

CSU Transportation Research & Workforce Development Request for Proposals

◆ Background

California's Road Repaid and Accountability Act of 2017 (SB 1) is a comprehensive transportation funding package designed to address a wide range of transportation-related needs across California. As part of SB 1, annual appropriations of up to \$2 million are made available to the California State University (CSU) for the purpose of conducting transportation research and transportation-related workforce education, training and development. The [Mineta Transportation Institute](#) (MTI) at San José State University (SJSU) leads the California State University Transportation Consortium (CSUTC). CSUTC comprises MTI/SJSU along with partners CSU Chico, CSU Fresno, and CSU Long Beach.

As part of the CSUTC comprehensive research portfolio, MTI/SJSU manages a CSU-wide competitive request for proposals to identify research projects aligned with SB 1 priorities.

◆ General Proposal Information

Who can apply? This research funding opportunity is available to faculty (permanent or temporary) at any California State University campus. Commercial organizations, non-profits, and other universities may not respond to this RFP. The Principal Investigator(s) must be CSU faculty; non-CSU personnel may participate on research teams but funding should be limited. Questions about budgets should be directed to Dr. Hilary Nixon (hilary.nixon@sjsu.edu). All proposals must include funding for CSU students. Proposals submitted by CSU campuses other than SJSU will be required to submit a subrecipient commitment form. **A researcher is limited to serving as PI or co-PI on one proposal and as a team member on two other proposals.** Prior on-time performance in a previously-funded CSUTC-project will be considered during the evaluation process.

Project funding. Proposal budgets, including indirect/F&A/overhead expenses (limited to 15%), must not exceed \$75,000. Applicants must use the budget template provided. The anticipated period of performance is 12 months. Approximately 10 awards will be issued through this competitive selection process.

Deadline. The deadline to apply to this funding opportunity is **11:59 p.m. (Pacific) on Friday, February 11, 2022.** All submissions must be submitted through Calstate InfoReady: <https://calstate.infoready4.com/> (search for CSU Transportation Research and Workforce Development RFP). For questions specifically about using InfoReady, please contact support@infoready.com.

Submittal Deadline:

February 11, 2022

RFP Guidelines,
Subrecipient
Commitment Form,
Proposal and Budget
Template available at:
<https://calstate.infoready4.com/>

MTI CONTACT:

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Issued: Dec. 10, 2021

ALL AWARDS ARE
SUBJECT TO THE
AVAILABILITY OF
APPROPRIATED
FUNDS

Proposal review. Proposals will be reviewed by an external, independent, third-party review committee using the evaluation criteria listed below. No CSU-affiliated faculty or staff will serve as reviewers. The committee will make the final decision regarding projects selected for funding.

Distribution of funds. The authorized contracting entity for SJSU, the SJSU Research Foundation, will award funds for approved proposals. The Principal Investigator will be required to submit monthly progress reports to MTI as a condition of payment.

◆ Targeted Research Needs and SBI High Priority Research Areas

CSUTC works with stakeholders to identify priority research needs that align with SB 1. Proposals must address one of the targeted research needs or fall within one of the SBI high priority research areas listed below. Proposals that respond to a targeted research need will receive a 10% scoring bonus during evaluation. FAQ sessions are available for each of the targeted research needs. These sessions will provide an opportunity for interested researchers to ask clarifying questions from the stakeholder. Registration is required for the FAQ sessions (see links below). See the full list of evaluation and scoring criteria at the end of this document.

Targeted Research Needs

1. ***Climate Impacts of Supply Chain Solutions: Executive Order N-19-21 and Priority Freight Routes.*** Recent congestion at port complexes across the U.S. has highlighted breakdowns in logistic operations in California and globally. Governor Newsom signed Executive Order (EO) N-19-21 to address this challenge. The EO directs the State Transportation Agency to evaluate and identify priority freight routes to be considered for a temporary exemption to current gross vehicle weight limits. Research is needed to address the following questions: (1) Will this action result in an appreciable alleviation of congestion? (2) The state had a similar temporary action in response to the COVID-19 pandemic. Was there any study into how this impacted road conditions, increased flow of goods, emissions? (3) What are the potential costs in increased road maintenance by allowances of this sort for different time periods (for example, if the exemption were 1 year, 6 months, or 3 months)? (4) What other unintended consequences have been studied during periods of increased weight limits? i.e. road safety, the performance of vehicles, and therefore emissions. (5) What are current routes where freight and trucking are not allowed? How do these exempted routes impact the supply chain?

Research need submitted by California State Assembly Transportation Committee

FAQ Session: January 4, 2022, 9:30-10:00 a.m. Register at:

<https://sjsu.zoom.us/meeting/register/tZApdeitqj8jGdQxX60r0g8luMVrxIca6T7v>

2. ***Climate Impacts of Supply Chain Solutions: Executive Order N-19-21 and Short-term Warehousing.*** Some have suggested that the supply chain would benefit from increased warehousing locations. Executive Order (EO) N-19-21 directs the Governor's Office of Business and Economic Development to identify non-state sites that could address short-term storage needs. The EO directs the Department of General Services to review state-owned property in proximity to impacted ports to address short-term storage needs. Research is needed to address the following questions: (1) How would increasing warehousing affect overall emissions and local air quality in Port-surrounding neighborhoods, warehousing-adjacent neighborhoods, and routes in between? (2) How would increasing warehousing interplay with South Coast Air Quality Management's indirect source rules? (3) How does this review and potential prioritization of state-owned property intersect with prioritization for housing and homelessness? (4)

What would a method of state-owned property prioritization look like? (5) What other potential impacts/unintended consequences may be overlooked?

Research need submitted by California State Assembly Transportation Committee

FAQ Session: January 4, 2022, 1:00-1:30 p.m. Register at:

https://sjsu.zoom.us/meeting/register/tZ0rcumrpzMoHNG0KjoGBQ7Ok5pj_44e_58F

- 3. *Establishing Partnerships Between Airports and Local Entities to Engage in Multimodal and Active Transportation Projects.*** The California Aviation System Plan 2020 highlights the importance of planning for and construction of projects that advance active transportation, multimodal travel, and social equity. The Road Repair and Accountability Act of 2017 (Senate Bill 1, SBI) and the Infrastructure Investment and Jobs Act (HR 3684, IIJA) provide strong funding mechanisms to initiate and complete projects meeting these goals. Airports are a major point of travel for commercial airline passengers, cargo, goods, and services. Airports are also major employment hubs. In addition, there is significant movement within and between airport facilities whether the airport is large or small. Therefore, airports are a crucial location for the development of active transportation and multimodal transportation with the consideration of equity and sustainability concerns. Airports, however, are unable to seek funding as the funding is available to communities and transportation providers. How can the lack of fund access be remedied through the facilitation of partnerships between airports and the communities that surround them? Are there any examples of successful partnerships, and what best practices can we learn from them?

Research need submitted by Caltrans, Division of Aeronautics

FAQ Session: January 4, 2022, 11:30 a.m.-12:00 p.m. Register at:

<https://sjsu.zoom.us/meeting/register/tZYvdOuprjgiGNBliTcsGZewdNBflvjehIDN>

- 4. *Evaluation of California's Active Transportation Program (ATP).*** Since its inception in 2013, ATP has funded over 800 projects across the state; over 400 of these projects are Safe Routes to Schools projects; and more than 89 percent of funding benefits disadvantaged communities. The California Transportation Commission reports that just 11% of applications were funded in the latest cycle, leaving millions of dollars' worth of high-quality, ready-to-go projects on the table. The need for a more stable financial footing that aligns the state's transportation investments with its stated goals for slashing greenhouse gas emissions by reducing vehicle miles traveled is clear. The California legislature has asked ATP to be at least doubled from its current size to consistently support the best applications received every cycle. However, it is unclear how projects currently funded by the Active Transportation Program achieve the program's stated goals. For additional state funding to be utilized as efficiently and effectively as possible, a comprehensive evaluation of ATP is needed.

Research need submitted by California State Assembly Transportation Committee

FAQ Session: January 4, 2022, 11:00-11:30 a.m. Register at: https://sjsu.zoom.us/meeting/register/tZYqd-2rqz8iGdaysnDd_I9LCW08IKleLdDV

- 5. *Governing Structures for Successful Regional Transit Coordination and Their Formation.*** The coordination of transit at the regional level in California can be difficult since many metropolitan areas have multiple independently governed and operated transit agencies. In some metropolitan areas, Regional Transit Coordinators (RTCs) play an important role in the delivery of effective public transportation. These

agencies have a wide range of structures and compositions. Research is needed that examines the Board composition and management structures for RTCs such as how they were formed and the advantages or disadvantages of different board and management structures, in order to provide recommendations to improve regional transit coordination in California.

Research need submitted by LA Metro

FAQ Session: January 4, 2022, 10:30-11:00 a.m. Register at: <https://sjsu.zoom.us/meeting/register/tZMvf-ySpj0uGNzBWYCroNfiyLCUJD2ZXOZk>

- 6. *Intermodal Connections between Regional Surface Corridors and Under-utilized Airports.*** The California Aviation System Plan (CASP) 2020 from the Caltrans Aeronautics Division/Office of Planning reviews interregional (surface) corridors and the proximity of airports that may be under-utilized for goods movement. The potential for exploring other opportunities for moving cargo to nearby airports is a suggestion in the latest Air Cargo Report 2.0 conducted by Caltrans Division of Transportation Planning, Office of Freight Planning. Research is needed that examines how reliever airports (for example, in the Los Angeles area (LAX) and nearby in Ontario (ONT)) could be used to reduce surface congestion.

Research need submitted by Caltrans, Division of Aeronautics

FAQ Session: January 4, 2022, 1:30-2:00 p.m. Register at:

<https://sjsu.zoom.us/meeting/register/tZYrdu2orj8oGtU9dGt3TQvXAtVg8v9GX4Z9>

- 7. *Local Jurisdictions Need Local VMT and Travel Data.*** As of the 2019 GHG inventory, transportation accounts for 40% of statewide GHG emissions. At the local level, it is often a higher proportion of emissions and can vary drastically by jurisdiction and demographics. Given the unique authority local jurisdictions have over land use decisions and other sectors that impact VMT and transportation emissions, it is important they have accurate and useful data on VMT and travel within their jurisdictional boundaries. The proposed research is to identify and evaluate the currently available travel data sources for local governments. This should include an inventory of available datasets, an evaluation of the accuracy and best uses for each data set, and a tool (or decision flow chart) for choosing the best dataset for specific end uses. Sources should include all available sources including third party, municipal, and publicly available data. This information will help local governments identify the best VMT and transportation GHG emissions reduction strategies, as well as monitor ongoing SCS implementation and impacts.

Research need submitted by California Air Resources Board

FAQ Session: January 4, 2022, 10:00-10:30 a.m. Register at:

<https://sjsu.zoom.us/meeting/register/tZcqdu2qqj8uGdx7TjsWztnlsMtDwOvZlozR>

- 8. *Non-VMT Impacts of Highway Capacity Expansions.*** Research shows that highway capacity expansions induce travel over the short-, medium-, and long-term life of the project. Therefore, projects that include capacity expansions have started to include vehicle miles traveled (VMT) mitigation that offsets the anticipated amount of additional VMT associated with the project. This type of analysis and mitigation has not been expanded to other non-site-specific external impacts (i.e. impacts not at the project site). Research is needed that involves a comprehensive literature review to identify the externalities associated with highway capacity expansion projects and any existing literature or elasticities for each externality. In addition, the research can establish new metrics or elasticities for the externalities, or identify gaps for future research and how it can be used to mitigate future impacts. This work will enable

local, regional, and state government agencies to quantify and mitigate the non-VMT externalities associated with highway capacity expansions that may occur to, from, or near their communities. Additionally, the identification and potential quantification of externalities can be incorporated into future cost-benefit analyses for roadway capacity expansion and maintenance decisions, offering a more comprehensive analysis.

Research need submitted by California Air Resources Board

FAQ Session: January 5, 2022, 2:00-2:30 p.m. Register at:

<https://sjsu.zoom.us/meeting/register/tZcscumgpj4oGNKMFllcS-2CtwYs0lemwmPT>

9. ***Oversight and Coordinated Planning between Airports and Regional Transportation Plans.*** The California Aviation System Plan (CASP) 2020 suggests broader oversight and decision-making at the planning level could be useful against insufficient coordination between regulators, airport planners, and municipal planners. Specifically, for airports, development is often insular and lacks a relationship to Regional Transportation Plans. Research is needed to evaluate if there are measures to be identified and implemented that can connect airports beyond existing means to surface transportation and intermodal projects.

Research need submitted by Caltrans, Division of Aeronautics

FAQ Session: January 4, 2022, 2:00-2:30 p.m. Register at:

<https://sjsu.zoom.us/meeting/register/tZYqfuysrDopHtUwWigzx8lUKAG8gnsu9BlO>

10. ***Potential for Existing San Joaquin Valley Airports to Support Regional Air Mobility Using Electric Aircraft and Enhance Zero Emission Freight and Passenger Mobility.*** Regional Air Mobility (RAM) using electric aircraft to carry freight and passengers from underutilized airports is a global development with over 400 hundred companies actively developing aircraft for this new service. The San Joaquin Valley has 32 general purpose airports with runway lengths easily long enough to support the new electric aircraft being developed, but only 4 currently have commercial air service. Research is needed to evaluate the potential for these airports to support RAM service including the electric charging needs for the new aircraft and to identify the opportunity for RAM service to transform these airports into zero emission multi-modal transportation hubs that support both electric ground vehicles and aircraft. The research will also evaluate how RAM service in the SJV can reduce automobile and truck traffic along State highways in the region to reduce congestion and maintenance of these highways with a special focus on Hwy 99.

Research need submitted by Fresno Council of Governments

FAQ Session: January 4, 3:00-3:30 p.m. Register at: <https://sjsu.zoom.us/meeting/register/tZ0pf--orTgjGtNpz4ksOhK5UmSpXdmVw3V>

<https://sjsu.zoom.us/meeting/register/tZ0pf--orTgjGtNpz4ksOhK5UmSpXdmVw3V>

11. ***Pricing Parking, Creating Value: Equitable Parking Fee Design for the San Francisco Bay Area.*** The majority of the San Francisco Bay Area region's parking supply is free and unmanaged. Free, abundant parking is part of the hidden subsidy that competes against transit and makes housing more unaffordable. These negative impacts fall heavily and disproportionately on low-income people, people of color, the elderly and children. At the same time, the abundance of free and under-taxed parking may be an untapped asset to support public transit and sustainable transportation. Research is needed to explore the revenue, environmental, and equity outcomes of different scenarios for broad-based parking pricing through taxes or fees. A key focus for this research need is to design different parking pricing scenarios,

estimate the amount of revenue each will generate, estimate the environmental benefits (such as greenhouse gas emissions avoided), and consider equity implications and ways to advance equity through fee design and expenditures.

Research need submitted by SPUR

FAQ Session: January 5, 2022, 1:30-2:00 p.m. Register at:

<https://sjsu.zoom.us/meeting/register/tZwvdO6trjMqHN0ik9xqgpUiMxXNCntuckOj>

- 12. Right-sizing Law Enforcement Staffing for Open Streets Programs:** Open Streets events can bring thousands of community members together to experience their streets in a whole new way. Some events use uniformed law enforcement personnel for traffic control and security at a significant cost, while others take a different approach to manage these tasks. Research is needed to understand the different strategies used and their effectiveness by comparing and evaluating requirements, policies, and outcomes across different cities (e.g. San Jose, Los Angeles, Long Beach, and others, including cities outside California) with a goal to recommend approaches that support open streets events are safe, welcoming, and utilize the right application of law enforcement.

Research need submitted by Silicon Valley Bicycle Coalition

FAQ Session: January 4, 2022, 2:30-3:00 p.m. Register at: [https://sjsu.zoom.us/meeting/register/tZMud-](https://sjsu.zoom.us/meeting/register/tZMud-yuqTopGdP7xgBjvPY3QHpdugfWE-S)

[yuqTopGdP7xgBjvPY3QHpdugfWE-S](https://sjsu.zoom.us/meeting/register/tZMud-yuqTopGdP7xgBjvPY3QHpdugfWE-S)

- 13. Transit Oriented Development Around Regional Airports.** Research is needed that addresses two key questions related to development around regional airports. First, if there is concern about encroachment around airports such that policy for reviewing proposed development would prevent limitations or alterations to airport access, would there be more of a role for transit oriented development, given that airport use (i.e. scheduling) is independent of surface development? And second, “smart growth” plans/proposals that account for airports are often referenced/applied to urban areas. Is there an opportunity to expand this concept to more rural areas?

Research need submitted by Caltrans, Division of Aeronautics

FAQ Session: January 4, 2022, 4:00-4:30 p.m. Register at:

https://sjsu.zoom.us/meeting/register/tZMrdOmprijMvGNdxl_5bAzyks2eUv6UG0jb

- 14. Transportation Equity and Housing: How are Regional Transportation, Land Use, and Housing Plans Addressing Housing Needs While Avoiding Unintended Consequences?** To meet multiple state goals related to housing, transportation, accessibility, climate, and equity, regional governments in California have integrated their land use, housing, and transportation plans. There are concerns, however, that in doing so, regions have planned for disproportionate concentrations of new housing in communities with environmental and socio-economic disparities and historically redlined communities. This is concerning because of potential unintended consequences that may result if this additional housing is not accompanied by other strategic policies and investments (e.g., anti-displacement measures, investments in multi-modal infrastructure, etc.). This project would examine this issue via a case-study approach, focusing on 1-2 metropolitan planning organizations’ recent transportation, land use, and housing planning documents (e.g., regional transportation plan/sustainable communities strategy, Regional Housing Needs Assessment allocation, etc.). The 1-2 case studies will: (a) examine the extent to which new housing is being planned in disadvantaged communities, historically redlined communities, and low-income and communities of color; (b) analyze the potential for negative unintended consequences of

high concentrations of new housing in these areas, and (c) propose possible strategies for avoiding negative unintended consequences.

Research need submitted by California Air Resources Board

FAQ Session: January 5, 2022, 1:00-1:30 p.m. Register at:

<https://sjsu.zoom.us/meeting/register/tZAodOqprD8tHtjBzfYEU16P4zaaaD7jVxBi>

SBI High-priority Research Needs

Proposals are also welcome that fall within one or more of the following high-priority research areas. No scoring bonus is provided for projects that fall within this general list of research areas.

- Congestion relief, including traffic management systems
- Trade corridor enhancements
- Improved transit and rail
- Pedestrian and cyclist safety
- Maintenance/rehabilitation of road and bridge infrastructure

◆ **Proposal Contents**

Using the provided template, applicants must respond to the following questions:

1. **Project Goal.**

Briefly state the overall goal of this project in 1-2 sentences.

2. **Project Background.**

Describe (approx. 500-750 words) the background problem/issue the proposed project will address and provide a brief review of the academic and/or professional literature that demonstrates your knowledge of past work in the field. Include references (citations can be listed at the end of the section or at the end of the entire proposal – they do not count towards the overall word count).

Applicants are expected to clearly indicate how their project expands upon existing knowledge in the field. All applicants should carefully review academic databases and research sites such as [TRID \(Transportation Research Integrated Database, trid.trb.org\)](http://TRID.trb.org) to ensure that the proposed project does not duplicate existing research but rather contributes to existing knowledge in the field.

3. **Research Question/Project Objective.**

Concisely state your proposed research question or project objective (1-2 sentences).

4. **Project Methods.**

Describe (<1000 words) how the project objectives will be accomplished. Provide a detailed description of your proposed methods in a manner that can be understood by a wide range of transportation experts. Applicants should describe data collection procedures, including any likely challenges associated with gathering the necessary data, and clearly describe the methods that will be used to analyze the data.

5. **Project Tasks/Timeline.**

List specific project tasks and anticipated timeline for completion (e.g. Task 2: Develop survey and submit to campus Institutional Review Board – Months 2-3). Project duration is a maximum of 12 months and the timeline should account for quarterly meetings with an external advisor. **The task list should end with the submittal of a draft report prepared according to MTI formatting guidelines due**

30 days prior to the end of the award period. All project reports will be peer reviewed and authors will be expected to respond accordingly to peer review comments when submitting a final report to MTI for publication.

6. **Technology Transfer Plan.**

Describe (<250 words) how the results of this project will be disseminated. Journal articles and conference presentations are valued, but also describe what efforts will be made to ensure that the results are made widely available beyond the academic community. **All authors will be required to participate in ongoing technology transfer tracking after completion of the project.**

7. **Benefits to Californians/External Support for Project.**

Describe (approx. 250-350 words) how the results of this project will benefit Californians and how practitioners might apply the anticipated results. Please describe what existing interest there is from transportation professionals in California for the proposed research. **All proposals must include a letter of support from an external agency/organization/professional that indicates interest in the project and willingness to serve as an informal advisor. The external advisor should be an industry professional and not an academic. For proposals responding to a targeted research need listed in this RFP, the letter of support must come from the organization who submitted the research need.** The advisor should be willing to informally review project progress once a quarter during the period of performance and offer advice to the research team as well as review the final draft report. Modest financial compensation for the informal advisor can be included in the project budget (<\$500).

8. **Research Team Qualification.**

Describe (approx. 250 words per team member) the research team's relevant skills and experiences that will help ensure success. Applicants should describe the role and responsibilities of each team member.

9. **Budget Justification.**

Provide a budget justification. No capital expenditures (>\$5,000) or international travel expenses are allowed. No computer equipment such as desktop computer, laptop, printer, tablets, etc. will be allowed. General attendance at conferences is not an allowable expense. Student involvement is a requirement and should be explained.

10. **Prior CSUTC-funded Project.**

If the PI or co-PI has received prior CSUTC funding, please provide the title of the project(s) and briefly summarize how that project (or projects) has led to improvements in the transportation system for Californians, if that work has been leveraged to obtain any additional external funding to support ongoing research, and how the research team disseminated the results of the research.

◆ **Items Required for Submission**

The following items will be required for submission to InfoReady

1. Proposal, using the template available at Calstate InfoReady
2. Project Budget using template available at Calstate InfoReady
3. Letter of support from external advisor documenting interest in the project and willingness to serve as an informal external advisor. This advisor should not be an academic, but rather an industry professional/representative who can speak to the broader usefulness or applicability of the proposed research. The letter should indicate the advisor's willingness to meet with the research team at least

quarterly and to review the final draft report. For proposals responding to a targeted research need listed in this RFP, the letter of support must come from the organization who submitted the research need.

4. Subrecipient commitment form for all proposals submitted from non-SJSU campuses
5. Two-page CVs for research team members (not students).

◆ **Evaluation Criteria**

The criteria and process for evaluating proposals is as follows:

Criteria	Rating Scale	% of Final Score (Weighting)
1. Does the proposal address a specific targeted research need?	Yes/No	Proposals that meet a targeted research need will receive a 10% bonus on their total score.
2. Does the proposal present a clear and concise understanding of the problem and project objectives? Is the research question clearly stated?	0 to 10	25%
3. Are the research methods appropriate for the proposed research? Is the approach to data collection and data analysis clearly explained? Does the proposed methodology address the ability to collect and analyze the data according to sound methodological practices?	0 to 10	35%
4. Are the proposed tasks achievable in the proposed timeline and budget?	0 to 10	10%
5. Are the technology transfer activities likely to achieve broad and appropriate dissemination of the research results and are the benefits to Californians and transportation practitioners clearly described?	0 to 10	10%
6. Is the research meeting a specific need in the transportation industry that will benefit Californians? Does the proposal clearly articulate that need and is the project likely to be successful in meeting that need? Does the letter from the external advisor suggest a strong interest in this project?	0 to 10	10%
7. Are the experiences and qualifications of the research team sufficient to ensure project success?	0 to 10	10%

Have they successfully completed similar/relevant research projects?

Review committee members will be asked to comment on the strengths and weaknesses of each proposal and rate each proposal using the criteria and process described above. In addition, if the PI or co-PI received prior CSUTC funding, on-time performance with that project will be considered in the evaluation.

◆ **MTI Contact**

For questions about this RFP, please contact:

Dr. Hilary Nixon

Deputy Executive Director

hilary.nixon@sjsu.edu

408-924-7564