



STANDARD CONSULTANT AGREEMENT

C0323 (08-03-09)

THIS AGREEMENT "Agreement" is entered into on August 27, 2013, by and between SANTA CLARA VALLEY WATER DISTRICT, ("District"), and URS CORPORATION, DBA URS CORPORATION AMERICAS, ("Consultant").

WHEREAS District desires certain services hereinafter described and Consultant is capable of providing and desires to provide such services,

NOW, THEREFORE, District and Consultant for the consideration and upon the terms and conditions specified agree as follows:

SECTION I

SCOPE OF SERVICES

The services to be performed under this Agreement are as described in Appendix One attached hereto and incorporated herein by this reference.

SECTION II

DUTIES OF CONSULTANT

1. All work performed by Consultant or under its direction must be sufficient to meet the purposes specified in this Agreement, and must be rendered in accordance with the accepted practices and standards of Consultant's profession.
2. Consultant must stay informed of and observe any and all statutes, laws, ordinances, and regulations pertaining to Consultant's contractual performance. To the extent that any copyrighted materials are used or reproduced for use in such performance, Consultant must secure, at its sole cost and expense, any and all necessary permission to utilize or reproduce such materials in the manner proposed or suggested by the scope of services.
3. Consultant must not undertake any work beyond the scope of this Agreement unless such additional work is approved in advance in writing by District. The cost of such additional work will be reimbursed to Consultant by District on the same basis as provided in Section IV unless otherwise specified.
4. If in the performance of the services hereunder, it is necessary to conduct investigations or other operations in the field, security and safety of the area of such field operations under the control of the Consultant will be the responsibility of Consultant.
5. Where services hereunder include preparation of drawings and other contract documents by Consultant and where, notwithstanding acceptance and approval by District thereof, in the opinion of the District, drawings and other contract documents so prepared are found during the course of construction to require modification due to the

oversight, inadvertence or negligent omissions of, errors by, or lack of detail provided by Consultant, such modifications must be made by Consultant without additional compensation. Where such contract documents are used in letting a contract for construction, Consultant will assume responsibility for any direct or actual damages suffered or incurred by the District, including, but not limited to, any increase in compensation due to a construction contractor, which increase is directly attributable to the required changes in the Drawings or other contract documents to the extent caused by Consultant's negligent acts, omissions, or errors.

6. Consultant is required, at District's request, to meet with District staff regarding performance of the Scope of Services.
7. In accordance with the provisions of Section 3700 of the California Labor Code, Consultant is required to secure Workers' Compensation insurance for its employees. Consultant must obtain and keep in full force and effect Workers' Compensation insurance necessary in connection with the performance of this Agreement to protect Consultant and its employees under the Workers' Compensation Insurance and Safety Act, including coverage under United States Longshoremen's and Harbor Worker Act, when applicable. Such insurance must be in a standard form and relieve the District of all responsibility therefore. Consultant must, prior to undertaking the work contemplated herein, supply District with a certificate of insurance evidencing that said requirements are fully in effect.
8. The Santa Clara Valley Water District is an equal opportunity employer and requires its contractors to have and adhere to a policy of equal opportunity and non-discrimination. In the performance of the Contract, the Consultant will comply with all applicable federal, state, local laws and regulations, and will not discriminate against any sub-consultant, employee, or applicant for employment, in the recruitment, selection for training including apprenticeship, hiring, employment, utilization, promotion, layoff rates of pay, or other forms of compensation, or against any other person, on the basis of race, color, religion, ancestry, gender, national origin, age (over 40), marital status, medical condition (including cancer), pregnancy, parental status, the exercise of family care leave rights, political affiliation, sexual orientation, gender identity, special disabled veteran status, Vietnam Era veteran and all other Veteran status, or because of a physical or mental disability (including HIV and AIDS). The Consultant's policy must conform with applicable state and federal guidelines including the Federal Equal Opportunity Clause, "Section 60-1.4 of Title 41, Part 60 of the Code of Federal Regulations," Title VII of the Civil Rights Act of 1964 as amended; the American's with Disabilities Act of 1990; the Rehabilitation Act of 1973 (sections 503 and 504); California Fair Employment and Housing Act (Government Code section 12900 et. Seq.); California Labor Code sections 1101 and 1102.
9. Consultant is responsible for designating a specific person responsible for assuring nondiscrimination and non-harassment as provided in the Agreement. That named individual must investigate all complaints directed to them by District. District will refer complaints in writing, and investigations will be deemed concluded only upon submission of a written investigation report from the Consultant to the District. The scope of such investigations must include not only officers, employees, and agents of the Consultant, but also all subcontractors, subconsultants, materialmen, and suppliers of the Consultant. In cases where such investigation results in a finding of discrimination,

harassment, or hostile work environment, Consultant must take prompt, effective disciplinary action against the offender. Failure to take appropriate action is a material breach of the Agreement.

SECTION III

DUTIES OF DISTRICT

1. District agrees to make available to Consultant all data and information in the possession of District which District deems necessary to the preparation of the work, and District will actively aid and assist Consultant in obtaining such information deemed necessary from other agencies and individuals
2. The District will authorize a staff person as the District representative to confer with Consultant relative to Consultant services hereunder. The work in progress hereunder will be reviewed by District at each milestone or at the discretion of District. If the District determines that the work is satisfactory and meets the requirements of the Agreement, it will be approved. If the work is not satisfactory, District will inform Consultant of the changes or revisions necessary to secure approval. However, none of the proposed changes or revisions or anything else in this Agreement should be construed to relieve the Consultant of professional or legal responsibility for the performance of any services. Corrections to the work as a result of errors or omissions of Consultant will not result in additional costs or expenses to District.

SECTION IV

FEES AND PAYMENT

1. District will pay for the services described in this Agreement according to the fee schedule set forth in Appendix Two attached hereto and incorporated herein by this reference. Payment for services and any other expenses related to this Agreement must not exceed the limit or limits shown in Appendix Two. Such payment is considered as full compensation for all labor, materials, supplies, equipment, and other items used in carrying out the services described in this Agreement.
2. Consultant must send all invoices to:

Santa Clara Valley Water District
Attention: Accounts Payable
P.O. Box 20670
San Jose, CA 95160-0670
3. Consultant must invoice for services on a monthly basis against the schedule of payments outlined in Appendix Two. Each monthly invoice must include a progress statement indicating whether or not the services are on schedule to be completed in accordance with Appendix Three. If completion of the services is not on schedule to be completed per Appendix Three, the progress statement must specify the anticipated length of the delay, the cause of the delay, the measures taken or proposed to mitigate the delay, and the timetable to implement those measures. In addition to ensuring that

each invoice is accompanied with a progress statement, Consultant must also ensure that each invoice contains the following information:

1. Agreement Number.
 2. Full Legal Name of Consultant/Firm.
 3. Payment Remit-to Address.
 4. Invoice Number.
 5. Invoice Date (the date invoice is mailed).
 6. Beginning and end date for billing period that services were provided.
4. If a progress statement is not attached to the invoice, or if the invoice does not contain the bulleted items above, that invoice will not be processed for payment.
5. Consultant must maintain records detailing the time worked by each employee and the rate at which the employee's time is being charged. When applicable, invoices must detail the time worked by each class of employee, and the rate at which the class of employee's time is being charged. In order to obtain reimbursement for allowable expenses, the statements must include an itemization of the actual expenses incurred.
6. Unless otherwise specified, when the total compensation payable under this Agreement exceeds twenty thousand dollars (\$20,000), ten (10) percent of each statement will be withheld by District and not paid to Consultant until thirty (30) calendar days after the assigned District representative signed off the final approval for the entire work as stated in Appendix One and close out of the Agreement. Provided that at any time after fifty (50) percent of the work has been completed, the District may, at its sole discretion, determine that satisfactory progress is being made in the completion of the Agreement, and prospectively make the remaining progress payments in full. The retention previously withheld on the first fifty (50) percent of the work will continue to be withheld until final contract close out.

SECTION V

TIME OF BEGINNING AND SCHEDULE FOR COMPLETION

1. Consultant must begin work by the date indicated in the written Notice to Proceed from District. The notice will not be issued until after this Agreement has been approved and authorized by District.
2. The schedule for completion of the work is detailed in Appendix Three attached hereto and incorporated herein by this reference.

SECTION VI

CHANGES IN WORK

1. District may order, via a written amendment signed by each parties authorized representative, changes in scope or character of work, either decreasing or increasing the amount of Consultant's services.

2. This Agreement may be terminated for cause by either party for failure to comply with any terms and conditions of this Agreement, provided, however, that the party in breach has five (5) business days or such period as the parties may otherwise agree in writing to cure such breach following written notification. Additionally, this Agreement may be terminated for convenience by the District upon five (5) business days prior written notice to Consultant. In the event of termination of this Agreement, (i) the District's sole obligation will be to pay Consultant for any authorized work performed through the date of the termination, subject to the not-to-exceed amount for each task; and (ii) Consultant must provide the District with all deliverables and other tangible data created through the date of termination. This paragraph will not be deemed to waive, prejudice, or diminish any rights which the District or Consultant may have at law or in equity for an unlawful termination or other breach of this Agreement by the other party.

SECTION VII

DELAYS AND EXTENSIONS

In the event Consultant is delayed in performance of its services by circumstances beyond its control, District may in its discretion grant a reasonable adjustment in the Schedule of Completion. All claims for adjustments in Schedule of Completion must be submitted to the District representative by Consultant within thirty (30) calendar days of the time of occurrence of circumstances necessitating the adjustment.

SECTION VIII

RESOLUTION OF DISPUTES

1. In the event of a dispute regarding performance of any of the terms of this Agreement, the parties agree to proceed as follows:
2. Internal Review: If Consultant wants to dispute an interpretation or requirement, Consultant must invoke this provision and submit the particulars of Consultant's position in writing to the identified District Representative. District Representative must reply in writing to the Consultant. If Consultant is not satisfied by the response of the District Representative, Consultant may appeal to the District's Contract Administrator, or designee. To exercise this administrative remedy the Consultant must submit their written position, the District Representative's response and any other additional reply information the Consultant deems relevant to the decision, to the District's Contract Administrator, or designee, with a copy to the District Representative. The Contract Administrator may at his/her discretion hold a meeting, ask for additional written information, and/or issue a decision based on the information submitted. If after following the Internal Review Process the Consultant is still not satisfied, Consultant may seek external review.
3. External Review: Consultant, only after proceeding through the Internal Review Process, or District may seek external review where there is a dispute regarding an interpretation or requirement under the Agreement. The intent of this provision is to provide an informal dispute resolution measure which is alternative to a court action. The parties agree that they will submit the controversy to mediation before a mediator. The selection of the mediator and the ground rules for the mediation must be agreed

upon by the parties. If Agreement cannot be reached to pursue binding mediation or another acceptable alternative dispute resolution procedure, the matter may be submitted to Court for traditional resolution.

SECTION IX

MISCELLANEOUS PROVISIONS

1. District reserves the right to approve the Project manager assigned Consultant to said work.
2. Consultant may not assign this Agreement without the express written consent of the District.
3. Consultant is employed to render a professional service only and any payments made to Consultant are compensation solely for such services as Consultant may render.
4. Any discretion or right to approve given to any party herein must be exercised in a reasonable manner.
5. All work performed, and documents produced, pursuant hereto will, upon completion, become the property of District. In the event the work is not completed, the completed portions thereof will become the property of District. However, District agrees that any reuse of any of the materials so furnished by Consultant will be at District's own risk unless prior written approval has been given by Consultant for such reuse. Any and all original correspondence, memoranda, reports, designs, plans, specifications, data compilations, computer programs, or drawings delivered to District by Consultant under terms of this Agreement, in or by any medium (including computer files transmitted electronically or on disk) is deemed to be "work for hire" under the copyright laws of the United States and the copyright will belong to the District. Co-venturers, subcontractors, and vendors to Consultant likewise be bound by these copyright terms. District makes no copyright claim and requires no release for copyrighted material or trademarked names used incidentally by Consultant.
6. Consultant represents and warrants that neither it or its Parent or Subsidiary Company is currently acting as consultant or expert for any party in support of a claim, potential claim, or active or potential legal action against the District by such party. Consultant agrees that it or its Parent or Subsidiary Company will not so act as such consultant or expert for the duration of this Agreement without first obtaining the written consent of District.
7. Neither Consultant, nor any parent or subsidiary of Consultant, nor any affiliated entity sharing substantially similar ownership or control with Consultant, are eligible to bid on any contract to be awarded for the construction of any Project which may be the subject of services provided under this Agreement.
8. Consultant hereby acknowledges that District policy prohibits the acceptance by District personnel of gifts of any kind from vendors or contractors. Consultant must honor this policy by not sending or bringing gifts to the District.

9. Consultant agrees that District, or its agent, has the right to review, obtain, and copy all records pertaining to performance of this Agreement. Consultant agrees to provide District, or its agent, with any relevant information requested and will permit District, or its agent, access to its premises, upon reasonable notice, during normal business hours for the purpose of interviewing employees and inspecting or copying books, records, accounts, computerized records, and other materials that may be relevant to the matter under investigation for the purpose of determining compliance with this Agreement. Consultant further agrees to maintain such records for a period of three (3) years after final payment under this Agreement.
10. It is understood and agreed that the District does not wish to receive from Consultant any confidential information of Consultant or of any third party. Consultant represents and warrants that any information provided to the District in the course of entering into and performing work under this Agreement is not confidential or proprietary to Consultant or any third party. Consultant must maintain confidential all District information which may be disclosed to Consultant where such information by its nature would construed as being confidential by a reasonable person. Consultant will use its best efforts to prohibit any use or disclosure of the District's confidential information, except as absolutely necessary to perform work under this Agreement.
11. Consultant must notify the District in writing of each completed deliverable described in Appendix One. Within thirty (30) calendar days of Consultant's notice, the District must either (i) notify Consultant that the District accepts the deliverable, or (ii) notify the Consultant of any deficiencies in such deliverable. If the District advises Consultant of deficiencies in the deliverable, Consultant must correct, at no cost to the District, those deficiencies as soon as possible and must again notify the District upon completion. The District must then respond to Consultant's notice within thirty (30) calendar days of receipt, and Consultant must correct at no cost to the District any further deficiencies noted. This process will continue until Consultant has corrected all deficiencies.
12. This Agreement, which includes the terms and conditions, Appendix One, Appendix Two, Appendix Three, and Appendix Four, represents the entire understanding between the parties hereto relating to the services described in this Agreement and supersedes any and all prior proposals or Agreements, whether written or oral, that may exist between the parties. This Agreement may not be modified or amended except in writing signed by a duly authorized representative of the party against whom enforcement is sought.

SECTION X

INDEMNIFICATION

Notwithstanding any other provision of this Agreement, Consultant agrees to indemnify, defend and hold harmless the District, its agents, officers, directors, and employees from and against any and all demands, claims, damages, losses and reasonable expenses, including but not limited to liabilities, obligations, claims, costs, reasonable expenses (including without limitation interest, penalties and reasonable attorney's fees), fines, taxes, levies, imposts, assessment, demands, damages or judgments of any kind or nature, whether in law or equity (including without limitation, death or injury to any person, property damage, administrative and judicial orders and consents, or any other loss) to the extent they arise out of, pertain to, or relate to the

Consultant's negligence, recklessness, or willful misconduct. The foregoing does not limit any strict liability imposed onto the Consultant by law.

SECTION XI

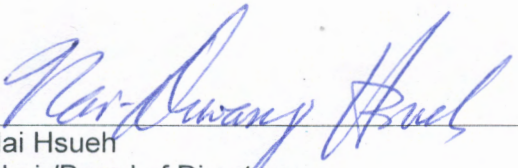
INSURANCE

Consultant's insurance requirements, if any, are set forth in Appendix Four attached hereto and incorporated herein by this reference.

IN WITNESS WHEREOF, the parties have executed this Agreement the day first hereinabove written.

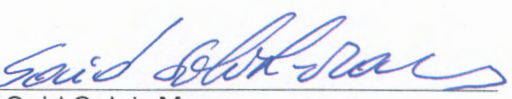
SANTA CLARA VALLEY WATER DISTRICT
"District"

By:


Nai Hsueh
Chair/Board of Directors

URS CORPORATION, DBA URS
CORPORATION AMERICAS
"Consultant"

By:


Said Salah-Mars
Vice President and Principal-in-
Charge

ATTEST:


Clerk/Board of Directors

Firm Address:
1333 Broadway, Suite 800
Oakland, CA 94612

"The official signing for Consultant certifies, to the best of his or her knowledge and belief, that neither Consultant nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency."

NOTE: "No representative may obligate the District to pay fees in excess of the amount in Appendix Two without written authorization from the Board of Directors or appropriate Executive Officer, in accordance with Board Governance Policies."

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APPENDIX ONE SCOPE OF SERVICES

ANDERSON DAM SEISMIC RETROFIT PROJECT DESIGN SERVICES

This Appendix describes the scope of tasks to be undertaken by Consultant in providing Design services for the District's Anderson Dam Seismic Retrofit Project (Project).

I. PROJECT OBJECTIVES

A. The District's objectives for the Project include:

1. Stabilize the dam embankment for the Maximum Credible Earthquake (MCE) on the Calaveras and Coyote Faults;
2. Modify the existing spillway and/or raise the dam crest and make other modifications as required to accommodate the updated Probable Maximum Flood (PMF);
3. Replace the outlet works to mitigate the potential fault rupture risk from the Maximum Credible Earthquake on the Coyote Creek-Range Front fault zone; meet current State of California Department of Water Resources, Division of Safety of Dams (DSOD) emergency drawdown flow requirements, and provide additional flood management flow requirements for District's use; and
4. Incorporate other dam safety deficiencies that are identified in Problem Definition Memorandum and through the Design Phase of Project delivery.

B. The Consultant's Services will support the District's objectives for the Project as follows:

1. Resolve the seismic deficiencies per Division of Safety of Dams (DSOD)/ Federal Energy Regulatory Commission (FERC) standards;
2. Meet the District's Dam maintenance and operational requirements;
3. Meet the requirements identified in the District's Quality Management System procedures;
4. Meet the requirements of all federal, state, and local laws and regulations required for Project delivery;
5. Meet requirements of the resource and regulatory agencies (permitting agencies) including DSOD and FERC;
6. Result in the District's Board of Directors, FERC, and DSOD approving Project decisions.

II. INTENT

A. Consultant will perform the following professional design services:

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1. Design the recommended Project (alternative) to resolve the seismic deficiencies with the embankment and intake and outlet works per DSOD and FERC requirements;
 2. Design the recommended Project (alternative) to resolve deficiencies with the passage of the PMF (including spillway and/or crest modifications) in accordance with DSOD and FERC requirements;
 3. Meet the District's maintenance and operational requirements;
 4. Meet the requirements of all laws and regulations required for Project delivery;
 5. Meet the requirements of resource and regulatory agencies (permitting agencies) including DSOD and FERC;
 6. Produce a Final Design that will be recommended by District staff for approval by the District's Board of Directors;
- B. The Consultant and its sub-consultants providing professional services described in this Scope of Services for this Agreement must be entirely unique and separate corporations from all other firms performing professional services for District relating to this Project. The Consultant and its sub-consultants associated with this Agreement will be precluded from competing for construction management or construction services during the construction phase of the Project. Subcontractors, vendors, and suppliers providing non-professional services, such as but not limited to lab testing, soil borings, or other may propose and/or contract with prime consultants or the District for each of the separate professional services referenced below in Section IV. Project Delivery Approach.
- C. District staff is currently preparing the necessary Project environmental documentation in conjunction with the Planning Consultant.

III. PROJECT BACKGROUND

The District manages an integrated water resources system that includes the supply of clean safe water, flood protection and stewardship of streams on behalf of Santa Clara County's 1.8 million residents and businesses. The District effectively manages 10 (ten) dams and surface water reservoirs, 3 (three) water treatment plants, nearly 400 (four hundred) acres of groundwater recharge ponds and more than 275 miles of streams.

One of the largest and most critical dam and reservoirs that is owned and operated by the District is the Anderson Dam. The DSOD and the FERC have jurisdictional oversight of Anderson Dam facilities.

Anderson Dam (Dam) is an earth-fill dam with a maximum height of about 240 feet. The crest is approximately 1,400 feet long and is 25 to 43 feet wide at approximately elevation 648 feet, NAVD88. The upstream and downstream slopes are approximately 2.5 horizontal to 1 vertical (H:V). The zoned Dam includes upstream and downstream rockfill shells (Zones 1 and 4), a compacted clay core (Zones 2 and 3), and graded transition zones between the rockfill and clay core. The dam was originally constructed to elevation 641 feet,

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but was subsequently raised about 7 feet in 1987 using compacted fill. The existing volume of embankment is approximately 3.3 million cubic yards.

Anderson Reservoir's capacity is approximately 90,400 acre-feet, and it is a critical water facility for the District. Anderson receives water through local rainfall, from the upstream Coyote Reservoir, and from pumped water from the Federal Central Valley Project. The spillway is located on the north side of the dam and has the capability to release approximately 63,000 cubic feet per second (cfs) of water. The outlet works has the capability to release flows up to 550 cfs through a 49-inch diameter outlet pipe. The reservoir water is used to supply groundwater recharge to both North County (via Coyote Creek) and South County (via Main Avenue Pipeline). The outlet works is also connected to the District's treatment plants via the District's in-county transmission system and is used to convey raw water to these plants for treatment.

The District's consultant, AMEC Geomatrix, Inc., completed a Seismic Stability Evaluation of Anderson Dam in June, 2011. The study findings indicate that the downstream slope of the dam could become unstable and that the upstream slope and dam crest could experience excessive deformation during the maximum credible earthquake. This is due to the presence of poorly compacted, liquefiable soil layers including: (a) a 5 to 10-foot thick layer of weak fill material at the bottom of the downstream dam shell; and (b) a weak alluvial material under portions of the upstream shell. These weak soil layers are susceptible to a loss in strength when subjected to severe seismic shaking.

The study also included a fault rupture hazard evaluation for the dam site. This evaluation was performed because the Coyote Creek-Range Front fault zone, located in the vicinity of the dam, has been classified as conditionally active as defined by DSOD. The study findings to date have not provided information sufficient to establish that the Coyote Creek-Range Front fault zone is inactive. The study findings indicate that the fault offset on the Coyote Creek-Range Front fault zone is up to 4 feet.

IV. PROJECT DELIVERY APPROACH

The District plans to deliver this Project by retaining four separate consulting firms as described below:

1. The Project Management Consultant (PMC) Team led by Black & Veatch Corporation has been retained to oversee and manage the delivery of the Project at the direction of the District.
2. The Planning Consultant (PC or Planning Team) led by HDR Engineering, Inc has been retained to perform preliminary engineering services and to develop the required environmental documents (Environmental Impact Report and Environmental Impact Statement) and environmental regulatory permits in support of the Project. The Planning Consultant is responsible for defining deficiencies in existing facilities, defining criteria that provide a basis for engineering solutions to address the deficiencies, development of conceptual engineering solutions that address the deficiencies, and evaluation of the concepts and recommendation of a Project to the District for authorization by the District's Board of Directors ("Board").

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3. The Consultant, serving as the Design Consultant, will perform design services in support of the Project, including developing the Project design, prepare construction documents, and providing engineering support for the bid process and during the construction phase of the Project. Engineering support during the construction phase shall be negotiated with the Consultant as an amendment to this Agreement.
4. The Construction Management Consultant (CM or Construction Manager) will be contracted to oversee the construction contract and coordinate with the Design Consultant during construction. The Construction Management Consultant will be procured prior to the construction phase of the Project.

V. PROJECT TASKS—GENERAL CONDITIONS

1. The Consultant is required to work closely and collaborate with Project Management Consultant, Planning Consultant, Construction Management Consultant, District Management, and District engineering, operations and maintenance staff to gain the necessary understanding of District's requirements, needs, operational constraints and preferences to address and complete key milestones and deliverables associated with this Scope of Services.
2. Review of Deliverables: All report/memoranda shall undergo preliminary review and comment by the PMC. The Consultant shall incorporate preliminary comments from the PMC prior to subsequent review and comment of deliverables by the District. As detailed herein, some deliverables (including but not limited to plans, specifications and cost estimates) are also subject to review and comment from regulatory agencies following District review process.
3. The Consultant is responsible for performing the Scope of Services in compliance with all applicable federal, state, local, and District regulatory standards and guidelines.
4. The Consultant shall use California State Licensed Contractors, Engineers, and Surveyors to perform the work appropriate to their licensing that is described in this Scope of Services. The Consultant shall make available upon request by the District, qualifications and licensing of personnel used in execution of the work.
5. The Consultant shall use Microsoft Office software and versions of applications for word processing, spreadsheets, scanned documents, and the latest version of CADD applications that meets District software application standards used at the time the Project work starts.
6. The Consultant shall submit deliverables in both electronic and hardcopy format. Deliverables shall be submitted in PDF and native (editable) format, including Word documents, Excel spreadsheets, PowerPoint files, AutoCAD files, etc. The hard copy deliverables shall be printed in professional quality presentation and submitted in 5 (five) copies. District may require original copies of signed documents and/or scanned (Adobe PDF) versions.
7. Drawings shall comply with District's CADD and drafting standards (including line types, line weights, text sizes, text orientation, dimensioning, labeling/numbering system for detailed plan views and detailed section views).

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8. CADD drawings prepared using different CADD software and versions must be converted to be compatible with District's CADD application. Prior to acceptance, District reserves the right to test the submitted CADD files to verify that the files are not corrupted or missing linkages (for blocks, etc., used in the drawing) and that the standards are retained during the conversion process used by the Consultant.
9. Engineering Estimates shall be prepared using the "bottom-up" methodology employed by contractors preparing bids for the construction work. The estimates must utilize a clear and logical work breakdown structure, with key assumptions on contractor productivity and equipment and labor spread for each piece of work. Labor rates shall be based on prevailing wage by craft and include both direct salary and fringes. Backup shall be included for equipment rates and material costs. A clear basis shall be provided for field and home office overhead, as well as any markups and profit.
10. The District and the PMC will facilitate access to District facilities as required for the Consultant to complete this Scope of Services.

DESIGN PHASE TASKS

Task 1—Project Management Services

The purpose of Task 1 activities is for Consultant to manage this Scope of Services such that the work is completed within the not-to-exceed fee limit stated in Appendix Two, Fees and Payments, and in accordance with the Project schedule stated in Appendix Three, Schedule of Completion, while ensuring that all services and deliverables by the Consultant meet the District and Project requirements.

- 1.1 Update the Project Design Work Plan (to be based on and incorporated by the District into the existing overall Anderson Dam Seismic Retrofit Project Work Plan) in accordance with the District's Quality Environmental Management System Work Instructions W75102 Create Work Plan and W73004 Design Phase WBS Item Description and Instructions (See Attachment Seven in Appendix One). The Updated Design Work Plan shall include, updates to the Project objectives and requirements, constraints, detailed Project design schedule (showing major tasks and deliverables), a list of the Consultant's team members and their roles and responsibilities, updated communication protocols (internal and external), updated document control procedures and other administrative procedures.
- 1.2 The Updated Design Work Plan shall also include an update to the Project Quality Assurance and Quality Control (QA/QC) Plan documenting the Consultant's procedures to ensure the Consultant's services and deliverables meet District requirements and accepted practices and standards of the Consultant's profession. District reserves the right to request and review the Consultant's Project documentation demonstrating their adherence with their own quality assurance procedures. The Consultant's updated QA/QC Plan shall be developed to comply with and support the Project QA/QC Plan.
- 1.3 Project Manager and other Consultant key staff will coordinate and attend periodic progress meetings and workshops with District staff and other agencies as needed to review, discuss and progress the work. For each meeting or workshop, the

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Consultant will prepare the meeting agenda and minutes and submit them for review by the PMC and the District. A kickoff meeting will be held with the District and PMC to discuss Project objectives, constraints, information needs, roles and responsibilities, and communication protocols.

- 1.4** Coordinate and communicate through the PMC with appropriate regulatory agencies (FERC and DSOD), District staff, and Planning Consultant staff as necessary to execute this Scope of Services. This task includes support in drafting correspondence related to the Consultant's Project design activities as requested by the District.
- 1.5** The Consultant is responsible for establishing and maintaining its own document control system after approval by the PMC as required to execute this Scope of Services. A document sharing system is maintained by the PMC for this Project. Access will be granted to Consultant staff to access other Project documents and reference materials, contact information, etc.
- 1.6** The Consultant shall submit a Monthly Progress Report. The Progress Report shall document the work completed, document the execution of the tasks described in this Scope of Services and enable the PMC and District to evaluate the Consultant's progress and performance towards completion of the work. The Progress Report shall include (a) an assessment of actual versus planned progress in completing the work, including a description of the tasks and deliverables completed to date; (b) for each task, the percentage of the fees incurred for the task compared to dollar amount allocated to the task; (c) a statement that all design-phase tasks, as specified in this Agreement, together shall be completed within the agreed upon not-to-exceed total amount of the Agreement; (d) a statement that progress towards completion of the work is on schedule and will be completed within the milestones in the Agreement Project schedule; or, if completion of the work is not on schedule, then a statement of the anticipated length of the delay, the cause of the delay, measures proposed or taken to prevent or minimize the delay, and the schedule for implementation of such measures; and (e) for any proposed change to this Scope of Services, provide the supporting rationale for such change. The Consultant will be provided with Progress Report samples/templates by the District.
- 1.7** The Consultant will hold internal meetings to monitor and control schedule and cost and to develop corrective measures, if necessary.

Task 1 Deliverables

1. Project Work Plan including QA/QC Plan.
2. Attendance at Progress Meetings and Workshops
3. Monthly Progress Reports
4. Meeting Agendas and Minutes

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Task 1 Assumptions

1. This scope includes a total of 24 monthly progress meetings.
2. Review workshops conducted with the District (4) and with DSOD/FERC/BOC review meetings (4) are included and part of the not-to-exceed amount in other tasks.
3. Progress reports will be prepared monthly for the duration (24 months) of this Agreement.

Task 2—Data Collection and Investigations

The purpose of Task 2 activities is to research, review, and adopt Planning Phase deliverables as a basis for the Project design, as well as to conduct necessary field survey and geotechnical information to establish Project base mapping and geotechnical information. Services shall include but not be limited to:

- 2.1** Review relevant available reference documents and standards. A full listing of the specific documents are included in Attachments Six and Seven of Appendix One.
- 2.2** Prepare and submit a Planning Phase Review and Adoption Memorandum:
 - 2.2.1** Review the Problem Definition Memorandum, Probable Maximum Flood Analysis, Conceptual Alternatives Report, Feasible Alternative Matrix Report, Staff Recommended Alternative Report, Planning Study Report, and other applicable memoranda, reports, and analyses prepared by the Planning Consultant.
 - 2.2.2** Prepare a memorandum summarizing the findings from the review of the above-referenced documents and detail any recommended revisions or clarifications needed for moving forward with these documents as a basis for the design work. The basis of each recommended revision or clarification should be included. This memorandum and any revised version will be subject to review and approval by District.
- 2.3** Develop a detailed work plan for the Data Collection and Investigations for subtasks 2.4 through 2.7. This work plan will include a schedule and approach to the delivery of the Data Collection and Investigations (subtasks 2.4 – 2.7) described herein. The Data Collection and Investigations Work Plan shall be submitted for review and comment by the PMC and District prior to finalization. The District shall issue a notice-to-proceed for subtasks 2.4 through 2.7 individually, and only after review of the Data Collection and Investigation Work Plan. No work on subtasks 2.4 through 2.7 shall occur until after receipt of District notice-to-proceed for the individual subtask(s).
 - 2.3.1** As a part of this task, the Consultant shall review previously completed relevant geotechnical reports and recommend additional investigations, if needed. The Geotechnical Work Plan shall be a chapter of the Data Collection and Investigations Work Plan. The Geotechnical Work Plan shall describe the goals of the investigations needed, the exploration locations and depths, the access and drilling methods, and the instrumentation and in-situ testing methods. The Geotechnical

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this work. The District will provide available data on the expected location and depth of utilities from existing mapping and information in the District's possession.

- 2.4.5** Base map preparation shall conform to District Standards for GIS Products (See Attachment Five to this Appendix One, Scope of Services).
- 2.5** Conduct Geotechnical/Subsurface Investigations as required for detailed design and identified in the Geotechnical Work Plan described in subtask 2.3.1.
 - 2.5.1** This Scope of Services assumes the total number of borings and drilling footage allowed for both investigation phases is as follows: for evaluating the upstream and downstream dam and buttress foundations and abutments - up to 20 borings, approximately 1,400 feet; outlet works structure and tunnel - up to 12 borings, approximately 1,600 feet; spillway and stilling basin - up to 5 borings, approximately 200 feet; cofferdam and lake sediments - up to 12 borings, approximately 400 feet; and borrow areas - up to 20 borings, approximately 1,300 feet.
 - 2.5.2** The initial phase will be designed to provide adequate data for the basis-of-design engineering analyses, the development of the draft Geotechnical Baseline Report, and the draft Basis of Design Report. The borings will be drilled with multiple drill rigs using rotary wash, sonic, wireline coring, and vibracore methods. The Consultant will collect drive samples in soil-like materials and rock core samples in the underlying bedrock. Sonic borings in the downstream embankment and toe foundations area will be drilled to collect continuous samples of rockfill and coarse alluvium. Bulk samples of the dam rockfill will be collected in up to 4 test pits excavated at selected locations on the downstream face of the dam, and select samples tested for geotechnical properties and material constituents. Samples of lake sediment will be collected by vibracore technique to allow for contaminant analysis.
 - 2.5.2.1** Borehole geophysical investigations will include P-wave and S-wave surveys for evaluation of foundation and outlet tunnel rock properties in some of the borings as well as televiewer surveys to evaluate rock mass fracture patterns and areas of potential core loss. Hydraulic conductivity surveys will be conducted in the outlet works borings to evaluate bedrock permeability in the likely outlet tunnel section. Open standpipe piezometers will be installed in several borings to allow for measurement of groundwater levels outside of areas previously explored.
 - 2.5.2.2** Rock core borings will be drilled in areas identified as potential sources of suitable rockfill material for the two buttresses. Borehole seismic P-wave velocity surveys and surface seismic refraction surveys will be completed in the proposed borrow areas. Several open standpipe piezometers will be installed in the proposed borrow areas to allow for groundwater measurements and cut slope stability analysis.
 - 2.5.3** The second phase of the Geotechnical Work Plan will fill in data gaps identified during the design process at the 30% design level. Phase II work will address all potential Project risks associated with site geologic conditions. A second round of rock core borings will be drilled in proposed borrow areas to obtain detailed information for material characterization and definition of construction specification

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requirements. Additional geophysical surveys and piezometers will also be completed in the proposed borrow areas.

- 2.5.4** The Consultant shall use a driller with a valid C57 license, a California-Registered Geologist, a California-Registered Geophysicist and a California-Registered Professional Geotechnical Engineer to complete all proposed investigation work, as appropriate.
- 2.5.5** Laboratory Testing Program - The Consultant shall develop a material testing program sufficient to gain District and regulatory acceptance; and to provide all necessary data (index and performance testing) for analysis and design of the Project. The tests will include index, hydraulic conductivity, compaction, consolidation, and strength tests. The Consultant will also conduct environmental analyses on selected samples of lake sediments and serpentine rock and bedrock to evaluate the presence of naturally occurring asbestos and mercury. The Consultant shall identify and use services of a qualified and certified materials testing facility. The Consultant shall prepare a draft material testing program for approval by the PM, District, and regulatory agencies. The Draft Program will be refined and finalized after inspection of the soil and rock samples.
- 2.5.6** Develop and submit a Geotechnical Data Report - The report will include the results of all new field exploration and laboratory testing work performed by the Consultant, and the results of the investigations previously completed by others. A Draft report shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft shall be submitted to DSOD and FERC. The document will be updated to respond to agency comments, and subsequently to incorporate the second phase of geotechnical investigations.
- 2.6** Conduct Environmental Support Studies - The Consultant will collect and evaluate engineering data that may be required to support environmental documentation by the Planning Consultant, including CEQA documents and permit applications. Activities may include, but are not limited to: (1) assist the PC in obtaining environmental clearance for design-phase exploratory investigations of dam site geologic and geotechnical conditions; (2) provide data on composition of materials to be excavated relative to environmental impacts, e.g. naturally occurring asbestos or reservoir sediment constituents; (3) estimate the number and types of equipment that will be utilized during Project construction and the duration, timing, and locations of construction activities, per CEQA requirements; (4) identify limits of temporary and permanent work areas; (5) provide 3-D renderings of proposed design for visual analysis and public presentations; and (6) describe methods for maintaining stream bypasses for minimum flows and temperature requirements for use in environmental permitting documents.
- 2.7** Conduct site geologic characterization and fault investigation - The Consultant will review available geologic, geotechnical, geophysical and historical data relevant to characterizing the dam site geologic conditions, including the location and geometry of the Coyote Creek-Range Front (CCRF) fault zone. The Consultant will conduct reconnaissance-level geologic mapping in the dam site vicinity to confirm previously identified geologic conditions and incorporate data into an updated three-dimensional geologic model of bedrock, unconsolidated materials and fault location

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and geometry. The Consultant shall complete a characterization of the mapped onsite fault strands of the CCRF) to better define possible constraints to Project components. The location and geometry of fault strands will be verified through progressively focused characterization of each of the previously mapped fault strands that cross Project components, consisting first of surface geophysical surveys, then shallow boreholes, and then road cut or trench exposures to define fault locations and characteristics for design. Geologic information on the direction and amount of coseismic slip, if encountered, will be documented.

- 2.7.1** The Consultant will prepare a Geologic Field Investigation Work Plan for the site geologic characterization and fault investigation effort, including site access, exploration locations, depths and methods. The Geologic Field Investigation Work Plan will be submitted for review and approval by the PMC, the District, and the DSOD and FERC prior to proceeding with the field work. This Scope of Services assumes that the Consultant will complete one geophysical profile and shallow trench exposure near the downstream toe of the embankment. Near the Entrance Gatehouse off Cochrane Road, the Consultant will complete geophysical profiling, boreholes, and shallow trenches to verify the location of faults mapped beneath the embankment and the area of proposed downstream buttresses. Eastern and central CCRF fault strands mapped beneath and near the existing spillway will be confirmed and characterized through a series of geophysical surveying, shallow boreholes, short trenches and augmentation of an existing road cut. The eastern and central CCRF fault strands on the southern side of the dam will be characterized at key locations through a similar multi-tool investigation.
- 2.7.2** All field efforts will include review by District and regulatory personnel, and completed under all safety, environmental and permit requirements. The results from the site geologic characterization and fault investigation will be integrated with other geotechnical results into a revised three-dimensional geologic model and presented in a technical memorandum, which will be submitted in Draft format to the PM and District prior to submittal to the DSOD and FERC. The technical memo will be finalized after addressing all review comments. Geotechnical data from the geologic field investigations will be incorporated into the Geotechnical Data Report.

Task 2 Deliverables

1. Data Collection & Investigation Work Plan, including Geotechnical Investigation Work Plan
2. Planning Studies Review and Adoption Memorandum
3. Comprehensive Project Base Map
4. Geotechnical Data Report
5. Site Geologic Characterization and Fault Investigations Work Plan
6. Site Geologic Characterization and Fault Investigations Memorandum

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Task 2 Assumptions

1. The District will provide the design, construction, and monitoring records for the dam including the records of the 1980's modifications to the spillway and outlet works, and other available documents in the District's files related to the seismic retrofit design of Anderson Dam including District site topographic data.
2. The existing topographical information is suitable for reference only and additional field surveys are necessary to verify and supplement the existing data.
3. The total number of borings, surveys, and drilling footage outlined for the site and borrow area investigations.
4. Access to the site for all data collection and field investigations will be cleared by the District. Environmental permits for the field investigations will be obtained by the PC.
5. If environmental support studies in addition to those listed herein and described in the Data Collection & Investigation Work Plan deliverable are requested, that work shall be negotiated and performed under a Task Order (See Attachment Three to Appendix One, Task Order Template).

Task 3A—Basis of Design (Approved for Design)

The purpose of Task 3A is to perform the engineering analyses and calculations that are required to support and develop the Basis of Design for the Project. The supporting analyses, calculations, and other supporting standards and detailed design information shall be used to prepare a biddable and constructible set of Project Plans and Specifications and the Engineering Cost Estimates.

It shall be the responsibility of the Consultant to perform independent analyses, as appropriate, to fully develop the Basis of Design without relying solely on work completed by others.

3A.1 Conduct engineering analyses and prepare technical memoranda and reports as required to support the Project design. These analyses will be subject to the review of the PMC, District, and Regulatory Agencies as inputs into the Project Basis of Design. These analyses shall include, but not be limited to the following:

3A.1.1 Design Criteria Memorandum - The Design Criteria Memorandum will define the basic criteria for the Project including District basic operations requirements, Project performance requirements, and DSOD and FERC design criteria. The Design Criteria Memorandum will include known relevant constraints such as environmental restriction dates and borrow and spoil area location constraints. The Design Criteria Memorandum will document geotechnical, civil, structural, electrical and mechanical standards to be used in the analyses and design. Pertinent codes and reference will be cited. The design criteria will be presented in a concise tabular format divided into features, issues, corresponding criteria, and remarks/references. The Design Criteria Memorandum will be issued in Draft form and updated as design progresses through the various design phases with comments from the PMC and District. A Design Criteria Workshop will be held with the PMC, District and Planning

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Consultant. The Draft Design Criteria Memorandum will be revised based on comments from the Workshop and a revised Draft Memoranda will be submitted to FERC and DSOD. The comments from FERC and DSOD will be responded to by the Consultant and incorporated into a third Draft Memorandum, if necessary.

- 3A.1.2** Outlet System Hydraulic and Operational Analysis – The Consultant shall evaluate the proposed outlet system to confirm, select, and refine the proposed system features and hydraulics as necessary to support detailed design. The outlet system shall be capable of meeting all established operational and regulatory requirements, including, but not limited to, passing the range of District operational flows in and out of the reservoir and passing the required DSOD drawdown requirement. The Outlet System Hydraulic and Operational Analysis Memorandum shall include necessary alternative analysis as required to select the configuration for final design.

The Consultant shall analyze the outlet system conduit hydraulics from intake to discharge points downstream including existing infrastructure and any new outlet works required for discharge to Coyote Creek. A transient analysis will be performed to assess pressure increases in the conduit as a result of pump startup and turbine valve shutdown. Separate hydraulic analyses shall be performed for the high level outlet. The Draft Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft shall be submitted to DSOD and FERC. The document will be finalized after receipt and response to all comments by the Consultant.

- 3A.1.3** Spillway Hydraulics - The Consultant shall develop a 3-D computational fluid dynamics (CFD) model of the spillway that incorporates approach conditions, proposed spillway features (approach conditions, ogee crest, upper chute, lower chute and flip bucket terminal structure) and energy dissipation features. The model shall include the high level outlet to confirm the sizing and orientation of primary features of the high level outlet including inlet geometry, gate arrangement, main conveyance and convergence with the spillway. The CFD model shall illustrate the flow velocity and energy distributions for the complete range of flows anticipated up to and including the PMF, and include consideration of impacts to the spillway performance resulting from potential degradation of the downstream channel. The CFD model will be calibrated with the results from the physical model tests completed by Hydro Research Science in 1986 for flows of 15,000, 40,000 and 60,000 cfs.

A Spillway Hydraulics Technical Memorandum presenting the methodology used, assumptions made, and results of the spillway hydraulics evaluation will be prepared. The Spillway Hydraulics Technical Memorandum will include digital appendices of the CFD model. The Draft Spillway Hydraulics Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Spillway Hydraulics Technical Memorandum shall be submitted to DSOD and FERC by the Consultant. The document will be finalized after receipt and response to all comments.

- 3A.1.4** Embankment Stability Analyses - The Consultant shall evaluate the embankment to confirm stability during construction and other loading conditions required by the

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regulatory agencies. The static stability includes long-term steady-state seepage conditions and rapid drawdown conditions. At a minimum, the analyses shall consider stability of all temporary (e.g., excavated) and permanent slopes on the upstream slope as well as the downstream slope. A two-dimensional, finite-element or finite-difference modeling program shall be used to characterize the embankment.

The Consultant shall develop a sufficient number of two-dimensional models to fully describe the embankment conditions from abutment to abutment. The models shall incorporate appropriate phreatic conditions for the loading conditions being evaluated. Where possible, the Consultant shall make use of previously developed input parameters, such as (1) material strength properties, and (2) hydraulic conductivities.

An Embankment Stability Analyses Technical Memorandum presenting the methodologies used, input parameters and assumptions made, and results of the analysis will be prepared. The Draft Embankment Stability Analyses Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Embankment Stability Analyses Technical Memorandum shall be submitted to DSOD and FERC. The document will be finalized after receipt and response to all comments.

3A.1.5 Embankment Deformation and Settlement Analyses - The Consultant shall develop an estimate of dynamic response and seismic deformation of the remediated embankment under the MCE on the Calaveras and the Coyote Creek faults. The two-dimensional equivalent linear finite-element program QUAD4MU and the two-dimensional nonlinear finite-difference program FLAC will be used to analyze the dynamic response of the dam, i.e. seismically induced deformation and settlement. In addition to the two-dimensional analyses, the Consultant will perform three-dimensional analyses of seismic deformation to evaluate the required buttress layouts. The three-dimensional analyses will be used to assess the effects of 3D behavior on the seismic response of the dam and optimize the embankment retrofit design. Material strength properties, MCE time histories, liquefied zones and post-earthquake strength developed previously in the SSE Project and approved by DSOD and FERC, will be utilized in the analyses to the extent possible.

An Embankment Deformation and Settlement Analyses Technical Memorandum presenting the methodologies used, input parameters and assumptions made, and results of the analysis will be prepared. The Draft Embankment Deformation and Settlement Analyses Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Embankment Deformation and Settlement Analyses Technical Memorandum shall be submitted to DSOD and FERC. The document will be finalized after receipt and response to all comments.

3A.1.6 Foundation and Embankment Seepage - The Consultant shall perform foundation and embankment seepage analyses necessary for stability, dam safety permitting and for construction and operation of the dam sufficient to obtain regulatory approval from DSOD and FERC, including evaluation of the 1987 fill material to meet DSOD criteria regarding seepage during a PMF event. The embankment seepage analysis

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shall include all construction and expected lifetime operational conditions of the dam embankment and coordination with the embankment deformation and seismic stability analyses required above. Embankment stability and seepage analysis shall also address erosion protection against rain and wave action.

A Foundation and Embankment Seepage Technical Memorandum presenting the methodologies used, input parameters and assumptions made, and results of the analysis will be prepared. The Draft Foundation and Embankment Seepage Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Foundation and Embankment Seepage Memorandum shall be submitted to DSOD and FERC. The document will be finalized after receipt and response to all comments.

3A.1.7 Outlet Works - The Outlet Works Design Technical Memorandum will document the basis of design for the new high level outlet works, low level outlet works, and tunnel design elements of both facilities. The Outlet Works Design Technical Memorandum shall document the proposed size, horizontal and vertical layout, hydraulic, structural, and geotechnical details as well as control and operational requirements, intake structure design, design of the outlet pipeline for fault offset in the tunnel, and design of the downstream controls and connections for the low level outlet.

3A.1.7.1 High-Level Outlet - A spillway conduit (possibly gated) to satisfy DSOD's emergency 7-day drawdown criterion. The design will likely include a gated intake structure, likely with a submersible hydraulic cylinder operator, which shall be designed to remain full operable following the design seismic event. The Consultant shall provide hydraulic, structural and geotechnical design details including excavation support and backfill, instrumentation for measuring and recording flow rates, water pressure, depths, gate motion and positions, corrosion protection and coating systems, cranes, hoists and rigging systems, electrical power and emergency power backup systems, and security and communication systems, as well as control and operational requirements.

3A.1.7.2 Low-Level Outlet - This Scope of Services assumes the low-level outlet works design includes a new multi-port sloping intake structure on the right abutment upstream of the spillway, a low-level outlet tunnel, downstream discharge structure(s), and a tie-in to the existing Anderson Force Main. The primary low-level outlet will consider both permanent fault displacement and severe ground shaking. The design approach will be validated based on a finite element analysis using the program ANSYS, which will capture the sliding of the pipeline on supports, imposed fault displacements, and the dynamic response of the pipe. Downstream controls for the low-level outlet will be designed to provide for District requirements, including but not limited to low and high capacity discharge to Coyote Creek, and tie-in to the Anderson Force Main.

3A.1.7.3 Tunnels - It is anticipated that both the low-level and high-level outlets will be placed within tunnels. The Outlet Works Design Technical Memorandum will include a description of the ground conditions and geotechnical design parameters which form the basis of the tunnel designs. Excavation and construction methods, constraints, and groundwater inflow control will be documented. Additionally,

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ground support design will be developed, including evaluation of the likely presence of low strength materials and risk of encountering adverse conditions such as squeezing conditions, raveling, flowing or running ground will be evaluated. The basis of design for lining of the tunnels will be determined, including evaluation of the risk of post-earthquake groundwater infiltration and potential ground loss in ruptured areas, and the need for including control measures as part of the tunnel excavation design.

3A.1.7.4 The scope of work for this task includes field investigations and data collection and interpretation for the Outlet Works in conjunction with other Project facilities; development of a Basis of Design Technical Memorandum; and supplementing the Basis of Design Report. Task 4 includes the subsequent preparation of plans, specifications, and engineer's cost estimates for all facilities associated with the Outlet Works, including but not limited to design of cut-and-cover grading and excavations, tunnels, pipelines, intake, connections, valves, gates, actuators, control systems for operation of all inlet/outlet works, permanent lining and structural support systems for tunnels, support and backfill for pipelines, instrumentation for measuring and recording flow rates, water pressure, depths, and valve/gate motion and positions, debris racks, corrosion protection and coating systems, cranes, hoists, monorails, and rigging systems, electrical power and emergency power backup systems, all water distribution, plumbing, and water storage systems, and security and communication systems.

3A.1.7.5 An Outlet Works Design Technical Memorandum presenting the methodologies used, input parameters and assumptions made, and results of the analysis will be prepared. The Draft Outlet Works Design Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Outlet Works Design Technical Memorandum shall be submitted to DSOD and FERC. The document will be finalized after receipt and response to all comments.

3A.2 Geotechnical Baseline Report - The Consultant shall prepare and submit a Geotechnical Baseline Report. The report shall reference: (1) the geotechnical studies previously performed on the Project site (by the Planning Consultant and others); (2) other relevant historical studies from the site vicinity, including, but not limited to, fault investigations, geological mapping and construction records; and (3) the results of geotechnical investigations performed by the Consultant (as part of this Project, see 2.5) to supplement the available data.

3A.2.1 The report shall reference the Geotechnical Data Report and present a characterization of the subsurface conditions (including but not limited to groundwater conditions, potential borrow sources, excavatability of rock, reuse as fill, tunnel ground support evaluation, final lining design, dam foundation excavation design, potential fault displacements, seismic activity and other relevant parameters) at the site, and representative graphical cross-sections that pass through the Project site. A map (or maps, as appropriate) shall be included showing the locations of known and suspected faults, landslides and other geological features in the Project vicinity.

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- 3A.2.2** If conflicts in the data are present, those conflicts shall be identified and resolved, if possible. The Consultant shall consider the likelihood that naturally-occurring asbestos (NOA) will be encountered during construction, and develop baselines to address such condition, as appropriate. Recommendations shall also be developed for additional geotechnical investigations that need to be performed during construction to establish measurable variances from baseline conditions.
- 3A.2.3** The Draft Geotechnical Baseline Report shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Geotechnical Baseline Report shall be submitted to DSOD and FERC, and their comments incorporated. The Geotechnical Baseline Report will continue to be refined during the design and final contract document preparation. The Final Geotechnical Baseline Report will be checked for consistency with the Final Plans and Specifications, and will itself be a contract document along with the Geotechnical Data Report.
- 3A.3** Reservoir Operations Technical Memorandum - The Consultant shall prepare a Reservoir Operations Technical Memorandum that addresses reservoir operations, flow releases to Coyote Creek, and management of inflows to the reservoir over the expected duration of construction. This Reservoir Operations Technical Memorandum shall establish clear baselines for inflows into the reservoir and requirements for design of temporary cofferdams. The Reservoir Operations Technical Memorandum shall further define schedule baselines for reservoir lowering to facilitate construction and for maintaining the existing intake in service, if required.
- 3A.3.1** As part of the evaluation, the Reservoir Operations Technical Memorandum shall address how and when the spillway and outlet works could be taken out of service while operating the reservoir within a relatively narrow band, maintaining a minimum level for resource protection and a maximum level that maintains adequate flood protection. The analysis will address flood safety risks (of being unable to maintain flood protection during construction or of reservoir rising to a level higher than accepted by FERC/DSOD), operational risk (lack of operational flexibility during construction) and technical risks of a large storm delaying the start of construction or adversely impacting construction.
- 3A.3.2** The Reservoir Operations Technical Memorandum presenting the methodologies used, input parameters and assumptions made, and results of the analysis will be prepared. The Draft Reservoir Operations Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Reservoir Operations Technical Memorandum shall be submitted to DSOD and FERC. The document will be finalized after receipt and response to all comments.
- 3A.4** Material Development and Handling Technical Memorandum - The Consultant shall prepare a Material Development and Handling Technical Memorandum with recommendations on material development and handling as required to facilitate construction. Specific recommendations (including alternatives analyses) on development of borrow and disposal areas shall be developed, along with staging requirements to facilitate these operations, including haul roads associated with borrow and disposal areas and associated reclamation of borrow areas. Borrow

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areas will be evaluated for quality and quantity of material suitable for rockfill as well as accessibility and environmental impacts. A Materials Balance Diagram shall be developed and presented in the Material Development and Handling Technical Memorandum to reflect excavation volumes, borrow, requirements for new fills, waste volumes and their associated shrink/swell factors.

The Material Development and Handling Technical Memorandum presenting the methodologies used, input parameters and assumptions made, and results of the analysis will be prepared. The Draft Material Development and Handling Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Material Development and Handling Technical Memorandum shall be submitted to DSOD and FERC and their comments incorporated. The Material Balance Diagram and Material Development and Handling Technical Memorandum will be updated at the 30%, 60% and 90% design submittals.

3A.5 Cofferdam Technical Memorandum - The Consultant shall prepare a Cofferdam Technical Memorandum that defines the basis of design for a temporary cofferdam to facilitate upstream embankment repairs in the dry. The Cofferdam Technical Memorandum shall focus on defining criteria for design, including location and alignment of the cofferdam, reservoir operations and levels during construction and crest elevation requirements; conveyance/bypass requirements during construction (for both flood control and environmental flows); removal after construction, particularly if the cofferdam is to be higher than the dead pool elevation; flood protection, including inflow hydrographs, for a design storm occurring during construction, cofferdam type, foundation treatment, freeboard requirements and seepage control.

3A.5.1 The Consultant shall evaluate and recommend whether the cofferdam should be designed by the Consultant and included as part of the Contract Bid Documents or whether the cofferdam be designed by the Contractor as part of their temporary site works to a set of criteria provided in the Contract Specifications. Regardless of the design approach, a preliminary cofferdam design will be made in this task for constructability, scheduling and cost-estimating purposes.

3A.5.2 Cofferdam type will be evaluated and a risk analysis performed for type selection. Cofferdam construction will be coordinated with construction/reservoir schedule to establish whether the schedule affects contract approach or cofferdam type selection. Locations and alignments for the cofferdam will be evaluated. An area around the recommended cofferdam alignment will be established to permit various cofferdam designs to be considered. Considerations include constraints from potential borrow areas, disposal site for upstream excavation/dredging, intake construction, and Project schedule. The specifications for Contractor design of the cofferdam will be developed in Tasks 4 through 7.

3A.5.3 The Cofferdam Technical Memorandum will present the methodologies used, input parameters and assumptions made, and results of the analysis will be prepared. The Draft Cofferdam Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft

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Cofferdam Technical Memorandum shall be submitted to DSOD and FERC. The document will be finalized after receipt and response to all comments.

- 3A.5.4** If the Consultant recommends that the cofferdam be designed by Consultant, the basis of design will be developed and presented in the Cofferdam Technical Memoranda and the design plans and specifications will be developed in Tasks 4 through 7.
- 3A.6** Basis of Design Report - The Consultant shall prepare a full Basis of Design Report to define the technical requirements and parameters for the entire Project including the fields of civil, geotechnical, structural, hydraulic, mechanical, electrical, instrumentation, controls, maintenance and others as appropriate. The Basis of Design Report shall include: (1) description of the general arrangement of existing and new Project facilities; (2) summary of the pertinent findings of the geotechnical investigations; (3) basis for dam, buttress and foundation material properties for use in analyses; (4) construction materials source assessment (on-site and commercial); (5) foundation characterization to assess excavation requirements and foundation acceptance criteria; (6) groundwater dewatering requirements; (7) civil and geotechnical design of the dam buttresses including stability and seismic deformation analyses; (8) design of disposal sites; (9) hydraulic and structural design of the spillway and outlet works; (10) mechanical and electrical design of the intake and outlet facilities; (11) access roadwork; and (12) the temporary cofferdam.
- 3A.6.1** The Basis of Design Report shall include all known and relevant constraints, such as: start and end of reservoir filling periods, environmental restriction dates, minimum flow criteria, criteria related to continuation of District water services and operations, borrow and spoil area constraints, sequencing constraints, etc. The Basis of Design Report shall include the completed Base Map and preliminary design drawings of the Project components detailing the retrofit, spillway and/or crest modifications, outlet works, and borrow/spoil areas.
- 3A.6.2** The Draft Basis of Design Report shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Basis of Design Report shall be submitted to DSOD and FERC and their comments incorporated.
- 3A.6.3** A review workshop will be convened with the District and PMC to review the basis of design documents. A separate review meeting will be convened with the District, DSOD, FERC and the BOC to review the basis of design documents. The review meeting will be held after submittal of the documents to the regulatory agencies.
- 3A.6.4** The Basis of Design Report will continue to be updated through the design phase. Upon completion of final design, the Basis of Design Report shall be updated to reflect any changes or additions that occurred over the course of the design development as detailed in Task 7.
- 3A.7** Civil, Roads, Utilities Technical Memorandum. A basis of design for permanent site access roads, other civil works, and utilities will be prepared. This effort includes development of a preliminary design of horizontal alignment and vertical profile of Coyote Road to accommodate the raising of Anderson Dam's crest and modification of the dam's buttress and embankment fill per the Project's seismic and hydraulic

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requirements. This includes temporary stockpile areas for material and modifications to the lower and upper parking areas and the adjacent dirt trails. Grading limits will be established to identify environmental, right of way, utility and drainage facility impacts; and design modifications to existing Anderson Dam Trail approaches where they intersect Coyote Road.

- 3A.7.1** This preliminary engineering work includes determining right of way, utilities easements, construction quantities, cost estimates and permit requirements for the Project, including roadway and structures. Design elements will be studied for value engineering opportunities, and those elements where significant cost savings or other advantages can be realized will be addressed.
- 3A.7.2** Exhibits will be attached to the Civil, Roads, Utilities Technical Memorandum and include planimetric maps showing key dimensions and features, roadway profiles, cross-sections, and additional construction details, as necessary, to graphically show the proposed work and limits of impact. Miscellaneous calculations used to determine pavement limits will also be included.
- 3A.7.3** The Civil, Roads, Utilities Technical Memorandum will present the input parameters and assumptions made and results of the analysis will be prepared. The Draft Civil, Roads, Utilities Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft Civil, Roads, Utilities Technical Memorandum shall be submitted to DSOD and FERC. The document will be finalized after receipt and response to all comments.

Task 3A Deliverables

1. Design Criteria Memorandum (3 Drafts)
2. Outlet System Hydraulic and Operational Analysis Tech Memorandum (2 Drafts + 1 Final)
3. Spillway Hydraulics Tech Memorandum (2 Drafts + 1 Final)
4. Embankment Stability Tech Memorandum (2 Drafts + 1 Final)
5. Embankment Deformation and Settlement Analyses Tech Memorandum (2 Drafts + 1 Final)
6. Foundation and Embankment Seepage Tech Memorandum (2 Drafts + 1 Final)
7. Outlet Works Design Tech Memorandum (2 Drafts + 1 Final)
8. Geotechnical Baseline Report (2 Drafts/Final)
9. Reservoir Operations Tech Memorandum (2 Drafts + 1 Final)
10. Material Development & Handling Tech Memorandum (2 Drafts + 1 Final)
11. Cofferdam Technical Memorandum (2 Drafts + 1 Final)

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12. Basis of Design Report (2 Drafts + 1 Final)

13. Civil, Road and Utilities Technical Memorandum

Task 3A Assumptions

1. The alternative identified in the Planning Study Report will be adopted for the embankment stability, deformation, and seepage analysis.
2. For embankment stability analyses, up to 6 cross-sections will be analyzed for temporary and permanent embankment conditions.
3. For dynamic response analyses and seismic deformation and settlement analyses, up to 3 transverse cross-sections will be analyzed with a total of 6 input time histories: 3 for Calaveras MCE, 3 for Coyote Creek MCE.

Task 3B—Basis of Design (Prior Approval Required)

The District may require, and the Consultant shall perform, the following Optional Services during the Design Phase on an as-needed basis. Prior to performing any of these Optional Services, the Consultant must obtain written authorization from the District's Water Utility Capital Division DOO in the form of a Task Order (See Attachment Three to Appendix One, Task Order Template). Written authorization will state the agreed-upon scope of the services, the classifications of staff performing the Optional Service, the associated not-to-exceed fees, and schedule.

A technical memorandum presenting the methodologies used, input parameters and assumptions made, and results of the study and analysis will be prepared for each sub-task. Each Draft Technical Memorandum shall be submitted to the District for comment. After incorporation of PMC and District comments, a Revised Draft shall be submitted to DSOD and FERC. Each document will be finalized after receipt and response to all comments.

3B.1—Spillway Physical Model Study

Develop a physical model of the spillway (for full range of flows up to the revised PMF). The physical model of the proposed spillway will be built at a reasonable scale to fully assess the flow characteristics of the entire spillway (including exit conditions). The Consultant shall utilize a hydraulics laboratory with experience developing similar physical models. The final model may be subject to verification by the District and regulatory agencies.

3B.2—Assessment of Dam Response to Fault Rupture

The potential impact of surface fault rupture on the dam will be assessed using simplified procedures such as those by Bray, Seed, and Seed (1994) to evaluate the propagation of fault rupture through embankments. The potential for and extent of cracking of the dam will be assessed based on the location and orientation of the fault displacements. The ability of the dam to withstand foundation fault offset and embankment cracking will be evaluated based on the existing dam design features such as filters and transition zones in the areas of potential offset and cracking. Key inputs to the fault rupture analysis are the foundation

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and embankment material characterization developed in previous analyses, as well as findings from the design phase geotechnical investigations.

3B.3—Finite Element Analyses of Dam Response to Fault Rupture

3B.3.1 Embankment deformations induced by fault rupture will be estimated through 3D numerical simulations using the program FLAC3D. Estimated foundation displacements will be applied to the base of the numerical mesh and the propagation of fault rupture into the embankment materials will be simulated using appropriate nonlinear soil models. Analyses will be performed for both the mean average fault displacement and the mean maximum fault displacement. Calculated deformations and stresses will be used for estimating the location and extent of potential cracking of the core and other embankment zones. Potential leakage through cracks in the core and the erodibility of the core and other embankment materials will be assessed to evaluate the likelihood of piping failure.

3B.3.2 The previously prepared Fault Rupture Response Technical Memorandum for Task 3B.2 will be updated to present the methodologies used, input parameters and assumptions made, and results of the analysis described in this sub-task.

Task 3B Deliverables

1. Work Plan
2. Spillway Physical Model Study Technical Memorandum
3. Assessment of Dam Response to Fault Rupture Technical Memorandum
4. Final Element Analyses of Dam Response to Fault Rupture Technical Memorandum

Task 4—30 Percent Design Document Preparation

The 30% design set shall establish primary drawings and specifications for all major Project components and shall include development of details at a preliminary level.

- 4.1** The Consultant shall prepare, and submit to the District, a sample drawing for District review that Drafting Standards are being adopted into the plan set.
- 4.2** The Consultant shall prepare, and submit to the District, an index drawing numbering scheme, file naming labeling, layout, and format for District review and approval that District's requirements are being used for the Project.
- 4.3** For specification development, the Consultant shall use the District's Standard Provisions (Boiler Plate) and the District's Special Provisions Format. The Consultant shall recommend edits and additions to the District Provisions where appropriate for this Project. The Consultant shall submit a recommended format for the Technical provisions, for review and approval by the District. Further, at the 30% level of design, detailed outlines of the technical specifications shall be included. The District has a separate bid proposal package/template that the Consultant shall provide input for as requested by the District. Multiple, intermediate submittals of

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Special Provision sections to the District are anticipated to reconcile referencing and formatting issues.

- 4.4** The Consultant shall prepare and submit 30% drawings, specifications, and an AACE Class 4 construction cost estimate. Cost estimates for the most significant lines of the work breakdown structure shall be "bottom-up" estimates. The basis for field and office overhead, other markups, and profit shall be clearly identified in the estimate.
- 4.5** The Consultant shall prepare a 30% Draft Construction Sequencing Plan (CSP) to identify the Consultant's intended construction sequencing to meet Project requirements, including support excavations for foundation, abutments, outlet works, stockpiling, embankment construction and other constructability considerations, including maintaining the required reservoir levels and service. This plan shall be used to guide the detailed design and shall be updated as the design is refined. The CSP shall eventually be incorporated into the specifications as a guide to the Contractor and to establish requirements to submit Contractor's own sequencing plans as needed to confirm continuance of reservoir operations.
- 4.6** The Consultant shall submit the 30% plans and specifications and CSP to the PMC and District, and shall include for review:
 - 4.6.1** The regulatory-driven improvements demonstrating the Project team has addressed these concerns or requirements.
 - 4.6.2** The constructability/sequencing requirements for the Contractor.
 - 4.6.3** Clear delineation of existing property lines and take lines (i.e. rights of way, easements, or property acquisitions) needed for Project construction and/or ongoing maintenance or access.
- 4.7** The Consultant will conduct a 30% review meeting/workshop with the PMC and the District to review and discuss PMC/District comments.
- 4.8** The Consultant will compile a Comment Resolution Document. The Comment Resolution Document shall list collected comments, proposed means of resolution, and means to document that resolution is completed in the next design submittal.
- 4.9** After incorporation of PMC and District comments, a Revised 30% Submittal shall be submitted to DSOD and FERC.
- 4.10** A 30% Constructability Review Workshop will be held with the District and PMC. Construction experts from the District, PMC and Consultant staff will participate in this workshop.
- 4.11** Subsequent to the 30% Constructability Workshop, a BOC meeting will be held with District, FERC, and DSOD, to review the 30% submittals.
- 4.12** The Consultant shall identify the need for and attend meetings, workshops and consultations with District as needed to complete the 30% design tasks.

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- 4.13** If, in the course of preparing the 30% documents, additional Technical Memoranda or edits to previously-finalized Memoranda (not identified for future updates in this Scope of Services) are necessary, that work shall be accomplished under Task 9 as Supplemental Services During Design.

Task 4 Deliverables

1. 30% Plans and Specifications (2 sets)
2. 30% Class 4 Construction Cost Estimate as defined by Association for the Advancement of Cost Engineering (AACE)
3. 30% Construction Sequencing Plan (2 drafts)
4. 30% Design Comment Resolution Document.
5. Agenda and Record for 30% Design Review Workshop(s)
6. Agenda and Record for 30% Constructability Workshop

Task 5—60 Percent Design Document Preparation

The 60% design set shall be a complete drawing and specification set. Plan and section drawings shall be included to a high degree of completion. Most details shall be present and substantially completed. Specifications shall be substantially completed. This set is expected to require the most intensive review effort.

- 5.1** The Consultant shall prepare and submit 60% drawings, specifications, and an AACE Class 3 construction cost estimate. Cost estimates for the most significant lines of the work breakdown structure shall be “bottom-up” estimates based on assumed productivity, equipment, and labor spreads for the activities. The basis for field and office overhead, other markups, and profit shall be clearly identified in the estimate.
- 5.2** The 60% plans and specifications and a 60% Construction Sequencing Plan (CSP) shall be submitted to the PMC and District and shall include for review:
 - 5.2.1** Changes as necessary to address the 30% submittal review comments.
 - 5.2.2** Construction Permitting Framework - The District has retained a separate consultant for the development of a Project EIR/EIS for compliance with CEQA/NEPA. The Consultant shall develop a Construction Permitting Framework document at 60% level, which will be updated to 90% level during the 90% design document preparation, listing permits that must be obtained by the Contractor. Some of the permits are related to Storm Water Pollution and Prevention Program, Dust Mitigation Plan, and Report of Waste Discharge (ROWD) for Construction Water. This document is intended to assist in the construction bidding.
 - 5.2.3** The regulatory-driven improvements demonstrating the Project has addressed these concerns or requirements.

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- 5.2.4** Constructability/Sequencing requirements for the Contractor.
- 5.2.5** Provisions regarding milestones, testing, and acceptance schedule and criteria for the Project aligned with completion and payment for the Contractor's completion of each milestone to be included in the Project specifications.
- 5.3** The Consultant shall prepare a draft bid sheet at the 60% level of design, including a Technical Memorandum that explains the basis for the bid sheet and the strategies related to risk and cost uncertainty associated with work that may be difficult to define.
- 5.4** The Consultant will conduct a 60% review meeting/workshop with the PMC and the District to review and discuss PMC/District comments.
- 5.5** The Consultant will compile a Comment Resolution Document. The Comment Resolution Document shall list collected comments, proposed means of resolution, and means to document that resolution is completed in the next design submittal.
- 5.6** After incorporation of PMC and District comments, a Revised 60% Submittal shall be submitted to DSOD and FERC.
- 5.7** Subsequent to the 60% review meeting/workshop with DSOD and the 60% Constructability Workshop, a BOC meeting will be held with District, FERC, and DSOD, to review the 60% submittals.
- 5.8** The Consultant shall identify the need for and attend design input meetings, workshops and consultations with District as needed to complete the 60% design tasks.
- 5.9** If, in the course of preparing the 60% documents, additional Technical Memoranda or edits to previously-finalized Memoranda (not identified for future updates in this Scope of Services) are necessary, that work shall be accomplished under Task 9 Supplemental Services During Design.

Task 5 Deliverables

- 1. 60% Plans and Specifications (2 sets)
- 2. 60% Class 3 Construction Cost Estimate as defined by AACE
- 3. 60% Construction Sequencing Plan (2 drafts)
- 4. 60% Design Comment Resolution Document
- 5. Draft Bid Sheet & Supporting Technical Memorandum
- 6. Draft Construction Permitting Framework Document
- 7. Agenda & Record for 60% Design Review Workshop(s)

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Task 5 Assumptions

1. The District will be responsible for acquisition of permanent and temporary property-related rights of way and all permit application fees.
2. The District will identify any additional required items that are identified in the EIR/EIS and other environmental permit application documents prior to the preparation of the 90% design submittals.

Task 6—90 Percent Design Document Preparation

The 90% design set shall be a complete drawing and specification set at or near the level of completion required for Agency Permitting Review and Contractor Bidding.

- 6.1 The Consultant shall prepare and submit 90% drawings, specifications, and a construction cost estimate (AACE Class 2). The cost estimate shall be based on an updated, detailed logical work breakdown structure based on the 90% plans, specifications, and 90% Construction Sequencing Plan.
- 6.2 Prepare/update the Basis of Design Report, design criteria TMs, analyses, calculations, etc., as identified in previous task descriptions. If in the course of preparing the 90% documents additional Technical Memoranda or edits to previously finalized Memoranda not identified for future updates in this Scope of Services are necessary that work shall be accomplished under Task 9 Supplemental Services During Design.
- 6.3 The 90% plans and specifications and a 90% Construction Sequencing Plan (CSP) shall be submitted to the PMC and District and shall include for review:
 - 6.3.1 Changes as necessary to address the 60% submittal review comments.
 - 6.3.2 The Consultant shall update the Construction Permitting Framework document to 90% level.
 - 6.3.3 The regulatory-driven improvements demonstrating the Project has addressed these concerns or requirements.
 - 6.3.4 Constructability/Sequencing requirements for the Contractor.
 - 6.3.5 Provisions regarding milestones, testing, and acceptance schedule and criteria for the Project aligned with completion and payment for the Contractor's completion of each milestone to be included in the Project specifications.
- 6.4 The Consultant shall prepare a draft bid sheet at the 90% level of design, including a Technical Memorandum that explains the basis for the bid sheet and the strategies related to risk and cost uncertainty associated with work that may be difficult to define.
- 6.5 The Consultant will conduct a 90% review meeting/workshop with the PMC and the District to review and discuss PMC/District comments.

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- 6.6** The Consultant will compile a Comment Resolution Document. The Comment Resolution Document shall list collected comments, proposed means of resolution, and means to document that resolution is completed in the next design submittal.
- 6.7** After incorporation of PMC and District comments, a Revised 90% Submittal shall be submitted to DSOD and FERC.
- 6.8** A BOC meeting will be held with District, FERC, and DSOD, to review the 90% submittals.
- 6.9** The Consultant shall identify the need for and attend design input meetings, workshops and consultations with District as needed to complete the 90% design tasks.
- 6.10** If, in the course of preparing the 90% documents, additional Technical Memoranda or edits to previously-finalized Memoranda (not identified for future updates in this Scope of Services) are necessary, that work shall be accomplished under Task 9-a Supplemental Services During Design.
- 6.11** Update the Construction Sequencing Plan and develop a Construction Sequencing Specification. The Construction Sequencing Specification will identify key milestone dates to be met during construction, and will include specific provisions for incorporation into the Contractor's plan, as needed.
- 6.12** Develop a Commissioning, Training and Maintenance Plan to prepare District staff for different operational modes: through the construction milestones, start-up and testing, and through the first year of operation. This Plan shall be a comprehensive approach to:
 - 6.12.1** Assure the facility can continue to operate through construction and not disrupt the ability to meet its delivery obligations.
 - 6.12.2** Assist the District Operations and Maintenance staff to continue to complete their primary duties of operating the facility on a day-to-day basis and not be dedicated to supporting the Project.

Task 6 Deliverables

- 1. Updated Basis of Design Report, Design Criteria TMs, and all supporting analyses and calculations, as identified in this Scope of Services.
- 2. 90% Construction Sequencing Plan and Construction Sequencing Specification
- 3. 90% Plans and Specifications (2 sets)
- 4. 90% Class 2 Construction Cost Estimate as defined by AACE
- 5. 90% Design Comment Resolution Document including resolution of regulatory and permitting agency comments.

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6. Commissioning, Training, and Maintenance Plan
7. Agenda & Record for 90% Design Review Workshop(s).

Task 7—Final Design Document Preparation

The 100% Design Set shall be a fully completed, signed, and sealed Plans and Specifications that is ready for DSOD and FERC permitting review. This set will be revised as necessary to address any remaining permitting agency comments to form the Bid Set, which will be used for Contractor Bidding. The scope of Task 7 includes:

- 7.1** Prepare and submit 100% Design and Contract Documents for PMC and District review, including:
 - 7.1.1** Plans and Specifications that address 90% review comments and design modifications or clarifications as required to support the Commissioning, Training, and Maintenance Plan.
 - 7.1.2** Specifications, including Standard Provisions, Special Provisions, Technical Provisions, Appendices, Notice to Bidders, geotechnical data report and geotechnical baseline report, bid documents and construction sequencing specification.
 - 7.1.3** Engineer's Estimate (AACE Class 2)
 - 7.1.4** Revisions as necessary to confirm and finalize the Basis of Design Report to Final Design.
 - 7.1.5** All Engineering Analysis and Calculations completed and checked as per the QA/QC Plan and assembled in accordance with the relevant design analyses sections in the Basis of Design Report.
- 7.2** The Consultant will submit 100% plans and specifications to FERC and DSOD for permitting review.
- 7.3** The Consultant shall identify all applicable permitting requirements in the certified EIR/EIS, in coordination with the Planning Consultant, and integrate those requirements into the final design documents. The Consultant shall assist the District in submittals and obtaining the necessary and timely permit approvals for Construction.
- 7.4** Compile all FERC and DSOD permitting comments, prepare a response document. Make revisions to drawings and specifications as necessary to resolve comments, and submit for approval.
- 7.5** After resolving all FERC and DSOD permitting issues, prepare and submit Bid Set including:
 - 7.5.1** 100% Design Comments Resolution Form.

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- 7.5.2** Revisions to plans and specifications as required for FERC and DSOD permitting approval.
- 7.5.3** Revisions to Engineer's Estimate, if necessary.
- 7.5.4** Revisions to Basis of Design Report, if necessary.
- 7.5.5** Revisions to Engineering Calculations, if necessary
- 7.6** The Consultant shall prepare a Design-to-Construction Phase Transition Report and use District's QEMS W73004 Design Phase WBS Item Descriptions and Instructions and F75101 Close-Out Checklist as guides for items to be included in the Transition Report. The report will include a description of the work that would occur during the construction phase but is not included in the construction contract documents, such as roles and responsibilities of discipline engineers and Consultants. It will also identify the special interactions that will be required with stakeholders and oversight agencies during construction, unique critical construction compliance checks, special or non-standard construction documentation requirements, and a list of required submittals.

Task 7 Deliverables

1. 100% Plans and Specifications (2 sets)
2. Bid Set that includes 100% Plans and Specifications, including Standard Provisions, Special Provisions, Technical Provisions, Appendices, Notice to Bidders, Geotechnical Data Report and Geotechnical Baseline Report and bid documents.
3. Engineering Calculations completed and checked as per the QA/QC Plan and assembled in conformance with relevant design analysis
4. Conformed Final Basis of Design Report
5. Engineer's Estimate (AACE Class 2).
6. 100% Comment Resolution Document
7. Design-to-Construction Phase Transition Report

Task 8—Bid and Award Services

Upon the District's request, the Consultant shall assist during the bidding process of the Project by:

- 8.1** Responding to bidders' questions pertaining to the Bid Set within two business days of receipt of District's written request. The Consultant will maintain a log of bidders' questions and responses, including whether any questions require addenda to the Bid Set.

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- 8.2** Attending the pre-bid conference, including a site visit, and assisting with preparation of documents to be distributed at the conference.
- 8.3** Preparing bid document addenda if clarifications or changes to documents in the Bid Set are needed, which includes:
 - 8.3.1** Changes to drawings will be shown on 8.5 x 11 sheets to the extent possible.
 - 8.3.2** Changes to drawings will be signed and stamped and will be provided within five business days of the written request from District.
 - 8.3.3** During preparation of each addendum, the Consultant shall evaluate any construction schedule and cost impact of the addendum and submit to District for consideration prior to finalizing addendum.
- 8.4** Preparing a Conformed Set of construction Contract Documents after construction bids are received for use during construction.

Task 8 Assumptions

- 1. District will set up service for bidders to obtain Bid Sets.
- 2. District will receive all bidders' questions, convey those questions related to the Consultant's work to the Consultant, and disseminate the responses to bidders.
- 3. District will be responsible for generating pre-bid conference notes and disseminating the notes to bidders.
- 4. District is responsible for reproducing and distributing bid documents and addenda documents.

Task 8 Deliverables

- 1. Written responses to bidders' questions and associated log.
- 2. Minutes of the pre-bid conference
- 3. Addenda to bid documents
- 4. Electronic versions of stamped and signed conformed set of construction contract documents.
- 5. Wet-stamped and signed conformed set of contract documents for use during Project construction.

Task 9—Supplemental Services During Design

The District may require, and the Consultant shall perform, Supplemental Services during the Design Phase on an as-needed basis. Prior to performing any Supplemental Service, the Consultant must obtain written authorization in the form of a Task Order approved by the

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District's Water Utility Capital Division DOO. Written authorization will state the agreed upon scope of the services requested, the classifications of staff performing the Supplemental Services, associated not-to-exceed fees, and schedule. The task descriptions described herein are preliminary, and do not serve as the final scope of services required for inclusion in the Task Order. Under no circumstances shall the Consultant start work on Supplemental Services without either a signed Task order or specific Notice-to-Proceed from the District PMC. See Section VII below for additional details on Task Orders.

9.1 Design of Cochrane Road Relocation

The Project may include relocation of Cochrane Road at the toe of Anderson Dam. At the District's request, the Consultant will perform services necessary to develop the plans, specifications, cost estimate and schedule for this element of the Project. The District will handle acquisition of real estate and secure rights of way, as well as define the corridor(s) for the road relocation.

9.2 Reservoir Rim Stability Analysis & Design

Preliminary analyses by the Planning Consultant have identified and summarized the historic landslide risk at specific locations along the Reservoir Rim. At the District's request, the Consultant shall conduct reservoir rim stability analyses and incorporate reservoir rim mitigation design into Project plans, specifications, and cost estimates.

9.2.1 Geotechnical Investigations. This task includes geotechnical investigation at select sites to determine the risk of landslides during reservoir drawdown and Project construction. A work plan for the Rim Geotechnical Investigations shall be developed and executed. Geotechnical investigation may include detailed mapping, borings, and trenching.

9.2.2 Mitigation Recommendations. A technical memorandum presenting the findings of the geotechnical investigation and alternatives analysis and recommendations for mitigating the risk of property damage due to landslides at the reservoir rim shall be prepared.

9.2.3 Design. If design of slope stability measures is selected as the mitigation alternative, the Consultant shall develop plans, specifications, and cost estimates for the slope stability Project. It is assumed this set of documents will be prepared, permitted and built separately from and in advance of the Anderson Dam Seismic Retrofit Project.

9.3 Determination of Fill Requirements for Downstream Buttress

Perform a parametric study to determine fill strengths that would be required to achieve the smaller footprint of the Project's downstream buttress. A technical memorandum summarizing this analysis should be prepared which should contain an opinion regarding the value of additional characterization, including the value of full scale test fills and shear testing and/or large scale lab testing to measure more accurately the rockfill and foundation parameters, as well as professional opinions regarding the likelihood (qualitative) of higher strength availability, possibility of verification of these higher parameters, and recommendations for strategy in

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obtaining regulator design approval and verification of design assumptions during construction.

9.4 Detailed Foundation Strength Characterization

Perform exploration and testing of the foundation which may involve the use of a combination of trenching, geo-physical methods, plate load tests, rock coring and testing, large diameter Pitcher barrel sampling and testing, large block soil sampling, televiwer borehole logging, and/or other methods. Recommendations for design rock shear strength and foundation acceptance criteria may be required.

9.5 Rock Fill Strength Characterization

Perform a field rock test program to provide the following: the excavation, processing, and compaction efforts which will be required during construction; the characteristics of the rock, verification of the availability, adequacy and quality, determination of low-stress shear strength using full scale test apparatus and correlation to strength of fill at design stresses; and the specification for the method for compaction, and index test acceptability criteria. Recommendations for design parameters, construction testing and acceptance criteria may be required.

9.6 Other Baseline Memoranda

9.6.1 Additional technical memoranda and sub-tasks not identified in the scope of services may be requested by the District based on the results of the Consultant effort and findings. Upon District Request, these additional memoranda will be prepared by the Consultant.

9.6.2 As the design progresses, it may be necessary to revise previously finalized reports or technical memoranda. At District request, the Consultant shall revise and update finalized memoranda or reports to reflect updated Project findings or conditions.

9.7 Additional Workshops/Review Meetings

Additional workshops/review meetings not identified in the scope of services may be requested by the District during the course of design. These may include, but are not limited to, workshops with DSOD on Technical Memoranda; BOC meetings to review Technical Memoranda; review meetings with DSOD on 30%-60%-90%-100% plans and specifications; and Constructability Workshops at the 60% and 90% design level.

VI. ADDITIONAL TERMS AND CONDITIONS

A. The Consultant as Independent Contractor

1. The Consultant shall perform all services as an independent contractor and not an agent or employee of District.
2. The expertise and experience of the Consultant are material considerations for District's award and execution of this Agreement. The

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Consultant shall not assign or transfer any interest in this Agreement nor the performance of any of the Consultant's obligations hereunder, without prior written consent of District, and any attempt to so assign this Agreement, or any rights, duties or obligations arising hereunder, will be void and of no effect. Any assignment of moneys due or to become due in accordance with this Agreement, will be to the extent permitted by law, and will be subject to all proper set-offs, deductions, and withholdings in favor of the District.

B. The Consultant's General Responsibilities

1. Standard of Care

- a. The Consultant and its sub-Consultants must perform Services in accordance with those standards of care that are generally recognized as being used by competent persons in the Consultant's area of specialty in the State of California.
- b. The Consultant and its sub-Consultants must perform Services in compliance with all applicable written federal, state and local codes, statutes, laws, regulations and ordinances, including, but not limited to, environmental, energy conservation, and disabled access requirements.

2. Unless the requirements for the Scope of Services described in this Agreement are specifically modified in writing, the Consultant must provide its services and deliverables as required.

C. Project Management

1. The Dams & Pipelines Project Delivery Unit Manager, Mr. Emmanuel Aryee, is the District Project Manager (Oversight Manager) and is responsible for the Project team. The Project Management Consultant's Project Manager, is responsible for managing the schedule and coordination of the Phase Consultants. At this time, the District anticipates assigning the Project Management Consultant to serve as the day-to-day Project Manager of the Anderson Dam Seismic Retrofit Project.

D. Task Orders

1. Supplemental Services may be assigned to the Consultant through issuance of Task Orders (See Attachment Three—Task Order Template). After Supplemental Services to be performed under this Agreement are identified and communicated to the Consultant by the PMC or District PM, the Consultant shall prepare a proposed Task Order. The proposed Task Order must identify the following:
 - a. Description of the services, including deliverables;

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- b. The total not-to-exceed amount for the Consultant to complete the services, including estimated number of hours per assigned staff to complete the services;
 - c. Proposed staff that will be assigned to complete the services, including resumes if not previously provided to the District Project Manager;
 - d. Estimated cost of each reimbursable expense, including any applicable fees;
 - e. Time schedule for completing the services; and
 - f. Copies of applicable state and federal permits required to complete the services, unless previously provided to the District Project Manager.
2. Consultant agrees that the not-to-exceed amount specified in a proposed Task Order will be the product of a good faith effort in exercising its professional judgment. After an Agreement has been reached on the negotiable items, the finalized Task Order will be signed by both the District's Water Utility Capital Division Deputy Operating Officer (or the Project Manager, if the Task Order amount is less than or equal to \$100,000), and the Consultant's Project Manager.
3. Consultant must not commence performance of work or services on a Task Order until it has been approved by the District Water Utility Capital Division Deputy Operating Officer (or the Project Manager, if the Task Order amount is less than or equal to \$100,000) and a specific Notice-to-Proceed has been issued by the District's Project Manager. No payment will be made for any work performed prior to approval or after the period of performance of the Task Order. The period of performance for Task Orders will be in accordance with dates specified in the Task Order. No Task Order will be written which extends beyond the expiration date of the Agreement. The total amount payable by the District for an individual Task Order will not exceed the amount agreed to in the Task Order.
4. Task Orders can be amended provided the amendment is approved by the District Water Utility Capital Division Deputy Operating Officer.

E. Confidentiality

Due to the nature of the services the Consultant will provide under the Agreement, there may be disclosure to the Consultant of detailed information about the District's operations, including on a need-to-know basis information which may be protected from public disclosure by confidentiality laws, the attorney-client privilege, and/or other provisions of law which govern the nature and timing of disclosure of public information. As such, the Consultant, its subcontractors, and its subconsultants are required to execute a Non Disclosure Agreement (see Attachment Four). The Consultant understands and

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acknowledges that District staff members providing information to the Consultant do so with the understanding that such information will be handled appropriately. In the event the Consultant receives such restricted or confidential information, the Consultant will limit access to the information to only those of the Consultant's employees, its subcontractors, and its subconsultants authorized by the District to have the information. The Consultant will notify the District's Project Manager immediately of any request by any third party to have access to the information, and will not disclose the requested information without first receiving express written authorization from the District's Project Manager. The requirements of this section will survive completion of the Agreement.

F. Conflict of Interest

1. Consultant represents that there exists no actual or potential conflict of interest concerning the services to be performed under this Agreement. Consultant represents that the Consultant's performance under the Agreement does not require the breach of any Agreement or obligation to keep in confidence the proprietary information of another party. Consultant shall not bring to the District or use in the performance of the Consultant's duties under the Agreement any materials or documents of another party considered confidential or proprietary unless the Consultant has obtained written authorization from such party, and the informed consent of the District, for the possession and use of such materials.
2. Upon District's request Consultant shall complete, execute, and submit California Fair Political Practices Commission Form 700.
3. Consultant also represents and warrants that during the term of the Agreement, the Consultant, Consultant's parent company, the Consultant's subsidiaries, or any affiliated entity sharing substantially similar ownership of or control with the Consultant shall not act as a Consultant or expert for any party in support of any potential or active claim or legal action against the District by such party.
4. Consultant, Consultant's parent company, Consultant's subsidiaries, or any affiliated entity sharing substantially similar ownership of or control with Consultant shall not submit a proposal: (i) for any contract to be awarded for the construction or construction management of any Project that is related to the services provided under the Agreement; or (ii) in response to any request for proposal or District solicitation developed or prepared by or with the assistance of Consultant, Consultant's parent company, Consultant's subsidiaries, or any affiliated entity sharing substantially similar ownership of or control with Consultant.

G. Term and Termination

This paragraph G, Term and Termination and the following paragraph H, Consultant's Compensation Upon Termination or Suspension, of Section VI. Additional Terms and Conditions, replaces the paragraph 2 stated in the

APPENDIX ONE SCOPE OF SERVICES

Standard Consultant Agreement portion of this Agreement, at Section VI.
Changes in the Work.

1. Term and Automatic Termination

This Agreement encompasses all services for which the Consultant is responsible to provide within the time limits and not-to-exceed amount set forth herein. The Consultant shall not undertake to provide services where it reasonably appears that the services cannot be provided and expenses cannot be incurred within said total compensation limit and the applicable not-to-exceed amount of any Task Order.

2. District's Rights

- a. Suspension: District may, by written notice to the Consultant, suspend any or all services pursuant to this Agreement or to any individual Task Order. District may subsequently terminate this Agreement or any Task Order for convenience, or decide to proceed. If a decision to proceed is not made within ninety (90) days from the date of the notice of suspension, any decision to proceed must be conditioned upon execution of a new Notice-To-Proceed or Task Order.
- b. Termination for Convenience: District may, by written notice to Consultant, terminate all or part of this Agreement or any Task Order at any time for District's convenience. Upon receipt of such notice, the Consultant shall immediately cease all work as specified in the notice. If this Agreement or any Task Order is so terminated, the Consultant shall be compensated as set forth in Section H., Consultant's Compensation upon Termination of Suspension, referenced below.
- c. Termination for Breach: If The Consultant violates any of the covenants, Agreements or stipulations of this Agreement or a Task Order, or if The Consultant fails to fulfill in a timely and proper manner its obligations pursuant to this Agreement or any Task Order, and does not cure such failure or violation within thirty (30) days (or a reasonable extension thereof, if requested, which extension will not be unreasonably withheld) after receipt of written notice from District specifying such failure or violation, District will thereupon have the right to terminate this Agreement and any or all uncompleted Task Orders by giving written notice to the Consultant of such termination. Such notice will specify the effective date thereof, and the Consultant shall not be entitled to compensation for services or expenses beyond the specified termination date.
- d. If, after notice of termination for breach of this Agreement or any Task Order, it is determined that the Consultant did not breach the Agreement or Task Order, the termination will be deemed to have

APPENDIX ONE SCOPE OF SERVICES

been effected for District's convenience, and the Consultant shall receive payment that is allowed by this Agreement for a termination for convenience.

- e. The rights and remedies provided herein to District are in addition to any other rights and remedies provided by law, this Agreement, or a Task Order.

H. The Consultant's Compensation Upon Termination or Suspension

- 1. In the event of termination of this Agreement or any Task Order, or suspension of services by District, the Consultant shall receive compensation based on satisfactory performance, accepted by the District Project Manager, as follows:
 - a. For Direct Labor—The Consultant shall be entitled to receive compensation for all authorized direct labor performed prior to termination pursuant to the provisions of this Agreement or Task Order and all authorized labor expenses incurred to demobilize from the Project after the date of termination.
 - b. For Reimbursable Expenses—The Consultant shall be entitled to receive compensation for all authorized Reimbursable Expenses incurred prior to termination and all authorized expenses incurred to demobilize from the Project after the date of termination.
 - c. In no event shall the total compensation paid for any item of service exceed the payment specified in the applicable Task Order for that item of service.

I. District Quality Management Environmental System (QEMS) Awareness and Training (See Attachment Seven to Appendix One)

As an on-site provider of services that has the potential to result in significant environmental impacts, Consultant is required to review the Contractor QEMS Awareness pamphlet, Document No. F622D04, incorporated herein by this reference hereto, with any of the employee(s), sub-contractor(s), and/or sub-consultant(s) ("Staff") performing services on behalf of the District, and make Staff aware of the District's Quality and Environmental Policy and their role and responsibility in achieving conformity with the expectations.

J. Release of Information Prohibited

The Consultant is not permitted to provide any information concerning the Project to the media nor anyone other than authorized District personnel. The Consultant shall not release any information pertinent to the Project under design or construction for publication, public disclosure, or in any other manner without first obtaining clearance and a release in writing from the District Project Manager. Any media inquiry at any time to the Consultant relating to any matter concerning services provided or requested to be provided under this Agreement will be

APPENDIX ONE SCOPE OF SERVICES

referred immediately to the District Project Manager. The Consultant shall not communicate with the media regarding any such matter.

K. Notices

All notices will be deemed to have been given when made in writing and when delivered or mailed to the representatives of the District and the Consultant at their respective addresses as follows:

District:

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3638
Attention: Katherine Owen, Deputy Operating Officer
Water Utility Capital Division
Email: koven@valleywater.org
Fax: (408) 979-5656

The Consultant:

URS Corporation Americas
1333 Broadway, Suite 800
Oakland, CA 94612
Attention: Lelio Mejia, Vice President
Email: lelio.mejia@urs.com
Fax: (510) 874-3268

L. Good Neighbor

The District always strives to be a good neighbor to the community adjacent to its facility. The Consultant shall ensure that disturbance to neighbors is minimized. The Consultant, its staff, and sub-Consultants will always interact with the members of the public in a polite and professional manner.

M. Appendix One, Scope of Services, Attachments

The following listed Attachments referred to herein are incorporated in this Scope of Services as though set forth in full:

Attachment One—Consultant's Key Staff and Sub-Consultants
Attachment Two—Dispute Resolution
Attachment Three—Task Order Template
Attachment Four—Non-Disclosure Agreement (NDA)
Attachment Five—District Standards for GIS Products
Attachment Six—Reference Documents
Attachment Seven—District QEMS Procedures and Work Instructions

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ATTACHMENT ONE TO APPENDIX ONE CONSULTANT'S KEY STAFF AND SUB-CONSULTANTS

1. The Consultant's key staff assigned to the Project are as follows:

Team Member	Project Role
Lelio Mejia	Project Manager
Mike Forrest	Lead Geotechnical Engineer and Deputy Project Manager
David Hughes	Lead Dam Engineer, Plans & Specifications, and Constructability/Scheduling/Cost Estimating
Ted Feldsher	Lead Tunnel Engineer
Greg Reichert	Lead Hydraulics Engineer, Spillway Design, and Reservoir & System Operations
John Roadifer	Engineering Manager, Dam Engineering, Borrow/Disposal Areas, and Plans & Specifications
Keith Kelson	Geologic Mapping & Characterization, and Seismic Hazards/Fault Evaluation
Mike Zusi	Outlet Works Design, and Structural Engineering
David Simpson	Borrow/Disposal Areas, Geologic Mapping & Characterization, and Geologic/Geotechnical Field Investigations
Steve Leach	Environmental Planning & Coordination/Liaison

2. If necessary and appropriate, the Consultant shall employ sub-consultants it deems appropriate to the complexity and nature of the required Services. All sub-consultants must, if their specialty is licensable, be licensed by the State of California to perform their specific Scope of Services. The Consultant must obtain District's approval of all sub-consultants. Upon District's request, the Consultant must provide copies of all sub-consultant contract Agreements. Any delegation or subcontracting of any services by the Consultant shall not operate to relieve the Consultant of its responsibilities under this Agreement

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ATTACHMENT ONE TO APPENDIX ONE CONSULTANT'S KEY STAFF AND SUB-CONSULTANTS

The following sub-Consultants are authorized to work on the Project:

Firm	Project Role	Key Personnel
Anchor Engineering, Inc.	Constructability/Scheduling and CADD	Christopher Coles
Beyaz & Patel, Inc.	Outlet/Pipeline Engineering	Gary Ho,
Cooper Testing Labs, Inc.	Laboratory Services	Peter Jacke
Design & Construction Management Services, Inc.	Constructability/Scheduling	Sherman Honeycutt
dot.dat.inc	Geotechnical Data Management	Dotti Nelson
F.W. Associates, Inc.	Electrical Engineering	Victor Tong
ISI Inspection Services, Inc.	Laboratory Services	Leslie Sakai
Lettis Consultants International, Inc.	Seismic Hazards/Fault Evaluation	John Baldwin
M. Lee Corporation	Cost Estimating	Martin Lee
Northwest Hydraulic Consultants Ltd.	Hydraulic Physical Modeling, Physical Model Testing	Brian Hughes
Omni Digital Imaging LLC	Reprographics	Roshan Silva
Prohaska's Drafting Service	CADD	John Prohaska
Robert Y. Chew Geotechnical, Inc.	Geotechnical Field Investigations	Robert Chew
SOHA Engineers	Spillway Design Support	Stephen Lau
Telamon Engineering Consultants, Inc.	Civil/Roads/Utilities Design and Surveying	Mennor Chan
V&A Consulting Engineers, Inc.	Corrosion Engineering	Jose Villalobos
Henry T. Falvey &	Hydraulics Analysis	Hank Falvey

ATTACHMENT ONE TO APPENDIX ONE

CONSULTANT'S KEY STAFF AND SUB-CONSULTANTS

Firm	Project Role	Key Personnel
Associates, Inc.		
Lee C. Gerbig, LLC	Mechanical Engineering	Lee Gerbig
Ed Rossillon	Hydraulics Analysis	Ed Rossillon
Kinnetic Laboratories, Inc.	Sediment Sampling	Ken Kronschnabl
NORCAL Geophysical Consultants, Inc.	Geophysical Surveys	Kenneth Blom
Taber Drilling	Geotechnical Exploration	Steve Taber

Contact information for the above listed sub-Consultants is as follows:

Anchor Engineering, Inc. Christopher Coles, (925) 385-0950, ccoles@anchorcm.com 3685 Mt. Diablo Boulevard, Suite 349 Lafayette, CA 94579	Beyaz & Patel, Inc. Gary Ho, (415) 293-4511, gho@beyazpatel.com 100 Montgomery, Suite 1250 San Francisco, CA 94104
Cooper Testing Labs, Inc. Peter Jacke, (650) 213-8436 peter@coopertestinglabs.com 937 Commercial Street Palo Alto, CA 94303	Design & Construction Management Services, Inc. Sherman Honeycutt, (925) 980-8590 Sherman.Honeycutt@Design-CM.com 2040 Shady Creek Place Danville, CA 94526
dot.dat.inc Dotti Nelson, (949) 854-3522, dotdat@cox.net 4 Sweetwater Irvine, CA 92603	F.W. Associates, Inc. Victor Tong, (510) 763-7475 vtong@fwa-inc.com 330 Franklin Street, Suite 400 Oakland, CA 94607
ISI Inspection Services, Inc. Leslie Sakai, (510) 900-2100 leslie@inspectionsservices.net 211 10th Street, Suite 222 Oakland, CA 94607	Lettis Consultants International, Inc. John Baldwin, (925) 482-0360 (ext. 202) Baldwin@lettisci.com 1981 N. Broadway, Suite 330 Walnut Creek, CA 94596

ATTACHMENT ONE TO APPENDIX ONE CONSULTANT'S KEY STAFF AND SUB-CONSULTANTS

M. Lee Corporation Martin Lee, (415) 693-0236, mlee@mleecorp.com 311 California Street, Suite 610 San Francisco, CA 94104	Northwest Hydraulic Consultants Ltd. Brian Hughes, (604) 980-6011, BHughes@nhcweb.com, 30 Gostick Place, North Vancouver, BC, Canada V7M 3G3
Omni Digital Imaging LLC Roshan Silva, (415) 748-2725, roshan@odirepro.com 1275 Fairfax Avenue #103 San Francisco, CA 94124	Prohaska's Drafting Service John Prohaska, (415) 507-9107, jprohaska@comcast.net 131 Surrey Lane San Rafael, CA 94903
Robert Y. Chew Geotechnical, Inc. Robert Chew, (415) 512-1881 Robert.chew@robertchewgeotechnical.com 55 New Montgomery Street, Suite 222 San Francisco, CA 94105	SOHA Engineers Stephen Lau, (415) 989-9900, slau@soha.com 48 Colin P. Kelly Jr. Street San Francisco, CA 94107
Telamon Engineering Consultants, Inc. Mennor Chan, (415) 837-1336, Mennor.c@telamoninc.com 855 Folsom Street, Suite 142 San Francisco, CA 94107	V&A Consulting Engineers, Inc. Jose Villalobos, (510) 903-6600, jvillalobos@vaengineering.com 155 Grand Avenue, Suite 700 Oakland, CA 94612
Henry T. Falvey & Associates, Inc. (303) 838-4920, Falvey@members.asce.org 11624 Blackfoot Road Conifer, CO 80433	Lee C. Gerbig, LLC Lee Gerbig, (317) 745-1787, leecgerbigllc@gmail.com 5555 Royal Troon Way Avon, IN 46123
Ed Rossillon Ed Rossillon, (303) 233-2480, rosie6617@hotmail.com 6505 W. 31st Avenue Wheat Ridge, CO 80214	Kinnetic Laboratories, Inc. Ken Kronschnabl, (831) 457-3950 kkronsch@kinnetidabs.com 307 Washington Street Santa Cruz, CA 95060
NORCAL Geophysical Consultants, Inc. Kenneth Blom, (707) 796-7170 kblom@norcalgeophysical.com 321A Blodgett Street Cotati, CA 94931	Taber Drilling Steve Taber, (916) 371-8234 asandino@taberdrilling.com 536 Galveston Street West Sacramento, CA 95691

- None of the above named the Consultant staff or sub-Consultants will be replaced without the approval of the District's Project Manager. If the Consultant's Project Manager or any other designated key staff person or sub-Consultant fails to perform to the satisfaction of the District on written notice from District's Project Manager, the Consultant shall have fifteen (15) calendar days to remove that person from the Project and provide a replacement acceptable to the District.

ATTACHMENT ONE TO APPENDIX ONE CONSULTANT'S KEY STAFF AND SUB-CONSULTANTS

- a. The Consultant shall not charge District the time it takes the Consultant's replacement personnel to obtain the District specific Project knowledge in the possession of the person or persons being replaced.
 - b. The Project team organization chart and delegated responsibilities of each team member will be revised accordingly and submitted to the District for concurrence.
4. The District's Project Manager may approve any revisions to the Consultant's key personnel or designated sub-Consultant as an administrative modification to this Agreement.

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ATTACHMENT TWO TO APPENDIX ONE DISPUTE RESOLUTION

I. THE CONSULTANT'S QUESTIONS AND CONCERNS

Questions regarding the terms, conditions and Services relating to this Agreement will be decided by the District who will furnish the decisions to the Consultant in writing within thirty (30) Days after receiving a written request from the Consultant.

II. DISPUTE RESOLUTION

A. Alternate Dispute Resolution (ADR)

1. District intends to use ADR techniques including Partnering and Mediation to resolve disputes relating to the Project.

B. The Consultant and its sub-Consultants are expected to participate in all ADR efforts.

C. The cost of Partnering training facilities and facilitator will be borne by District.

III. NEGOTIATIONS BEFORE AND DURING MEDIATION

Negotiations to resolve disputes before and during Mediation are initiated for settlement purposes only and are not binding unless otherwise agreed by District and the Consultant.

IV. MEDIATION

A. Voluntary Mediation

1. In the event a dispute or issue is not resolved by the Internal Review process stated in the Standard Consultant Agreement, Section VIII. Resolution of Disputes, District and the Consultant agree to attempt to resolve the matter by Mediation. The External Review paragraph of Section VIII is hereby deleted.
2. Said Mediation is voluntary, non-binding, and intended to provide an opportunity for the parties to evaluate each other's cases and arrive at a mutually agreeable solution.
3. These provisions relating to voluntary Mediation will not be construed or interpreted as mandatory arbitration.

B. Initiation of Mediation

1. Any party to a dispute or claim may initiate Mediation by notifying the other party or parties in writing.

ATTACHMENT TWO TO APPENDIX ONE DISPUTE RESOLUTION

C. Request for Mediation

1. A Request for Mediation must contain a brief statement of the nature of the dispute or claim, and the names, addresses, and phone numbers of all parties to the dispute or claim, and those who will represent them, if any, in the Mediation.

D. Selection of Mediator

1. Upon receipt of a Request for Mediation, within fourteen (14) Days, the parties will confer to select an appropriate Mediator agreeable to all parties.
2. If the parties cannot agree on a Mediator, they hereby agree to accept a Mediator appointed by a recognized association such as the American Arbitration Association.

E. Qualifications of a Mediator:

1. Any Mediator selected must have expertise in the area of the dispute and be knowledgeable in the Mediation process.
2. No person will serve as a Mediator in any dispute in which that person has any financial or personal interest in the result of the Mediation.
3. Before accepting an appointment, the prospective Mediator must disclose any circumstances likely to create a presumption of bias or prevent a prompt meeting with the parties. Upon receipt of such information, the parties will confer and decide whether to select another Mediator.

F. Vacancies

1. If any Mediator becomes unwilling or unable to serve, another Mediator will be selected unless the parties agree otherwise.

G. Representation

1. Any party may be represented by person(s) of their choice who must have full authority to negotiate.
2. The names and addresses of such person(s) must be communicated in writing to all parties and to the Mediator.

H. Time and Place of Mediation

1. The Mediator will set the time of each Mediation session.
2. The Mediation will be held at a convenient location agreeable to the Mediator and the parties, as determined by the Mediator.

ATTACHMENT TWO TO APPENDIX ONE DISPUTE RESOLUTION

3. All reasonable efforts will be made by the parties and the Mediator to schedule the first session within sixty (60) Days after selection of the Mediator.

I. Identification of Matters in Dispute

1. Unless a longer period of time is required by the Mediator, at least ten (10) Days before the first scheduled Mediation session, each party must provide the Mediator a brief memorandum setting forth its position with regard to the issues that need to be resolved. At the discretion of the Mediator, or otherwise agreed by the parties, the parties may mutually exchange such memoranda.
2. At the first session, the parties will be expected to produce all information reasonably required for the Mediator to understand the issue(s) presented. The Mediator may require each party to supplement such information.

J. Authority of Mediator

1. The Mediator does not have authority to impose a settlement on the parties but will attempt to assist the parties in reaching a satisfactory resolution of their dispute.
2. The Mediator is authorized to conduct joint and separate meetings with the parties and to make oral and written recommendations for settlement.
3. Whenever necessary, the Mediator may also obtain expert advice concerning technical aspects of the dispute, provided the parties agree and assume the expenses of obtaining such advice. Arrangements for obtaining such advice will be made by the Mediator or the parties, as determined by the Mediator.
4. The Mediator is authorized to end the Mediation whenever, in the Mediator's judgment, further efforts at Mediation would not contribute to a resolution of the dispute between the parties.

K. Privacy

1. Mediation sessions are private.
2. The parties and their representatives may attend Mediation sessions.
3. Other persons may attend only with the permission of the parties and with the consent of the Mediator.

ATTACHMENT TWO TO APPENDIX ONE DISPUTE RESOLUTION

L. Confidentiality

1. The Mediator will not divulge confidential information disclosed to a Mediator by the parties or by witnesses in the course of the Mediation.
2. All records, reports, or other documents received by a Mediator while serving as Mediator, are confidential.
3. The Mediator must not be compelled to divulge such records or to testify in regard to the Mediation in any adversary proceeding or judicial forum.
4. The parties must maintain the confidentiality of the Mediation and must not rely on, or introduce as evidence in any arbitration, judicial or other proceedings:
 - a. Views expressed or suggestions made by the other party with respect to a possible settlement of the dispute;
 - b. Statements made by the other party in the course of the Mediation proceedings;
 - c. Proposals made or views expressed by the Mediator;
 - d. Whether the other party had or had not indicated willingness to accept a proposal for settlement made by the Mediator.

M. No Stenographic Record

1. There will be no stenographic record of the Mediation.

N. Termination of Mediation

1. The Mediation will be terminated:
 - a. By the execution of a Settlement Agreement by the parties;
 - b. By a written declaration of the Mediator to the effect that further efforts at Mediation are no longer worthwhile; or
 - c. By a written declaration of a party or parties to the effect that the Mediation proceedings are terminated.

O. Exclusion of Liability

1. No Mediator will be a necessary party in judicial proceedings related to the Mediation.

ATTACHMENT TWO TO APPENDIX ONE DISPUTE RESOLUTION

P. Interpretation and Application of These Mediation Provisions

1. The Mediator will interpret and apply these Mediation provisions insofar as they relate to the Mediator's duties and responsibility.

Q. Expenses

1. The expenses of witnesses for each party must be paid by the party producing the witnesses.
2. All other expenses of the Mediation, including required traveling and other expenses of the Mediator, and the expenses of any witness called by the Mediator, or the cost of any proofs or expert advice produced at the direct request of the Mediator, will be apportioned as the Mediator finds appropriate or as otherwise agreed to by the parties.

V. COMPENSATION FOR PARTICIPATION IN MEDIATION

Neither the Consultant nor the District is entitled to compensation for time spent in or for negotiations or Mediation to resolve questions or disputes between the Consultant and District arising out of this Agreement.

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ATTACHMENT THREE TO APPENDIX ONE TASK ORDER TEMPLATE

Task Order No. _____

Agreement: Standard Consultant Agreement – Contract No. _____ (“Agreement”) Between the Santa Clara Valley Water District (“District”) and _____ (“Consultant”), dated _____.

District Project Manager: _____

Consultant Project Manager: _____

Dollar Amount of Task Order: Not-to-exceed \$ _____

1. Upon full execution of this Task Order Number: _____, as set forth in Appendix One, Section VI. Additional Terms and Conditions, D. Task Orders, and issuance of a notice to proceed by the District Project Manager, the Consultant is hereby authorized to perform the services described in Attachment A to this Task Order. Any costs incurred, services performed or expenditures by the Consultant before this Task Order is executed or before the issuance of the notice to proceed will be considered outside the contracted scope of services and will not be eligible for payment.
2. Both the scope of services to be performed and the deliverables to be provided under this Task Order are described in Attachment A which is attached hereto and incorporated by this reference. Attachment A identifies the following:
 - a. The Consultant personnel to be assigned to perform the services, including resumes if not previously provided to the District Project Manager.
 - b. The estimated number of hours required to perform the services assigned to each assigned Consultant personnel.
 - c. Estimated cost of each reimbursable expense, including any applicable fees.
 - d. Project schedule for completing the scope of services.
3. The Consultant shall be compensated at the hourly rates established in Appendix Two, Fees and Payments, of the Agreement. The Consultant agrees that it will provide all equipment, furnish all materials, except as may be otherwise noted in the Attachment A.
4. This Task Order will become effective on the date of signature by the District Deputy Operating Officer and the Consultant Project Manager, and remain in effect until the earlier of: completion of the tasks set forth in Attachment A or {enter expected completion date}.
5. Copies of applicable state and federal permits required to complete the work in Attachment A are attached to this Task Order, unless the Consultant Project Manager previously provided the appropriate permits to the District.
6. The Consultant shall perform all services described in Attachment A to this Task Order in accordance with the terms and conditions of the Agreement.
7. Signatures:

Signature/Print Name: _____

**CONSULTANT PROJECT MANAGER
ON BEHALF OF THE CONSULTANT**

DATE

Signature/Print Name: _____

**SANTA CLARA VALLEY WATER DISTRICT
DEPUTY OPERATING OFFICER (or the
Project Manager, if the Task Order amount
is less than or equal to \$100,000)**

DATE

ATTACHMENT FOUR TO APPENDIX ONE NON-DISCLOSURE AGREEMENT (NDA)



SANTA CLARA VALLEY WATER DISTRICT NON-DISCLOSURE AGREEMENT (NDA)

FC 1650 (03-19-06)
Page 1 of 2

This confidentiality agreement ("Agreement") is entered into as of _____ (date), by and between Santa Clara Valley Water District (hereinafter the "District"), and _____, or which together with its subsidiaries and affiliates, are individually and collectively be referred to hereinafter as the "Company."

1. During the course of Company's relationship with the District, the District has disclosed or may disclose to Company confidential information that may include but not be limited to the following kinds of information: plans, security data, vulnerability assessments, draft documents, network data, control systems data, security protocols, personnel data, computer programs, remote application access, computer information licensed to the District, and work product of the District's employees and agents, and other non-public information ("Confidential Information").
2. Company agrees:
 - (i) to hold the Confidential Information in strict confidence and to take reasonable precautions to protect such Confidential Information;
 - (ii) not to reproduce, transcribe, or disclose the Confidential Information, or any information derived from the Confidential Information to third parties without prior written approval by the District;
 - (iii) not to make, have made, use, distribute or sell for its own purposes or for any purpose other than on behalf of the District, any item or data incorporating Confidential Information;
 - (iv) to only make a minimum amount of copies of any Confidential Information that is absolutely necessary to carry out services it provides to the District;
 - (v) to only disclose Confidential Information to its responsible employees who have: (a) a need to know such Confidential Information in order to carry out the services Company provides to the District; and (b) signed and returned to the District the PERSONAL NDA, attached to this Agreement as Attachment One;
 - (vi) to promptly return all copies, renderings, transformations, and derivatives of the Confidential Information to the District at the termination of its working relationship with the District; or if requested by the District to destroy and certify in writing the destruction of such Confidential Information; and
 - (vii) to notify the District in writing immediately when it becomes aware of any unauthorized release of the Confidential Information.
3. Company acknowledges that its compliance with this Agreement is necessary to protect the District, and that any action on Company's part that is inconsistent with this Agreement will cause the District irreparable and continuing harm. Therefore, if anything Company (including its employees and agents) does that is inconsistent with this Agreement, Company consents to the District obtaining a court order to stop its inconsistent actions and otherwise to prevent any, without the District having to post any bond or security for such order. The District may pursue other remedies available to it, all of which are nonexclusive and cumulative. This Agreement sets forth the entire agreement with respect to the Confidential Information disclosed herein and supersedes all prior or contemporaneous agreements concerning such Confidential Information, whether written or oral. All additions or modifications to this Agreement must be made in writing and must be signed by both parties. This Agreement is made under and will be construed according to the laws of the State of California.

By signing below, you acknowledge that you have read this Agreement and you have authority to agree, and do agree, on behalf of Company to all of the terms and conditions contained in this Agreement.

COMPANY

Signature: _____ Date: _____

Name: _____ Title: _____

ATTACHMENT FOUR TO APPENDIX ONE NON-DISCLOSURE AGREEMENT (NDA)

Santa Clara Valley
Water District



PERSONAL NDA
(Attachment One to the Santa Clara Valley
Water District NDA)
FC 1650 (03-19-08)
Page 2 of 2

I acknowledge that the Santa Clara Valley Water District ("District") will make available to me from time to time certain information that is highly confidential to the District. I acknowledge that such information is extremely sensitive and agree that I will not disclose all or any part of this confidential information to any person, firm, corporation, association, or partnership without the written permission of the District. For example, this confidential information includes but not be limited to the following kinds of information: plans, security data, vulnerability assessments, draft documents, network data, control systems data, security protocols, personnel data, computer programs, remote application access, computer information licensed to the District, and work product of the District's employees and agents, and other non-public information.

I will hold all of the District's confidential information at all times in trust and strictest confidence for the District from and after the date of its creation or disclosure to me. I will prevent the impermissible release of the District's confidential information. I will not retain nor incorporate any of the confidential information into any database or any medium other than may be required for the District's exclusive benefit. I will not duplicate or disclose or otherwise reveal such confidential information in any manner inconsistent with this agreement.

In addition, I will not perform an illegal act and I will not share the password or account access provided exclusively to me. When leaving a workstation unattended, or out of sight, I will save my work and log off or lock the workstation to prevent unauthorized access. I will make no attempt to circumvent access codes or information protection schemes or uncover security loopholes or attempt to break authentication procedures or encryption protocols. I will make no attempts to increase the level of access to which I have been authorized. I will not attempt to use or obtain access codes in an unauthorized manner or from another user. I will not allow non-employees to access District computer systems.

I agree to abide by the statements made regarding the use of confidential information, including, without limitation, any on the use of the District's network.

I acknowledge that my faithful compliance with this NDA is necessary to protect the District and that any action on my part that is inconsistent with this NDA will cause the District irreparable and continuing harm. Therefore, if anything I do is inconsistent with this NDA, I consent to the District obtaining a court order to stop my inconsistent actions and otherwise to prevent any, without the District having to post any bond or security for such order. The District may pursue other remedies available to it, all of which are nonexclusive and cumulative.

PLEASE COMPLETE THE FOLLOWING SECTION (PLEASE PRINT):

Full Name:	
Company Name:	
Phone No.:	Fax No.:
Email Address:	
What department(s) do you work with within the District?	
Signature:	Date:

ATTACHMENT FIVE TO APPENDIX ONE DISTRICT STANDARDS FOR GIS PRODUCTS

A. INTRODUCTION

1. A Geographic Information System (GIS) is an organized collection of computer hardware, software, and geographic data designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information.

B. GENERAL POLICIES

1. The diverse nature of the GIS precludes policies that cover every situation that can arise. However, the general policies of the District as they apply to the GIS include:
 - a. The District GIS standard coordinate system is California State Plane Coordinate System (Feet) using the North American Datum of 1983 California Zone 3 (NAD 83) for horizontal data and the North American Vertical Datum of 1988 (NAVD 88) for vertical data.
 - b. Each dataset must have a complete, District-compliant metadata file specific to that dataset. Datasets that do not include metadata will not be accepted by the District.
 - c. All GIS products must be reviewed by the GIS Administration Unit or an authorized reviewer before they can be accepted by the District.

C. DEFINITIONS

1. ESRI—Environmental Systems Research Institute. A GIS software company. The District is standardized on ESRI GIS software.
2. Metadata—Information that describes the content, quality, condition, origin, and other characteristics of data or other pieces of information. Metadata for spatial data may describe and document its subject matter; how, when, where, and by whom the data was collected; availability and distribution information; its Projection, scale, resolution, and accuracy; and its reliability with regard to some standard. Metadata consists of properties and documentation. Properties are derived from the data source (for example, the coordinate system and Projection of the data), while documentation is entered by a person (for example, keywords used to describe the data).
3. PRJ file—The PRJ (Projection) file contains the coordinate system information for the data.

ATTACHMENT FIVE TO APPENDIX ONE DISTRICT STANDARDS FOR GIS PRODUCTS

4. World file—A text file containing information about where an image should be displayed in real world coordinates. When an image has a properly configured world file, GIS software can use the information (a total of six values, including the starting coordinates, the cell size in both x and y dimensions, and any rotation and scaling information) to accurately overlay the image with any other data already in that coordinate system.

D. DATASET STANDARDS

1. All GIS feature datasets will be created in ESRI ArcView shapefile, ESRI ArcInfo coverage, ESRI geodatabase or ESRI-compliant format. Tabular datasets will be in dBase IV (DBF) or INFO (ESRI ArcInfo database file) format. Image data will be in ESRI GRID, Multiresolution Seamless Image Database (MrSID), or Tag Image File (TIFF or GeoTIFF) format.
2. All GIS datasets must include coordinate system information. Shapefiles must include ESRI-compliant PRJ files and image data must include ESRI-compliant World files. PRJ files can be created using ArcGIS. Non-ArcGIS users can create a PRJ file by copying the information from Attachment Five-A-Sample PRJ file for California State Plane Zone 3 NAD 83 feet, pasting it in Notepad, and then saving it as the name of the dataset with a PRJ extension. For example, the shapefile **creeks.shp** should have a PRJ file named **creeks.prj**.

E. METADATA STANDARDS

1. A metadata file for each dataset must be completed in order to comply with the Federal Geographic Data Committee (FGDC) Content Standards for Digital Geospatial Metadata. The Content Standard for Digital Geospatial Metadata adopted by the State Land Information Board, State of California, can be found at <http://www.fgdc.gov/metadata/csdlgm>.
2. If a new dataset is derived from an existing dataset that does not have metadata, a complete, District-compliant metadata file must be provided with the new dataset.
3. If using ArcGIS software, metadata should be created using ArcCatalog and provided in eXtensible Markup Language (XML) file format. All required fields must be completed. A list of required fields can be found in Attachment Five-B-SCVWD GIS Dataset Metadata Template. Attachment Five-C-SCVWD GIS Dataset Metadata Help provides information about each required field.
4. If not using ArcGIS software, metadata can be provided in Rich Text (RTF) file format using the District's metadata template, Attachment Five-B-SCVWD GIS Dataset Metadata Template.

ATTACHMENT FIVE TO APPENDIX ONE DISTRICT STANDARDS FOR GIS PRODUCTS

F. PROJECT STANDARDS

1. ArcView 3.x Project files (APR) are not easily transferred from one file system to another. Therefore, ArcView 3.x layouts should be exported to high-quality (300 dpi minimum) images, such as Portable Document Format (PDF) or Joint Photographic Experts Group (JPG) format, for transfer to the District.
2. ArcGIS Project files (MXD) provided to the District must be created so that they can be easily transferred to the District's file system without broken links to datasets or pictures. Any non-standard marker symbols, fonts, or other special files must be included with the Project. Project files must be saved with relative path names. Pictures (such as logos) must be saved as part of the document.

G. CARTOGRAPHY STANDARDS

1. All maps must have the following standard map components:
 - a. Title
 - b. Legend
 - c. North Arrow
 - d. Scale Bar
 - e. Map Date
 - f. Map Author

H. ATTACHMENTS

The following listed Attachments referred to herein are incorporated in this Attachment Five to Appendix One—District Standards For GIS Products as though set forth in full:

1. Attachment Five-A, Sample PRJ File For California State Plane Zone NAD 83 Feet
2. Attachment Five-B, SCVWD GIS Dataset Metadata Template
3. Attachment Five-C, SCVWD GIS Dataset Metadata Help

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ATTACHMENT FIVE - A TO APPENDIX ONE

SAMPLE PRJ FILE FOR CALIFORNIA STATE PLANE ZONE NAD 83 FEET

PROJCS["NAD_1983_StatePlane_California_III_FIPS_0403_Feet",GEOGCS["GCS_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GRS_1980",6378137,298.257222101]],PRIMEM["Greenwich",0],UNIT["Degree",0.017453292519943295]],PROJECTION["Lambert_Conformal_Conic"],PARAMETER["False_Easting",6561666.666666666],PARAMETER["False_Northing",1640416.666666667],PARAMETER["Central_Meridian",-120.5],PARAMETER["Standard_Parallel_1",37.0666666666667],PARAMETER["Standard_Parallel_2",38.4333333333333],PARAMETER["Latitude_Of_Origin",36.5],UNIT["Foot_US",0.30480060960121924]]

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ATTACHMENT FIVE – B TO APPENDIX ONE
SCVWD GIS DATASET METADATA TEMPLATE

8. POINT OF CONTACT INFORMATION
SCVWD CONTACT:

Attn: Information Systems Solution Unit Manager

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614
(408) 630-2488
9. DISTRIBUTION CONTACT INFORMATION (If Applicable)
 - a. CONTACT PERSON:
 - b. CONTACT ORGANIZATION:
 - c. ADDRESS:
 - d. CITY:
 - e. STATE OR PROVINCE:
10. METADATA CONTACT INFORMATION
 - a. CONTACT PERSON:
 - b. CONTACT ORGANIZATION:
 - c. ADDRESS:
 - d. CITY:
 - e. STATE OR PROVINCE:
 - f. METADATA DATE:
11. SPATIAL REFERENCE INFORMATION
 - a. PROJECTION: California Stateplane, NAD 83, Zone 3, Feet

B. ADDITIONAL INFORMATION

1. DATA ACCURACY/QUALITY
 - a. ORIGINAL SOURCE/SCALE:
 - b. LOGICAL CONSISTENCY:
 - c. COMPLETENESS:
 - d. PROCESS DESCRIPTION:
 - e. ATTRIBUTE ACCURACY REPORT:
2. NOTES:

ATTACHMENT FIVE - C TO APPENDIX ONE

SCVWD GIS DATASET METADATA HELP

FGDC METADATA INFORMATION. REQUIRED INFORMATION FOR FGDC COMPLIANCE—ALL ITEMS UNDER “REQUIRED INFORMATION” MUST BE COMPLETED!

A. REQUIRED INFORMATION

1. CITATION INFORMATION

- a. ORIGINATOR: The organization or individual who developed the data; for example, authors would be the originators of a book.
- b. PUBLICATION DATE: The date when the data set is made available for release or otherwise published. Dates can be provided as a year, a year and a month, or as a year, month, and day. Dates should be provided in the format YYYYMMDD (e.g., 20000921). If the publication date is unknown, put unknown. If the material (data) is unpublished, put unpublished material.
- c. TITLE: The name of the dataset, filename.

2. DESCRIPTION INFORMATION

- a. ABSTRACT: Abstract briefly describes the “what” aspects of the data. For example, what information is in the data set? What area is covered?
- b. PURPOSE: Purpose describes the “why” aspects. For example, why was the data set created?

3. TIME PERIOD OF CONTENT INFORMATION

- a. CALENDAR DATE: The year (and optionally month, or month and day) for which the data set corresponds to the ground, or “ground condition.” The ground condition is the date for when the real world looked the way it is described by the data (e.g., the calendar date/ground condition for a set of aerial photographs would be the date or dates that the pictures were taken). Dates should be provided in the format YYYYMMDD (e.g., 20000921). If the data was collected during a series of dates, please provide a beginning date and an ending date (e.g., Beginning Date: 20020912, Ending Date: 20031225).
- b. CURRENTNESS REFERENCE: Indicate the basis on which the time period of content information was determined. Most potential users are interested in a data set’s currentness with regard to the “ground condition” (that is, when the “real world” looked the way it is described in the data set). Unfortunately, sometimes only the date that the information was recorded or published—perhaps weeks, months, or even years after it was collected—is known. Or the time period of content dates may have been derived in some other fashion (e.g., from a text phrase such as Summer, 1992). The Currentness Reference element requires the producer to identify whether the Time Period of Content dates refer to the ground condition, to some later time when the information was published, or are derived from some source. The choices for this section would be: ground condition, publication date, or free text.

ATTACHMENT FIVE - C TO APPENDIX ONE

SCVWD GIS DATASET METADATA HELP

4. STATUS INFORMATION

- a. **PROGRESS:** The state of the data set. Use words such as complete, in work, or planned.
- b. **UPDATE FREQUENCY:** The frequency with which changes and additions are made to the data set after the initial data set is complete. Use words such as annually, as needed, continually, daily, irregular, monthly, none planned, quarterly, unknown, weekly, or other text describing when the data is updated.

5. KEYWORDS INFORMATION

- a. **THEME:** Common use word or phrase (keywords) used to describe the subject of the data set. Keywords are words or phrases that index the contents of the data source; they are very useful when searching for data. Theme is not the file name (e.g., creeks.shp, pipeline.shp, etc).
- b. **THESAURUS:** You must specify whether or not the theme keywords were derived from a formal thesaurus. If not, type "None"; otherwise, provide the name of the thesaurus.

6. ACCESS INFORMATION

- a. **ACCESS CONSTRAINTS:** Restrictions and legal prerequisites for accessing the data set. If there are no access constraints, the value of the appropriate element should be "None."
- b. **USE CONSTRAINTS:** Restrictions and legal prerequisites for using the data set after access is granted. If there are no use constraints, the value of the appropriate element should be "None."

7. ATTRIBUTE INFORMATION: Attribute Labels and Definitions must be included for each attribute.

- a. **ATTRIBUTE LABEL—**The name of the attribute field.
- b. **ATTRIBUTE DEFINITION—**A description of the attribute necessary to clarify or explain the dataset.
- a. **POINT OF CONTACT INFORMATION:** The name of the individual/organisation to contact to gain information about the data set. The current information will be used as the default for the point of contact information.

ATTACHMENT FIVE - C TO APPENDIX ONE

SCVWD GIS DATASET METADATA HELP

a. SCVWD CONTACT:

Information Systems Solutions Unit Manager

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614
(408) 630-2488

8. DISTRIBUTION CONTACT INFORMATION (If Applicable): The name of the individual/organisation that is responsible for the creation and distribution of the original data set.
- a. CONTACT PERSON: The name of the individual to contact where the data set was acquired.
 - b. CONTACT ORGANIZATION: The name of the organization to contact where the data set was acquired.
 - c. ADDRESS: The address of the organization or the individual.
 - d. CITY: The city of the address.
 - e. STATE OR PROVINCE: The state or province of the address.
9. METADATA CONTACT INFORMATION: The party who is responsible for creating the metadata must be included as the metadata contact; they should be able to answer questions about or receive reports about errors in the metadata.
- a. CONTACT PERSON: The name of the individual who created the metadata.
 - b. CONTACT ORGANIZATION: The **organization** associated with the creation of the metadata.
 - c. ADDRESS: The address of the organization or the individual.
 - d. CITY: The city of the address.
 - e. STATE OR PROVINCE: The state or province of the address.
 - f. METADATA DATE: When the metadata was last updated (YYYYMMDD).
10. SPATIAL REFERENCE INFORMATION
- a. PROJECTION: California State plane, NAD 83, Zone 3, Feet

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ATTACHMENT FIVE - C TO APPENDIX ONE

SCVWD GIS DATASET METADATA HELP

B. ADDITIONAL INFORMATION

1. DATA ACCURACY/QUALITY

- a. ORIGINAL SOURCE/SCALE: The original source and scale at which the data was derived from.
- b. LOGICAL CONSISTENCY: Describes the topological integrity of the data. For example, do lines intersect only where intended? Are there any duplicate lines? Are any polygons too small? You may want to report the software used to test and verify the topological integrity of the data.
- c. COMPLETENESS: Includes information about omissions, selection criteria, generalization, definitions used, and other rules used to derive the data. For example, you may want to include information about thresholds such as the minimum area for polygons.
- d. PROCESS DESCRIPTION: Provide details of the steps taken to construct the data. For each detail, provide a description including the parameters or tolerances used; as well as dates, software, and the process contact. (i.e., "update log")
- e. ATTRIBUTE ACCURACY REPORT: An explanation of the accuracy of the identification of entities and assignments of values in the data set and a description of the tests used. Attribute descriptions should go in this section as well.

2. NOTES:

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ATTACHMENT SIX TO APPENDIX ONE

REFERENCE DOCUMENTS

The following Reference Documents are provided on a CD.

- Ref. 1 – HDR Engineering, 2013a, Problem Definition Memorandum, dated January 18, 2013.
- Ref. 2 – HDR Engineering, 2013b, Conceptual Alternatives Report, dated February 28, 2013.
- Ref. 3 – HDR Engineering, 2013c, Feasible Alternatives Matrix, dated April 4, 2013.
- Ref. 4 – HDR Engineering, 2013d, Final Draft Staff Recommended Alternative Report, dated April 26, 2013.
- Ref. 5 – HDR Engineering, 2013e, Revised Draft Planning Study Report, dated May 23, 2013.
- Ref. 6 – AMEC, 2012, Evaluation of Upstream Displacement, dated July 17, 2012.
- Ref. 7 – HDR Engineering, 2012a, Interim Risk Reduction Measures, dated August 6, 2012.
- Ref. 8 – HDR Engineering, 2012b, Recommendations for Paleoseismic Fault Trenching, dated August 22, 2012.
- Ref. 9 – HDR Engineering, 2013g, Surface Fault Rupture Evaluation, Anderson Dam Seismic Retrofit Project, dated March 6, 2013.
- Ref. 10 – HDR Engineering, 2013h, Anderson Dam PMF Study Revision, Anderson Dam Seismic Retrofit Project, dated March 11, 2013.
- Ref. 11 – HDR Engineering, 2013i, Review of Reservoir Drawdown Criteria, Anderson Dam Seismic Retrofit Project, dated May 2, 2013.
- Ref. 12 – HDR Engineering 2013j, Limited Downstream Geotechnical Investigation Report, Anderson Dam Seismic Retrofit Project, dated May 2, 2013
- Ref. 13 – HDR Engineering, 2013k, Borrow Area Field Investigation Plan, Anderson Dam Seismic Retrofit Project, dated May 28, 2013.
- Ref. 14 – Black and Veatch 2012b, Risk Management Plan, dated October 10, 2012
- Ref. 15 – Black and Veatch 2013a, Technical Memorandum – Constructability Review, dated March 21, 2013.

ATTACHMENT SEVEN TO APPENDIX ONE
DISTRICT QEMS PROCEDURES AND WORK INSTRUCTIONS

The following District QEMS Procedures and Work Instructions are provided on a CD.

Attachment #	Document Title
1	Capital Project Delivery
2	File Instructions for Capital Projects
3	Design Phase WBS Descriptions and Instructions
4	Construction Phase Work Instructions
5	Instructions for Hazardous Substance Study
6	Advertise, Report of Bids, Award
7	Change Management Practice
8	Create Workplan
9	Checklist for Advertisement
10	Project Delivery Flowchart
11	Calculation Cover Sheet
12	Listing of Calculations Form
13	Technical Memo Template
14	30% Design Phase Quality Control Form
15	60% Design Phase Quality Control Form
16	90% Design Phase Quality Control Form
17	100% Design Phase Quality Control Form
18	Construction Submittal Comment Form
19	HSLA Form
20	Environmental Planning Guidance Section 1 - Purpose
21	Environmental Planning Guidance Section 3 - Mitigation Measure Monitoring and Reporting
22	Environmental Planning Guidance Section 4 - Responsible Agency
23	Environmental Planning Guidance Section 5 - Joint Documents
24	Closeout Checklist
25	Contractor QEMS Awareness Pamphlet (Doc. #F622D04)

APPENDIX TWO

FEES AND PAYMENTS

I. GENERAL

Payment for all services performed by Consultant to the satisfaction of the District as listed in Appendix One—Scope of Services for this Agreement will be based on the Total Fixed Not-to-Exceed (NTE) Fees stated in this Appendix Two for the completion of the associated tasks. The District will make payments to the Consultant according to the terms provided for in this Appendix. Payments made by the District to the Consultant for services rendered will be considered full compensation for all personnel, materials, supplies, subconsultant(s), and equipment including reimbursable, travel, and per diem expenses incurred by the Consultant to complete the work.

II. TOTAL AUTHORIZED FUNDING

Total payment for services performed, as defined in Appendix One—Scope of Services, will not exceed a total amount of **\$11,384,761** during the term of this Agreement. Under no conditions will the total compensation to the Consultant exceed this NTE amount without prior written approval in the form of an amendment to this Agreement executed by the District's Board of Directors ("Board"), or Chief Executive Officer as authorized by the Board. The Consultant guarantees that it will complete the contracted Scope of Services for the Total NTE Amount stated herein.

III. COST BREAKDOWN

The NTE total compensation of this Agreement consists of the following task fee breakdown. No services will be performed or fees paid by the District to the Consultant for Supplemental Services without prior written authorization by the District as stated in Appendix One of this Agreement.

COST BREAKDOWN

Task	Description	Total Fixed (Not-to-Exceed) Fees
1	Project Management Services	\$877,668
2	Data Collection and Investigations	\$2,555,092
3A	Basis of Design (Approved for Design)	\$1,571,579
3B	Basis of Design (Prior Approved Required)	\$428,816
4	30% Design Document Preparation	\$1,361,525
5	60% Design Document Preparation	\$1,408,868
6	90% Design Document Preparation	\$787,007

APPENDIX TWO

FEES AND PAYMENTS

Task	Description	Total Fixed (Not-to-Exceed) Fees
7	Final Design Document Preparation	\$336,182
8	Bid and Award Services	\$160,564
9	Supplemental Services During Design	\$1,897,460
Total Not-to-Exceed Amount		\$11,384,761

IV. TERMS AND CONDITIONS

Payments for work completed, as defined in Appendix One—Scope of Services, will be based on the following terms:

- District will pay for services provided by the Consultant according to the schedule of rates for professional, technical, and administrative personnel as listed below in the Hourly Rate Schedule and unit rate.
- The stated hourly and unit rates are effective for the term of this Agreement unless otherwise revised as indicated. After twelve (12) months from the date this Agreement is entered into by parties ("anniversary date"), and each 12 months thereafter, these hourly and unit rates may be negotiated by the Consultant and the District, provided Consultant submits written notice to District of Consultant's request to revise the hourly and unit rates ninety (90) calendar days prior to the anniversary date of this Agreement. Both parties will use as a benchmark for negotiations the percent change for the previous twelve (12) months of the "Employment Cost Index (ECI), for total compensation for private industry workers, for the San Francisco-Oakland-San Jose, CA CSA Census region and metropolitan area (not seasonally adjusted)" as published by the U.S. Department of Labor, Bureau of Labor Statistics, or 2.6% for professional, scientific and technical staff, and 1.3% for administrative staff, whichever is less. A negative index will result in rates remaining the same. Such rate revisions are subject to written approval by the District's Water Utility Capital Services Division Deputy Operating Officer.

HOURLY RATE SCHEDULE

Classification	Hourly Rate
URS	
Principal	\$241
Project Manager	\$241

APPENDIX TWO

FEES AND PAYMENTS

Classification	Hourly Rate
Senior Manager	\$195
Sr..Project Engineer/Scientist	\$174
Project Engineer/Scientist	\$137
Sr. Engineer/Scientist	\$116
Staff Engineer Scientist	\$98
Sr. GIS CADD/Graphic	\$133
GIS/CAD/Graphic	\$105
Editor	\$120
Contract Administrator	\$112
Admin. Assistant/Typist	\$79
Anchor Engineering, Inc.	
Senior Engineering Technician	\$135
Beyaz & Patel, Inc.	
Principal Engineer	\$208
Managing Engineer	\$184
Pipeline Engineer	\$184
Senior Engineer	\$145
Engineer	\$117
CADD Technician	\$109
Clerical/Word Processing	\$65
Design and Construction Management Services, Inc.	
Principal	\$200
dot.dat.inc	
Data Processor	\$70
F.W. Associates, Inc.	
Principal	\$196
Project Engineer	\$151

APPENDIX TWO

FEES AND PAYMENTS

Classification	Hourly Rate
Senior Engineer	\$113
CADD	\$87
Lettis Consultants International, Inc.	
Principal	\$190
Senior	\$180
Senior Project	\$140
Project	\$125
Senior Staff	\$110
Staff	\$95
Technical Typing	\$80
M. Lee Corporation	
Chief/Lead Estimator	\$194
Senior Estimator	\$142
Estimator	\$127
Prohaska's Drafting Service	
GIS/CADD/Graphic	\$88
Robert Y. Chew Geotechnical, Inc.	
Principal Engineer	\$199
Senior Geologist	\$126
Project Engineer	\$110
Staff Engineer	\$70
SOHA Engineers	
Principal	\$220
Senior Project Manager	\$180
Senior Project Engineer	\$135
Drafter	\$95

APPENDIX TWO

FEES AND PAYMENTS

Classification	Hourly Rate
Telamon Engineering Consultants, Inc.	
Principal	\$218
Project Manager	\$203
Engineer II	\$140
Engineer I	\$125
CADD Drafter III	\$125
V&A Consulting Engineers, Inc.	
Project Manager	\$200
Associate Engineer	\$140
Project Administrator / Clerical	\$75
Independent Consultants	
Hank Falvey	\$180
Lee Gerbig	\$100
Ed Rossillon	\$110

CONTRACTORS/VENDORS UNIT RATE SCHEDULE

Description	Unit	Unit Rate
Cooper Testing Labs, Inc.		
Atterberg	Each	\$160
Moist & Density	Each	\$21
Sieve	Each	\$105
Bulk Sieve	Each	\$170
UU Triaxial	Each	\$225
CU Triaxial	Each	\$505
Direct Shear	Each	\$200
Falling-head Perm.	Each	\$305

APPENDIX TWO

FEES AND PAYMENTS

Description	Unit	Unit Rate
Consolidation	Each	\$360
Compaction Modified Proctor 6-in.	Each	\$300
Corrosivity	Each	\$233
Unconfined Compression - Rock	Each	\$255
Point Load	Each	\$75
Slake Durability	Each	\$185
Brazilian Splitting	Each	\$105
Sample Storage	Per Sample/Day	\$0.50
Principal Consulting	Per Hour	\$160
Inspection Services, Inc.		
Atterberg	Each	\$162
Moist & Density	Each	\$36
Sieve	Each	\$103.5
Compaction Modified Proctor 6-in.	Each	\$256.5
UU Triaxial	Each	\$162
CU Triaxial	Each	\$477
Direct Shear	Each	\$189
Consolidation	Each	\$315
Kinnetic Laboratories, Inc.		
Reservoir Sediment Sampling	Lump Sum	\$16,000
Mercury Testing	Each	\$42
NorCal Geophysical Consultants, Inc.		
Mobilization	Per Hour	\$160
Geophysical Logging	Per Hour	\$205

APPENDIX TWO

FEES AND PAYMENTS

Description	Unit	Unit Rate
Standby	Per Hour	\$160
Per Diem	Per Day	\$175
Log Preparation	Each	\$160
Northwest Hydraulic Consultants Ltd.		
Spillway Physical Model Study	Lump Sum	\$215,000
Omni Digital Imaging LLC		
B&W Copy – Letter Size	Per Page	\$0.04
Color Copy – Letter Size	Per Page	\$0.35
Color Copy – 11x17 Size	Per Page	\$0.70
Color Print – Over Size	Per S.F.	\$6.00
Taber Drilling		
Mob/Demob – Land Drill Rig	Lump Sum, Per Rig	\$2,700
Mob/Demob – Barge and Drill Rig	Lump Sum, Per Rig	\$11,750
Mob/Demob – Sonic Rig	Lump Sum, Per Rig	\$4,600
Soil Drilling and Sampling – Truck Rig	Per Foot	\$77
Soil Drilling and Sampling – Track Rig	Per Foot	\$87
Soil Drilling and Sampling – Barge	Per Foot	\$129
Rock Core Drilling – Truck Rig	Per Foot	\$88
Rock Core Drilling – Track Rig	Per Foot	\$98
Rock Core Drilling – Barge	Per Foot	\$140
Sonic Drill	Per Foot	\$111
Packer Testing	Each	\$740
Core Boxes	Each	\$50

APPENDIX TWO

FEES AND PAYMENTS

Description	Unit	Unit Rate
Undisturbed Soil Sampling	Each	\$35
Assist Geophysical Logging	Per Boring	\$1,180
Grout Backfill of Borings	Per Foot	\$5
Install Open Standpipe PVC Piezometer	Per Foot	\$6
Install Christie Boxes	Each	\$75
Hammer Calibration	Each	\$3,000
Cutting Disposal	Per Foot	\$7
Small Bulldozer Mob/Demob	Lump Sum	\$850
Small Bulldozer	Per Day	\$2,400
Backhoe Mob/Demob	Lump Sum	\$750
Backhoe (Case 580E or similar)	Per Day	\$1,250
Conex Storage Container Mob/Demob	Lump Sum Per Box	\$510
Conex Storage Container (8' X 20')	Per Month/Box	\$110
Standby	Per Hour	\$295
Asbestos Analysis	Each	\$462
Metal Analysis (As, Ni, Cr, Cu, Co)	Each	\$68

3. Unused fees from a completed task may be reallocated to a future task provided that the Agreement Total Not-To-Exceed Amount is not exceeded. However, transferring of fees from future tasks to current tasks will not be permitted.
4. Not-to-exceed fees and services to be performed under Supplemental Services will commence only after written approval from the District Water Utility Capital Division Deputy Operating Officer (or the Project Manager, if the Task Order issued authorizing Supplemental Services is less than or equal to \$100,000).
5. Expenses incurred by the Consultant for Sub-Consultants providing professional services and for Subcontractor/Vendors will be reimbursed at actual cost plus 5%.

APPENDIX TWO

FEES AND PAYMENTS

6. All other direct expenses not included in overhead including, but not limited to, mapping, rendering, printouts, leased equipment, mailing and delivery services, printing services, film and processing, plotting, and supplies, will be billed monthly at cost plus 5% linked to each Agreement Task, as approved by the District's Project Manager.
7. Automobile travel mileage expenses will be paid at the current IRS rate. District will not reimburse Consultant and its subconsultants for travel to and from District Headquarters and surrounding campus located at 5700 Almaden Expressway, San Jose, California. District will reimburse Consultant and its subconsultants for mileage incurred from District Headquarters or Consultant's and subconsultants' firm address, whichever is closer to the destination, to Project site and to meeting locations with regulatory agencies, if directed or authorized by the District.
8. Monthly invoices will be prepared in accordance with the terms of this Appendix Two and the Standard Consultant Agreement Section IV, Fees and Payments and represent work performed and reimbursable costs incurred during the identified billing period and will be consistent with Appendix One and include categorized costs for all labor charges, name and personnel category, and direct charges by task, must reflect actual fees versus the Agreement not-to-exceed fees in this Appendix Two. Before submitting an invoice, a draft monthly progress report and invoice (in Adobe PDF format) will be provided by the Consultant for preliminary review by the District Project Manager. Upon preliminary approval by the District, the Consultant will mail the complete signed and dated hardcopy invoice, including all supporting documentation. District review of the draft invoice does not represent final approval of the hardcopy invoice.
9. District's Project Manager will review invoice within 5 working days of receipt, address any questions with Consultant's Project Manager, and approve the undisputed amount of the invoice within 10 working days of receipt of the invoice. District will pay undisputed invoices within 30 calendar days from date invoice is approved by District's Project Manager.
10. Prevailing Wages
 - a. The services to be performed pursuant to this Agreement are "public works" subject to California Labor Code Section 1771, et. seq. and the applicable implementing regulations. The General Prevailing Wage Rates issued by the California Department of Industrial Relations may be adjusted by the State during the term of this Agreement. Notwithstanding any other provisions of this Agreement, Consultant will not be entitled to any adjustment in compensation rates in the event there are adjustments to the General Prevailing Wage Rates.
 - b. Labor Code Section §1720 includes "Inspection and Land Surveying" in its definition of "Public Works." If Consultant's Scope of Services includes

APPENDIX TWO

FEES AND PAYMENTS

such work, Consultant must comply with all Labor Codes applicable to prevailing wages.

11. Consultant's services will be performed by its staff members and subconsultants' staff members at the lowest hourly rates commensurate with the complexity of the required services.
12. Consultant's attention is directed to Section IV of the Standard Consultant Agreement regarding FEES AND PAYMENT and the corresponding retention clause.
13. Small Business Enterprise (SBE) Participation

This Agreement provides for the Consultant to include California Department of General Services certified Small/Micro Businesses in the performance of the services, estimated to be 30% or more of the Total Not to Exceed Amount stated in this Appendix Two and Consultant agrees to use its best efforts to meet this goal.

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APPENDIX THREE

SCHEDULE OF COMPLETION

1. This Agreement commences on the date specified in the introductory paragraph of the Standard Consultant Agreement portion of this Agreement. This Agreement expires February 29, 2016 unless its term is modified by a written amendment hereto, signed by both parties.
2. Consultant will commence Tasks listed in Appendix One of this Agreement upon receipt of the Notice-to-Proceed (NTP) issued by the District.
3. Consultant will perform and complete the Services described in Appendix One, Scope of Services, in accordance with the Project Schedule table as shown below. Consultant will coordinate services with the District to provide the timeline of all tasks and subtasks including the site visits, document review, meetings and Deliverables.
4. The approved Project Schedule will be monitored monthly. Changes to the schedule for performance of Tasks and Deliverables are subject to advance written approval by District. Consultant's attention is directed to District's Standard Consultant Agreement, Section VII. Delays and Extensions.
5. Project Delays—The Consultant will make all reasonable efforts to comply with the Project Schedule as shown here in Appendix Three. In the event the Project Schedule will be delayed, Consultant will notify the District as soon as possible, providing the reason why, the length of the delay, and a description of the actions being taken to address the delay. In the event Consultant is delayed in performance of its services by circumstances beyond its control, District may in its discretion grant a reasonable adjustment in the Project Schedule. This language will prevail should any conflict or discrepancy occur between this provision and Section VII. Delays and Extensions.
6. District's Project Manager and Consultant may agree to modify the schedule specified for Consultant's performance as an administrative modification to the Agreement.

Task	Description	Duration from NTP
1	Project Management Services	Duration of Agreement
2	Data Collection and Investigations	11 months ⁽¹⁾
3A	Basis of Design (Approved for Design)	12 months
3B	Basis of Design (Prior Approved Required)	12 months
4	30% Design Document Preparation	12 months
5	60% Design Document Preparation	15 months
6	90% Design Document Preparation	16 months
7	Final Design Document Preparation	19 months

**APPENDIX THREE
SCHEDULE OF COMPLETION**

Task	Description	Duration from NTP
8	Bid and Award Services	24 months
9	Supplemental Services during Design	Duration of Agreement
⁽¹⁾ Provided environmental clearance and site access for field investigations are received from the District within two months of NTP. If not, the scheduled completion date will be adjusted to 11 months from the receipt of the environmental clearance and site access, and completion dates for subsequent tasks that are dependent on Task 2 will be adjusted accordingly.		

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APPENDIX FOUR

INSURANCE REQUIREMENTS

Please refer to the insurance requirements listed below.

Without limiting the Consultant's indemnification of, or liability to, the Santa Clara Valley Water District ("District"), the Consultant must provide and maintain at its own expense, during the term of this Agreement, or as may be further required herein, the following insurance coverages and provisions:

Consultant must provide its insurance broker(s)/agent(s) with a copy of these requirements and warrants that these requirements have been reviewed by Consultant's insurance agent(s) and/or broker(s), who have been instructed by Consultant to procure the insurance coverage required herein. All Certificates of Insurance complete with copies of all required endorsements must be sent to: **Contract Administrator, Santa Clara Valley Water District, 5750 Almaden Expressway, San Jose, CA 95118.**

In addition to certificates, Consultant must furnish District with copies of original endorsements affecting coverage required by this Appendix. The certificates and endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. **All endorsements and certificates are to be received and approved by District before work commences.** In the event of a claim or dispute, District has the right to require Consultant's insurer to provide complete, certified copies of all required pertinent insurance policies, including endorsements affecting the coverage required by this Appendix.

Consultant must, at its sole cost and expense, procure and maintain during the entire period of this Agreement the following insurance coverage(s).

Required Coverages

1. Commercial General/Business Liability Insurance with coverage as indicated:

\$2,000,000 per occurrence / **\$2,000,000** aggregate limits for bodily injury and property damage

General Liability insurance must include:

- a. Coverage at least as broad as found in standard ISO form CG 00 01.
- b. Contractual Liability expressly including liability assumed under this contract.
- c. If Consultant must be working within fifty (50) feet of a railroad or light rail operation, any exclusion as to performance of operations within the vicinity of any railroad bridge, trestle, track, roadbed, tunnel, overpass, underpass, or crossway must be deleted, or a railroad protective policy in the above amounts provided.
- d. Severability of Interest
- e. Broad Form Property Damage liability
- f. If the standard ISO Form wording for "OTHER INSURANCE," or other comparable wording, is not contained in Consultant's liability insurance policy, an endorsement must be provided that said insurance will be primary insurance and any insurance or self-insurance maintained by District, its Directors, officers, employees, agents or volunteers must be in excess of Consultant's insurance and must not contribute to it.

APPENDIX FOUR

INSURANCE REQUIREMENTS

2. Business Auto Liability Insurance with coverage as indicated:

\$2,000,000 combined single limit for bodily injury and property damage per occurrence, covering all owned, non-owned and hired vehicles.

3. Professional/Errors and Omissions Liability with coverage as indicated:

\$10,000,000 per claim/ **\$10,000,000** aggregate

Professional/Errors and Omission Liability appropriate to the Consultant's profession, and must include:

A. If coverage contains a deductible, or self-insured retention, it shall not be greater than one hundred thousand dollars (\$100,000) per occurrence/event.

B. Coverage shall include contractual liability

C. If coverage is claims-made:

- a. Certificate of Insurance shall clearly state that the coverage is claims-made.
- b. Policy retroactive date must coincide with or precede the Consultant's start of work (including subsequent policies purchased as renewals or replacements).
- c. Policy must allow for reporting of circumstances or incidents that might give rise to future claims.
- d. Insurance must be maintained and evidence of insurance must be provided for at least three (3) years after completion of the contract of work.

4. Workers' Compensation and Employer's Liability Insurance

Statutory California Workers' Compensation coverage covering all work to be performed for the District.

Employer Liability coverage for not less than \$1,000,000 per occurrence.

General Requirements

With respect to all coverages noted above, the following additional requirements apply:

1. **Additional Insured Endorsement(s)** Consultant must provide an additional insured endorsement for Commercial General/Business Liability and Business Automobile liability coverage naming the **Santa Clara Valley Water District, its Directors, officers, employees, and agents, individually and collectively**, as additional insureds, and must provide coverage for acts, omissions, etc. arising out of the named insureds' activities and work. Other public entities may also be added to the additional insured endorsement as applicable and the Consultant will be notified of such requirement(s) by the District.

APPENDIX FOUR

INSURANCE REQUIREMENTS

(NOTE: Additional insured language on the Certificate of Insurance is **NOT** acceptable without a separate endorsement such as Form CG 20 10, CG 2033, CG 2037. Note: Editions dated 07/04 are not acceptable)

2. **Primacy Clause:** Consultant's insurance must be primary with respect to any other insurance which may be carried by the District, its officer, agents and employees, and the District's coverage must not be called upon to contribute or share in the loss.
3. **Cancellation Clause Revision:** The Certificate of Insurance **MUST** provide **30 days notice of cancellation, (10 days notice for non-payment of premium)**. **NOTE: The standard wording in the ISO Certificate of Insurance is not acceptable.** The following words must be crossed out or deleted from the standard cancellation clause: "...endeavor to..." AND "...but failure to mail such notice must impose no obligation or liability of any kind upon the company, its agents or representatives."
4. **Acceptability of Insurers:** All coverages must be issued by companies admitted to conduct business in the State of California, which hold a current policy holder's alphabetic and financial size category rating of not less than A- V, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the District's Risk Management Administrator.
5. **Self-Insured Retentions or Deductibles:** Any deductibles or self-insured retentions must be declared to and approved by the District. At the option of the District, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the District, its officers, officials, employees and volunteers; or the Consultant shall provide a financial guarantee satisfactory to the Entity guaranteeing payment of losses and related investigations, claim administration, and defense expenses.
6. **Subconsultants:** Should any of the work under this Agreement be sublet, the Consultant must require each of its subconsultants of any tier to carry the aforementioned coverages, or Consultants may insure subconsultants under its own policies.
7. **Amount of Liability not Limited to Amount of Insurance:** The insurance procured by Consultant for the benefit of the District must not be deemed to release or limit any liability of Consultant. Damages recoverable by the District for any liability of Consultant must, in any event, not be limited by the amount of the required insurance coverage.
8. **Coverage to be Occurrence Based:** With the exception of the Professional Liability/Errors and Omissions coverage mentioned above, all coverage must be occurrence-based coverage. Claims-made coverage is not allowed.
9. **Waiver of Subrogation:** Consultant agrees on to waive subrogation against the District to the extent any loss suffered by Consultant is covered by any Commercial General Liability policy, Automobile policy, Workers' Compensation policy, or Professional policy described in **Required Coverages** above. Consultant agrees to advise its broker/agent/insurer about this provision and obtain any endorsements, if needed, necessary to ensure the insurer agrees.

APPENDIX FOUR
INSURANCE REQUIREMENTS

10. **Non-compliance:** The District reserves the right to withhold payments to the Consultant in the event of material noncompliance with the insurance requirements outlined above.
11. **Please mail the certificates and endorsements to:**
- Contract Administrator
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118**

IMPORTANT: On the certificate of insurance, please note either the name of the Project or the name of the District contact person or unit for the contract.

If your insurance broker has any questions, please advise him/her to call Mr. David Cahen, District Risk Management Administrator, at (408) 630-2213.

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