

STAFF REPORT



MEETING DATE:	April 25, 2024
SUBJECT:	Authorize the Executive Director to Execute a Technical Services Agreement for the Shasta Planning Data Dashboard
AGENDA ITEM:	7-7
STAFF CONTACT:	Mehdi Moeinaddini, Associate Transportation Planner

SUMMARY:

The Shasta Planning Data Dashboard will enhance SRTA's travel model tools to support regional planning efforts and will provide a new, online user-friendly reporting dashboard that will track the region's progress in addressing federal and state transportation performance metrics. The board of directors approved this project as part of the Fiscal Year 2023/24 Overall Work Program (OWP) on October 26, 2023. Following this, a Request for Proposals (RFP) for consultant services was issued with proposals due April 5, 2024. After evaluating proposals, staff recommends a technical services agreement (TSA) be awarded to [consultant], for a budget not to exceed \$500,000 for a term ending June 30, 2026.

STAFF RECOMMENDATION:

It is recommended that the board of directors:

1. Authorize the executive director to execute a technical services agreement (TSA) with [consultant] to prepare the Shasta Planning Data Dashboard, for a term ending June 30, 2026, not to exceed \$500,000; and
2. Authorize the executive director to make minor administrative amendments as appropriate.

DISCUSSION:

Background – At the February 23, 2023, board of directors meeting, this project was introduced as a new work element in the Fiscal Year (FY) 2023/24 OWP ([February 23, 2023, item 12](#)) to modernize SRTA's data management systems, update modeling tools, and provide an online information dashboard for tracking the performance of the region's transportation infrastructure, as described in Attachment A. The project secured grant funds from Caltrans in August 2023. SRTA amended project information as part of formal amendment 1 of the FY 2023/24 OWP ([October 26, 2023, item 18](#)). A project meeting was held with Caltrans on January 30, 2024, prior to starting the project.

Proposals – SRTA issued an RFP for consultant services on March 4, 2024, with proposals due on April 5, 2024. Proposals were received from An evaluation panel was established and the panel's consensus scores were as follows: It is recommended that ... be awarded the contract based on The proposed project schedule is attached (Attachment B). Staff will update the board of directors on key milestones during the planning process.

Benefits – There is a need for a modern data analytics dashboard supporting interactive analysis and visualization. The project will:

- Enhance decision-making by improving data quality and availability.
- Support regional planning efforts by integrating SRTA's land use and travel modeling tools.
- Enhance engagement and transparency by providing an online public information dashboard.
- Demonstrate the region's progress in addressing federal, state, and regional transportation performance metrics from capital investments.

ALTERNATIVES:

The board of directors may reject the staff recommendation. However, staff would need to issue a new RFP which would cause a significant project delay. The board of directors may award the contract to a different consultant who responded to the RFP with supporting information. The board of directors may delay this item and request staff to provide additional information. However, it's worth noting that the board of directors has been regularly briefed on the project's progress. A delay may potentially impact the timelines of other critical initiatives, including the updating of the travel model, the development of the next regional transportation plan, performance measurement activities, and associated public engagements.

OTHER AGENCY INVOLVEMENT:

The Project Advisory Committee (PAC) will review and make recommendations regarding the dashboard development and model enhancements. Members may include representatives from SRTA; planning and public works department staff from Anderson, Redding, Shasta Lake, and Shasta County; Redding Area Bus Authority; the Shasta County Air Quality Management District; and Caltrans District 2. */// The Technical Advisory Committee (TAC) met on April 11, 2024, to receive an update on the project.///*

FISCAL IMPACT:

The recommended contract amount is \$500,000 for consultant services. This project is programmed in the FY 2023/24 OWP (Work Element 705.06) previously approved by the board of directors on October 26, 2023.

Sean Tiedgen, AICP, Executive Director

Attachments:

A: Scope of Work

B: Schedule

Attachment A: Scope of Work for Shasta Planning Data Dashboard

Task 1: Outreach and Public Engagement Plan

The stakeholder community will be involved through a participatory initiative that includes workshops, meetings, activities oriented to evaluate the proposed platform and dashboard (e.g., demonstration, conducting usability testing sessions with representative users, distributing surveys to gather feedback from users, etc.), and specific workshops for different target groups. Through this participatory initiative, stakeholders will be involved in the development of the proposed platform and dashboard in addition to evaluating the final version and suggesting specific improvements. Participants may include representatives of key stakeholder communities, like policymakers or advisors, local government agencies, tribal entities as well as interested citizens. There will be specific workshops geared toward local government agencies and tribal entities to discuss how the platform and dashboard can meet their needs. The positive effects of the project's outcomes need to be discussed in this workshop. Through channels of dissemination and communication (e.g., SRTA and the project website) and the follow-up workshop, stakeholders will be kept close to the project. They will critically evaluate the effects of suggested recommendations in the follow-up workshop.

1.1 Stakeholder Identification and Segmentation:

- Identify key stakeholders, including policymakers, local government agencies, tribal entities, and community members.
- Segment stakeholders based on their roles and interests to tailor outreach efforts effectively.

1.2 Initial Stakeholder Engagement:

- Send personalized invitations to key stakeholders for an initial meeting to introduce the project's objectives and the importance of their involvement.
- Conduct an orientation session to familiarize stakeholders with the project's goals and expected outcomes.

1.3 Participatory Initiatives:

- Organize a series of workshops, meetings, and activities to engage stakeholders throughout the project's lifecycle.
- Plan specific workshops tailored to different target groups to address their unique needs and concerns.
- Workshops should be designed to evaluate the proposed platform and dashboard, collect feedback and suggestions, and encourage collaboration among stakeholders.

1.4 Separate Workshops for Local Government and Tribal Entities:

- Organize dedicated workshops for local government agencies and tribal entities to showcase the benefits and positive effects of the proposed platform and dashboard, explain how they can actively use and recommend the platform to their respective communities, and highlight the impact of the project's outcomes on their work.

1.5 Continuous Communication and Engagement:

- Maintain regular communication with stakeholders through various channels such as SRTA website updates, project newsletters, social media platforms, and email updates.
- Encourage stakeholders to provide input and suggestions through these communication channels.

1.6 Dissemination of Information:

- Utilize channels like SRTA website for wider dissemination of project updates and achievements.
- Keep stakeholders informed about the project's progress and outcomes through these channels.

1.7 Follow-up Workshops:

- Plan Follow-up workshops towards the end of the project to present the final version of the platform and dashboard, highlight the improvements made based on stakeholder feedback, allow stakeholders to critically evaluate the project's outcomes and the impact of their recommendations, and discuss the next steps and potential follow-up projects.

1.8 Feedback Loop:

- Establish a feedback mechanism that allows stakeholders to provide ongoing input and suggestions even after the project's completion.

1.9 Evaluation and Iteration:

- Continuously evaluate the effectiveness of the outreach plan and make necessary adjustments based on stakeholder feedback and changing project needs.

1.10 Reporting and Documentation:

- Maintain detailed records of all interactions, feedback, and suggestions provided by stakeholders.
- Generate regular reports on the progress of stakeholder engagement efforts to keep all parties informed.

Task Deliverables

- Outreach and public engagement plan
- Meeting notes identifying the required needs and priorities.
- Outcome reports from workshops with the local government agencies, underrepresented communities, and tribal entities
- Outcome report evaluating the effects of suggested recommendations
- Updates to SRTA website
- Public engagement reports

Task 2: Data Collection and Updating the Required Prediction Models

The primary objective is to thoroughly explore and assess our integrated land use and travel model, slated for potential readiness by mid-2024, with the aim of identifying necessary updates and calibration requirements. A secondary goal is to investigate the available data sources, evaluating their relevance and potential usage in updating, calibrating, and validating the integrated model. Additionally, the project seeks to establish a framework for the automated retrieval of identified data to facilitate seamless updates and calibrations. Furthermore, the exploration extends to analyzing data related to the impacts of land use and transportation strategies, extracted from the integrated model.

2.1 Integrated Model Exploration:

- Review the current state of the integrated land use and travel model.
- Evaluate the model's performance.
- Identify discrepancies and potential areas for improvement.
- Develop a plan for updating and calibrating the model.

2.2 Data Source Investigation:

- Identify existing data sources relevant to land use and transportation.
- Evaluate the quality, accuracy, and timeliness of the data.
- Assess the compatibility of data sources with the integrated model.

2.3 Framework Development for Automated Data Retrieval:

- Design a framework for automated data retrieval.
- Integrate the framework with the integrated model.
- Conduct testing to ensure seamless data updates.

2.4 Data for Land Use and Transportation Impacts:

- Design a tool to extract and analyze relevant data from the model on the impacts of land use and transportation strategies.
- Integrate the tool with the integrated model.

2.5 Documentation and Reporting:

- Document all processes, updates, and calibration steps.
- Prepare a comprehensive report outlining findings, recommendations, and the updated model's capabilities.
- Provide training for relevant team members on the use of the updated model.
- Ensure a smooth transition to the updated model.

Task Deliverables

- The land use, mobility, health, accident, and other required data
- A framework for data collection and uploading
- Updated model
- A tool to extract and analyze relevant data from the model. This tool focuses on assessing the effects of land use and transportation strategies on various aspects such as land use patterns, travel behavior, health, safety, environmental impact, and greenhouse gas emissions.

Task 3: Dashboard Development, Documentation, and Training

The proposed multi-data views dashboard needs to include, land use, traffic volume, travel time, transit ridership, and freight traffic in addition to greenhouse gas estimation and health and safety indicators such as reported crashes and fatalities. This task may include but is not limited to providing data, maps, figures, and reports for current and predicted housing and infill development opportunities, traffic count, pedestrian and bicycle counts, Vehicle Miles Traveled (VMT), Level of Service (LOS), risk spots for accidents, health, safety, and environmental impacts, etc.

3.1 Dashboard Design and Development

- Select a suitable platform or tool for creating the dashboard.
- Design the dashboard layout, visualizations, and interactive components to effectively communicate insights.
- Each domain should have its own set of visualizations, such as maps, graphs, and charts.
- Ensure that federal performance measure rules 1 (safety), 2 (pavement and bridge condition), and 3 (system performance, freight, and CMAQ) can be reported, where applicable.

3.2 Integrate the simulation model into the Dashboard

- Incorporate the simulation model into the dashboard.
- The dashboard should show the model outputs and have some options to take inputs from the user and produce relevant predictions or trends.

3.3 Real-time Data Integration (if applicable)

- If real-time data is available, implement mechanisms to update the dashboard with the latest information periodically.

3.4 User Interface and Interactivity

- Focus on user experience by making the dashboard intuitive and user-friendly.
- Users should be able to interact with the dashboard, selecting regions (select cities, counties, census block groups, or a specific area using selection tools like polygons, rectangles, and similar options), time frames, and specific metrics of interest.

3.5 Testing and Quality Assurance

- Thoroughly test the dashboard to ensure its functionality, accuracy, and responsiveness.
- Identify and fix any bugs or issues.

3.6 Documentation

- User Guide: Create a comprehensive user guide that explains how to use the dashboard. Include step-by-step instructions on accessing the dashboard, navigating through its various sections, and making the most of its features.
- Data Dictionary: Provide a data dictionary that defines each variable, metric, or dataset used in the dashboard. Include descriptions, data sources, units of measurement, and any transformations performed on the data.
- FAQs: Anticipate common questions and issues users might encounter and create a frequently asked questions (FAQ) section in the documentation.
- Technical Documentation: For users who want to delve deeper into the technical aspects, provide documentation on the architecture, data sources, predictive models used, and any APIs or data pipelines involved.
- Updates and Versioning: Specify how updates and version changes to the dashboard will be communicated to users. This ensures that users are aware of improvements or changes that might affect their use of the dashboard.
- Troubleshooting: Include a section on troubleshooting common problems or errors users might encounter while using the dashboard.

3.7 Training

- Training Sessions: Conduct training sessions for staff and potential users, especially for the first dashboard launch. These sessions can be in-person or virtual, depending on the audience's location.
- Video Tutorials: Create video tutorials that walk users through various tasks and features of the dashboard. This allows users to learn at their own pace and serves as a valuable resource for new users.
- Interactive Demos: Develop interactive demos or simulations that let users practice using the dashboard in a risk-free environment.

- User Support: Establish a support system for users to reach out with questions or issues. This could be through email, a dedicated helpdesk, or a forum where users can interact with each other and ask questions.
- Feedback Loop: Encourage users to provide feedback during training sessions. This feedback can help to identify areas where users may be struggling or where the dashboard could be improved.
- Advanced Training: Offer advanced training sessions for staff who need to extract deeper insights from the dashboard. These sessions can cover topics like interpreting predictive model outputs or performing custom analyses.
- Regular Refreshers: Consider offering periodic refresher training sessions if needed to keep users updated on any changes, new features, or best practices related to the dashboard.
- Feedback Incorporation: Use feedback from users during training sessions to make continuous improvements to both the dashboard and the training materials.

3.8 Deployment and Maintenance

- Establish a plan for ongoing maintenance, updates, and data refreshes.
- Implement necessary security measures to protect sensitive data and ensure compliance with privacy regulations.

Task Deliverables

- A scenario toolkit
- A toolkit to query, analyze, and download data
- A dashboard to present data, maps, figures, and reports
- Documentation and training reports

Task 4: Advisory Committee Meetings

A Project Advisory Committee (PAC) made up of regional partners will help advise SRTA and the consultant throughout the process. Updates to the platform will be provided and feedback will be received to improve user interactivity and presentation of data. There may be a significant crossover of participants on this PAC and SRTA's regional Technical Advisory Committee.

Task Deliverables

- Meetings to provide updates regarding the proposed platform and dashboard – meeting notes
- Meetings to evaluate the final version – meeting notes

Task 5: Board Review/Approval

SRTA's Technical Advisory Committee (TAC) and board of directors will be informed throughout the development of the proposed platform and dashboard. SRTA's TAC provides technical review and input of all items before they are presented to the board of directors. At key milestones of the project, presentations may be made to share progress and seek input. It's anticipated that up to three presentations may be made to SRTA's TAC and board of directors.

Task Deliverables

- Meetings to provide updates regarding the proposed platform and dashboard – meeting notes
- Meetings to evaluate the final version – meeting notes

Attachment B: Schedule

[illegible]