



Stage 1 Business Analysis

California Department of Technology, SIMM 19A.3 (Ver. 3.0.9, 02/01/2022)

1.1 General Information

1. Agency or State entity Name: 2660 - Transportation, Department of

If Agency/State entity is not in the list, enter here with the [organization code](#).

[Click or tap here to enter text.](#)

2. Proposal Name and Acronym: California Transportation Improvement Program System (CTIPS) Replacement

3. Proposal Description: (Provide a brief description of your proposal in 500 characters or less.)

The Division of Financial Programming (DoFP) seeks to implement a replacement California Transportation Improvement Program System (CTIPS) through an enhanced solution that integrates and manages project programming and allocation data for the Department and its external partners. Stakeholders will benefit from a modernized, secure, and reliable application that will lend to the Department's partnership, credibility, and accuracy.

4. Proposed Project Execution Start Date: 7/8/2027

5. S1BA Version Number: Version 1

1.2 Submittal Information

1. Contact Information

Contact Name: Kien Le

Contact Email: kien.le@dot.ca.gov

Contact Phone: (916) 439-4306

2. Submission Type: New Submission

If Withdraw, select Reason: [Choose an item.](#)

If Other, specify reason here: Click or tap here to enter text.

Sections Changed, if this is a Submission Update: (List all sections changed.)

[Click or tap here to enter text.](#)

Summary of Changes: (Summarize updates made.)

Click or tap here to enter text.

3. Attach [Project Approval Executive Transmittal](#) to your email submission.

4. Attach [Stage 1 Project Reportability Assessment](#) to your email submission.

1.3 Business Sponsorship

1. Executive Champion (Sponsor)

Title: Division Chief

Name: James Anderson

Business Program Area: Financial Programming

2. Business Owner

Title: Office Chief

Name: Kien Le

Business Program Area: Financial Programming

3. Product Owner

Title: Senior Transportation Engineer, Electrical

Name: Heather Loeb

Business Program Area: Financial Programming

1.4 Stakeholder Assessment

The Stakeholder Assessment is designed to give the project team an overview of communication channels that the state entity needs to manage throughout the project. More stakeholders may result in increased complexity to a project.

1. Indicate which of the following are interested in this proposal and/or the outcome of the project. (Select 'Yes' or 'No' for each.)

State Entity Only: Yes

Other Departments/State Entities: Yes

Public: No

Federal Entities: Yes

Governor's Office: No

Legislature: No

Media: No

Local Entities: Yes

Special Interest Groups: No

Other: No

2. Describe how each group marked 'Yes' will be involved in the planning process.

State Department/Entity: Caltrans

Internal departmental units, including the Office of Capital Improvement Programming (OCIP), the State Highway Operation and Protection Program (SHOPP), the Office of Federal Programming and Data Management (OFPDM), the Office of California Transportation Commission Liaison (OCTCL), and the SB1 Program, each use CTIPS to manage the financial programming business needs of their projects. The programs input data into CTIPS and rely on data out of CTIPS. These program areas will be responsible for designating Subject Matter Experts (SMEs) and providing management overview of the project planning process. SMEs will participate in requirements analysis, market analysis, as well as the solution implementation.

The Division of Local Assistance and the Division of Project Management utilize data from CTIPS to manage their financial programming business needs. These divisions may stay informed of project progress during the planning process so if SME participation is required from these divisions, the project team can react and include these SMEs accordingly.

Caltrans IT will provide IT project management and business analysis expertise throughout the PAL. Caltrans IT will also provide IT management oversight and contract management support services.

Other State Departments/State Entities

The California Transportation Commission (CTC) is responsible for the programming and allocating of funds for the construction of highway, passenger rail and transit improvements throughout California. The CTC is also an active participant in the initiation and development of

State and Federal legislation that seeks to secure financial stability for the State's transportation needs. All CTC financial programming actions for the Department are managed through CTIPS.

The CTC will be an informed stakeholder and will provide validation that the current financial programming application functions and data availability requirements are met.

Federal Entities

Federal Entities include the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The Federal Entities will be informed stakeholders and will provide validation that the current financial programming application functions and data availability requirements are met.

Local Entities

Local Entities include Cities, Counties, Transit Agencies, Environmental Agencies, Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs). Projects are drawn from the State STIP, SHOPP, and TSM Plan for the respective geographic regions along with any local and federal funded improvements to the local road system. CTIPS supports the implementation of policies that are consistent with Legislative requirements, processing project funding applications, federal documents, and serve as the primary source for project allocations and amendments for local agencies.

The Local Entities will be informed stakeholders and will provide validation that the current financial programming application functions and data availability requirements are met.

1.5 Business Program

- 1. Business Program Name:** Financial Programming
- 2. Program Background and Context:** (Provide a brief overview of the entity's business program(s) current operations.)

The DoFP is responsible for the preparation, management, and administration of project programming documents required under state and federal statutes. The DoFP facilitates funding processes to enable program delivery with optimal program outcomes. In general, programming is the public decision-making process which sets priorities and provides resources necessary to implement projects envisioned in long-range transportation plans. Programming is the commitment of transportation funds to be available over a period of several years to projects. The transportation programming process promotes equity, environmental justice, and public involvement in making transportation decisions.

The DoFP is responsible for preparing, updating and maintaining the following documents: the four-year State Highway Operation and Protection Program (SHOPP), the Interregional Transportation Improvement Program (ITIP), Traffic Congestion Relief Program (TCRP), various Proposition 1B bond programs, Senate Bill 1 (SB 1) programs – including Trade Corridor Enhancement Programs (TCEP) and Solutions for Congested Corridor Programs (SCCP), the

Federal Statewide Transportation Improvement Program (FSTIP), and the monthly California Transportation Commission (CTC) book items submitted by Caltrans.

The DoFP is also responsible for managing the CTIPS application and database which is used to support the business of financial programming, as well as the Vote Initiation Process with Electronic Records (VIPER) database used to create Vote Box documents presented to the CTC during Commission meetings.

The CTIPS application plays an integral role in meeting program's operations to support the delivery of FTIP, SHOPP and STIP projects. In FY 2023, the application managed programmed projects totaling \$26B. CTIPS services 1,200+ customers, including internal users such as the Divisions of Project Management, SB1, and Local Assistance, as well as external partners such as the CTC, MPOs, RTPAs, FTA and FHWA. Additionally, CTIPS interfaces to several key project delivery applications including CalSMART (Project Programming Requests and SB1 Reporting), Quality Management Reporting System (QMRS), LP2000 (Local Assistance), and Vote Initiation Process with Electronic Records (VIPER).

3. How will this proposed project impact the product or services supported by the state entity?

The replacement system will mitigate the Department's current risks and issues in the areas of data reliability, supporting business needs and decision making, scalability, and accessibility. Stakeholders will benefit from a modernized, secure, and reliable application that will lend to the Department's partnership, credibility, and accuracy without increased operational resources. Specifically, the proposed project will generate efficiencies through reducing staff hours required to manually collect, validate, and correct financial programming data and to provide authoritative and trusted reports. Additional gains for the Department include dependable automated data transfers between related applications, minimized reliance on IT Staff and consultant support, and system accessibility to all users.

1.6 Project Justification

1. Strategic Business Alignment

Enterprise Architect

Title: Infrastructure Management Division Chief

Name: Mike Nguyen

Strategic Plan Last Updated: 7/1/2020

Strategic Business Goal: Strengthen Stewardship and Drive Efficiency

Alignment: CTIPS stakeholders will benefit from the increased data integrity and business process efficiencies through a modernized solution with minimal reliance on IT staff and consultant support.

TIP: Copy and paste or click the + button in the lower right corner to add Strategic Business Goals and Alignments as needed.

Mandate(s): State

Bill Number/Code, if applicable: AB434

Effective July 2019 onwards, California AB 434 requires that all websites of state agencies and entities must be accessible to users of all abilities. Specifically, websites must conform (at minimum) to Level AA of the W3C's Web Content Accessibility Guidelines (WCAG) 2.0 or a subsequent version. Even before the introduction of California AB 434, Californian state agencies and entities were required to comply with Section 508 of the Rehabilitation Act – a federal law applicable to all agencies in receipt of financial assistance from the federal government.

TIP: Copy and paste or click the + button in the lower right corner to add Bill Numbers/Codes and relevant language as needed.

2. Business Driver(s)

Financial Benefit: Yes

Increased Revenue: No

Cost Savings: No

Cost Avoidance: Yes

Cost Recovery: No

Will the state incur a financial penalty or sanction if this proposal is not implemented? No

If the answer to the above question is "Yes," please explain:

[Click or tap here to enter text.](#)

Improvement

Better Services to the People of California: Yes

Efficiencies to Program Operations: Yes

Improved Equity, Diversity, and/or Inclusivity: Yes

Improved Health and/or Human Safety: No

Improved Information Security: Yes

Improved Business Continuity: Yes

Improved Technology Recovery: Yes

Technology Refresh: No

Technology End of Life: Yes

1.7 Business Outcomes Desired

Executive Summary of the Business Problem or Opportunity:

Several business problems persist with the current CTIPS application that place the Department at risk:

1. Poor data quality and data sharing.

The current CTIPS application has been in use for 25 years and is technologically outdated. The CTIPS architecture is archaic and lacks system quality assurance measures making the system susceptible to data quality issues. Furthermore, the lack of automation of data transfers from CTIPS to other systems results in delays and unnecessary staff hours to manually extract and load data between systems. The data in these other systems are sometimes conflicting, redundant, or outdated, which results in stakeholders having insufficient data for timely business decisions. As a result, internal and external CTIPS users continue to waste resources on validating and correcting financial programming data.

2. Business needs are not met efficiently.

The maintenance and operation of the existing CTIPS application faces fundamental technological issues due to the following factors: unsupported/unknown legacy code, poor system documentation, and a lack of institutional knowledge. The 2016 CTIPS automated update resulted in an overly complicated development and maintenance challenge of the resulting JavaScript application and Oracle database with a single vendor available for support and no Caltrans IT application development support. Application modifications to meet mandates by changing legislative statutes, new business processes, and/or system interface updates are costly and time-consuming. Additionally, there are instances where CTIPS cannot meet the business need. The VIPER system is a stand-alone FileMaker Pro system developed due to CTIPS' inability to include Vote Box processing and various CTC reporting requirements and is an example of application sprawl. Also developed due to CTIPS' limitations is the Electronic Project Programming Request (ePPR) module of CalSMART, which communicates bidirectionally with CTIPS and was built as a siloed function within CalSMART. The lack of ability to effectively expand and scale the CTIPS system upward places the Department at risk of delayed project delivery and/or lapsed funds.

3. CTIPS does not effectively support business decision making.

DoFP is an information-intensive organization, with diverse information needs in support of a myriad of data analysis, decision-making, forecasting, metrics creation/evaluation, inquiry, information sharing, and policy analysis. In many cases, these needs cannot be satisfied with

static reports with stale data, but rather require real-time information that is dynamically acquired via a decision-making support capability.

4. CTIPS information is not sufficiently accessible.

The CTIPS application is public facing but not equitably accessible to all. CTIPS fails to meet the DoFP Strategic Management Plan (SMP) objective to provide reliable, accessible, and flexible access to pertinent information and documents in accordance with the Americans with Disabilities Act (ADA).

1. Enhance Data Quality and Interfacing

Objective ID: 1.1

Objective: Reduce by 75 percent the number of hours stakeholders spend validating/correcting data in CTIPS, CTIPS reports or in applications that interface with CTIPS after the first-year post implementation.

Metric: Hours spent addressing CTIPS-generated data quality issues.

Baseline: 72,000 annual hours.

Target Result: Conduct stakeholder usage survey to identify future system hours spent per staff in data validation and correction. The survey may compare approximate staff hours against a target of 18,000 hours of stakeholder's time spent validating/correcting data in CTIPS, CTIPS reports, or in applications that interface with CTIPS by the end of the first year following implementation.

2. Meet Business Needs More Efficiently

Objective ID: 2.1

Objective: In Year 2 following deployment, reduce by 50 percent the number of hours spent on system updates and bug fixes by Program staff, IT staff, and Consultants.

Metric: Hours spent by Program Staff, IT Staff, and Consultant addressing business needs for CTIPS.

Baseline: 5,300 annual hours for Program Staff, IT Staff, and Consultant.

Target Result: Reduce the number of hours to 2,650 or less annual hours for Program Staff, IT Staff, and Consultant.

Objective ID: 2.2

Objective: Upon go-live, utilize system extensibility, configurability, and scalability features to address new and future business needs thereby reducing the need of staff to proliferate ancillary/redundant data systems.

Metric: Extensibility, configurability, and scalability features in CTIPS.

Baseline: Oracle development services that require IT staff to conduct lengthy implementation processing to release new system changes or inability to meet business due to existing system limitations.

Target Result: Test Summary Report that includes evaluation and acceptance of results for system extensibility, configurability, and scalability requirements documented in the Requirement Traceability Matrix.

Objective ID: 2.3

Objective: Upon go-live, the new application will support VIPER functionality.

Metric: The VIPER functionality that supports the business of financial programming.

Baseline: The FileMaker Pro VIPER system currently supports VIPER functionality.

Target Result: Upon go-live, VIPER functionality will be integrated into the CTIPS replacement. The VIPER system will be decommissioned in the future.

Objective ID: 2.4

Objective: Upon go-live, the new application will support electronic project programming request functionality.

Metric: The electronic project programming requests functionality that supports the business of financial programming.

Baseline: The CalSMART ePPR module currently supports electronic project programming request functionality.

Target Result: Upon go-live, the CalSMART ePPR functionality will be integrated into the CTIPS replacement. The CalSMART ePPR module will be decommissioned in the future.

3. Increase Decision Making Support

Objective ID: 3.1

Objective: Upon go-live, implement a decision-making support capability to provide decision makers with the ability to dynamically acquire Financial Programming information required to facilitate decision-making, forecasting, metrics creation/evaluation, inquiry, information sharing, and Policy analysis.

Metric: Hours spent by Caltrans staff collecting and generating Financial Programming information.

Baseline: 1,758 annual hours for Caltrans staff.

Target Result: Reduce by 50 percent the number of hours Caltrans staff spends collecting and generating Financial Programming information to facilitate decision making.

4. Increase Access to CTIPS Information

Objective ID: 4.1

Objective: Upon go-live, increase the number of users that can access CTIPS information.

Metric: Accessibility of the CTIPS information to its users.

Baseline: CTIPS currently has approximately 1300 users.

Target Result: Increase the number of CTIPS users that require ADA accommodation by the end of the second year following implementation.

1.8 Project Management

1. Project Management Risk Score: 0.5

(Attach a completed [Statewide Information Management Manual \(SIMM\) Section 45 Appendix A Project Management Risk Assessment Template](#) to the email submission.)

2. Project Approval Lifecycle Completion and Project Execution Capacity Assessment

Does the proposal development or project execution anticipate sharing resources (state staff, vendors, consultants, or financial) with other priorities within the Agency/state entity (projects, PALs, or programmatic/technology workload)?

Answer: No

Does the Agency/state entity anticipate this proposal will result in the creation of new business processes or changes to existing business processes?

Answer (No, New, Existing, or Both): Both New and Existing Processes

1.9 Initial Complexity Assessment

1. Business Complexity Score: 2.0

(Attach a completed [SIMM Section 45 Appendix C](#) to the email submission.)

2. Noncompliance Issues: (Indicate if your current operations include noncompliance issues and provide a narrative explaining how the business process is noncompliant.)

Programmatic regulations: No

HIPAA/CIIS/FTI/PII/PCI: No

Security: No

ADA: Yes

Other: No

Not Applicable: No

Noncompliance Description:

The current CTIPS system is not ADA compliant. The application is not equitably available for all users. Previous attempts have shown that CTIPS cannot be modified for compliance due to the system's underlying architecture.

3. Additional Assessment Criteria

If there is an existing Privacy Threshold Assessment/Privacy Information Assessment, include it as an attachment to your email submission.

How many locations and total users is the project anticipated to affect?

Number of locations: 1

Approximate number of internal end-users: 1,132

Approximate number of external end-users: 158

Total number of CTIPS users: 1,290

Estimated Number of Transactions/Business Events (per cycle): 600/day

1.10 Funding

Planning

1. Does the Agency/state entity anticipate requesting additional resources through a budget action to **complete planning** through the project approval lifecycle framework? No

If Yes, when will a budget action be submitted to your Agency/DOF for planning dollars?

[Click or tap to enter a date.](#)

2. Please provide the Funding Source(s) and dates funds for planning will be made available:

Cost-sharing via the Financial Policy Board from programs supported by CTIPS. It is anticipated that planning funds will be available FY 24-25.

Project Implementation Funding

1. Has the funding source(s) been identified for **project implementation**? Yes

If known, please provide the Funding Source(s) and dates funds for implementation will be made available:

Budget Change Proposal (BCP) will be pursued for project implementation.

Will a budget action be submitted to your Agency/DOF? Yes

If "Yes" is selected, specify when this BCP will be submitted: Upon approval of Stage 2,
date: Estimated Timeline - June 2026.

2. Please provide a rough order of magnitude (ROM) estimate as to the total cost of the project: \$9.9 Million

End of agency/state entity document.

Please ensure ADA compliance before submitting this document to CDT.

When ready, submit Stage 1 and all attachments in an email to ProjectOversight@state.ca.gov.

Department of Technology Use Only

Original "New Submission" Date: 12/26/2024

Form Received Date: 12/26/2024

Form Accepted Date: 12/26/2024

Form Status: Completed

Form Status Date: 12/26/2024

Form Disposition: Approved

If Other, specify: [Click or tap here to enter text.](#)

Form Disposition Date: 12/26/2024

Department of Technology Project Number (0000-000): 2660-549