Examination of Key Transportation Funding Programs in California and Their Context

WHITE PAPER

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WHITE PAPERS IN THE SERIES INCLUDE:

Forward

Assembly Bill (AB) 285 (Friedman, 2019) requires the California Strategic Growth Council (SGC) to submit a report to the Legislature by January 31, 2022, that includes the following:

- An overview of the California Transportation Plan (CTP) 2050
- An overview of all regional Sustainable Communities Strategies and any alternative planning strategies, as needed
- An assessment of how the implementation of the CTP and regional plans "will influence the configuration of the statewide integrated multimodal transportation system"
- A "review of the potential impacts and opportunities for coordination" of key state funding programs" to be conducted in consultation with the administering agencies
- Recommendations for improving these programs and other relevant transportation funding programs to better align the programs to meet long-term common goals, including the goals outlined in the CTP

In spring 2021, the SGC contracted with the University of California (UC) to provide materials supporting their report to the Legislature. Researchers at the UC Berkeley, UC Davis, and UCLA Institutes of Transportation Studies and the UC School of Berkeley Law joined forces to prepare a series of white papers to provide the evidentiary basis for the project. Elizabeth Deakin, the UC Berkeley principal investigator, coordinated the work.

Background

California has adopted ambitious goals for its transportation systems. The state has pledged to reduce greenhouse gas (GHG) emissions by 40 percent compared to 1990 levels and by 80 percent by 2050, and has also committed to achieve carbon neutrality by 2045. With transportation a major emitter, substantial changes in transportation vehicles, fuels, operations, and user choices must be achieved to meet these goals.

As pressing as climate change goals must be, other goals remain important. California has pledged to maintain its transportation infrastructure in a state of good repair, provide for safe operations, support economic development, meet air quality standards, protect the state's natural environment, coordinate urban transportation with housing policies, and do so in a way that is equitable for all. This ambitious set of goals places considerable responsibility on transportation planners and decision-makers.

A series of state initiatives has moved the state toward zero-emissions vehicles, cleaner fuels, and planning for transportation and land use measures that reduce vehicle miles traveled (VMT). Nevertheless, a 2018 assessment by the California Air Resources Board (CARB) found that the State of California is at risk of missing its 2030 GHG emissions reduction target for transportation-related emissions, in part due to increases in VMT. Since then, CARB has taken steps to tighten its requirements, the California Department of Transportation (Caltrans) has updated its plans and planning guidance, and metropolitan planning agencies and their partners (transit agencies, county transportation commissions, cities) have updated their plans and programs, which include both transportation and land use elements.

California's transportation plans for the most part have been developed in a context of anticipated growth in population and the economy. In a business-as-usual context, such growth is associated with increases in VMT. Nationwide, for example, the Federal Highway Administration has projected that VMT will continue to increase as the result of population increases, rising disposable income, increased GDP, growth in the goods component of GDP, and relatively steady fuel prices. For California to buck these trends would require a large-scale, concerted effort.

However, in the past two years, the COVID-19 pandemic has disrupted daily life and led to massive changes in travel behavior. As recovery from the pandemic occurs in fits and starts, whether and to what extent pandemic-induced changes in travel will persist remains in question. Major issues include whether telecommuting and e-commerce will remain popular and whether avoidance of shared modes will continue.

At the same time, new transportation options, from high-speed rail to bike sharing, are being added to California's transportation systems, and transportation technologies continue to evolve—electrification and automation are examples. Such changes need to be considered in plans that aim to steer actions for 20, 30, or even 50 years, along with other driving forces, including fuel prices and turnover rates for the vehicle fleet. How these factors are dealt with in plans can make a difference in how well the plans comport with actual experiences in the future.

The UC team has evaluated California's state and metropolitan transportation plans, financing for transportation, and the legal framework in this broad and uncertain context while taking into consideration the legacies of successive transportation technologies and the institutions that shaped and were shaped by them and the implications for change.

Research Methods

The UC team carried out its work based on 1) reviewing and analyzing previous research on the topic, including government reports, assessment document, and scholarly literature; 2) discussions with SGC staff and the staff of state agencies involved in transportation planning and related activities in California; and 3) interviews with key informants. A series of white papers was prepared to address the topics to be included in the report to the Legislature.

White Papers and Summary

Each white paper is designed to be read as a stand-alone document. In addition, a separate summary synthesizes the findings and recommendations.

Evaluation of California State and Regional Transportation Plans and Their Prospects for Attaining State Goals: Summary and Synthesis pulls together the key findings and recommendations of all the white papers. It assesses the prospects for achieving the state's diverse goals through its transportation planning and programming processes and identifies strengths and weaknesses of current policies and practices. It also provides the authors' recommendations for changes to policy and practice that could improve overall system performance and achievement of state goals for climate, equity, environment, safety, infrastructure, and the economy.

A Brief History of Transportation Policy and Institutions presents the development of transportation systems in the United States, with particular attention to California. The review includes key technological advances in transportation and the institutions that were developed to implement them. The paper also discusses the problem of organizational inertia and the issues associated with changing organizational culture to better reflect the problems of the day.
Review of Statewide Transportation Plans for California reviews the most recently adopted CTP and other key transportation plans adopted by state agencies, discusses the special attention given to new technologies in the CTP, and presents the findings from over 80 interviews with stakeholders across California who were asked to weigh in on the strengths and weaknesses of transportation planning practices in the state.

MPO Planning and Implementation of State Policy Goals evaluates California metropolitan planning organizations' regional transportation plans and sustainable communities strategies and looks at the relationship between MPO plans and what is actually funded through transportation improvement programs.

Examination of Key Transportation Funding Programs in California and Their Context assesses the congruence between funding programs and state goals for transportation. Particular attention is given to major funding sources, such the State Operation and Protection Program, and programs designed to promote key state goals, including the Affordable Housing and Sustainable Communities program, the Transit and Intercity Rail Capital Program, the Transformative Climate Communities program, and the Sustainable Transportation Planning Grant program.

Flexibility in California Transportation Funding Programs and Implications for More Climate-Aligned Spending examines key features of the legislative authority for transportation planning and finance in California, including local option sales taxes for transportation, and assesses the amount of flexibility that current laws and practices allow for reprioritizing projects as problems and priorities change.

Executive Summary

In this white paper, our central question is: How well do California's transportation funding programs support the state's goals and climate agenda? We examine eleven key transportation funding programs (see table), five of which are specified in Assembly Bill (AB) 285, and evaluate their alignment with the goals identified in the California Transportation Plan (CTP) 2050 and other transportation documents, particularly those pertaining to climate action. We consider the historical context in which these programs were developed and the contemporary context in which these 11 programs are placed, alongside many others in California's complicated funding system.

Much of California's current transportation funding system was developed in response to major shifts in federal funding in the mid-20th century, which catalyzed a need for states and localities to develop their own programs to become eligible for federal fund matches. Much of the complexity in California's current transportation system is rooted in the many political compromises that were necessary to develop highway funding programs in the 1940s and transit programs in the 1960s and 70s. Even when there was agreement over the general need for such funding, legislators had to brook disagreements over how to pay for it. As a result, many transportation programs, especially transit-supportive ones, have complex conditions and eligibility criteria so strict that numerous exemptions were subsequently adopted to avoid transit shutdowns.

In the 1980s, in response to Proposition 13, localities especially counties started putting local option sales tax measures (LOST) on local ballots. LOSTs, popular with voters for their "sunsetting" clauses and specificity of projects, have since become the largest source of transportation funding in California—21.7 percent of transportation funding considered for this report. Their popularity, pervasiveness, and sheer size means that LOSTs, implemented at the county-level, have outsize effects on transportation outcomes in the state.

Research into patterns of transportation funding indicates that new and additional funding sources do not displace or replace existing already-programmed funds; in other words, transportation spending tends not to be fungible. Therefore, LOSTs add funding capacity, enabling localities to build projects they otherwise could not. However, the significant amount of funding from LOSTs has shifted the locus of influence away from metropolitan planning organizations (MPO), which are responsible for implementing the state's vision for land use and transportation through sustainable communities strategies (SCS), to counties that have no such obligations.

Our review of state transportation funding programs and their appropriations suggests that the influence of the five AB 285 programs on state policy outcomes is limited by their small share of the state's transportation funding: The five AB 285 programs account for only 2.13 percent of the state's annual transportation funding reviewed for this research. The five AB 285 programs we looked at focus on transportation-related projects to meet state climate adaptation goals, with a primary goal of achieving greenhouse gas emission (GHG) reduction. Projects funded by these programs include

sustainable transportation infrastructure, intermodal transit facility expansion, and shared mobility programs. Most programs have prescribed types of activities or projects. All AB 285–identified programs were established recently and provide funding allocation for projects within disadvantaged communities, low-income communities, and low-income households, as established by Senate Bill (SB) 535 and AB 1550.

The six additional programs we reviewed, which are older on average, have fewer and more focused goals, namely improving mobility across California through diverse forms of transportation. Perhaps because they predate some contemporary state goals, most of the programs lack a statutory commitment in funding toward disadvantaged communities and instead consider only the impact of projects on disadvantaged communities within the project evaluation process.

In essence, the state's older programs have greater funding, fewer goals, and fewer goals aligned with contemporary state objectives; in contrast, the state's newer programs have comparatively less funding, more goals attached, and more goals aligned with the state's targets for reducing GHG emissions, reducing vehicle miles traveled (VMT), increasing non-auto mode share, and improving transportation equity and access.

While the state has many goals for transportation, particularly related to reducing statewide emissions, our in-depth review of the programs' levels of funding (Section 3), eligibility criteria (Section 4), and goals (Section 5), suggests that the state's transportation spending is not well aligned with its goals. For example, the largest two programs address few of the state goals in their statutory description, criteria, or wording, whereas several of the programs that address the most state goals are among the least-funded programs (of those we studied).

The table shows the programs listed in order of amount appropriated and illustrates the "inverted alignment" of the largest programs addressing the fewest goals, and the smallest programs the most. We created this table by identifying state goals from a review of the 2024 Caltrans Strategic Plan, the CTP 2050, and numerous state bills and then placing each goal into seven categories. We reviewed each funding program for references to relevant legislation and keywords and phrases that aligned with state goals and then evaluated whether the program's stated goals and requirements would serve the fulfillment of our identified state goals. Finally, we counted the number of state goals in each category with which each program aligned and added the amount appropriated for each program to assess the level of funding.

Alignment of selected programs and goal categories, sorted by appropriation

	Amount appropriated (in millions)	Reduce emissions, improve environment	Improve transportation equity and access	Increase safety and resilience	Prioritize "fix it first"	Promote non-auto modes	Reduce VMT	Support vibrant communities, economy	Total (all goals)
Goals in category		12	9	3	2	2	3	2	33
State Highway Operations & Protection Program	$4,540	8	2	2	2	2	0	0	16
Local Transportation Fund	$1,899.3	0	2	1	0	1	0	0	4
Interregional Transportation Improvement Program	$710.0	6	6	2	0	2	2	0	18
Affordable Housing and Sustainable Communities*	$324.0	12	9	3	0	2	3	2	31
Solutions for Congested Corridors Program	$250.0	7	3	2	0	2	2	1	17
Low-Carbon Transit Operations Program*	$225.4	12	9	3	0	2	3	2	31
Local Partnership Program	$200.0	7	3	3	0	2	3	0	18
Active Transportation Program	$123.0	7	5	2	0	2	2	1	19
Transformative Climate Communities*	$41.7	12	9	3	0	2	3	2	31
Sustainable Transportation Planning Grant*	$34.0	12	9	3	0	2	3	2	31
Transit and Intercity Rail Capital Program*	$27.9	11	9	3	0	2	3	2	30

*AB 285 program

Why this misalignment in goals and spending occurs is unclear, but possible reasons are that new funding has been hard-fought. Programs like SHOPP and Local Streets and Roads require more resources for "fix-it-first" maintenance and rehabilitation than in the capital-intensive era of the 1950s–70s due to the increasing needs of the state's aging highways and roads and to general inflation and the increase in construction costs. In addition, past goals focused on system expansion to provide a "safe and efficient system of Federal-aid highways in each state" (Federal Highway Act of 1956).

The state's contemporary commitments to environmental sustainability and social justice have attached more goals to programs without necessarily more funding, which attaches fewer dollars to each goal, potentially affecting the effectiveness of each program achieving any one state goal.

Our recommendations (Section 7) center on improving the effectiveness of the state's transportation funding in attaining its climate goals by:

- Reevaluating program goal and funding alignment so that programs that advance more state goals meet with more funding and/or are adjusted to have goals meet their funding levels
- Reevaluating program eligibility criteria to support a common application and using state funding leverage to not only fund and enable projects consistent with contemporary goals but also to abandon projects antithetical to contemporary goals
- Implementing a clearinghouse with consultative services, or a "one-stop-shop" solution for matching good projects with state funds, so that even smaller projects and smaller agencies are better able to pursue projects, especially in disadvantaged communities
- Increasing funding and improving allotments for disadvantaged communities for project implementation and planning capacity-building, including reserving a percentage of program funds specifically for disadvantaged communities, as the Greenhouse Gas Reductions Fund currently does
- Increasing the involvement of, and funding through, MPOs to leverage the institutional knowledge of state goals through their development of SCSs and to enable more regional and strategic coordination of transportation funding than is attained through state-created formula programs currently distributed at the county level, such as State Transit Assistance, Low Carbon Transit Operations, Local Streets and Roads Program, and the Local Transportation Fund
- Increasing the use of Congestion Mitigation and Air Quality Improvement (CMAQ) funding opportunities by pursuing opportunities to steer regional CMAQ investments toward meeting multiple state goals with projects such as bicycle and pedestrian facilities and programs, travel demand management, car sharing, electric vehicle infrastructure, and bike sharing
- Improving data available on prospective and approved state and local transportation investments to empower advocates
- Investigating the process by which applicant agencies develop and apply for project ideas to better understand how program criteria and application processes shape project designs and how state funding might influence what types of climate advantageous projects are pursued and why

1. Introduction

This white paper examines select California transportation funding programs: five specified in Assembly Bill (AB) 285 and six that the research team identified as important because of their prominence, size, or that the types of projects they fund are related to the goals of AB 285.

AB 285 directed that we examine these five key programs.

- Affordable Housing and Sustainable Communities (AHSC)
- Transit and Intercity Rail Capital Program (TIRCP)
- Low-Carbon Transit Operations Program (LCTOP
- Transformative Climate Communities (TCC)
- Sustainable Transportation Planning Grant (STPG)

We also evaluated these six programs.

- State Highway Operations & Protection Program (SHOPP)
- Local Partnership Program (LPP)
- Interregional Transportation Improvement Program (ITIP)
- Solutions for Congested Corridors Program (SCCP)
- Active Transportation Program (ATP)
- Local Transportation Fund (LTF)

The purpose of this white paper is to: 1) provide a detailed description of these key programs; 2) place these programs in both historical and contemporary context; 3) identify how well these programs align with contemporary state goals; and 4) make recommendations based on our findings.

The literature review in Section 2 provides historical context for transportation funding in California and to outline what the research says about topics germane to our analysis of the key programs, specifically how the complexity of programs' eligibility criteria (using performance measures) could impinge on their effectiveness, what implications the growing importance of local option sales taxes have on state goal attainment at the regional level, and how fungible funds are in practice (and what that means for programmatic funding). We also summarize a recent research paper that focuses on how well California's transportation program funding aligns with state climate action commitments.

To add further context to our analysis of the key programs, in Section 3, we provide an inventory of transportation funding programs in California that illustrates how many programs exist and the level of funding that they provide. AB 285's five key programs constitute less than 3 percent of the state's transportation funding appropriations.

In Section 4, we outline the 11 programs' scope, what they fund, their eligibility criteria, history, and other details. In Section 5, we identify and describe the state's goals (as identified in key legislation and strategic plans) and the programs' goals. We assess how well each program aligns with state goals.

In Section 6, we use our findings from Section 3 on transportation funding programs and Section 5 on state and program goals to analyze to which categories of goals most funding flows and if there is a correspondence between well-funded programs and programs that meet many state goals.

Finally, in Section 7, we make recommendations based on our review of state programs, our funding inventory, our goals identification, and our summary analysis.

2. Literature Review

A review of the literature is helpful for explaining the relative complexity of California's transportation funding, especially transit funding. This section presents a brief history of transportation funding in California, discusses the emergence and growing importance of local option sales taxes, reports on the research into transportation funding fungibility (affecting program effectiveness), and summarizes past research into the alignment of California's transportation funding programs with its climate action goals.

Brief Context of Transportation Funding in California

Since cars first plied the state's rutted roads in the early 1900s, California has searched for ways to pay for the ever-expanding demand of car infrastructure: first its construction, then its maintenance, and finally, the mitigation of its externalities. The *ad valorem* local property taxes and special assessments that had funded streets for horses and buggies became inadequate with the advent of the car, and the state moved quickly to bond financing (in 1909), vehicle registration fees (1913), and fuel taxes (1923) to fund expansive and speed-supportive state highways (Garrett, 2016). When these highways came to need maintenance, funds were again inadequate, and hard-won legislation (Collier-Burns Highway Act of 1947) introduced the country's first highway trust fund that protected gas and diesel tax revenue from being diverted to non-highway purposes (Garrett, 2016).

The Federal Aid Highway Act of 1956 redoubled the financial resources of the US government to the state's transportation funding system (especially for funding controlled-access highways paid for through the Federal Highway Trust Fund), and accordingly reoriented urban and regional transportation planning in California (Taylor, 2000). Today, the Federal Highway Trust Fund is a primary source of funding for SHOPP.

The impetus for the contemporary system of funding the state's transit systems arose in the wake of the collapse of privately-operated transit operators in the middle of the 20th century. In response to the bankruptcy, abandonment, or public takeover of many private operators in urban areas and the beleaguered operations in rural areas throughout the US, the federal government created the Urban Mass Transportation Administration (UMTA) in 1964, the predecessor of the Federal Transit Administration (FTA). The UMTA disbursed federal funds to transit operators but only for capital equipment purchases, requiring operations to be funded locally. A matching funds requirement for federal funds pressured the State of California to provide more local funding for transit and catalyzed the passage of the Transportation Development Act (TDA) in 1971. The TDA controversially "diverted" gas taxes to transit and marked the "beginning of measures that made some road user charges available to public transportation" (Gahbauer et al., 2019).

The formation of TDA legislation by Senators Mills, Alquist, and Deddah reflected the many compromises necessary to support transit funding (Taylor, 1991) and explain the subsequent complexity of transit funding in California. A reluctance among rural and suburban areas for taxes that would support urban transit systems, a stated interest in "local control" from then-Governor Reagan, and senatorial interest in "financial discipline" and performance constituted a mix of strong interests that yielded the complexity of the TDA's transit funding: It swapped out a percentage of state sales tax for a local amount, made exemptions for small counties with 1970 populations below 500,000 (a condition that stands today),

and formed a local transportation fund (LTF) in each county so as to be local (Taylor, 1991). In addition, various cost-efficiency and cost-effectiveness performance measures and requirements were put in place in the 1970s to satisfy concerns over transit service eroding further, despite additional funding. Moreover, local match requirements for state funding addressed political concerns over ensuring financial discipline. When Proposition 13 passed in 1978, shifting the locus of tax revenue collection to the state, many counties sought exemptions to the local match, and the state introduced other requirements instead, such as minimum farebox recovery rates (for TDA funds eligibility) and performance audit requirements (Gahbauer et al., 2019).

More recently, the Road Repair and Accountability Act of 2017, known as Senate Bill (SB) 1, provides over $50 billion in tax and fee revenue over 10 years to fix transportation infrastructure and make additional improvements to the state's transit, rail, active transportation, and freight systems. SB 1 specifically emphasizes "benefits to mobility, community, and environmental challenges along highly traveled corridors," and its size and scope make it an important new source of transportation funding in the state.

Performance Measures as Eligibility Criteria for Transit Funding

When performance measurements are used in eligibility criteria for funding, the impacts on decision-making for levels of transit service can be profound. Much research was conducted in the 1970s and '80s regarding transit performance measures. Because performance criteria affect not only what gets funded but also who applies, their design and inclusion in funding programs affect transportation expenditures, such as on which climate-compatible projects money is and is not spent. Because criteria can drive program expenditures, they are important to consider as a source of possible misalignment between contemporary goals and funding outcomes (Gahbauer et al., 2019). In part because of this legacy, a gap exists between state and local agencies' use of "service effectiveness" as the key performance measure while most funding programs still use performance metrics around cost.

Local Options Sales Taxes and Their Growing Importance

An important development in California's transportation funding environment over the past few decades has been the growth of local option sales taxes (LOST) (Crabbe et al., 2005). Thanks to the success of LOSTs—which began in California but have become popular across the US—no other state is now more reliant on local sales tax revenue to fund transportation (Wachs et al., 2020).

The trend can be explained by the diminishment of traditional sources of transportation funding (namely fuel taxes) due to inflation, increased fuel efficiency, and opposition to fuel tax increases, prompting local and regional governments to "[take] transportation financing into their own hands." (Wachs et al., 2020). In addition to being a response to evaporated revenue, LOSTs also allow civic and political leaders to sidestep financial obstacles and vicissitudes elsewhere in the transportation funding system as they seek to provide for increasing demand in vehicle miles traveled (VMT) (Crabbe et al., 2005).

Although they have voter appeal, LOSTs are not necessarily the most efficient or most effective long-term funding solution, as Crabbe et al. argue. While both fuel taxes and sales taxes are regressive, higher fuel taxes encourage non-driving modes of travel and the adoption of more fuel-efficient (or electric) vehicles, whereas general sales taxes can have no influence on travel behavior (Crabbe et al., 2005).

Nevertheless, LOSTs have maintained their popularity with voters despite anti-tax sentiment elsewhere, exemplified by Proposition 62 (1986), which put in place the "supermajority" requirement for local tax measures. Crabbe et al. identify four reasons for the enduring appeal of LOSTs: They have direct approval from voters; funds are spent in the same county that they are raised, providing direct, local benefits; measures usually have sunsetting terms making them less of a commitment; and they tend to name specific projects that they will fund (Crabbe et al., 2005).

The specificity typical of LOST measures, such as in Los Angeles County's Measures R (2008) and M (2016), motivates voters but also binds local authorities to the projects and technologies referenced in the ballot measure over a period of time in which those technologies can change dramatically and conditions could call for amendment, causing a tension between accountability and flexibility (Wachs et al., 2020). An investigation into this tension found that "for the most part" a balance is achieved in California through state law and public utilities' code rules and conditions, and that most counties have mechanisms in place to ensure that measures are delivered and that amendment is possible (though difficult) (Wachs et al., 2020). For example, San Diego's TransNet LOST can be amended by a two-thirds vote of the commission, with exceptions; for certain amendments to "structural and high-priority elements of the program," voters must approve in public referenda. Since its enactment in 1987, TransNet has been amended six times. However, a LOST's specificity and earmarking of particular projects makes high-profile capital projects attractive in terms of capturing voters' interest, but results in projects that do not have funds lined up for operations and maintenance. Many transportation authorities presume Caltrans will allocate funds for operations and maintenance, which risks "overcapitalizing" California's transportation system (Crabbe et al., 2005). Research reveals that LOSTs "did not simply substitute a new source of financial support for projects that would have been built anyway. Many of the capital projects are too costly to have been built without the sales-tax revenue" (Crabbe et al., 2005).

Where local transportation sales taxes have evolved to deliver a funding source for ongoing transportation needs and maintenance, county transportation authorities have increasingly central roles in funding operations. Special taxes, including those designated to transportation agencies, require two-thirds support in California. Movements to reduce LOST passage requirements to a simple or 55 percent majority "reflect many counties' desires to retain these sales taxes as permanent parts of the transportation finance landscape." However, this increased concentration of funds at the county level has the effect of decreasing MPO priority-setting, with important ramifications. At the county level, "the implications of [LOST] projects for land use or energy consumption need not today be considered, and there is presently no expectation among those who program sales-tax dollars that these transportation investments be coordinated with the efforts of other agencies who must plan for and respond to such externalities" (Crabbe et al., 2005).

Fungibility of Funds

In the decades since the Transportation Development Act of 1971, when California's legislators wrote transportation funding criteria to address concerns about fiscal discipline, researchers have investigated the extent to which external funding influences program spending and overall government expenditure. With a focus on LOSTs, one researcher (Afonso, 2015) summarizes three models for explaining how transportation funding might influence program and overall spending. The "rational" model describes no change to either program or government spending when funding is earmarked. In this scenario, funds are entirely fungible, so federal funding does not change the amount of expenditure on the program and instead funds are swapped out for other governmental expenditures, meaning there is also no effect on total government spending. The second, the "Leviathan" model, assumes that new external funding (including earmarks) allows funds that would have been spent to be used elsewhere, growing overall government expenditure (unless checked by laws). The third, the "flypaper" model describes a scenario in which funding "sticks" to the intended program such that it will receive more revenue with an earmark than under the "rational" model.

Afonso and others have demonstrated that transportation funding, LOSTs in particular, are best described by the flypaper model. Afonso notes:

> "Within the established frameworks of Leviathan, rational, and flypaper effect behaviors, the analysis suggests that LOST-T revenue is used in a manner consistent with flypaper effect behavior. Because LOST-Ts are only a partial earmark for transportation projects, the generated revenue is more fungible (Dye and McGuire 1992; Novarro 2002), yet it appears that California counties are not taking advantage of this fungibility and actually increase spending on transportation from non-LOST-T revenue when the county has a LOST-T in place."

In other words, LOST-financed projects often require funding in excess of what they generate, and they use revenue that would have been spent elsewhere if the LOST were not in place.

In an analysis of federal highway funding, researchers have similarly found that states using federal grant money as a substitute for their own spending is not a concern and that federal funding appears to allow states to implement projects that they would not have otherwise attempted (Nesbit & Kreft, 2009).

While research into the fungibility of transportation funding in particular appears to be somewhat scarce, the work that has been done concludes definitively that funding in transportation is additive, and fungibility of funds in transportation programs is generally relatively low.

Alignment of Program Funding with State Climate Action Commitments

A 2018 white paper by Gian-Claudia Sciara and Amy Lee appears to be the only academic research to date that examines the extent to which California's commitments to climate action are reflected in its transportation funding programs. The paper finds that California's ambitious goals for reducing greenhouse gas (GHG) emissions from transportation are not reflected in its state transportation funding allocations; rather, the white paper "finds that the state's framework for funding transportation is disconnected from its climate goals." The authors note that "California's framework for allocating state level transportation resources is notoriously complex, captured in a wall-sized flow diagram known affectionately as Chart C" and that, despite improvements made in SB 1, changes are "modest and influential only at the margins," and "...the bill relies more on inherited statutory formulae for distributing funds than on any new framework," leaving in place existing frameworks that are "overly complex, lack transparency, unstable, and do not serve GHG reduction." This is a concern because transportation has a higher share of emissions in California than the national average and because transportation-related GHGs have recently started increasing due to population growth, fuel prices, and economic growth. These findings are echoed in the California Air Resources Board's (CARB) 2018 Progress Report published in response to SB 150.

Sciara and Lee pose the question of whether the state's investments in transportation infrastructure are distributed in ways that "support the necessary transition to a lower-VMT future." They find that the state's historic boom and bust cycles mean that "concerns about how to raise revenue for transportation often trump discussions of how those resources are or should be distributed." The authors note that "California climate policies in transportation have not yet reached into the actual statutes that direct state transportation funds."

The authors argue that the established public finance principles of "fiscal sustainability" merit consideration in California's allocation of transportation funding. Specifically, these principles "discourage borrowing to meet current needs when future generations will be left paying for services provided in the past." While SB 1 has "in part enhanced fiscal sustainability for California transportation funding" by increasing funding and improving stability by eliminating the "fuel tax swap," its use of existing structures for fund allocations does little to "explicitly reward sustainable transportation or to encourage investments that will secure a less automobile reliant future." Moving beyond current practices that "reflect largely inherited formulae, negotiated over decades to broker the politics of modal siloes, geographical/jurisdictional divides, and competition from state needs outside of transportation" is necessary for supporting the state's goals for climate, ensconced in such bills as SB 375.

To better align the state's transportation funding with its climate goals, Sciara and Lee propose statutory reforms that give metropolitan planning organizations (MPO) greater responsibility for allocating more state-generated revenue. Current laws give allocation authority to county-based County Transportation Commissions. Shifting allocations to MPOs, which (under SB 375) develop sustainable communities strategies (SCS), would enable regional decision-making and put decisions concerning funding allocations in the same locus as decisions concerning sustainable land use, development, and transportation.

3. Inventory of Transportation Funding Programs

Public funding for transportation in California comes from a combination of federal, state, and local sources. Federal sources and many state sources of funding are well-documented in the biennial Federal Statewide Transportation Improvement Program. Local sources of funds are documented at the city, county, or Regional Transportation Planning Agency (RTPA) level but often inconsistently between jurisdictions.

A more complete picture of transportation funding in California is possible using supplemental data from the California Transportation Commission (CTC), California State Controller's Office, Federal Highway Administration (FHWA), FTA, MPOs, and Caltrans (Caltrans, 2021b). Our analysis combines 35 funding programs and revenue sources from the federal, state, and local level. These programs and revenue sources provided a total of $30.6 billion in the most recent fiscal year (FY) for which data is available for each program (see Table 1).[1] Information for 14 mostly state-level programs were provided by CARB (CARB, 2021), totaling $10,195,470,500.

The list excludes some minor sources of transportation infrastructure and operations funding and does not include incentive programs, fuels, and so on, but it strives to include any source of funding for which available spending capacity exceeds $50 million annually. The list does not include certain expenditures involved in operating the State Highway System that are not included in SHOPP, such as the California Highway Patrol. Nor does the list include one-time funds, such as those authorized in the Coronavirus Aid, Relief, and Economic Security (CARES) Act and subsequent federal appropriations.

[1] Reported data for each program varies between FYs 2018–19, 2019–20, and 2020–21. This is not ideal but a limitation of merging funding administered by various agencies and levels of government.

For each funding source, the percentage of expenditures dedicated to each of the six categories was estimated from the most recent round's publicly available project award information found on the CTC, Caltrans, and Strategic Growth Council (SGC) websites based on the most recent program year: transit, highway, local return and discretionary, streets and roads, and other (including affordable housing and active transportation). Local return and discretionary funding is money programmed by individual cities (common for LOSTs) and money left to the discretion of the administering agency. Some programs are dedicated to a specific source. For discretionary programs like SCCP and the State Transportation Improvement Program (STIP), the most recent program list allowed insight into percent allocations to each category. This work builds on prior work (Dasmalchi & Amberg, 2021) to identify funding formulas for local transportation funding measures to determine the allocations of an estimated $6.643 billion in FY 2019–20 California transportation LOST receipts.

The five AB 285–identified programs accounted for 2.13 percent of the total allocations and revenues. When considering all 35 sources of funding (see Figure 1), transit was the largest single category. The $653 million in AB 285 programs funding was distributed 39 percent to transit and 61 percent to other uses, chiefly affordable housing and community development.

Figure 1: Expenditures by category for the 35 transportation revenues and funding programs studied

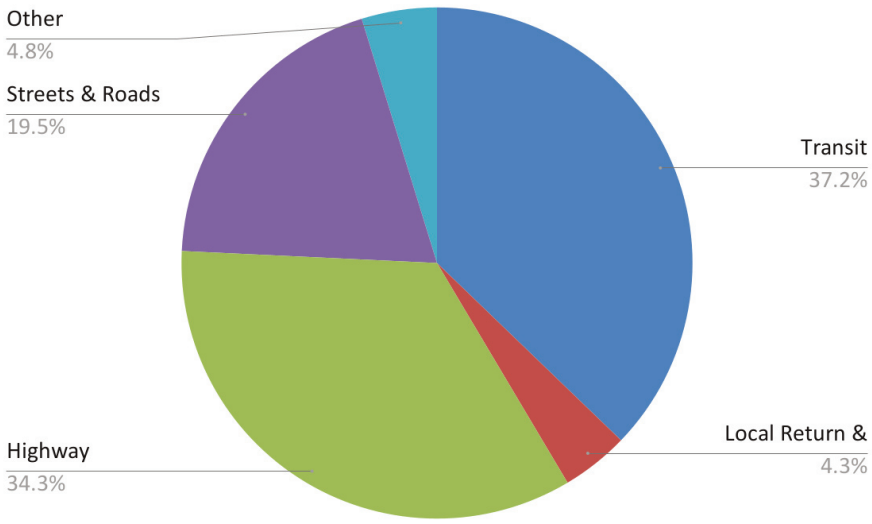


Table 1: Top programs and revenue sources for transit

Program Name	Responsible for Administration	FY of Reported Data	Transit
Local Option Sales Tax	County RTPAs/transit districts	2019–20	$2,790,775,631
Transit Fares	Local transit agencies	2018–19	$1,798,045,859
Local Transportation Fund	County RTPA / Transportation Commission	2019–20	$1,573,769,909
Federal Transit Administration Formula Grants for Urbanized Areas	FTA	2019–20	$1,099,908,851
Federal Transit Administration Capital Investment Grants Program and State of Good Repair Program	FTA	2019–20	$936,647,483
Transit – General Funds and Property Taxes	Local transit agencies	2018–19	$901,883,110
State Transit Assistance	Caltrans	2020–21	$802,999,000
Transit – Other Directly Generated	Local transit agencies	2018–19	$509,655,843
Low Carbon Transit Operations Program [iv]	Caltrans		$225,400,000

Note: The programs in this table collectively fund 94.0 percent of transit expenditures. Data for programs with a bracketed Roman numeral was provided by CARB and used as-is, at times without a source year. The numeral refers to the data source.

As Table 2 shows, SHOPP provides the largest amount of highway funds. Of the nine top programs for highways, six are state-sourced, one is regional (MPO), and two are local.

Table 2: Top programs and revenue sources for highways

Program Name	Responsible for Administration	FY of Reported Data	Highway
State Highway Operation and Protection Program [xii]	CTC		$4,540,000,000
Local Option Sales Tax	County RTPAs/transit districts	2019–20	$1,555,591,083
Toll fees for highways and bridges	Local/regional agencies	2018–19	$1,038,517,000
State Highway Maintenance and Rehabilitation [xi]			$950,000,000
Transportation Infrastructure Finance and Innovation Act	MPOs	2020–21	$500,000,000
State Transportation Improvement Program [xiii]	CTC	2020–21	$427,027,000
Trade Corridor Enhancement Program [iii]	CTC		$300,000,000
Highway Safety Improvement Program	Caltrans Division of Local Assistance	2019–20	$277,600,000
Highway Bridge Program	Caltrans Division of Local Assistance	2020–21	$270,626,000

Note: The programs in this table collectively fund 94.1 percent of highway expenditures. Data for programs with a bracketed Roman numeral was provided by CARB and used as-is, at times without a source year. The numeral refers to the data source.

As Table 3 shows, significant funding for local streets and roads comes from local general funds. Of the eight top programs for local streets and roads, three are state-sourced, three are local, and two are regional (MPO and county).

Table 3: Top programs and revenue sources for local streets and roads

Table 3: Top programs and revenue sources for local streets and roads

Program Name	Responsible for Administration	FY of Reported Data	Streets & Roads
Local General Funds	Cities and counties	2019–20	$1,755,043,729
Local Streets and Roads Program [xiv]	CTC/Controller		$1,500,000,000
State Highway Maintenance and Rehabilitation [xi]			$950,000,000
Local Option Sales Tax	County RTPAs/transit districts	2019–20	$933,577,353
Developer Impact Fees	Cities and counties	2019–20	$402,921,387
Surface Transportation Block Grant Program	MPOs	2019–20	$172,296,300
Local Transportation Fund	County RTPA / Transportation Commission	2019–20	$138,079,981
Local Partnership Program [ii]	CTC		$51,200,000

Note: The programs in this table collectively fund 99.51 percent of local streets and roads expenditures. Data for programs with a bracketed Roman numeral was provided by CARB and used as-is, at times without a source year. The numeral refers to the data source.

With all evaluated funding programs taken together, LOSTs constitute the largest source of revenue for transportation in California, as shown in Table 4.

Table 4: All programs and funding sources with estimated percentages to expenditure category

Program Name	Appropriated for Reported FY (Millions)	Transit	Local Return & Discretionary	Highway	Streets & Roads	Other
Local Option Sales Tax	$6,643,000	42.0%	14.5%	23.4%	14.1%	6.0%
State Highway Operation and Protection Program [xii][C]	$4,540,000			100.0%		
State Highway Maintenance and Rehabilitation [xi][C]	$1,900,000			50.0%	50.0%	
Local Transportation Fund[C, B]	$1,899,311	82.9%	0.0%		7.3%	9.9%
Transit Fares	$1,798,045	100.0%				
Local General Funds	$1,755,043				100.0%	
Local Streets and Roads Program [xiv][C]	$1,500,000				100.0%	
Toll fees for highways and bridges	$1,375,875	0.3%	24.2%	75.5%	0.0%	0.0%
Federal Transit Administration Formula Grants for Urbanized Areas	$1,099,908	100.0%				
Federal Transit Administration Capital Investment Grants Program and State of Good Repair Program	$936,647	100.0%				
Transit – General Funds and Property Taxes	$901,883	100.0%				
State Transit Assistance	$802,999	100.0%				
State Transportation Improvement Program [xiii][C]	$710,000	23.9%		76.1%		
Surface Transportation Block Grant Program	$522,110			34.0%	33.0%	33.0%
Transit – Other Directly Generated	$509,655	100.0%				
Transportation Infrastructure Finance and Innovation Act	$508,449	1.7%		98.3%		
Developer Impact Fees	$402,921				100.0%	
Congestion Mitigation and Air Quality Improvement Program	$391,700	30.0%		50.0%		20.0%
Affordable Housing and Sustainable Communities [vi][C, A]	$324,000	0.5%				99.5%
Trade Corridor Enhancement Program [iii][C]	$300,000			87.3%	0.8%	12.0%

Table 4, continued

Program Name	Appropriated for Reported FY (Millions)	Transit	Local Return & Discretionary	Highway	Streets & Roads	Other
Highway Safety Improvement Program	$277,600			100.0%		
Highway Bridge Program	$270,626			100.0%		
Solutions for Congested Corridors Program [i][C, B]	$250,000	55.5%		44.5%		
Low Carbon Transit Operations Program [iv][C, A]	$225,400	100.0%				
Local Partnership Program – Competitive [ii][C]	$200,000	13.5%	0.0%	51.5%	25.6%	9.4%
Federal Transit Administration – Other	$141,630	100.0%				
Active Transportation Program [x][C, B]	$122,971					100.0%
Intelligent Transportation Systems Program	$53,965			50.0%	50.0%	
State Rail Assistance Program	$51,600	100.0%				
Transformative Climate Communities [vii][C, A]	$41,700					100.0%
Sustainable Transportation Planning Grants [xv][C, A]	$34,000					100.0%
Federal Transit Administration Formula Grants for Rural Areas	$28,568	100.0%				
Transit and Intercity Rail Capital Program [v][C,A]	$27,900	100.0%				
Clean Mobility Options	$21,150	15.0%				85.0%
Sustainable Transportation Equity Project [viii][C]	$19,500					100.0%

Key: C=CARB-provided, A=AB 285, B=Additional programs investigated)
Note: Data for programs with a bracketed Roman numeral was provided by CARB and used as-is, at times without a source year. The numeral refers to the data source.

Table 5 summarizes expenditure categories by level of funding. SHOPP is funded by a blend of federal and state sources deposited into the State Highway Account, which cannot be readily disentangled.

Table 5: Summary of expenditure category by funding level (in thousands)

	Transit	Local Return & Discretionary	Highway	Streets & Roads	Other	Total
Federal	$2,332,714	$0	$1,448,576	$199,279	$250,636	$4,231,205
Mixed Federal & State		$0	$4,540,000	$0	$0	$4,540,000
State	$1,412,386	$0	$1,853,057	$2,503,450	$613,298	$6,382,191
Local	$7,577,920	$1,297,930	$2,594,108	$3,229,622	$586,156	$15,285,737
Total	$11,323,019	$1,297,930	$10,435,741	$5,932,351	$1,450,090	$30,439,132

4. In-Depth Look at the Programs

This section describes each of the five AB 285 programs and six additional programs, its establishment, funding source and scope, eligibility criteria, and statutory requirements. We also include a list of recently funding projects for each program.

AB 285 Programs

Programs specified in AB 285 focus on transportation-related projects to meet state climate adaptation goals, with a primary focus of achieving greenhouse gas (GHG) emission reduction. Projects funded by these programs include sustainable transportation infrastructure, intermodal transit facility expansion, and shared mobility programs. Only the Affordable Housing and Sustainable Communities (AHSC) and Transformative Climate Communities (TCC) programs provide funding for GHG emission reduction not directly related to transportation infrastructure. The most flexible AB 285–identified program is TCC. The enabling legislation does not limit the types of eligible activities if projects empower the communities most impacted by climate change to envision solutions to reduce GHG emissions and improve air quality, but agency guidelines include a list of eligible activities. However, this program funds only a few projects each cycle. AHSC primarily funds affordable housing and housing-related infrastructure in project areas close to qualifying transit to support GHG emission reduction goals.

Three of the five AB 285 programs are funded by the Greenhouse Gas Reduction Fund (GGRF) with proceeds from the state Cap-and-Trade auction. All programs identified in AB 285 provide funding allocation for projects within disadvantaged communities, low-income communities, and low-income households, as established by SB 535 and AB

1550.[2] TCC provides the greatest percentage of its funding to communities affected by climate change, requiring that 51 percent of census tracts within the project area be in the top 10 percent of disadvantaged census tracts based on the CalEnviroScreen 3.0 and the low-income census tracts defined by AB 1150. The remaining 49 percent of census tracts within the project area must be in the top 25 percent of census tracts within disadvantaged or AB 1550 low-income communities. The Transit and Intercity Rail Capital Program (TIRCP) reserves the least share of funding toward disadvantaged communities, requiring that only 25 percent of the budget go toward programs in these areas.

Affordable Housing and Sustainable Communities Program

AHSC is a competitive grants program established in 2015 through Division 44, part one of the Public Resources Code (California Strategic Growth Council, 2021). The main goal of the AHSC is to promote the reduction of GHG emissions through programs that encourage compact, infill development patterns, as well as active transportation and transit usage. AHSC focuses particularly on benefiting disadvantaged communities, low-income communities, and low-income households by creating higher accessibility via low-carbon transportation options to affordable housing, employment, and other key centers (California Strategic Growth Council, 2021).

AHSC is administered by California Strategic Growth Council (SGC), which coordinates efforts with the Department of Housing and Community Development (HCD) and CARB. Additionally, HCD implements the transportation, housing, and infrastructure components of the program. AHSC supports the efforts of AB 32, SB 375, and SB 32 in providing investment for projects that reduce GHG emissions. Additionally, AHSC follows SB 535 and AB 1550 requirements to maximize the benefit of the program for disadvantaged communities, low-income communities, and low-income households (California Strategic Growth Council, 2021).

AHSC receives its funding from the GGRF, which was instituted to receive proceeds from the state Cap-and-Trade auctions. The Cap-and-Trade program provides a limited number of GHG permits each year to support the GHG emission reduction goals set up through AB 32. Each year, the permits are auctioned, and the proceeds can provide funding for programs like AHSC.

Of the AHSC available funds, 50 percent are reserved for affordable housing development while the other 50 percent are for projects benefiting disadvantaged communities. For all project area types, the maximum AHSC program loan or grant award is $30 million, and the minimum award is at least $1 million (California Department of Housing and Community Development, n.d.).

AHSC assists with programs that help achieve its goal of GHG emission reduction and benefit disadvantaged communities, low-income communities, and low-income households. Disadvantaged communities are identified by the CalEnviroScreen 3.0 as "census tracts that fall within the top 25 percent of the CalEnviroScreen 3.0, plus an additional 22 tracts that score the highest 5 percent of the CalEnviroScreen's Pollution Burden" (California Strategic Growth Council, 2021). Low-income communities and households are both defined by AB 1550. Low-income communities include "census tracts with median household incomes at or below the threshold designated as low income" by HCD. Low-Income

[2] AHSC, TIRCP, LCTOP, and TCC receive funding from the GGRF and are thus required to maximize the benefit of each program for disadvantaged communities, low-income communities, and low-income households in accordance with SB 535 and AB 1550. The Sustainable Transportation Planning Grant is not under the same statutory obligations, yet it aims to provide at least 50% of its competitive funding to serve the disadvantaged communities identified by SB 535 and AB 1550, in addition to Native American Tribal Governments, regionally/locally defined disadvantaged communities, the California Department of Education, Free or Reduced Priced Meals Data, and California Healthy Places Index.

households include households with "incomes at or below 80 percent of the state median income or with a household income at or below the threshold designated as low-income" by HCD (California Air Resources Board, 2017).

Eligible applicants include local governments, transportation and transit agencies, nonprofit and for -profit housing developments, joint powers authorities, K-12 school, college, and university districts, and federally recognized Indian tribes. Typical applicants have historically included affordable and mixed-income housing developments, regional transportation agencies, and public transit providers (California Strategic Growth Council, n.d.-b). Figure 2 lists eligible capital projects and program costs. Projects eligible for funding include affordable housing development, housing-related infrastructure, sustainable transportation infrastructure, transit-related amenities, and program costs for activities, such as active transportation, transit ridership, workforce development, and carshare programs (California Department of Housing and Community Development, n.d.).

Figure 2: Eligible capital projects and program costs

Eligible Capital Projects
• Affordable Housing Development (AHD) • Housing-Related Infrastructure (HRI) • Sustainable Transportation Infrastructure (STI) • Transportation-Related Amenities (TRA)
Eligible Program Costs (PGM)
• Active Transportation Programs • Transit Rideship Programs • Criteria Air Pollutant Programs • Workforce Development Programs • Car Share Programs

Source: California Strategic Growth Council, 2021, p. 9

AHSC grants and loans are awarded through a competitive process based on the application's merits and proposed use of funds within an identified project area. To achieve its goal, AHSC focuses on three main project areas: 1) transit-oriented development (TOD), 2) integrated connectivity project (ICP), and 3) rural innovation project area (RIPA) (California Strategic Growth Council, 2021). Figure 3 illustrates the requirements for applications within each project area. All three program areas must include access to qualifying transit, such as rail, bus, or flexible transit service, with active service at least two or more times during peak hours. Applications within a TOD project area must also be served by high-quality transit, such as rail or a bus rapid transit (BRT) line, with at least a 15-minute service during peak hours. Additionally, projects within a TOD area must use at least 50 percent of AHSC funds toward affordable housing and another eligible capital program or project cost. ICPs or RIPAs must not be served by high-quality transit, with at least 50 percent of AHSC funds directed toward affordable housing and all AHSC funds used for sustainable transportation infrastructure and affordable housing. RIPAs must be located within a rural area.

Figure 3: AHSC program requirements and procedures

Project Area Types	Transit-Oriented Development (TOD) Project Area	Integrated Connectivity Project (ICP) Project Area	Rural Innovation Project Area (RIPA)
Transit Requirements (All Project Areas) §102	▪ MUST include **Qualifying Transit** ▪ **Qualifying Transit** includes various forms of **Rail Service**, **Bus Service** and **Flexible Transit Service**. ▪ All Project Areas MUST also include a **Transit Station/Stop,** served by at least one **Qualifying Transit** line departing two or more times during **Peak Hours** (unless it is **Flexible Transit Service**). This level of service must have been publicly posted by the provider at some point between January 2020 and the time of application. *Note: ICP/RIPA projects that propose addition of High Quality Transit will remain eligible as an ICP/RIPA.*		
Project Area Specific Transit Requirements §102	▪ MUST be served by **High Quality Transit** ▪ Headway frequency of 15 minutes or less during **Peak Hours** ▪ Must operate on a railway or be a **Bus Rapid Transit (BRT)** service that either fully or partially operates on a dedicated bus-only lane	▪ CANNOT be served by **High Quality Transit**	▪ CANNOT be served by **High Quality Transit** ▪ MUST be located within a **Rural Area**
Required AHSC Funded Components §102 & §103	▪ At least fifty (50) percent of **AHSC Program** funds MUST be used for **Affordable Housing** (which includes **Affordable Housing Developments** or **Housing Related Infrastructure**) AND ▪ At least one other type of **Eligible Capital Project or Program Cost**	▪ At least fifty (50) percent of **AHSC Program** funds MUST be used for **Affordable Housing** (which includes **Affordable Housing Developments** or **Housing Related Infrastructure)** ▪ **AHSC Program** funds MUST be used for **Sustainable Transportation Infrastructure** AND **Affordable Housing** (which includes **Affordable Housing Developments** or **Housing Related Infrastructure)**	

Source: California Strategic Growth Council, 2021

Since 2015, there have been five rounds of AHSC awards. The latest cycle, round 5 of funding, provided a total of $552 million in funding to 55 projects (California Strategic Growth Council, n.d.-a). Projects funded under this cycle included the Fruitvale Transit Village IIB in Oakland, a TOD project providing 169 new affordable housing units out of 181 total units. The funded project also incorporates several aspects of the Fruitvale Community Transportation Plan, including new bike facilities and pedestrian improvements, with total funding of $39,966,039 from AHSC. Another project funded this cycle is Entrada in Riverside, an ICP providing new affordable housing units and expanding the transit system, with $22,121,206 in funding from AHSC. Approximately $405 million has been set aside in grants and loans, or a combination, for round 6, to be announced October 28, 2021 (California Strategic Growth Council, n.d.-c).

Transit and Intercity Rail Capital Program

TIRCP is a competitive grants program established through SB 862 in 2014 and modified by SB 9 in 2015. The program's purpose is to fund capital improvements that modernize public transit systems in California. Its goals include reducing GHG emissions through improvements and expansions to transit services that increase ridership, integrate the state's rail system, and boost transit safety. The program's enabling legislation designates 25 percent of available funds to projects that benefit disadvantaged communities and, as a GGRF program, TIRCP must also meet priority population targeting requirements, which for FYs 2020–21 and 2021–22 is set at 90 percent.

TIRPCP funding comprises "a portion of the Transportation Improvement Fee revenues established by SB 1 and a continuous appropriation of 10 percent from the quarterly Cap and Trade auction proceeds deposited in the GGRF established through AB 32, plus any annual budget allocations provided by enacted budget bills" (California State Transportation Agency, 2019). Anticipated revenue is used to determine the TIRCP fund estimate and award amount. Applications for TIRCP run on five-year cycles with about $500 million of grant funds awarded per cycle. Since its inception in 2015, the program has provided over $5.8 billion for selected projects. By law, at least 25 percent of available funds must benefit disadvantaged communities, and recent program requirements have exceeded this threshold. Funding for this program is disbursed as reimbursements for project costs incurred after the project is selected. Additionally, after allocation, funded projects must be awarded within 6 months and completed within 36 months.

To be eligible for the program, applicants need to be public agencies that operate or plan intercity or commuter passenger rail services, urban rail transit services, or bus or ferry transit services. Projects that qualify for TIRCP funding include rail capital projects; intercity, commuter, and urban rail projects that increase service levels, improve reliability, or decrease travel times; rail, bus, and ferry integration implementation; and BRT or other bus and ferry investments. Projects are evaluated through a competitive process. Applicants must show how they achieve GHG emissions reduction using CARB's quantification methodology, provide the forecasted ridership increases resulting from the project, address how the project integrates rail and transit operations to ameliorate connectivity and the travel experience, and discuss safety improvements. Secondary criteria for evaluating applications include additional measures for the reduction of GHG emission and VMT not captured by CARB's methodology as well as details on how the project provides benefits to disadvantaged groups and low-income communities. TIRCP does not have matching requirements, but programs with matching funds or funding from additional sources, like STIP, LCTOP clean vehicle programs, and state transportation bond funds, are preferred.

The most recent cycle for TIRCP was in 2020, and $500 million was awarded to 17 recipients. The selected projects leverage an additional investment of $4.9 billion. A project that was awarded one of the highest amounts is LA Metro, which received $107,050,000 for a zero-emission propulsion service pilot project on the Metrolink Antelope Valley Line, creating 60-minute bidirectional service on the entire line, and 30-minute bidirectional service between Los Angeles Union Station and Santa Clarita. The purchase of seven zero-emission buses to enhance and extend Route 14 for the Santa Monica Big Blue Bus was awarded $1,105,000. (California State Transportation Agency, 2020a).

Low-Carbon Transit Operations Program

LCTOP is one of several programs established through SB 862 in 2014 by the California Legislature. The goal of LCTOP is to "provide operating and capital assistance for transit agencies to reduce greenhouse gas emission and improve mobility, with a priority on serving disadvantaged communities" (California Transportation Commission, n.d.-b). Caltrans administers LCTOP in coordination with CARB and the State Controller's Office (SCO). Caltrans is responsible for ensuring that LCTOP funding projects meet statutory requirements in terms of eligibility, GHG reduction, disadvantaged community benefit, and any other requirements by law (California Transportation Commission, n.d.-b).

In addition to SB 862, which establishes the LCTOP, the fund must follow the following statutory requirements: AB 1150, SB 32, and SB 1119. AB 1150 redefines the minimum investment required for low-income communities and households. AB 1150 requires a minimum of 25 percent of the proceeds to be invested in projects located within and benefiting individuals living in disadvantaged communities, 5 percent of proceeds must be invested in projects located and benefiting individuals living in low-income communities or with benefit to low-income households statewide, and an additional 5 percent toward projects located and benefiting individuals residing in low-income communities or that

provide benefit to low-income households within half a mile of a disadvantaged community (California Air Resources Board, n.d.). Recent program targets have exceeded this threshold, with priority population targets of 80 percent for LCTOP.

LCTOP serves to fulfill CARB requirements under SB 32 to reduce GHG emissions by 40 percent below 1990 levels by 2030 (Caltrans, Division of Rail and Mass Transportation, 2020). Furthermore, under SB 1119, LCTOP must waive the requirement for recipient transit agencies that serve disadvantaged communities to expend 50 percent of their total funding on projects that benefit disadvantaged communities if the funding is used for one of the following purposes: 1) to create or expand transit service that serves disadvantaged or low-income communities; 2) to create transit fare subsidies and conduct fare integration technology improvements, and 3) to purchase zero-emission transit buses and any supporting infrastructure (California Transportation Commission, n.d.-b; SB-1119 Low Carbon Transit Operations Program, 2018).

The LCTOP fund was established as a noncompetitive, formulaic program that has received 5 percent of annual action proceeds since the beginning of FY 2015–16. Given that the program is based on State Transit Assistance eligibility funds, 50 percent of the funds are meant for regional entities, and 50 percent of funds are for transit operators (California Transportation Commission, n.d.-b). The Department of Finance releases auction proceeds quarterly to the LCTOP fund after the Cap-and-Trade totals are finalized. Afterwards, through a formulaic process, the SCO determines the amount to be awarded to each recipient. In addition to selecting the funds allocated for LCTOP, SCO also prepares a list of eligible recipients in accordance with Section 39719 of the health and safety codes. The LCTOP funds come from auctions in February, May, August, and November each year. SCO must release the funding amount to Caltrans by February to meet the Spring Allocation Request due date (California Transportation Commission, n.d.-b).

Projects eligible for LCTOP funding include bus or rail service expansions, intermodal transit facility expansion, equipment acquisition, fueling, and maintenance, as well as other costs to operate those services or facilities. All projects must reduce GHG emissions. Agencies receiving LCTOP funding who serve disadvantaged communities must use at least 50 percent of the total funding received to benefit disadvantaged communities (California Transportation Commission, n.d.-b).

During FY 2019–20, LCTOP awarded $146,054,354 in funding. Recent projects include the capital project for Plumas County Transportation to construct a solar-illuminated charging station ($38,973), LA Metro to install new stationary and portable charging equipment as part of the Electric Bus Charging Infrastructure project ($39,0098,039), and the City of Arbing to replace diesel buses with zero-emission buses and install charging station infrastructure ($41,262) (Caltrans, Division of Rail and Mass Transportation, 2019).

Transformative Climate Communities Program

TCC was developed through AB 2722 to provide funding for neighborhood-level, community-led climate plans (California Department of Conservation, n.d.). TCC funds community-led development and infrastructure projects focused on reducing GHG emissions while achieving environmental, health, and economic benefits for disadvantaged communities (California Strategic Growth Council, n.d.-d). The SGC administers TCC in partnership with the Department of Conservation (California Strategic Growth Council, 2019a). The program is funded through the California Cap-and-Trade program as part of the California Climate Investment statewide initiative (California Strategic Growth Council, 2019b).

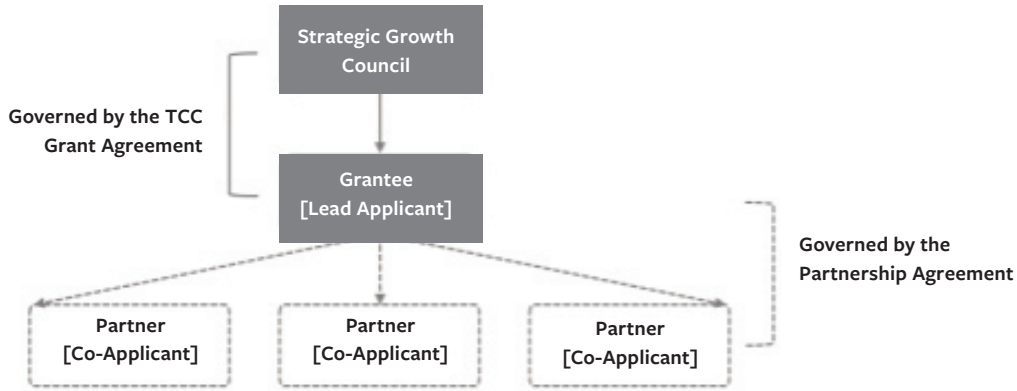
In addition to following AB 2722, TCC supports AB 32 to reduce GHG emissions to 1990 levels by 2020 and SB 32 to reduce GHG emissions to 40 percent below 1990 levels by 2030 (California Strategic Growth Council, 2019b). Additionally, TCC must follow SB 535 by spending a minimum of 25 percent of GGRF to benefit disadvantaged

communities as defined by the CalEnviroScreen 3.0, and AB 1550 by spending an additional minimum of 10 percent of funds to benefit low-income communities or households (California Strategic Growth Council, 2019b).

TCC funds and empowers communities most impacted by pollution to develop goals, strategies, and projects to lead transformative climate initiatives and generate a community vision aligned with the TCC Program Objective. As illustrated in Figure 4, all potential applicants must create a Collaborative Stakeholder Structure through a partnership agreement that describes the "governance, organization, and financial relationship of the Collaborative Stakeholder Structure." The Collaborative Stakeholder Structure must include: 1) at least one eligible project lead; 2) a public agency; and 3) community residents or community-nominated members that are not co-applicants (California Strategic Growth Council, 2019a).

Eligible projects leads include, but are not limited to, "community-based organizations, local governments, nonprofit organizations, philanthropic organizations and foundations, faith-based organizations, coalitions or associations of nonprofit organizations, community development finance institutions, community development corporations, joint powers authorities, and/or tribal governments" (California Strategic Growth Council, 2019b). The Collaborative Stakeholder Structure is responsible for implementing the TCC proposal and following TCC guidelines.

Figure 4: Collaborative stakeholder structure



Source: California Strategic Growth Council, 2019b, p. 6

Project areas eligible for funding can be determined using the TCC Mapping Tool. Applicants must use the TCC Mapping Tool to develop an eligible TCC funding area, which must contain at least 51 percent of census tracts within the top 10 percent of disadvantaged census tracts based on the CalEnviroScreen 3.0 and the low-income census tracts defined by AB 1150. The remaining 49 percent of census tracts within the project area must be in the top 25 percent of census tracts within disadvantaged or AB 1550 low-income communities (CalEPA & OEHHA, n.d.). Additionally, project areas must not be larger than five square miles (California Strategic Growth Council, 2019b). Potential projects eligible for funding include affordable and suitable housing developments, transit stations and facilities, bicycle and carshare programs,

residential weatherization and solar projects, water-energy efficient installations, urban greening projects, bicycle and pedestrian facilities, low-carbon transit vehicles and clean vehicles rewards, and health and well-being projects (CalEPA & OEHHA, n.d.).

So far, TCC has provided three rounds of funding. During round 1, TCC awarded three implementation grants, one for $66.50 million and two others about $33.5 million each, in addition to 10 planning grants of about $170,000 each. The second round of funding awarded two implementation grants of about $23 million each, and five planning grants for $200,000 each (California Strategic Growth Council, 2019a). During FY 2019–2020, round three of funding was budgeted for approximately $60 million (California Strategic Growth Council, 2019a). However, due to the COVID-19 pandemic, SGC was directed to award only up to $42.15 million (California Strategic Growth Council, 2020). Organizations and project areas that received funding during round 1 or 2 were not eligible for round 3 funding (California Strategic Growth Council, 2019b).

In June 2020, SGC awarded $48.1 million to three implementation grants and $600,000 among three planning grants (California Strategic Growth Council, 2020). The implementation awardees included:

- Better Neighborhoods, Same Neighbors: An East Oakland Neighborhood Initiative received $28,200,000 toward projects focused on housing, community greening, bike-sharing, and planting justice.
- Eastside Climate Collaborative in Riverside received $9,080,894 toward projects focused on complete streets, zero-emission bus acquisition, green energy sources, green jobs, and urban forest renovation.
- Stockton Rising received $4,869,106, in addition to funds that become available for the 2019–20 budget, toward projects that focus on wellness trails, complete streets, housing, and solar/EV charging for low-income families.

Sustainable Transportation Planning Grant Program

Established through SB 1, the STPG program seeks to advance Caltrans' mission of delivering a "safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability" by funding transportation projects that improve public health, social equity, environmental justice, and the environment (Caltrans, Division of Transportation Planning, 2021b). Reducing GHG emissions to meet the state targets of 40 and 80 percent below 1990 levels by 2030 and 2050 is the primary purpose of this Caltrans-administered program (Caltrans, Division of Transportation Planning, 2021a). Figure 5 describes the grant program objectives.

Funds for this grant program total $34.5 million a year, including $9.5 million from state and federal grants and $25 million from SB 1. The STPG includes four types of grants: Sustainable Communities Competitive, Sustainable Communities Formula, Strategic Partnerships, and Strategic Partnerships – Transit. The Sustainable Communities Competitive process includes $12 million from the state Road Maintenance and Rehabilitation Account (RMRA) and $5 million from the State Highway Account. Of the total $17 million, $3 million is reserved for technical projects. This grant has a maximum of $700,000 and a minimum of $100,000. Applications from disadvantaged communities have a lower grant minimum of $50,000. The Sustainable Communities Formula grant comprises $12.5 million funds from RMRA and state funds. The Strategic Partnerships grant includes $1.5 million from FHWA and other federal funds and has a minimum of $100,000 and a maximum of $500,000. The Strategic Partnerships – Transit application has $3 million available from FTA and other federal funds. This process has a maximum of $500,000 and a minimum of $75,000 for rural RTPAs, and $100,000 for MPOs (Caltrans, Division of Transportation Planning, 2021a).

Most recently, the program distributed approximately $21.5 million in grant awards to 59 recipients out of 169 applicants in FY 2020–21. The program dispensed an additional $12.5 million in Sustainable Communities Formula grants to MPOs to augment their RTP/SCSs, for a total of $34 million (California Transportation Commission, n.d.-c).

Figure 5: Sustainable Transportation Planning Grant objectives

Objective	Description
Sustainability	Promote reliable and efficient mobility for people, goods, and services, while meeting the State's GHG emission reduction goals, preserving the State's natural and working lands, and preserving the unique character and livability of California's communities.
Preservation	Preserve the transportation system through protecting and/or enhancing the environment, promoting energy conservation, improving the quality of life, and/or promoting consistency between transportation improvements and State and local planning growth and economic development patterns.
Accessibility	Increase the accessibility of the system and mobility of people, inclusive of those with disabilities, and freight.
Safety	Increase the safety and/or security of the transportation system for motorized and active transportation users.
Innovation	Promote the use of technology and innovative designs to improve the performance and social equity of our transportation system and provide sustainable transportation options.
Economy	Support the economic vitality of the area (i.e. enables global competitiveness, enables increased productivity, improves efficiency, increases economic equity by enabling robust economic opportunities for individuals with barriers to employment and for Disadvantaged Business Enterprise (DBE), etc.).
Health	Decrease exposure to local pollution sources, reduce serious injuries and fatalities on the transportation system, and promote physical activity across the lifespan, inclusive of those with disabilities, especially through transportation means.
Social Equity	Promote transportation solutions that focus on and prioritize the needs of disadvantaged communities most affected by poverty, air pollution and climate change, and promote solutions that integrate community values with transportation safety and performance while encouraging meaningful public involvement in the transportation decision making process.

Source: Caltrans, Division of Transportation Planning, 2021a, p. 4

Each grant type has its own eligibility criteria. For the Sustainable Communities Competitive process, at least 50 percent of the available funds must go to projects that benefit disadvantaged communities, unlike the rest of the AB 285 programs, which are required to follow SB 535 and AB 1550, including funding for disadvantaged communities, low-income communities, and low-income households. While the STPG is not under the same statutory obligations as the rest of AB 285 programs, it prioritizes funding toward disadvantaged communities, including those identified by SB 535 and AB 1550. Additionally, the STPG prioritizes funding toward Native American Tribal Governments, regionally or locally defined disadvantaged communities, and disadvantaged communities identified by the California Healthy Places Index and the California Department of Education.

Applications must show how the project fits the goals of furthering the region's RTP/SCS, reducing GHG emissions, and the grant program objectives. An active transportation master plan, climate change adaptation plans for transportation facilities, and Complete Streets plans are examples of a project that might qualify for funding through this grant program.

On the other hand, the Sustainable Communities Formula distributes the funds to MPOs using:

1. A base allocation
2. A two-part population component that distributes funds by the proportion of the total population of each MPO based on California Department of Finance estimates each January
3. An air quality component based on the proportion of federal Congestion Mitigation Air Quality (CMAQ) funds to total programmatic FHWA PL funds (California Transportation Commission, n.d.-d)

Figure 6 shows how funds are typically distributed among the MPOs. Similar to the competitive program, projects must meet the grant program objectives.

Figure 6: Sustainable Transportation Planning Grant allocations for MPOs

Sustainable Communities Formula Grants	
Metropolitan Planning Organization	**Total Formula Grant Allocation**
Tahoe Metropolitan Planning Organization	$160,750
Madera County Transportation Commission	$164,209
Kings County Association of Governments	$162,943
Shasta Regional Transportation Agency	$163,172
Butte County Association of Governments	$180,569
Merced County Association of Governments	$197,424
San Luis Obispo Council of Governments	$195,962
Tulare County Association of Governments	$246,944
Santa Barbara County Association of Governments	$224,579
Stanislaus Council of Governments	$291,053
San Joaquin Council of Governments	$341,671
Kern Council of Governments	$374,899
Association of Monterey Bay Area Governments	$315,537
Fresno Council of Governments	$407,484
Sacramento Area Council of Governments	$774,991
San Diego Association of Governments	$1,021,553
Metropolitan Transportation Commission	$2,106,140
Southern California Association of Governments	$5,170,390
Total	**$12,500,000**

Source: Caltrans, Division of Transportation Planning, 2021a

The Strategic Partnerships and Strategic Partnerships – Transit grants are intended to fund projects that meet the federal planning factors in addition to the grant program objectives.

Grant applications undergo two levels of review: the Caltrans District Review and Evaluation and the Caltrans Headquarters Interagency Review Committees Evaluation. For the district review, applications are evaluated by "content, submission of proper documentation, overall relationship to regional and local planning efforts" (Caltrans, Division of Transportation Planning, 2021a). Afterwards, the top-ranking applications are recommended for further review. The final

review functions as a high-level review to prevent misalignment with state efforts or avoid duplicate efforts. Overall, applications are reviewed based on "how well they are able to describe the project, justify need, incorporate the grant-specific objectives, and develop a Scope of Work and Cost and Schedule" (Caltrans, Division of Transportation Planning, 2021a).

Caltrans might require pre-award audits from selected grantees when an award is higher than $250,000 to ensure that the recipients have an appropriate financial management system. All grants in the program require a local match of cash, in-kind, or a combination of the two. Federal funds are not eligible to meet the match requirement. As seen in Figure 7, the Sustainable Communities and the Strategic Partnerships – Transit grants require an 11.47 percent match, while the Strategic Partnerships grant needs a 20 percent match. Additionally, grant recipients must maintain an accounting system listing expenditures and additional matching funds by line item. To track the progress and expenditures of each grant, recipients must submit quarterly progress reports to Caltrans (Caltrans, Division of Transportation Planning, 2021a).

Figure 7: STPG program minimum local match requirements

Minimum Local Match Requirements (Percentage of Total Project Cost)			
Grant Program	**Grant Request**	**Local Match**	**Total Project Cost**
Sustainable Communities and Strategic Partnerships –Transit	**88.53%** Example: $300,000	**11.47%** Example: $38,868	**100%** Example: $338,868
Strategic Partnerships	**80%** Example: $300,000	**20%** Example: $75,000	**100%** Example: $375,000

Source: Caltrans, Division of Transportation Planning, 2021a, p. 27

Additional Programs

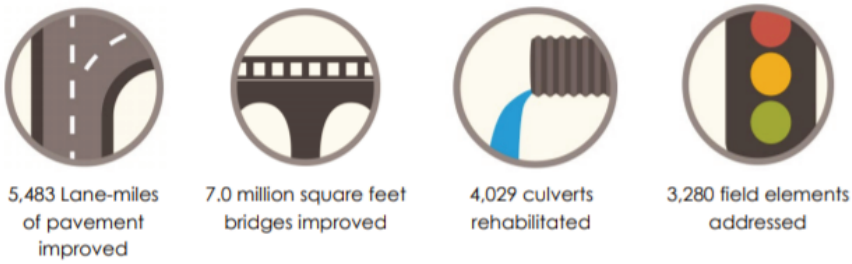
Across additional programs not specified in AB 285, the overarching goal is improving mobility across California through diverse forms of transportation. Most of these programs also aim to reduce GHG emissions and enhance air quality. However, the Local Transportation Fund (LTF) does not have specific language regarding climate change adaptation requirements for funding. Most of these programs receive more funding than AB 285 programs, with SHOPP, LTF, and the Interregional Transportation Improvement Program (ITIP) receiving the greatest funding among the programs analyzed in this paper. The Active Transportation Program (ATP) is the most similar to AB 285 programs with a primary objective of funding transportation projects to improve the environment as well as support community needs. However, all the additional programs lack a statutory commitment to directing funding toward disadvantaged communities. Most programs consider only the impact of projects on disadvantaged communities within the project evaluation process.

State Highway Operations & Protection Program

SHOPP was established in 1977 through the California Government Code section 14526.5 with the goal of requiring Caltrans to "prepare a state highway operation and protection program for the expenditure of transportation funds and major capital improvements" (Caltrans, 2020b). SHOPP serves as California's "fix-it-first" program, with a primary focus on providing funds to repair and preserve the State Highway System, including funding emergency repairs, safety improvements, and some highway operational improvements.

The CTC must approve SHOPP; however, the Office of SHOPP Management within Caltrans is responsible for planning, developing, managing, and reporting the SHOPP four-year portfolio (Caltrans, 2020b). The 2020 SHOPP was prepared per the asset management process established through the California Transportation Asset Management Plan and implemented through the State Highway System Management Plan. These programs format the SHOPP asset classes, performance measures, and targets under SB 486. To meet the 2027 performance targets established by SB 1, SHOPP contains projects that fulfil these goals along four primary asset classes: 1) pavement improvement; 2) bridge improvement; 3) culvert rehabilitation; and 4) field elements (Figure 8).

Figure 8: 2020 SHOPP improvements



Source: Caltrans, 2020b, p. ii)

SHOPP is a biennial program, adopted no later than April 1 of each even-numbered year. Consistent with the biennial STIP Fund Estimate, each SHOPP covers the last two years of the previous SHOPP and adds two new years of programming capacity (Caltrans, 2020b). SHOPP is funded through revenue from federal and state taxes, including the State Highway Account, the Federal Highway Trust Fund, and the RMRA. Additionally, SB 1 provided a new set of taxes and fees to be deposited into the RMRA, and SB 1 created an excise tax with annual adjustments for annual inflation. Taxes that fund SHOPP are fiscally constrained by the STIP Fund Estimate. STIP is created by Caltrans and adopted by the CTC (Caltrans, 2020b). SB 1 created further regulations for the CTC's management of SHOPP to extend accountability and transparency, which are outlined in detail in the CTC SHOPP Guidelines released in June 2019.

In the initial stage, the project concept is outlined and refined. Projects enter a formal planning stage 5–6 years before construction. During the conceptual and formal planning phase, agencies must determine the project's scope, cost, and schedule. During the formal planning stage, the project sponsor should conduct stakeholder engagement. After a project completes the formal planning phase, it can then be considered by the CTC for programing and fiscal commitment. SHOPP does not provide funding for the conceptual and formal planning phases. Upon completion of formal project planning, the project is ready for programming and fiscal commitment by the CTC (Caltrans, 2020b).

Projects eligible for funding include significant capital improvements for state highway and bridge maintenance, safety, operation, and rehabilitation. Improvements can include adding auxiliary lanes near the ramp, slow vehicle lanes, curve and vertical alignment correction, and traffic management systems. SHOPP also provides consideration for state projects that help implement complete street elements, like pedestrian and bicycle facilities, emissions reduction, and enhancements for wildlife connection. These additional projects are usually co-benefits to SHOPP's primary focus to provide funds to repair and preserve the State Highway System. However, SB 1 does require that Caltrans consider climate change for all investment decisions. To that end, all funded projects must not add capacity to the State Highway System, except for some new auxiliary lanes (Caltrans, 2020b).

The 2020 SHOPP provides funding for projects covering FYs 2020-21 through 2023-24, with a total of $17.4 billion to be implemented over this period. Examples of the kinds of projects funded during the 2020 cycle include the San Diego–Coronado Bay Bridge to the Route 75/5 connector overcrossing and bridge rehabilitation, funded at $28,408; rehabilitating drainage systems, replacing overhead signs and structures, and updating the Transportation Management System near King City, Greenfield, Soledad, Gonzales, and Salinas, funded at $18,650; and the Broome Road project to rehabilitate the roadway, install Transportation Management System elements, upgrade the lighting, median barrier, guardrail, and bridge railing, rehabilitate drainage systems, and enhance highway worker safety, funded at $165,515.

Local Partnership Program

The LPP was established in 2017 through SB 1. The LPP appropriates $200 million annually to local and regional transportation agencies from the RMRA. The LPP funds are meant to serve local and regional agencies with voter-approved taxes or fees to fund transportation projects that improve aging infrastructure, road conditions, active transportation, and transit and rail and provide health and safety benefits (California Transportation Commission, 2020a).

The CTC is responsible for allocating LPP funding to local and regional transportation agencies (California Transportation Commission, 2020a). Each funding cycle provides three years of funding, with the 2020 LPP including funding to cover FYs 2020–21 through 2022–23. Funding for new cycles is completed biannually. Of the $200 million allocated annually, $20 million is set aside for Formulaic Incentive Funding, and the remaining $180 million is distributed through the Formulaic (60 percent) and Competitive (40 percent) programs. Funding and eligibility for the LPP follows Streets and Highways Code sections 2032 and 2033. Additionally, Government Code 8879 defines the conditions for state-local partnership program accounts that fund LPP. This code highlights that the state-local partnership program should reward counties that have approved fees or taxes solely dedicated for transportation improvement, while providing funding for a variety of capital projects that provide mobility, accessibility, system connectivity, safety, or air benefits.

Formulaic Program

The CTC allocates funding for the Formulaic program based on voter-approved revenue from sales taxes, parcel or property taxes, tolls, and other taxes dedicated to transportation improvements. Only applicants who have received "voter approval for taxes, tolls or fees, which taxes, tolls or fees are dedicated solely to transportation improvement" are eligible for Local Partnership Formulaic Program funding (California Transportation Commission, 2020a).

The CTC establishes (or changes) the formulaic distribution before each programming cycle and allocates funds prior to each program cycle with two sets of funds created in the state, one for southern counties and another for northern counties, with tax revenues collected from each area allocated into that region's fund (California Transportation Commission, 2020a).

Of the funding available to the southern counties, 75 percent is distributed based on the population of the county compared to the total population of counties in Southern California, and 25 percent is allocated based on the total sales taxes collected in the county compared to the total sales tax revenue collected in all Southern California counties (California Transportation Commission, 2020a). And the same process applies to the northern counties. For cities with voter-approved local sales tax for transportation funding in counties without a countywide sales tax, the CTC uses a formulaic funding distribution based on the city's population and the city's sales tax revenue.

All funds are distributed only to agencies within counties that collect voter-approved taxes for transportation improvement. All eligible taxing authorities receive a minimum of $200,000 annually. Additionally, all projects funded through the Formulaic program require a one-to-one match from private, local, federal, or state funds, with a few exemptions. A project must start construction or right-of-way acquisition within 10 years of receiving funding (California Transportation Commission, 2020a).

Projects eligible for Formulaic program funding include improvements to the State Highway System, local road systems, and transit facilities, acquisition, retrofit, or rehabilitation of buses or other transit equipment, improvements to bicycle or pedestrian safety or mobility, mitigating transportation's impact on the environment, and road maintenance and rehabilitation (California Transportation Commission, 2020a). The 2020 Formulaic cycle includes funding for FYs 2020–21 through 2022–23. Recent projects included improving Route 156 in San Benito County; extending the Green line in Los Angeles County, purchasing 30 buses in San Mateo County, and rehabilitating Erle Road in Yuba County (California Transportation Commission, 2021a).

Competitive Program

Funding from the LPP is available for applicants that have voter-approved taxes, tolls, fees, or imposed fees dedicated solely to transportation improvement. The Competitive program funding is divided into two parts, with a portion allocated to authorities with voter-approved taxes, tolls, or fees, and the other portion for applications with only imposed fees (California Transportation Commission, 2020a).

Projects require a one-to-one match with a private, local, federal, or state fund, with a few exceptions. Projects with discretionary federal funds at the time of nomination are given priority. Projects considered for funding must have completed the project-level processes for the California Environmental Quality Act (CEQA), and if federally funded, the National Environmental Policy Act (California Transportation Commission, 2020a).

Projects eligible for Competitive program funding improvements to the State Highway System, local road systems, and transit facilities, acquisition, retrofit, or rehabilitation of buses or other transit equipment, improvements to bicycle or pedestrian safety or mobility, mitigating transportation's impact on the environment, and road maintenance and rehabilitation (California Transportation Commission, 2020a).

A total of $27,671,000 was recommended for funding through the 2020 Competitive program, resulting in an oversubscription by $7,671,000 of the $20 million annual available funding. Recent projects include the Bridge Street widening and complete streets project in Sutter County; the NextGen bus speed and reliability improvement project in LA County, and the Route 55 improvement in Orange County (California Transportation Commission, 2021b).

Interregional Transportation Improvement Program

The ITIP is a Caltrans-proposed component of STIP that is guided by the Interregional Transportation Strategic Plan (ITSP), established in 1998 in response to SB 45 (1997) (Caltrans, n.d. -a). ITSP was created "to improve interregional

mobility for people and goods across the state of California on highway and passenger rail corridors" (Caltrans, Division of Transportation Programming, 2019). The state of California initially funded STIP through a price-based tax. However, through SB 1, the funding switched to an incremental excise tax with a provision for annual inflation adjustments (Caltrans, Division of Transportation Programming, 2019). The STIP provides funding for the Regional Improvement Program (RIP) and the ITIP, with 75 percent of the STIP funding directed toward RIP and 25 percent to ITIP. Caltrans administers the ITIP with approval from the CTC.

The 2020 ITIP provides funding for FYs 2020–21 through 2024–25 (Caltrans, Division of Transportation Programming, 2019). Streets and Highway Code section 164 requires that at least 60 percent of the funded projects are outside urbanized areas on the Interregional Road System and for intercity passenger rail. Of the 60 percent, at least 15 percent must go toward intercity passenger rail projects. Up to 40 percent of the remaining funds can be programmed anywhere in the state, however it should be split 40/60 between projects in Northern and Southern California, respectively.

In 2020, the STIP fund provided $54,414,000 for new projects, and $572,967,000 was carried forward from projects funded through the 2018 STIP. The new funds will be available in FY 2024–25, with a combined $625,381,000 to fund projects during the 2020 STIP cycle. From this capacity, a total of $625,350,000 was programmed (Caltrans, Division of Transportation Programming, 2019).

Projects eligible for ITIP funding include improving state highways, intercity passenger rail systems, and interregional movement of people, goods, and vehicles (Caltrans, Division of Transportation Programming, 2019). The ITSP further refines potential eligible projects by highlighting corridors of importance to statewide movement of goods and people. In California, the Interregional Road System consists of 93 highway routes, of which the ITSP has identified 11 Strategic Interregional Corridors that provide connectivity statewide (Figure 10).

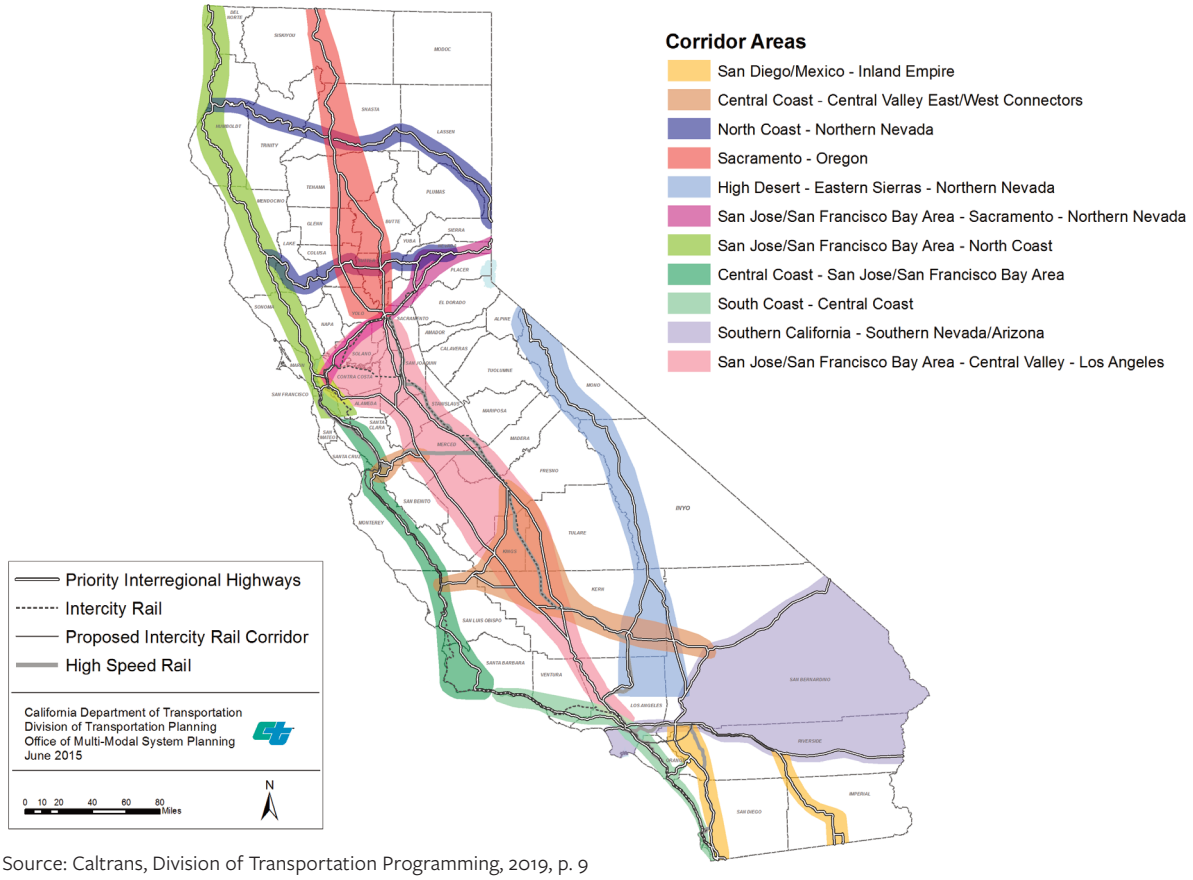
Potential ITIP projects are evaluated through several performance indicators to ensure consistency with the ITSP and STIP guidelines listed in Figure 9 (Caltrans, Division of Transportation Programming, 2019). For projects to be considered accessible, they must focus on eliminating a constraint in the overall corridor performance, improving the corridor-wide movement of people and goods to and from economic activity, or improving regional and local transit systems. To increase interregional reliability, a project must shorten travel time, improve the overall corridor operation system, or alleviate congestion created by the movement of people or goods across the region. To measure safety, projects are evaluated in terms of their ability to reduce safety conflicts between different forms of transportation, enhance safety or emergency responsiveness along a corridor, or improve safe travel with the potential to reduce fatalities or serious injuries. Integration is assessed by evaluating whether a project facilitates connection with other modes of travel to create a multimodal traveling network in the corridor or connectivity with different modes of interregional travel, or improves operations of freight-rail traffic. Projects are considered economically beneficial if they are located on a priority interregional facility, carry significant truck volume or freight and goods movement, and benefit the greater state economy. The sustainability of projects is assessed by measuring whether the project promotes mode shift or sustainability principles, such as energy conservation or transition to zero-emission technology, achieves a reduction of GHG emissions, or directly benefits disadvantaged communities.

Projects also are evaluated in terms of partnership. Funding is prioritized for projects with Interregional Improvement Programming funds comprising more than 20 percent of the total project funding, an all-new RIP shared program on the State Highway System (Caltrans, Division of Transportation Programming, 2019).

Figure 9: Adopted STIP guidelines and ITSP objectives	
Accessibility	Provide access for people and goods to and through all regions of California
Reliability	Ensure that the interregional transportation system is reliable and efficient for the movement of people, goods, services, and emergency response
Safety	Develop and operate a safe interregional transportation system for all travelers
Integration	Optimize multimodal connectivity throughout the interregional transportation system
Economy	Improve interregional connectivity to enhance California's diverse economy
Sustainability	Improve and manage California's interregional transportation system in an environmentally sensitive, economical, and equitable manner

Source: Caltrans, Division of Transportation Programming, 2019, p. 11

Figure 10: 2020 ITIP Strategic Interregional Corridors



Source: Caltrans, Division of Transportation Programming, 2019, p. 9

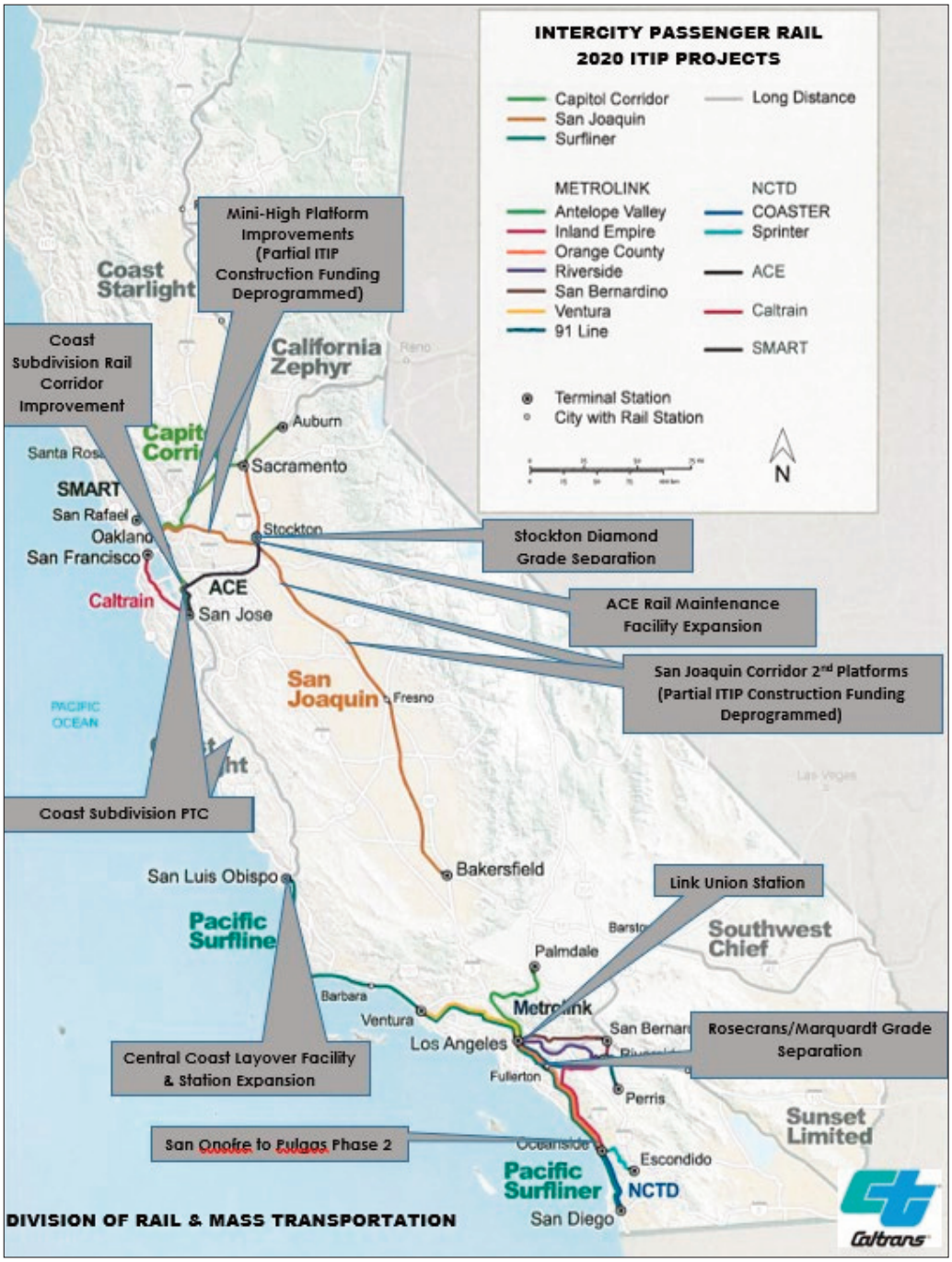
The 2020 STIP fund estimate provided $52,414,000 in new funding for the 2020 cycle, with $572,967,000 in financing for projects carried over from the 2018 ITIP. All new projects and projects carried over from the 2018 cycle are located within one of the eleven Strategic Interregional Corridors identified by STIP. Figure 11 shows the regional breakdown of the fund. In the 2020 ITIP, the Central Coast – Central Valley East/West Connectors corridor received the greatest amount of funding ($222,955,000) for projects. In addition to highway projects, the 2020 ITIP funded several Intercity Passenger Rail Projects (Figure 12), including the Mini-High Platform improvement in the Bay Area project and the Link Union Station in Los Angeles.

Figure 11: ITIP projects and associated Strategic Interregional Corridor

Strategic Interregional Corridors	Route	Project Description	District	County	2020 ITIP Total (1000s)
South Coast - Central Coast	Pac Surfliner	Central Coast Layover Facility	5	San Luis Obispo	$97,683
	Pac Surfliner	Link Union Station	7	Los Angeles	
	Pac Surfliner	Roscrans/Marquardt Grade Separation	7	Los Angeles	
	Pac Surfliner	San Onofre to Pulgas Phase 2	11	San Diego	
Central Coast - San Jose / San Francisco Bay Area	US 101	South Coast 101 HOV Lanes (Segments C, D, and E)	5	Santa Barbara	$0
San Jose/San Francisco Bay Area - North Coast	US 101	Eureka/Arcata Corridor Improvement	1	Humboldt	$45,057
San Jose/San Francisco Bay Area - Sacramento - Northern Nevada	Capitol	Coast Subdivision Rail Corridor Improvements	4	Alameda	$26,863
	Capitol	Coast Subdivision Positive Train Control Implementation	4	Various	
San Jose/San Francisco Bay Area - Central Valley - Los Angeles	San Joaquin	Second Platforms (Modesto and Turlock-Denair)	10	Stanislaus	$169,777
	San Joaquin	Mini-High Platform Improvements	10	Stanislaus/Fresno	
	San Joaquin	Stockton Diamond Grade Separation	10	San Joaquin	
	San Joaquin	Stockton Regional Rail Maintenance Facility Expansion	10	San Joaquin	
	SR 99	Tagus 6 Lane Widening	6	Tulare	
	SR 99	Tulare City Widening	6	Tulare	
	SR 99	South Madera 6 Lane Widening	6	Madera	
	SR 99	Livingston Widening - Southbound	10	Merced	
Sacramento Valley - Oregon	SR 70	Passing Lanes (Segments 2 and 3)	3	Butte	$13,400
High Desert - Eastern Sierras - Central Nevada	US 395	Olancha and Cartago Expressway	9	Inyo	$49,615
	SR 14	Freeman Gulch Widening Segment 2	6	Kern	
Central Coast - Central Valley East/West Connectors	SR 156	SR 156 West Corridor Study	5	Monterey	$222,955
	SR 41	Excelsior Expressway - 2 to 4 Lane	6	Fresno	
	SR 46	SR 46 Improvements (Cholame Widening, Route 41/46 WYE, Antelope Grade)	5	San Luis Obispo	
North Coast - Northern Nevada	SR 29	Segment 2B and 2C of the Lake 29 Expressway Project	1	Lake	$0
				Grand Total	$625,350

Source: Caltrans, Division of Transportation Programming, 2019, p. 19

Figure 12: 2020 ITIP Intercity Passenger Rail Projects



Source: Caltrans, Division of Transportation Programming, 2019, p. 20

Solutions for Congested Corridors Program

The SCCP was established by SB 1 to provide funding for projects aiming to "reduce congestion in highly traveled and highly congested corridors through performance improvements that balance transportation improvements, community impacts, and that provide environmental benefit" (California Transportation Commission, n.d.-e).

The CTC administers the SCCP and currently accepts nominations in two-year cycles. The CTC is responsible for tracking performance and reporting how well the funded projects are using the funds. In accordance with SB 1, each two-year cycle makes about $500 million available, or $250 million per year (California Transportation Commission, 2020b). Allocation requests for funds must be placed within the fiscal year of the project's programming. Projects selected are provided with the funds through a reimbursement process. Overall, SB 1 designates $2.5 billion over a 10-year period ($250 million annually) starting from 2017 (California Transportation Commission, n.d.-c).

SCCP projects can include improvements to state highways, local streets, railways, public transit, and bicycle and pedestrian facilities. To gain consideration for SCCP funding, regional transportation agencies, county transportation commissions, or Caltrans projects must be nominated. Priority is granted to projects where multiple entities seek funding collaboratively. Furthermore, nominated projects must be part of an existing regional transportation plan and a comprehensive multimodal corridor plan. To complete the comprehensive plan requirement, applicants must follow the Comprehensive Multimodal Corridor Plan Guidelines set by the CTC. Preference is given to comprehensive projects that collaborate with Caltrans and local or regional partners. However, only up to 50 percent of the funds available are used for projects nominated exclusively by Caltrans. While no matching funds are required, funding leverage is desirable as well as additional discretionary funds from federal, state, local, or private sources. Caltrans encourages applications from innovative projects on par with the state's climate goals. Nevertheless, funding from this program cannot go toward the construction costs of general-purpose lanes on state highways. Highway projects can only receive SCCP funding if it is directed toward HOV lanes, managed lanes, or operational improvements, such as interchanges, auxiliary lanes, and ramp modifications (California Transportation Commission, 2020b).

Nominated projects first undergo a screening process, and if passed, might be evaluated in collaboration with the "California Air Resources Board to review the air quality benefits; the Department of Housing and Community Development to review the efficient land use benefits; and Caltrans to review the Life-Cycle Benefit-Cost Analysis" (California Transportation Commission, 2020b).

Projects are primarily evaluated on their ability to address congestion by noting the level of congestion from all modes in a corridor and identifying the environmental and community impacts of the current condition. Nominations should note how the congestion problem would evolve if the project's changes were not applied. As a second primary evaluation criterion, nominations should describe how proposed solution would reduce congestion, why it is the best one for the corridor, and how the project incorporates benefits to transportation, community, and environment (California Transportation Commission, 2020b).

As secondary criteria, and part of the evaluation criteria highlighted in the Comprehensive Multimodal Corridor Plan Guidelines, nominations must also include quantitative and qualitative measures for safety, congestion, accessibility, economic development, environment, and land use. To address safety, project nominations must list current safety issues and how the proposed project could mitigate some of those problems. The application should also include how the project will improve accessibility for the people who use the corridor. An explanation of how the project will increase regional economic development benefits and access to economic opportunities is also required. As measures of the

environmental impact of the project, the nomination must include how the project will reduce GHG emissions and air pollutants. Finally, an analysis of land-use efficiency must be performed. Table 6 lists some examples of how each criterion can be measured (California Transportation Commission, 2018, 2020d).

Table 6: Examples of performance measures for SCCP consideration

Corridor Performance Measures for SCCP Consideration	Examples of Measures
Safety	Number of fatal and injury crashes; number of bicycle and pedestrian collisions
Accessibility	Access to multimodal choices, first-mile/last-mile considerations
Economic development, job creation, and retention	Truck time reliability; access to jobs and education
Improved air quality and GHG emissions reduction	Reduction of pollutants; reduction of GHG emissions
Land use	Increase in non-vehicle mode share; climate adaptation

Examples of projects that can receive SCCP funding include adding new HOV lanes, upgrading fare systems, adding zero-emission buses, or increasing biking facilities. The most recent cycle was in 2020 and included funding for FYs 2021–22 and 2022–23. From a pool of 21 applicants, seven projects were selected to collectively receive $500 million in funding during the two-year cycle. A Caltrans-nominated project in Los Angeles was recommended to receive $150 million—the highest amount of funding provided for this cycle—to convert the I-105 HOV lane to a High Occupancy Toll facility. The project that received the top ranking based on the criteria analysis was the Train Control Modernization Program for BART, which is estimated to cost $1.14 billion, but the nomination for SCCP funds requested only $60 million to upgrade the cabling system in various control rooms and installing new trail control raceways. On the lower end of the funding amount awarded, $25 million went to Napa to alleviate congestion in the Soscol Junction by constructing a new interchange with roundabouts, an elevated structure, and a Class I multiuse path (California Transportation Commission, 2020d).

Active Transportation Program

The ATP, administered by the Office of State Programs at the Caltrans Division of Local Assistance, was created through SB 99 and AB 101 in 2013. The ATP consolidates several federal and state programs, including the Safe Routes to School program, Transportation Alternatives Program (TAP), and the Bicycle Transportation Account. In 2016, the GGRF provided augmented funds to the ATP, and in 2017, SB 1 directed additional funding to the ATP.

In providing funding for projects that support active transportation modes, the ATP aims to increase the proportion of trips taken by walking or biking, improve non-motorized vehicle safety, advance regional active transportation efforts to reduce GHG emissions, improve public health outcomes, and ensure that disadvantaged communities benefit from the program (Caltrans, 2020a).

ATP funds are sourced from the federal TAP, the federal Highway Safety Improvement Program, State Highway Account, and the RMRA from SB 1 (California Transportation Commission, 2020c). The ATP runs on a two-year cycle with around $445 million available in total per cycle. The amount available is distributed among different types of applicants—50 percent goes to projects in the statewide competitive selection component, 40 percent is designated for MPOs, and 10 percent to small areas with populations of less than 200,000. Projects not selected in the statewide component are considered in one of the other components, depending on project location. Per the program's statute requirements, each category must assign 25 percent of their designated funding to projects that benefit disadvantaged communities (California Transportation Commission, 2020c). The distributions for the 2021 cycle included $245,921,000 for the statewide component, $44,156,000 to the urban and rural component, and $176,624,000 to MPOs. In addition, $4 million is reserved for the California Conservation Corps and Certified Local Community Conservation Corps (California Transportation Commission, 2021d).

To qualify for eligibility, applicants must be part of a local, regional, or state angency, transit agency, natural resources or public land agency, public school, tribal government, or Caltrans. Private nonprofit tax-exempt organizations can apply for ATP funding if the project is eligible for the Recreation Trail Program and it benefits the public. Because part of the ATP funding comes from federal sources, applications need to be federal-aid eligible. Only quick-build projects or those designated as state-only funding projects are exempt from this requirement (California Transportation Commission, 2020c).

ATP projects must fall within one of the following categories: infrastructure, non-infrastructure, combination, or plan. Infrastructure projects can include capital investments that meet the goals of increasing active transportation modes, such as secure bicycle parking, bikeway improvements, and Safe Routes to School projects. On the other hand, non-infrastructure projects can include active transit education or encouragement that show effectiveness in increasing active transportation use. Combination projects are those that include both infrastructure and non-infrastructure, components. The plan category involves active transportation plans, such as bicycle or pedestrian plans. Project applications are further categorized by size: large infrastructure or combination, medium infrastructure or combination projects, small infrastructure or combination, non-infrastructure only, and plan (California Transportation Commission, 2020c). Table 7 describes each category.

Table 7: Active Transportation Program project types

Application Type	Eligibility	Qualification	Notes
Large	Infrastructure or combination	$7 million or more	Subject to onsite reviews by Caltrans. Funding is available for pre-construction phases.
Medium	Infrastructure or combination	Greater than $2 million, less than $7 million	—
Small	Infrastructure or combination	$2 million or less	—
Non-infrastructure	Only non-infrastructure (excluding combination projects)	—	—
Plan	Only plans meeting criteria for benefiting a disadvantaged community	—	Plan applications cannot be combined with other types of projects.

Each application is assessed based on the criteria listed in Figure 13. Each of the criteria is weighted based on the importance for each category.

Figure 13: Active Transportation Program scoring methodology for project criteria

Scoring Topic	Large Inf. /I + NI	Medium Inf. /I + NI	Small Inf. /I + NI	Plan	Non-Infrastructure Only
Benefits to Disadvantaged Communities (DAC)	10	10	10	30	10
Need	38	40	52	20	40
Safety	20	25	25		10
Public Participation & Planning	10	10	10	25	15
Scope and Plan Layout Consistency and Cost Effectiveness	7				
Scope and Plan Layout Consistency		5	3		10
Context Sensitive & Innovation	5	5			5
Transformative Projects	5				
Evaluation and Sustainability					10
Leveraging	5	5			
Implementation & Plan Development				25	
Corps	(0 or -5)	(0 or -5)	(0 or -5)		(0 or -5)
Past Performance	0 to -10	0 to -10	0 to -10	0 to -10	0 to -10
Total	100	100	100	100	100

Source: California Transportation Commission, 2020c

The ATP is an oversubscribed funding program, with $2.3 billion of requests for $460 million in available funding (California Transportation Commission, 2021c). The CTC provides a list of additional programs that might provide funding for active transportation projects. This list includes programs like SHOPP, AHSC, TIRCP, TCC, LPP, and SCCP (California Transportation Commission, n.d.-a). To maximize effectiveness, the ATP requires non-infrastructure and non–Safe Routes to School funding requests of at least $250,000. A recent example of an infrastructure project that received ATP funding is the replacement of a 4-foot-wide wooden pedestrian bridge in the city of Santa Barbara with a 12-foot-wide bridge and a new 12-foot-wide bridge connecting two neighborhoods that were separated by a creek as well as adding a new sidewalk and safety lighting. The project's cost was $2,703,000 (City of Santa Barbara & Caltrans, 2020). Another project that received funding is a non-infrastructure project in Santa Cruz County to provide hands-on bicycle and pedestrian safety education for students through Safe Routes to School. This project received $447,000 (Santa Cruz County Health Services Agency, 2021).

Local Transportation Fund

The LTF program is a component of the TDA (SB 325) and is administered by the Caltrans Division of Rail and Transportation. It provides funding for projects that are part of regional transportation plans (Caltrans, n.d. -b). Projects that are eligible for funding include bicycle and pedestrian facilities, community and public transit, bus and rail projects, transportation planning, and other programming activities. Additionally, counties with less than 500,000 people in the 1970 census can the funds for local street and road construction if all the public transit needs are met.

LTF funding derives from ¼ cent of the state's sales tax and is distributed back to each county through the State Board (Caltrans, n.d. -b). In accordance with the TDA, the distribution of funds within a county is based on population. Furthermore, the TDA provides a performance measure requirement from transit operators to qualify for LTF funding. Farebox ratio, or fare-revenue-to-operating cost, is used for this purpose. The farebox ratio must be greater than the ratio that the transit operator had in FY 1978-79 or 20 percent, if the agency is in an urbanized area, and 10 percent for non-urban areas. In cases where the planning agency from an urbanized area is in a county with a population of less than 500,000, the farebox ratio can be 15 percent. If a transit agency fails to meet the farebox requirement during a fiscal year, its LTF funding is reduced. An exception to this requirement is projects that serve elderly populations, and the RTPA can set an appropriate performance measure and its threshold. Additionally, new lines or new areas serviced are exempt from meeting the farebox ratio on the first year of operation (Caltrans, Division of Rail and Mass Transportation, 2018).

Article 3 in the TDA requires two types of audits for LTF projects: fiscal and performance. The fiscal audit is conducted yearly and submitted to the State Controller's Office and the RTPA. The audit includes the farebox recovery ratio. Performance audits are triennial and are used to verify the efficiency and effectiveness of transit agencies and operators. These audits are submitted to Caltrans (Gahbauer et al., 2019).

To allocate funds, a priority system, as highlighted in Figure 14 in Appendix A, must be followed. Because the audits are a statutory requirement, they are given the highest priority, followed by planning and programming, pedestrian and bicycle projects, passenger rail projects, Consolidated Transportation Service Agency activities, and Article 4 and Article 8 claims (Caltrans, Division of Rail and Mass Transportation, 2018). Article 4 includes public transportation projects, and Article 8 includes all other allocations.

Figure 15 in Appendix A illustrates the funding allocations of Los Angeles County for 2020 and is an example of how LTF funding is distributed across different entities within the county. The entities that received the most funding included transit organizations, like LA Metro, Santa Monica's Big Blue Bus, and Foothill Transit.

Program Summary

STPG, TCC, and TIRCP all include low levels of funding toward increasingly competitive grants. STPG provides the least amount of funding among one of the greatest number of recipients. In the last funding cycle, FY 2020-21, STPG awarded $34 million, with $12.5 million of that amount allocated to the MPOs for formulaic distribution. For the competitive program, STPG received requests for $55 million among 169 applicants. However, given budget limitations, it awarded only $21.5 million, spread across 59 projects (California Transportation Commission, n.d.-d). The most common project types funded were active transportation and multimodal transportation projects.[3] The most frequent non-funded projects included technical projects followed by active transportation projects.[4]

TCC provides the greatest flexibility of investment in projects that best serve community needs in the fight toward GHG emission reduction and clean air; however, it receives the second-lowest amount of funding. For each round of funding, TCC awards only two or three implantation grants. During the last round three of funding, it provided only $48.1 million among three implementation projects, and $600,000 in funding across three planning grants.[5] However, Oakland's Better Neighborhoods, Same Neighbors: An East Oakland Neighborhood Initiative received the total amount of funding requested (California Strategic Growth Council, 2020). The other two awards were the Eastside Climate Collaborative in the City of Riverside and the Stockton Rising project in the City of Stockton. Riverside received partial funding because they submitted some of the same project materials from their round 5 application to SGC's AHSC program. TCC funded the difference between the amount requested and the amount provided through AHSC. Stockholm received partial funding due to a lack of funding for TCC. The award included a stipulation provided it became available through the 2019-20 cycle (California Strategic Growth Council, 2020).

The TIRCP covers only partial funds for projects. It provided $500 million[6] to 17 projects over the 2020 five-year funding cycle, with a total project cost of over $5.4 million (California State Transportation Agency, 2020b), thus covering about 9 percent of the total project cost. The projects receiving the greatest share of the funding included capacity expansion projects for BART and LA Metro. The project that received the least amount of funding—the purchase of zero-emission buses for the Transit Joint Powers Authority of Merced County—had a higher share of the total cost covered than the BART and LA Metro projects (California State Transportation Agency, 2020a).[7] All projects funded during the 2020 five-year cycle "are located within disadvantaged communities or low-income communities and contribute direct, meaningful and assured benefits to disadvantaged communities, low-income communities or low-income households" (California State Transportation Agency, 2020b).

[3] Of the 59 projects funded, 13 focused on active transportation, and 11 included a focus on multimodal transportation.
[4] For 110 projects not funded, 27 included technical project types, and 25 focused on active transportation.
[5] $48.7 million refers to the actual TCC amount awarded during the latest round of funding and not to the proposed allocation by CARB.
[6] $500 million over 5 years refers to the actual TIRCP amount awarded during the latest round of funding and not to the proposed allocation by CARB.
[7] Long Beach Transit received the greatest share of total cost funding covered through TIRCP for the purchase of five zero-emission buses, yet the total amount in funding was relatively low ($6,451,000) (California State Transportation Agency, 2020b).

5. Goal Alignment

From our review, we identified 33 state goals. Several of the goals are more explicit on their environmental focus by naming GHG reduction targets, achieving carbon neutrality, reducing fossil fuel dependency, or improving air quality. Another group of goals focuses on providing improvements to transportation access and equity. This set of goals include transportation benefits to disadvantaged communities and groups, such as low-income communities, people with disabilities, and communities of color. Other goals focus on safety, reducing VMT, active transportation, and fix-it-first improvements.

Many of the goals identified share similarities. For example, goals sourced from EO N-19-19 (2019) and SB 32 (2016) provided parallel goals for reducing GHG emissions at 40 percent below the 1990 levels by 2030. While some goals from different sources are identical, most other state goals tend to offer general similarity but less specific congruence. For example, active transportation investment is highlighted in EO N-79-20 (2020) and in parts of SB 1 (2017), but they differ in that EO N-79-20 places emphasis on providing active transportation benefits to underinvested communities.

State Goals Methodology

To identify the state's transportation goals, we reviewed the 2020-2024 Caltrans Strategic Plan, the CTP 2050, and several state bills that address the goals and expectations for transportation funding across the state. The legislation reviewed is listed in the Source column in the Appendix B tables. We read all the source material, identifying the main goals of each plan or piece of legislation, with particularly focus on identifying the primary aims guiding funding selection for transportation projects across the state. For legislation, these goals are often declared in a findings section of the bill.

Additionally, we read each funding program described in Section 4 to identify whether and to what extent the program aligned with the state's goals. We searched the document for instances where the legislation or plan was specifically mentioned within the statutory requirements. We also searched for keywords and phrases that highlight alignment between the funding program goals and state goals. Future research should investigate the frequency and clustering of these key terms and phrases across projects to better understand how the projects' wording aligns with state goals. Finally, we evaluated each funding program to identify whether its general goals and requirements would serve to fulfill the state goals.

Key Programs' Stated Purposes and Goals

The programs identified in AB 285 are AHSC, TIRCP, LCTOP, TCC, and STPG. The purpose of AHSC is to fund land use, housing, transportation, and land preservation projects that reduce GHG emissions. TIRCP provides funds for capital improvements that modernize intercity rail, bus, and vanpool services, ferry, and rail transit systems to reduce GHG emissions, increase ridership, integrate the state's rail service, and ameliorate transit safety. LCTOP provides operating and capital assistance for transit agencies to reduce GHG emissions and improve mobility, prioritizing disadvantaged communities. TCC provides funding for communities most impacted by pollution to decide on their own goals, strategies, and projects to reduce GHG emissions and air pollution. The purpose of the STPG is to provide a safe,

sustainable, integrated, and efficient transportation system to enhance the state's economy and livability. All programs identified in AB 285 include funding requirements for programs that serve disadvantaged communities.[8]

Additional programs not identified in AB 285 include SHOPP, LPP, ITIP, SCCP, ATP, and LTF. SHOPP is a fix-it-first program with the goal to repair and preserve highways, fund emergency repairs and safety improvements, and provide some highway operational improvements on the State Highway System. LPP provides funding to counties, cities, districts, and regional transportation agencies for transportation improvements. The goal of ITIP is to improve interregional mobility for people and goods across California on highway and passenger rail corridors. SCCP funds projects with the goals of reducing congestion in highly traveled and congested corridors while focusing on community engagement and environmental benefits. ATP funds projects that encourage active transportation by increasing the proportion of trips taken by biking and walking, amplifying safety and mobility for non-motorized users, reducing GHG emissions, improving public health outcomes, and extending the program benefits to underserved communities. The purpose of the LTF is to provide funding for projects that follow regional transportation plans.

State Goals and Program Goal Alignment

Overall, the AB 285 programs have high levels of alignment with state goals and particularly with climate adaptation goals, including reducing GHG emissions and VMT, transitioning away from fossil fuels, and improving air quality to enable healthy vibrant communities (see Table 10 in Appendix B). Most of the programs focused on transit and active transportation investments to create affordable and safe multimodal travel options. The FAST Act eliminates the MAP-21 TAP and replaces it with the set-aside Surface Transportation Block Grant program funding for transportation alternatives. These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects, such as pedestrian and bicycle facilities, recreational trails, Safe Routes to School projects, community improvements, such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.

Across the six other programs that we reviewed, there is less consistency in alignment with state goals (see Table 11 in Appendix B). However, across all programs, there is an investment in transit and active transportation and improvement of multimodal mobility and access to destinations for all users. Most programs, except LTF, also focused on reducing GHG emissions, reducing VMT, enhancing the safety of transportation systems, and improving air quality. While most of the additional programs do not primarily focus on providing resources to underserved communities, the LPP, ITIP, SCCP, and ATP programs consider the effects and benefits of investment on disadvantaged communities, low-income communities, and low-income households. SHOPP, in particular, focuses on a fix-it-first approach to repair and preserve the State Highway System in alignment with SB 1. The LTF is the least aligned with state objectives, primarily focusing on providing transit and active transportation funding to create a reliable multimodal transportation system but lacking precise alignment with other state goals.

[8] AHSC, TIRCP, LCTOP, and TCC receive funding from GGRF, thus are required to maximize the benefit of each program for disadvantaged communities, low-income communities, and low-income households in accordance with SB 535 and AB 1550. The STPG is not under the same statutory obligations, yet it aims to provide at least 50% of its competitive funding to serve the disadvantaged communities identified by SB 535 and AB 1550, in addition to Native American Tribal Governments, regionally or locally defined disadvantaged communities, the California Department of Education, Free or Reduced Priced Meals Data, and California Healthy Places Index.

State Goals Referenced in Programs

In our review of each state funding program, we noted how the goal was referenced: whether the enabling legislation's goals were explicitly cited, mentioned in eligibility criteria, mentioned as keywords, or not mentioned, but the program has a general alignment with the legislative goal.

Table 8 shows how the 33 goals identified were mentioned in the program statutes that we reviewed. For each of these 33 goals, we coded whether the goal for the program was:

1. Explicitly mandated by the legislature
2. Substantively addressed in the agency's program criteria
3. Specifically mentioned in the agency's program criteria (for example, a keyword)
4. Not specifically mentioned but generally aligned with the program
5. Not aligned with the program criteria

Codings #1 and #2 are not mutually exclusive: For some programs, a goal was both explicitly mandated by the legislature and substantively addressed in the agency's program criteria. These were coded for both #1 and #2.

Our analysis reveals that more recent programs (those identified in AB 285) tend to have state goals referenced in the eligibility criteria; they are more specific. The programs that have less-specifically cited eligibility criteria tend to be older.

Table 8: State goal references in programs, by reference type

Program	Year established	#1 Legislative goal explicitly named	#2 Goal is a main part of program eligibility criteria	#3 Goal is mentioned as a keyword	#4 General alignment (no keywords mentioned, not a main part of criteria)	#5 No alignment
Sustainable Transportation Planning Grant (STPG)	2017	16%	45%	13%	39%	3%
Transformative Climate Communities (TCC)	2016	29%	52%	6%	32%	6%
Affordable Housing and Sustainable Communities (AHSC)	2014	16%	58%	10%	32%	3%
Transit and Intercity Rail Capital Program (TIRCP)	2014	0%	42%	23%	35%	3%
Low-Carbon Transit Operations Program (LCTOP)	2014	29%	55%	10%	13%	3%
Local Partnership Program (LPP)	2017	13%	13%	19%	16%	53%
Solutions for Congested Corridors Program (SCPP)	2017	3%	0%	10%	45%	44%
Active Transportation Program (ATP)	2013 (as part of SB 99 and AB 101) 2017 (as part of SB 1)	16%	3%	10%	29%	44%
State Highway Operations & Protection Program (SHOPP)	1998	3%	6%	29%	13%	50%
Interregional Transportation Improvement Program (ITIP)	1998	10%	10%	19%	19%	44%
Local Transportation Fund (LTF)	1972 (as part of SB 325)		0%	0%	0%	13%

Programs in bold are AB 285 programs.

State Goals Over Time

In 2006, the CTP 2025 focused on a vision of creating, planning, and operating "an integrated transportation system" (Caltrans, 2006). To ground this vision, the CTP 2025 included six goals: 1) Improve Mobility and Accessibility, 2) Preserve the Transportation System, 3) Support the Economy, 4) Enhance Public Safety and Security, 5) Reflect Community Values, and 6) Enhance the Environment (Caltrans, 2006). These six goals are aligned across three quality-of-life measurements, including a prosperous economy, social equity, and quality environment. However, the primary policies developed through these plans focus on creating a thriving economy while limiting their commitment to social and environmental equity.

In contrast, the CTP 2050 vision (released 15 years after CTP 2025) focuses on creating a transportation system that is "safe, resilient, and universally accessible" and that supports "vibrant communities, advances racial and economic justice, and improves public and environmental health" (Caltrans, 2021a). This vision is accompanied by eight goals: 1) Safety, 2) Climate, 3) Equity, 4) Accessibility, 5) Quality of Life and Public Health, 6) Economy, 7) Environment, and 8) Infrastructure (Caltrans, 2021a). This reflects changes in consideration for climate adaptation policies with a central aim of GHG reduction. Additionally, the CTP 2050 contains a stronger consideration for social equity, with a particular focus on "eliminating transportation burdens for low-income communities, communities of color, people with disabilities, and other disadvantaged groups" (Caltrans, 2021a).

Furthermore, CTP 2050 goals reflect the goals in significant state legislation, including the Road Repair and Accountability Act of 2017 through SB 1, which solidified the focus of state transportation funding away from road expansion to repairment of existing transportation (fix it first) and investment in complete street projects, in addition to SB 535 Disadvantaged Communities of 2017, which prioritizes the state's Cap-and-Trade funding program to benefit "most burdened communities at the same time reducing pollution that causes climate change" (California Office of Environmental Health Hazard Assessment, 2015).

The shifts in state goals over time are reflected through the funding programs. Older funding programs tend to be in higher alignment with previous state goals, while newer funding programs tend to be better fit to support the new vision for California's transportation system. And it is not surprising that, in 2021, a large share of funding programs is more responsive to an outmoded plan with a horizon year of 2025 compared to a newer plan with a horizon year of 2050.

6. Summary Analysis and Conclusion

From our analysis of both state and program goals, the five key programs identified in AB 285 align well with the state goals that we identified. As described in more detail in Section 5, state goals related to AB 285 that we highlighted include a wide range of goals (to a varying level of detail), from emissions and VMT reductions to improving active transportation, moving away from fossil fuels, and supporting a safe transportation system that eliminates transportation burdens for disadvantaged persons and supports vibrant communities.

Table 9 indicates the percentage of goals within each category that each state program addresses or aligns with. The programs are sorted by amount appropriated for the fiscal year (from our Section 3 analysis). We created this table by identifying state goals from a review of the 2024 Caltrans Strategic Plan, the CTP 2050, and numerous state bills and then placing each goal into seven categories (see Appendix C for goals by category). We then reviewed each funding program for references to relevant legislation, keywords and phrases that aligned with state goals, and evaluated whether the

program's stated goals and requirements would serve the fulfillment of our identified state goals. Finally, we counted the number of state goals in each category with which each program aligned and added the amount appropriated for each program to assess the level of funding that the programs and goals received.

Table 9: Alignment of selected programs and goal categories, sorted by appropriation

	Amount appropriated (in millions)	Reduce emissions, improve environment	Improve transportation equity and access	Increase safety and resilience	Prioritize "fix it first"	Promote non-auto modes	Reduce VMT	Support vibrant communities, economy	Total (all goals)
Goals in category		12	9	3	2	2	3	2	33
State Highway Operations & Protection Program	$4,540	8	2	2	2	2	0	0	16
Local Transportation Fund	$1,899.3	0	2	1	0	1	0	0	4
Interregional Transportation Improvement Program	$710.0	6	6	2	0	2	2	0	18
Affordable Housing and Sustainable Communities*	$324.0	12	9	3	0	2	3	2	31
Solutions for Congested Corridors Program	$250.0	7	3	2	0	2	2	1	17
Low-Carbon Transit Operations Program*	$225.4	12	9	3	0	2	3	2	31
Local Partnership Program	$200.0	7	3	3	0	2	3	0	18
Active Transportation Program	$123.0	7	5	2	0	2	2	1	19
Transformative Climate Communities*	$41.7	12	9	3	0	2	3	2	31
Sustainable Transportation Planning Grant*	$34.0	12	9	3	0	2	3	2	31
Transit and Intercity Rail Capital Program*	$27.9	11	9	3	0	2	3	2	30

*AB 285 program

Table 9 shows that some of the state's largest programs (by appropriation amount) align with few of the state's goals. Conversely, programs that meet many state goals are among those with the lowest appropriation amounts. This lack of correspondence between funding amount and alignment with state goals raises questions about the extent to which the state can attain its transportation-related climate goals when programs oriented toward them are possibly underfunded and are, in any case, funded less than those that meet fewer of the state's goals.

Table 9 also reveals that some of the largest programs—notably the two largest, SHOPP and LTF, and the only two programs with billion-dollar budgets—meet relatively few goals in each goal category and across categories. This suggests that the programs are focused on a few specific areas, but perhaps contradicts logical expectations that the largest program would also be the broadest. Similarly, some of the programs with the smallest appropriations—notably TCC, STPG, and TIRCP—align with the most state goals across most goal categories, contrary to what might be expected of small-budget programs. The combination of small amounts and broad goals in these programs raises the question of whether they are overcommitted and/or underfunded.

7. Recommendations

Based on our review of the five AB 285 and other key funding programs, our inventory of other state funding sources, our assessment of state goals and their alignment with program funding, we offer eight recommendations for improving the state's transportation investment programs to meet GHG reduction targets and contemporary goals expressed in CTP 2050.

1) Redirect Funds to Newer Programs or Add New Goals to Old Programs

As we note in Section 6, several programs, principally SHOPP and LTF but also ITIP, have the largest funding appropriations but meet the fewest of the identified goals (among the 11 programs we evaluated). Conversely, the programs with the smallest amount of funding (TCC, STPG, and TIRCP) align with the most state goals. This means that funding for certain goals, such as GHG reduction, is diluted by both competing goals within funding programs and additional transportation investment not made with GHG reduction as a top tier goal. While we did not research the cause of this misalignment between funding and goal advancement, we do note a correlation that more recently adopted programs tend to address a broader array of goals by both legislative mandate and agency guidance.

To remedy this disconnect, the legislature must either direct more funds to newer programs that meet a broader set of contemporary goals or add additional goals and requirements to older programs, such as SHOPP, LTF, and ITIP. This approach is preferable to curtailing the number of goals in more recent programs to make these programs more targeted.

2) Comprehensively Reevaluate Program Evaluation Criteria

State-funded programs have the potential to shape which local projects are envisioned and pursued, but the programs' ability to "capture the imagination" of local leaders, planners, and agency staff is surely limited when funding must instead be cobbled together from multiple sources that use strict, complicated, and sometimes mutually exclusive

funding criteria. While criteria for individual programs serve to channel funding to intended uses and purposes, the effect is diluted when criteria are not synchronized and difficult for applicants to reconcile, especially when the funding tied to each set of criteria is insufficient to fund an entire project.

The research suggests that overly prescriptive, and sometimes conflicting, eligibility criteria can be counterproductive, especially when performance measures are used as criteria. As we note in Section 2, criteria affect not only what gets funded but also who applies, and criteria that are too strict can keep agencies from applying for fear of not meeting the criteria when funding is what could improve conditions to meet those criteria (and state goals).

Research indicates that performance measures are useful for tracking changes over time, but are not necessarily suitable for determining need or eligibility for funds. In addition, performance measures written into eligibility criteria lock in the goals sought at the time of their writing and can become outdated, as the state changes or adds to its goals for transportation.

In creating a common application (see recommendation 3), state agencies should revisit and streamline agency-defined eligibility criteria to enhance the flexibility with which applicants can address contemporary state goals. In reevaluating criteria, the state should also consider how to use discretionary programs as incentives to achieve state-level objectives, for instance, for counties to abandon outdated capital projects embedded in LOSTs. For instance, the Local Partnership Program competitive program could match LOST funding forfeited from a planned freeway expansion project if it is abandoned in accordance with the ordinance or resolution adopting the LOST.

3) Establish a Common Application and "One-Stop Shop" for Fund Sourcing

The complexity of California's transportation funding system has costs that limit its effectiveness. Applicants must spend significant staff time in navigating eligibility criteria for funding programs and determining with which program and to what extent their desired project could be funded. Smaller applicants often do not have the in-house resources to figure out how and where to apply and rely on consultants whose costs and contracting hurdles make smaller grant sources and even smaller projects not worth pursuing, even when those smaller projects could have meaningful effects at the scale of these small agencies.

The state currently maintains a grant funding portal at grants.ca.gov, which serves as a clearinghouse for competitive transportation funding programs administered by various agencies. At a minimum, California state agencies should create a streamlined, common application process for popular project types that allows the same project to be considered for multiple funding sources. Creating a state transportation funding clearinghouse with staff to either consult on program applicability or match proposals with appropriate funding programs would facilitate application and funding of smaller projects from smaller agencies and disadvantaged communities. This consulting and or matchmaking would also provide informal training and best practice awareness to local leaders, planners, and agency staff to assist in proposing projects that best meet the needs of their communities and regions.

4) Consider Disadvantaged Community Investments from All Funding Programs

Current programs vary in the extent to which they address funding for disadvantaged communities. While the GGRF, as directed by SB 535, is a model for providing a funding set-aside for disadvantaged communities, we suggest that the updated definitions of disadvantaged communities from the STPG program be used rather than the GGRF's, because they allow for a more expansive definition that would benefit more underserved communities than those defined only by CalEnviroScreen 3.0 and Caltrans' low-income metrics.

Furthermore, most transportation investments in disadvantaged communities are not tracked because funding does not come from programs with a set-aside. We recommend that the state track all project-level transportation investments in disadvantaged communities regardless of the funding source (see recommendation 7). Tracking information should include the expenditure category for future assessments of whether transportation expenditures in disadvantaged communities are balanced between highway and non-highway categories.

Existing formula funds that flow to cities, such SB1's Local Streets and Roads program, can be established as a bona fide source to fund staff time to prepare applications for discretionary funding, including plan-phase awards, that benefit disadvantaged communities.

5) Increase Funding Through and Involvement of MPOs

Because MPOs are mandated to develop SCSs and develop land use and transportation that meet state GHG reduction targets, and because MPOs are structurally suited for regional planning and coordination, state funding that flows through MPOs is likely to be more successful in aligning with state goals for land use and transportation. The rise of LOSTs, discussed in Section 2, which collectively constitute the largest transportation funding source in the state, have enabled agencies to fund many transportation projects that do not necessarily align with state goals (as funding is largely county determined). LOSTs are popular with voters and with local officials who value the self-determination that they offer, but collectively, LOSTs have shifted the locus of influence in funding away from the state and MPOs, potentially making any goal attainment incidental.

Making more funding available through MPOs and making that funding more flexible and easier for localities to apply for and access could enable state funding to be primary and might reduce the appeal of (and need for) LOSTs in localities.

We therefore echo the recommendations made by researchers Gian-Claudia Sciara and Amy Lee: "Statutory reforms could allocate state transportation funds to better support SB 375 by giving metropolitan planning organizations (MPOs) responsibility for allocating a far greater share of state generated transportation revenue" (Sciara & Lee, 2018). Such a shift could be implemented with formulas that ensure that counties receive the same level of funding, even though the discretion over programming revenues to individual projects shifted from the county to the MPO. Such a change could also bring added requirements for consistency with implementation of an adopted SCS. Specific programs and sources of funds to consider are the Local Partnership Program, Active Transportation Program, Local Transportation Fund, and Developer Impact Fees.

If this recommendation is implemented, the Governor's Office, which sets MPO boundaries, should reconsider MPO boundaries to align with modern commute sheds, which might mean mergers into large MPOs (MTC, Central Valley).

6) Increase Use of CMAQ Funding Opportunities to Implement Priority Goals

Federal CMAQ funding is available for areas that do not meet federal standards for criteria pollutants identified in the Clean Air Act. These criteria pollutants include ground-level ozone and particulate matter but exclude GGH emissions. By state law, this funding is suballocated to MPOs. Based on a review of project lists, MPOs and county transportation commissions often use CMAQ for projects that reduce traffic congestion and improve traffic flow through bottleneck expansion, such as auxiliary lanes, HOV lanes, and express lanes that add capacity. Such projects, which smooth out variable vehicle speeds, can demonstrate reductions in criteria pollutant emissions through integrated traffic-air quality models. However, as part of SB 743 (2013) implementation, Caltrans increasingly recognizes bottleneck expansion projects as contributors to increases in VMT.

CMAQ is a significant federal funding source (approximately $400 million, on the scale of ATP) that can also be used for project types that achieve more state goals, such as bicycle and pedestrian facilities and programs, travel demand management, carsharing, electric vehicle infrastructure, and bike sharing (Federal Highway Administration, n.d.).

CARB should consider opportunities to steer regional CMAQ investments toward project types that are likely to meet multiple state goals as part of SCS implementation. It could also impose a requirement for the assessment of project-related GHG impacts when CMAQ funding is used on a project that received environmental clearance prior to such assessments being required in CEQA. To improve CARB's negotiating position, the state legislature could give CARB the ability to administer CMAQ funding earmarked for a region if it finds that the MPO is out of compliance with an SCS.

7) Publish Structured Data on Prospective State and Local Transportation Investments

The SCO published detailed structure data on county and city transportation expenditures, including project-level expenditures, via an open data portal (California State Controller's Office, n.d.). However, a similar level of detail in a structured data format does not exist for state transportation expenditures in the SHOPP, STIP, FSTIP, and other state or regional programs. Where data do exist, they are often embedded in tables within PDF files and not easily accessible for multi-project data analysis. To improve transparency, the CTC, MPOs, and Caltrans should report project-level funding requests in a structured data format for all projects that can receive funding in the FSTIP, which would include projects funded by the RTIP, SHOPP, STIP, and so on. Each project's reporting should include the requested funding program, the total project cost, the amount requested from the funding program, and the percentage of the project's expenditure classified as benefiting highways, transit, active transportation, and so on. Publishing statewide project funding requests in a standardized data format before funding requests are officially adopted allows advocacy groups to analyze the data and create their own slate of projects that will further their advocacy objectives.

Refocusing advocacy on slates of projects rather than individual projects allows for more systemic disruption of existing decision-making processes in which local, regional, and state agency staff produce the sole slate of projects for discretionary funding programs. Standardized reporting would also illuminate data on planning and engineering activities for legacy projects that have been repeatedly passed up for construction funding, perhaps because the project does not meet contemporary needs. An advocacy group could use this data to develop a list of legacy projects that should be deleted, similar to the Congress for New Urbanism's "Freeways without Futures" list.

Furthermore, the SCO could consider amending reporting requirements for county roads, city streets, and transportation planning agencies to categorize each project's expenditure as highway, transit, active transportation, and so on.

8) Investigate Agencies' Project Ideation and Development Process

Our research was focused on the structure of state funding as described in statutes, legislation, and data tables, supplemented by a review of academic literature. Accordingly, our recommendations flow from an understanding of how the programs are designed to work and an assessment of how they are working based on funding expenditure. An even more comprehensive understanding of the efficacy of state funding in meeting state goals would be achieved through research into the effect of program criteria on agency staff decision-making, which was not within our scope. We nevertheless participated in interviews with several MPO and county transportation commission staff to gain some insight into their decision-making process. We believe this area merits further exploration to determine questions such as:

- Which types of projects do and do not get developed because of program criteria, program funding levels, and low probability of grant success, and does this vary across type and size of agency?
- How do projects change from their original ideation through the process of finding suitable program funding and working through program eligibility criteria? Do these changes align with state goals?
- Which types of projects do agencies consider to be easiest to pursue and do those types of projects advance the state's goals?

With a better understanding of how state funds are pursued, and how state funding criteria shape project formation, the state would be empowered to design programs in ways that potentially achieve outcomes that better align with the state's goals.

References

Afonso, W. B. (2015). Leviathan or Flypaper: Examining the Fungibility of Earmarked Local Sales Taxes for Transportation. *Public Budgeting & Finance*, *35*(3), 1–23. https://doi.org/10.1111/pbaf.12072

CalEPA & OEHHA. (n.d.). *CalEnviroScreen 3.0 and AB 1550 Mapping Tool for TCC*. Retrieved September 17, 2021, from https://oehha.maps.arcgis.com/apps/webappviewer/index.html?id=ba698dc09c824da1b1ab3d0dd7f5bd54

California Air Resources Board. (n.d.). *California Climate Investments Legislative Guidance*. Retrieved September 16, 2021, from https://ww2.arb.ca.gov/resources/documents/california-climate-investments-legislative-guidance

California Air Resources Board. (2017). *Identification of Low-Income Communities under AB 1550 Methodology and Documentation for Maps*. https://ww2.arb.ca.gov/sites/default/files/classic/cc/capandtrade/auctionproceeds/kml/ab1550_maps_documentation.pdf

California Air Resources Board. (2018). 2018 Progress Report: California's Sustainable Communities and Climate Protection Act. https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_01_ExecutiveSummary.pdf

California Department of Conservation. (n.d.). *Transformative Climate Communities Program*. Retrieved September 16, 2021, from https://www.conservation.ca.gov/dlrp/grant-programs/Pages/Transformative-Climate-Communities-Program.aspx

California Department of Housing and Community Development. (n.d.). *Affordable Housing and Sustainable Communities Program* (*AHSC*). Retrieved September 16, 2021, from https://www.hcd.ca.gov/grants-funding/active-funding/ahsc.shtml#assistance

California Department of Tax and Fee Administration. (2021). *Monthly Payments to Special Districts from the Transactions* (*Sales*) *and Use Tax*. https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=MonthlyLocalAllocationSpecialDistrict

California Office of Environmental Health Hazard Assessment. (2015, November 20). *SB 535 Disadvantaged Communities* [Text]. OEHHA. https://oehha.ca.gov/calenviroscreen/sb535

California State Controller's Office. (n.d.). *Government Financial Reports—CA Local Government Financial Data*. Retrieved September 17, 2021, from https://bythenumbers.sco.ca.gov

California State Controller's Office. (2021a). *Transit Operators Raw Data for Fiscal Years 2017-18 to 2019-20*. SCO By the Numbers. https://bythenumbers.sco.ca.gov/Raw-Data/Transit-Operators-Raw-Data-for-Fiscal-Years-2017-1/6dj3-r4jw

California State Controller's Office. (2021b). *City Street Raw Data for Fiscal Years 2017-18 to 2019-20*. SCO By the Numbers. https://bythenumbers.sco.ca.gov/Raw-Data/City-Street-Raw-Data-for-Fiscal-Years-2017-18-to-2/mpy3-2iag

California State Controller's Office. (2021c). *County Road Raw Data for Fiscal Years 2017-18 to 2019-20*. SCO By the Numbers. https://bythenumbers.sco.ca.gov/Raw-Data/County-Road-Raw-Data-for-Fiscal-Years-2017-18-to-2/3dkq-ugr6

California State Controller's Office. (2021d). *Cities Raw Data for Fiscal Years 2017-18 to 2019-20*. SCO By the Numbers. https://bythenumbers.sco.ca.gov/Raw-Data/Cities-Raw-Data-for-Fiscal-Years-2017-18-to-2019-2/885w-tc2s

California State Controller's Office. (2021e). *Transportation Planning Agencies Raw Data for Fiscal Years 2017-18 to 2019-20*. SCO By the Numbers. https://bythenumbers.sco.ca.gov/Raw-Data/Transportation-Planning-Agencies-Raw-Data-for-Fisc/ag4r-akxk

California State Controller's Office. (2021f). *Transportation Planning Agencies Raw Data for Fiscal Years 2017-18 to 2019-20*. SCO By the Numbers. https://bythenumbers.sco.ca.gov/Raw-Data/Transportation-Planning-Agencies-Raw-Data-for-Fisc/ag4r-akxk

California State Transportation Agency. (2019). *2020 Transit and Intercity Rail Capital Program Guidelines*. https://calsta.ca.gov/-/media/calsta-media/documents/tircp-2020-final-guidelines.pdf

California State Transportation Agency. (2020a). *Transit and Intercity Rail Capital Program 2020 Awards*. https://calsta.ca.gov/-/media/calsta-media/documents/2020-tircp-award-list.pdf

California State Transportation Agency. (2020b). *Transit and Intercity Rail Capital Program Fourth Round Selected Projects – Project Detail Summary*. https://calsta.ca.gov/-/media/calsta-media/documents/2020-tircp-detailed-project-award-summary.pdf

California Strategic Growth Council. (n.d.-a). *Affordable Housing and Sustainable Communities Awards and Applications*. https://sgc.ca.gov/programs/ahsc/resources/awards-applications.html

California Strategic Growth Council. (n.d.-b). *Affordable Housing and Sustainable Communities: Integrating affordable homes and sustainable transportation*. https://sgc.ca.gov/programs/ahsc/docs/20180731-Update-Fact%20Sheet-AHSC.pdf

California Strategic Growth Council. (n.d.-c). *AHSC Guidelines—Strategic Growth Council*. Retrieved September 16, 2021, from https://sgc.ca.gov/programs/ahsc/resources/guidelines.html

California Strategic Growth Council. (n.d.-d). *TCC Vision*. Retrieved September 16, 2021, from https://sgc.ca.gov/programs/tcc/vision

California Strategic Growth Council. (2019a). *Notice of Funding Availability—Transformative Climate Communities Program FY 2019-2020 Funding Round*. https://sgc.ca.gov/programs/tcc/docs/20191104-TCC_NOFA_FINAL.pdf

California Strategic Growth Council. (2019b). *Transformative Climate Communities Program: Round 3 Final Program Guidelines FY 2019 – 2020*. https://sgc.ca.gov/programs/tcc/docs/20191104-TCC_Guidelines_Round_3_Final.pdf

California Strategic Growth Council. (2020). *Transformative Climate Communities Program: Round 3 Implementation Grant Awards*. https://sgc.ca.gov/programs/tcc/docs/20210427-Round3-Combined.pdf

California Strategic Growth Council. (2021). *Affordable Housing and Sustainable Communities Program, Round 6 FY 2019-2020 Program Guidelines*. https://sgc.ca.gov/meetings/council/2021/docs/20210224-AHSC_Round_6_Guidelines.pdf

California Transportation Commission. (2018). *2018 Comprehensive Multimodal Corridor Plan Guidelines*. https://catc.ca.gov/-/media/ctc-media/documents/120518-approved-cmcp-guidelines-a11y.pdf

California Transportation Commission. (2020a). *2020 Local Partnerships Program Guidelines*. https://catc.ca.gov/-/media/ctc-media/documents/deputy-approved/guidelines/05052020-revised-final-adopted-2020-lpp-guidelines-v2.pdf

California Transportation Commission. (2020b). *2020 Solutions for Congested Corridors Program Guidelines*. https://catc.ca.gov/-/media/ctc-media/documents/programs/sccp/2020129-adopted-2020-sccp-guidelines-a11y.pdf

California Transportation Commission. (2020c). *2021 Active Transportation Program Guidelines*. https://catc.ca.gov/-/media/ctc-media/documents/programs/atp/guidelines/2020429-final-amended-adopted-2021-atp-guidelines-a11y.pdf

California Transportation Commission. (2020d). *2020 Solutions for Congested Corridors Program Staff Recommendations*. https://catc.ca.gov/-/media/ctc-media/documents/programs/sccp/recommendation/2020-solutions-for-congested-corridors-program-staff-recommendations-111620-a11y.pdf

California Transportation Commission. (2021a). *Amended Local Partnership Formulaic Program*. https://catc.ca.gov/-/media/ctc-media/documents/programs/local-partnership-program/formulaic/2020-program/lpp-formulaicprogramcycles1-3-web-a11y.pdf

California Transportation Commission. (2021b). *Amend 2020 Local Partnership Competitive Program*. https://catc.ca.gov/-/media/ctc-media/documents/programs/local-partnership-program/approved-amend-2020-lppc-a11y.pdf

California Transportation Commission. (2021c). "Adoption of 2021 Active Transportation Program – Statewide and Small Urban and Rural Components, Resolution G-21-30." Retrieved December 7 2021 from, https://catc.ca.gov/-/media/ctc-media/documents/programs/atp/2021/bi49postedversiona11y.pdf

California Transportation Commission. (2021d). *2021 Active Transportation Program Staff Recommendations – Statewide and Small Urban & Rural Components*. https://catc.ca.gov/-/media/ctc-media/documents/programs/atp/2021/staff-recommendation/2021-atp-staff-recommendations-summary-a11y.pdf

Caltrans. (n.d. -a). *Interregional Transportation Strategic Plan*. Retrieved December 7, 2021, from https://dot.ca.gov/programs/transportation-planning/multi-modal-system-planning/interregional-transportation-strategic-plan

Caltrans. (n.d. -b). *Transportation Development Act*. Retrieved September 17, 2021, from https://dot.ca.gov/programs/rail-and-mass-transportation/transportation-development-act

Caltrans. (2006). *California Transportation Plan 2025*.

Caltrans. (2020a). *Active Transportation Program Fact Sheet*. https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/atp/2020/atpfactsheet20202024.pdf

Caltrans. (2020b). *2020 SHOPP State Highway Operation and Protection Program*. https://dot.ca.gov/-/media/dot-media/programs/financial-programming/documents/20200521-2020-shopp-adopted-final-f0020353-vendor-a11y.pdf

Caltrans. (2021a). *California Transportation Plan 2050*.

Caltrans. (2021b). *2021 Federal Statewide Transportation Improvement Program*. https://dot.ca.gov/-/media/dot-media/programs/financial-programming/documents/2021-fstip-041621-final.pdf

Caltrans. (2021c). *2021 Federal Statewide Transportation Improvement Program*. https://dot.ca.gov/-/media/dot-media/programs/financial-programming/documents/2021-fstip-041621-final.pdf

Caltrans. (2021d). *Budgetary Flow of California State Fees and Taxes Designated for Transportation Purposes Proposed for the 2021-22 Fiscal Year*. https://dot.ca.gov/-/media/dot-media/programs/budgets/documents/2021-22-chart-c-a11y.pdf

Caltrans, Division of Rail and Mass Transportation. (2018). *2018 Transportation Development Act (TDA) Statutes and California Code of Regulations*. https://dot.ca.gov/-/media/dot-media/programs/rail-mass-transportation/documents/f0009844-tda-07-2018-a11y.pdf

Caltrans, Division of Rail and Mass Transportation. (2019). *FY 19-20 Low Carbon Transit Operations Program Allocation Award List*. https://dot.ca.gov/-/media/dot-media/programs/rail-mass-transportation/documents/lctop/fy1920-lctop-award-list-v2-a11y.pdf

Caltrans, Division of Rail and Mass Transportation. (2020). *FY 2020-2021 Low Carbon Transit Operations Program Guidelines*. https://dot.ca.gov/-/media/dot-media/programs/rail-mass-transportation/documents/lctop/2021-03-lctop-fy20-21-final-guidelines-a11y.pdf

Caltrans, Division of Transportation Planning. (2021a). *Sustainable Transportation Planning Grant Program Grant Application Guide*. 86.

Caltrans, Division of Transportation Planning. (2021b). *Sustainable Transportation Planning Grant Program—Fiscal Year 2021-22 Grant Application Guide*.

Caltrans, Division of Transportation Programming. (2019). *2020 Interregional Transportation Improvement Program (ITIP)*. https://dot.ca.gov/-/media/dot-media/programs/financial-programming/documents/2020-ocip-final-itip-a11y.pdf

CARB. (2021). *AB 285 Matrix*.

City of Santa Barbara & Caltrans. (2020). *Bike/Ped Bridge & Sidewalk*. https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/atp/completed/finalinfrastructurehighlight-march2020.pdf

Clean Mobility Options. (2021). Mobility Project Awardees. https://www.cleanmobilityoptions.org/mp-awardees

County of Los Angeles California. (2020). *County of Los Angeles, California Local Transportation Fund*. https://auditor.lacounty.gov/wp-content/uploads/2021/06/FY1920-Local-Transportation-Fund.pdf

Crabbe, A. E., Hiatt, R., Poliwka, S. D., & Wachs, M. (2005). *Local Transportation Sales Taxes: California's Experiment in Transportation Finance* [University of California Transportation Center, Working Paper]. University of California Transportation Center. https://econpapers.repec.org/paper/cdluctcwp/qt1jg9w662.htm

Dasmalchi, E., & Amberg, N. (2021). *The Landscape of California's Local Option Sales Taxes*. https://escholarship.org/uc/item/2f45q3c5

Federal Highway Act of 1956. Retrieved September 23, 2021, from https://history.house.gov/Records-and-Research/Listing/lfp_008

Federal Highway Administration. (n.d.). *Congestion Mitigation and Air Quality Improvement (CMAQ) Program*. Retrieved September 17, 2021, from https://www.fhwa.dot.gov/ENVIRonment/air_quality/cmaq/reference/cmaq_essentials

Federal Highway Administration. (2019). *Highway Statistics 2019*. Tables SF-3B, LGF-3B, LDF, SDF, https://www.fhwa.dot.gov/policyinformation/statistics/2019

Federal Transit Administration. (2020). *2019 Annual Database Revenue Sources. National Transit Database*. https://www.transit.dot.gov/sites/fta.dot.gov/files/2020-10/2019%20Revenue%20Sources.xlsx

Gahbauer, J., Lederman, J., Huang, E., Wachs, M., Matute, J., & Taylor, B. D. (2019). *An Assessment of Performance Measures in the Transportation Development Act*. https://escholarship.org/uc/item/0dk5g542

Garrett, M. (2016). FUNDING TRANSPORTATION IN CALIFORNIA: A HISTORY OF CRISES. *California Journal of Politics and Policy*, *8*(4). https://doi.org/10.5070/P2cjpp8432848

Assembly Bill No. 1550: An act to amend Section 39713 of the Health and Safety Code, relating to greenhouse gases., (2016) (testimony of Gomez). https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1550

Nesbit, T., & Kreft, S. F. (2009). *Federal Grants, Earmarked Revenues, and Budget Crowd-Out: State Highway Funding* (SSRN Scholarly Paper ID 1414492). Social Science Research Network. https://doi.org/10.1111/j.1540-5850.2009.00930.x

Santa Cruz County Health Services Agency. (2021). *Santa Cruz County SRTS Educations and Encouragement*. Caltrans. https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/atp/completed/niprojectprofile-santacruzcounty20210211-a11y.pdf

SB-1119 Low Carbon Transit Operations Program., no. SB 1119, California State Senate (2018). https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB1119

Sciara, G.-C., & Lee, A. (2018). *Aligning California's Transportation Funding with Its Climate Policies* [Institute of Transportation Studies, Working Paper Series]. Institute of Transportation Studies, UC Davis. https://econpapers.repec.org/paper/cdlitsdav/qt9jp6d597.htm

Taylor, B. D. (1991). *Unjust Equity: An Examination of California's Transportation Development Act*. https://escholarship.org/uc/item/7h13774d

Taylor, B. D. (2000). When Finance Leads Planning: Urban Planning, Highway Planning, and Metropolitan Freeways in California. *Journal of Planning Education and Research*, *20*(2), 196–214. https://doi.org/10.1177/0739456X0002000206

Taylor, B., & Morris, E. (2015). Public transportation objectives and rider demographics: Are transit's priorities poor public policy? *Transportation*, *42*(2), 347–367.

Wachs, M., Marks, J., King, H., Lederman, J. S., & Guy, T. (2020). *Balancing Accountability and Flexibility in California's Local Option Sales Taxes*. https://escholarship.org/uc/item/20f5b90m

Appendix A:
Section 4 Program Tables

Figure 14: Local Transportation Fund allocations

Priority	PURPOSE	PUC SECTION	Eligible Claimants	Amount Available
1	TDA administration	99233.1	County Auditor & the TPA	As necessary
2	Planning & Programming	99233.2	El Dorado County TPA Monterey County TPA Metropolitan Transportation Com. Nevada County TPA Orange CTC Placer County TPA Riverside CTC San Bernardino CTC Santa Cruz County RTC Tahoe Regional Planning Agency	≤ 3% of revenues
		130050	Ventura CTC	≤ 2% of revenues
		130004	Los Angeles County Metropolitan Transportation Authority	≤ 1% of revenues
			Southern California Association of Governments	≤ ¾ of 1% & ≤ $1 million of revenues
3	Pedestrian & bicycle facilities	99233.3 99234	Cities & Counties	Countywide, 2% of remaining money
4	Rail passenger service operations & capital improvements	99233.4 99234.9	Cities, Counties, CTC's or Operators	≤ apportionment
	Long-term planning	99233.5 (a)	San Diego Association of Governments	
5	San Diego MTDB administrative & planning functions; construction & acquisition programs	99233.5 (b)	San Diego Metropolitan Transit Development Board	≤ 10% of remaining money for area of MTDB
6	Community Transit Services	Article 4.5, 99233.7	Cities, Counties, Operators & CTSA's	Countywide, ≤ 5% of remaining money

(Cont. on next page)

PRIORITY	PURPOSE	PUC SECTION	Eligible Claimants	Amount Available
7	Article 4-Public Transportation,	99233.8	Operators	≤ Area Apportionment
	Support of public transportation systems	99260(a) 99262	Operators	≤ Area Apportionment
	Aid to research & development projects	99260(b)	Operators	≤ Area Apportionment
	Grade separation projects	99260(c)	Operators	≤ Area Apportionment
	Peak hour service contract	99260.2(a)	Operators	≤ Area Apportionment
	Rail passenger ticket purchases	99260.2(b)	Transit Districts	≤ Area Apportionment
	Payments to railroad corporation	99260.5	Transit Districts, Cities, Counties	≤ Area Apportionment
	Rail passenger service	99260.6, 99234.9	Cities & Counties, CTC, Operators	≤ Area Apportionment
	Claims for separate service to elderly & elderly	99260.7	Cities & Counties with a Joint Power Agency agreement	≤ Area Apportionment
8	Article 8-Other Allocation	99233.9	Cities & Counties where not restricted	≤ Area Apportionment
	Local streets & roads; pedestrian & bicycle projects	99400(a), 99402, 99407	Cities & Counties where not restricted	≤ Area Apportionment
	Commuter ferry services		Cities within the County of San Diego	≤ Area Apportionment
	Rail Passenger service operations & capital improvements	99400(b)	Cities & Counties	≤ Area Apportionment
	Public or special group transportation service contract	99400 (c,d,e)	Transit Districts, Cities & Counties	≤ Area Apportionment
	Multimodal transportation terminal	99400.5	Cities & Counties	≤ Area Apportionment
	Express bus & van pool services	99400.6	County of San Diego	≤ Area Apportionment

Source: Caltrans, Division of Rail and Mass Transportation, 2018, p. 32

Figure 15: Local Transportation Fund Supplemental Schedule of Allocations and Disbursements for LA County

COUNTY OF LOS ANGELES, CALIFORNIA — **Schedule II**
Local Transportation Fund
Supplemental Schedule of Allocations and Disbursements (Continued)
For the Year Ended June 30, 2020

		Disbursements						
Claimant	Total Allocations	Administrative and Planning	Article 3	Article 4	Article 8A	Total Disbursements	Total Reserves	Total Reimbursements
LA County Public Works	8,547,663	-	1,509,488	-	5,792,635	7,302,123	1,245,540	-
LA Habra Heights	5,000	-		-	-	-	5,000	-
LA Mirada	304,113	-	67,034	214,581	-	281,615	22,498	-
LA Verne	110,561	-	110,561	-	-	110,561	-	-
Lomita	14,630	-	14,630	-	-	14,630	-	-
Lynwood	27,675	-	27,675	-	-	27,675	-	-
Lynwood	48,808	-	-	-	-	-	48,808	-
Montebello	9,107,443	-	89,696	8,974,415	-	9,064,111	43,332	-
Maywood	89,832	-	37,390	-	-	37,390	52,442	-
Monrovia	26,116	-	-	-	-	-	26,116	-
Monterey Park	41,766	-	-	-	-	-	41,766	-
Norwalk	3,543,479	-	71,600	3,400,348	-	3,471,948	71,531	-
Palmdale	6,913,773	-	49,657	-	6,756,613	6,806,270	107,503	-
Paramount	40,415	-	40,415	-	-	40,415	-	-
Pasadena	209,491	-	112,338	-	-	112,338	97,153	-
Pico Rivera	125,087	-	81,667	-	-	81,667	43,420	-
Pomona	151,010	-	97,331	-	-	97,331	53,679	-
Redondo Beach	992,437	-	139,765	805,958	-	945,723	46,714	-
Rolling Hills	5,000	-	-	-	-	-	5,000	-
Rolling Hills Estates	5,477	-	-	-	-	-	5,477	-
San Dimas	43,214	-	20,000	-	-	20,000	23,214	-
San Fernando	6,084	-	6,084	-	-	6,084	-	-
San Marino	28,192	-	18,600	-	-	18,600	9,592	-
San Gabriel	26,000	-	26,000	-	-	26,000	-	-
Santa Clarita	11,729,953	-	417,109	-	1,887,857	2,304,966	9,172,721	252,266
Santa Fe Springs	12,411	-	-	-	-	-	12,411	-
Santa Monica	63,607	-	-	-	-	-	63,607	-
Santa Monica's Big Blue Bus	26,399,199	-	-	26,399,199	-	26,399,199	-	-
SCAG	3,273,750	3,273,750	-	-	-	3,273,750	-	-
Sierra Madre	15,827	-	8,350	-	-	8,350	7,477	-
South Gate	66,859	-	66,859	-	-	66,859	-	-
South Pasadena	71,043	-	48,280	-	-	48,280	22,763	-
Temple City	87,027	-		-	-	-	24,676	62,351
Torrance	7,128,164	-	195,540	6,824,827	-	7,020,367	107,797	-
Vernon	5,000	-		-	-	-	5,000	-
Walnut	35,237	-	15,592	-	-	15,592	19,645	-
West Covina	74,075	-	994	-	-	994	73,081	-
West Hollywood	82,217	-	56,320	-	-	56,320	25,897	-
Westlake Village	11,738	-	11,738	-	-	11,738	-	-
Whittier	59,455	-	-	-	-	-	59,455	-
Total	**$ 626,039,333**	**$ 11,056,368**	**$ 9,664,091**	**$ 499,504,422**	**$ 24,169,611**	**$ 544,394,492**	**$ 80,968,537**	**$ 676,304**
LACMTA	460,436,502	7,676,618	-	388,141,186	-	395,817,804	64,618,698	-
LACO - ACCTG	106,000	106,000	-	-	-	106,000	-	-
LA Canada Flintridge	27,305	-	27,305	-	-	27,305	-	-

Source: County of Los Angeles California, 2020

Figure 16 illustrates the breakdown of funding across different project types during the 2020–21 through 2023–24 funding cycle. This period includes a total of $4,453 million in pavement funding, $2,155 mobility in collision reduction, and $475 million in mobility projects.

Figure 16: 2020 SHOPP funding for FYs 2020–21 through 2023–24

(in Millions)

Program Funding	2020-21	2021-22	2022-23	2023-24	Total
2020 Fund Estimate	$4,400	$4,300	$4,100	$4,000	$16,800
ER Reimbursement	$140	$140	$140	$140	$560
Programmed	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
Pavement	$630	$601	$1,842	$1,380	$4,453
Bridge	$742	$631	$428	$569	$2,371
Culvert(s)	$89	$121	$113	$390	$713
TMS	$215	$114	$440	$187	$957
Supplementary Assets	$171	$285	$201	$351	$1,009
Major Damage Restoration	$407	$412	$74	$0	$894
Collision Reduction	$558	$985	$236	$376	$2,155
Mandates	$87	$272	$79	$87	$525
Mobility	$31	$264	$71	$109	$475
Roadside Preservation	$55	$11	$31	$17	$113
Protective Betterments	$66	$61	$0	$0	$127
Multiple Objective	$23	$0	$47	$0	$70
Subtotal	**$3,074**	**$3,757**	**$3,563**	**$3,467**	**$13,861**
Reserved	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**Total**
Pavement	$0	$0	$0	$0	$0
Bridge	$0	$0	$0	$0	$0
Culvert(s)	$0	$0	$0	$0	$0
TMS	$0	$0	$0	$0	$0
Supplementary Assets	$0	$0	$0	$0	$0
Major Damage Restoration	$633	$240	$240	$240	$1,353
Collision Reduction	$460	$159	$175	$170	$965
Mandates	$32	$12	$12	$12	$68
Mobility	$0	$0	$0	$0	$0
Roadside Preservation	$0	$0	$0	$1	$0
Protective Betterments	$0	$0	$0	$0	$0
Multiple Objective	$0	$0	$0	$0	$0
Subtotal	**$1,125**	**$411**	**$427**	**$423**	**$2,386**

Source: Caltrans, 2020b, p. 23

Appendix B: Goals Alignment

Table 10: Local Transportation Fund allocations, AB 285 programs

Source	State Goals	AHSC	TIRCP	LCTOP	TCC	STPG
AB 32 (2006)	By 2020: limit GHG emissions to 1990 levels through market-based mechanisms	X	X	X	X	X
EO N-19-19 (2019)	By 2030: reduce GHG emissions 40% below 1990 levels	X	X	X	X	X
SB 32 (2016)	By 2030: reduce GHG emissions 40% below 1990 levels	X	X	X	X	X
EO B-30-15 (2015)	By 2050: reduce GHG emissions 80% below 1990 levels	X	X	X	X	X
EO S-3-05 (2005)	By 2050: reduce GHG emissions 80% below 1990 levels	X	X	X	X	X
EO N-19-19 (2019)	Reduce VMT	X	X	X	X	X
AB 32 (2006)	Reduce VMT	X	X	X	X	X
SB 1 (2017)	Finance “fix-it-first” projects					
SB 1 (2017)	Invest in transit and active transportation	X	X	X	X	X
SB 1 (2017)	Provide environmental benefits by reducing GHG emissions and improving air quality	X	X	X	X	X
SB 1 (2017)	Encourage an increased use of active modes of transportation, with a focus on public health, GHG reduction, and safety	X	X	X	X	X
EO N-79-20 (2020)	Accelerate transition away from fossil fuels	X	X	X	X	X
EO N-79-20 (2020)	Create an integrated, affordable, accessible rail system	X	X	X	X	X
EO N-79-20 (2020)	Support active transportation, prioritizing historically underinvested communities	X	X	X	X	X
CTP 2050	Provide a safe and secure transportation system	X	X	X	X	X
CTP 2050	Eliminate transportation burdens for low-income communities, communities of color, people with disabilities, and other disadvantaged groups	X	X	X	X	X
CTP 2050	Improve multimodal mobility and access to destinations for all users	X	X	X	X	X
CTP 2050	Enable vibrant, healthy communities	X	X	X	X	X
CTP 2050	Support a vibrant, resilient economy	X	X	X	X	X

Source	State Goals	AHSC	TIRCP	LCTOP	TCC	STPG
CTP 2050	Enhance environmental health and reduce negative transportation impacts	X	X	X	X	X
CTP 2050	Maintain a high-quality, resilient transportation system	X	X	X	X	X
Caltrans SMP 2020-2024	By 2050: eliminate fatalities and serious injuries in transportation networks	X	X	X	X	X
Caltrans SMP 2020-2024	Eliminate race-based disparities in transportation safety outcomes	X	X	X	X	X
Caltrans SMP 2020-2024	Enhance and connect the multimodal transportation network, creating greater access for historically underserved communities	X	X	X	X	X
Caltrans SMP 2020-2024	Advance equity and livability in all communities, prioritizing investment in historically harmed and segmented communities	X	X	X	X	X
Caltrans SMP 2020-2024	Accelerate CalSTA and CAPTI action plans, engaging with communities most impacted by the climate crisis	X		X	X	X
Caltrans SMP 2020-2024	Strengthen stewardship, drive efficiency, and enhance asset management through “fix-it-first” approach					
AB 398 (2017)	Reauthorize and extend cap-and-trade to meet 2030 GHG reduction goals established by SB 32	X	X	X	X	X
EO N-55-18 (2018)	By 2045: achieve carbon neutrality	X	X	X	X	X
SB 743 (2013)	Replace LOS with VMT as metric for measuring transportation impacts for CEQA	X	X	X	X	X
SB 535 (2012)	Requires GGRF investments to fund projects that benefit DACs	X	X	X	X	X
AB 1550 (2016)	Amends DAC investment minimums from SB 535	X	X	X	X	X
SB 375 (2008)	Directs CARB to set regional targets for reducing GHG emissions, establishing a collaborative process between regional and state agencies	X	X	X	X	X

AHSC: Affordable Housing and Sustainable Communities; TIRCP: Transit and Intercity Rail Capital Program; LCTOP: Low-Carbon Transit Operations Program; TCC: Transformative Climate Communities; STP: Sustainable Transportation Planning Grant

Table 11: Local Transportation Fund allocations, additional programs

Source	State Goals	SHOPP	LPP	ITIP	SCCP	ATP	LTF
AB 32 (2006)	By 2020: limit GHG emissions to 1990 levels through market-based mechanisms						
EO N-19-19 (2019)	By 2030: reduce GHG emissions 40% below 1990 levels	X	X	X	X	X	
SB 32 (2016)	By 2030: reduce GHG emissions 40% below 1990 levels	X	X	X	X	X	
EO B-30-15 (2015)	By 2050: reduce GHG emissions 80% below 1990 levels	X	X	X	X	X	
EO S-3-05 (2005)	By 2050: reduce GHG emissions 80% below 1990 levels	X	X	X	X	X	
EO N-19-19 (2019)	Reduce VMT		X	X	X	X	
AB 32 (2006)	Reduce VMT		X	X	X	X	
SB 1 (2017)	Finance “fix-it-first” projects	X					
SB 1 (2017)	Invest in transit and active transportation	X	X	X	X	X	X
SB 1 (2017)	Provide environmental benefits by reducing GHG emissions and improving air quality	X	X	X	X	X	
SB 1 (2017)	Encourage an increased use of active modes of transportation, with a focus on public health, GHG reduction, and safety	X	X	X	X	X	
EO N-79-20 (2020)	Accelerate transition away from fossil fuels	X		X			
EO N-79-20 (2020)	Create an integrated, affordable, accessible rail system			X			
EO N-79-20 (2020)	Support active transportation, prioritizing historically underinvested communities	X	X	X	X	X	X
CTP 2050	Provide a safe and secure transportation system	X	X	X	X	X	
CTP 2050	Eliminate transportation burdens for low-income communities, communities of color, people with disabilities, and other disadvantaged groups			X		X	
CTP 2050	Improve multimodal mobility and access to destinations for all users	X	X	X	X	X	X
CTP 2050	Enable vibrant, healthy communities					X	
CTP 2050	Support a vibrant, resilient economy				X		
CTP 2050	Enhance environmental health and reduce negative transportation impacts	X	X		X	X	
CTP 2050	Maintain a high-quality, resilient transportation system		X				X
Caltrans SMP 2020-2024	By 2050: eliminate fatalities and serious injuries in transportation networks	X	X	X	X	X	

Source	State Goals	SHOPP	LPP	ITIP	SCCP	ATP	LTF
Caltrans SMP 2020-2024	Eliminate race-based disparities in transportation safety outcomes						
Caltrans SMP 2020-2024	Enhance and connect the multimodal transportation network, creating greater access for historically underserved communities		X	X	X	X	
Caltrans SMP 2020-2024	Advance equity and livability in all communities, prioritizing investment in historically harmed and segmented communities					X	
Caltrans SMP 2020-2024	Accelerate CalSTA and CAPTI action plans, engaging with communities most impacted by the climate crisis				X		
Caltrans SMP 2020-2024	Strengthen stewardship, drive efficiency, and enhance asset management through “fix-it-first” approach	X					
AB 398 (2017)	Reauthorize and extend cap-and-trade to meet 2030 GHG reduction goals established by SB 32						
EO N-55-18 (2018)	By 2045: achieve carbon neutrality	X	X				
SB 743 (2013)	Replace LOS with VMT as metric for measuring transportation impacts for CEQA		X				
SB 535 (2012)	Requires GGRF investments to fund projects that benefit DACs			X			
AB 1550 (2016)	Amends DAC investment minimums from SB 535						
SB 375 (2008)	Directs CARB to set regional targets for reducing GHG emissions, establishing a collaborative process between regional and state agencies						

SHOPP: State Highway Operations & Protection Program; LPP: Local Partnership Program; ITIP: Interregional Transportation Improvement Program; SCCP: Solutions for Congested Corridors Program; ATP: Active Transportation Program; LTF: Local Transportation Fund

Appendix C:
Mapping Goals to Categories

Reduce emissions, improve environmental

1. AB 32 (2006)—By 2020, limit GHG emissions to 1990 levels through market-based mechanisms
2. EO N-19-19 (2019)—By 2030, reduce GHG emissions 40% below 1990 levels
3. SB 32 (2016)—By 2030, reduce GHG emissions 40% below 1990 levels
4. EO B-30-15 (2015)—By 2050, reduce GHG emissions 80% below 1990 levels
5. EO S-3-05 (2005)—By 2050, reduce GHG emissions 80% below 1990 levels
6. SB 1 (2017)—Provide environmental benefits by reducing GHG emissions and improving air quality
7. EO N-79-20 (2020)—Accelerate transition away from fossil fuels
8. CTP 2050—Enhance environmental health and reduce negative transportation impacts
9. Caltrans SMP 2020-2024—Accelerate CalSTA and CAPTI action plans, engaging with communities most impacted by the climate crisis
10. AB 398 (2017)—Reauthorize and extend cap-and-trade to meet 2030 GHG reduction goals established by SB 32
11. EO N-55-18 (2018)—By 2045, achieve carbon neutrality
12. SB 375 (2008)—Directs CARB to set regional targets for reducing GHG emissions, establishing a collaborative process between regional and state agencies

Improve transportation equity and access

1. EO N-79-20 (2020)—Create an integrated, affordable, accessible rail system
2. EO N-79-20 (2020)—Support active transportation, prioritizing historically underinvested communities
3. CTP 2050—Eliminate transportation burdens for low-income communities, communities of color, people with disabilities, and other disadvantaged groups
4. CTP 2050—Improve multimodal mobility and access to destinations for all users
5. Caltrans SMP 2020–2024—Eliminate race-based disparities in transportation safety outcomes
6. Caltrans SMP 2020–2024—Enhance and connect the multimodal transportation network, creating greater access for historically underserved communities
7. Caltrans SMP 2020–2024—Advance equity and livability in all communities, prioritizing investment in historically harmed and segmented communities
8. SB 535 (2012)—Requires GGRF investments to fund projects that benefit DACs
9. AB 1550 (2016)—Amends DAC investment minimums from SB 535

Increase safety and resilience

1. CTP 2050—Maintain a high-quality, resilient transportation system
2. Caltrans SMP 2020-2024—By 2050, eliminate fatalities and serious injuries in transportation networks

Prioritize "fix it first"

1. SB 1 (2017)—Finance fix-it-first projects
2. Caltrans SMP 2020–2024—Strengthen stewardship, drive efficiency, and enhance asset management through fix-it-first approach

Prioritize non-auto modes

1. SB 1 (2017)—Invest in transit and active transportation
2. SB 1 (2017)—Encourage an increased use of active modes of transportation, with a focus on public health, GHG reduction, and safety

Reduce VMT

1. EO N-19-19 (2019)—Reduce VMT
2. AB 32 (2006)—Reduce VMT
3. SB 743 (2013)—Replace level of service with VMT as metric for measuring transportation impacts for CEQA

Support vibrant communities, economy

1. CTP 2050—Enable vibrant, healthy communities
2. CTP 2050—Support a vibrant, resilient economy

Appendix D:
CARB-provided Sources for CARB-provided Data

[i] https://catc.ca.gov/programs/sb1/solutions-for-congested-corridors-program
[ii] https://catc.ca.gov/programs/sb1/local-partnership-program
[iii] https://catc.ca.gov/programs/sb1/trade-corridor-enhancement-program
[iv] https://dot.ca.gov/programs/rail-and-mass-transportation/low-carbon-transit-operations-program-lctop
[v] https://catc.ca.gov/programs/transit-intercity-rail-capital-program
[vi] https://www.hcd.ca.gov/grants-funding/active-funding/ahsc.shtml
[vii] https://sgc.ca.gov/programs/tcc
[viii] https://ww2.arb.ca.gov/our-work/programs/low-carbon-transportation-investments-and-air-quality-improvement-program-1
[x] https://catc.ca.gov/programs/active-transportation-program
[xi] https://sco.ca.gov/aud_road_maintenance_sb1.html
[xii] https://catc.ca.gov/programs/state-highway-operation-and-protection-program
[xiii] https://catc.ca.gov/programs/state-transportation-improvement-program
[xiv] https://catc.ca.gov/programs/sb1/local-streets-roads-program
[xv] https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants