



STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
REQUEST FOR QUALIFICATIONS NOTICE
NUMBER 06A3341

Read carefully as the following revisions have been made to this document:

- On February 2, 2026, new escalations rates.
- On February 2, 2026, interviews will be held in person.
- On September 30, 2025, the U.S. Department of Transportation (U.S. DOT) issued an interim final rule (IFR) which, among other things, implemented changes to the Disadvantaged Business Enterprise (DBE) Program via modifications to 49 Code of Federal Regulations Part 26. (Docket Number DOT-OST-2025-0897.) The IFR was published in the Federal Register on October 3, 2025, and took immediate effect. (90 FR 47969 (Oct. 3, 2025).)
- On 03/07/25, GENERAL, Executive Order N-12-23 replaces Executive Order N-12-12. GenAI Reporting and Factsheet Form STD1000 is retired.
- On 01/31/25, GENERAL the Fee & Escalation table has been revised.

Note: Questions concerning this Request for Qualifications (RFQ) must be submitted in writing to the attention of Adam Matheny at Adam.Matheny@dot.ca.gov. Questions must be received no later than seven (7) business days after the RFQ advertisement. Consultants contacting the District or Division directly seeking information about this RFQ will be disqualified from consideration in the selection process.

I. GENERAL INFORMATION

A. Caltrans is soliciting Statements of Qualifications (SOQs) from qualified firms that may lead to the award of a contract for **AE On-Call Roadway Design & Related Project Development and Construction Design Support Services**. In submitting your SOQ, you shall comply with the instructions found herein. In addition to those programs that are specified in this solicitation, prospective consultants are encouraged to consider programs that are available, such as those for the use of small businesses, disadvantaged businesses, disabled veteran businesses, new emerging firms, and other businesses covered by State and Federal programs.

B. The estimated contract amount is \$ 2,686,364 - \$ 4,364,561.50

C. The estimated contract term is 5 years.

D. Interviews will be held **in person** on October 14, 2026 at

1976 E. Dr. Martin Luther King Jr. Blvd.

Stockton, CA 92502, Room 56

Confirmation letters will be sent to those firms short-listed.

- E. The most highly qualified consulting firm will be required to submit an electronic copy of the financial documents listed on the appropriate Financial Documents Submittal Checklist available on the [AE Contract Information](#) website. The most highly qualified consulting firm will be notified of their selection and receive instructions for the electronic submission of the financial documents.

The most highly qualified consulting firm must submit a complete financial documents package no later than four (4) days after notification of selection. The prime consultant must submit the complete financial documents package in order for Caltrans to have the information necessary to engage in negotiations. The prime consultant is solely responsible for timely and complete submission of financial documents on behalf of the entire proposed team; financial documents will not be accepted from proposed subconsultant firms. Failure to submit a complete financial documents package by the specified due date may result in termination of negotiations with the most highly qualified consulting firm.

- F. Negotiations will be held with the top-ranked firm by teleconference/WebEx during the week of November 23, 2026. The fee for profit shall be (10%) ten percent, and the escalation shall be as follows:

Year	Period	Escalation
0	09/29/2026 - 09/30/2027	1.71%
1	10/01/2027 - 09/30/2028	3.42%
2	10/01/2028 - 09/30/2029	3.42%
3	10/01/2029 - 09/30/2030	3.42%

Notes:

1. Partial year will only occur on the last year of the contract term. All other periods are full years.
 2. Increases to the loaded billing rates after contract execution is not authorized for any reason per Article IV, Section 17 and Article XVI, Section 6 of the California Constitution.
- G. The scheduled date to complete cost negotiations and submit final cost proposal is December 7, 2026.
- H. Disadvantaged Business Enterprise Program
1. On September 30, 2025, the U.S. Department of Transportation (U.S. DOT) issued an interim final rule (IFR) which, among other things, implemented changes to the Disadvantaged Business Enterprise (DBE) Program via modifications to 49 Code of Federal Regulations Part 26. (Docket Number DOT-OST-2025-0897.) The IFR was published in the Federal Register on October 3, 2025, and took immediate effect. (90 FR 47969 (Oct. 3, 2025).) The IFR, as published in the Federal Register, is available at the following url: [Docket No. DOT-OST-2025-0897](#)
 2. In the event of any ambiguity or discrepancy between the existing law, including the IFR, and this contract, existing law controls.
- J. Federal and/or State prevailing wage rates may apply. This requirement, if

applicable, will be specified in the draft Agreement. See SOQ Submittal Instructions, Section I.,G. regarding the California Department of Industrial Relations (DIR) Consultant/Contractor Registration Program on the [AE Contract Information](#) website.

- K. Caltrans does not guarantee, either expressly or by implication, that any work or services will be required under any contract issued as a result of this RFQ.
- L. A Pre-award or Post-award Audit will be performed on any contract issued as a result of this RFQ.
- M. Contract boilerplate can be obtained on the [AE Contract Information](#) website.
- N. Pursuant to Executive Order (EO) N-6-22 issued March 4, 2022, persons identified in the list established by the US Department of the Treasury are ineligible to bid on, submit a proposal for, enter into, or renew any Agreement with the State for any goods and/or services. Any person who submits a bid or proposal to Caltrans certifies that it is not identified in the most current lists located <https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/ukraine-russia-related-sanctions>.

If applicable, any person who submits a bid or proposal to Caltrans certifies that its subcontractors are not identified in the most current lists located <https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/ukraine-russia-related-sanctions>

- O. Pursuant to Executive Order N-12-23 – Generative Artificial Intelligence (GenAI) Technology Use and Reporting, effective February 20, 2025.
 - 1. The State of California seeks to realize the potential benefits of GenAI, through the development and deployment of GenAI tools, while balancing the risks of these new technologies.
 - 2. Bidder / Offeror must notify the State in writing if it:
 - A) intends to provide GenAI as a deliverable to the State; or
 - B) intends to utilize GenAI, including GenAI from third parties, to complete all or a portion of any deliverable that materially impacts:
 - 1) functionality of a State system,
 - 2) risk to the State, or
 - 3) Contract performance.

Note: For avoidance of doubt, the term “materially impacts” shall have the meaning set forth in State Administrative Manual (SAM) § 4986.2 Definitions for GenAI.

- 3. Failure to report GenAI to the State may result in disqualification. The State reserves the right to seek any and all relief to which it may be entitled to as a result of such non-disclosure.
- 4. Upon notification by a Bidder / Offeror of GenAI as required, the State reserves the right to incorporate GenAI Special Provisions into the

final contract or reject bids/offers that present an unacceptable level of risk to the State.

5. Government Code 11549.64 defines “Generative Artificial Intelligence (GenAI)” as an artificial intelligence system that can generate derived synthetic content, including text, images, video, and audio that emulates the structure and characteristics of the system’s training data.

II. SCOPE OF WORK/DELIVERABLES

The work to be performed for this RFQ is described in the Scope of Work/Deliverables and is hereby incorporated as Attachment 1.

III. CONFLICT OF INTEREST

- A. Conflicts of interest may occur due to direct or indirect financial or business interests in the work to be performed or in any real property acquired for such project. Conflicts of interest can include, but are not limited to, past, existing or planned activities or because of relationships with other persons or firms. If there is a conflict of interest, the proposed team, including both the prime consultants and subconsultants, and individual employees of team members would actually or potentially be unable to render impartial assistance or advice to Caltrans. The proposer’s objectivity or availability in performing the contract work may be impaired due to actual or potential conflicts of interest.
- B. If the proposed team determines that any actual or potential conflicts of interest exist, it must identify and describe in detail each conflict of interest to Caltrans, using the Disclosure of Potential Conflict of Interest Form, which can be found on the [A&E Contract Information](#) website. Along with the description of the actual or potential conflicts of interest, the proposed team shall also offer measures to avoid, neutralize, or mitigate all listed conflicts. The list of conflicts, including conflicts that apply to individuals as well as firms, and the mitigation measures on the Disclosure of Potential Conflict of Interest Form must be submitted as a separate section in the Statement of Qualifications. Disclosure of information will not disqualify a proposed team from competing for a contract. The existence of actual or potential conflicts of interest will be used as a criterion to evaluate team availability during the evaluation and selection process. Caltrans reserves the right to terminate negotiations with the first selected firm and begin negotiations with the next selected firm or to cancel the procurement prior to execution if Caltrans learns that the selected firm failed to disclose any actual or potential conflicts, which it knew or should have known about, or if the proposed team provided or omitted information on the disclosure form that results in the information being false or misleading.
- C. After award, conflict of interest guidelines and policies shall continue to be monitored and enforced by the Caltrans Contract Manager. Additional information about Conflict-of-Interest issues can be found in the SOQ Submittal Instructions and General Contract Process Information document (Section V. Post Government Employment Restrictions and Section VI. Conflict of Interest Concerning Consultant(s)) found on the AE Contract Information website (see link below). The State and Federal contract

boilerplates on DPAC's website also contain information on conflict-of-interest issues (Exhibit D) and can be found on the AE Contract Information website (see link below).

- D. The prime consultant and subconsultants may be proposed on SOQs for other Caltrans A&E on-call contracts; however, the Caltrans Contract Manager may prohibit work on specific project(s) where Caltrans determines that a conflict of interest exists.

IV. SUBMISSION OF STATEMENTS OF QUALIFICATIONS (SOQs)

- A. IMPORTANT: Download "Statement of Qualifications Submittal Instructions and General Contract Process Information" from the [AE Contract Information](#) website (Dated Rev. 10/07/2020) . Failure to follow these instructions may result in rejection of your SOQs.
- B. SOQ Package Submittal Instructions

Read instructions below carefully. You will be required to submit an electronic SOQ file to Sacramento.

1. The electronic submission of a single unprotected (i.e. not password protected) PDF file of the SOQ is required. The electronic submittal will be accepted until **10:00 a.m. on 09/29/2026**. Hard copies of the SOQs are **NOT** required. Fax copies or copies transmitted by email will not be allowed.
2. You will be required to create a Novell Filr account with Caltrans. Send an email message to the Contract Analyst, Adam Matheny, at Adam.Matheny@dot.ca.gov containing the information listed below for a link and instructions to complete the self-registration page and submit the SOQ electronically.

Your firm's name

Your email address

The solicitation number for which you would like to submit a SOQ

The file name shall include the contract number, consultant name (max. 25 characters) separated by an underscore (_), ending with the ".pdf" extension.

Example A: 50A0694_JohnDoeConsulting.pdf

Example B: 50A0694_aaa1234engineer.pdf

3. SOQ submittals will be considered non-responsive if the electronic submittal is not received by the date and time specified in this RFQ.
- C. Request for RFQ Copies
- Copies of this RFQ may be obtained on the [CaleProcure](#) website.

**SCOPE OF WORK/DELIVERABLES
ROADWAY DESIGN & RELATED PROJECT DEVELOPMENT and
CONSTRUCTION DESIGN SUPPORT SERVICES**

Roadway Design & Project Development Services (Attachment 1A)
Hydrology and Hydraulics Engineering Services (Attachment 1B)
Electrical Design Services (Attachment 1C)
Traffic Design Services (Attachment 1D)
Landscape Architecture Design Services (Attachment 1E)

**For Caltrans, District 10, Division of Project Development
On-Call Contract**

Table of Contents

A.	GENERAL PROJECT DESCRIPTION AND OVERVIEW OF SERVICES.....	4
1.	Purpose of Work.	4
2.	Explanation of Work.....	5
3.	Caltrans Project Development Team	5
4.	Exclusion of Work.	6
5.	Location of Work.	9
B.	REQUIRED SERVICES – GENERAL PERFORMANCE.....	9
1.	General Roadway Project Development Support Services.....	9
2.	Public Hearing	10
3.	Specific Roadway Project Development Support Services	11
4.	Proposed Caltrans Projects	12
5.	Emergency Projects	12
6.	Partnering.....	13
7.	Quality Control Plan	13
8.	Constructability Reviews.....	14
C.	GENERAL REQUIREMENTS - PERSONNEL.....	15
1.	Independent Contractor Status.....	15
2.	Consultant Work Hours and Availability	17
3.	Assigned Personnel on Task Orders	17
4.	Stable Workforce	19
5.	Safety	19
6.	Other Personnel Requirements	21
7.	Confidentiality and Nondisclosure Agreement.....	21
D.	NON-ARCHITECTURAL ENGINEERING INCIDENTAL SERVICES	22

1.	Non-Architectural and Engineering (A&E) services	22
2.	Training Services	22
3.	Incidental Public Relations Services	23
E.	CONSULTANT PERSONNEL REQUIREMENTS	23
1.	Consultant Contract Manager	23
2.	Consultant Task Order Manager	25
3.	Consultant Responsible Person	27
4.	Specific Personnel Requirements for Scope of Work Attachments (1A-1E)	28
5.	Consultant Research Data Specialist (for GIS)	29
F.	COORDINATION	30
G.	GENERAL REQUIREMENTS FOR DELIVERABLES AND DATA	31
1.	Ownership of Proprietary Property	31
2.	Format for Unprotected and Modifiable Electronic File Transfers	32
3.	Computer Aided Drafting & Design Software Requirements	33
4.	Submittals	34
5.	Project Files	34
H.	REVIEW AND ACCEPTANCE PROCESS	35
1.	General	35
2.	Reviews of Deliverables	36
3.	Acceptance of Deliverables	37
4.	Rejection of Deliverables	39
I.	GENERAL REQUIREMENTS – EQUIPMENT AND APPURTENANCES	39
1.	General	39
2.	Office Equipment and Supplies (Consultant’s Office):	40
3.	Field Equipment and Supplies:	41
4.	Office Equipment and Supplies (Use of Caltrans Office)	41
J.	GENERAL REQUIREMENTS – STANDARDS	42
1.	Federal, State, and Local Requirements	42
2.	Prevailing Wages	43
3.	Caltrans Standards	44
4.	Manuals	44
5.	Policies / Directives	46
6.	Guidance	46
K.	GENERAL MATERIALS AND ORIENTATION PROVIDED BY CALTRANS	47
1.	General Materials	47
2.	Permits to Enter Property	47

3.	Orientation	48
L.	CONFLICT OF INTEREST	49
1.	General Requirements.....	49
2.	Project Related	49
3.	Personnel Related	50
4.	Financial or Business Relationship	50
5.	Relationship with other Transportation or Regulatory Agencies	50
6.	Subsequent Contract for Later Phase of Same Project	50
7.	Conflict of Interest Examples	51
M.	SPECIFIC SUPPORT SERVICES ATTACHMENT	51

**BASE SCOPE OF WORK/DELIVERABLES
ROADWAY DESIGN & RELATED PROJECT DEVELOPMENT and
CONSTRUCTION DESIGN SUPPORT SERVICES**

**For Caltrans, District 10, Division of Project Development
On-Call Contract**

Roadway Design & Project Development Services (Attachment 1A)

Hydrology and Hydraulics Engineering Services (Attachment 1B)

Electrical Design Services (Attachment 1C)

Traffic Design Services (Attachment 1D)

Landscape Architecture Design Services (Attachment 1E)

A. GENERAL PROJECT DESCRIPTION AND OVERVIEW OF SERVICES

1. Purpose of Work.

- a) The Consultant shall perform consultation, research, professional and technical engineering studies required for roadway design and related project development services including construction design support as described in Attachments 1A-1E and this base scope of work, Attachment 1, collectively the Scope of Work (SOW). Work will include the development of the Project Report, Plans Specifications & Estimate (PS&E) including construction design support services. All work shall comply with applicable statutes, laws, regulations, and policies pertaining to the National Environmental Policy Act (“NEPA”), the California Environmental Quality Act (“CEQA”), and other applicable statutes, laws, regulations, and policies pertaining to project development.
- b) Capital Project Delivery Phase
The Consultant shall perform professional and technical engineering studies required for project development and delivery support services limited to performing A&E Services on the State Highway System (SHS), including Maintenance facilities, in the Phase 0 - Project Approval and Environmental Document (PA&ED), Phase 1 - Plans, Specifications, and Estimates (PS&E), and Phase 3 – Construction design support.
- c) This Agreement is for the following specific roadway design support services and the following attachments with this base scope of work, Attachment 1, collectively create the scope of work for this Agreement (“Scope of Work” or “SOW”).
 - i. Roadway Design & Project Development Services (Attachment 1A)
 - ii. Hydrology and Hydraulics Engineering Services (Attachment 1B)
 - iii. Electrical Design Services (Attachment 1C)
 - iv. Traffic Design Services (Attachment 1D)
 - v. Landscape Architecture Design Services (Attachment 1E)

d) Architectural and Engineering Services

This Agreement is for Architectural and Engineering (“A&E”) services, as described in California Government Code Sections 4525, et seq., and California Code of Regulations, Title 21, Chapter 12, Article 1, section 1520.1, except that non-A&E incidental and ancillary services are permitted if the cumulative value of all such non-A&E services do not exceed 15% of the total expenditures under this Agreement. Non-A&E incidental services are further addressed in Section D, Non-Architectural and Engineering (“A&E”) Services.

2. Explanation of Work.

- a) The Caltrans Contract Manager assigned to this Agreement (“Caltrans Contract Manager”) shall assign specific work to the Consultant through the issuance of task orders describing in detail the services with associated schedule to be performed under this Agreement (“Task Order(s)”). Task Order development and execution shall be governed by the provisions set forth in Exhibit A - “Scope of Work and Deliverables”, subsection 2. - “Task Order” of this Agreement. The Consultant shall only perform work that is assigned in an authorized Task Order. This Agreement does not guarantee that a Task Order shall be issued.
- b) Task Orders shall be executed within the first 36 months and design support for construction related tasks to continue through the remaining duration of the Agreement. No project development related tasks will be assigned after the first 36 months of the Agreement.
- c) If applicable, when a subsequent agreement for the same or similar scope of work is executed within three (3) months prior to the termination of this Agreement, no additional Task Orders shall be executed under this Agreement upon the effective date of the subsequent agreement for the same or similar scope of work as this Agreement.
- d) The Consultant for the Agreement shall perform the services above after the contract authority for Contract 06A2843 is exhausted or no more than two (2) months prior to expiration of Contract 06A2843 (expected sunset date: March 13, 2028), whichever occurs sooner. The Consultant shall plan accordingly to meet the timing of and the volume of workload needs.

3. Caltrans Project Development Team

- a) The Caltrans Project Development Team (PDT) consists of subject matter experts in various functional units directly involved with the implementation of a transportation project. The PDT utilizes a systematic, interdisciplinary approach which will ensure the integrated use of project development guides, social sciences and the environmental design arts in planning and in decision making which may have an impact on the transportation project.

- b) Caltrans employs a formal interdisciplinary PDT approach, bringing together various disciplines to collaboratively plan, develop, and evaluate project alternatives. The PDT supports the Caltrans project manager by providing guidance, offering recommendations to both the project manager and district management, and helping implement the project work plan. Team members actively participate in key meetings, public hearings, and community engagement efforts. The PDT is also responsible for conducting studies assigned to Caltrans and for gathering and maintaining data throughout the project development process.
- c) Project development services should be developed using the Task Order scope of work including this scope of work as described in, Attachment 1 to this Agreement and should be based on consultations and input from Caltrans PDT subject matter experts and not be developed in a vacuum.
- d) Consultant Role and Involvement in PDT:
 - i. As the design engineer, the Consultant shall function as an integral technical member of Caltrans PDT. The Consultant shall provide direct technical support to the Caltrans Task Order Manager, including the preparation of engineering analyses, development and evaluation of alternatives, and production of design deliverables necessary to support and inform PDT decision-making throughout all phases of project development.
 - ii. The Consultant shall participate in PDT meetings, provide technical input regarding feasibility, cost, constructability, and environmental considerations, and coordinate with Caltrans functional units to ensure that all design products conform to applicable Caltrans standards, policies, procedures, and project requirements.
 - iii. Caltrans shall retain overall leadership of the PDT and sole authority for final decision-making. The Consultant's design services and technical products shall provide the analytical and engineering basis upon which the PDT evaluates alternatives, resolves technical issues, and advances the project from planning and development through PS&E.
 - iv. While the Consultant Design Engineer shall be considered part of the PDT for purposes of coordination and collaboration, the Consultant shall at all times remain an independent contractor operating under this Agreement. Nothing herein shall be construed to create an employer-employee relationship between Caltrans and the Consultant or its personnel.

4. Exclusion of Work.

The following activities will be performed by others and are excluded from this Agreement. The Consultant must consider these excluded activities in the project schedules to be submitted to Caltrans for approval. Consultant further agrees to provide the necessary information in a timely manner to facilitate the successful completion of the excluded tasks listed below:

- a) The following contract and task order(s) are excluded from this Agreement until the task order(s) are closed and/or the contract authority is exhausted:

Existing Contract Number.	Open Task Order No.:	Location: Co-Route-Post Mile:	Project Description
06A2843	1	ALP-004-R0/31.67	10-0J720 SR4 Pavement Anchor Project
06A2843	2	AMA-088-R54.7/R60.8	10-0K130 Peddler Hill Pavement Anchor
06A2843	3	MER-140-16/16.5	10-1H020 MER 140/165 Mobility Improvements
06A2843	5	CAL-049-8.5/9.1	10-1H010 CAL 49 Mobility Improvement

- b) The following related project development services are performed by others and excluded from this Agreement:
- i. Environmental Studies in support for the preparation of draft and final Environmental Document and all permit activities to environmental agencies.
 - ii. Architecture and Structural Engineering - includes new or retrofit design of bridge or major building facility structures.
 - iii. Geotechnical Engineering - includes all geotechnical testing, analysis, studies and reports.
 - iv. Materials Recommendation for Pavement recommendation

- v. Material Testing - field testing of any material for design use or construction material testing.
 - vi. Land Surveying.
 - vii. Right of Way Engineering.
 - viii. Hazardous Waste Assessment
 - ix. Value Analysis.
- c) The following additional activities are excluded from this Agreement:
- i. The Consultant shall not perform work on project(s) in the Project Initiation Documents (PID) phase or K-Phase and shall not be reimbursed for any work performed during these phases or any project planning activities.
 - i. Consultant is prohibited from providing instructional training as an outcome of or in reference to the required services and deliverables herein nor participate in instructional workshop training.
 - ii. Consultant shall coordinate with Caltrans Contract Manager for all printing service needs. Pursuant to Government Code Section 14850 and State Contracting Manual, Volume 1, Section 3.21 mandate that all printing services, including print service requests within this Agreement, must be performed by the Office of State Publishing (OSP) or the California Prison Industry Authority (CALPIA), unless completed by a Caltrans Reprographics Unit.
- d) Information Technology related activities excluded.
- i. Information Technology (IT) related activities to be excluded from this Agreement are defined as auxiliary automated information handling, including systems design and analysis, conversion of data, computer programming, information storage and retrieval, voice systems that use interactive databases, video including videoconferencing systems that transmit sensitive data, data communications, requisite systems controls, the use of interactive databases and simulation are excluded, including development and or maintenance of Webpage.

- ii. Task Orders incorporating elements of permissible IT exceptions shall be in compliance with the data governance requirements and practices defined in the following Caltrans IT webpage:
<https://dot.ca.gov/programs/ctdata>.
- iii. For Task Orders that require elements of IT services, Caltrans Contract Manager shall email draft Task Order to "it.certification@dot.ca.gov" and have the Caltrans [HQ IT Certification Branch](#) review the draft Task Order and if applicable, determine the classification of an IT service acquisition for compliance with Caltrans IT policies and requirements prior to Task Order execution.

5. Location of Work.

- a) The work shall be performed on roadway project development services for the Caltrans Division of Design, within District10, as described in this Scope of Work to improve the State transportation system. Work could potentially occur throughout the counties of Alpine, Amador, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus, Tuolumne of California in District 10. The specific location of the work to be performed within the above-described geographical limits shall be identified in each Task Order.
- b) It may become necessary for Caltrans, Division of Design, District 10 Project Development, District 10 projects to extend into another adjoining Caltrans District's boundary line of (District 5, District 7, District 9, and District6). It may become necessary for services to extend into another adjoining District/County line. In such instances, the project work shall not extend more than a thirty (30)-mile radius from the project location.

B. REQUIRED SERVICES – GENERAL PERFORMANCE

1. General Roadway Project Development Support Services

- a) The Consultant should anticipate performing a broad range of tasks related to general roadway design and project development support services. The Consultant shall possess the necessary expertise, capabilities, and equipment required to execute the Scope of Work outlined in this Agreement.
- b) The scope and scale of potential project services may vary and could include the development and design of roadway and maintenance projects to support the District's project delivery needs for the State transportation system. Each Task Order will define the specific scope of work, project location and limits, purpose, expected outcomes, deliverables, period of performance, and project schedule.

- c) Under an authorized Task Order, the Consultant shall provide Caltrans with roadway design and project development support services in accordance with the Scope of Work and within the geographical area defined in the “Location of Work” section of this Agreement. The Consultant shall furnish all necessary personnel, materials, transportation, lodging, instrumentation, and specialized facilities and equipment required to meet the needs of all relevant agencies and ensure compliance with all applicable federal, state, and local statutes, laws, codes, regulations, policies, procedures, ordinances, standards, specifications, performance criteria, and guidelines relevant to the Consultant’s services and deliverables.
- d) The Consultant shall commence the required work within two (2) working days following receipt of a fully executed Task Order and a Notice to Proceed (NTP) issued by the Caltrans Contract Manager to the Consultant Contract Manager. Certain assignments may require Consultant personnel to mobilize within 24 hours of notification. Once initiated, work shall be carried out diligently and continuously until all required tasks are completed to the satisfaction of the Caltrans Contract Manager or the designated Task Order Manager.
- e) The Consultant Contract Manager, Task Order Manager, and designated Key Personnel shall remain accessible to the Caltrans Contract Manager at all times during regular Caltrans business hours, and outside of normal hours as necessary, at the discretion of the Caltrans Contract Manager.

2. Public Hearing

- a) Public hearings as defined in the Caltrans Standard Environmental Reference (SER) refer to formal opportunities for public participation in the project development and environmental process. These public hearings are generally held during early and mid-PA&ED stages of project development to introduce the project, to share and shape project alternatives, gather community input, address potential impacts, and refine project decisions.
- b) Commensurate with the magnitude and complexity of the Task Order project, additional public hearings may be required by the Caltrans Task Order Manager. The Consultant shall support public hearings that are typically conducted during the early and mid-phases of the PA&ED stage.
 - i. Project Initiation / Early PA&ED:
Public Hearings may occur shortly after initiation of environmental studies to introduce the project to the public, present the purpose and need, describe preliminary constraints, and gather community concerns and input that may influence the development of project alternatives.
 - ii. Project Initiation / Mid PA&ED:

Additional Public Hearings may be held at mid-PA&ED to present design concepts, preliminary engineering, environmental findings, and the range of alternatives under consideration. These mid-stage workshops provide an opportunity for the public to comment on potential impacts, mitigation strategies, and alternative refinements prior to circulation of the Draft Environmental Document.

- c) For all Public Hearings, the Consultant will assist Caltrans contracted A&E Environmental Consultant, or Caltrans Environmental Planning functional unit who serves as the lead, in coordination with the Caltrans Task Order Manager and other Caltrans PDT members. As directed by the Task Order, the Consultant shall provide technical and logistical support for these public hearings, including preparation of engineering exhibits, graphics, and informational materials; attendance at public meetings; and availability of technical staff to respond to engineering-related questions under Caltrans' direction. The Consultant shall ensure all materials conform to Caltrans standards, reflect current engineering and environmental information, and support Environmental Planning's responsibilities for public involvement under NEPA and CEQA.
- d) The Consultant will assist Caltrans (and/or it's A&E Environmental Consultant) to hold additional workshops as needed. Consultant design engineers may meet in the PS&E phase with property owners, environmental groups, city/county officials, agencies that issue permits (environmental or other permit), to work with them to finalize project design such as highway access location details, local road realignment details, and finalize design details for roadway improvements and area relinquishments.
- e) All public-facing commitments and project statements remain the responsibility of Caltrans, with the Consultant acting in a technical support capacity.

3. Specific Roadway Project Development Support Services

The specific Roadway Project Development Support Services are described in the attachment template chosen to create the Scope of Work for this Agreement. The attachment templates used with this base scope of work, Attachment 1, to comprise the Scope of Work for this Agreement are:

- a. Roadway Design & Project Development Services (Attachment 1A)
- b. Hydrology and Hydraulics Engineering Services (Attachment 1B)
- c. Electrical Design Services (Attachment 1C)
- d. Traffic Design Services (Attachment 1D)
- e. Landscape Architecture Design Services (Attachment 1E)

4. Proposed Caltrans Projects

- a) Provided in Attachment 1F is a list of proposed Caltrans, District 10 projects for delivery. This list is not exclusive, however, and it does not constitute a commitment that the proposed project delivery will be initiated or completed, or work assigned to the Consultant. Caltrans reserves the right to add or delete from this list of Districts project delivery that are within the geographical jurisdiction of this Agreement set forth in “Location of Work” Section.
- b) Caltrans intends to utilize this Agreement to complete a specific piece of work as long as it is located within the geographical jurisdiction of this Agreement set forth in the “Location of Work” for each of the project development delivery services listed in this Agreement utilizing the services described in this Scope of Work and as described in a Task Order. In the future, Caltrans may find it necessary to create a separate agreement (or agreements) that involves a specific district project listed in this Agreement and includes part of the work contained in this Agreement. Caltrans reserves the right to procure Architectural and Engineering (A&E) services involving the listed district projects or unlisted district projects (within the geographical jurisdiction of this Agreement set forth in “Location of Work” Section) involving in whole or in part the same work using a project-specific agreement if the schedule to complete performance of the specific project extends beyond the term of this Agreement or the cost to complete the specific project exceeds the dollar balance remaining in the Agreement after accounting for amounts due to the Consultant for work previously performed and for work that is scheduled to be performed in executed Task Orders.
- c) Should a project-specific agreement be procured under these provisions, the parties mutually agree that, in accordance with Exhibit D, Section III, termination of this Agreement, Caltrans shall terminate for convenience the portion of the Agreement that includes the common scope of work identified in the project-specific agreement. Such partial termination for convenience shall be processed by amendment to this Agreement. Unless otherwise required by law, regulation, or Caltrans policy or procedure, the Consultant may compete for these project-specific Agreements.

5. Emergency Projects

At the sole discretion of Caltrans, Consultant may be required to provide the required services on safety projects, emergency projects, Emergency Storm Damage Projects, excess parcel assessments, or other current/future transportation projects, including minor projects not listed above, except for those specially excluded above, within the geographical jurisdiction of the Agreement set forth in “Location of Work” Section. However, the dollar value of the services not listed in the Agreement shall not exceed 10% of the total value of services that are listed and performed in the Agreement.

6. Partnering

Partnering is a way of conducting business in which both Consultant and Caltrans make commitments to achieve mutual goals.

- a) Consultant and Caltrans' Contract Managers shall schedule a kick-off partnering meeting; set expectations, roles and goals; establish the project-specific partnering process; develop risk/opportunity management strategies; monthly invoice processing and get buy-in and commitment from the Caltrans PDT.
- b) Consultant shall partner with all parties and stakeholders to establish and maintain cooperative communication channels and mutually resolve conflicts at the lowest responsible level. Consultant may participate in dispute resolution plan to establish a common understanding of the team procedures and process to resolve disputes most efficiently and effectively.

7. Quality Control Plan

- a) Prior to commencing work, the Consultant shall prepare the quality control plan identifying the minimum standard of work quality and obtain approval from the Caltrans Contract Manager. The quality control plan shall be applicable to all Task Orders during the entire time the work is being performed under the Agreement. The Consultant shall complete the quality control plan and certify at the completion of work that all measures contained therein were satisfied. Caltrans shall perform quality assurance on the quality control plan to ensure that quality control was satisfied.
- b) The Consultant shall have an established process whereby Quality Assurance/Quality Control (QA/QC) processes are incorporated and applied to all Task Order activities and deliverables and shall include the following:
 - i. All Task Order deliverables are reviewed for accuracy, completeness, and readability before submittal to Caltrans.
 - ii. Calculations and Task Order deliverables in whole or in part are independently checked, corrected, and re-checked.
 - iii. All job-related correspondence and memoranda are routed and received by affected persons and then filed in the appropriate Task Order file.
 - iv. Task Order activities are routinely verified for accuracy and completeness, such that any discovered deficiencies do not become systemic or affect the result of a Task Order deliverable.
- c) The Consultant shall provide an outline of their quality control plan before a specific task begins and shall identify critical quality control reviews within each

Task Order. The Caltrans Contract Manager shall periodically request evidence that the QA/QC plan is functioning.

- d) Consultant developed and revised statewide guidance, policies, and procedures, specification language, project documents, models, tools, research, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, Task Order deliverables, backup documents, and associated support activities required by this Agreement submitted to the Caltrans Contract Manager for review shall be marked clearly as being fully checked or unchecked, and that the preparation of the material followed the quality control plan established for the work.
- e) Caltrans review of Task Order deliverables shall not be construed as quality assurance on Consultant's work. Pursuant to the "Review and Acceptance Process" described herein, reviews by Caltrans do NOT include detailed review or checking of major components, quantitative calculations, related details, or accuracy of information. The responsibility for accuracy and completeness of such items remains solely that of the Consultant.
- f) The QA/QC plan shall contain provisions for the development of appropriate "checklists" to maintain product quality and control. These "checklists" shall be delivered to the Caltrans Contract Manager with the QA/QC plan. The Consultant shall update these documents when directed by the Caltrans Contract Manager. Within thirty (30) calendar days of the Notice to Proceed (NTP), the Consultant shall submit to the Caltrans Contract Manager or Caltrans designee a job specific QA/QC plan and staffing plan consistent with the executed Task Order
- g) The Caltrans Contract Manager shall be the final decision maker to address all questions which may arise as to the quality or acceptability of Task Order deliverables furnished and work performed for this Agreement.

8. Constructability Reviews

- a) The Consultant shall conduct constructability reviews (CR) to enhance project quality and overall constructability, with the objective of reducing construction contract change orders and minimizing construction delay claims. These reviews also promote improved communication between construction and other project team members, ensure that necessary field reviews are performed, and help minimize plan revisions during the final stages of design.
- b) During the PA&ED phase, the CR shall confirm that all project alternatives, including the proposed preferred alternative, are feasible based on the available level of design detail. This review is particularly critical when consulting with environmental permitting agencies, which may impose construction windows or

specific mitigation requirements. The review shall include an assessment of the proposed work plan, schedule, environmental constraints, and potential construction impacts.

- c) The Consultant's CR shall serve as a validation process to ensure that the plans, specifications, and estimates clearly define a project that is both biddable and buildable by a qualified contractor. The CR process is iterative and interdisciplinary, supporting continuous improvement of project quality throughout development.

C. GENERAL REQUIREMENTS - PERSONNEL

1. Independent Contractor Status

For circumstances when Consultant personnel perform work at the Consultant home office or within Caltrans facilities alongside Caltrans staff, all supervision and instructions to Consultant personnel shall be transmitted by the Consultant Task Order Manager. Consultant Task Order Manager shall exercise comprehensive control authority over its personnel in the manner and means to fulfill work performed without any involvement of the Caltrans Task Order Manager or designee.

a) Consultant Personnel Relationship

- i. Consultant is an independent contractor, and nothing contained in the Agreement shall be construed as constituting any relationship with Caltrans other than as an independent contractor. In no event shall the relationship between Consultant personnel and Caltrans be construed as creating any relationship whatsoever between Caltrans and any of Consultant's employees.
- ii. Neither Consultant nor any of its employees is or shall be deemed to be an employee of Caltrans. The Consultant has the sole rights to terminate its personnel at-will without cause and demonstrate its right to control over its personnel.

b) Consultant Personnel - Supervision Control and Instructions

- i. Consultant personnel shall operate as independent contractors whereby free to perform their jobs in their own ways and means, using their own specific methodologies to achieve the desired Task Order services and deliverables.
- ii. Consultant personnel are not required to follow Caltrans functional office protocols nor Caltrans specific instructions on how to perform its work.
- iii. Except as otherwise specified in the Agreement, Consultant Contract Manager has sole authority and responsibility to employ, discharge, terminate and otherwise control its employees and has complete and sole responsibility as a

principal for its agents, for all its subconsultants (also referred to as “Subconsultants”) and for all other persons that Consultant or any of its subconsultants hires or engages to perform or assist in performing the Scope of Work.

- iv. Consultant shall make all of its own business decisions including personnel decisions and bear the risk for its decisions without any burden or liability placed upon Caltrans.

c) Skilled and Qualified Labor

- i. Consistent with “Team of Subject Matter Experts” described herein, the Consultant shall provide professional services in an area of its specialization as an essential part of the purpose of the business enterprise, considered as skilled professionals and do not require training.
- ii. Consultant shall provide its own training to its employees and its subconsultants, and Consultant shall not rely upon Caltrans to provide such training.

d) Consultant agrees that:

- i. The Consultant Contract Manager or designee shall manage, instruct, and supervise all Consultant employees and subconsultants, and shall not allow any other party to manage, instruct and supervise such parties.
- ii. Unless approved in writing by Caltrans Contract Manager, Consultant shall not hire employees or subconsultants to work on Caltrans matters exclusively and only. Consultant may hire employees and subconsultants for a specific Caltrans matter provided such party has the skills and knowledge to work on other matters and they are assigned to other matters from time to time.
- iii. Consultant shall provide its own tools, equipment and supplies, and Consultant shall not rely on Caltrans to provide such tools, equipment, and supplies. Notwithstanding the foregoing, Caltrans may, during the term of the Agreement, allow Consultant to access selected items of equipment; provide non-employee User-Ids and related access to Caltrans computer systems to Consultant employees and subconsultants; and provide non-employee access cards and other such forms of identification to Consultant employees and subconsultants.
- iv. Consultant shall advise its employees and subconsultants of the foregoing Agreement terms that apply to them, and Consultant shall advise such employees and subconsultants to report to Consultant any apparent or actual breaches. Consultant shall relay any such reports to Caltrans Contact Manager.

2. Consultant Work Hours and Availability

- a) Unless otherwise specified in this Agreement or a Task Order, or directed by the Caltrans Contract Manager, the normal workday shall be Monday through Friday, from 8 a.m. to 5 p.m. or any combination of five (5) consecutive days which may include Saturday and/or Sunday, and the normal workweek shall consist of forty (40) hours. If Saturday and/or Sunday is part of a regular work week as determined by Caltrans, then the Saturday and/or Sunday work shall be treated as work performed on a regular workday and no overtime shall be paid for the first eight (8) hours on Saturday or Sunday. Consultant Contract Manager shall be responsible for providing Consultant personnel who can satisfy the requirements set forth in this Agreement.
- b) If Caltrans determines that the Consultant's services and work product need to be received outside of normal business hours (including instances where receipt of services is required to avoid danger to life or property), the Consultant may be directed to provide its services and work product during specific hours during the week (including hours that are outside of normal business hours). Night work may be required on project services. For services covered by prevailing wage laws and/or regulations, any shift differential rate pay for prevailing wage tasks shall be reimbursed in accordance with the applicable Department of Industrial Relations (DIR) determination.
- c) The Consultant's typical workday(s) shall include, but not be limited to, working in conjunction, in coordination, and in cooperation with all of the following:
 - i. Caltrans Contract Manager
 - ii. Caltrans Task Order Manager
 - iii. Caltrans District Staff and Caltrans PDT
 - iv. Other Federal, State and/or Local Agencies
- d) The Consultant shall obtain approval from the Caltrans Facility Manager prior to conducting activities within a maintenance station or other Caltrans facility.
- e) The above sections (a-d) regarding work hours and availability are superseded by applicable state and/or federal prevailing wage laws and regulations, to the extent there is a conflict.

3. Assigned Personnel on Task Orders

- a) Pursuant to Exhibit A, section 2 – Task Order, when responding to Caltrans' Task Orders and in consultation with the Caltrans Contract Manager, the Consultant Contract Manager shall identify the specific individuals proposed for the task and their job assignments. The Consultant shall provide documentation that proposed

personnel meet the appropriate minimum qualifications as required by this Agreement.

- b) The Consultant's personnel shall be assigned and remain committed to specific Caltrans project services/deliverables until completion and acceptance of the project services /deliverables by Caltrans. Personnel assigned by the Consultant shall be available at the start of a Task Order and continue to be available until after acceptance of the project services/deliverable by Caltrans.
- c) After Task Order execution, the Consultant shall not add, delete or substitute personnel without the Caltrans Contract Manager's prior written approval and amending the applicable Task Order accordingly.
- d) Resumes containing the qualifications and experience of the Consultant's and Consultant's subconsultant's personnel, which include existing and additional personnel, and copies of their minimum required certifications, shall be submitted to the Caltrans Contract Manager for review before assignment on a project or Task Order. The resume and copies of current certification for each additional personnel shall be submitted to the Caltrans Contract Manager within one (1) week of receiving the request.
- e) The Caltrans Contract Manager or designee may interview the Consultant's personnel for qualifications and experience prior to placement on a Task Order or project. The Caltrans Contract Manager's decision to select the Consultant's personnel shall be binding to the Consultant and its subconsultants. The Consultant shall provide adequate qualified personnel to be interviewed by the Caltrans Contract Manager within one (1) week of receiving the request.
- f) The Caltrans Contract Manager or designee shall evaluate the adequacy (quality and quantity) of the work performed by the Consultant's personnel and determine whether the Task Order deliverables satisfy the acceptance tests and criteria. The Caltrans Contract Manager may reject any Consultant personnel for who are determined by the Caltrans Contract Manager to lack the minimum qualifications or rejected not limited to the following:
 - i. If at any time the level of performance is below expectations, the Caltrans Contract Manager may direct the Consultant to immediately replace Consultant personnel from the project services specified in a Task Order and request that the Consultant assign another qualified personnel as needed.
 - ii. The Consultant personnel does not meet the qualifications required by this Agreement for performance of the work as demonstrated by a resume and copies of current certifications submitted by the Consultant.

- g) The replacement Consultant personnel (for subsection i and ii above) shall have the same job classification, as set forth in the Consultant's Cost Proposal, - Attachment 2, and meet or exceed the qualifications and experience level requirements as set forth in the Consultant's Statement of Qualification for this Agreement ("SOQ") – Attachment 6, at no additional cost to Caltrans and shall not exceed the specific rate of compensation as set forth in the Consultant's Cost Proposal, - Attachment 2.

4. Stable Workforce

- a) Maintaining a stable workforce is essential to the successful completion of Caltrans work. Consultant shall implement the personnel retention plan strategy submitted with its Statement of Qualification for this Agreement ("SOQ").
- b) Pursuant to Agreement Exhibit D, subsection 1. C. – "Personnel Substitutions and Additions", the Consultant shall be prepared to provide additional personnel, as necessary, during the period performance of this Agreement to accommodate the work.

5. Safety

- a) Consultant shall review, become familiar with and comply with occupational safety and health standards established by federal and state laws. Consultant shall review, become familiar with Caltrans Construction Code of Safe Practices (COSP), along with the Caltrans Safety Manual, these materials describe standard safety practices for Caltrans with general environmental services and operations. Consultant shall provide safe working and reasonably free from danger to life or health to its employees and the traveling public and shall maintain a written Injury and Illness Prevention Program.
- b) In addition to the requirements specified elsewhere in this Agreement, the following also shall apply:
 - i. The Consultant shall maintain a working environment that is safe for project personnel and the public. The Consultant shall provide a code of safe practices that includes at a minimum, fall protection safety, lead training, respirator training, and promotes an awareness of health and safety requirements and enforce applicable regulations and Agreement provisions for the protection of the project personnel and the public.
 - ii. The Consultant's personnel shall comply with all safety provisions of the [Caltrans Safety Manual](https://dot.ca.gov/programs/construction/construction-manual/section-2-1-safety) (https://dot.ca.gov/programs/construction/construction-manual/section-2-1-safety), [Caltrans Surveys Manual](http://www.dot.ca.gov/hq/row/landsurveys/SurveysManual/Manual_TOC.html) (http://www.dot.ca.gov/hq/row/landsurveys/SurveysManual/Manual_TOC.html), [Caltrans Laboratory Safety Manual](http://www.dot.ca.gov/hq/esc/ctms/pdf/lab_safety_manual.pdf) (http://www.dot.ca.gov/hq/esc/ctms/pdf/lab_safety_manual.pdf), [Caltrans](#)

[Traffic Manual](https://dot.ca.gov/programs/safety-programs/camuted) (<https://dot.ca.gov/programs/safety-programs/camuted>) and [Caltrans Code of Safe Practices](http://www.dot.ca.gov/hq/construc/safety/) (<http://www.dot.ca.gov/hq/construc/safety/>).

- iii. The Consultant shall comply with all federal, state, and local Occupational Safety and Health Administration (OSHA) statutes, laws, codes, regulations, policies, procedures, ordinances, standards, rules, specifications, performance standards, and guidelines, and the safety instructions that Caltrans issues for performance of Task Order work, applicable to the work under this Agreement, regarding safety equipment and procedures (including, but not limited to, use and operation). Under no circumstance shall the Consultant's safety policies be less stringent than Caltrans'.
 - iv. The work shall not be performed when conditions prevent a safe and efficient operation and shall only be performed with written authorization by Caltrans.
- c) The Consultant shall be solely responsible for the protection of health and safety of its personnel, subconsultants, and subconsultant's personnel in performance of this Agreement.
 - d) The Consultant shall provide, at no cost to Caltrans, all safety equipment to perform the required services in a safe manner including, but not limited to: gloves, coveralls, sunscreen, insect repellents, fire extinguishers, hard-soled safety footwear, white hard hats, eye protection, hearing protection, and approved safety attire. The Consultant's personnel shall wear hard-soled safety footwear, white hard hats, eye protection, hearing protection, and approved safety vests at all times while working in the field.
 - e) The Consultant shall provide, at no cost to Caltrans, appropriate safety training for all the Consultant's and the subconsultant's office, laboratory, and field personnel, including training required for performing the work in an office setting or in the field, project construction site, to work on and near highways in a safe manner.
 - f) Any safety violations committed by the Consultant personnel may be cause for termination of the Agreement.
 - g) Consultant personnel whose work involves field work must:
 - i. Have current certification of defensive driving training and current California Driver's License.
 - ii. Have attended an 8-hour Construction Safety Orientation Class prior to being assigned to work on Caltrans projects and current on annual

refresher class. (See Section on Field Safety for additional requirements.)

6. Other Personnel Requirements

- a. Annual Caltrans Approved Information Security Awareness Training.
This mandatory training is to be completed annually by all Caltrans employees, contractors, consultants, subconsultants, partners, vendors, students, and volunteers with access to computers or network resources. At the request of the Caltrans Contract Manager, Consultant personnel will complete security and privacy awareness training each year.
- b) The Consultant is responsible for providing fully trained personnel to efficiently perform the work. The Consultant's personnel may be asked to attend certain special training if recommended by the Caltrans Contract Manager. On such occasions, with the approval of the Caltrans Contract Manager, Caltrans shall compensate the Consultant for the Consultant's actual cost for time spent in training only. All other costs, fees, and expenses associated with the training, including any transportation costs, lodging, per diem, and training fees, shall be the Consultant's responsibility.
- c) In location(s) where the Consultant personnel is expected to work for extended period(s) of time, the Consultant shall either relocate the personnel or make every effort to hire local persons.
- d) Caltrans shall not reimburse the Consultant for costs to relocate its personnel to the service area of this Agreement. Caltrans shall not reimburse the Consultant for per diem costs, unless preapproved by the Caltrans Contract Manager. Caltrans shall not reimburse the Consultant for out-of-state travel without prior written approval from the Caltrans Contract Manager.

7. Confidentiality and Nondisclosure Agreement

- a) Critical to keeping information secure, including competitive, sensitive proprietary information or trade secrets, and for the validity of the Consultant Task Order work and deliverables, the Consultant personnel shall maintain process integrity and confidentiality. The Consultant shall have procedures in place that address confidentiality and conflict of interest issues in all services and deliverables performed.
- b) A Confidentiality and Nondisclosure Agreement ("NDA") template document shall be submitted in draft and the opportunity presented for Caltrans to provide comments and feedback prior to final acceptance by Caltrans of the executed NDAs and before Consultant commences work on the first Task Order under this Agreement.

- c) All Consultant and subconsultant personnel are required to sign and submit the approved NDA prior to commencing work for the first time on a Task Order.
- d) Consultant may not disclose any roadway design or environmental project information to third parties without prior written approval of the Caltrans Contract Manager.

D. NON-ARCHITECTURAL ENGINEERING INCIDENTAL SERVICES

1. Non-Architectural and Engineering (A&E) services

- a) The Consultant shall only provide incidental non-A&E services, such as Geographic Information Systems (GIS) support, office support, , and meeting support, provided such services are necessary for the completion of the A&E tasks and/or deliverables performed by the Consultant described in executed Task Orders and covered by the work in this Contract and the rendering of the services is approved in advance by the Caltrans Contract Manager.
- b) Incidental services shall only be provided to support the Consultant's personnel who are performing A&E services, tasks, and deliverables on this Agreement. The Agreement amount spent on such incidental services shall be relatively minor when compared to the professional A&E services performed. The Consultant shall not be paid or reimbursed for any incidental non-A&E services provided to Caltrans unless provided in the fashion described in this Agreement and included in an executed Task Order.
- c) The total aggregate cost of all non-A&E services under this Agreement shall not exceed 15% of the total authority of the Agreement.
- d) Any non-A&E services are an incidental task to the Agreement and not the purpose for entering into this Agreement.

2. Training Services

- a) Incidental training services may be provided only if the training involves the specific work product of this Agreement. Such incidental training services are permitted, but only if:
 - i. The training involves the specific work product created under this Agreement and does not involve general A&E training and is not the work product of a previous agreement.
 - ii. The total aggregate cost of all training including all other incidental work under this Agreement does not exceed 15% of the total authority of the Agreement.
 - iii. The training is an incidental task within the Agreement and not the purpose for entering into this Agreement.

3. Incidental Public Relations Services

- a) Non-A&E incidental and ancillary work activities may include assisting with public relations services, however, are limited to developing content for display boards, power point slides, leaflets, flyers and other non-mainstream media for dissemination of information.
- b) Public relations activities on mainstream media are prohibited and is defined as advertising actions that appeal to press, television, radio, billboards, cinema, web site development, and other virtual mediums.

E. CONSULTANT PERSONNEL REQUIREMENTS

1. Consultant Contract Manager

- a) The Consultant Contract Manager shall coordinate work-related matters and Consultant's operations under this Contract with the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager, and Functional Manager, multiple stakeholders including, but not limited to, Caltrans' various functional units, Caltrans' project managers, local agencies, various environmental groups, and regulatory state federal agencies. The Consultant Contract Manager shall be a Licensed Professional Engineer (Civil) Registered in the State of California and in good standing with the Board of Registration during the Contract period.
- b) The Consultant Contract Manager shall have a documented minimum of five (5) years of responsible experience performing the duties as a consultant contract manager, managing and leading a team of architectural and engineering firms for similar roadway design and project development support services contracts. Specifically for the five (5) years of responsible experience performing the duties as a Consultant Contract Manager, the other Project Manager, Design Manager, Lead Designer, Design Manager, Office Manager and other lead roll position experiences will not qualify for the Consultant Contract Manager experience as outlined herein for Personnel Requirements under Consultant Contract Manager. The Consultant Contract Manager shall be an employee of the Consultant, not an employee of a subconsultant.
- c) The Consultant Contract Manager shall have a documented minimum ten (10) years of demonstrated experience acceptable to Caltrans with "substantial knowledge and experience" working in roadway design and project development support services work.
 - i. "Substantial knowledge" is defined as having a Bachelor's or higher degree in civil engineering is desirable.
 - ii. "Substantial experience" is defined as having a minimum of ten (10) years of demonstrated experience acceptable to Caltrans in performing roadway

design and project development support services and having worked in a relevant field for sufficient time to ensure ability to control and advise on the full range of activities and to be expert in terms of a wide variety of special, unusual or complex features of the work with various environmental constraints. The Consultant Contract Manager shall be knowledgeable about all Caltrans policies and procedures.

- d) Each cumulative set of 5 years and 10 years minimum years of experience, gained from multiple projects at various times, shall be in serial (not in parallel order), with the total time not accounting for double-counting or any overlapping between the two types of experience. Specific contract management experience shall be detailed for each relevant project listed in the resume section of the Statement of Qualifications (Section E of the Standard Form 330). SF330 Resume shall provide a brief description of each project and include significant details of the previous role that best demonstrates the person's capability and experience relevant to his/her proposed role in this contract and consistent with the scope of work herein.
- e) In addition to other specified responsibilities, the Consultant Contract Manager shall be responsible for all matters related to the Consultant's personnel, subconsultants, roadway design and project delivery services, and Consultant's and subconsultant's teams' operations ensuring compliance with the provisions in this Contract and but not limited to, the following:
 - i. Administers inherent governmental contract, including those dealing with cost, time, ensuring compliance with the agreement provisions, fulfilling all Task Order requirements, and quality of goods and services as per the SOW herein;
 - ii. Maintains familiarity of day-to-day task order operations, including project resources needs and expenditures.
 - iii. Makes or participates in decisions about changed conditions or scope changes that require Task Order amendments involving supplemental resources and cost adjustments.
 - iv. Reviews financial processes, transactions and documentation to ensure that safeguards are in place to minimize and eliminate fraud, waste, and abuse.
 - v. Commensurate with the magnitude and complexity of the project, the Consultant Contract Manager may personally make design and environmental engineering or best reasoned decisions over which the Consultant Contract Manager provides supervisory direction and control authority.
 - vi. Coordination of the work of professional, technical, or special consultants.
 - vii. Ensure that deliverables are clearly defined, acceptance tested and that criteria are specific, measurable, attainable, realistic, and time-bound; and

confirm with appropriate Consultant personnel that the deliverables satisfy the acceptance tests and criteria.

- viii. Supervising, reviewing, monitoring, training, and directing the Consultant's and subconsultants' personnel.
- ix. Assigning qualified personnel to complete the required Task Order work as specified on an "as-needed" basis in coordination with the Caltrans Contract Manager.
- x. Administering personnel actions for Consultant personnel and ensuring appropriate actions taken for subconsultant personnel.
- xi. Maintaining and submitting organized project files for record tracking and auditing.
- xii. Developing, organizing, facilitating, and attending scheduled coordination meetings, and preparation and distribution of meeting minutes.
- xiii. Implementing and maintaining quality control procedures to manage conflicts, ensure product accuracy, and identify critical reviews and milestones.
- xiv. Assuring that all applicable safety measures are in place.
- xv. Providing invoices in a timely manner and providing monthly Contract expenditures.
- xvi. Reviewing invoices for accuracy and completion before billing Caltrans.
- xvii. Managing subconsultants.
- xviii. If applicable, monitoring and maintaining required DBE (Disadvantaged Business Enterprise) or DVBE (Disabled Veteran Business Enterprise) involvement.
- xix. Possessing knowledge, experience, and familiarity with prevailing wage issues and requirements in State of California.
- xx. Attending meetings with the Caltrans Functional Managers and regulatory agencies.
- xxi. Monitoring the health and safety of personnel working in a hazardous environment in accordance with all applicable Federal, State, and local regulations.

2. Consultant Task Order Manager.

- a) For each Task Order the Consultant shall provide a Consultant Task Order Manager to coordinate the Consultant Task Order operations with the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager. Commensurate with the magnitude and complexity of the project, a Consultant Task Order Manager may manage more than one Task Order.

- b) The Consultant Task Order Manager shall have “substantial knowledge and experience” working in roadway design and project development support services work, including knowledge of environmental constraints.
 - i. “Substantial knowledge” is defined as having a Bachelor's or higher degree in Civil Engineering is desirable.
 - ii. "Substantial experience" is defined as having a minimum of 5 years of experience and having worked in roadway design and project development Support Services work for sufficient time to ensure ability to control and advise on the full range of activities and to be expert in terms of a wide variety of special, unusual or complex roadway features and maintenance related work when performing project development support services referenced in SOW to this agreement. Demonstrated experience acceptable to Caltrans gained from multiple projects at various times, shall be in serial (not in parallel order), with the total time not accounting for double-counting or any overlapping time within applicable experience.
- c) The cumulative 5 years minimum years of experience, gained from multiple projects at various times, shall be in serial (not in parallel order), with the total time not accounting for double-counting or any overlapping. Relative experience shall be detailed for each relevant project listed in the resume section of the Statement of Qualifications (Section E of the Standard Form 330). SF330 Resume shall provide a brief description of each project and include significant details of the previous role that best demonstrates the person's capability and experience relevant to his/her proposed role in this contract and consistent herein.
- d) The Consultant Task Order Manager (who will be other than the Consultant Contract Manager) shall be assigned to conduct, or direct the conduct of, all work assigned under one or more Task Order(s). The Consultant Task Order Manager shall be the primary contact for the assigned Task Order and be available as needed for communication with Caltrans. In addition to other specified responsibilities, the Consultant Task Order Manager shall be responsible for all matters related to the executed task order deliverables including Consultant's and Sub-Consultants' teams operations ensuring compliance with the provisions in this Agreement and associated technical support services work including, but not limited to, the following:
 - i. Commensurate with the magnitude and complexity of the project services, the Consultant Task Order Manager may personally make engineering design or best reasoned decisions over deliverables.
 - ii. Coordination of the work of its professional, technical team, or the Caltrans PDT.

- iii. Ensuring that deliverables are acceptance tested and are specific, measurable, attainable, realistic, and time-bound; and that the deliverables satisfy the buildable, and biddable acceptance tests and criteria.
- iv. Supervising, reviewing, monitoring, training, and directing the Consultant's and Sub-Consultants' personnel.
- v. Developing, organizing, facilitating, and attending scheduled coordination meetings, and preparation and distribution of meeting minutes.
- vi. Knowledgeable in noise, vibration and hydroacoustic technical support services related scope.

3. Consultant Responsible Person

- a) The "responsible person in charge of work" refers to an individual who exercises independent control and direction over the investigation or design of professional engineering work, or the direct engineering oversight of such projects. This role requires the use of professional initiative, expertise, and independent judgment. The Consultant's designated Responsible Person shall be actively involved in monitoring project progress and shall have the authority to make final decisions regarding project development and delivery.
- b) The attachment templates for the SOW for this Agreement indicate specific personnel qualification requirements and area of work experience for the Consultant Responsible Person (who may be the Task Order Manager, commensurate with the magnitude and complexity of the project), assigned to conduct, or direct the conduct of, all work assigned under the Task Order. The Consultant Responsible Person shall be the primary contact for the assigned Task Order and be available as needed for communication with Caltrans. The attachment templates used with this base scope of work, Attachment 1, collectively the SOW, are as follows:
 - i. Roadway Design & Project Development Services (Attachment 1A)
 - ii. Hydrology and Hydraulics Engineering Services (Attachment 1B)
 - iii. Electrical Design Services (Attachment 1C)
 - iv. Traffic Design Services (Attachment 1D)
 - v. Landscape Architecture Design Services (Attachment 1E)
- c) In this Agreement, a person who is authorized to review and approve Consultant roadway design and project development related studies, reports, calculations, analytical results, details, other documents, other items, and deliverables in place of the Consultant Contract Manager shall be hereafter referred to as the Consultant Responsible Person. The Consultant Responsible Person shall be the signing authority for all analytical results notes, calculations, analysis, reports, plans, graphics, drawings, visual simulations, studies, product, data, details, other

documents, other items, and deliverables under the Contract requiring the signature of a project design engineering Consultant Responsible Person.

- d) All analytical results, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product data, plans, details, other documents, other items, and deliverables under this Contract bearing the signature of a qualified replacement Consultant Responsible Person who is currently employed by the Consultant or its subconsultants. In such an event, no additional time shall be allowed, or cost reimbursed to the Consultant without the prior written approval of the Caltrans Contract Manager.
- e) Consultant Responsible Person shall be currently employed by the Consultant or its subconsultants at the time the deliverables are submitted to Caltrans for consideration under the review and acceptance process. Consultant Responsible Person shall have a minimum five (5) years of experience acceptable to Caltrans in performing lead duties for similar roadway design and project development related support services contracts and shall have a minimum of two (2) of these five (5) years as a lead worker.
- f) The cumulative 5 years minimum years of experience, gained from multiple projects at various times, shall be in serial, with the total time not accounting for double-counting or any overlapping. Relative experience shall be detailed for each relevant project listed in the resume section of the Statement of Qualifications (Section E of the Standard Form 330). SF330 Resume shall provide a brief description of each project and include significant details of the previous role that best demonstrates the person's capability and experience relevant to his/her proposed role in this contract and consistent with the Request for Qualifications for this Agreement ("RFQ").
- g) Consultant Responsible Person shall manage the project development, related engineering studies, analysis, and best management practices as they relate to roadway design and project development and regulatory compliance. Provide direction and monitoring of consultant and subconsultant staff and design support services responsibilities to ensure they are performed with due diligence and sensitivity. Guide and implement procedures for complying with statutory and regulatory requirements and environmental streamlining and efficiency measures.

4. Specific Personnel Requirements for Scope of Work Attachments (1A-1E)

- a) Attachment(s) 1A, 1B, 1C, 1D, and 1E to this Agreement identify the specific personnel requirements for personnel classifications for this Agreement.

- b) The Consultant shall provide key personnel with roadway design subject specific and supporting expertise, transportation experience, and technical assistance, including but not limited to all subject areas identified in the Attachment SOW.
- c) Consultant key personnel shall possess demonstrated experience in providing design support services to the Caltrans Task Order Manager throughout the project's advertising and construction phases. These services include, but are not limited to, providing technical responses to bidder inquiries during the advertising period to ensure clarity in the contract documents. During the construction phase, the Consultant key personnel shall perform detailed Contract Change Order (CCO) reviews to evaluate technical merit and cost-effectiveness and assist Caltrans Task Order Manager in providing formal responses for contractor Requests for Information (RFIs) for the purposes of resolving design-related issues in a timely manner.

5. Consultant Research Data Specialist (for GIS)

- a) The Consultant Research Data Specialist for GIS deliverables shall have documented five (5) years of progressively responsible technical quantitative and qualitative data analysis experience, including but not limited to researching, identifying patterns and trends in historical data, as well as data model creation experience.
- b) Research Data Specialist shall possess 12 semester or 18 quarter units course work from an accredited institution in any combination of a data driven research-related field, such as economics, mathematics, psychology, sociology, demography, geography, anthropology, statistics, data science or a research related field. This must include at least one course in statistical methods; and equivalent to graduation from an accredited institution with a bachelor's degree. A master's or higher degree in economics, mathematics, psychology, sociology, demography, geography, anthropology, statistics, data science or a related research-oriented field may be substituted for two years of the required experience.
- c) The Consultant Research Data Specialist for GIS deliverables shall have the following area of experience:
 - i. Expertise in Global Positioning System, Geographic Information System, GeoRef (<https://previews.americangeosciences.org/vufind/>) and Environmental Systems Research Institute (ESRI) GIS software;

And
 - ii. ESRI Geospatial Software Tools and GIS content development and analysis must have expertise in but not limited to:

- (1) Current versions of ArcGIS, ArcPro platforms and web-based applications;
- (2) Python platform and tool/add-in customization and creation;
- (3) ArcGIS server and database maintenance and updates.
- (4) Data transfer from the GIS environment to other spreadsheet or database platforms, including working with very large databases (in excess of 256 columns) and generating reports;
- (5) Creating and managing metadata for spatial data layers;
- (6) Collaboration with GIS professionals such as other Caltrans offices and partner agencies;
- (7) Process automation; and
- (8) Writing manuals and reports.

F. COORDINATION

1. For each Task Order, the Consultant shall collaborate with the Caltrans Contract Manager and may need to coordinate activities and work closely with multiple stakeholders including, but not limited to, Caltrans' various functional units, Caltrans' project managers, Caltrans PDT, local agencies, various environmental groups, other state agencies, Native American tribal governments, utility companies, railroads, other agencies, other entities with an interest in the project (including, but not limited to, FHWA), other consultants, and other contractors.
2. In the event an instruction or direction is unclear to the Consultant, the Consultant shall ask the Caltrans Contract Manager or designee to clarify the instruction or direction prior to Task Order execution.
3. The Consultant shall provide engineering design studies and project development services characterized by complex, non-linear, overlapping and parallel (not serial order) schedules that may require parallel execution or intermittent field work to ensure timely project delivery. All tasks must be completed in a high-priority manner to maintain compatibility with overall project design and project development requirements. In the event of unanticipated finds, the Consultant must deliver a rapid response, including the immediate development of an action plan and coordination with relevant permitting agencies and stakeholders to preserve the project schedule. Specific assignments related to such unanticipated finds or other disconnected work phases will be authorized through individual sequential Task Orders as needed.
4. The foregoing paragraph does not relieve the Consultant of professional responsibility during the performance of this Agreement. In instances where the Consultant believes a better standard solution to a task being performed or an issue being addressed is possible, the Consultant shall promptly notify the Caltrans Contract Manager of these concerns, together with the supportable reasons. However, Caltrans shall make all final

decisions on the interpretation of the instructions, directions, work product and outputs that are described in the Task Order.

5. The Consultant shall have the capability to send to and receive from Caltrans' digital electronic mail system and file transfer protocol system including, but not limited to, attachments for word processing, photographs, spreadsheets, and databases.
6. The Consultant shall obtain the Caltrans Contract Manager's approval prior to making presentations at non-Caltrans sponsored conferences or workshops for any services provided under this Agreement including, but not limited to, use of data, measurements, analyses, maps, plots, charts, telemetry, draft, and final documents collected or prepared during activities conducted under the Agreement.
7. The Consultant shall notify the Caltrans Contract Manager or Caltrans designee in writing a minimum one (1) week before any field work begins, unless the Task Order specifies some other notification date.
8. The Consultant shall assist Caltrans in obtaining necessary approvals and permits for any work. The Consultant shall identify all necessary approvals and permits, prepare signature-ready permit applications, and track the status of permit applications required for completion of the Task Order deliverables, as specified in each Task Order.

G. GENERAL REQUIREMENTS FOR DELIVERABLES AND DATA

1. Ownership of Proprietary Property

- a) All Task Order deliverables, intermediate work products, and original documents including, but not limited to, original field notes, photographs, reports, documents, plans, data, data files, edits to field data, adjustment calculations, final results, drawings, specifications, estimates, studies, record search, records, books, maps, manuscripts, manuals, background information, spreadsheets, procedural scripts, macros developed, intellectual properties and other similar products, developed pursuant to this Agreement:
 - i. Shall be subject to the provisions of this Agreement Exhibit D "Ownership of Proprietary Property" and "Ownership of Data", and
 - ii. All deliverables and products mentioned herein shall be sent to Caltrans upon completion of each Task Order or immediately upon request by the Caltrans Contract Manager. The Consultant shall retain a copy of all documents furnished to Caltrans until expiration of the Agreement.
- b) Unless otherwise specified in the Task Order, all analytical results, plans, designs, specifications, estimates, notes, calculations, analysis, reports, graphics, drawings, visual simulations, studies, product, data, manuals, details, other documents, other

items, and Task Order deliverables required under this Agreement (collectively, the “Deliverables”), shall conform to the format outlined below.

2. Format for Unprotected and Modifiable Electronic File Transfers

- a) Consultant shall submit deliverables in unprotected and modifiable digital electronic files that are fully compatible, readable, and useable by Caltrans software, as set forth in “Software Requirements” section. Task Order Deliverables shall meet the following requirements and as specified in each Task Order:
 - i. A file sharing system acceptable to Caltrans may be used to facilitate and record reviews of project documents and Task Order deliverables.
 - ii. Text-based documents shall be submitted as an Adobe Portable Document Format (“PDF”) file using Adobe Acrobat Reader version 5 or later software as requested by the Caltrans Contract Manager. The PDF file shall be inclusive of all graphics (e.g., page orientation, photographs or other images, charts, and tables) and be suitable for printing in final form.
- b) The PDF file shall:
 - i. Contain functioning bookmarks, indexes, tables of contents or other hyperlinks as required by the Task Order.
 - ii. Be configured (e.g., bookmarks, indexes, table of contents, thumbnails, annotations, signatures, and security settings) as required, or as directed by the Task Order.
 - iii. Be optimized for use by Adobe Acrobat Reader 5 or newer.
 - iv. Be compliant with Caltrans Americans with Disabilities Act (ADA) document standards
- c) Text-based documents shall also be submitted in Microsoft Word format, version 2013 or later. The document shall include all graphics (e.g., photographs, image graphics, charts, and tables). Photographs shall be in “jpeg” file format. Other image graphics shall be in “gif” format unless otherwise specified.
- d) Word processing files shall be submitted in Microsoft Word format, version 2013, or format currently in use by Caltrans.
- e) All graphics (e.g., photographs or other drawings) shall be submitted separately from the pdf and Microsoft Word documents in archive-type file formats (e.g., photographs and bitmapped drawings as “tif”, Microstation drawings as “dgn”, and vector drawings as “ai”) unless otherwise specified. The intent of this section is for Consultant to provide Caltrans with a copy of each graphic in an uncompressed file

format for archive purposes. Consultant may suggest alternative formats that are compatible with this goal.

- f) Spreadsheet files shall be submitted in Microsoft Excel format, version 2013, or format currently in use by Caltrans.
- g) Database files shall be submitted in Microsoft Access format, version 2013, or format currently in use by Caltrans.
- h) Consultant shall not format digital electronic files as “view only” or “read only” unless so specified in the Task Order.
- i) Schedules in Critical Path Method (CPM) software, with Primavera Project Planner (P3, P6) and SureTrak, or any updated version, as a minimum; Scheduler Analyzer Pro; and Microsoft Projects or equivalent. Consultant shall have access to use additional industry standard CPM software.

3. Computer Aided Drafting & Design Software Requirements

- a) Consultant’s personnel shall be proficient in Computer Aided Drafting & Design software and shall produce deliverables that are fully compatible, readable and useable by Caltrans software, requiring no modification or translation of Consultant’s deliverables. Consultant shall ensure that no loss of data integrity or accuracy results from any transfer of data. Compressed data must be in a "self-expanding executable" format. Software standards include but are not limited to the following:
 - i. MicroStation Connect (Bentley Systems, Inc.)
 - ii. ProjectWise InterPlot 10.00.02.29(Bentley/InterPlot Corporation)
 - iii. Civil 3D 2020 or 2016 (Autodesk, Inc.)
- b) Consultant shall deliver all documents, work products, and other deliverables in the format(s) required by Caltrans. Caltrans anticipates that it will update its software periodically and at such time, new software standards may be required by notice provided to Consultant 30 days in advance.
- c) To ensure and verify compatibility, Caltrans may provide sample or required format(s) to Consultant, and Consultant and Caltrans may conduct tests of sample deliverables from Consultant. Caltrans reserves the right to reject deliverables that do not meet these requirements. If a deliverable is rejected, Consultant shall resubmit deliverables to Caltrans that meet these requirements and shall not bill Caltrans for the rejected deliverables or for time associated with correcting the rejected deliverables.
- d) Caltrans’ Consultant Resource Files and Guidance webpage, which is available at <https://misc-external.dot.ca.gov/cadd/index.htm>, provides standards, procedures,

and policies in the handling of electronic files and information for Caltrans' project delivery process. It includes Caltrans Memorandum and Directives, support documentation, and Caltrans customized resource files.

- e) Based on project needs, Task Order may require Consultant to use software and digital electronic formats other than those indicated in this Agreement as needed to accomplish the objectives of the specialized Task Order.

4. Submittals

- a) The minimum standard of appearance, organization, and content of Task Order deliverables shall be that of similar types produced by Caltrans and set forth in related Caltrans manuals.
- b) Task Order deliverables shall be in accordance with prevailing industry standards and in a form acceptable to the Caltrans Contract Manager. These items shall identify the preparer, the designated reviewers, and the criteria for acceptance.
- c) Task Order deliverables shall be prepared on Caltrans standardized forms when applicable. Consultant shall request, and Caltrans may provide necessary forms for Consultant's use. If there are no Caltrans standardized forms, the format and content requirements for a Task Order deliverable shall be specified in the applicable Task Order.
- d) Consultant shall submit Task Order deliverables in unprotected and modifiable digital electronic files in a specified digital device format (CD, DVD, and/or flash drive, or via a file sharing system acceptable to Caltrans). Appropriate documentation shall accompany each digital device indicating the contents of each file.
- e) Consultant personnel involved in preparation or review of Task Order deliverables shall be identified in the prepared or reviewed report, including the Consultant Responsible Person's digital electronic signature and seal when applicable.
- f) MicroStation is Caltrans' standard drafting software. It is used primarily for the preparation of final contract plans for all PS&E submittals but can also be used for 3D modeling and visualization. Consultant's PS&E deliverables shall follow and use the format established standards in the latest version of the Plans Preparation Manual available on the internet <https://dot.ca.gov/programs/design/manual-plans-preparation-manual-ppm>

5. Project Files

- a) Consultant will develop, maintain, update and organize all project information in accordance with the Caltrans Project Development Uniform File System methodology described in Chapter 7 of Caltrans' Project Development and

Procedures Manual (PDPM). Consultant shall maintain a complete set of project development records for the Working File, and Project History File.

- b) Project data shall be available for access and review by Caltrans staff at any time and submitted to Caltrans staff by Consultant according to project schedule deadlines. Consultant shall maintain a separate complete set of project files for each project included under this Agreement.
- c) Consultant shall retain a copy of all documents furnished to Caltrans Contract Manager as described in Agreement Exhibit D, “Retention of Records”.
- d) The Consultant shall maintain a separate complete set of project files for each Task Order issued by the Caltrans Contract Manager performed under this Agreement. The Consultant shall maintain two (2) sets of these files. One (1) set shall be maintained on site with the Consultant and the other set shall be updated by the Consultant monthly and delivered to the Caltrans Contract Manager in coordination with the Caltrans Task Order Manager. These files shall be indexed in accordance with Caltrans’ Project Development Uniform File System ([https://dot.ca.gov/-/media/dot-media/programs/design/documents/pdpm-chapter7-all y.pdf](https://dot.ca.gov/-/media/dot-media/programs/design/documents/pdpm-chapter7-all%20y.pdf)). These files shall be made available to the Caltrans Contract Manager during normal working hours and shall be transferred to Caltrans upon completion of work under the Task Order upon request.

H. REVIEW AND ACCEPTANCE PROCESS

1. General

- a) The Caltrans Contract Manager shall have the unilateral right to monitor and review the progress and processes of the Consultant related to work performed under this Agreement.
- b) Pursuant to the Agreement Exhibit D – “Special Terms and Conditions”, section 24 – “Evaluation of Consultant”, the Caltrans Contract Manager may utilize ADM2031 – Past Performance” form at any time or frequency to document consultant’s past performance. At a minimum, Consultant will be evaluated on their past performance during the first Task Order to set the expectations, and then on a yearly basis after Agreement execution date, and at Agreement close out. Additional evaluations of the Consultant’s performance maybe conducted.
- c) The performance of the Consultant Contract Manager, key personnel, and Consultant team personnel shall be evaluated by the Caltrans Contract Manager and Caltrans Task Order Manager, as needed, but no less frequently than after issuance of the first Task Order, annually, and at the expiration of the Agreement. Unsatisfactory reviews of specific Consultant personnel may result in Caltrans requesting that they be replaced with new personnel; the Consultant shall

immediately replace personnel with individuals whose qualifications at a minimum equal those of the personnel replaced at no additional cost to Caltrans. Evaluation includes, but not be limited to, the following:

- i. Job performance.
 - ii. Quality of Work.
 - iii. Timely submittal of reports, invoices, daily reports, and other required documents.
 - iv. Early detection of problems and timely resolutions.
 - v. Requesting timely approval for personnel changes and travel expenditure.
 - vi. Responsiveness and ability to control costs.
 - vii. DBE or DVBE Participation.
 - viii. Conflicts of interest.
- d) Poor performance and any negative evaluations may result in the request for replacement of the Consultant Contract Manager, key personnel, or any Consultant personnel; the need to replace key personnel shall reflect adversely on the Consultant's performance evaluation, and if warranted, may result in the termination of the Agreement per Exhibit D, Section III, Termination of the Agreement.
- e) Upon completion of each deliverable or task, the Caltrans Contract Manager and/or designee shall either accept or reject the completed work.
- f) Consultant shall work in close liaison with the Caltrans Contract Manager. Time is of the essence. Caltrans shall exercise review and approval functions through the Caltrans Contract Manager at key points or milestones, as specified in each Task Order. Milestone reviews shall be performed with the Caltrans Contract Manager for the specific performance, products, and deliverables listed in each Task Order.

2. Reviews of Deliverables

- a) Consultant shall submit Task Order deliverable document(s) in draft prior to scheduled submittal date and the opportunity afforded to Caltrans to provide comments and feedback, prior to final submittal. Caltrans reviews, validations, and approvals made prior to the final submittal of Task Orders deliverables are intended only to provide interim authorizations to proceed and do not constitute final approval of the Task Order deliverables.
- b) Reviews by Caltrans do NOT include detailed reviews or checking of major components, quantitative calculations, related details, or accuracy of information. The responsibility for accuracy and completeness of Task Order deliverables remains solely that of the Consultant.

- c) The Caltrans Contract Manager shall be the final decision maker to address all questions which may arise as to the quality or acceptability of Task Order deliverables furnished and work performed for this Agreement.
- d) The Consultant shall prepare the required analytical results, permits, estimates, notes, calculations, analysis, reports, plans, graphics, drawings, visual simulations, studies, product, data, manuals, details, other documents, other items, and Task Order deliverables required by this Agreement according to requirements of this Agreement and applicable Caltrans Manuals for the Task Order work.
- e) If directed by the Caltrans Contract Manager, the Consultant shall prepare and update a comprehensive Critical Path Method (CPM) network diagram, Bar Chart Schedule, Logic Network Schedule, and/or the Caltrans Work Breakdown Structure (WBS) for each Task Order issued by the Caltrans Contract Manager showing a deliverables schedule as well as other relevant data to monitor project progress, Consultant's work control, and Caltrans review of work status, if required in the Task Order. The relevant data shall include a list of activities with budgeted cost, milestones, and target date for completion of each activity. The minimum number of task details shall be identified in the Task Order. This workplan shall be updated once a month to show the approved baseline schedule and the actual progress schedule.
- f) Caltrans shall review the aforementioned project planning, scheduling, project progress and status documents and return them to the Consultant with notes and comments within 20 working days in order to validate the planning and cost control procedures on a monthly basis of performance period.
- g) The Consultant's timesheets shall be reviewed by the Consultant Contract Manager prior to submitting the invoice. Pursuant to Agreement Exhibit B - "Budget Detail and Payment Provisions", Section 2 – "Compensation and Payment", Consultant shall submit monthly itemized invoices, including all supporting timesheets and certified payroll as requested by the Caltrans Contract Manager. Consultant shall submit receipts for Other Direct Charges, including transportation and subsistence costs, to be reimbursed, shall be at actual costs incurred without any markups.

3. Acceptance of Deliverables

- a) Task Order deliverables shall be subject to written approval and acceptance by Caltrans Contract Manager prior to payment for these items.
- b) Task Order deliverables and tasks provided for acceptance under each Task Order shall comply with the terms, covenants and conditions of this Agreement.
- c) Task Order deliverables shall satisfy Caltrans acceptance criteria and tests. The work product(s) shall be complete, of neat appearance, well-organized, technically

and grammatically correct, independently checked for error, checked by designated reviewers (Caltrans and Consultant Personnel), dated, and shall conform to industry standards and all applicable Caltrans, State, and Federal Standards, Requirements, and Procedures. All Task Order deliverables shall be approved by the Caltrans Contract Manager or Caltrans Task Order Manager.

- d) It is expected that the Consultant shall fulfill all Task Order deliverables and deliver based on the agreed upon each Task Order deliverables and milestone schedule. Failure to complete the work based on the agreed upon schedule in the Task Order may result in suspension of invoice payment, termination of the Task Order or this Agreement. Failure of Consultant to complete the work, Caltrans may have Task Order services and deliverables completed in any way allowed by law, for which the Consultant shall be liable for any additional costs incurred. Such additional costs shall be borne by the Consultant and no additional reimbursement made by the Caltrans.
- e) The Consultant agrees that any efforts on behalf of the Caltrans to remedy any deficiency or to rectify any incompleteness of Task Order deliverables, may be deducted from amounts due to the Consultant in pending or future invoices, or if the Agreement is terminated, may be recouped by any means allowed by law.
- f) It is Consultant's responsibility to notify the Caltrans Contract Manager that the work is complete and ready for review or acceptance. Work is subject to reviews and approval by the Caltrans Contract Manager or his/her designee. The Caltrans Contract Manager shall have the ultimate responsibility and authority to determine whether Consultant has satisfied its duties and obligations under the Agreement, including specifically whether Consultant delivered all work product and Task Order deliverables and whether Consultant's work product and Task Order deliverables satisfied all of the applicable Agreement requirements (including acceptance criteria or tests).
- g) Caltrans Contract Managers approval of work constitutes approval for Consultant invoice payment and not transference or termination of Consultant's responsibility to perform work in accordance with the terms of the Agreement and Consultant represents and warrants that their work product and related Task Order deliverables are acceptable, and any work that needs correction shall be made at Consultant's sole cost and expense and in a timely manner. Regardless of any prior reviews and acceptances of work during the term of this Agreement, all work is subject to final review and approval by the Caltrans Contract Manager or his/her designee and extends during the term of the Task Order to ensure Task Order deliverables are consistent with the executed Task Order.
- h) Notwithstanding any other provision of this Agreement, until final acceptance of a Task Order under the Agreement, any acceptance or approval means approval to proceed, but it does not mean final acceptance or approval of a deliverable or task,

and it does not reduce or eliminate any of Consultant's duties or responsibilities under this Agreement.

4. Rejection of Deliverables

- a) Pursuant to Exhibit A, Section 2, "Task Order," of the Agreement, Caltrans shall not pay Consultant for Consultant's work under this Agreement and the charges incurred by Consultant that do not conform to the requirements specified in this Agreement or for services or deliverables that do not conform to the applicable Task Order, and such work shall be corrected at Consultant's sole expense at no additional cost to Caltrans.
- b) In the event of non-acceptance of Task Order services or deliverables due to errors, omissions, or non-compliance with general Caltrans standards, or the provisions of this Agreement (including without limitation to the applicable Task Order), Consultant shall rectify and remedy the errors, omissions, or non-compliance to the satisfaction of the Caltrans Contract Manager at no cost to Caltrans. Caltrans shall withhold approval and payment until the work is satisfactorily completed and approved by the Caltrans Contract Manager. Additional cost incurred by Consultant to rectify and remedy the errors, omissions, or non-compliance to the satisfaction of the Caltrans will not be reimbursed.

I. GENERAL REQUIREMENTS – EQUIPMENT AND APPURTENANCES

1. General

- a) Consultant shall provide all tools, equipment, supplies, and appurtenances needed to fully complete the required Services described in the Agreement, and Consultant shall not require or rely upon Caltrans to provide such tools, equipment and supplies. While Consultant adheres to the foregoing Independent Contractor Status defined herein, Caltrans may, during the term of the Agreement, provide non-employee user identification (ID) cards and related access to allow Consultant and subconsultant personnel to access selected items of equipment; to allow limited access to Caltrans computer systems with built-in logical firewalled restraints.
- b) The Consultant may claim reimbursement for providing equipment or supplies. However, such claimed costs shall be in compliance with 48 Code of Federal Regulation (CFR), Chapter 1, Part 31 (Federal Acquisition Regulation - FAR cost principles) and 2 CFR, Part 200, and be consistent with the Consultant's company-wide allocation policies and charging practices with all clients including federal government, state governments, local agencies, and private clients.
- c) The Consultant or its subconsultants shall not incorporate any materials or equipment of a single or sole source origin into project development without the advance written approval of Caltrans.

2. Office Equipment and Supplies (Consultant's Office):

- a) The Consultant shall have and provide adequate office equipment and supplies to complete the work required by this Agreement. Such equipment and supplies shall include, but not be limited to, the following:
 - i. Office Supplies.
 - ii. Computers with appropriate software, printers, plotters, fax machines, calculators, data collectors and their necessary attachments and accessories.
- b) Consultant shall possess and skillfully operate data processing systems, software packages, reference materials, or other tools, including hardware and software, used in providing transportation engineering deliverables that should include but not be limited to, the following:
 - i. Microsoft Office Software (including, but not limited to, Word, Excel, PowerPoint, Publisher, Access, Power Bi).
 - ii. Adobe Acrobat Professional version 5 or later.
 - iii. Critical Path Method (CPM) software, with Primavera Project Planner (P3, P6) and SureTrak, or any updated version, as a minimum; Scheduler Analyzer Pro; and Microsoft Project. The Consultant shall have access to additional industry standard CPM software, as needed.
 - iv. Drupal
 - v. ArcGIS Desktop and ArcGIS Pro
 - vi. Filemaker Pro version 16 or later
 - vii. PDF Accessibility Checker 4 (PAC 3) Colour Contrast Analyzer
 - viii. Webex
 - ix. Microsoft Teams
- c) The Consultant shall provide a computer system for each person working under a Task Order that meets the Caltrans current specifications. Caltrans reserves the right to provide the computer equipment and access to computer system if such items are beneficial to Caltrans' interest.
- d) Consultant shall provide at its own expense reference materials, or other tools, used in providing Task Order deliverables.
- e) Caltrans shall not reimburse payments for any hardware, software, or other equipment (including, but not limited to, batteries, paper, and office supplies) considered as tools of the trade that may be required for the Consultant to perform work required in this Agreement.
- f) The Caltrans Contract Manager shall approve any Consultant's request for digital electronic connections and compatibility with current Caltrans Windows-based

networks and programs in writing prior to the use and/or installation of any electronic hardware and/or software.

3. Field Equipment and Supplies:

- a) Attachment(s) 1A, 1B, 1C, 1D, and 1E to this Agreement identify the specific field equipment and supplies Agreement. The attachment scopes of work for this Agreement will indicate specific field equipment and supplies.
- b) Consultant shall have and provide adequate field tools, instruments, equipment, materials, supplies, and safety equipment to complete the required services and that meet or exceed Caltrans specifications per the applicable Caltrans manuals. Consultant shall not require or rely upon Caltrans to provide such tools, equipment, and supplies. If required by the Task Order, the tools, instruments, equipment, materials, supplies, and safety equipment required for each Consultant field personnel shall include, but not be limited to the following:
 - i. Sufficient vehicles suitable for the work to be performed and terrain conditions of the project sites. Vehicles shall be fully equipped with all necessary tools, instruments, equipment, materials, supplies, and safety equipment required for the efficient operation of the Consultants' field personnel. Each vehicle shall have overhead flashing amber light(s) visible from all sides (360 degrees) with a driver control switch; locking toolbox; fire extinguisher; and first aid kit. Vehicles without side windows shall not be used. All vehicles shall be clearly marked as to ownership. Each vehicle shall be equipped to meet Caltrans safety requirements.
 - ii. A laptop computer or tablet equipped with an aircard or Hotspot, appropriate software, Digital Camera and Electronic Calculator
 - iii. Communication device: Mobile telephone, cell phone shall be compatible with the current Caltrans cellular phone system.
 - iv. Applicable hand tools and other equipment listed in Attachment 1A 1B 1C, 1D, and 1E.
 - v. All necessary safety equipment including, but not limited to, fire extinguisher, hard-soled safety footwear, white hard hats, eye protection, hearing protection, and approved high visibility reflective safety attire as appropriate for the requested field work to be performed safely and efficiently within operating highway and construction zone environments.

4. Office Equipment and Supplies (Use of Caltrans Office)

At the sole discretion and convenience of Caltrans, the Consultant may be expected to spend time and work for extended assignments to perform on Task Order deliverables

and support functions at Caltrans offices. Caltrans may provide the office space at various Caltrans offices assigned as "Client Office OH", when required by a Task Order. Use of Caltrans office space may include, but is not limited to, all utilities, office equipment (except for the laptop), and office supplies typically used by the Caltrans personnel, to the Consultant personnel providing services under this Agreement.

- a) Consultant and its subconsultants, shall include an adjusted Field Office Indirect Cost Rate, adjusted for associated allocable cost pool incurred specifically for this Agreement, in its cost proposals – Attachment 2 and use the adjusted Field Office Indirect Cost Rate assigned as “Client Office OH” in billing Caltrans for those personnel utilizing Caltrans’ office facilities;, and the cost rates will reflect Consultant’s lower overheard costs where Caltrans provides office space, office equipment and furniture.
- b) If Consultant or its subconsultants, does not have an adjusted Field Office Indirect Cost Rate classified as “Client Office OH”, it will develop and use an adjusted Field Office Indirect Cost Rate assigned as “Client Office OH” to reflect an equitable distribution of separate cost groupings for costs allocable to off-site locations to the Agreement (as specified in 48 CFR 31.203(f)).
- c) When working on-site in the Caltrans Facilities, Consultant shall adjust its hours to meet the business needs of Caltrans and shall generally work and be present during Caltrans building business hours (which are 8:00 a.m. - 5:00 p.m.). The business hours can be adjusted in different Task Orders.

J. GENERAL REQUIREMENTS – STANDARDS

1. Federal, State, and Local Requirements

- a) All work/services under this Agreement shall be performed in accordance with all applicable federal, state, and local statutes, laws, codes, regulations, policies, procedures, ordinances, standards, specifications, performance standards, and guidelines, including but not limited to the latest (including all updates) Caltrans regulations, policies, procedures, manuals, standards, specifications, performance standards, directives, guidelines, handbooks, guidance documents, forms, templates, policy memo, methodologies, and other informational or directive publications, including compliance with Federal Highway Administration (FHWA) and state guidelines for implementing those requirements; and any permits, licenses, agreements or certifications that apply to specific Task Orders; the terms and conditions of this Agreement; and current Caltrans manuals and any future revisions or updates.
- b) Standards and processes not covered by the applicable Caltrans manuals shall be performed as specified in the Task Order. If no standards exist, Task Orders may

present new standards, so long as these standards do not conflict with the requirements or amend the Scope of Work under of this Agreement.

2. Prevailing Wages

- a) Pursuant to Agreement Exhibit F, for all covered prevailing wage work, Consultant shall comply with all of the applicable provisions of the California Labor Code requiring the payment of prevailing wages. Consultants Cost Proposal, Attachment 2 shall reflect the effective Department of Industrial Relations (DIR) determinations as of the RFQ date.
- b) For all covered prevailing wage work, CEM-2501 Fringe Benefit Statement and Consultants Cost Proposal - Attachment 2 shall accurately show the cumulative sum of all irrevocable fringe benefits including but not limited to:
 - i. Benefits contribution provided either to an independent trustee or third person pursuant to a fund, trust, or plan
 - ii. Health & welfare
 - iii. Collective bargain fringe benefits
 - iv. Vacation Fringe Benefits
 - v. Holiday pay
 - vi. Pension
 - vii. Continuous service benefits
 - viii. Cash payments in lieu of fringe benefits
 - ix. Bonus
 - x. Fixed cost benefits
 - xi. Travel and or subsistence payments
 - xii. Apprenticeship or other training programs
 - xiii. Other purposes similar to those specified above
- c) Consultant's invoice shall include the following non-prevailing wage services when applicable:
 - i. Drive time to and from the project site to perform field review.
 - ii. Performing office tasks, such as, project administration in nature, executive or clerical in nature
 - iii. Report writing
 - iv. Work performed outside California
- d) CPA firm performed Indirect Cost Rate ("ICR") schedule or FAR compliant ICR schedule shall include a footnote describing the Consultant and its subconsultants treatment of prevailing wage difference between the employee's standard hourly wage versus the base wage identified in the DIR Prevailing Wage determination and difference between the fringe benefits normally provided to the employee (as calculated by the A&E firm), calculated on an hourly basis, versus the prevailing

wage fringe amount required to be paid for the employee's role established by DIR. Consultant must be able to prove that their accounting treatment for prevailing wage deltas is consistent, in order to be reimbursed for prevailing wage delta costs on Caltrans and local government agency contracts. Consultant may provide evidence of their accounting treatment for prevailing wage through an overhead audit or through other documentation.

3. Caltrans Standards

- a) The standards, manuals, directives, and other guidance applicable to services provided under the Agreement are referenced below or are available on the Caltrans' webpages linked below, and they are incorporated by reference to this Agreement with the same force and effect as though fully set forth herein. Additional standards, guidance and general requirements applicable to the projects may be specified in individual Task Orders or elsewhere in the Agreement. The Consultant is solely responsible for obtaining, at its expense, all necessary manuals, reference documents, and other materials.
- b) Unless otherwise specified in a Task Order, the most current version of applicable standards, manuals, directives, and other procedural guidance shall apply. The Consultant is solely responsible to verify that the latest version or update is used when applicable. Unless otherwise specified, the system of measurement and language used in all Task Order deliverables will be English (U.S. Customary Units).
- c) The standards, manuals, directives, and other guidance listed herein or available on Caltrans' webpages are not exhaustive and may not include all applicable standards for a given project. Consultant shall be solely responsible for determining all applicable practices and standards to be used in performing work/services. Consultant shall inform and demonstrate to Caltrans if standards, directives, or practices required by Caltrans in performance of the work are insufficient, in conflict with applicable standards, or otherwise create a problem for delivering the required services. Should the requirements of any reference, standard, manual, or policy referenced in the Agreement conflict with another, Consultant shall propose a solution and request Caltrans in writing to resolve the conflict.

4. Manuals

- a) The Consultant is responsible for obtaining, at its expense, all necessary manuals, reference documents, and other materials.
- b) Caltrans Manuals generally may be purchased from the Publication Distribution Unit. The Publications staff may be reached at (916) 263-0822, and the center is located at the following address:

State of California

California Department of Transportation
Publication Distribution Unit
1900 Royal Oaks Drive
Sacramento, CA 95815-3800

c) Manuals and documents that are not available from the Caltrans internet webpage may be requested from the Caltrans Contract Manager. The list below is not all-inclusive, but is intended to illustrate the types of reference material and sources of information. Caltrans does not guarantee the availability of publications nor its Internet web pages.

i. CADD Manuals and Resources

<https://dot.ca.gov/programs/design/manual-cadd-users-manual>

ii. Highway Design Manual (HDM)

<https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm>

iii. Project Development Procedures Manual (PDPM)

<https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm>

iv. Plans Preparation Manual (PPM)

<https://dot.ca.gov/programs/design/manual-plans-preparation-manual-ppm>

v. Standard Plans and Specifications

<https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>

vi. Engineering Services Manuals

<https://dot.ca.gov/programs/engineering-services/manuals>

vii. Bridge Manuals

<https://dot.ca.gov/programs/engineering-services/manuals>

viii. Geotechnical Manual

<https://dot.ca.gov/programs/engineering-services/manuals>

ix. Main Street, California

dot.ca.gov/-/media/dot-media/programs/design/documents/main_street_oct2023-a11y.pdf

- x. Right of Way Manual

<https://dot.ca.gov/programs/right-of-way/right-of-way-manual>

- xi. Surveys Manual

<https://dot.ca.gov/programs/right-of-way/surveys-manual-and-interim-guidelines>

- xii. Standard Environmental Reference (SER)

<https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser>

- xiii. Construction Manual

<https://dot.ca.gov/programs/construction/construction-manual>

5. Policies / Directives

- a. Project Delivery Directives

i. <https://dot.ca.gov/programs/project-delivery>

- b. Policy Memos related to the environmental process

i. <https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/policy-memos>

- c. Traffic Operations Policy Directives (TOPDs)

<https://dot.ca.gov/programs/traffic-operations/policy>

- d. Deputy Directives

[DD-60-R2 Transportation Management Plans](#)

6. Guidance

- a. Middle-Mile Broadband Initiative

<https://dot.ca.gov/programs/design/middle-mile-broadband-initiative>

- b. Broadband Facilities on the State Highway Right of Way

<https://dot.ca.gov/programs/design/wired-broadband>

- c. CADD Consultant Resource Files and Guidance

<https://misc-external.dot.ca.gov/cadd/index.htm>

- d. Cost Estimating Guidance Document
<https://dot.ca.gov/programs/design/cost-estimating-improvements>
- e. Design Information Bulletins (DIBs) and Design Memoranda
<http://www.dot.ca.gov/programs/design>
- f. Stormwater Quality Control – Project Planning and Design Guide
<https://dot.ca.gov/-/media/dot-media/programs/design/documents/f0005755-final-ppdgjuly-2017-rev4292019a11y2.pdf>
- g. Construction Contract Development Guide (replaced RTL guide)
https://ppmoe.dot.ca.gov/des/oe/docs/CCD-Guide_ADA.pdf
- h. Transportation Management Plan (TMP) Guidelines
<https://dot.ca.gov/programs/traffic-operations/tmp>

K. GENERAL MATERIALS AND ORIENTATION PROVIDED BY CALTRANS

1. General Materials

- a) Materials (if deemed applicable, necessary, and when available from Caltrans) that may be furnished or made available by Caltrans and were listed in the individual Task Orders and this Agreement, are for Consultant's use only and shall be returned to Caltrans in their original condition by the end of the Agreement. Consultant shall use the materials in the execution of the specific work described in the Task Order. These materials may include, but not be limited to, the following:
 - i. Available background or reference information for each Task Order
 - ii. Caltrans standardized forms
 - iii. All available information in possession of Caltrans pertaining to utility companies whose facilities may be affected by the proposed work
 - iv. All pertinent correspondence and investigations
 - v. Existing as-built construction plans
 - vi. Digital Electronic templates of Task Order formats.
 - vii. All pertinent correspondence and investigations.
- b) Appropriate background information, site topographic maps, as-built drawings, blank Caltrans plan sheet overlays, digital electronic seed files, cell libraries, lane closure request forms, right-of-way alignments and survey limits, preliminary utility location maps, areas where focused studies are needed, construction contract documents, and shop drawings, as available, may be provided for each Task Order.

2. Permits to Enter Property

- a) The Consultant is responsible for notifying the property owner 48 hours in advance of entering the property, unless otherwise specified in the Permit. The Consultant shall not perform work on property outside of the Caltrans right-of-way until Caltrans has obtained an entry permit from the property owner. The Consultant shall notify the Caltrans Contract Manager within 48 hours if permission has been denied.
- b) Caltrans shall provide Permits to Enter for private property access. The Consultant shall notify Caltrans, in writing, sufficiently in advance of its need to enter upon private property or facility to perform work. The Consultant's notice shall specify the date, purpose, duration, location, and the time of day of the Consultant's activities. The Consultant personnel shall carry the Permits to Enter on their person while performing work outside the Caltrans Right-of-Way.
- c) No work shall be performed by the Consultant outside the Caltrans Right-of-Way without Permits to Enter. The Consultant shall comply with all conditions imposed by the Caltrans Contract Manager and requirements set forth in the Permit to Enter. The Consultant shall be responsible for any damages that Consultant did to owner property at Consultant's own expense.
- d) For Agreement work on Caltrans' Right-of-Way, an executed agreement constitutes the Consultant's "Encroachment Permit." The Consultant (as well as any of its subconsultants) shall carry a copy of the fully executed Agreement along with the pertinent Task Order(s) at all times while conducting work for Caltrans within Caltrans' Right-of-Way.
- e) When performing work within Railroad Company property, the Consultant is required to obtain sufficient and/or adequate insurance coverage that shall comply with the Railroad Company's requirements when performing work within their jurisdiction. The Consultant agrees to provide the amount of insurance and types of coverage required by the Railroad Company before commencing work on Task Order, which may be above and beyond that required by Caltrans.

3. Orientation

- a) Caltrans may provide orientation regarding the requirements for this Agreement and each Task Order as deemed necessary by Caltrans. The orientation may consist of a description of Caltrans procedures, practices, and requirements for the specific work to be performed and sharing of project related files and notes. However, if the orientation instructions conflict with the Agreement or Task Order requirements, the Agreement and the executed Task Order shall prevail over any descriptions provided.

- b) Consultant's warranties and indemnities hereunder cover errors and omissions in the Task Order materials or orientation even though they may be related to errors and omissions in preliminary information supplied by Caltrans.

L. CONFLICT OF INTEREST

1. General Requirements

- a) All professional and technical engineering services such as design analysis, studies, deliverables, Task Order deliverables produced by the Consultant shall be free of any conflict of interest and shall be subject to the approval and acceptance of the Caltrans Contract Manager. The Consultant shall inform the Caltrans Contract Manager of any 'perceived' conflict of interest as soon as discovered.
- b) The Consultant and its subconsultants will not be eligible to bid on or otherwise compete for or accept awards for contracts for non-A&E construction or related construction services for projects identified in the RFQ or assigned Task Order(s). If the Consultant or any subconsultants are not assigned specific projects by the expiration of the contract, either may bid or otherwise compete for and enter into contracts for non-A&E construction and related services.
- c) Failure by the Consultant to notify the Caltrans Contract Manager of any conflict of interest is grounds for termination of the Agreement for default pursuant to Exhibit D, Section III, Termination, of the Agreement.
- d) The Consultant, its subconsultants and their subsidiaries are required to disclose in the SOQ and throughout the term of the awarded Agreement any environmental analysis services provided to Caltrans and all Consultant clients which either actually provided or potentially to be provided under that Agreement(s) on the project services listed in this SOW.
- e) In the event of non-acceptance due to discovery of conflict of interest, the Consultant shall provide replacement Task Order deliverables free of any conflict of interest as a prerequisite for receipt of payment and at no additional cost to Caltrans. In the event the Consultant is unable to provide replacement Task Order deliverables, the Consultant shall not receive compensation for the Task Order deliverables containing the conflict of interest. If work is later determined to contain a conflict of interest, either the Consultant shall reimburse Caltrans for any amount paid for the conflicted work or Caltrans may deduct that payment from any current or future amounts owed to the Consultant.

2. Project Related

- a) The Consultant, its subconsultants and their subsidiaries are required to disclose in the SOQ and throughout the term of the awarded Agreement any environmental analysis services provided to Caltrans and all Consultant clients which either actually provided or potentially will provide under that agreement(s) on the project services listed in this SOW.

3. Personnel Related

- a) Former Caltrans employees, including former retired annuitants, designated in a Conflict-of-Interest Code are subject to post employment restrictions under Government Code Section 87406. Information regarding post-employment ban as stated in Government Codes is found at the California Fair Political Practices Commission website: <http://www.fppc.ca.gov/>.

4. Financial or Business Relationship

- a) Consultants shall disclose in the SOQ having financial, business, or other relationship with the publishing firms that may have an impact upon the outcome of the products deliverables listed herein.

5. Relationship with other Transportation or Regulatory Agencies

- a) Consultants working with regulatory agencies and other stakeholders that support the SER and other related environmental guidance documents shall disclose work performed in the SOQ.
- b) Throughout the terms of the Agreement, the Consultant and its subconsultants shall disclose and briefly describe any financial, business or other relationship with Caltrans, governmental agencies (e.g. California Transportation Commission - CTC, Bay Area Toll Authority - BATA, Metropolitan Transportation Commission - MTC, and other) that relates to or concerns Caltrans (e.g. San Francisco Bay Bridge corridor, and other) agreements and projects which may have a potential conflict of interest with the Agreement.

6. Subsequent Contract for Later Phase of Same Project

- a) Consultant that performs on one phase of a project and seeks to enter into a subsequent contract for a later phase of the same project, is prohibited to assist Caltrans in duties and services related to engaging in or advising, preparation of a request for proposals, request for qualifications, or any other solicitation regarding subsequent or additional contract.
- b) For purposes of the item (6. a.) above, the Consultant is not considered as “engaging in or advising on the making of the subsequent contract” by participating in the planning, discussions, or drawing of plans or specifications during an initial stage

of a project if that participation is limited to conceptual, preliminary, or initial plans, reports or specifications and all bidders or proposers for the subsequent contract have access to the same information, including all conceptual, preliminary, or initial plans, reports or specifications.

- c) Caltrans shall at all times retain responsibility for public contracting, including with respect to any subsequent phase of this project. Consultant's participation in the planning, discussions, or drawing of project plans, reports or specifications shall be limited to conceptual, preliminary, or initial plans, reports or specifications. Consultant shall cooperate with the Caltrans to ensure that all bidders for a subsequent contract solicitation on any subsequent phase of the project listed herein have access to the same information, including all conceptual, preliminary, or initial plans, reports or specifications prepared by this Agreement.

7. Conflict of Interest Examples

- a) Perspective consultants having financial, business, or other relationships with the transportation partners that may have an undue advantage of obtaining policy and guidance prior to the release to the general public which may impact transportation decisions and project alternatives. Prospective consultants shall also list current clients who may have a financial interest in the outcome of the Agreement.
- b) Providing design services for Caltrans and construction inspection services for the construction contractor on the same project.
- c) Bid and accept award for non-A&E construction contract on the same project that provided design services for.

The above list of potential conflict of interest scenarios is only a sample of types of conflicts of interest for the services provided under the Agreement but is not an exclusive list of potential conflicts.

M. SPECIFIC SUPPORT SERVICES ATTACHMENT

Attachment 1A – Roadway Design & Project Development Services**SCOPE OF WORK/DELIVERABLES
ROADWAY DESIGN & RELATED PROJECT DEVELOPMENT and
CONSTRUCTION DESIGN SUPPORT SERVICES**

**For Caltrans, District 10, Division of Project Development
On-Call Contract**

A. Purpose of Work.**1. Project Design Engineering Studies, Project Report and PS&E Contract Documents**

- a) The Consultant shall provide consultation, research, and professional and technical engineering services necessary for roadway design and related project development activities on the State Highway System (SHS), including maintenance facilities. The Consultant will support and assist in initiating various engineering studies and analyses required for project development and the preparation of Plans, Specifications, and Estimates (PS&E). This work will be performed in coordination with Caltrans subject matter experts and the Caltrans Project Development Team (PDT), and will include the initiation of engineering studies and reports as identified in the Exclusion of Work section of the base Scope of Work.
- b) The Consultant shall assist the District in meeting its project delivery commitments. This work will include the development of Project Reports and the preparation of PS&E contract documents that are ready for listing, incorporating all approved environmental commitments. Project development efforts shall place a strong emphasis on supporting California State Highway "Main Street" investments that enhance multimodal travel options and promote livable, sustainable community development.
- c) The Consultant shall adhere to Caltrans' uniform policies and procedures in performing project development and design functions. These policies and procedures are intended to guide the application of fundamental engineering techniques and aid in resolving engineering-related issues. Additionally, the Consultant shall incorporate relevant elements of project development, including Hydraulics Engineering Services – Attachment 1B, Electrical Design Services – Attachment 1C, Traffic Design Services – Attachment 1D, and Landscape Architecture Design Services- Attachment 1E Services.
- d) The Consultant shall prepare project plans that clearly and accurately depict the design intent, construction requirements, and right of way needs for transportation

projects. Project plans shall serve as the primary communication tool between designers, reviewers, and contractors, and must be developed in accordance with Caltrans standards, guidelines, and accepted engineering practices to ensure its biddable, constructable, has clarity, and consistency.

2. Providing Construction Design Support

Consultant shall be capable of providing design support services throughout the construction phase. Consultant shall review the construction Resident Engineer's request to review contractor's Request for Information or design change by performing independent modeling, analysis, and engineering studies during construction.

B. Required Services – Project Development, Engineering Studies and Project Report

1. General Services

- a. Potential work activities, whether comprising all or part of a project, may vary in scope and size and may involve any type of improvement to the State transportation system. These improvements may include, but are not limited to, roadway rehabilitation, facility widening and/or realignment, relocation of existing facilities, and the construction of new infrastructure. Each Task Order will define the specific project location, project limits, purpose, expected outcomes, deliverables, period of performance, project schedule, and detailed scope of work to be performed.
- b. The Consultant shall review all information compiled during the Project Initiation Document (PID) phase, as well as assess any preliminary data gaps that may need to be addressed during the development of the Project Report (PR) and associated environmental constraints. Using available data and in accordance with Caltrans policies and directives, the Consultant shall conduct analyses to define and address the project's need, purpose, and general project development scope. For highway projects, this may include assessments of existing and projected transportation needs such as Vehicle Miles Traveled (VMT), Level of Service (LOS) evaluations for build versus no-build scenarios, corridor analyses to determine traffic volumes, multimodal opportunities, required lane configurations, and reviews of traffic safety data and accident histories.
- c. The Consultant shall participate in informal consultations with the Caltrans PDT and appropriate federal and state regulatory agencies to support the development of the PR and PS&E contract documents. Project development and design should be based on consultation and input from Caltrans PDT subject matter experts and not be developed in a vacuum. Such consultations may also be necessary to identify mitigation measures for unavoidable transportation project impacts, based on engineering studies and analysis, and to develop corresponding design implementation strategies. The Consultant shall document all measures agreed upon by the Caltrans PDT, along with

supporting assessments and decisions, for inclusion in relevant project reports, project design and PS&E contract deliverables.

- d. The Consultant shall not engage in negotiations or make decisions on behalf of Caltrans. Caltrans shall retain full responsibility for initiating and managing all final consultations both informal and formal with other consultants, contractors, and local, state, and federal resource and regulatory agencies, as well as any other involved entities, particularly regarding regulatory or programmatic consultation matters.

2. Liaison with Railroad Companies

- a. The Caltrans Headquarters Division of Engineering Services-Structure Design performs the direct liaison work with the various railroad companies. The Caltrans District railroad liaison helps coordinate this work, but the majority of the work and ultimate approval comes from Structure Design. Consultant shall be available to provide any supporting mapping and reports for this liaison with the Railroad companies.
- b. Railroad/Utility Agreements
Consultant is responsible to collaborate and provide the Caltrans District Division of Right-of-Way Railroad (RR) Coordinator with approximate geometric maps, profiles, and cross sections for the purpose of determining railroad involvement and for use in subsequent negotiations, as necessary. Refer to [Project Development Procedures Manual \(PDPM\)](#), Chapter 3 – Involvement of Caltrans Functional Units, Section 3 “Surveys” and Section 8 “Structure Design.” at: <https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm>

3. Main Street, California

- a. Consultant shall incorporate [Main Street, California](#) as a guide for fostering people-centered State Highway Main Streets (“Main Street”), which highlights the special importance of State Highways that are functioning as community main streets. “People-centered” main streets are those that are sustained in ways that elevate the needs of people who use main street. They are fostered with an understanding that supporting travel of all modes is essential, and that main streets are also community places that people value. People-centered main streets improve multimodal access, equity, economic prosperity, and environmental quality through partnerships and engagement.
- b. The Consultant shall incorporate into the project planning process considerations related to the design, maintenance, and operation of main streets and their impacts on travelers, communities, and the environment. This document addresses all three of these focus areas. Strategic planning and design to ensure mobility for all users including implementation of Complete Streets concepts are covered under the theme of “multimodal travel.” Approaches to creating main streets that support both

communities and environmental goals are explored under the themes of “livability” and “sustainability.”

- c. Consultants design and development of state highway main streets must support both local circulation needs and regional or statewide travel demands. Planning and designing these corridors using principles of multimodal travel, livability, and sustainability requires collaboration with stakeholders to ensure that mobility and access needs are met. Consultant shall implement these strategies to enhance Main Street's value and functionality as a community asset.

4. Project Scope Review

- a. Consultant shall review the available Project Initiation Report including Project Scope planning documents, analyze the available information and department policies and directives to identify resolve the project's need and purpose and general scope. For highway projects, this would include determining the existing and future transportation needs and to include but not limited to: VMT, LOS for evaluation of build to no build scenario, a corridor analysis to determine deliverable volumes, multimodal opportunities, determining the general perimeters such as the required number of lanes, and analyzing traffic accident history.
- b. Consultant shall review and give considerations to planning documents such as Transportation Planning Scoping Information Sheet (TPSIS), Transportation Corridor Report (TCR), Regional Transportation Improvement Program, and Regional Transportation Plans (RTP).
- c. Projects may vary in scope and size and may encompass any type of improvement for the State transportation system including, but not limited to, roadway rehabilitation, widening, culvert replacement, safety improvements, and/or construction of new roadway facilities such as roundabouts. The project location, project limits, purpose, expected results, project deliverables, period of performance, project schedule, and scope of work to be performed shall be described in each Task Order.
- d. The Consultant shall identify project constraints and gather the information necessary to assess the extent of existing issues and anticipated future needs. This process shall include coordination and discussions with both internal and external stakeholders, as appropriate. For State highways located within community settings, the Consultant shall recognize and account for the unique characteristics, values, and contextual features of those communities. The Consultant shall actively engage with stakeholders to ensure these considerations are reflected in the development of project alternatives.

5. Requesting for Engineering Studies, Reports, and Data from others for Project Development

The Consultant shall identify, request, coordinate, and manage the receipt of all necessary Caltrans generated, or generated by others for Caltrans, design data, reports, and specialized engineering products required for the development of the roadway Project Report and PS&E package. The actual performance of specialized services such as those listed below, will be executed by Caltrans, or others, and not the Consultant under this Agreement. The Consultant shall review project requirements to determine all necessary supporting data, reports, and products needed for the roadway design PR and PS&E development. This includes, but is not limited to:

a. Surveys and Right-of-Way (R/W) Engineering Requests

- i. Due to long lead times, survey needs shall be evaluated and identified early during the project initiation phase and revisited throughout the project development process as necessary. Depending on project complexity and specific circumstances, the Consultant shall collaborate with the Caltrans Division of Surveys to determine the need for compilation and delivery of existing survey, boundary, and monumentation information.
- ii. Following the initial evaluation of survey needs, the Consultant Project Engineer shall submit the initial survey request, accompanied by a strip map. The scope and extent of the survey will be determined based on the project type, availability of existing information, sensitivity of the area of potential effect, and the number of viable project alternatives.
- iii. The Consultant shall collaborate with the Caltrans District Division of Surveys to assess R/W requirements, obtain public records, and prepare or update right of way cost estimates and cost estimate maps. Survey or right of way engineering products will generally be required during the project's PS&E phase. During this phase, the Consultant may also be required to revise R/W acquisition boundaries based on updated project needs.
- iv. During the PS&E phase, the Consultant Project Engineer should have had active coordination with the Caltrans District right-of-way agent for each parcel required for the project. Consultant shall identify the right-of-way needs and completion of the right-of-way parcel map to allow the Caltrans District right-of-way unit to appraise the property, negotiate with the property owner for acquisition, conclude the acquisition by purchase or by starting the condemnation process, and to provide for relocation assistance for the occupants and clearance of the property for construction.

b. Environmental Study Request (ESR) Preparation

- i. The Consultant shall submit an Environmental Study Request (ESR) to Caltrans District Division of Environmental that includes all necessary environmental reviews, design, and right-of-way efforts required to develop and complete the

ESR. This includes the preparation of environmental study maps for alternatives selected for further evaluation. Only those maps not produced under other activities (e.g., WBS 160.10.15) and needed for publication in the Environmental Documents/Determinations and related technical reports shall be included in this task.

ii. Coordination with Caltrans Environmental Division

The Consultant shall collaborate with the Caltrans District Division of Environmental in preparing exhibits, geometric base maps, and functional base plan sheets essential for project development. This coordination shall ensure environmental considerations are fully integrated into project planning and documentation.

iii. Environmental Constraints and Collaboration

Depending on the complexity and context of the project, the Consultant shall coordinate with the Caltrans Division of Environmental to identify the need for and recommend more detailed investigations. The goal of this task is to identify and delineate any environmental resources or constraints and to prepare a base environmental constraints map. This map will support the recommendation process and influence the initial selection of project alternatives.

iv. Noise Study Request

Consultant shall prepare and submit a complete noise study request to Caltrans District Division of Environmental as required for project development. Consultant shall collaborate with district environmental to utilize noise studies performed by others, where applicable for project development.

c. Geotechnical Services Request

Based on Task Order project needs, Consultant shall prepare a signature-ready District Service Request Form for submittal to the Caltrans Office of Geotechnical Design to initiate required geotechnical deliverables in accordance with Caltrans policies, procedures, and project development milestones. These deliverables include, but are not limited to, the District Preliminary Geotechnical Report (DPGR), the Preliminary Geotechnical Design Report (PGDR), and the Geotechnical Design Report (GDR).

- i. The DPGR, typically prepared during the Project Approval and Environmental Documentation (PA&ED) phase if not completed in the Project Initiation Document (PID) phase, shall identify potential geologic and geotechnical conditions, anticipated subsurface profiles, hazards, and constraints affecting project scope, cost, schedule, or feasibility, and provide preliminary recommendations for scoping and future investigations.
- ii. The PGDR, also prepared during the PA&ED phase, shall update and expand upon the DPGR with refined assessments and preliminary design-level recommendations to support environmental clearance and preliminary design.

- iii. The GDR, typically prepared during the Plans, Specifications, and Estimates (PS&E) phase, shall provide final geotechnical design recommendations based on detailed site-specific investigations and engineering analysis, including subsurface profiles, material properties, design parameters, and recommendations for foundations, retaining systems, slopes, seismic design, and construction.
 - iv. The Consultant shall track and document all submittals, communications, and approvals with the Office of Geotechnical Design, ensure all requests align with the project schedule, incorporate geotechnical findings into the PS&E package, and coordinate with Caltrans for review, comment resolution, and formal approval of all draft and final reports.
- d. Bridge Site Data Submittal and Structures Coordination
- i. Consultant shall coordinate with the Caltrans Headquarters Division of Engineering Services (DES) - Structure Design throughout all phases of the project development process involving structures.
 - ii. The Consultant shall prepare and submit a complete Bridge Site Data Submittal (BSDS) package for each structure within the project limits for the Caltrans DES, Office of Structure Design (OSD) or the designated design entity. The BSDS package should include all necessary supporting documentation, including pertinent preliminary data and site information that is essential for the design of a structure. The BSDS package may include, but is not limited to, structure site plans, site geometrics, contour maps, utility locations, profiles, typical cross sections, clearance controls for all project alternatives, and the identification of surface and subsurface obstacles.
 - iii. During the project development process, Consultant shall maintain continuous communication with Caltrans DES OSD. The Consultant shall coordinate with the Caltrans Task Order Manager throughout the process. The Consultant is responsible for ensuring the BSDS package is accurate, complete, and meets the minimum information requirements specified in the [Caltrans OSFP Information and Procedures Guide, Chapter 4](#) and other relevant Caltrans manuals and memos.
- e. Structure Advance Planning Study (APS) Request/Update
- i. The Consultant shall prepare and compile all pertinent project information and documents necessary for Caltrans OSD to develop the Structure APS. Structure APS are prepared by Structure Design and are required for scoping and budget purposes and is used to program all structure project development and construction support, and construction capital costs.

- ii. The Consultant shall submit Structure APS request(s) as needed to develop, as early as possible, a feasible structure, cost, project risk and controls appropriate for the specific site location. When appropriate, the Consultant may elect to submit several requests to compare alternative project concepts.
 - iii. The Consultant shall conduct field assessments and gather all relevant project data during the Project Initiation Document (PID) or Project Approval/Environmental Document (PA/ED) phase to identify project constraints, potential solutions, and information needed for the structure APS. The comprehensive study/studies from the APS are to be included in the PR during the PA&ED phase.
- f. Materials Recommendation Request
- Consultant shall prepare a signature-ready Materials Recommendation Request package to Caltrans District Division of Construction, which shall include, but is not limited to, a Structural Section Recommendation (SSR), Corrosion Study Report, Coring Data, Inertial Profiler results, and Portland Cement Concrete (PCC) mix design.
- i. The SSR shall establish pavement layer thicknesses and material types in accordance with Caltrans standards. The Corrosion Study Report shall evaluate soil and groundwater conditions for corrosivity and identify protective measures as necessary. The Coring Data shall verify existing pavement conditions, layer thicknesses, and material composition.
 - ii. The Inertial Profiler results shall document pavement ride quality and define smoothness acceptance criteria. The PCC mix design shall specify approved material proportions to achieve required strength, durability, and constructability. All deliverables shall serve as the technical basis for Caltrans review and incorporation into the project's PS&E.
- g. Technical Planning Recommendation Request
- Consultant shall prepare and submit a complete Technical Planning Recommendation Request to the Caltrans District Office of Technical Planning Branch for issuance of the Traffic Index (TI), Traffic Forecasting, and Design Designation for the project. The Consultant shall utilize the following for project development and delivery documents as appropriate:
- i. The Traffic Index establishes cumulative traffic loading, expressed in equivalent single axle loads (ESALs), to determine pavement structural section thickness.
 - ii. Traffic Forecasting provides projected traffic volumes, classifications, and growth rates necessary to define design year roadway and interchange conditions.

- iii. The Design Designation identifies the traffic parameters required for geometric and structural design, including, but not limited to, design hourly volume, directional distribution, truck percentage, design speed, and terrain classification.
- iv. These deliverables shall serve as the technical basis for preparation of the project's PS&E in conformance with the Caltrans Highway Design Manual and applicable design standards.

h. Traffic Safety Analysis and Traffic Operations Recommendation Request

Consultant shall prepare and submit a complete Traffic Operations Recommendation Request package which shall include, but not be limited to, a traffic operations analysis and a traffic safety analysis.

- i. The traffic operations analysis evaluate roadway performance under existing and projected conditions to ensure proposed improvements adequately address traffic flow, congestion, delay, and intersection capacity, and provide the technical justification for lane configurations, signal operations, ramp treatments, and related features in accordance with Caltrans standards.
- ii. The traffic safety analysis examine existing and anticipated collision patterns, roadway characteristics, and systemic risk factors to identify potential safety concerns and recommend measures to reduce crash frequency and severity, consistent with the Highway Safety Manual (HSM) and Caltrans safety objectives.
- iii. Consultant shall utilize these analyses to establish the technical basis for Caltrans review and approval of traffic operational strategies and design elements to ensure the project achieves both operational efficiency and safety performance when developing the PR and PS&E package.

i. Right of Way Datasheet Request

The Consultant shall execute roadway design tasks while effectively coordinating with Caltrans' District Division of Right of Way (ROW) to manage all data, Caltrans generated, or generated by others for Caltrans, required for the project's development, PR, and eventual Plans, Specifications, and Estimates (PS&E) submittal. The Consultant is responsible for identifying, requesting, tracking, and integrating all external data and reports needed for the design process including the following:

- i. Consultant shall prepare and submit a Right of Way Datasheet (RWDS) request to Caltrans' District Division of Right of Way with the purpose of identifying and summarizing all anticipated right of way requirements for the project. The datasheet documents the type and extent of property interests needed, including

but not limited to full acquisitions, partial takes, easements, temporary construction permits, and utility relocations. It also identifies potential conflicts with existing property ownership or land uses.

- ii. The R/W Datasheet provides the basis for estimating acquisition costs and schedules and will support coordination among design, environmental, utility, and right of way teams to ensure compliance with applicable Caltrans and FHWA requirements.
- j. Hazardous Waste Initial Site Assessment and Investigations Requests:
The Consultant shall utilize the Initial Site Assessment (ISA) checklist as a guide for project screening and to get an assessment of projects for potential hazardous waste involvement.
 - i. Consultant shall review the PID documents to identify projects that require an ISA for hazardous waste. Projects determined to have any known or potentially hazardous waste within the proposed project limits will require an ISA.
 - ii. Consultant shall collaborate and coordinate with Caltrans District Division of Environmental Hazardous Waste for the performance of the ISA, which will be performed by Caltrans or other Caltrans consultants. ISA will be required for all projects to complete the applicable environmental document.
 - iii. Additionally, for “high risk” sites, as assessed by the hazardous waste technical specialist, it is strongly recommended that a Preliminary Site Investigation (PSI) at least be started during the project development phase. Consultant shall collaborate and coordinate with Caltrans District Division of Environmental Hazardous Waste for the performance of the PSI by others.

6. Performing Engineering Studies for Development of Project Report

- a. Updated Project Information
Consultant shall review of the information assembled and developed during the PID as well as a preliminary assessment of what additional information may be required during the PA&ED phase.
- b. Alternatives Development

Based on the Task Order, Consultant shall identify all potential alternatives and reaching consensus with internal and external stakeholders on the alternatives that will be addressed in the Project Report. This activity includes establishing the study limits of the various alternatives to be analyzed for the Project Report.

c. Engineering Studies and Project Development

- i. Consultant shall perform and conduct preliminary engineering studies used in the development of a draft PR. Work may include survey work and preliminary field studies directly related to the project. The scope of the studies should be sufficient to complete the environmental evaluation of the project and to reach a decision on project approval. This activity includes development in more detail or update of those studies initiated during the PID phase.
- ii. Consultant may be required to perform additional engineering studies required to address new alternatives or revisions developed during the PA&ED phase. Engineering studies will require developing the text, exhibits and cost estimate required for a Draft Project Report. This activity includes development and approval of all design exceptions that were not addressed during the PID.
- iii. Project development shall identify potential risks to the transportation network due to future climate hazards for incorporation into the project needs evaluation and identification.
- iv. Depending on the Task Order scope, Consultant should identify all potential alternatives and reaching consensus with internal, and external stakeholders on the alternatives that will be addressed in the project development. This activity includes establishing the study limits of the various alternatives to be analyzed in the Project Report
- v. Project development shall include basic strategy options to meet the project need and purpose. Including developing horizontal & vertical alignment, cross sections, preliminary staging plans, strip maps, right of way requirements, rehabilitation strategies and reviews by Caltrans PDT for all alternatives under considerations.

d. Design Standard Decision Document (DSDD)

- i. Based on the Task Order complexity, project challenges and as required, Consultant shall prepare and document any exceptions and/or deviations from the Highway Design Manual or Caltrans Design Standards by completing and submitting the DSDD to the Caltrans Task Order Manager for review and comments.
- ii. The Consultant shall identify all proposed nonstandard design features and secure formal written approval for such deviations during the engineering design phases. For any deviation that significantly impacts the project's core concept or cost estimate, the Consultant must submit a detailed DSDD justifying the variance; this approval must be finalized before proceeding to subsequent development stages to ensure project feasibility and cost estimating accuracy.

- iii. Consultant Task Order Manager shall coordinate any deferrals, and ensure they are documented and approved by the appropriate Caltrans approval authority for design deviations consistent with the current Design Delegation Agreement between the Caltrans District Division of Design and the Caltrans District Director
- e. Coordination with Caltrans Division of Environmental
The Consultant shall actively coordinate and collaborate with the Caltrans District Division of Environmental Analysis (DEA) throughout the design process to ensure that all roadway design alternatives are environmentally sound, comply with all regulatory requirements, and align with the commitments made in the project's environmental documentation (e.g., Environmental Study Report, NEPA/CEQA documents).
 - i. The Consultant shall furnish all necessary preliminary design data, plans, and technical information to Caltrans District DEA as required for Caltrans' environmental analysis and studies of roadway alternatives. This includes, but is not limited to:
 - 1) Preliminary plan sheets showing proposed horizontal and vertical alignments.
 - 2) Typical cross-sections and proposed right-of-way limits.
 - 3) Details of temporary construction areas, access roads, and staging areas.
 - 4) Locations of proposed drainage features and potential impact areas.
 - 5) Information on potential noise or air quality impacts resulting from design choices.
 - ii. The Consultant shall participate in project initial scoping meetings with Caltrans District DEA staff to define the limits of environmental documentation, identify key environmental constraints, and establish clear communication protocols.
 - iii. The Consultant shall work closely with Caltrans District DEA to develop and refine environmentally preferred alternatives. The Consultant is responsible for adjusting design alternatives based on environmental feedback, minimizing or avoiding impacts to sensitive resources (e.g., wetlands, habitats, historic properties), and incorporating approved mitigation measures into the design plans.
 - iv. The Consultant shall support the Caltrans District DEA during consultation and permitting with external regulatory agencies (e.g., U.S. Army Corps of Engineers, Regional Water Quality Control Board, Caltrans Division of Water Resources, Fish and Wildlife Service). The Consultant's role is generally supporting Caltrans District DEA, and Caltrans District DEA holds the primary responsibility for agency coordination.

f. Preliminary Utility Verification

The Consultant shall perform preliminary utility investigations in accordance with Caltrans' Chapter 17 of the PDPM. The primary objective of this task is to gather, verify, and document existing utility information to support the development of the Project Report and facilitate subsequent design phases. The following key tasks include:

i. Utility Record Search and Cataloging:

Obtaining, reviewing, and electronically cataloging permit available utility records from as-builts, , conducting field reviews to confirm and supplement utility data, and preparing utility summary spreadsheets and verification maps for Caltrans review.

ii. Data Integration, Basemap Development and Utility Conflict Plans

Existing utility data and information shall be verified and incorporated into the project basemap (CAD file). Consultant shall also compile and organize utility plat maps and utility owner data, identify potential physical conflicts with proposed improvements, note non-compliance with Caltrans' Chapter 17 Encroachments and Utilities Policy, and develop preliminary conflict plans.

g. Stormwater Data Report

Consultant shall evaluate the project scope and site conditions to determine the need for and feasibility of incorporating stormwater Best Management Practices (BMPs) into projects within the Caltrans right-of-way. Consultant shall utilize the Caltrans Stormwater Quality Handbooks: Project Planning and Design Guide which provides design guidance for selecting and designing permanent stormwater quality best management practices (BMPs) during the planning and design phase of a project.

i. Consultant shall prepare Stormwater Data Reports (SWDR) at all required project phases in accordance with Caltrans procedures. Depending on project scope and potential stormwater impacts, the Consultant shall utilize the appropriate SWDR form:

- 1) Micro SWDRs for projects without stormwater impacts, PID SWDRs (Interim PID SWDRs) for use at the PID phase in lieu of Long or Short Forms,
- 2) Long Form SWDRs at the PA&ED and PS&E phases for projects requiring treatment BMPs, with potential water quality impacts, or seeking Compliance Unit credits, and
- 3) Short Form SWDRs at the PA&ED and PS&E phases for projects not meeting Long Form criteria.
- 4) Where a PID SWDR is not utilized, the applicable Long or Short Form SWDR shall also be prepared at the PID phase. See link for additional

information regarding SWDRs requirements:
<https://dot.ca.gov/programs/design/hydraulics-stormwater>

- ii. The SWDR shall document stormwater quality issues and design decisions made regarding project compliance with State permits. Consultant shall document the process up to initiating drainage and stormwater design as described in the [Stormwater Quality Handbooks, Project Planning and Design Guide \(PPDG\) – Appendix D](#).
- h. Public and Local Agency Input

Consultant shall collaborate with Caltrans Environmental to incorporate where applicable the public and local agency input as a critical component of the transportation project development process, ensuring that projects are responsive to community needs, environmentally responsible, and legally compliant.

 - i. Consultants early and continuous engagement will provide opportunities for the public, local governments, and other stakeholders to contribute in defining the project's purpose and need, identifying potential alternatives, and evaluating environmental and community impacts.
 - ii. Public input is typically gathered through notices, scoping meetings, workshops, and public hearings, while coordination with local agencies helps integrate land use plans, transportation priorities, and resource management considerations.
- i. Circulation, Review & Approval

The Consultant will be responsible for managing the circulation, review, and revisions, of all roadway design deliverables, including PS&E, as well as supporting technical documents.

 - i. This will include preparing draft submittals for internal quality control, coordinating with the Caltrans Task Order Manager and agency staff to distribute materials for interdisciplinary review, and responding to comments from Caltrans PDT, local agencies, utility providers, and other stakeholders.
 - ii. Consultant shall revise and resubmit documents as needed to address all review feedback, maintain version control of submittals, and ensure compliance with applicable standards, guidelines, and project requirements. Final deliverables will be submitted for formal approval in accordance with the project schedule and agency protocols.
- j. Construction Estimates

Consultant shall prepare detailed construction cost estimates for all transportation project alternatives under consideration. This will include developing itemized quantities and unit costs for roadway, drainage, structures, traffic control, and other

related work elements based on preliminary designs, applicable standards, and industry bid history.

- i. The Consultant will ensure that estimates reflect current market conditions, incorporate appropriate contingencies, and account for variations in scope between alternatives to support accurate cost comparisons during project alternative evaluation.
- ii. Each alternative estimates will be prepared in a format consistent with Caltrans requirements and will be updated as design refinements occur to ensure that decision-makers have reliable cost information for selecting a preferred alternative.

7. Performing Specific Engineering Studies for Project Report

Attachment(s) 1B, 1C, 1D, and 1E to this Agreement identify the specific engineering studies for this Agreement.

C. Required Services – Prepare PS&E for RTL

1. Update Engineering Studies for PS&E

- a. Consultant shall ensure that each project has a documented review and update of the project's engineering studies including scope, cost, and schedule, which is not more than one year old, included in the project's permanent project history file.
- b. Consultant shall develop project design while requiring the continuous review and update of data. Examples of information that should be obtained for the development of preliminary plans are listed as follows: Mapping and Surveys Data, Materials Report, Drainage Report, Traffic Data.
- c. Additional engineering studies, and reports may need updating including requests to others but not limited to the following items:
 - i. Value Analysis Request for projects over \$25M total cost
 - ii. Bridge Site Submittal Request to Caltrans DES Office of Structures Design
 - iii. Design Standard Decision Document Review Request/Update
 - iv. Request for Right of Way Engineering Transmittal
 - v. Request for Hazardous Waste Certification
 - vi. Request for Traffic Management Plan (TMP)
 - vii. Perform Safety Review
 - viii. Perform Estimate Certification Request
 - ix. Request for Right of Way Certification

2. PS&E development

The Consultant shall provide professional engineering services necessary to develop the PS&E package, incorporating prior environmental approvals, technical studies, design decisions, and project development documents. The required services includes roadway design, supported by technical reports, coordination with utilities and right of way, and preparation of construction documents. Consultant shall develop PS&E involving the preparation of geometric base maps and functional base plan sheets, including review of existing project information, gathering appropriate mapping, and conducting additional studies identified herein as required:

a. Project Task Management and Collaboration

- i. Consultant shall provide overall project task management, quality assurance/quality control (QA/QC), and coordination with Caltrans PDT, and other stakeholders.
- ii. Attend PDT meetings, milestone reviews, and design coordination workshops.
- iii. Maintain a project schedule, action item log, and decision tracking matrix.
- iv. Consultant shall maintain the Task Order scope, cost, and schedule.
- v. The Consultant shall have a good working knowledge of computer graphic programs that shall produce high level graphic/photo-realistic simulations and the ability to produces professionally formatted reports, studies and contract documents.

b. Geometric Review, Base Mapping and Data Updates

- i. Task Orders may include work related to the development of horizontal and vertical alignments, cross sections, typical sections, and construction staging or detour alignments.
- ii. Geometric design features shall be thoroughly analyzed. Any deviations from established Caltrans design standards must receive formal approval from the Caltrans PDT. All such deviations and justifications shall be documented for inclusion in the Project Report and PS&E contract documents.
- iii. Incorporate survey data, aerial mapping, utility records, and right-of-way information into base plans.
- iv. Update storm water data reports, and other project information required for PS&E development.

c. Roadway and Drainage Design

- i. Prepare roadway plans including title sheet, typical cross-sections, plan & profile sheets, grading, and construction details.
- ii. Develop drainage design, hydrology/hydraulics reports, and drainage plans.

- iii. Provide pavement design report and recommendations.
- d. Request Traffic Support - Traffic Handling Plans
 - i. Consultant shall collaborate with the Caltrans Division of Traffic to indicate the need and advise for more detailed traffic studies and safety investigations.
 - ii. Develop traffic handling plans (staging, detours, construction area signs).
 - iii. Prepare signing and striping plans, traffic signal/electrical plans, and pavement delineation details.
 - iv. Incorporate Transportation Management Plan (TMP) requirements, if applicable.
- e. Utilities and Right of Way Coordination
 - i. Identify utility conflicts and prepare relocation plans as applicable.
 - ii. Develop utility conflict maps and incorporate relocation requirements into PS&E.
 - iii. Support right of way engineering by providing requirements, maps, and exhibits.
 - iv. Consultant shall abide by the Encroachment and Utility policies in Caltrans' Chapter 17 of the PDPM.
 - v. Consultant shall identify utility needs, inspecting facilities, and preparing utility estimate for inclusion in the Right of Way Data Sheets. Task includes updated Utility Estimates, Utility Verification Maps, Verified Utility Locations transfer to plan sheet,
 - vi. Consultant shall coordinate with Caltrans District Division of Right of Way for request for Pothole (Pos Loc) for high risk utilities including Pothole plan, Notice to Owner to Pothole, Report of Investigation to Pothole, for all high risk utilities.
 - vii. Encroachment Permit Considerations
 - viii. During the project development process, Consultant will require close coordination between the Caltrans project manager, and Caltrans District representatives of the right-of-way engineering unit and their determination project schedules and cost estimates, and to assure the acquisition of all necessary property rights.
- f. Caltrans Encroachment and Utility Policy

- i. All projects must conform to Caltrans' Encroachment and Utility Policies in Chapter 17 of the Project Development Procedures Manual (PDPM).
 - ii. Encroachments and Utilities Policy exceptions must be approved through the exception process.
- g. Specifications and Estimates
 - i. Prepare special provisions in accordance with Caltrans Standard Specifications and regulatory permit requirements as applicable.
 - ii. Prepare engineer's estimate of probable construction cost (quantities, unit prices, and summaries).
 - iii. Ensure consistency between plans, specifications, and estimates.
- h. Regulatory Agency Coordination

The Consultant shall not negotiate or make decisions in Caltrans' name. Caltrans shall retain responsibility for initiating and managing all final consultation, both informal and formal, with other consultants; other contractors; Federal, State, and Local resource and regulatory agencies; and other involved agencies, regarding regulatory, project, project impacts, project mitigation proposals, project mitigation, project compensation, project proposals, and any issues.
- i. Caltrans District Office Engineer

The Caltrans district office engineer unit is responsible for combining the structure PS&E package with the district PS&E package so as to have one combined PS&E package.

 - i. Consultant will coordinate with the Caltrans district office engineer unit who is responsible for notifying the Caltrans Headquarters Division of Engineering Services-Structure Design two weeks prior to submitting a combined PS&E to Caltrans Headquarters Division of Engineering Services-Office Engineer.
 - ii. For all Caltrans projects, except for Minor B projects, Headquarters Division of Engineering Services-Office Engineer will require the Consultant to submit a Ready to List (RTL) submittal for advertisement date after determination that the contract documents have been prepared complete and accurate as to all engineering requirements (PS&E ready) and legal requirements including all constraints cleared.
- j. Submittals and Review Milestones

Unless otherwise established in the Task Order, as a minimum, Consultant shall submit PS&E packages for review at the following milestones:

- i. 30% Design (During PA&ED phase) – roadway geometrics, drainage concepts, traffic staging approach.
- ii. 60% Design (Draft PS&E) – complete draft plans, specifications, and engineer's estimate.
- iii. 95% Design (Pre-Final PS&E) – revised package addressing review comments, suitable for final review.
- iv. 100% Design (Final PS&E / Ready-to-List package) – final stamped and signed plans, specifications, and cost estimate, ready for contract advertisement.

3. Constructability Review

- a. The purpose of this task is to provide an independent constructability review of the roadway design plans, specifications, and estimates (PS&E) to ensure that the project can be constructed efficiently, safely, and cost-effectively. The Consultant will evaluate the completeness, clarity, and feasibility of the design from a contractor's perspective and provide recommendations to minimize construction risks, reduce potential change orders, and improve project delivery.
- b. The Consultant shall perform a comprehensive constructability review of the roadway design package, including but not limited to plans, specifications, cost estimates, and supporting technical reports. The review will focus on identifying design issues that may impact construction sequencing, schedule, cost, or quality. All reviews shall be performed in accordance with Caltrans policies, procedures, standards, manuals, and guidelines.
- c. Schedule:
Constructibility reviews shall be performed at key design milestones, including:
 - i. 30% Design (Preliminary Plans at PA&ED phase) – Focus on staging concepts, geometrics, and major design elements.
 - ii. 60% Design (Draft PS&E) – Comprehensive review of plans, specifications, and estimate.
 - iii. 95% Design (Pre-Final PS&E) – Verification that prior comments have been addressed and that the package is ready for bid.
- d. Review of Plans
 - i. Examine roadway, drainage, traffic handling, staging, and utility relocation plans for internal consistency and accuracy.

- ii. Assess whether the plans clearly communicate design intent and can be efficiently interpreted by a construction contractor.
 - iii. Verify that details (profiles, cross sections, staging, grading, drainage, and typical sections) are constructible and coordinated.
- e. Review of Specifications
 - i. Evaluate the draft specifications for clarity, completeness, and alignment with Caltrans Standard Specifications and special provisions.
 - ii. Identify areas where specifications may be conflicting, ambiguous, or unnecessarily restrictive.
 - iii. Recommend revisions that improve bid competitiveness and minimize disputes during construction.
- f. Review of Quantities and Estimates
 - i. Verify that the quantities and cost estimates are consistent with the plans and specifications.
 - ii. Identify potential areas of over- or under-estimation that may impact bid accuracy or project budgeting.
- g. Identification of Construction Risks
 - i. Evaluate potential construction risks, such as staging conflicts, traffic handling challenges, site access limitations, utility conflicts, or schedule constraints.
 - ii. Recommend alternative details or approaches that may reduce risks, improve safety, or expedite construction.
- h. Coordination with Caltrans Project Development Team
 - i. Conduct review meetings with the Caltrans PDT to discuss findings and recommendations.
 - ii. Document all constructibility comments in a structured comment log (Excel or database format), including reference sheet, issue description, and recommended resolution.
 - iii. Participate in follow-up discussions to ensure comments are addressed and resolved prior to final PS&E submittal.

4. Resident Engineer Pending File

After the transportation project is advertised and awarded, the project is ready for construction. The Consultant project engineer is responsible for furnishing the resident

engineer (RE) Pending File consisting of any pertinent project data required to administer the construction contract. The information is compiled in a RE Pending File and appropriate items to be placed within said file:

- a. The Consultant will support the Caltrans District Resident Engineer (RE) in preparing and compiling all items required for the RE Pending File, which serves as the official record for construction oversight and contract administration. This effort shall ensure the RE has complete, accurate, and accessible project documentation at the start of construction.
- b. The Consultant's responsibilities include delivering construction staking data, control surveys, and supporting technical reports such as drainage, pavement, geotechnical, and materials handouts.
- c. Consultant will provide right-of-way certification documents, utility relocation plans, conflict maps, and associated agreements. In addition, the consultant will finalize the engineer's estimate, prepare project-specific special provisions, and compile environmental commitments and other preconstruction documentation for the RE's pending file.
- d. All items will be delivered in accordance with Caltrans standards, the Project Development Procedures Manual, and district-specific guidance. Draft RE Pending File documents will be provided with the 95% PS&E milestone, with final versions included in the 100% Ready-to-List package. Deliverables will be organized in both hard copy and digital formats to support efficient project administration.

D. Required Services – Design Support During Construction

1. On almost all construction projects, developments in the field will necessitate some design changes. For early resolution of these changes, it is essential that there be timely and effective coordination between the Caltrans resident engineer, the Caltrans project manager, the Caltrans Task Order Manager, and other district personnel that have a direct interest in the project.
2. Caltrans' policy is to allow only those changes that are required to complete the work as contemplated at the time the plans and specifications were approved. Proposed deviations from design standards must be approved following the procedures in Chapter 21 – Design Standard Decisions.
 - a. If set forth in an authorized Task Order, the Consultant shall assist Caltrans, Division of Design, District Program, in reviewing the construction contractor's Request for Information by performing independent modeling, analysis, and engineering studies during construction.
 - b. The Consultant shall assist Caltrans, Division of Design, District Program, in reviews and approvals of all submittals from the construction contractor in a

timely manner. The most current Caltrans Standard Specifications allow a minimum six (6) weeks of review time for Caltrans.

- c. Where directed in a Task Order, the Consultant shall perform the following tasks:
 - i. Review all available existing documents (As-Built Plans, reports, and others).
 - ii. Determine member material properties and unit weight.
 - iii. Prepare complete PS&E construction contract packages in both English and Metric units for a construction contract (or contracts) as directed by the executed Task Orders.
 - iv. Consultant shall electronically prepare impacted plan sheets using the Caltrans Division of Design's format. As-built record drawings shall be utilized to the maximum extent possible.

E. Required Services - Work Breakdown Structure Activities

1. Caltrans Workplan Standards Guide

- a. Task Orders are based on the Caltrans Workplan Standards Guide (WSG). The latest WSG is found in the Guide to Project Delivery Workplan Standards Guide, which is available from the Caltrans' Publication Unit and on the Internet at https://dot.ca.gov/-/media/dot-media/programs/project-management/documents/workplan_standards_guide_all1y1.pdf.
- b. The WSG references the Work Breakdown Structure (WBS) categories, which are potential and related work activities applicable to this Agreement.
- c. The WGS references WBS categories which present the potential and related work activities that the Consultant may be required to perform. All revisions to the current version of the WBS shall apply during the life of this Agreement.

2. Work Breakdown Structure

- a. The following WBS activities are applicable to the work described in the Scope of Work for this Agreement, which is comprised of the base scope of template, Attachment 1, and Roadway Design & Project Development Services, Attachment 1A:

<u>WBS Code</u>	<u>WBS Title</u>
160	Perform Preliminary Engineering Studies and Draft Project Report
160.05	Updated Project Information

160.05.05	Approved PID Review
160.05.10	Geotechnical Information Review (See Note 1)
160.05.15	Materials Information Review (See Note 1)
160.05.20	Traffic Data and Forecasts Review (See Note 1)
160.05.25	Geometrics Review
160.05.30	Project Scope Review
160.05.35	Project Cost Estimate Review
160.05.99	Other Updated Project Information Products
160.10	Engineering Studies
160.10.10	Traffic Forecasts/Modeling (See Note 1)
160.10.15	Geometric Plans for Project Alternatives
160.10.20	Value Analysis (See Note 1)
160.10.25	Hydraulics/Hydrology Studies
160.10.30	Highway Planting Design Concepts
160.10.35	Traffic Operational Analysis (See Note 1)
160.10.40	Updated Right of Way Data Sheet (See Note 1)
160.10.45	Utility Locations Determined for Preliminary Engineering
160.10.50	Railroad Study (See Note 1)
160.10.55	Multi-modal Study (See Note 1)
160.10.60	Park and Ride Study (See Note 1)
160.10.65	Right of Way Relinquishment and Vacation Study (See Note 1)
160.10.70	Traffic Studies (See Note 1)
160.10.75	Updated Materials Information (See Note 1)
160.10.80	Updated Geotechnical Information (See Note 1)
160.10.85	Structures Advance Planning Study (APS) (See Note 2)
160.10.90	High Occupancy Vehicle Report (See Note 1)
160.10.95	Updated Preliminary Transportation Management Plan (See Note 1)
160.10.99	Other Engineering Studies
160.15	Draft Project Report
160.15.05	Cost Estimates for Alternatives
160.15.10	Fact Sheet for Exceptions to Design Standards
160.15.15	Approved Exceptions to Encroachment Policy
160.15.20	Draft Project Report
160.15.25	Draft Project Report Circulation Review and Approval
160.15.99	Other Draft Project Report Products
160.20	Engineering and Land Net Surveys (See Note 1)
160.20.25	Existing Records (See Note 1)
160.20.30	Land Net Surveys (See Note 1)
160.20.35	Land Net Map (See Note 1)
160.20.40	Right of Way Engineering Products (See Note 1)
160.20.50	Control Surveys (See Note 1)
160.20.55	Aerial Surveys- Aerial LiDAR, Photogrammetric Maps and Products (See Note 1)
160.20.60	Engineering Surveys (See Note 1)

160.20.65	As-Built Centerline Surveys (See Note 1)
160.20.70	Pavement Surveys (See Note 1)
160.30	Environmental Study Request (ESR)
160.30.05	Maps for ESR
160.30.10	Surveys and Mapping for Environmental Studies
160.30.15	Property Access Rights for Environmental/Engineering Studies
160.40	NEPA Assignment (See Note 1)
160.45	Base Maps and Plan Sheets for PA&ED Development
165	Perform Environmental Studies and Prepare Draft Environmental Document (See Note 1)
165.05	Environmental Scoping of Alternatives Identified for Studies in the PID (See Note 1)
165.05.05	Project Information Review (See Note 1)
165.05.10	Public and Agency Scoping Process (See Note 1)
165.05.15	Alternatives for Further Study (See Note 1)
165.10	General Environmental Studies (See Note 1)
165.10.20	Visual Impact Assessment and Scenic Resource Evaluation (See Note 1)
165.10.35	Water Quality Studies (See Note 1)
165.10.45	Summary of Geotechnical Report (See Note 1)
165.10.60	Location Hydraulic and Floodplain Study Report
165.15.15	Resource Agency Permit Related Coordination (See Note 1)
165.20.05.20	Field Survey (See Note 1)
165.20.15.25	Phase II Report (See Note 1)
165.20.20.05	Preliminary Area Of Potential Effects/Study Area Maps for Architecture (See Note 1)
165.20.25.05	Final Area Of Potential Effects/Study Area Maps (See Note 1)
170	Obtain Permits, Licenses, Agreements and Certifications (PLACs) and Route Adoptions during PA&ED Component (See Note 1)
170.05	Required PLACs (See Note 1)
170.10	PLACs (See Note 1)
170.10.05	U.S. Army Corps of Engineers Permit (404/10) (See Note 1)
170.10.10	U.S. Forest Service PLACs (See Note 1)
170.10.15	U.S. Coast Guard PLACs (See Note 1)
170.10.20	Department of Fish and Wildlife 1600 Agreement(s)/2080.1/2081 Permit(s) (See Note 1)
170.10.25	Coastal Development Permit (See Note 1)
170.10.30	Local Agency Concurrence/PLACs (See Note 1)
170.10.40	Waste Discharge (NPDES) Permit(s) (See Note 1)
170.10.45	U.S. Fish and Wildlife Service/National Marine Fisheries Service Approval (See Note 1)
170.10.50	Regional Water Quality Control Board 401 Permit (See Note 1)
170.10.95	Other PLACs (See Note 1)
170.15	Railroad Agreements (See Note 1)
170.15.25	PUC Exhibits and Application (See Note 1)

170.15.99	Other Railroad Agreement Products (See Note 1)
170.20	Freeway Agreements (See Note 1)
170.20.05	Draft Freeway Agreement (See Note 1)
170.20.10	Draft Freeway Agreement Review (See Note 1)
170.20.15	Final Freeway Agreement (See Note 1)
170.20.20	Executed Freeway Agreement (See Note 1)
170.20.99	Other Freeway Agreement Products (See Note 1)
170.25	Agreement for Material Sites (See Note 1)
170.30	Executed Maintenance Agreement (See Note 1)
170.40	Route Adoptions (See Note 1)
175	Circulate Draft Environmental Document and Select Preferred Project Alternative (See Note 1)
175.05	DED Circulation (See Note 1)
175.05.99	Other DED Circulation Products (See Note 1)
175.10	Public Hearing (See Note 1)
175.10.05	Need for Public Hearing Determination (See Note 1)
175.10.10	Public Hearing Logistics (See Note 1)
175.10.15	Displays for Public Hearing (See Note 1)
175.10.20	Second Notices of Public Hearing and Availability of DED (See Note 1)
175.10.25	Map Display and Public Hearing Plan (See Note 1)
175.10.30	Display Public Hearing Maps (See Note 1)
175.10.35	Public Hearing (See Note 1)
175.10.40	Record of Public Hearing (See Note 1)
175.10.99	Other Public Hearing Products (See Note 1)
175.15	Public Comment Responses and Correspondence (See Note 1)
175.20	Project Preferred Alternative (See Note 1)
180	Prepare and Approve Project Report and Final Environmental Document (See Note 1)
180.05	Final Project Report
180.05.05	Updated Draft Project Report
180.05.10	Approved Project Report
180.05.15	Updated Storm Water Data Report
180.05.99	Other Final Project Report Products
180.10	Final Environmental Document (See Note 1)
180.10.05	Approved Final Environmental Document (See Note 1)
180.10.05.05	Draft Final Environmental Document Review (See Note 1)
180.10.05.10	Revised Draft Final Environmental Document (See Note 1)
180.10.05.55	Floodplain Only Practicable Alternative Finding
180.15	Completed Environmental Document (See Note 1)
180.20	NEPA Assignment (See Note 1)
185	Prepare Base Maps and Plan Sheets During PS&E Development
185.05	Updated Project Information
185.05.05	Project Concept Review
185.05.10	Updated Project Information

185.05.99	Other Updated Project Information Products
185.15	Preliminary Design
185.15.05	Roadway and Miscellaneous Design
185.15.10	Proposed Geometrics Review
185.15.15	Requests for Exceptions to Design Standards
185.15.20	Value Analysis (See Note 1)
185.15.99	Other Preliminary Design Products
185.20	Engineering Reports
185.20.05	Updated Traffic Data Analysis and Forecasts (See Note 1)
185.20.10	Preliminary Hydrology and Hydraulic Reports
185.20.15	Preliminary Geotechnical Design Report (PGDR) (See Note 1)
185.20.20	Preliminary Pavement Design Report (See Note 1)
185.20.25	Preliminary Materials Report (See Note 1)
185.20.30	Soundwall Design Report
185.20.35	Updated Transportation Management Plan for Design Phase (See Note 1)
185.20.40	Utility Locations Determined for Design
185.20.99	Other Engineering Report Products
185.25	Right of Way Requirements Determination (See Note 1)
185.25.05	Project Review with Affected Agencies
185.25.10	Fee and Easement Requirements Determination (See Note 1)
185.25.15	Right of Way Requirements Maps (See Note 1)
185.25.20	Final Railroad Involvement Determination (See Note 1)
185.25.25	Water Well Abandonment Needs Determination
185.25.30	Utility Conflict Maps
185.30.10	Site Plans for Bridges and Structures (See Note 2)
185.30.25	Site Plans for Pumping Plants (See Note 2)
185.30.30	Site Plans for Special-Design Culverts (See Note 2)
185.30.99	Other Structure Site Plan Products (See Note 2)
185.99	Other Base Map And Plan Sheet Products
200	Utility Relocation
200.15	Approved Utility Relocation Plan
200.20	Utility Relocation Package
200.25	Utility Relocation Management
200.30	Utility Close Out
200.99	Other Utility Relocation Products
205	Obtain Permits, Licenses, Agreements and Certifications (PLACs) during PS&E Component (See Note 1)
205.05	PLACs Determination (See Note 1)
205.10	PLACs (See Note 1)
205.10.05	U.S. Army Corps of Engineers Permit (404/10) (See Note 1)
205.10.10	U.S. Forest Service PLACs (See Note 1)
205.10.15	U.S. Coast Guard PLACs (See Note 1)
205.10.20	Department of Fish and Game 1600 Agreement(s)/2080.1/2080 Permit(s) (See Note 1)

205.10.25	Coastal Zone Development Permit (See Note 1)
205.10.30	Local Agency Concurrence/PLACs (See Note 1)
205.10.40	Waste Discharge National Pollutant Discharge Elimination System (NPDES) Permit(s) (See Note 1)
205.10.45	U.S. Fish and Wildlife Service/National Marine Fisheries Service Approval (See Note 1)
205.10.50	Regional Water Quality Control Board 401 Permit (See Note 1)
205.10.60	Updated Environmental Commitments Record (See Note 1)
205.10.95	Other PLACs (See Note 1)
205.15	Railroad Agreements (See Note 1)
205.15.05	Plan Approval (See Note 1)
205.15.10	Special Provisions and Insurance Clauses (See Note 1)
205.15.15	Service Contract for Railroad Services (See Note 1)
205.15.20	Construction and Maintenance Agreement (See Note 1)
205.15.25	PUC Exhibits and Application (See Note 1)
205.15.99	Other Railroad Agreement Products (See Note 1)
205.25	Agreement for Material Sites (See Note 1)
205.30	Executed Maintenance Agreement (See Note 1)
205.45	MOU from Tribal Employment Rights Office (TERO) (See Note 1)
205.55	NEPA Assignment (See Note 1)
230	Prepare Draft PS&E
230.05	Draft Roadway Plans
230.05.05	Title Sheet
230.05.10	Typical Cross Sections
230.05.15	Key Map and Line Index
230.05.20	Roadway Layouts
230.05.25	Profile and Superelevation Sheets
230.05.30	Construction Details
230.05.35	Contour Grading Plans
230.05.40	Summary of Quantities Sheets
230.05.45	Sound Wall Plans
230.05.50	Retaining Wall Plans
230.05.55	Standard Plans Selection
230.05.60	Stage Construction and Detour Plans or Traffic Handling Plans (See Note 1)
230.05.65	Water Pollution Control Plans
230.05.70	Engineering Reports (See Note 1)
230.05.70.05	Hydrology and Hydraulic Reports
230.05.70.10	Products Required To Ready Site for Subsurface Exploration (See Note 1)
230.05.70.15	Geotechnical Design Report (GDR) (See Note 1)
230.05.70.20	Pavement Design Report (See Note 1)
230.05.70.25	Materials Report (See Note 1)
230.05.99	Other Draft Roadway Plan Products

230.10	Draft Highway Planting Plans
230.10.05	Highway Planting Plans
230.10.15	Plant List
230.10.20	Irrigation Plans
230.10.30	Irrigation Quantity Sheets
230.10.99	Other Draft Roadway Plan Products
230.15	Draft Traffic Plans
230.15.05	Signing and Pavement Delineation Plans
230.15.10	Construction Area Signs Plans
230.15.15	Traffic Electrical Plans
230.15.99	Other Draft Traffic Plan Products
230.20	Transportation Management Plan (See Note 1)
230.25	Draft Utility Plans
230.25.05	New Facility Plans
230.25.10	Utility Relocation Plans
230.25.99	Other Draft Utility Plan Products
230.30	Draft Drainage Plans
230.35	Draft Specifications
230.35.05	Roadway Specifications
230.35.10	Highway Planting Specifications
230.35.15	Traffic Specifications
230.35.20	Electrical Specifications
230.35.25	Utility Specifications
230.35.30	Hydraulic Specifications
230.35.35	Water Pollution Control Specifications
230.35.40	Erosion Control Specifications
230.35.99	Other Draft Specification Products
230.40	Draft PS&E Quantities and Estimates
230.40.05	Roadway Quantities and Estimates
230.40.10	Highway Planting Quantities and Estimates
230.40.15	Drainage Quantities and Estimates
230.40.20	Traffic Quantities and Estimates
230.40.25	Electrical Quantities and Estimates
230.40.30	Utility Quantities and Estimates
230.40.35	Water Pollution Control Quantities and Estimates
230.40.40	Erosion Control Quantities and Estimates
230.40.99	Other Draft PS&E Quantities and Estimates Products
230.55	Structures Draft PS&E Incorporation
230.60	Updated Project Information for PS&E Package
230.60.05	Updated Storm Water Data Report
230.60.10	Other Reviews and Update of Project Information
230.90	NEPA Assignment (See Note 1)
230.99	Other Draft PS&E Products
235	Mitigate Environmental Impacts and Clean up Hazardous Waste (See Note 2)

235.05	Environmental Mitigation (See Note 2)
235.05.20	Environmental Mitigation Right Of Way Work (See Note 2)
255	Circulate, Review, and Prepare Final District PS&E Package
255.05	Circulated & Reviewed Draft District PS&E Package
255.10	Updated PS&E Package
255.10.05	Updated Roadway PS&E
255.10.10	Updated Highway Planting PS&E
255.10.15	Updated Traffic PS&E
255.10.20	Updated Hydraulic PS&E
255.10.25	Updated Technical Reports
255.10.30	Updated Utility PS&E
255.10.35	Updated Electrical PS&E
255.10.99	Other Updated PS&E Package Products
255.15	Environmental Reevaluation (See Note 1)
255.20	Final District PS&E Package
255.20.05	Reviewed Plans for Drafting Standards Compliance
255.20.10	Final Structures Specifications and Estimate Incorporated into Final District PS&E
255.20.15	Request For Funds
255.25	Geotechnical Information Handout (See Note 1)
255.30	Materials Information Handout (See Note 1)
255.35	Construction Staking Package and Control
255.35.10	Construction Staking Package
255.35.20	Project Control for Construction
255.40	Resident Engineer's Pending File
255.45	NEPA Assignment (See Note 1)
255.50	Secured Lease for Resident Engineer Office Space or Trailer
255.55	Contractor Outreach
255.65	Right of Way Certification Document- (See Note 1)
255.70	Right of Way Engineering Products- (See Note 1)
255.75	Upgraded/Updated Right Of Way Certification Document- (See Note 1)
260	Contract Bid Documents Ready to List
260.50	Draft Contract Submittal Ready to Process (PS&E)
260.60	Draft Contract Comments (DCC)
260.70	Draft Contract Comment Response (DR)
260.75	Environmental Certification at RTL
260.90	Ready To List (RTL)
260.95	Finalized Submittal Package
265	Awarded and Approved Construction Contract
265.50	Contract Ready for Advertising
265.55	Advertised Contract
265.60	Bids Opened
270	Construction Engineering and General Contract Administration
270.66	Technical Support (See Note 3)

275	Construction Engineering and General Contract Administration of Structures Work (See Note 2)
285.10	Functional Support (See Note 3)
285.10.15	Other Functional Support
290	Disputes and Claims (See Note 3)
290.40	Potential Claim Record (See Note 3)
290.50	Alternative Dispute Resolution (See Note 3)
290.60	Claim Resolution (See Note 3)
290.70	Arbitration (See Note 3)
295	Accept Contract/Prepare Final Construction Estimate and Final Report (See Note 3)
295.15	As-Built Plans
295.20	Project History File
Note 1:	For these WBS items, provide only engineering support such as mapping and/or design information.
Note 2:	Work performed for these WBS activities will be limited to collaborations with roadway design elements and providing mapping information. The Consultant shall not perform structural design work.
Note 3:	Work performed for these WBS activities will be limited to providing design support services throughout the construction phase.

F. Consultant Personnel Requirements

1. General Requirements

- a. The Consultant shall provide personnel with relevant roadway design and technical subject specific expertise, in the various areas of Civil Engineering, including Transportation, Geotechnical, Environmental, Pavement, Hydraulic & Hydrologic, Land survey, Electrical Systems, Urban Planning & Land use experience, and technical assistance, including but not limited to all subject areas identified in Attachment 1B, 1C, 1D, and 1E to this Agreement.
- b. The Consultant shall provide experienced key personnel at the advance journey or senior level, familiar with Caltrans procedures, including but not limited to:
 - i. Highway design obligations detailed in state and federal laws
 - ii. Task Order management assistance
 - iii. GIS content development and analysis
 - iv. Interdisciplinary Coordination: Experience collaborating with roadway designers, environmental specialists, geotechnical engineers, and construction staff.

- c. In addition to the personnel listed in the base scope of work, Attachment 1, below is a list of proposed personnel classifications required to fulfill the required services herein during the term of the Agreement as outlined, however, this is not an exclusive list of the personnel classifications of Roadway Design & Project Development Services that may be requested. Caltrans reserves the right to add/or delete personnel from this list.

2. Consultant Licensed Civil Design Engineer (Consultant Responsible Person)

- a. The Consultant's Licensed Civil Design Engineer shall be employed by the Consultant or one of its Subconsultants at the time deliverables are submitted to Caltrans for review and acceptance. The Licensed Civil Design Engineer shall have a minimum of five (5) years of experience, acceptable to Caltrans, performing duties under similar Roadway Design Services contracts. Of these five (5) years, at least two (2) years shall have been in a lead worker capacity.
- b. Depending on the complexity of each project and Task Order, if required by the Caltrans Contract Manager, the Consultant shall designate a Consultant Responsible Person. The Consultant's Licensed Civil Design Engineer is hereby designated as the Consultant Responsible Person, with all associated qualifications and responsibilities.
- c. The Consultant's Licensed Civil Design Engineer shall have substantial knowledge and experience in Roadway Design Engineering including general Civil Engineering and Project Development Support Services, including familiarity with Storm Water Data Report (SWDR) water quality and environmental constraints.
 - i. *Substantial knowledge* is defined as possessing a Bachelor's degree or higher in civil engineering.
 - ii. *Substantial experience* is defined as having at least five (5) years of relevant experience, including work in Roadway Design and Project Development Support Services. This experience must be sufficient to ensure the ability to manage and advise on a comprehensive range of project development activities and to demonstrate expertise in a variety of Roadway Design and general Civil Engineering, including those involving unusual or complex roadway features and maintenance-related work, as outlined in the SOW of this agreement.
- d. Demonstrated experience, acceptable to Caltrans, must be gained from multiple projects performed at different times in serial (not parallel) order. Overlapping or concurrently held experience shall not be double-counted toward the total years of applicable experience. Relevant experience must be clearly detailed for each project listed in the resume section of the Statement of Qualifications (Section E of Standard Form 330). Each SF330 resume shall include a brief description of the project and provide specific details of the individual's role, emphasizing responsibilities and

- accomplishments that best demonstrate the capability and experience relevant to the proposed role on this contract and consistent with the requirements outlined in the RFQ.
- e. In addition to other specified responsibilities, the Consultant's Licensed Hydraulic Engineer shall possess knowledge of and perform all tasks related to Hydrology and Hydraulics services, including but not limited to the following:
 - i. Cross pavement drainage
 - ii. Cross culvert design
 - iii. Knowledge and familiarity with all Caltrans Hydraulics references and design related guidance.
 - iv. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - v. Knowledgeable in hydrology and stormwater technical support services and related scope.
 - f. The Consultant Responsible Person shall be accountable for the overall technical quality, coordination, and timely delivery of general Civil Engineering and roadway design performed under the assigned Task Order. Responsibilities include, but are not limited to:
 - i. Serving as the primary technical authority and liaison between the Consultant team and Caltrans for all Roadway Design and general Civil Engineering related matters.
 - ii. Ensuring that all deliverables meet the standards, requirements, and deadlines specified in the Task Order and applicable Caltrans guidelines.
 - iii. Overseeing and coordinating the work of other Consultant and Subconsultant staff involved in the Task Order.
 - iv. Reviewing and approving technical analyses, reports, and calculations prior to submittal.
 - v. Addressing Caltrans PDT comments, concerns, or required revisions in a timely and technically sound manner.
 - vi. Confirming that staff assigned to the Task Order are properly qualified and their work aligns with the scope and expectations of the contract.
 - vii. Participating in meetings, field reviews, or teleconferences as requested by Caltrans.

3. Consultant Task Order Lead person.

- a. The Consultant Task Order Lead (who may also serve as the Consultant's Licensed Civil Design Engineer or the Consultant Responsible Person) shall be assigned to

perform or oversee all work associated with a specific Task Order. This individual shall serve as the primary point of contact for the assigned Task Order and must be available as needed to communicate with Caltrans.

- b. The Consultant Task Order Lead shall possess the same qualifications and demonstrated experience required of the Consultant's Licensed Civil Design Engineer

4. Consultant Civil Design Engineer (Unlicensed)

- a. Consultant Civil Design Engineer must be a graduate from a (4) four-year curriculum in civil engineering, accredited by the Accreditation Board for Engineering Technology (ABET). Consultant Civil Design Engineer shall possess a documented three (3) years of demonstrated experience acceptable to Caltrans in performing Civil Design Engineer including general civil engineering studies and analysis is required.
- b. Consultant Civil Design Engineer assisting in performing roadway design shall also have all knowledge, skills, experience, and approvals required by Permits, Agreements or Certifications that apply to and is (are) relevant to each Task Order.
- c. Consultant Civil Design Engineer shall be experienced in the use of Caltrans compatible engineering drafting design software and Computer Aid Drafting and Design (CADD) based software including MicroStation AutoCAD Civil-3D and computer aided civil engineering and surveying system (CaiCE), AutoCAD Civil-3D.
- d. In addition to other specified responsibilities, the Consultant Civil Design Engineer shall possess preliminary knowledge of and perform tasks related to all aspects of general roadway design services, including but not limited to the following:
 - i. Roadway design
 - ii. Geometrics design
 - iii. Cross pavement drainage
 - iv. Cross culvert design
 - v. Knowledge and familiarity with all Caltrans roadway design references and design related guidance.
 - vi. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - vii. Knowledgeable in general Civil design engineering technical support services related scope herein.

5. Consultant Civil Engineering Technician

- a. Consultant Civil Engineering Technician shall be capable of providing roadway design project support services on an as needed basis. Each Consultant Civil Engineering Technician personnel assigned as an Engineer Technician shall have:
 - i. Two (2) years of education equivalent to completion of a curriculum beyond the 12th grade in either (1) general civil engineering, accredited by the ABET,

- which includes courses in trigonometry and algebra or higher, drafting, computer science, and physics, chemistry, or a comparable physical science; or (2) surveying accredited by the ABET, which includes courses in trigonometry and algebra or higher, drafting, surveying, and computer science.
- ii. A documented minimum two (2) years of demonstrated experience acceptable to Caltrans in performing civil engineering technician work including general civil engineering studies and analysis, supporting various aspects of highway projects.
- b. Consultant Civil Engineering Technician shall be experienced in the use of Caltrans compatible engineering drafting design software and Computer Aid Drafting and Design (CADD) based software including MicroStation AutoCAD Civil-3D and computer aided civil engineering and surveying system (CaiCE), AutoCAD Civil-3D.
 - c. Possession of a valid Engineer-in-Training (EIT) certificate issued or accepted by State of California is desirable.

G. Field Equipment and Supplies

- 1. In addition to equipment provisions in the base scope of work, Attachment 1, the Consultant shall have and provide adequate field tools, instruments, equipment, materials, supplies, and safety equipment to complete the required services and that meet or exceed Caltrans specifications per the Caltrans Manuals and Consultant shall not require or rely upon Caltrans to provide such tools, equipment and supplies. If required by the Task Order, the tools, instruments, equipment, materials, supplies, and safety equipment required for each Consultant field personnel shall include, but not be limited to the following:
 - a. Hand tools including but not limited to shovels, gloves, pick, measuring tape, buckets, wheel barrow, heat gun, sledge hammer, concrete and asphalt thermometers, clip board, calculator, peg book, as appropriate for the requested field personnel work.
 - b. Necessary miscellaneous tools, non-consumables, and supplies including, but not limited to, hammers and shovels.
 - c. The Consultant shall provide all necessary tools, instruments, equipment, materials, supplies, and safety equipment required to perform the work identified in each Task Order and this Agreement accurately, efficiently, and safely. The Consultant's personnel shall be fully trained in the use of such necessary tools, instruments, equipment, materials, supplies, and safety

equipment. The Consultant shall not be reimbursed separately for tools of the trade, which may include, but not be limited to, the above-mentioned equipment.

- d. The Consultant may claim reimbursement for providing equipment or supplies. However, such claimed costs shall be in compliance with 48 Code of Federal Regulation (CFR), Chapter 1, Part 31 (Federal Acquisition Regulation - FAR cost principles) and 2 CFR, Part 200, and be consistent with the Consultant's company-wide allocation policies and charging practices with all clients including federal government, state governments, local agencies, and private clients.

H. Manuals, Documents, Publications and Internet sites

In addition to the manuals, documents and guidance referenced in the base scope of work, Attachment 1 the following manuals, documents and links to internet sites are referenced in association with the work in this Agreement. The list is not all-inclusive, but is intended to illustrate the types of reference material and sources of information.

- a. Caltrans' Internet Home Webpage:
<https://dot.ca.gov/>
- b. Caltrans Standard Environmental Reference (SER), Caltrans Environmental Handbook, Volume I, Volume II, Volume III, and Volume IV:
<https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser>
- c. Caltrans Guidance Manual: Storm Water Monitoring Protocols:
<https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/ctws-ot-20-350-04-01-monitoring-guidance-manual-a11y.pdf>
- d. Caltrans Project Planning and Design Activities Guide:
<https://dot.ca.gov/programs/design/manual-project-planning-design-guide>
- e. LOCAL MANUALS
"Site Assessment and Mitigation Manual" of the San Diego County Department of Environmental Health:
https://www.sandiegocounty.gov/content/sdc/deh/hazmat/sam_manual.html
- f. State Water Resources Control Board
Wetland Riparian Area Protection Policy :

https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html

- g. U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), Final Report. September. U.S. Army Research and Development Center, Vicksburg, Mississippi:
<https://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/trel08-28.pdf>
- h. U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), Final Report. May. U.S. Army Research and Development Center, Vicksburg, Mississippi:
https://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/west_mt_finalsupp.pdf
- i. U.S. Army Corps of Engineers. Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineers Waterways Experiment Station, Vicksburg, Mississippi:
<https://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf>
- j. USACE Sacramento District:
<https://www.spk.usace.army.mil/>
- k. USACE San Francisco District:
<https://www.spn.usace.army.mil/>
- l. USACE Los Angeles:
<https://www.spl.usace.army.mil/>
- m. USACE standards for delineation of other waters of the U.S.: Lichvar, Robert W., and Shawn M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the United States: a Delineation Manual. August. U.S. Army Corps of Engineers, ERDC/CRREL TR-08-12:
https://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf
- n. USACE standards for delineation of other waters of the U.S.: U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter 05-05: Ordinary High Water Mark Identification. December 7:
<https://usace.contentdm.oclc.org/utis/getfile/collection/p16021coll9/id/1253>

- o. Caltrans Near Me – Find District Current Project Lists:
<https://dot.ca.gov/caltrans-near-me>

Attachment 1B – Hydrology and Hydraulics Engineering Services

**SCOPE OF WORK/DELIVERABLES
ROADWAY DESIGN & RELATED PROJECT DEVELOPMENT and
CONSTRUCTION DESIGN SUPPORT SERVICES**

**For Caltrans, District 10, Division of Project Development
On-Call Contract**

A. Purpose of Work.

1. Hydrology and Hydraulics

- a) The Consultant shall provide consultation, research, and professional and technical engineering services in Hydrology and Hydraulics necessary for roadway design and related project development activities on the State Highway System (SHS), including maintenance facilities. This work will be performed in coordination with Caltrans subject matter experts and the Caltrans Project Development Team (PDT).
- b) Consultant shall provide support services for design and evaluation of cross drainage systems that safely convey surface water and stream flow across or away from the highway right of way. Stormwater conveyance shall be achieved primarily through culverts and other standard plan structures, which must be designed to meet hydraulic performance requirements, carry highway and construction loads, and, where applicable, provide passage for wildlife within identified connectivity areas. The work shall emphasize hydraulic design in accordance with Caltrans standards, while ensuring consistency with good engineering practice, and cost-effective solutions.

B. Required Services – Hydrology and Hydraulics Engineering Analysis & Studies

1. General Services

- a. Potential work activities, whether comprising all or part of a project, may vary in scope and size and may involve any type of improvement to the State transportation system. These improvements may include, but are not limited to, roadway rehabilitation, facility widening and/or realignment, relocation of existing facilities, and the construction of new infrastructure. Each Task Order will define the specific project location, project limits, purpose, expected outcomes, deliverables, period of performance, project schedule, and detailed scope of work to be performed.
- b. The Consultant shall review all information compiled during the Project Initiation Document (PID) phase, as well as assess any preliminary data gaps that may need to be addressed during the development of the Project Report and associated

environmental constraints. Using available data and in accordance with Caltrans policies and directives, the Consultant shall conduct analyses to define and address the project's need, purpose, and general scope.

2. Performing Engineering Studies for Project Report

a. Updated Project Information

Consultant shall review the information assembled and developed during the PID as well as a preliminary assessment of what additional information may be required during the project report and environmental document development phase.

b. Preliminary Hydraulic/Hydrology Design

- i. Consultant shall commence preparation of the Hydraulic/Hydrology Design report and preliminary Hydraulic/Hydrology Design including sizing and location of culverts, storm drains and roadway drainage, cross drainage, sizing the ditches and basins, and other drainage facilities for all alternatives.
- ii. Consultant shall conduct a hydrology study, providing calculations for basin design, offsite cross drains design, and onsite pavement drainage design for preferred alternatives for environmental studies and determine the need for R/W requirements.
- iii. Consultant performing hydraulics works shall take into consideration the findings of environmental studies and any constraints arising from them. Early and continuous coordination between the hydraulics and environmental teams should be exercised to ensure compliance and integration of interrelated requirements.
- iv. Many projects, by necessity, will include water quality enhancement features or encroach on wetlands, floodplains, and receiving waters of the USA. When flood plain encroachment is involved, the Consultant should be involved in preparing the location hydraulic studies. Historical drainage maps often depict the extent of the encroachment and help determine which project alternatives should be considered. Documentation of these features must be included in the draft project report.
- v. Consultant shall identify all necessary permits required for the project, including those required from Central Valley Flood Protection Board (CVFPB), FEMA for Floodplain Encroachment, Local Flood Control Agencies and Water Districts, Utility Companies, Fish and Wildlife, and the U. S. Army Corps of Engineers (USACE).
- vi. Consultant shall perform a Rapid Stability Assessment (RSA) of existing crossings. RSA document requirements are located at website:
<https://dot.ca.gov/-/media/dot-media/programs/design/documents/f0004535-ct-hydrmodification-requirements-guidance-a11y.pdf>.

- c. Design Standard Decision Document (DSDD)
 - i. Based on the Task Order complexity, challenges and as required, Consultant shall prepare and document any exceptions for and/ or deviations from the Highway Design Manual or Caltrans Design Standards by completing and submitting the DSDD to the Caltrans Task Order Manager for review and comments.
 - ii. The Consultant shall identify all proposed nonstandard design features and secure formal written approval for such deviations during the engineering design phases. For any deviation that significantly impacts the project's core concept or cost estimate, the Consultant must submit a detailed DSDD justifying the variance; this approval must be finalized before proceeding to subsequent development stages to ensure project feasibility and cost estimating accuracy.
 - iii. Consultant Task Order Manager shall coordinate any deferrals and ensure they are documented and approved by the appropriate Caltrans approval authority for design deviations consistent with the current Design Delegation Agreement between the Caltrans Division of Design and the Caltrans District Director.
- d. Coordination and collaborations with Caltrans Division of Environmental
Consultant shall produce preliminary design elements to be used to develop base maps for the required environmental studies.
- e. Consultant shall reference and adhere to the latest version of the Caltrans Highway Design Manual (HDM), specifically Chapter 800 through 890 referenced herein.
- f. Consultant shall reference Caltrans Project Development Procedures Manual (PDPM) Chapter 3 Section 9 referenced herein. <https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm>
- g. Consultant shall consult with, and project design deliverables shall conform to the latest version of relevant FHWA Hydraulic Publications referenced herein.
- h. Consultant shall refer to and adhere to the Central Region hydraulics Design Criteria, which will be made available upon Task Order execution.
- i. Consultant shall reference and adhere to the Central Region Hydraulics Design Consultant hydrology and Hydraulic Report (Drainage Report) format, which will be made available upon the Task Order execution.
- j. Consultant shall document all correspondence with adjacent property owners and local agencies when designing drainage systems that impact other facilities.
- k. Consultant shall coordinate with District function units, including maintenance, landscape design, stormwater design, and traffic operations. Consultant shall document all correspondence related to these interactions.

- i. Consultant shall document correspondence with local maintenance forces regarding potential and existing drainage, safety and access issues. Consultant shall document correspondence regarding the need for cooperative maintenance agreements and/or drainage easements.
- ii. Consultant shall document correspondence with District Landscape Architecture regarding potential and existing erosion control, BMP practices, and access issues.
- iii. Consultant shall document correspondence with District stormwater design regarding potential and existing trash generating zones, water table depth, treatment BMP and NEPA issues.
- iv. Consultant shall document correspondence with District traffic safety regarding proposed placements of fixed objects such as headwalls or wingwalls.
- v. Consultant shall document correspondence with Caltrans Right of Way regarding right of way needs and possible necessary acquisitions.
- vi. Consultant shall document correspondence with District Complete Streets Liaison regarding the impacts on sidewalk, ADA ramps, bicycle lanes and multi-modal connectivity from drainage improvements.

3. Cost Estimates for Alternatives

a. Project Cost Estimate

- i. The Consultant shall prepare project cost estimates in accordance with applicable standards and guidelines. For the purposes of this Agreement, the term “project cost estimate” shall include all capital outlay costs, such as right-of-way acquisition, structures, landscaping, and other permanent improvements. Project cost estimates shall not normally include capital outlay support costs.
- ii. The Consultant shall ensure that cost estimates are accurate, transparent, and defensible. Estimates must not be artificially reduced to remain within funding limits or to create the appearance of additional funding availability for the District. Likewise, estimates must not be artificially inflated beyond the standard contingency percentages specified in this Scope unless such increases are supported with adequate and documented justification.
- iii. The Consultant shall incorporate appropriate levels of contingency consistent with project development stage, complexity, and risk. All assumptions, methodologies, and data sources used in the preparation of the cost estimate shall be clearly documented and submitted with the estimate for review and approval.

b. Consultant shall be responsible for including the following:

- i. Prepare, revise and update project cost estimates.
- ii. For project cost estimates that have achieved the PS&E milestone, update final engineer's cost estimates that are more than three months old.
- iii. Incorporate new or revised cost data from functional units in project cost estimates.
- iv. Maintain a record of successive cost estimates for each project, including structure and right-of-way cost estimates, with documentation of the reasons for significant changes

C. Required Services – Prepare PS&E for RTL

1. Support in Preparation of Contract Documents

a. Preliminary Design Development

The Consultant shall develop complete drainage-related PS&E documents in accordance with the Caltrans Highway Design Manual (HDM), the Plans Preparation Manual (PPM), the Standard Specifications, and applicable Caltrans design policies, procedures and standards,

b. Final Hydrology and Hydraulic Reports.

- i. Consultant shall prepare a comprehensive Final Hydrology and Hydraulic Report to support the detailed drainage design. This work shall include hydrology study, hydraulics calculations, and the design of all required drainage facilities.
- ii. The drainage design shall address sizing and placement of the following: culverts, storm drains, roadway drainage systems, cross drains, rock slope protection, ditches, basins, Hydraulic Grade Line (HGL) calculations, channel lining, headwall/wingwall structures, special manhole design, trenchless installation system, treatment BMPs and other drainage facilities for the selected alternative.

c. Geotechnical Report Request

The Consultant shall prepare signature-ready District Service Request Form for submittal to the Caltrans Office of Geotechnical Design to initiate required geotechnical deliverables in accordance with Caltrans policies and procedures for required Geotechnical Report to support drainage design deliverables. The report shall include, at minimum: soil infiltration rate data, groundwater table information, Design inputs for basins and for trenchless installation operations.

d. Temporary Drainage Systems

The Consultant shall design and prepare temporary drainage systems to accommodate detours during staged construction.

- e. **Pumping Station Design Support**
The Consultant shall provide hydrology and hydraulic data required to support the design and operation of the pumping station.
- f. **Update Stormwater Data Report and Begin Stormwater Design**
 - i. Consultant shall update and maintain the Storm Water Data Report (SWDR) including all attachments, and associated checklists, throughout the Plans, Specification & Estimate (PS&E) phase.
 - ii. The SWDR shall document stormwater quality issues and design decisions made regarding project compliance with State permits. Consultant shall clearly document the process up to and including initiation of drainage and stormwater design in accordance with the Stormwater Quality Handbooks, Project Planning and Design Guide (PPDG) – Appendix D.
- g. **Permit Support**
Consultant shall assist the Caltrans Task Order Manager in applying for all necessary permits. This includes providing all necessary technical documentation, reports and calculations to support permit application submittals.
- h. **Central Valley Flood Protection Board (CVFPB) Permit Package**
When applicable, the Consultant shall prepare the permit package required by the Central Valley Flood Protection Board (CVFPB). All CVFPB permit packages must be reviewed and approved by Caltrans Hydraulic Design before the permit package is submitted. CVFPB website can be accessed at <https://cvfpb.ca.gov/>
- i. **Fish Passage Design Package**
Consultant shall develop fish passage in accordance with Caltrans' guidance. Design package shall be incorporated into the drainage PS&E when applicable. Project development shall be consistent with Fish Passage Design for Roadway Crossings Guidance accessed at <https://dot.ca.gov/programs/design/manual-fish-passage-design-for-roadway-crossings>.

D. Required Services - Work Breakdown Structure Activities

1. Caltrans Workplan Standards Guide

- a. Task Orders are based on the Caltrans Workplan Standards Guide (WSG). The latest WSG is found in the Guide to Project Delivery Workplan Standards Guide, which is available from the Caltrans' Publication Unit and on the Internet at https://dot.ca.gov/-/media/dot-media/programs/project-management/documents/workplan_standards_guide_all1y1.pdf

- b. The WSG references the Work Breakdown Structure (WBS) categories, which are potential and related work activities applicable to this Agreement.
- c. The WSG references WBS categories which present the potential and related work activities that the Consultant may be required to perform. All revisions to the current version of the WBS shall apply during the life of this Agreement.

2. Work Breakdown Structure

- a. The following WBS activities are applicable to the work described in the Scope of Work for this Agreement, which is comprised of the base scope of template, and Attachment 1B:

<u>WBS Code</u>	<u>WBS Title</u>
160.10.25	Hydraulic/Hydrology Studies
160.10.26	Preliminary Hydraulic/Hydrology Design
160.10.60	Location Hydraulic and Floodplain Study Report
160.15.05	Cost Estimates for Alternatives
185.20.10	Hydrology and Hydraulic Reports
205	Obtain Permits, Licenses, Agreements, and Certifications (PLACs) during PS&E Component
230.05.70.05	Hydrology and Hydraulic Reports
230.30	Draft Drainage Plans
230.35.30	Hydraulic Specifications
230.40.15	Drainage Quantities and Estimates
255.10.20	Updated Hydraulic PS&E
255.10.25	Updated Technical Reports
270.66	Technical Support
285.10	Functional Support (See Note 1)

Note:

- 1. Work performed for these WBS activities will be limited to providing design support services throughout the construction phase.

E. Consultant Personnel Requirements

1. General Requirements

- a. The Consultant shall provide personnel with Hydraulics and Hydrology subject specific and supporting expertise, transportation experience, and technical assistance, including but not limited to all subject areas identified in the Scope or Work for this Agreement.

- b. The Consultant shall provide experienced key personnel at the advanced or senior level, familiar with Caltrans procedures, including but not limited to:
 - i. Highway Hydraulics and Hydrology design obligations detailed in state and federal laws
 - ii. Task Order management assistance
 - iii. GIS content development and analysis
 - iv. Stormwater management, and floodplain modeling.
 - v. Interdisciplinary Coordination: Experience collaborating with roadway designers, environmental specialists, geotechnical engineers, and construction staff.
- c. In addition to the personnel listed in the Base SOW, below is a list of proposed personnel classifications required to fulfill the required services herein during the term of the Agreement as outlined, however, this is not an exclusive list of the personnel classifications of Hydraulics and Hydrology Services that may be requested. Caltrans reserves the right to add/or delete personnel from this list.

2. Consultant Licensed Civil Engineer (Consultant Responsible Person)

- a. The Consultant's Licensed Civil Engineer (Hydraulic) shall be employed by the Consultant or one of its Subconsultants at the time deliverables are submitted to Caltrans for review and acceptance. The Licensed Civil Engineer (Hydraulic) shall have a minimum of five (5) years of experience, acceptable to Caltrans, performing duties under similar Hydrology and Hydraulics Services contracts. Of these five (5) years, at least two (2) years shall have been in a lead worker capacity.
- b. Depending on the complexity of each Task Order, if required by the Caltrans Contract Manager, the Consultant shall designate a Consultant Responsible Person. The Consultant's Licensed Civil Engineer (Hydraulic) is hereby designated as the Consultant Responsible Person, with all associated qualifications and responsibilities.
- c. The Consultant's Licensed Civil Engineer (Hydraulic) shall have substantial knowledge and experience in Hydrology and Hydraulics Design and Project Development Support Services, including familiarity with Storm Water Data Report (SWDR) water quality and environmental constraints.
 - i. *Substantial knowledge* is defined as possessing a bachelor's degree or higher in Civil Engineering.
 - ii. *Substantial experience* is defined as having at least five (5) years of relevant experience, including work in Roadway Hydraulics and Hydrology analysis and Project Development Support Services. This experience must be sufficient to ensure the ability to manage and advise on a comprehensive range of project development activities and to demonstrate expertise in a variety of Hydrology and Hydraulics scenarios, including those involving unusual or complex roadway

features and maintenance-related work, as outlined in the Scope of Work (SOW) of this agreement.

- d. Demonstrated experience, acceptable to Caltrans, must be gained from multiple projects performed at different times in serial (not parallel) order. Overlapping or concurrently held experience shall not be double counted toward the total years of applicable experience. Relevant experience must be clearly detailed for each project listed in the resume section of the Statement of Qualifications (Section E of Standard Form 330). Each SF330 resume shall include a brief description of the project and provide specific details of the individual's role, emphasizing responsibilities and accomplishments that best demonstrate the capability and experience relevant to the proposed role in this Agreement and consistent with the requirements outlined in the RFQ.
- e. In addition to other specified responsibilities, the Consultant's Licensed Civil Engineer (Hydraulic) shall possess knowledge of and perform all tasks related to Hydrology and Hydraulics services, including but not limited to the following:
 - i. Hydraulic Design: Cross culvert design, subsurface drainage, open channel, and transportation facility drainage systems.
 - ii. Highway Hydrology: Hydrological estimating methods and software for offsite and onsite watershed study. Hydraulic and Hydrology calculations and software in Table 808.1 in HDM Chapter 800-50
 - iii. Knowledge and familiarity with all Caltrans Hydraulics and Hydrology references and design related guidance.
 - iv. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - v. Knowledgeable in Hydraulics and storm water quality technical support services related scope.
- f. The Consultant Responsible Person shall be accountable for the overall technical quality, coordination, and timely delivery of Hydrology and Hydraulics Services performed under the assigned Task Order. Responsibilities include, but are not limited to:
 - i. Serving as the primary technical authority and liaison between the Consultant team and Caltrans for all Hydrology and Hydraulics-related matters.
 - ii. Ensuring that all deliverables meet the standards, requirements, and deadlines specified in the Task Order and applicable Caltrans guidelines.

- iii. Overseeing and coordinating the work of other Consultant and Subconsultant staff involved in the Task Order.
- iv. Reviewing and approving technical analyses, reports, and calculations prior to submittal.
- v. Addressing Caltrans PDT comments, concerns, or required revisions in a timely and technically sound manner.
- vi. Confirming that staff assigned to the Task Order are properly qualified and their work aligns with the scope and expectations of the Agreement.
- vii. Participating in meetings, field reviews, or teleconferences as requested by Caltrans.

3. Consultant Task Order Lead person.

- a. The Consultant Task Order Lead (who may also serve as the Consultant's Licensed Civil Engineer (Hydraulic) or the Consultant Responsible Person) shall be assigned to perform or oversee all work associated with a specific Task Order. This individual shall serve as the primary point of contact for the assigned Task Order and must be available as needed to communicate with Caltrans.
- b. The Consultant Task Order Lead shall possess the same qualifications and demonstrated experience required of the Consultant's Licensed Civil Engineer (Hydraulic).

4. Consultant Civil Design Engineer (Hydraulic) - Unlicensed

- a. Consultant Civil Design Engineer (Hydraulic) must be a graduate from a four-year curriculum in civil engineering, accredited by the Accreditation Board for Engineering Technology (ABET). Consultant Civil Design Engineer (Hydraulic) shall possess a documented three (3) years of demonstrated experience acceptable to Caltrans in performing Hydrology and Hydraulic studies and analysis is required.
- b. Consultant Civil Design Engineer (Hydraulic) assisting in performing Hydrology and Hydraulic shall also have all knowledge, skills, experience, and approvals required by Permits, Licenses, Agreements or Certifications that apply to and is (are) relevant to each Task Order.
- c. Consultant Civil Design Engineer (Hydraulic) shall be experienced in the use of Caltrans compatible engineering drafting design software and Computer Aid Drafting and Design (CADD) based software including MicroStation AutoCAD Civil-3D and computer aided civil engineering and surveying system (CaiCE), AutoCAD Civil-3D.

- d. In addition to other specified responsibilities, the Consultant Civil Design Engineer (Hydraulic) shall possess preliminary knowledge of and perform tasks related to all aspects of Hydrology and Hydraulics services, including but not limited to the following:
- i. Hydraulic Design: Cross culvert design, subsurface drainage, open channel, and transportation facility drainage systems
 - ii. Highway Hydrology: Hydrological estimating methods and software for offsite and onsite watershed study. Hydraulic and Hydrology calculations and software in Table 808.1 in HDM Chapter 800-50.
 - iii. Knowledge and familiarity with all Caltrans Hydraulics and Hydrology references and design related guidance.
 - iv. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - v. Knowledgeable in Hydraulics and storm water quality technical support services related scope.

F. Manuals, Documents, Publications and Internet sites

In addition to the manuals, documents and guidance referenced in the base scope of work, Attachment 1 the following manuals, documents and links to internet sites are referenced in association with the work in this Agreement. The list is not all-inclusive but is intended to illustrate the types of reference material and sources of information.

- a. Caltrans' Internet Home Webpage:
<http://www.dot.ca.gov/>
- b. Caltrans Guidance Manual: Storm Water Monitoring Protocols:
<https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/ctws-ot-20-350-04-01-monitoring-guidance-manual-a11y.pdf>
- c. Caltrans Highway Design Manual (HDM):
<https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm>
- d. Central Valley Floodplain Protection Board (CVFPB):
<https://cvfpb.ca.gov/>
- e. National Flood Insurance Program-Flood Hazard Mapping by Federal Emergency Management (FEMA):
<https://msc.fema.gov/portal/home>

- f. Manuals, guides and publications on Hydraulics Design by US Army Corp. of Engineers:
<https://www.usace.army.mil/library.aspx>
- g. California Code of Regulations-Title 23-Water:
<https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IADE1A8605B6E11EC9451000D3A7C4BC3&transitionType=Default&contextData=%28sc.Default%29&bhcp=1>
- h. Hydraulic Engineering from Federal Highway Administration:
<https://www.fhwa.dot.gov/engineering/hydraulics/>
- i. Hydrology and Hydraulic Tools from FHWA.
<https://highways.dot.gov/federal-lands/hydraulics>
- j. Caltrans Hydromodification Requirements Guidance Storm Water Best Management Practices Rapid Assessment of Stream Crossings Higher Level Stream Stability Analysis.
<https://dot.ca.gov/-/media/dot-media/programs/design/documents/f0004535-ct-hydromodification-requirements-guidance-all.pdf>

Attachment 1C – Electrical Design Services**SCOPE OF WORK/DELIVERABLES
ROADWAY DESIGN & RELATED PROJECT DEVELOPMENT and
CONSTRUCTION DESIGN SUPPORT SERVICES**

**For Caltrans, District 10, Division of Project Development
On-Call Contract**

A. Purpose of Work.**1. Electrical Design Services**

- a) The Consultant shall provide consultation, research, and professional and technical engineering services necessary for electrical design and related project development activities on the State Highway System (SHS), including maintenance facilities. The Consultant shall provide professional electrical engineering services to support Caltrans in the development of transportation projects. Services will include engineering studies during Project Report development and preparation of Plans, Specifications, and Estimates (PS&E) for Ready-to-List (RTL).
- b) Consultant will support and assist in the analyses required for project development and the preparation of Plans, Specifications, and Estimates (PS&E) for all applicable electrical systems. This work will be performed in coordination with Caltrans subject matter experts and the Caltrans Project Development Team (PDT).

B. Required Services – Electrical Design Services**1. General Services**

- a. Potential work activities, whether comprising all or part of a project, may vary in scope and size and may involve any type of improvement to the State transportation system. These improvements may include, but are not limited to, the design of electrical power distribution systems to accommodate the electrical elements required to support safe and efficient roadway operations. This includes the development of project plans and specifications for roadway and intersection lighting, traffic signal systems, communication, ramp metering system, flashing beacons, vehicle detectors, intelligent transportation system (ITS) elements, traffic monitoring station systems, changeable message signs, communication networks, conduit including cabling systems, grounding, fiber optic cable systems, service equipment including equipment enclosures, transformers, related control systems, and other essential electrical elements. The work will be coordinated with roadway, structural, and traffic engineering to ensure compliance with applicable codes and standards, while

delivering cost-effective and reliable systems that enhance roadway safety and long-term performance. Electrical design service will be required for existing facilities, and construction of new infrastructure.

- b. Each Task Order will define the specific project location, project limits, purpose, expected outcomes, deliverables, period of performance, project schedule, and detailed scope of work to be performed.
- c. The Consultant shall review all information compiled during the Project Initiation Document (PID) phase, as well as assess any preliminary data gaps that may need to be addressed during the development of the Project Report and associated environmental constraints. Using available data and in accordance with Caltrans policies and directives, the Consultant shall conduct analyses and electrical engineering to define and address the project's needs, purpose, and general scope.
- d. The Consultant shall participate in informal consultations with the Caltrans Project Development Team (Caltrans PDT) to support the development of the Project Report and PS&E contract documents. The electrical system and appurtenances design for Project development should be based on consultation and input from Caltrans PDT subject matter experts and not be developed in a vacuum. The Consultant shall document all measures agreed upon by the Caltrans PDT, along with supporting assessments and decisions, for inclusion in relevant project reports, project design and PS&E contract deliverables.

2. Performing Engineering Studies for Project Report

- a. Updated Project Information
Consultant shall review the information assembled and developed during the PID as well as a preliminary assessment of what additional information may be required during the project report and environmental document development phase.
- b. Electrical Engineering Analysis and Studies
The Consultant shall perform electrical engineering analysis and preliminary studies necessary to support the development of the Project Report (PR) in accordance with the latest version of the Caltrans electrical Systems Design Manual, Highway Design Manual (HDM), and other applicable Caltrans standards and guidelines. The Consultant shall conduct necessary electrical analysis and activities not limited to the following:
 - i. Conduct field reviews and evaluate existing electrical systems inventory to assess current conditions and identify needs related to traffic signals, lighting, ramp metering, ITS elements, and other electrical systems.
 - ii. Perform capacity, condition, and compliance assessments of existing electrical infrastructure.

- iii. Identify preliminary electrical system requirements, including power source identification, service cabinet needs, conduit routing, pull box locations, and preliminary load calculations.
 - iv. Evaluate impacts to existing electrical facilities due to proposed project improvements.
 - v. Recommend electrical system concepts and feasible alternatives, including cost-effective and energy-efficient solutions such as LED lighting, or solar options.
 - vi. Coordinate with utility providers and Caltrans District Electrical Design Task Order Manager as required.
 - vii. Prepare technical documentation and exhibits for inclusion in the PR, including basis of design summaries, preliminary layout sketches, preliminary plans, for the various alternatives.
 - viii. Provide electrical design support to Caltrans District Task Order Manager in identifying utility conflicts and coordinating service requirements with utility agencies.
 - ix. Ensure all work complies with ADA, California Manual on Uniform Traffic Control Devices (CA MUTCD), and other applicable codes.
 - x. Consultant shall prepare the draft electrical plans necessary to show the R/W requirements including permanent easements and temporary construction easements.
 - xi. Consultant shall coordinate with Caltrans Division of Environmental when developing preliminary electrical design plans to be used to develop base maps for the required environmental studies.
 - xii. Preliminary electrical system plans shall incorporate applicable environmental documentation or statements, as required under PDPM Appendix K for Project Reports for example statutory exemptions, categorical exclusions, or ND/IS attachments.
- c. Fiber Optic Cable System Services
- Based on Task Order needs, Consultant shall develop a comprehensive Project Report that integrates fiber optic cable system design considerations in compliance with Caltrans' electrical Systems Design Manual and the Project Development Procedures Manual (PDPM). Consultants' preliminary design concepts shall address the benefits and justifications for implementing a fiber optic system such as improved reliability,

scalability, and integration with District TMC communications infrastructure and consistent with PDPM guidelines for a Project Report not limited to the following:

- i. Document and analyze alternatives for fiber optic deployment, such as:
 - Mainline, distribution, and lateral fiber configurations.
 - Installation methods for fiber optic cables such as pull through conduit, bundled micro-duct, direct burial with armored cable.
 - Installation methods for fiber optic conduit such as trench, horizontal directional drilling, in structure, attached to structure.
 - Vault and termination point locations (including vault vs. cabinet, environmental protection, and accessibility).
 - ii. Present a preliminary concept design, showing separate depiction of the fiber optic system from other electrical systems (conduits, pull boxes) on plan exhibits.
 - iii. Include span planning guidelines such as establishing minimum bend radii, innerduct sizing, and tracer wire requirements.
 - iv. Incorporate reliability and topology analysis, comparing star vs. ring configurations in terms of redundancy, scalability, and cost.
 - v. Provide cost estimates for alternatives, capturing materials, installation, vaults, splicing, and environmental protection, to support solution evaluation.
- d. Standards Design Standard Decision Document (DSDD)
- i. Based on the Task Order complexity and challenges and as required, Consultant shall prepare and document any exceptions for and/or deviations from the Highway Design Manual or Caltrans Design Standards by completing and submitting the DSDD to the Caltrans Task Order Manager for review and comments .
 - ii. The Consultant shall identify all proposed nonstandard design features and secure formal written approval for such deviations during the engineering design phases. For any deviation that significantly impacts the project's core concept or cost estimate, the Consultant must submit a detailed DSDD justifying the variance; this approval must be finalized before proceeding to subsequent development stages to ensure project feasibility and cost estimating accuracy.
 - iii. Consultant Task Order Manager shall coordinate any deferrals and ensure they are documented and approved by the appropriate Caltrans approval authority for design deviations consistent with the current Design Delegation Agreement between the Caltrans Division of Design and the Caltrans District Director.

- e. Based on the Task Order, the expected deliverables shall include but not limited to:
 - i. Electrical Systems Technical Memorandum
 - ii. Preliminary Electrical Concept Plans (as applicable)
 - iii. Preliminary Electrical Quantities and Cost Estimates for the various alternatives
 - iv. Existing Conditions Assessment Summary
 - v. Utility Coordination Summary (as related to electrical services)
- f. Cost Estimates for Project Alternatives
 - i. The Consultant shall prepare project cost estimates in accordance with applicable standards and guidelines. For the purposes of this Agreement, the term “project cost estimate” shall include all capital outlay costs, such as right-of-way acquisition, structures, landscaping, and other permanent improvements. Project cost estimates shall not normally include capital outlay support costs.
 - ii. The Consultant shall ensure that cost estimates are accurate, transparent, and defensible. Estimates must not be artificially reduced to remain within funding limits or to create the appearance of additional funding availability for the District. Likewise, estimates must not be artificially inflated beyond the standard contingency percentages specified in this Scope unless such increases are supported with adequate and documented justification.
 - iii. The Consultant shall incorporate appropriate levels of contingency consistent with project development stage, complexity, and risk. All assumptions, methodologies, and data sources used in the preparation of the cost estimate shall be clearly documented and submitted with the estimate for review and approval.

C. Required Services – Prepare PS&E for RTL

1. Update Electrical Engineering Studies for PS&E

- a. Consultant shall develop project electrical design while requiring the continuous review and update of data. Examples of information that should be obtained for the development of preliminary electrical plans are listed as follows: Mapping and surveys data, recommendations from TMS support, electrical systems, and electrical maintenance.

2. PS&E Development

a. General Requirements

- i. The Consultant shall develop complete electrical-related PS&E documents in accordance with the Caltrans Electrical Systems Design Manual (ESDM), the Plans Preparation Manual (PPM), the Standard Specifications, and applicable Caltrans design policies, procedures and standards.
- ii. The Consultant shall coordinate with Caltrans Task Order Manager including the District Electrical Division, Traffic Operations, and Maintenance personnel throughout PS&E development to ensure compliance with operational and maintenance requirements.
- iii. The Consultant shall have a good working knowledge of computer graphic programs that shall produce high level graphic/photo-realistic simulations and the ability to produce professionally formatted reports and studies.
- iv. Consultants PS&E shall incorporate the Department-furnished material for traffic signal and ramp meter controller assemblies into the electrical design.
- v. The Consultant shall coordinate with the utility companies to apply for electrical service, as needed.
- vi. Electrical plans shall include new or modified systems such as signal and lighting systems, lighting systems, ramp metering systems, camera systems, changeable message sign systems, flashing beacon systems, traffic monitoring station systems, roadside weather information systems, highway advisory radio systems, and fiber optic systems.

b. Plans Development

- i. The Consultant shall provide professional electrical engineering services necessary to develop a complete PS&E package, incorporating prior environmental approvals, design decisions, project development documents, and conducting additional electrical studies as necessary.
- ii. Before beginning plan development, the Consultant shall coordinate and collaborate with the following Caltrans functional offices to obtain recommendations and input:
 - 1) Caltrans Division of Traffic Operations, Traffic Management System Support
 - 2) Caltrans Division of Traffic Operations, Electrical Systems
 - 3) Caltrans Division of Maintenance, Electrical

- iii. Based on the Task Order and project complexity, Consultant shall prepare detailed plan sheets showing electrical systems separately from other disciplines, including but not limited to:
 - 1) Traffic signals, lighting, and service cabinets.
 - 2) Intelligent Transportation Systems (ITS) devices such as CCTV, detectors, communication equipment.
 - 3) Conduit, pull boxes, splice vaults, and electrical routing.
 - 4) Power service connections, grounding, and bonding details.
 - 5) Fiber optic and communication system layouts (based on project scope).
 - iv. Consultants project plans shall depict electrical systems in compliance with ESDM chapter requirements such as conduit separation, pull box placement, bend radius for fiber optics.
 - v. Project plans shall provide and call out general notes, details, and legends consistent with Caltrans CADD and plan preparation standards.
- c. Specifications & Special Provisions
- i. The Consultant shall provide professional electrical engineering services necessary to develop a complete special provision for electrical work not fully covered by the Caltrans Standard Specifications, including but not limited to:
 - 1) Traffic signal controller equipment and cabinets.
 - 2) Lighting poles, luminaires, and foundations.
 - 3) ITS devices and communication systems.
 - 4) Protective electrical devices (surge suppression, fault interrupters, grounding).
 - ii. Special Provisions for each project shall incorporate applicable Caltrans Standard Plans and Standard Specifications and clearly identify deviations or project-specific requirements.
 - iii. Consultant shall develop materials and installation specifications consistent with ESDM requirements for safety, durability, and maintainability.
- d. Cost Estimate (Engineer's Estimate)
- i. The Consultant shall provide professional electrical engineering services necessary to develop a complete and biddable Engineer's Estimate.
 - ii. Consultant shall prepare a detailed engineer's estimate of probable construction cost for all electrical work, using current Caltrans bid item codes where available.

- iii. Engineer's Estimate shall include quantities for conduits, conductors, poles, service equipment, pull boxes, communication cable, vaults, ITS devices, and all incidental materials.
- iv. Engineer's Estimate shall be updated at each submittal milestone (35%, 65%, 95%, and Final PS&E).

D. Required Services - Work Breakdown Structure Activities

1. Caltrans Workplan Standards Guide

- a. Task Orders are based on the Caltrans Workplan Standards Guide (WSG). The latest WSG is found in the Guide to Project Delivery Workplan Standards Guide, which is available from the Caltrans' Publication Unit and on the Internet at https://dot.ca.gov/-/media/dot-media/programs/project-management/documents/workplan_standards_guide_all1y1.pdf.
- b. The WSG references the Work Breakdown Structure (WBS) categories, which are potential and related work activities applicable to this Agreement.
- c. The WSG references WBS categories which present the potential and related work activities that the Consultant may be required to perform. All revisions to the current version of the WBS shall apply during the life of this Agreement.

2. Work Breakdown Structure

- a. The following WBS activities are applicable to the work described in the Scope of Work for this Agreement, which is comprised of the base scope of template, and Attachment 1B:

<u>WBS Code</u>	<u>WBS Title</u>
160.10.70	Traffic Studies
180.05.05	Updated Draft Project Report
185.15.05	Roadway and Miscellaneous Design
230.15.15	Traffic Electrical Plans
230.35.20	Electrical Specifications
230.40.25	Electrical Quantities and Estimates
255.10.35	Updated Electrical PS&E
265.55	Advertised Contract
285.10	Other Functional Support (See Note 1)

Note 1. Work performed for these WBS activities will be limited to providing design support services throughout the construction phase.

E. Consultant Personnel Requirements**1. General Requirements**

- a. The Consultant shall provide personnel with electric design subject specific and supporting expertise, electrical design experience, and technical assistance, including but not limited to all subject areas identified in the Attachments SOWs.
- b. The Consultant shall provide experienced staff at the advanced journey or senior level, familiar with Caltrans procedures, including but not limited to:
 - i. Highway electrical design for various electrical systems, such as signal and lighting systems, lighting systems, ramp metering systems, camera systems, changeable message sign systems, flashing beacon systems, traffic monitoring station systems, roadside weather information systems, highway advisory radio systems, and fiber optic systems.
 - ii. Evaluate lighting levels using computer-based lighting software to meet the requirements in the Traffic Operations Manual, Chapter 205 Lighting and Sign Illumination Systems
 - iii. Task Order management assistance
 - iv. GIS content development and analysis
- c. In addition to the personnel listed in the base scope of work, Attachment 1, below is a list of proposed personnel classifications required to fulfill the required services during the term of the Agreement as outlined, however, this is not an exclusive list of the personnel classifications of electrical design services that may be requested. Caltrans reserves the right to add/or delete personnel from this list.

2. Consultant Licensed Electrical Engineer or Licensed Civil Engineer (Consultant Responsible Person)

- a. The Consultant Responsible Person shall be a Licensed Professional Engineer (Civil or Electrical) Registered in the State of California and in good standing with the Board of Registration during the Agreement period. The Consultant Responsible Person (who may be the Task Order Manager) shall be employed by the Consultant or one of its Subconsultants at the time deliverables are submitted to Caltrans for review and acceptance. The Consultant Responsible Person shall have a minimum of five (5) years of experience, acceptable to Caltrans, performing duties under similar electrical design services contracts. Of these five (5) years, at least two (2) years shall have been in a lead worker capacity.

- b. For each Task Order, if required by the Caltrans Contract Manager, the Consultant shall designate a Consultant Responsible Person.
- c. The Consultant Responsible Person shall have substantial knowledge and experience in electrical design including knowledge in fiber optic cable system design.
 - i. *Substantial knowledge* is defined as possessing a bachelor's degree or higher in Civil Engineering or Electrical Engineering.
 - ii. *Substantial experience* is defined as having at least five (5) years of relevant experience, including work in Electrical Design. This experience must be sufficient to ensure the ability to manage and advise on a comprehensive range of Electrical Design activities and to demonstrate expertise in a variety of Electrical scenarios, including those involving unusual or complex roadway features and maintenance-related work, as outlined in the Scope of Work (SOW) of this agreement.
- d. Demonstrated experience, acceptable to Caltrans, must be gained from multiple projects performed at different times in serial (not parallel) order. Overlapping or concurrently held experience shall not be double-counted toward the total years of applicable experience. Relevant experience must be clearly detailed for each project listed in the resume section of the Statement of Qualifications (Section E of Standard Form 330). Each SF330 resume shall include a brief description of the project and provide specific details of the individual's role, emphasizing responsibilities and accomplishments that best demonstrate the capability and experience relevant to the proposed role on this Agreement and consistent with the requirements outlined in the RFQ.
- e. In addition to other specified responsibilities, the Consultant Responsible Person shall possess knowledge of and perform all tasks related to electrical services, including but not limited to the following:
 - i. Lighting system design and lighting analysis calculations
 - ii. California Electrical Code
 - iii. Knowledge and familiarity with all Caltrans electrical references and design related guidance.
 - iv. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - v. Knowledgeable in electrical technical support services related scope.
 - vi. Demonstrated experience in highway electrical design for various electrical systems, such as signal and lighting systems, lighting systems, ramp metering systems, camera systems, changeable message sign systems, flashing beacon systems, traffic monitoring station systems, roadside weather information systems, highway advisory radio systems, and fiber optic cable system design.

- f. The Consultant Responsible Person shall be accountable for the overall technical quality, coordination, and timely delivery of electrical Services performed under the assigned Task Order. Responsibilities include, but are not limited to:
 - i. Serving as the primary technical authority and liaison between the Consultant team and Caltrans for all electrical related matters.
 - ii. Ensuring that all deliverables meet the standards, requirements, and deadlines specified in the Task Order and applicable Caltrans guidelines.
 - iii. Coordinating the work of other Consultant and Subconsultant staff involved in the Task Order.
 - iv. Reviewing and approving technical analyses, reports, and calculations prior to submittal.
 - v. Addressing Caltrans PDT comments, concerns, or required revisions in a timely and technically sound manner.
 - vi. Confirming that staff assigned to the Task Order are properly qualified and their work aligns with the scope and expectations of the Agreement.
 - vii. Participating in meetings, field reviews, or teleconferences as requested by Caltrans.

3. Consultant Task Order Lead person.

- a. The Consultant Task Order Lead (who may also serve as the Consultant Responsible Person) shall be assigned to perform or oversee all work associated with a specific Task Order. This key personnel individual shall serve as the primary point of contact for the assigned Task Order and must be available as needed to communicate with Caltrans.
- b. The Consultant Task Order Lead shall possess the same qualifications and demonstrated experience required of the Consultant Responsible Person.

4. Consultant Civil Design Engineer (Electrical) - Unlicensed

- a. Consultant Civil Design Engineer (Electrical) must be a graduate from a (4) four-year curriculum in electrical or civil engineering, accredited by the Accreditation Board for Engineering Technology (ABET). Consultant Civil Design Engineer (Electrical) shall possess a documented three (3) years of demonstrated experience acceptable to Caltrans in performing electrical studies and analysis is required.
- b. Consultant Civil Design Engineer (Electrical) assisting in performing electrical activities shall also have all knowledge, skills, experience, and approvals required by Permits, Licenses, Agreements or Certifications that apply to and is (are) relevant to each Task Order.
- c. Consultant Civil Design Engineer (Electrical) shall be experienced in the use of Caltrans compatible engineering drafting design software and Computer Aid Drafting

- and Design (CADD) based software including MicroStation AutoCAD Civil-3D and computer aided civil engineering and surveying system (CaiCE), AutoCAD Civil-3D.
- d. In addition to other specified responsibilities, the Consultant Civil Design Engineer (Electrical) shall possess preliminary knowledge of and perform tasks related to all aspects of electrical services, including but not limited to the following:
- i. Lighting system design and lighting analysis including calculations
 - ii. California electrical Code
 - iii. Knowledge and familiarity with all Caltrans electrical references and design related guidance.
 - iv. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - v. Knowledgeable in electrical technical support services related scope.
 - vi. Ability to assist the Consultant Responsible Person in highway electrical design for various electrical systems, such as signal and lighting systems, lighting systems, ramp metering systems, camera systems, changeable message sign systems, flashing beacon systems, traffic monitoring station systems, roadside weather information systems, highway advisory radio systems, and familiarity with fiber optic cable systems.

F. Manuals, Documents, Publications and Internet sites

In addition to the manuals, documents and guidance referenced in the base scope of work, Attachment 1 the following manuals, documents and links to internet sites are referenced in association with the work in this Agreement. The list is not all-inclusive, but is intended to illustrate the types of reference material and sources of information.

- a. Traffic Operations Manual, Chapter 205 Lighting and Sign Illumination Systems
<https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/trafficops/202501-ch-205-part-1-roadway-lighting-all.pdf>
- b. Electrical Systems Design Manual
https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/manuals-policy-data-reports/electrical-systems_design_manual_first_edition_july-2020-all.pdf
- c. Ramp Metering Design Manual
<https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/ramp-metering/202210-rmdm-all.pdf>

Attachment 1D – Traffic Design Services

**SCOPE OF WORK/DELIVERABLES
ROADWAY DESIGN & RELATED PROJECT DEVELOPMENT and
CONSTRUCTION DESIGN SUPPORT SERVICES**

**For Caltrans, District 10, Division of Project Development
On-Call Contract**

A. Purpose of Work.

1. Traffic Design

- a) The Consultant shall provide consultation, research, and professional and technical engineering services in Traffic Design necessary for roadway design and related project development activities on the State Highway System (SHS), including maintenance facilities. This work will be performed in coordination with Caltrans subject matter experts and the Caltrans Project Development Team (PDT).
- b) For the purpose of this Scope of Work, Traffic Design is defined as consisting of the following key elements: Traffic Control & Plans (Signing, Pavement Delineation, TMPs, Traffic Handling/Staging, plans), Work Zone Design (Temporary devices, safe passage, ADA compliance), Regulatory Standards (California Manual on Uniform Traffic Control Devices (CAMUTCD) for signs, markings,), and including assisting with “Complete Streets” and multimodal considerations.
- c) Exclusion of Work
In addition to the Exclusions of Work described in the Base SOW, Attachment 1, the following traffic safety and traffic operations activities and reports listed below will be provided by Caltrans and are therefore excluded from this SOW:
 - i. Traffic accident report
 - ii. Transportation system management and operations
 - iii. Traffic forecasting and Modeling
 - iv. Travel demands and forecasting
 - v. Route concept report
 - vi. Regional traffic planning
 - vii. Traffic operations analysis
 - viii. Multi modal studies
 - ix. Traffic management plans
 - x. Ramp metering design

The Consultant shall collaborate with the Caltrans District Division of Traffic on system and corridor planning, and on transportation deficiency data that validates the need for the project development. Depending on the complexity and specific circumstances of each project, Consultant shall collaborate with the Caltrans Task Order Manager to indicate the need and advice for more detailed traffic studies and safety investigations data that would be performed by Caltrans.

B. Required Services – Traffic Design Engineering Studies

1. General Services

- a) Potential work activities, whether comprising all or part of a project, may vary in scope and size and may involve any type of improvement to the State transportation system. These improvements may include, but are not limited to, roadway rehabilitation, facility widening and/or realignment, relocation of existing facilities, and the construction of new infrastructure. Each Task Order will define the specific project location, project limits, purpose, expected outcomes, deliverables, period of performance, project schedule, and detailed scope of work to be performed.
- b) The Consultant shall review all information compiled during the Project Initiation Document (PID) phase, as well as assess any preliminary data gaps that may need to be addressed during the development of the Project Report and associated environmental constraints. Using available data and in accordance with Caltrans policies and directives, the Consultant shall conduct analyses to define and address the project's need, purpose, and general scope.

2. Request for Traffic Planning, Studies, and Reports

- a) Consistent with the Exclusion of Work section described herein, the Consultant shall submit requests for applicable Traffic Studies or reports to the Caltrans District for all traffic-related products necessary to perform its deliverables.
- b) Consultant shall meet and confer with the Caltrans PDT to develop project constraints and information required to determine the extent of the existing problem and future project needs.

3. Performing Engineering Studies for Project Report

- a. Updated Project Information
Consultant shall review the information assembled and developed during the PID as well as a preliminary assessment of what additional information may be required during the project report and environmental document development phase. Based on project complexity, the Consultant shall update items below evaluated during the PID phase.

b. Traffic Design Recommendations and Project Report Estimate

As per Task Order and project needs, the Consultant shall prepare the following traffic-related Traffic Design products:

- i. Overhead sign work – Evaluate existing conditions and determine whether to replace existing sign structure or recommend the need for new sign structure or panel.
- ii. Roadside sign work – inventory existing roadside signs and determine whether replacement or installation of new roadside signs are required per project scope.
- iii. Pavement marking and striping work – Evaluate the condition of existing pavement markings and striping and determine whether they conform to current Caltrans policies and criteria. (e.g., wrong-way markers at off-ramps, use of traffic stripe tape for lane lines, etc.)
- iv. Traffic handling plans - Evaluate the need for traffic handling plans, identify the scope of staging, and assess the potential impacts of various staging strategies.
- v. Motorist information and Detour Plans - Evaluate the need for motorist information plans and/or detour plans.

c. Standards Design Standard Decision Document (DSDD)

- i. Based on the Task Order complexity, challenges and as required, Consultant shall prepare and document any exceptions for and/or deviations from the Highway Design Manual or Caltrans Design Standards by completing and submitting the DSDD to the Caltrans Task Order Manager for review and comments .
- ii. The Consultant shall identify all proposed nonstandard design features and secure formal written approval for such deviations during the engineering design phases. For any deviation that significantly impacts the project's core concept or cost estimate, the Consultant must submit a detailed DSDD justifying the variance; this approval must be finalized before proceeding to subsequent development stages to ensure project feasibility and cost estimating accuracy.
- iii. Consultant Task Order Manager shall coordinate any deferrals and ensure they are documented and approved by the appropriate Caltrans approval authority for design deviations consistent with the current Design Delegation Agreement between the Caltrans Division of Design and the Caltrans District Director.

d. **Coordination with Caltrans Division of Environmental**

The preliminary design is used to develop base maps for the required environmental studies. Consultant will provide mapping and associated documents for areas of potential excavation for sign foundations as needed. Consultant shall review limits of work to ensure construction area signs are within the environmental study area.

4. Cost Estimates for Project Alternatives

- a. The Consultant shall prepare detailed construction cost estimates for traffic design elements for each alternative under consideration and in accordance with applicable standards and guidelines. For the purposes of this Agreement, the term “project cost estimate” shall include all capital outlay costs, such as right-of-way acquisition, structures, landscaping, and other permanent improvements. Project cost estimates shall not normally include capital outlay support costs.
- b. The Consultant shall ensure that cost estimates are accurate, transparent, and defensible. Estimates must not be artificially reduced to remain within funding limits or to create the appearance of additional funding availability for the District. Likewise, estimates must not be artificially inflated beyond the standard contingency percentages specified in this Scope unless such increases are supported with adequate and documented justification.
- c. The Consultant shall incorporate appropriate levels of contingency consistent with project development stage, complexity, and risk. All assumptions, methodologies, and data sources used in the preparation of the cost estimate shall be clearly documented and submitted with the estimate for review and approval.

C. Required Services – Prepare PS&E for RTL

- a. Consultant shall develop project design documents, requiring continuous review and updating of data. Information to be obtained for the development of preliminary plans may include layouts, cross sections, basemaps, staging plans, staging cross sections, geotechnical coordination for overhead signs, and available routes for rerouting traffic with motorist information detour plans.
- b. Consultant shall develop project PS&E design documents not limited to the following:
 - i. Sign plans that show overhead sign and roadside sign work.
 - ii. Sign panel detail plans.
 - iii. Pavement Delineation plans and detail plans.
 - iv. Traffic handling plans.
 - v. Construction Area Sign plans
 - vi. Motorist Information plans
 - vii. Detour plans.

- viii. Quantity plans for the above items.
- ix. Determine relevant Caltrans Standard Plan sheet.
- x. Develop project special provisions for the proposed traffic design work.

D. Required Services - Work Breakdown Structure Activities

1. Caltrans Workplan Standards Guide

- a) Task Orders are based on the Caltrans Workplan Standards Guide (WSG). The latest WSG is found in the Guide to Project Delivery Workplan Standards Guide, which is available from the Caltrans' Publication Unit and on the Internet at https://dot.ca.gov/-/media/dot-media/programs/project-management/documents/workplan_standards_guide_all1y1.pdf.
- b) The WSG references the Work Breakdown Structure (WBS) categories, which are potential and related work activities applicable to this Agreement.
- c) The WSG references WBS categories which present the potential and related work activities that the Consultant may be required to perform. All revisions to the current version of the WBS shall apply during the life of this Agreement.

2. Work Breakdown Structure

- a) The following WBS activities are applicable to the work described in the Scope of Work for this Agreement, which is comprised of the base scope of template, and Attachment 1D:

WBS Code	WBS Title
160	PERFORM PRELIMINARY ENGINEERING STUDIES AND DRAFT PROJECT REPORT
160.05	UPDATED PROJECT INFORMATION
160.05.05	APPROVED PID REVIEW
160.05.35	PROJECT COST ESTIMATE REVIEW
160.05.99	OTHER PROJECT INFORMATION PRODUCTS
160.10	ENGINEERING STUDIES
160.10.70	TRAFFIC STUDIES
160.10.99	OTHER ENGINEERING STUDIES
160.15	DRAFT PROJECT REPORT
160.15.05	COST ESTIMATES FOR ALTERNATIVES
160.15.25	DRAFT PROJECT REPORT CIRCULATION, REVIEW, AND APPROVAL

WBS Code	WBS Title
230	PREPARE DRAFT PS&E
230.05	DRAFT ROADWAY PLANS
230.05.55	STANDARD PLANS SELECTION (X Sheets - Attach Revised Standard Plans)

230.05.60	STAGE CONSTRUCTION AND DETOUR PLANS OR TRAFFIC HANDLING PLANS (X Sheets)
230.15	DRAFT TRAFFIC PLANS
230.15.05	SIGNING AND PAVEMENT DELINEATION PLANS (X Sheets)
230.15.10	CONSTRUCTION AREA SIGNS PLANS (X Sheet)
230.15.99	OTHER DRAFT TRAFFIC PLAN PRODUCTS
230.35	DRAFT SPECIFICATIONS
230.35.15	TRAFFIC SPECIFICATIONS
230.40	DRAFT PS&E QUANTITIES AND ESTIMATES
230.40.20	TRAFFIC QUANTITIES AND ESTIMATES
230.60	UPDATED PROJECT INFORMATION FOR PS&E PACKAGE
230.60.10	OTHER REVIEWS AND UPDATE OF PROJECT INFORMATION

WBS Code WBS Title

255	CIRCULATE, REVIEW AND PREPARE FINAL DISTRICT PS&E PACKAGE
255.10	UPDATED PS&E PACKAGE
255.10.15	UPDATED TRAFFIC PS&E
255.40	RESIDENT ENGINEER'S PENDING FILE

WBS Code WBS Title

285	CHANGE ORDER ADMINISTRATION
285.10	FUNCTIONAL SUPPORT (See Note 1)
285.10.15	OTHER FUNCTIONAL SUPPORT (See Note 1)

Note 1. Work performed for these WBS activities will be limited to providing design support services throughout the construction phase.

E. Consultant Personnel Requirements

1. General Requirements

- a. The Consultant shall provide personnel with Traffic Design subject specific and supporting expertise, transportation experience, and technical assistance, including but not limited to all subject areas identified in the Attachments SOW.
- b. The Consultant shall provide experienced staff at the advance journey or senior level, familiar with Caltrans procedures, including but not limited to:
 - i. Overhead sign structure design and application, including sign panel detail plans.
 - ii. Roadside sign design and application, including sign panel detail plans.
 - iii. Pavement markings and striping design and application
 - iv. Development of traffic handling plans in conjunction with staged construction of the project.
 - v. Develop motorist information plans and coordinate acceptable routes.

- vi. Develop detour plans in coordination with staging and traffic handling plans.
 - vii. Develop construction area plan sheets with relevant advanced warning and funding signs.
 - viii. Develop quantity plan sheet for the above listed plans.
 - ix. Develop AASHTOWare Project estimate for traffic design items using Caltrans Contract Item Codes.
 - x. Develop project special provisions for the proposed traffic design work.
- c. In addition to the personnel listed in the Base SOW, below is a list of proposed personnel classifications required to fulfill the required services herein by Caltrans during the term of the Agreement as outlined; however, this is not an exclusive list of the personnel classifications of Traffic Design Services that may be requested. Caltrans reserves the right to add/or delete personnel from this list.

2. Consultant Licensed Civil Engineer (Consultant Responsible Person)

- a. The Consultant's Licensed Civil Engineer shall be employed by the Consultant or one of its Subconsultants at the time deliverables are submitted to Caltrans for review and acceptance. The Licensed Civil Engineer shall have a minimum of five (5) years of experience, acceptable to Caltrans, performing duties under similar Traffic Design and Traffic Operations Services contracts. Of these five (5) years, at least two (2) years shall have been in a lead worker capacity.
- b. For each Task Order, if required by the Caltrans Contract Manager, the Consultant shall designate a Consultant Responsible Person. The Consultant's Licensed Civil Engineer is hereby designated as the Consultant Responsible Person, with all associated qualifications and responsibilities.
- c. The Consultant's Licensed Civil Engineer shall have substantial knowledge and experience in Traffic Design and Traffic Operations and Project Development Support Services, including familiarity with Traffic Design and Traffic Operations quality and environmental constraints.
 - i. *Substantial knowledge* is defined as possessing a Bachelor's degree or higher in Civil Engineering.
 - ii. *Substantial experience* is defined as having at least five (5) years of relevant experience, including work in Traffic Design and Traffic Operations and Project Development Support Services. This experience must be sufficient to ensure the ability to manage and advise on a comprehensive range of project development activities and to demonstrate expertise in a variety of Traffic Design and Traffic Operations scenarios, including those involving unusual or complex roadway

features and maintenance-related work, as outlined in the Scope of Work (SOW) of this agreement.

- d. Demonstrated experience, acceptable to Caltrans, must be gained from multiple projects performed at different times in serial (not parallel) order. Overlapping or concurrently held experience shall not be double counted toward the total years of applicable experience. Relevant experience must be clearly detailed for each project listed in the resume section of the Statement of Qualifications (Section E of Standard Form 330). Each SF330 resume shall include a brief description of the project and provide specific details of the individual's role, emphasizing responsibilities and accomplishments that best demonstrate the capability and experience relevant to the proposed role on this Agreement and consistent with the requirements outlined in the RFQ.
- e. In addition to other specified responsibilities, the Consultant's Licensed Civil Engineer shall possess knowledge of and perform all tasks related to Traffic Design, including but not limited to the following:
 - i. Knowledge and familiarity with Caltrans Statewide and District policies relevant to signs, pavement delineation, and traffic control.
 - ii. Knowledge and familiarity with Caltrans Plans Preparation Manual.
 - iii. Knowledge and familiarity with all Caltrans Traffic Design references and design related guidance.
 - iv. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - v. Knowledge and familiarity with current CA MUTCD, Caltrans Highway Design Manual, Caltrans Standard Plans, and Caltrans Design Information Bulletins.
- f. The Consultant Responsible Person shall be accountable for the overall technical quality, coordination, and timely delivery of Traffic Design Services performed under the assigned Task Order. Responsibilities include, but are not limited to:
 - i. Serving as the primary technical authority and liaison between the Consultant team and Caltrans for all Traffic Design related matters.
 - ii. Ensuring that all deliverables meet the standards, requirements, and deadlines specified in the Task Order and applicable Caltrans guidelines.
 - iii. Overseeing and coordinating the work of other Consultant and Subconsultant staff involved in the Task Order.
 - iv. Reviewing and approving technical analyses, reports, and calculations prior to submittal.
 - v. Addressing Caltrans PDT comments, concerns, or required revisions in a timely and technically sound manner.
 - vi. Confirming that staff assigned to the Task Order are properly qualified and their work aligns with the scope and expectations of the Agreement.

- vii. Participating in meetings, field reviews, or teleconferences as requested by Caltrans.

3. Consultant Task Order Lead person.

- a. The Consultant Task Order Lead (who may also serve as the Consultant's Licensed Civil Engineer or the Consultant Responsible Person) shall be assigned to perform or oversee all work associated with a specific Task Order. This individual shall serve as the primary point of contact for the assigned Task Order and must be available as needed to communicate with Caltrans.
- b. The Consultant Task Order Lead shall possess the same qualifications and demonstrated experience required of the Consultant's Licensed Civil Engineer.

4. Consultant Civil Design Engineer (Traffic) - Unlicensed

- a. Consultant Civil Design Engineer (Traffic) must be a graduate from a four-year curriculum in civil engineering, accredited by the Accreditation Board for Engineering Technology (ABET) Consultant Civil Design Engineer (Traffic) shall possess a documented two (2) years of demonstrated experience acceptable to Caltrans in performing Traffic Design studies and analysis is required.
- b. Consultant Civil Design Engineer (Traffic) assisting in performing Traffic Design shall also have all knowledge, skills, experience, and approvals required by Permits, Licenses, Agreements or Certifications that apply to and is (are) relevant to each Task Order.
- c. Consultant Civil Design Engineer (Traffic) shall be experienced in the use of Caltrans compatible engineering drafting design software and Computer Aid Drafting and Design (CADD) based software including MicroStation AutoCAD Civil-3D and computer aided civil engineering and surveying system (CaiCE), AutoCAD Civil-3D.
- d. In addition to other specified responsibilities, the Consultant Civil Design Engineer (Traffic) shall possess preliminary knowledge of and perform tasks related to all aspects of Traffic Design including but not limited to the following:
 - i. Development of Staging and Traffic Handling strategies.
 - ii. Suitable pavement delineation and signs strategies specific to projects.
 - iii. Knowledge and familiarity with all Caltrans Traffic Design, Traffic Safety, and Traffic Operations references and design related guidance.
 - iv. Knowledge of Caltrans Standard Plans, Standard Specifications, Design Policies, and Construction Manual.
 - v. Knowledgeable in Traffic Design technical support services related scope.

F. Manuals, Documents, Publications and Internet sites

In addition to the manuals, documents and guidance referenced in the base scope of work, Attachment 1 the following manuals, documents and links to internet sites are referenced in association with the work in this Agreement. The list is not all-inclusive but is intended to illustrate the types of reference material and sources of information.

1. Caltrans Internet Webpage:
<http://www.dot.ca.gov>
2. California MUTCD:
<https://dot.ca.gov/programs/safety-programs/camutcd>
3. Caltrans Standard Plans:
<https://design.onramp.dot.ca.gov/2023-standards>
4. Caltrans Design Information Bulletins webpage:
<https://dot.ca.gov/programs/design/design-information-bulletins-dibs>

Attachment 1E – Landscape Architecture Design Services

**SCOPE OF WORK/DELIVERABLES
ROADWAY DESIGN & RELATED PROJECT DEVELOPMENT and
CONSTRUCTION DESIGN SUPPORT SERVICES**

**For Caltrans, District 10, Division of Project Development
On-Call Contract**

A. Purpose of Work.

1. Landscape Architecture Design

- a) The Consultant shall provide consultation, research, and professional and technical landscape architecture design services responsible for the implementation of Caltrans' policies, procedures, and programs for highway planting. Landscape Architecture design work is defined as including new highway planting, replacement highway planting, roadside rehabilitation, highway planting revegetation, and required mitigation planting, irrigation system design, plant establishment, wildflower planting, erosion control, roadside safety improvements, safety roadside rest areas, vista points, park and ride facilities, project aesthetics (including structures aesthetics), contour grading, and slope treatment. This work will be performed in coordination with Caltrans subject matter experts and the Caltrans Project Development Team (PDT).
- b) The Consultant shall provide landscape design services that help integrate a transportation facility within its setting, creating a safe, sustainable, efficient, and visually pleasing travel experience for all who live, work, and travel in California. As part of the Project Development Team, Landscape Architect will play a vital role in multi-modal transportation and facility design, visual impact assessments, aesthetics, mitigation, roadside management, water and natural resource conservation, ecological restoration, site planning and development, and developing strategies for including livability and sustainability principles into project delivery.

B. Required Services – Landscape Architecture Design Studies

1. General Services

- a. The Consultant will participate in the project development process that will include evaluating and addressing impacts to aesthetic, environmental, scenic, and community values in balance with transportation goals. The Consultant shall offer a broad range of skills to identify innovative design solutions that address Landscape challenges along with competing requirements.

- b. Potential work activities, whether comprising all or part of a project, may vary in scope and size and may involve any type of improvement to the State transportation system. These improvements may include, but are not limited to, roadway rehabilitation, facility widening and/or realignment, relocation of existing facilities, and the construction of new infrastructure. Each Task Order will define the specific project location, project limits, purpose, expected outcomes, deliverables, period of performance, project schedule, and detailed scope of work to be performed.
- c. The Consultant shall review all information compiled during the Project Initiation Document (PID) phase, as well as assess any preliminary data gaps that may need to be addressed during the development of the Project Report and associated impacts to aesthetic, scenic, community values and environmental constraints. Using available data and in accordance with Caltrans policies and directives, the Consultant shall conduct Landscape architectural analyses to define and address the project's need, purpose, and general scope.
- d. Consultant shall collaborate with the Caltrans District Landscape Architect on traveler and worker safety, recurrent maintenance activity elimination, site planning, multimodal transportation accommodation, and comprehensive corridor plan elements for the project.

2. Performing Landscape Architecture Design Studies for Project Report

Consultant shall perform landscape architecture studies with the focus on creating a balanced, integrated, and multi-modal transportation network that coexists harmoniously with its surroundings. These studies shall integrate transportation facilities with the natural and built environment, improving safety, enhancing aesthetics and environmental sustainability, and contributing to community livability including the following:

- a. Updated Project Information:
Consultant shall review the information assembled and developed during the PID as well as perform a preliminary assessment of what additional information may be required during the project report and environmental document development phase.
- b. Visual Impact Assessment (VIA) Questionnaire:
The VIA Questionnaire is used to determine the level of reporting required to perform a comprehensive visual study as part of the NEPA/CEQA process. Consultant shall determine the level of visual assessment required for the project by completing a VIA Questionnaire. The VIA Questionnaire must be completed under the direction of a licensed landscape architect.
- c. Visual Impact Assessment (VIA):
Consultant shall prepare a VIA at the level determined by the VIA Questionnaire. The VIA must be completed under the direction of a licensed landscape architect.

d. Scenic Resource Evaluation:

For projects located on the State Scenic Highways, Consultant shall complete a Scenic Resource Evaluation under the direction of a licensed landscape architect and addressing impacts to aesthetic, environmental, scenic, and community values in balance with transportation goals.

e. Visualization:

The Consultant shall conduct a visual assessment of the route to determine if it meets current scenic highway criteria and to what extent, if any, development has intruded on the scenic views. Depending on project complexity, the Consultant will prepare 3D modeling of the proposed transportation project. The project visualization will be used for visual communication with project sponsors, public engagement and other outreach purposes.

f. Tree Appraisal:

The Consultant shall provide certified Arborist(s) to prepare tree appraisals in accordance with the guide for plant appraisal. The Arborist must hold the Tree and Plant Appraisal Qualification credential and utilize methodologies outlined by the Council of Tree and Landscape Appraisers as represented within the [International Society of Arboriculture](#).

g. Design Concept:

Consultant shall prepare a Design Concept for highway planting and roadside rehabilitation including roadside landscape project. Consultant shall develop the Design Concept in an iterative and collaborative process led by licensed Consultant Landscape Architects, involving extensive coordination with a Caltrans multi-disciplinary Project Development Team, local agencies, and the public.

The Design Concept is used when the landscape design is part of an engineering roadway project. The purpose of the Design Concept is to identify project purpose and need, together with methods to address these needs, and to ensure that Caltrans' objectives are achieved, including enhancing aesthetics, maintaining environmental, scenic, and community values, and enhancing traveler and worker safety. The Design Concept must be compatible with the elements of the comprehensive corridor plan if available.

h. Design Intent Statement:

Consultant shall prepare a Design Intent Statement developed from the Design Concept. The Design Intent Statement is defined as a clear, concise document that outlines the specific objectives, guiding principles, and proposed solutions for a project's aesthetic and functional design elements.

The Design Intent Statement shall explain the purpose for the planting and irrigation work, as well as maintenance requirements for use by construction and maintenance personnel. When referring to the Design Intent Statement, it should allow future

construction and maintenance staff to make decisions consistent with the original design concept.

- i. StandardsDesign Standard Decision Document (DSDD)
 - i. Based on the Task Order complexity and challenges and as required, Consultant shall prepare and document any exceptions for and/or deviations from the Highway Design Manual or Caltrans Design Standards by completing and submitting the DSDD to the Caltrans Task Order Manager for review and comments.
 - ii. The Consultant shall identify all proposed nonstandard design features and secure formal written approval for such deviations during the engineering design phases. For any deviation that significantly impacts the project's core concept or cost estimate, the Consultant must submit a detailed DSDD justifying the variance; this approval must be finalized before proceeding to subsequent development stages to ensure project feasibility and cost estimating accuracy.
 - iii. Consultant Task Order Manager shall coordinate any deferrals, and ensure they are documented and approved by the appropriate Caltrans approval authority for design deviations consistent with the current Design Delegation Agreement between the Caltrans District Division of Design and the Caltrans District Director.

3. Cost Estimates for Alternatives

- a. Project Report Recommendation and Cost Estimate

Consultant shall prepare a report listing each of the items from the design concept together with the estimated cost of each item. These items will be included in the Draft Project Report or Project Report and in the 11-Page Cost Estimate for the project.
- b. The Caltrans Project Development Procedures Manual Chapter 29 provides guidance on highway planting separate contract policy. Consultant shall determine need for a separate contract for highway planting work for the project. Consultant shall coordinate early and often with the District Landscape Architect to ensure that separate contract highway planting projects are identified and programmed. The cost for highway planting separate contract must be shown in the Project Report of the parent project.

C. Required Services – Prepare PS&E for RTL

- a. Consultant shall develop a project design from the Design Concept while requiring the continuous review and update of data. Examples of information that should be obtained for the development of preliminary plans are listed as follows: mapping and surveys data, materials report, drainage report, traffic data, and utilities mapping.

- b. Consultant Landscape Architect shall prepare detailed contract plans, specifications, and estimate using the latest Caltrans standards. PS&E shall include plant list, and a water management plan. Planting and irrigation design should be sufficiently developed, and the plans should be complete and accurate enough to allow a detailed analysis of how well the deficiencies and justifications described in the Project Report have been addressed.
- c. The Consultant Landscape Architect must ensure the project complies with Caltrans' policies and standards discussed in the Highway Design Manual, Chapter 900 – Landscape Architecture referenced herein.
- d. Stormwater Data Report and Begin Preliminary Stormwater Design
Consultant shall evaluate the project scope and site conditions to determine the need for and feasibility of incorporating stormwater Best Management Practices (BMPs) into projects within the Caltrans right-of-way.
 - i. Consultant shall continue updating the Storm Water Data Report (SWDR) including the SWDR, attachments, and associated checklists during the Plans, Specification & Estimate (PS&E) phase.
 - ii. The SWDR shall document stormwater quality issues and design decisions made regarding project compliance with State permits. Consultant shall document the process up to initiating drainage and stormwater design as described in the [Stormwater Quality Handbooks, Project Planning and Design Guide \(PPDG\) – Appendix D](#).
 - iii. Consultant shall utilize the Caltrans Stormwater Quality Handbooks: Project Planning and Design Guide which provides design guidance for selecting and designing stormwater quality best management practices (BMPs) during the planning and design phase of a project.

D. Required Services - Work Breakdown Structure Activities

1. Caltrans Workplan Standards Guide

- a. Task Orders are based on the Caltrans Workplan Standards Guide (WSG). The latest WSG is found in the Guide to Project Delivery Workplan Standards Guide, which is available from the Caltrans' Publication Unit and on the Internet at https://dot.ca.gov/-/media/dot-media/programs/project-management/documents/workplan_standards_guide_a11y1.pdf.
- b. The WSG references the Work Breakdown Structure (WBS) categories, which are potential and related work activities applicable to this Agreement.

- c. The WGS references WBS categories which present the potential and related work activities that the Consultant may be required to perform. All revisions to the current version of the WBS shall apply during the life of this Agreement.

2. Work Breakdown Structure

- a. The following WBS activities are applicable to the work described in the Scope of Work for this Agreement, which is comprised of the base scope of template, and Attachment 1B:

<u>WBS Code</u>	<u>WBS Title</u>
160	Perform Preliminary Engineering Studies and Draft Project Report
165	Perform Environmental Studies and Prepare Draft Environmental Document
175	Circulate Draft Environmental Document and Select Preferred Project Alternative
180	Prepare and Approve Project Report and Final Environmental Document
185	Prepare Base Maps and Plan Sheets During PS&E Development
230	Prepare Draft PS&E
255	Circulate, Review, and Prepare Final District PS&E Package
260	Contract Documents Ready to List
265	Awarded and Approved Construction Contract
270	Construction Engineering and General Contract Administration
285	Change Order Administration
285.10	Functional Support (See Note 1)
295	Accept Contract/Prepare Final Construction Estimate and Final Report

Note:

1. Work performed for these WBS activities will be limited to providing design support services throughout the construction phase.

E. Consultant Personnel Requirements

1. General Requirements

- a. The Consultant shall provide personnel with landscape architect design subject specific and supporting expertise, and technical assistance, including but not limited to all subject areas identified in the Attachments SOWs. All planting, irrigation, and erosion control plans shall be prepared by or under the direction of a licensed landscape architect.

- b. The Consultant shall provide experienced staff at the advance journey or senior level, familiar with Caltrans procedures, including but not limited to:
 - i. Highway design obligations detailed in state and federal laws
 - ii. Inter-agency performance measure tracking
 - iii. Task Order management assistance
 - iv. GIS content development and analysis
 - v. Roadside design policies and procedures
- c. In addition to the personnel listed in the Base SOW, below is a list of proposed personnel classifications required to fulfill the required services herein by Caltrans during the term of the Agreement as outlined, however, this is not an exclusive list of the personnel classifications of landscape architect that may be requested. Caltrans reserves the right to add/or delete personnel from this list.

2. Consultant Licensed Landscape Architect (Consultant Responsible Person)

- a. The Consultant's Licensed Landscape Architect shall be employed by the Consultant or one of its Subconsultants at the time deliverables are submitted to Caltrans for review and acceptance. The Licensed Landscape Architect shall have a minimum of five (5) years of experience, acceptable to Caltrans, performing duties under similar Landscape Architect Services contracts. Of these five (5) years, at least two (2) years shall have been in a lead worker capacity.
- b. For each Task Order, if required by the Caltrans Contract Manager, the Consultant shall designate a Consultant Responsible Person. The Consultant's Licensed Landscape Architect is hereby designated as the Consultant Responsible Person, with all associated qualifications and responsibilities.
- c. The Consultant's Licensed Landscape Architect shall have substantial knowledge and experience in Landscape Architecture Design and Project Development Support Services, including familiarity with Storm Water Data Report (SWDR) water quality and environmental constraints.
 - i. *Substantial knowledge* is defined as possessing a Bachelor's degree or higher in Landscape Architecture, accredited by the American Society of Landscape Architects (ASLA).
 - ii. *Substantial experience* is defined as having at least five (5) years of relevant experience acceptable to Caltrans in Landscape Architect Services, including work in Roadway Design and Project Development Support Services. This experience must be sufficient to ensure the ability to manage and advise on a comprehensive range of project development activities and to demonstrate expertise in a variety of Landscape Architecture design scenarios, including those involving unusual or complex roadway features and maintenance-related work, as outlined in the Scope of Work (SOW) of this agreement.

- d. Demonstrated experience, acceptable to Caltrans, must be gained from multiple projects performed at different times in serial (not parallel) order. Overlapping or concurrently held experience shall not be double-counted toward the total years of applicable experience. Relevant experience must be clearly detailed for each project listed in the resume section of the Statement of Qualifications (Section E of Standard Form 330). Each SF330 resume shall include a brief description of the project and provide specific details of the individual's role, emphasizing responsibilities and accomplishments that best demonstrate the capability and experience relevant to the proposed role on this Agreement and consistent with the requirements outlined in the RFQ.
- e. In addition to other specified responsibilities, the Consultant's Licensed Landscape Architect shall possess knowledge of and perform all tasks related to Landscape Architecture design and aesthetics services, including but not limited to the following:
 - i. Knowledge and familiarity with all Caltrans Landscape Architecture design references and design related guidance.
 - ii. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - iii. Irrigation Design
 - iv. Knowledge of Visual Studies for CEQA/NEPA compliance
 - v. 3D modeling
 - vi. Use of native plant material specific to the project site and integrated pest management techniques to conserve water
 - vii. Highway planting and erosion control work
 - viii. Plant establishment period of sufficient length to ensure the survival
- f. The Consultant Responsible Person shall be accountable for the overall technical quality, coordination, and timely delivery of Landscape Architecture design and aesthetic services performed under the assigned Task Order. Responsibilities include, but are not limited to:
 - i. Serving as the primary technical authority and liaison between the Consultant team and Caltrans for all Landscape Architecture design and aesthetics-related matters.
 - ii. Ensuring that all deliverables meet the standards, requirements, and deadlines specified in the Task Order and applicable Caltrans guidelines.
 - iii. Overseeing and coordinating the work of other Consultant and Subconsultant staff involved in the Task Order.
 - iv. Reviewing and approving technical analyses, reports, and calculations prior to submittal.

- v. Addressing Caltrans PDT comments, concerns, or required revisions in a timely and technically sound manner.
- vi. Confirming that staff assigned to the Task Order are properly qualified and their work aligns with the scope and expectations of the Agreement.
- vii. Participating in meetings, field reviews, or teleconferences as requested by Caltrans.

3. Consultant Task Order Lead person.

- a. The Consultant Task Order Lead (who may also serve as the Consultant's Licensed Landscape Architect or the Consultant Responsible Person) shall be assigned to perform or oversee all work associated with a specific Task Order. This individual shall serve as the primary point of contact for the assigned Task Order and must be available as needed to communicate with Caltrans.
- b. The Consultant Task Order Lead shall possess the same qualifications and demonstrated experience required of the Consultant's Licensed Landscape Architect.

4. Consultant Landscape Associate - Unlicensed

- a. Consultant Landscape Associate must be a graduate from a four-year curriculum in landscape architecture, accredited by the American Society of Landscape Architects (ASLA). Consultant Landscape Associate shall possess a documented three (3) years of demonstrated experience acceptable to Caltrans in performing Landscape Architecture design and aesthetics studies and analysis.
- b. Consultant Landscape Associate assisting in performing Landscape Architecture design and aesthetics shall also have all knowledge, skills, experience, and approvals required by Permits, Licenses, Agreements or Certifications that apply to and is (are) relevant to each Task Order.
- c. Consultant Landscape Associate shall be experienced in the use of Caltrans compatible engineering drafting design software and Computer Aid Drafting and Design (CADD) based software including MicroStation AutoCAD Civil-3D and computer aided civil engineering and surveying system (CaiCE), AutoCAD Civil-3D.
- d. In addition to other specified responsibilities, the Consultant Landscape Associate shall possess preliminary knowledge of and perform tasks related to all aspects of Landscape Architecture design and aesthetics services, including but not limited to the following:
 - i. Knowledge and familiarity with all Caltrans Landscape Architecture design references and design related guidance.
 - ii. Knowledge of Caltrans Standard Plans, Standard Specifications, and Construction Manual.
 - iii. Irrigation Design

- iv. Visual Studies for CEQA/NEPA compliance
- v. 3D modeling
- vi. Use of native plant material specific to the project site

5. Consultant Arborist

- a. Consultant Arborist must be a graduate from a four-year curriculum in arboriculture, horticulture, forestry, or related fields. The Consultant's certified Arborist shall be employed by the Consultant or one of its Subconsultants at the time deliverables are submitted to Caltrans for review and acceptance. The Consultant Arborist shall have a minimum of three (3) years of eligible work experience, acceptable to Caltrans, in arboriculture performing tree appraisals.
- b. Consultant Arborist shall have "substantial knowledge and experience" working in the and have documented knowledge and work experience in tree biology, tree diagnosis and treatment, tree protection, soil management, climbing and rigging, safety and risk management, urban forestry, and tree identification and selection.
- c. Consultant Arborist shall be ISA Certified as outlined by the International Society of Arboriculture. At the time of Statement of Qualification (SOQ) submittal, the Consultant Arborist shall have completed the ISA certification(s). The ISA credentials shall be inserted in SOQ Section 2 – "General Services Administration Standard Form SF330, inserted immediately after applicable key personnel's resume.
- d. The cumulative three (3) years minimum of work experience, gained from multiple projects at various times, shall be in serial (not in parallel order), with the total time not accounting for double-counting or any overlapping. Relative experience shall be detailed for each relevant project listed in the resume section of the Statement of Qualifications (Section E of the Standard Form 330). SF330 Resume shall provide a brief description of each project and include significant details of the previous role that best demonstrates the person's capability and experience relevant to his/her proposed role in this Agreement and consistent herein.

F. Manuals, Documents, Publications and Internet sites

In addition to the manuals, documents and guidance referenced in the base scope of work, Attachment 1 the following manuals, documents and links to internet sites are referenced in association with the work in this Agreement. The list is not all-inclusive, but is intended to illustrate the types of reference material and sources of information.

- 1. Caltrans' Internet Home Webpage:
<http://www.dot.ca.gov/>

2. Caltrans Guidance Manual: Storm Water Monitoring Protocols:
<https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/ctws-ot-20-350-04-01-monitoring-guidance-manual-all.pdf>
3. CHAPTER 29 – Landscape Architecture
<https://dot.ca.gov/-/media/dot-media/programs/design/documents/pdpm-chapter29-all.pdf>
4. Project Development Procedures Manual (PDPM)
<https://dot.ca.gov/programs/design/manual-project-development-procedures-manual-pdpm>
5. Highway Design Manual (HDM)
<https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm>