

**DESIGN ENGINEERING SERVICES FOR THE CONCRETE BRIDGE DECK OVERLAY AND DECK
SEAL 2025
REQUEST FOR PROPOSAL
SJCDPW-RFP-26-03
SJCDPW'S PRELIMINARY WORK SCOPE**

The EXHIBIT "A" will define task unique to each bridge where it is appropriate. Interested consulting firms will need to response to all tasks as defined in EXHIBIT "A". The preliminary Scope of Work described in this Request for Proposal is provided for guidance only. The Proposal needs to be detailed and defined in order to accomplish each task successfully. All work must comply with County policies, the Local Assistance Procedure Manual (LAPM), latest Caltrans Standard Plans and Specifications, and the most recent guidelines for the Highway Bridge Program (HBP).

Project Background

Throughout the County there are a handful concrete bridges, due to wear and tear, vehicle loads and weathering, have resulted in minor cracking on the concrete surface or deck. Treating the deck with a methacrylate deck seal, or in more severe cases, a polyester concrete overlay, will seal all cracks and prevent water and moisture from penetrating and corroding the reinforcing steel in the bridge deck. These deficiencies if not maintained can lead to spalling, section loss, or corrosion of the reinforcing steel. The following bridges have been recommended for such preventative maintenance measures based on Caltrans Bridge Inspection Report work recommendations:

Polyester Concrete Deck Overlay

- Bird Road Bridge No. 29C-370 across California Aqueduct
- Tracy Boulevard Bridge No. 29C-028 across Old River
- Mountain House Road Bridge No. 29C-083L across California Aqueduct
- Mountain House Road Bridge No. 29C-083R across California Aqueduct
- Blewett Road Bridge No. 29C-371 across California Aqueduct
- Paradise Road Bridge No. 29C-312 across Tom Paine Slough

Methacrylate Deck Seal

- Jack Tone Road Bridge No. 29C-159 across Temple Creek
- Hansen Road Bridge No. 29C-347 across Delta Mendota Canal

These bridges were built between 1955 and 1993 with the typical speed limit ranging from 45-55 MPH.

Project Objective

This project will combine two authorized Bridge Preventive Maintenance Program (BPMP) projects, Methacrylate Deck Seal (MDS), and Polyester Concrete Overlay (PCO) into one project (Project). The Project, in general, will consist of removing existing AC or chip seal where applicable, cleaning of the deck by abrasive blasting, sweeping/blowing with high pressure air to provide a clean surface and finally placing the recommended MDS and/or PCO.

San Joaquin County Department of Public Works (SJCDPW) is soliciting qualified consultants to provide professional and technical engineering services for the design of the Concrete Bridge Deck Overlay and Deck Seal 2025

The selected firm (Consultant) shall be requested to enter into a consultant services agreement with San Joaquin County as set forth in the Request for Proposals (RFP).

The Project will require tasks, which include, but are not limited to the following;

- Project Management & Review Meetings
- Environmental Clearances and Documentation (Both NEPA and CEQA)
- Utility Coordination
- Plans, Specifications and Engineer's Estimate (PS&E)
- Contract Bidding Assistance/Design Support During Construction

The Consultant is encouraged to identify any supplemental tasks deemed necessary and/or recommend alternatives, which may enhance the Project, reduce costs, or expedite the delivery.

The Consultant shall be required to provide all labor, equipment, tools, and facilities necessary for the completion of the Project's design and environmental clearance.

SJCDPW reserve the right to eliminate or reduce the scope of work if sufficient funds are not available for the Project. SJCDPW will only request the Cost Proposal from the highest ranked consultant. The highest ranked consultant shall submit the proposed costs for each of the tasks and subtasks identified here within the scope of work.

The requested design engineering services shall include, but not be limited to, the following:

TASK 1.0 PROJECT MANAGEMENT & REVIEW MEETINGS

TASK 1.1 – COORDINATION/MEETINGS/ADMINISTRATION

Project Management: Project Manager will be responsible for directing the project team during the development and execution of the Project, as well as communication with SJCDPW staff, and documenting the progress and decisions made during the entire Project. This involves all aspects of project management including financial performance, schedule, and quality control.

Project Kick-Off Meeting: A Project "Kick-off" Meeting will be held following the Notice to Proceed. This meeting includes representatives from SJCDPW, Consultant, sub-consultants and other involved agencies. The primary meeting objectives will be to present the project, its goals, review the project scope and action item list, explain the project schedule, identify key project issues, and facilitate a general exchange of views and ideas regarding the completion of the project.

Consultant will visit each bridge site with one bridge engineer and one roadway engineer to evaluate traffic and other factors that may affect the project, to brainstorm design ideas, and to document the existing conditions and to make necessary measurements. Each location shall be photographed. Upon completion of the field visit, consultant will document the inspections, observations, and results of field measurements in a memorandum. Consultant will develop design criteria to be used for the Project. Consultant will also schedule a phone meeting to report findings, gather SJCDPW comments, determine the applicability of data, and identify any additional information needs before proceeding to the next steps.

Project Development Meetings: A coordination and status conference call will be held on a monthly basis for the duration of the Project. These meetings will be held to review project status, design and budget to obtain required SJCDPW input, make decisions, and discuss issues that have the potential of affecting the project design, budget, or schedule. Consultant will provide updated Project Schedules as necessary. Consultant will prepare and distribute all meeting notes, agendas, and minutes. This includes attendees' contact information, meeting content and action items to be completed.

Project Schedule: The schedule will be prepared in Microsoft Project and identify the beginning dates and duration of each task. If necessary, the schedule will be updated on a monthly basis.

Deliverables:

- ✓ Meeting agendas and minutes
- ✓ Project Schedule

TASK 1.2 COORDINATION WITH OTHER AGENCIES

Consultant will be responsible for the identification and coordination of impacted utility companies or other relevant stakeholders. Consultant may require to initiate communication with Department of Water Resources (DWR), Bureau of Reclamation (USBR), Caltrans and any other affected agencies regarding project development/improvements and maintenance access requirements. These agencies will be provided proposed project plans as requested and/or required. Consultant will provide copies of written correspondence with each impacted agency.

TASK 1.3 – PROGRESS REPORTS

On a monthly basis, progress reports will be issued with invoices to SJCDPW detailing major items worked on during the billing period and percentage completion for each task, with substantiation for backup. The progress reports will also identify any potential Project issues.

Deliverables:

- ✓ Invoices with Progress Reports

TASK 1.4 – DATA RESEARCH AND COLLECTION

Consultant will review project limits, identify available and required documents, contact information, scope, schedule, budget, regulatory items, County and other agency approval processes, and other administrative procedures. Consultant will also review any project material available from the County, various utility companies, DWR, USBR, Caltrans, and other stakeholders. The Project material will include, but not be limited to: as-built plans, Caltrans inspection reports, analysis studies, potential traffic detour plans, traffic count data, and utility company plat drawings which might indicate site constraints including buried and overhead utilities, etc.

TASK 2.0 ENVIRONMENTAL ANALYSIS

TASK 2.1 INITIAL ASSESSMENT AND PRELIMINARY ENVIRONMENT STUDY (PES)

The initial environmental assessment shall identify potential environmental issues (such as noise, air quality, aesthetics, water quality, and the anticipated corresponding technical studies. The Consultant shall prepare the Preliminary Environmental Study (PES) form (LAPM – Exhibit 6-A) and schedule a field review with Caltrans and SJCDPW to discuss and determine what technical studies will be needed.

The assessment work which includes, but is not limited to, the following:

- Prepare a PES form.
- Prepare a Project Footprint Map.
- Conduct a field review with Caltrans and SJCDPW. Consultant shall prepare all documents required to complete "Field Review Form", as defined in Chapter 7 of the LAPM. After the meeting, the Consultant will prepare meeting minutes and update the form as appropriate and submit it to SJCDPW for distribution to Caltrans.
- Respond to any Caltrans comments regarding PES and environmental related documentation.

The Project is federally funded. The environmental documentation must be prepared in accordance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) requirements.

Deliverables:

- ✓ Project footprint map
- ✓ PES Form
- ✓ Field Review agenda, attendance roster, and meeting minutes
- ✓ Field Review Form (LAPM - Exhibit 7-B)

Environmental Consultant will lead this task. Consultant will provide engineering support to Environmental Consultant to complete the environmental document in the following subtasks:

TASK 2.2 ENVIRONMENTAL TECHNICAL STUDIES

Upon approval of the PES form, Consultant will provide the necessary environmental technical studies identified in the approved PES Form.

If the consultant identifies additional work necessary for completing the environmental documentation that is not noted in the tasks below, please include in the proposal.

Prepare Technical Studies: Consultant will conduct the following technical studies for the approved Concrete Bridge Deck Overlay and Deck Seal 2025 Project.

Cultural Resources: Consultant will provide cultural resource studies if required, NEPA, and CEQA. If required, Consultant will conduct the following tasks to identify cultural resources in the project's Area of Potential Effects (APE).

Consultant will prepare a draft APE map for cultural resources in consultation with Caltrans and other Project design staff. The APE will include all areas that may be directly affected by Project construction and operation. The APE map may be modified depending upon alterations to the Project, consultation with Caltrans, and the findings of the field survey. All changes will be reflected in the final APE which will be included in the technical documents.

Noise: Consultant will prepare a noise study memorandum in accordance with the requirements of Title 23, Section 772 of the Code of Federal Regulations (CFR) (23 CFR 772) and the Caltrans Traffic Noise Analysis Protocol (Protocol). Because federal funding and Caltrans oversight is involved, a noise study must be prepared in accordance with procedures specified by FHWA and the Protocol. The memo will summarize the construction noise impact analysis which will be based on U.S. Department of Transportation guidance.

For CEQA, background information on noise will be discussed, and the existing noise environment will be described. Applicable County noise regulations and planning guidelines will be summarized including those contained in the San Joaquin County General Plan Noise Element and County noise ordinance. Construction noise will be evaluated based on U.S. Department of Transportation Guidance. Construction noise impacts will be evaluated using noise standards in the San Joaquin County noise ordinance. If significant construction noise impacts are identified, mitigation, if feasible, to reduce impacts will be identified.

Air Quality Technical Memorandum: Construction impacts will be assessed qualitatively with mitigation measures based on requirements included in San Joaquin Valley Unified Air Pollution Control District's fugitive dust regulation (Regulation VIII).

- ✓ Cultural Resource Study
- ✓ Noise Study Memorandum
- ✓ Air Quality Technical Memorandum

TASK 2.3 FINAL ENVIRONMENTAL DOCUMENT/ENVIRONMENTAL CLEARANCE

After technical studies have been approved by Caltrans, Consultant will obtain environmental clearance or categorical exemption in accordance with the California Environmental Quality Act (CEQA) guidelines for the Project. The Consultant will develop a Notice of Exemption (NOE) for SJCDPW review and submittal. The NOE will contain several elements: a brief project description; the location of the project; a finding that the project is exempt from CEQA, including a citation to the appropriate exemption; and a brief statement of the reasons to support the finding that the project is exempt. The Consultant will also produce a vicinity map to be included in the NOE. SJCDPW staff may provide an example of the vicinity map for the Consultant to reference.

Consultant will also obtain environmental clearance or categorical exclusion in accordance with the National Environmental Policy Act (NEPA) guidelines for the Project. The Consultant will work with Caltrans Local Assistance environmental staff to prepare a Categorical Exclusion as the NEPA approval document for the project and will include avoidance, minimization, and mitigation measures provided in the technical studies prepared.

Deliverables:

- ✓ CEQA NOE and NEPA CE Clearances

TASK 3.0 UTILITY COORDINATION

TASK 3.1 UTILITY "A" PACKAGE

At the beginning of the project, "A" letters will be sent to all known utility companies at the site to determine the location and size of facilities within the project limits. This information will be incorporated into the base maps and used during design to determine conflicts and relocation requirements.

Deliverables:

- ✓ Utility Coordination Database
- ✓ Utility "A" Exhibit

The Consultant shall be responsible for identifying all utilities that could potentially conflict with the planned project, and determining special requirements for facilities including protection, relocation, right-of-way, easements, and construction.

TASK 4.0 PLANS, SPECIFICATIONS AND ENGINEER’S ESTIMATE (PS&E)

TASK 4.1 PREPARATION OF 35% PS&E (PRELIMINARY BASE PLANS)

The Consultant will develop Preliminary Base Plans that incorporate one-foot contour topography, sufficiently extend to show transitions from the proposed improvements to the existing conditions. The Preliminary Base Plans will be developed in accordance with San Joaquin County policies, procedures, manuals, standards, and the Local Assistance Program. These preliminary plans, drawn to a scale of 1"=40', shall be submitted to SJCDPW for review and approval as the thirty-five percent (35%) design stage submittal. 35% plans will consist of the title sheet, typical section, layout plan and profile sheet.

Deliverables:

- ✓ Preparation of 35% PS&E in AutoCAD (2024 or higher version)

Task 4.2 PREPARATIONS OF 65% (PS&E)

The purpose of this task is to perform the detailed design, obtain design approval, and produce the construction drawings, special provisions, and construction estimate required for the construction documents. The plans, specifications and estimate will be prepared to latest State Standards and in accordance with the SJCDPW policies, procedures, manuals, and standards.

These plans will include all details necessary to construct the project and conform to existing profiles. Consultant will prepare Plans, Specifications and Engineer’s Estimate (PS&E) and will include the following minimum items listed below:

- Title/Cover Sheet (SJCDPW format)
- Typical Section
- Detour or Traffic Staging Plan (if required)
- Construction Details
- Construction Staging Plan (if required)
- Summary of Quantities Sheet
- Quantity support calculations
- Engineer’s Estimates in Microsoft Excel

A meeting will be held after SJCDPW review 65% submittal to discuss SJCDPW’s review (redlines and comments) of the draft PS&E. Consultant will provide the following deliverables for PS&E:

Deliverables:

- @ 65% stage = Preparation of 65% PS&E in AutoCAD (2024 or higher version)
1 Electronic version in PDF format (11x17 and 22x34)
Technical specifications
Engineer’s Estimate
Working Days Schedule

Project technical specifications, including special provisions based on latest Caltrans Standard Special Provisions (SSP) and SJCDPW provided specifications format will be developed in Microsoft Word.

SJCDPW will provide boilerplate specifications which will include Section 7, "Legal Relations and Responsibility", to combine with the Consultant prepared Project specific technical specifications for the 65%, 95% and 100% (final) submittal.

Task 4.3 PREPARATIONS OF 95% (PS&E)

The draft PS&E package consisting of plans, specifications, and estimate, along with design, QA/QC check, and quantity calculations, will be submitted to SJCDPW for review. This submittal will also include any design exceptions proposed for the Project.

Deliverables:

@ 95% stage = Preparation of 95% PS&E in AutoCAD (2024 or higher version)
1 Electronic version in PDF format (11x17 and 22x34)
Technical specifications
Engineer's Estimate
Revised Working Days Schedule
Response/Review Matrix to the redlines of the 65% plan submittal

Prior to 95% design submittal, Consultant will perform an internal quality and constructability review of the entire PS&E package. This review includes checking all pay items for consistency with the bid list, plans, quantities and special provisions. A meeting will be held after SJCDPW review (redlines and comments) the 95% submittal to discuss plans.

Task 4.4 PREPARATIONS OF 100% (FINAL PS&E)

Upon receiving review comments from SJCDPW and other agencies, each comment will be reviewed, discussed, and addressed in writing. Appropriate modifications will then be made to the plans, specifications, and estimate, which will be submitted to SJCDPW, to form a complete package that is ready to advertise for construction.

Deliverables:

@100% stage = Preparation of 100% PS&E in AutoCAD (2024 or higher version)
1 Electronic version in PDF format (11x17 and 22x34)
1 set of Stamped and signed Contract specifications
Final Engineer's Estimate
Quantity and quantity check calculations
1 set 11x17 wet signed plans on Mylar (or SJCDPW approved equivalent)
Project Working Days Schedule
Response/Review Matrix to the redlines of the 95% plan submittal

Electronic files will be a version of the applicable software as specified below.

- AutoCAD format electronic files - plans and drawings
- Microsoft Word format electronic files - specifications
- Microsoft Excel format electronic files - Engineer's Estimate, design calculations, quantity check calculations.
- Microsoft Project working schedule

TASK 5.0 CONTRACT BIDDING ASSISTANCE & DESIGN SUPPORT DURING CONSTRUCTION

Task 5.1: CONTRACT BIDDING ASSISTANCE

Consultant will provide technical assistance to SJCDPW through bidding process. Services include providing clarification or answers to questions received from prospective bidders, attending the Pre-Bid meeting and assisting in preparing addendums, if necessary. The Contract Bidding Assistance could include necessary design revisions if SJCDPW deems it necessary. SJCDPW will be responsible for receiving all inquiries, forwarding these inquiries to the Consultant for responses and SJCDPW will provide all responses from Consultant to bidder's questions received during the bidding period.

Task 5.2: DESIGN SUPPORT DURING CONSTRUCTION:

After the award of the construction contract, the CONSULTANT will provide design services during construction. Design services during construction will include reviewing contractor submittals, responding to Requests for Information (RFI's), evaluating Non-Conformance Reports (NCR's), and other items deemed necessary by SJCDPW. Construction submittals and documentation will be reviewed for conformance with the Project plans and specifications.