

**MONTEREY COUNTY WATER RESOURCES AGENCY
AGREEMENT FOR PROFESSIONAL SERVICES
WITH SURVEYORS, ARCHITECTS, ENGINEERS AND/OR DESIGN
PROFESSIONALS**

This is an agreement (“Agreement”) between the Monterey County Water Resources Agency, hereinafter called "Agency," and McMillen, Inc., a Idaho Corporation, 1471 Shoreline Dr, Suite 100 Boise, ID 83702 hereinafter called "CONTRACTOR".

In consideration of the mutual covenants and conditions set forth in this Agreement, the parties agree as follows:

1. Employment of CONTRACTOR. Agency hereby engages CONTRACTOR and CONTRACTOR hereby agrees to perform the services set forth in Exhibit A, in conformity with the terms of this Agreement. CONTRACTOR will complete all work in accordance with the **Scope of Work/Work Schedule set forth in Exhibit A:**

(a) The scope of work is briefly described and outlined as follows:

Engineering services for design of the San Antonio Dam replacement spillway.

(b) The CONTRACTOR shall perform its services under this agreement in accordance with usual and customary care and with generally accepted practices in effect at the time the services are rendered. The CONTRACTOR and its agents and employees performing work hereunder are specially trained, experienced, competent, and appropriately licensed to perform the work and deliver the services required by this Agreement.

(c) CONTRACTOR, its agents and employees shall perform all work in a safe and skillful manner and in compliance with all applicable laws and regulations. All work performed under this Agreement that is required by law to be performed or supervised by licensed personnel shall be performed in accordance with such licensing requirements.

(d) CONTRACTOR shall furnish, at its own expense, all materials and equipment necessary to carry out the terms of this Agreement, except as otherwise provided herein. CONTRACTOR shall not use Agency premises, property (including equipment, instruments, or supplies) or personnel for any purpose other than in the performance of its obligations hereunder.

2. Term of Agreement. The term of this Agreement shall begin on September 15, 2023 by CONTRACTOR and Agency, and will terminate on December 31, 2026, unless earlier terminated as provided herein.

3. Payments to CONTRACTOR; maximum liability. Subject to the limitations set forth herein, Agency shall pay to CONTRACTOR in accordance with the fee schedule set forth in Exhibit B. The maximum amount payable to CONTRACTOR under this contract is four hundred thirty four thousand five hundred dollars.

(\$) 434,500 .

4. Monthly Invoices by CONTRACTOR; Payment.

- (a) CONTRACTOR shall submit to Agency an invoice, in a format approved by Agency, setting forth the amounts claimed by CONTRACTOR, together with an itemized basis for such amounts, and setting forth such other pertinent information Agency may require. CONTRACTOR shall submit such invoice monthly or as agreed by Agency, but in no event shall such invoice be submitted later than 30 days after completion of CONTRACTOR's work hereunder. Agency shall certify the claim if it complies with this contract and shall promptly submit such claim to the Monterey County Auditor-Controller, who shall pay the certified amount within 30 days after receiving the invoice certified by Agency. It is understood and agreed that CONTRACTOR shall complete all work described in Exhibit A for an amount not exceeding that set forth above, notwithstanding CONTRACTOR's submission of periodic invoices.
- (b) CONTRACTOR shall submit to Agency an invoice via email to WRAAccountsPayable@co.monterey.ca.us and to the Contract Administrator Section 26.
- (c) CONTRACTOR agrees that Agency may withhold five percent (5%) of the amount requested by CONTRACTOR from any progress payment, until such time as all goods and services are received in a manner and form acceptable to Agency.
- (d) If, as of the date of execution of this Agreement, CONTRACTOR has already received payment from Agency for work which is the subject of this Agreement, such amounts shall be deemed to have been paid under this Agreement and shall be counted toward Agency's maximum liability set forth above.
- (e) CONTRACTOR shall not be reimbursed for travel expenses unless expressly approved in writing in accordance with this Agreement.

5. Indemnification

5.1 For purposes of the following indemnification provisions ("Indemnification Agreement"), "design professional" has the same meaning as set forth in California Civil Code section 2782.8. If any term, provision or application of this Indemnification Agreement is found to be invalid, in violation of public policy or unenforceable to any extent, such finding shall not invalidate any other term or provision of this Indemnification Agreement and such other terms and provisions shall continue in full

force and effect. If there is any conflict between the terms, provisions or application of this Indemnification Agreement and the provisions of California Civil Code Sections 2782 or 2782.8, the broadest indemnity protection for the COUNTY under this Indemnity Agreement that is permitted by law shall be provided by CONTRACTOR.

5.2 Indemnification for Design Professional Services Claims: CONTRACTOR shall indemnify, defend and hold harmless COUNTY, its governing board, directors, officers, employees, and agents against any claims that arise out of, or pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONTRACTOR, its employees, subCONTRACTORS, and agents in the performance of design professional services under this Agreement, excepting only liability arising from the sole negligence, active negligence or willful misconduct of COUNTY, or defect in a design furnished by COUNTY, but in no event shall the amount of such CONTRACTOR's liability exceed such CONTRACTOR's proportionate percentage of fault as determined by a court, arbitrator or mediator, or as set out in a settlement agreement. In the event one or more defendants to any action involving such claim or claims against COUNTY is unable to pay its share of defense costs due to bankruptcy or dissolution of the business, such CONTRACTOR shall meet and confer with the other parties to such action regarding unpaid defense costs.

5.3 Indemnification for All Other Claims or Loss:
For any claim, loss, injury, damage, expense or liability other than claims arising out of the CONTRACTOR's performance of design professional services under this Agreement, CONTRACTOR shall indemnify, defend and hold harmless COUNTY, its governing board, directors, officers, employees, and agents against any claim for loss, injury, damage, expense or liability resulting from or alleging injury to or death of any person or loss of use of or damage to property, arising from or related to the performance of services under this Agreement by CONTRACTOR, its employees, subCONTRACTORS or agents, excepting only liability arising from the sole negligence, active negligence or willful misconduct of the COUNTY, or defect in a design furnished by the COUNTY.

6. Insurance.

6.1 Evidence of Coverage:
Prior to commencement of this Agreement, the CONTRACTOR shall provide a "Certificate of Insurance" certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition the CONTRACTOR upon request shall provide a certified copy of the policy or policies.

This verification of coverage shall be sent to the Agency's Contact, unless otherwise directed. The CONTRACTOR shall not receive a "Notice to Proceed" with the work under this Agreement until it has obtained all insurance required and such, insurance has been approved by the Agency. This approval of insurance shall

neither relieve nor decrease the liability of the CONTRACTOR.

6.2 Qualifying Insurers:

All coverage's, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A-VII, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Purchasing Manager.

6.3 Insurance Coverage Requirements:

Without limiting CONTRACTOR's duty to indemnify, CONTRACTOR shall maintain in effect throughout the term of this Agreement a policy or policies of insurance with the following minimum limits of liability:

Commercial general liability insurance, including but not limited to premises and operations, including coverage for Bodily Injury and Property Damage, Personal Injury, Contractual Liability, Broad form Property Damage, Independent CONTRACTORS, Products and Completed Operations, with a combined single limit for Bodily Injury and Property Damage of not less than \$1,000,000 per occurrence.

Exemption/Modification (Justification attached; subject to approval).

Business automobile liability insurance, covering all motor vehicles, including owned, leased, non-owned, and hired vehicles, used in providing services under this Agreement, with a combined single limit for Bodily Injury and Property Damage of not less than \$1,000,000 per occurrence.

Exemption/Modification (Justification attached; subject to approval).

Workers' Compensation Insurance, if CONTRACTOR employs others in the performance of this Agreement, in accordance with California Labor Code section 3700 and with Employer's Liability limits not less than \$1,000,000 each person, \$1,000,000 each accident and \$1,000,000 each disease.

Exemption/Modification (Justification attached; subject to approval).

Professional liability insurance, if required for the professional services being provided, (e.g., those persons authorized by a license to engage in a business or profession regulated by the California Business and Professions Code), in the amount of not less than \$1,000,000 per claim and \$2,000,000 in the aggregate, to cover liability for malpractice or errors or omissions made in the course of rendering professional services. If professional liability insurance is written on a "claims-made" basis rather than an occurrence basis, the CONTRACTOR shall, upon the expiration or earlier termination of this Agreement, obtain extended reporting coverage ("tail coverage") with the same liability limits. Any such tail coverage shall continue for at least three years following the expiration or earlier termination of this Agreement.

Exemption/Modification (Justification attached; subject to approval).

6.4 Other Insurance Requirements.

All insurance required by this Agreement shall be with a company acceptable to the Agency and issued and executed by an admitted insurer authorized to transact Insurance business in the State of California. Unless otherwise specified by this Agreement, all such insurance shall be written on an occurrence basis, or, if the policy is not written on an occurrence basis, such policy with the coverage required herein shall continue in effect for a period of three years following the date CONTRACTOR completes its performance of services under this Agreement.

Each liability policy shall provide that the Agency shall be given notice in writing at least thirty days in advance of any endorsed reduction in coverage or limit, cancellation, or intended non-renewal thereof. Each policy shall provide coverage for CONTRACTOR and additional insureds with respect to claims arising from each subCONTRACTOR, if any, performing work under this Agreement, or be accompanied by a certificate of insurance from each subCONTRACTOR showing each subCONTRACTOR has identical insurance coverage to the above requirements.

Commercial general liability and automobile liability policies shall provide an endorsement naming the Monterey County Water Resources Agency and the County of Monterey, their officers, agents, and employees as Additional Insureds with respect to liability arising out of the CONTRACTOR'S work, including ongoing and completed operations, and shall further provide that such insurance is primary insurance to any insurance or self-insurance maintained by the County and that the insurance of the Additional Insureds shall not be called upon to contribute to a loss covered by the CONTRACTOR'S insurance. The required endorsement form for Commercial General Liability Additional Insured is **ISO Form CG 20 10 11-85 or CG 20 10 10 01 in tandem with CG 20 37 10 01 (2000). The required endorsement form for Automobile Additional Insured endorsement is **ISO Form CA 20 48 02 99.****

Prior to the execution of this Agreement by the Agency, CONTRACTOR shall file certificates of insurance with the Agency's contract administrator, showing that the CONTRACTOR has in effect the insurance required by this Agreement. The CONTRACTOR shall file a new or amended certificate of insurance within five calendar days after any change is made in any insurance policy, which would alter the information on the certificate then on file. Acceptance or approval of insurance shall in no way modify or change the indemnification clause in this Agreement, which shall continue in full force and effect.

CONTRACTOR shall at all times during the term of this Agreement maintain in force the insurance coverage required under this Agreement and shall send, without demand by Agency, annual certificates to Agency's Contract Administrator. If the certificate is not received by the expiration date, Agency shall notify CONTRACTOR and CONTRACTOR shall have five calendar days to send in

the certificate, evidencing no lapse in coverage during the interim. Failure by CONTRACTOR to maintain such insurance is a default of this Agreement, which entitles Agency, at its sole discretion, to terminate this Agreement immediately.

7. Maintenance of Records. CONTRACTOR shall prepare, maintain and preserve all reports and records that may be required by federal, State, and local rules and regulations relating to services performed under this Agreement. CONTRACTOR shall retain all such records for at least five years from the date of final payment, or until any litigation relating to this Agreement is concluded, whichever is later.
8. Right to Audit at Any Time. Agency officials shall have the right, at any time during regular working hours and on reasonable advance notice, to examine, monitor and audit all work performed and all records, documents, conditions, activities and procedures of CONTRACTOR or its subCONTRACTORS relating to this Agreement. Government Code Section 8546.7 provides that an audit by the State Auditor General may be performed up to three years after the final payment under any contract involving the expenditure of public funds in excess of \$10,000.
9. Confidentiality; Return of Records. CONTRACTOR and its officers, employees, agents, and subCONTRACTORS shall comply with all federal, State and local laws providing for the confidentiality of records and other information. To the extent permitted by applicable law and regulations, CONTRACTOR shall maintain confidentiality with respect to Agency's well database and other water use data.

CONTRACTOR shall not disclose any confidential information received from Agency or prepared in connection with the performance of this Agreement without the express permission of Agency. CONTRACTOR shall promptly transmit to Agency all requests for disclosure of any such confidential information. CONTRACTOR shall not use any confidential information gained through the performance of this Agreement except for the purpose of carrying out CONTRACTOR's obligations hereunder. When this Agreement expires or terminates, CONTRACTOR shall return to Agency all records, which CONTRACTOR utilized or received, from Agency to perform services under this Agreement.

10. Termination. Either party may terminate this Agreement by giving written notice of termination to the other party at least thirty (30) days prior to the effective date of termination, which date shall be specified in any such notice. In the event of such termination, the amount payable hereunder shall be reduced in proportion to the services provided prior to the effective date of termination. Agency may terminate this Agreement at any time for good cause effective immediately upon written notice to CONTRACTOR. "Good cause" includes, without limitation, the failure of CONTRACTOR to perform the required services at the time and in the manner provided herein. If Agency terminates this Agreement for good cause, Agency may be relieved of the payment of any consideration to CONTRACTOR, and Agency may proceed with the work in any manner, which it deems proper. Costs incurred by Agency thereby shall be

deducted from any sum due CONTRACTOR.

11. Amendments and Modifications. No modification or amendment of this agreement shall be valid unless it is set forth in writing and executed by the parties.
12. Non-Discrimination. Throughout the performance of this Agreement, CONTRACTOR will not unlawfully discriminate against any person because of race, color, religion, gender, national origin, ancestry, physical disability, medical condition, marital status, age older than 40, or sexual orientation, gender identity or any other status protected under federal, state or local law, either in CONTRACTOR's employment practices or in the furnishing of services to recipients. CONTRACTOR shall ensure that the evaluation and treatment of its employees and applicants for employment and all persons receiving and requesting services are free of such discrimination. CONTRACTOR shall comply fully with all federal, State and local laws and regulations which prohibit discrimination. The provision of services primarily or exclusively to any target population designated herein shall not be deemed prohibited discrimination.
13. Independent Contractor. In its performance under this Agreement, CONTRACTOR is at all times acting and performing as an independent CONTRACTOR and not an employee of Agency. No offer or obligation of employment with Agency is intended in any manner, and CONTRACTOR shall not become entitled by virtue of this Agreement to receive from Agency any form of benefits accorded to employees including without limitation leave time, health insurance, workers compensation coverage, disability benefits, and retirement contributions. CONTRACTOR shall be solely liable for and obligated to pay directly all applicable taxes, including without limitation federal and State income taxes and social security arising out of CONTRACTOR's performance of this Agreement. In connection therewith, CONTRACTOR shall defend, indemnify, and hold harmless Agency from any and all liability, which Agency may incur because of CONTRACTOR's failure to make such payments.
14. Delegation of Duties; Subcontracting. CONTRACTOR is engaged by Agency for its unique qualifications and abilities. CONTRACTOR may not, therefore, delegate any of its basic duties under this Agreement, except to the extent that delegation to CONTRACTOR's employees is contemplated herein. No work shall be subcontracted without the written consent of Agency, except as provided in this Agreement or its attachments. Notwithstanding any subcontract, CONTRACTOR shall continue to be liable to Agency for the performance of all work hereunder. CONTRACTOR shall not assign, sell, mortgage or otherwise transfer its interest or obligations in this Agreement without Agency's prior written consent.
15. Agency's Rights in Work Product. All original materials prepared by CONTRACTOR in connection with its work hereunder -- including but not limited to computer codes, customized computer routines developed using proprietary or commercial software packages, reports, documents, maps, graphs, charts, photographs and photographic negatives -- shall be the property of Agency and shall be delivered to Agency prior to final payment. CONTRACTOR may utilize any existing materials developed by

CONTRACTOR prior to commencement of work under this Agreement, which materials shall remain the property of CONTRACTOR.

16. Compliance with Terms of Federal or State Grant. If any part of this Agreement has been or will be funded pursuant to a grant from the federal or State government in which Agency is the grantee, CONTRACTOR shall comply with all provisions of such grant applicable to CONTRACTOR's work hereunder, and said provisions shall be deemed a part of this Agreement as though fully set forth herein.
17. Conflict of Interest. CONTRACTOR warrants that it presently has no interest and shall not acquire any interest during the term of this Agreement, which would directly or indirectly conflict in any manner or to any degree with its full and complete performance of all services under this Agreement.
18. Governing Laws. This Agreement is entered into in the County of Monterey, State of California, and shall be construed and enforced in accordance with the laws of the State of California. The parties hereby agree that the County of Monterey shall be the proper venue for any dispute arising hereunder.
19. Compliance with Applicable Law. The parties shall comply with all applicable federal, state, and local laws and regulations in performing this Agreement.
20. Construction of Agreement. The parties agree that each party has fully participated in the review and revision of this Agreement and that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in the interpretation of this Agreement or any exhibit or amendment. To that end, it is understood and agreed that this Agreement has been arrived at through negotiation, and that neither party is to be deemed the party which prepared this Agreement within the meaning of Civil Code Section 1654. Section and paragraph headings appearing herein are for convenience only and shall not be used to interpret the terms of this Agreement.
21. Waiver. Any waiver of any term or condition hereof must be in writing. No such waiver shall be construed as a waiver of any other term or condition herein.
22. Successors and Assigns. This Agreement and all rights, privileges, duties and obligations hereunder, to the extent assignable or delegable, shall be binding upon and inure to the benefit of the parties and their respective successors, permitted assigns and heirs.
23. Contractor. The term "CONTRACTOR" as used in this Agreement includes CONTRACTOR's officers, agents, and employees acting on Contractor's behalf in the performance of this Agreement.
24. Interpretation of Conflicting Provisions. In the event of any conflict or inconsistency between the provisions of this Agreement and the Provisions of any exhibit or other attachment to this Agreement, the provisions of this Agreement shall prevail and control.

25. Time is of the Essence. The parties mutually acknowledge and agree that time is of the essence with respect to every provision hereof in which time is an element. No extension of time for performance of any obligation or act shall be deemed an extension of time for performance of any other obligation or act, nor shall any such extension create a precedent for any further or future extension.

26. Contract Administrators.

CONTRACTOR's designated principal responsible for administering CONTRACTOR's work under this Agreement shall be

Jodi Burns

Agency's designated administrator of this Agreement shall be

Mark Foxworthy

27. Notices. Notices required under this Agreement shall be delivered personally or by electronic facsimile, or by first class or certified mail with postage prepaid. Notice shall be deemed effective upon personal delivery or facsimile transmission, or on the third day after deposit with the U.S. Postal Service. CONTRACTOR shall give Agency prompt notice of any change of address. Unless otherwise changed according to these notice provisions, notices shall be addressed as follows:

TO AGENCY	TO CONTRACTOR
Name: <u>Mark Foxworthy</u>	Name: <u>Jodi Burns</u>
Address: <u>1441 Schilling Plc. North Bldg.</u> <u>Salinas, CA 93901</u>	Address: <u>1471 Shoreline Dr, Suite 100</u> <u>Boise, ID 83702</u>
Telephone: <u>(831) 755-8984</u>	Telephone: <u>(208) 342-4214</u>
Fax: _____	Fax: _____
E-Mail: <u>Foxworthymel@co.monterey.ca./us</u>	E-Mail: <u>burns@mcmillen.com</u>

28. Electronic Deliverables. Where feasible, all reports, documents and other printed information provided to the Agency pursuant to this Agreement shall be submitted in both written and Electronic formats in accordance with the specifications listed in Exhibit C.

29. Non-exclusive Agreement. This Agreement is non-exclusive and both parties reserve the right to contract with other entities for the same or similar services.

30. Execution of Agreement. Any individual executing this Agreement on behalf of an entity represents and warrants that he or she has the requisite authority to enter into this Agreement on behalf of such entity and to bind the entity to the terms and conditions hereof. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement.

31. Exhibits. The following Exhibits are attached hereto and incorporated by reference:

Exhibit A - Scope of Work/ Work Schedule
Exhibit B - Fee Schedule/Payment Provisions
Exhibit C - Risk Registry

32. Entire Agreement --As of the effective date of this Agreement, this document, including all exhibits hereto, constitutes the entire agreement between the parties, and supersedes any and all prior written or oral negotiations and representations between the parties concerning all matters relating to the subject of this Agreement.

**MONTEREY COUNTY WATER RESOURCES AGENCY
AGREEMENT FOR PROFESSIONAL SERVICES
WITH SURVEYORS, ARCHITECTS, ENGINEERS AND/OR DESIGN
PROFESSIONALS**

IN WITNESS WHEREOF, AGENCY and CONTRACTOR execute this agreement as follows:

**MONTEREY COUNTY WATER
RESOURCES AGENCY:**

CONTRACTOR:

BY: 
DocuSigned by:
Ara Azhderian
1F182FFB49A2435...

BY: 

Ara Azhderian
General Manager

Type Name: Marcus Emmons

Title: Director of Operations, VP

Date: 9/25/2023 | 8:38 PM PDT

Date: 09/22/2023

BY: 

Type Name: Mara McMillen

Title: President/CEO

Date: 09/22/2023

* INSTRUCTIONS: If CONTRACTOR is a corporation (including limited liability and nonprofit corporations), the full legal name of the corporation shall be set forth together with the signatures of two specified officers. If CONTRACTOR is a partnership, the name of the partnership shall be set forth together with the signature of a partner with authority to execute this Agreement on behalf of the partnership. If CONTRACTOR is contracting in an individual capacity, the individual shall set forth the name of his or her business, if any, and shall personally sign the Agreement.

(San Antonio Spillway Design-
Agreement)

Approved as to form ¹:

Approved as to fiscal provisions:

DocuSigned by:
Kelly L. Danton
Assistant County Counsel

DocuSigned by:
Essequiel Vega Rios
Administrative Analyst

Dated: 9/25/2023 | 9:23 AM PDT

Dated: 9/25/2023 | 3:51 PM PDT

County Counsel – Risk Manager:

Auditor-Controller ²:

Dated: _____

Dated: 9/25/2023 | 1:42 PM PDT

¹ Approval by County Counsel is required, and/or when legal services are rendered

² Approval by Auditor-Controller is required



Exhibit A - Scope of Work/ Work Schedule

April 5, 2023

Attn: John R. Hollenbeck, P.E.
Monterey County Water Resources Agency
Salinas, CA

Subject San Antonio Spillway Emergency Project
Re. Design Services Scope of Work

Dear Mr. Hollenbeck,

McMillen, Inc. (McMillen) is pleased to submit a scope of work (SOW) and budget in response to the Request for Proposal (RFP) received on February 8, 2023, for the design, bid, construction, and post-construction phases of the Monterey County Water Resources Agency (Agency) San Antonio Spillway Emergency Project (Project). The SOW follows that provided by the Agency, with additional detail included. The following paragraphs offer a description of our understanding of the Project, a detailed SOW, and a firm-fixed-price cost breakdown.

PROJECT UNDERSTANDING

The San Antonio Spillway Emergency Project (Project) is mandated by the California Department of Water Resources, Division of Safety of Dams (DSOD) via their letter of 12 APR 2019. The Agency developed a work plan to accommodate the Project's scope of work and issued it to DSOD on 28 JUN 2019. The work plan envisioned investigative analyses to confirm whether the existing spillway chute could be rehabilitated to correct deficiencies documented by past DSOD inspections and from the Spillway Condition Assessment Report by GEI Consultants, Inc., May 2018 (GEI May 2018). At a work session meeting with DSOD on 6 JUN 2022, DSOD advised that rehabilitation of the existing chute was unacceptable, and that spillway replacement was necessary. The Agency requested confirmation of spillway replacement via a 6 SEP 2022 letter to DSOD. The Agency received confirmation in an 18 NOV 2022 letter from DSOD stating that replacement of the existing spillway structure with one consistent with modern design standards is required.

The confirmation from DSOD gives the Agency clear direction to regroup and deliver a new spillway to accommodate the requirement presented in the 12 APR 2019 letter from DSOD. The Agency seeks a revised scope of work in the form of a letter proposal for professional engineering services from McMillen to deliver plans, specifications and estimates (PS&E) to



obtain approval from DSOD for the replacement of the San Antonio Spillway. The Project will be a design-bid-build delivery method. McMillen's revised scope of work will be presented by the Agency as part of a revised work plan to DSOD. Include a schedule for delivering the design up to the start of the bidding phase, and provide an estimate duration for construction, which the Agency will use to seek a time adjustment from DSOD to complete the Project.

The Agency understands DSOD requires the replacement of the spillway chute; however, the Agency has lesser understanding if the ogee control structure and/or the flip bucket need to be replaced. The Agency has begun initial conversations with DSOD who suggest stability analysis is needed to confirm the adequacy of the ogee spillway. The GEI report suggests that the ogee control structure can adequately accommodate the Probably Maximum Flood (PMF) outflow with adequate freeboard, yet this needs confirmation by McMillen and approved by DSOD. The ogee control structure likely is placed over the Rinconada fault. The GEI report further suggests the downstream flip bucket is adequately supported on cast-in-place pile and further suggests the potential for back-cutting and undermining of the flip bucket during moderate spillway discharge. McMillen shall address these potential problems.

McMillen's services for the Project includes all professional services and associated design engineering services necessary to support the Agency for the following phases of work:

- Design Phase – development of the engineering calculations and development of plans, specifications, estimates, and schedules for the Project. Importance shall be placed on the ability to construct an element, or elements, of the new spillway during a non-rain season; therefore, the CONTRACTOR shall devise strategies for construction timing to avoid risk(s) during the rainy season (nominally mid-October to end of March). DSOD will review the 100-percent stamped construction documents and design documentation report, and any comments they have shall be incorporated into the bid set of documents.
- Bid Phase – support the Agency during the bid phase by preparing responses to bidder's technical questions, preparing bid addenda, attending a pre-bid meeting, and conducting bid evaluation. Development of Conformed Contract Documents is needed after Project award to a construction contractor.
- Construction Phase – support the Agency during the construction phase by providing recommended responses to contractor's request for information (RFI), review and comments to technical submittals, and preparing design change notices.
- Post-Construction Phase – prepare a post-construction report to document the Project's design and the as-built conditions. Prepare a set of as-built plans to support the Agency's issuance to DSOD. Submit the drawings to the Agency in AutoCAD format in addition to the PDF format.

PROJECT SCOPE OF WORK

The SOW is organized into 13 basic work tasks as follows:

- Task 1: Project Management.
- Task 2: Data Collection & Site Visit.
- Task 3: Hydrology & Hydraulic Analysis.
- Task 4: Spillway Alternatives Analysis.
- Task 5: Schematic Design (30%).
- Task 6: Preliminary Design (60%).
- Task 7: Draft Design (90%).
- Task 8: Final Design (100%).
- Task 9: Issue for Bid Design.
- Task 10: CEQA Support.
- Task 11: Physical Model.
- Task 12: Construction Bid Support and Engineering Services During Construction.
- Task 13: Post-construction Support.

The following narratives provide our project approach and assumptions for each of these work tasks. The narratives are the basis of the development of our labor-hour estimate for this Project.

TASK 1: PROJECT MANAGEMENT

This work task consists of providing the management and staff needed to plan, organize, direct, supervise, control, and coordinate the administrative aspects of the Project. Work tasks include invoicing, preparation of progress reports, contract and subcontract administration, accounting, purchasing, office services, personnel administration, publications support, and document and drawing control administration necessary to complete the requirements of the scope of work. A risk register of possible factors that could change the course of the design and would impact cost, schedule, or both will be developed by the Project Manager. The risk register will be updated throughout the duration of the design process.

ASSUMPTIONS

- Estimated Project Duration: 40 months.

DELIVERABLES

- Monthly Invoices and Progress Reports.
- Risk Register.

TASK 2: DATA COLLECTION & SITE VISIT

This work task consists of reviewing historical information on the design and construction of the San Antonio Dam & Spillway and reviewing the design information provided by John Hollenbeck. The focus of this analysis is to assemble the data necessary to provide the foundation upon which the remaining work tasks within this Scope of Work will be executed.

McMillen proposes to schedule an initial Kickoff Meeting and Site Visit at the Project Site. Jodi Burns (Project Manager), Mark Merklein (Lead Structural Engineer), Kevan Thurman (Structural Engineer), Shannon Wright (Civil Engineer), and Marc Ryan (Lead Geotechnical Engineer) and Courtney Johnson (Lead Geologist) from Slate, will attend the Kickoff Meeting and Site Visit. In advance of the meeting, McMillen will review the data received to date and set up data request lists for discussion at the meeting. A Kickoff Meeting and Site Visit Memo will be compiled documenting discussions and information gathered during the Kickoff Meeting and Site Visit.

Slate will review the geotechnical engineering and geologic data available for the site. These documents will include reports, maps, photos, plans, records, and any other readily-available information for the site. To field check past geologic observations, two Slate geologists will perform geologic reconnaissance of the spillway and immediate vicinity. In advance of the geologic reconnaissance, Slate will compile maps of available geologic data and identify target areas to visit for confirmation of outcrop conditions.

ASSUMPTIONS

- The topographic survey used for the Interlake Tunnel and San Antonio Spillway Modification Project will be utilized. No additional topographic survey will be required at this time.
- Data transfer and sharing will utilize SharePoint. McMillen will provide login and passwords for up to eight (8) Agency personnel.
- Geotechnical investigations that were completed as part of the San Antonio Spillway Modification and San Antonio Spillway Investigation Project will be sufficient for the completion of the design assuming the new spillway is within the footprint of the existing spillway. If an alternative location is determined to be the preferred alternative, additional geotechnical investigations may be required.

- 2023 Fiscal year General Services Administration (GSA) current per diem rates for travel to Monterey County: \$240 per person for lodging; mileage, meal, and incidental expenses (M&IE): \$74 per person per full day (\$55.50 first/last day travel).
- Site visit and kickoff meeting assumes two (2) days of travel and one (1) full day on site (up to 8 hours). The site visit will be required to properly assess the facility. Up to four (4) McMillen engineers and two (2) geotechnical engineers and/or geologists from Slate Geotechnical Consultants, Inc. will attend the site visit.
- Geologic reconnaissance assumes two (2) days of travel and two (2) full days on site (up to 8 hours). Reconnaissance will be required to field check available geologic information and confirm qualitative rock quality. The reconnaissance cannot be performed with the site visit and kickoff meeting. Up to two (2) Slate geologists will perform the geologic reconnaissance.
- McMillen's policy is to purchase refundable airfare to protect our clients and our team in the case of inadvertent rescheduling of meetings.

DELIVERABLES

- DRAFT Kickoff Meeting and Site Visit Summary Memorandum (PDF format).
- FINAL Kickoff Meeting and Site Visit Summary Memorandum (PDF format).

TASK 3: HYDROLOGIC AND HYDRAULIC ANALYSIS

This task includes the evaluation of the probable maximum flood (PMF) inflow hydrograph. The following cases will be developed as part of the PMF development and analysis:

- Inflow Case 1: Inflow PMF hydrograph without an Interlake Tunnel (ILT) Project contribution.
- Inflow Case 2: Inflow PMF hydrograph with an ILT Project contribution.

McMillen will build upon the previous hydrologic analysis completed by McMillen and will prepare a DRAFT technical memorandum (TM) summarizing the assumptions and evaluation of the PMF inflow hydrograph study. This task includes attending a work session meeting with the Agency and DSOD to present the findings of the PMF analysis and collect comments.

ASSUMPTIONS

- The current PMF inflow hydrograph for San Antonio Reservoir is documented in a 1999 report by GEI Consultants, Inc. The Agency will provide DSOD's summary of their review of the GEI 1999 report that is available for reference.

- The PMF inflow hydrograph study will be reviewed by DSOD and the Agency. Their comments will be addressed in the final technical memorandum.
- The DSOD and Agency review period is assumed to be 4 weeks.
- The PMF Inflow Hydrograph Study Work Session with the Agency and DSOD will be a virtual conference call meeting lasting up to 2 hours.

DELIVERABLES

- DRAFT PMF Inflow Hydrograph Study TM (PDF format).
- FINAL PMF Inflow Hydrograph Study TM (PDF format).
- DRAFT PMF Inflow Hydrograph Study Work Session Meeting Minutes (PDF format).
- FINAL PMF Inflow Hydrograph Study Work Session Meeting Minutes (PDF format).

TASK 4: SPILLWAY ALIGNMENT ALTERNATIVES ANALYSIS

This task includes a spillway alignment alternatives analysis study that will address the chute alignment, the control structure, and the terminal structure. The reuse of the existing ogee control structure and terminal structure shall be evaluated, including stability analysis of both. The approved PMF inflow hydrograph shall be routed through the reservoir with each of the alternative spillway alignments and the following outflow cases will be developed for each alternative:

- Outflow Case 1 - Norm. Max WSEL @ 780' without ILT Project.
- Outflow Case 2 - Norm. Max WSEL @ 780' with ILT Project.
- Outflow Case 3 - Norm. Max WSEL @ 787' with ILT Project.

Freeboard assessment shall include evaluation of wave runup on the dam for each case. The structural engineer will determine the chute geometry and wall height required for each alternative and each outflow case. The study will provide cost opinions for all alternatives and outflow cases evaluated.

The Agency shall participate in the selection of the final spillway configuration. A work session meeting shall be held with DSOD to confirm the direction of the Project and collect comments.

ASSUMPTIONS

- The approved PMF inflow hydrograph developed in Task 3 will be routed through all developed alternatives.
- A computation fluid dynamic (CFD) and/or HEC-RAS model will be developed for each alternative.

- McMillen will provide design drawings for up to three alternatives at the 10 percent design level to aid in coordination and selection of the final alternative.
- The Agency's property line is near the entrance gate to the dam site; thus, an alignment that extends beyond the property line will require right-of-way procurement. McMillen's GIS specialist will assist the Agency and Project team by developing exhibits to support the right-of-way process should that be necessary.
- This work includes the stability analysis of the existing ogee crest weir structure and the existing terminal structure.
- The American Association of Cost Engineering (AACE) provides guidelines for development of cost estimates for various levels of project definition. For the alternatives analysis, a Class 4 estimate will be prepared at the ~10% design level of Project definition as defined by the AACE. Typical accuracy ranges for Class 2 estimates are -30% to -15% on the low side, and +20% to +50% on the high side, depending on the complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination.
- DSOD and Agency review period is assumed to be 4 weeks.
- A four hour work session conference call meeting will be held with DSOD after the DRAFT San Antonio Spillway Alternatives Analysis Report is delivered to DSOD and the Agency to confirm the direction of the Project and collect comments.
- McMillen will attend a one-day workshop in Salinas, CA, to present the proposed alternatives, discuss DSOD's comments, and determine a path forward with a preferred alternative with the Agency.
- 2023 Fiscal year GSA current per diem rates for travel to Monterey County: \$240 per person for lodging; mileage, meal, and incidental expenses (M&IE): \$74 per person per full day (\$55.50 first/last day travel).
- The meeting assumptions include two (2) days of travel and one (1) full day in Salinas, CA, (up to 8 hours) to attend the Alternatives Analysis Meeting. Up to two (2) McMillen engineers and one (1) Slate geotechnical engineer and one (1) Slate geologist will attend the Alternatives Analysis Meeting.
- McMillen's policy is to purchase refundable airfare to protect our clients and our team in the case of inadvertent rescheduling of meetings.

DELIVERABLES

- DRAFT San Antonio Spillway Alternatives Analysis Report (PDF format).
- FINAL San Antonio Spillway Alternatives Analysis Report (PDF format).

- DRAFT San Antonio Spillway Alternatives Analysis Meeting Minutes (PDF format).
- FINAL San Antonio Spillway Alternatives Analysis Meeting Minutes (PDF format).

TASK 5: SCHEMATIC DESIGN (30% DESIGN)

This task includes the development and submission of the 30% schematic design of the preferred alternative recommended from the analysis in Task 4. The documents submitted will include the technical drawings and a list of specifications, AACE Class 3 cost estimate, and a 30% Design Documentation Report (DDR). The anticipated drawing list proposed for the Project is shown in Table 1.

Table 1. Proposed San Antonio Spillway Emergency Project Drawing List

General	
G001	Cover Sheet
G002	Location Map, Vicinity Map
G003	Drawing Index
G004	Standard Abbreviations
G005	Standard Symbols
G006	Overall Site Plan and Project Control
G007	General Site Plan, Contractor Staging, and General Arrangement
G008	Hydraulic Profile and Design Criteria
G009	Pipe Schedule
Demolition	
D100	Spillway Demolition Key Plan
D101	Demolition Plan 1 - Control Structure
D102	Demolition Plan 2 - Daylight to 8+00
D103	Demolition Plan 3 - STA 8+00 to 13+00
D104	Demolition Plan 4 - STA 13+00 to STA 18+00
D105	Demolition Plan 5 - STA 18+00 to Daylight
D106	Demolition Plan 6 - Terminal Structure
D200	Demolition Details 1
D201	Demolition Details 2
D202	Demolition Photos 1
D203	Demolition Photos 2
Erosion and Sediment Control	
ESC100	Spillway ESC Key Plan
ESC101	ESC Plan 1
ESC102	ESC Plan 2
ESC103	ESC Plan 3
ESC104	ESC Plan 4

ESC105	ESC Plan 5
ESC106	ESC Plan 6
ESC 200	ESC Details 1
ESC 201	ESC Details 2
	Civil
GC001	General Civil Notes
GC002	Standard Civil Details 1
GC003	Standard Civil Details 2
C100	Overall Site Civil Key Plan
C101	Civil Plan & Section 1 - Control Structure
C102	Civil Plan & Section 2 - Daylight to 8+00
C103	Civil Plan & Section 3 - STA 8+00 to 13+00
C104	Civil Plan & Section 4 - STA 13+00 to STA 18+00
C105	Civil Plan & Section 5 - STA 18+00 to Daylight
C106	Civil Plan & Section 6 - Terminal Structure
C200	Drain Details 1 (Manholes, Cleanouts, ?)
C201	Drain Details 2
C202	Piezometers
C203	Additional Monitoring?
C204	Rock Anchors (Flip Bucket, Ogee, and Slab)
C205	Rock Anchors (Flip Bucket, Ogee, and Slab)
C300	Bridge Overall Abutment Plan
C301	Bridge Abutment Enlarged Plan
C302	Bridge Abutment Sections
	Structural
GS001	General Structural Notes
GS002	Standard Structural Details 1
GS003	Standard Structural Details 2
GS004	Standard Structural Details 3
S100	Overall Site Structural Key Plan
S101	Structural Plan - Control Structure
S102	Structural Plan - Daylight to 8+00
S103	Structural Plan - STA 8+00 to 13+00
S104	Structural Plan- STA 13+00 to STA 18+00
S105	Structural Plan - STA 18+00 to Daylight
S106	Structural Plan - Terminal Structure
S200	Structural Sections (Typ Walls)
S201	Structural Sections (Typ Walls)
S202	Structural Sections Bridge Abutment
S203	Structural Sections Ogee

S204	Structural Section Terminal Structure
S205	Structural Details 1
S206	Structural Details 2
S207	Structural Details 3
S300	Bridge Overall Abutment Plan
S301	Bridge Abutment Enlarged Plan
S302	Bridge Abutment Sections
S303	Bridge Details

The Slate geotechnical work will include:

- Refinement of all analyses in Task 4.
- Rock mass characterization and strengths/stiffness.
- Rock anchor capacities (assume two values across the spillway).
- Seepage analyses to estimate flows into drainage system. Assume multiple 2D analyses with both transverse and longitudinal flow.
- Design ground motions.
- Surface fault rupture considerations.
- Foundation acceptance criteria.
- Foundation treatment recommendations (dental concrete, slush grouting, etc).

ASSUMPTIONS

- Not all drawings provided in the drawing list will be developed at the 30% design level.
- The preferred alternative CFD and/or HEC-RAS model will be further developed to support the design process.
- Existing and available subsurface data are sufficient to conduct the analyses required for design.
- A Class 3 estimate will be prepared at the 30% design level of Project definition as defined by the AACE. Typical accuracy ranges for Class 3 estimates are -20% to -10% on the low side, and +10% to +30% on the high side, depending on the complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination.
- After submission of the 30% Design Documents, the Agency will have two weeks to review. A review meeting will be held within one week of the review period and a

conference call meeting for up to two hours will occur to discuss the 30% design documents.

DELIVERABLES

- 30% Design Drawings (PDF format).
- List of Specifications (PDF format).
- 30% Design Documentation Report (PDF format).
- Class 3 Cost Estimate (PDF format).
- 30% Design Review Meeting Minutes (PDF format).
- Assumes a 4-hour work session with DSOD to present the 30% DDR and collect comments from DSOD.

TASK 6: PRELIMINARY DESIGN (60% DESIGN)

This task includes the development and submission of the 60% preliminary design. The documents submitted will include the technical drawings, specifications, AACE Class 2 cost estimate, and a 60% DDR.

ASSUMPTIONS

- The preferred alternative CFD and/or HEC-RAS model will be further developed to support the design process.
- Not all drawings provided in the drawing list will be developed at the 60% design level.
- Existing and available subsurface data are sufficient to conduct the analyses required for design.
- The Construction Specifications Institute (CSI) standard format specification for the specification package. The Agency will provide Division 00 specifications for the contract.
- A Class 2 estimate will be prepared at the 60% design level of Project definition as defined by the AACE. Typical accuracy ranges for Class 2 estimates are -15% to -5% on the low side, and +5% to +20% on the high side, depending on the complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination.
- After submission of the 60% Design Documents, the Agency will have two weeks to review. A review meeting will be held within one week of the review period and a

conference call meeting for up to two hours will occur to discuss the 60% design documents.

DELIVERABLES

- 60% Design Drawings (PDF format).
- 60% Specifications (PDF format).
- 60% Design Documentation Report (PDF format).
- Class 2 Cost Estimate (PDF format).
- 60% Design Review Meeting Minutes (PDF format).

TASK 7: DRAFT DESIGN (90% DESIGN)

This task includes the development and submission of the 90% draft design. The documents submitted will include the technical drawings, specifications, AACE Class 1 cost estimate, and a 90% DDR.

ASSUMPTIONS

- The preferred alternative CFD and/or HEC-RAS model will be further developed to support the design process.
- The CSI standard format specification for the specification package. The Agency will provide Division 00 specifications for the contract.
- Existing and available subsurface data are sufficient to conduct the analyses required for design.
- A Class 1 estimate will be prepared at the 90% design level of Project definition as defined by the AACE. Typical accuracy ranges for Class 2 estimates are -10% to -3% on the low side, and +3% to +15% on the high side, depending on the complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination.
- After submission of the 90% Design Documents, the Agency will have two weeks to review. A review meeting will be held within one week of the review period and a conference call meeting for up to two hours will occur to discuss the 90% design documents.

DELIVERABLES

- 90% Design Drawings (PDF format).
- 90% Specifications (PDF format).

- 90% Design Documentation Report (PDF format).
- Class 1 Cost Estimate (PDF format).
- 90% Design Review Meeting Minutes (PDF format).

TASK 8: FINAL DESIGN (100%)

This task includes the development and submission of the 100% Final, stamped design to the Agency and DSOD. The documents submitted will include the technical drawings, specifications, AACE Class 1 cost estimate, and a 100% DDR.

ASSUMPTIONS

- The CSI standard format specification for the specification package. The Agency will provide Division 00 specifications for the contract.
- Existing and available subsurface data are sufficient to conduct the analyses required for design.
- A Class 1 estimate will be prepared at the 90% design level of Project definition as defined by the AACE. Typical accuracy ranges for Class 2 estimates are -10% to -3% on the low side, and +3% to +15% on the high side, depending on the complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination.
- After submission of the 100% Design Documents, the Agency and DSOD will have eight weeks to review. A review meeting will be held within one week of the review period and a conference call meeting for up to two hours will occur to discuss the 100% design documents.

DELIVERABLES

- 100% Stamped Signed Design Drawings (PDF format).
- 100% Stamped Signed Specifications (PDF format).
- 100% Stamped Signed Design Documentation Report (PDF format).
- Class 1 Cost Estimate (PDF format).
- List of Technical Submittals (PDF format).
- List of Specialty Construction Inspections (PDF format).
- List of Technical Certification/Training Requirements for Contractor's Personnel (PDF format).
- 100% DSOD Design Review Meeting Minutes (PDF format).

TASK 9: ISSUE FOR BID DESIGN

This task includes addressing DSOD comments on the 100% design and submission of the Issue for Bid (IFB) design to the Agency for support of the construction bid. The documents submitted will include the final stamped technical drawings, specifications, AACE Class 1 cost estimate, and DDR.

ASSUMPTIONS

- The CSI standard format specification for the specification package. The Agency will provide Division 00 specifications for the contract.
- A Class 1 estimate will be prepared at the 90% design level of Project definition as defined by the AACE. Typical accuracy ranges for Class 2 estimates are -10% to -3% on the low side, and +3% to +15% on the high side, depending on the complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination.

DELIVERABLES

- Stamped Signed IFB Design Drawings (PDF format).
- Stamped Signed IFB Specifications (PDF format).
- Stamped Signed IFB Design Documentation Report (PDF format).
- Class 1 Cost Estimate (PDF format).
- List of Technical Submittals (PDF format).
- List of Specialty Construction Inspections (PDF format).
- List of Technical Certification/Training Requirements for Contractor's Personnel (PDF format).

TASK 10: CEQA SUPPORT

This task includes preparation of technical documents to support the California Environmental Quality Act (CEQA) exemption, as necessary.

ASSUMPTIONS

- McMillen will provide engineering support to the environmental consultant that includes writing the Project Description and providing construction material and equipment estimates to support the CEQA environmental consultant.

- McMillen will not provide permitting support for the CEQA process. The permitting work will be completed by the Agency and their environmental consultant.

DELIVERABLES

- DRAFT CEQA Engineer Project Description and Construction Estimate Report (PDF format).
- FINAL CEQA Engineer Project Description and Construction Estimate Report (PDF format).

TASK 11: PHYSICAL MODEL

This task includes development, construction, and analysis of a physical model of the proposed San Antonio Spillway.

ASSUMPTIONS

- McMillen will provide engineering support to the University of Iowa as required to support their model development and analysis.
- The University of Iowa will develop, construct, and provide data measurements of their physical model.
- The model will evaluate the PMF developed in Task 4 (see below outfall cases) as well as the historical spillway design flow of 20,000 cubic feet per second (cfs), if the control structure is maintained, and the watershed 2-year, 10-year, and 25-year peak flow rates.
 1. Outflow Case 1 - Norm. Max WSEL @ 780' without ILT Project.
 2. Outflow Case 2 - Norm. Max WSEL @ 780' with ILT Project.
 3. Outflow Case 3 - Norm. Max WSEL @ 787' with ILT Project.
- The physical model will measure and provide data as follows: pressure measurements along the chute surface centerline, water surface elevations/profiles through the extent of the model and along the side walls, and head-discharge relationship over the spillway crest.
- The physical model will evaluate the potential for erosion downstream of the flip bucket to help determine the bucket geometry to confirm the flow is moved a sufficient distance downstream to prevent head cutting back upstream and how the flow enters the anticipated channel or plunge pool downstream.

- The physical model will allow for design modifications such as spillway channel alignment or curvature, spillway channel wall height, spillway crest elevation, and potential spillway flow control (i.e. adding gates).
- The physical model will be stored for up to one year until the spillway design is complete.
- Assumes up to two (2) site visits for the Project Manager and Hydraulic Engineer to observe the model study.
- 2023 Fiscal year GSA current per diem rates for travel to Monterey County: \$98 per person for lodging; mileage, meal, and incidental expenses (M&IE): \$59 per person per full day (\$44.25 first/last day travel).
- Each site visit assumptions include two (2) days of travel and one (1) full day observing the Physical Model runs (up to 8 hours).

DELIVERABLES

- DRAFT San Antonio Physical Model Report (PDF format).
- FINAL San Antonio Physical Model Report (PDF format).

TASK 12: CONSTRUCTION BID SUPPORT AND ENGINEERING SERVICES DURING CONSTRUCTION

This task consists of reviewing and responding to bidder questions and preparing bid addenda to support the bidding process.

Response to Bidder Questions – McMillen will coordinate the efforts required to respond to bidder questions between the Design Engineer and Agency staff. McMillen will distribute and respond to the bidder's questions as required, ensure a timely response, issue responses, and track bidder's questions along with responses.

Prepare Bid Addenda – McMillen will assemble bid addenda(s) which clearly outline modifications required to the contract documents to resolve bidder's questions and address potential issues with the design documents.

This task consists of reviewing and responding to shop drawings, submittals, request for information (RFIs), Structural Inspections, and Weekly Construction Meetings for McMillen staff. Correspondence with onsite inspectors is included as part of the overall response to Submittals and RFIs.

Shop Drawing and Submittal Review – This task includes review and response to shop drawings and submittals from the contractor, as required. McMillen will coordinate with the

Agency and the Contractor to resolve any issues with contractor's submittals to ensure conformance with the contract documents and timely return of submittals.

Respond to RFIs – This task includes the response to RFIs, as required. McMillen will coordinate with the Agency and the Contractor to resolve design questions and respond in a timely manner to maintain the overall Project schedule. To support the geotechnical RFIs and submittals, McMillen will have a subcontract with the geotechnical of record on the Project.

Weekly Construction Meeting – This task includes attendance of weekly construction progress meetings that will be required to coordinate the design between the McMillen design team, the Agency, and the construction team throughout the construction period.

Civil and Structural Inspections – This task includes site visits for the Civil Engineer and Structural Engineer to inspect the construction. This task assumes 12 days on site with travel for each engineer and four days for the Project Manager.

Slate work will include the following:

- Mapping of the exposed bedrock surface after demolition of the existing spillway.
- Construction observation for adherence to geotechnical design specifications, as directed by McMillen.

ASSUMPTIONS:

- It is assumed that five (5) bid addenda may be requested by Agency and/or contractor under this Task.
- Assumes up to 12 civil discipline submittal reviews for two hours each.
- Assumes up to 32 structural discipline submittal reviews for two hours each.
- Assumes up to 50 RFIs for four hours each. Four hours of review time is assumed for 10 RFIS, two hours were assumed for 20 RFIs, and 1 hour is assumed for 20 RFIs.
- Assumes up to four (4) site visits for the structural engineer of record to complete the required inspections throughout the construction period.
- Assumes a two phased construction period. The first phased is assumed to occur April through October of 2025 and the second phase occurring April through October of 2026, with project close-out activities extending into November 2026
- 2023 Fiscal year GSA current per diem rates for travel to Monterey County: \$240 per person for lodging; mileage, meal, and incidental expenses (M&IE): \$74 per person per full day (\$55.50 first/last day travel).

- The meeting assumptions include two (2) days of travel and one (1) full day to the Project site, (up to 8 hours) to complete structural inspections.
- Assumes up to 60 Weekly Construction meetings for one hour each throughout the duration of the construction period. The McMillen engineering team will attend the weekly construction meetings via conference call.
- Up to one (1) Slate engineer will be required to provide construction observation support for up to eight (8) weeks full time (up to 8 hours per day).
- One (1) Slate geologist will perform mapping of the exposed bedrock in the footprint of the planned spillway. Mapping will be conducted after demolition of the existing spillway and will be performed on the foundation area when it has been cleared as much as possible and prepared for new construction.
- Geologic mapping of the exposed foundation will be required to record the foundation conditions and as-built conditions of the bedrock. If possible, high-resolution imagery and elevation data point clouds will be collected using airborne methods. This will allow the mapping to be conducted primarily as a desktop task thereby significantly reducing potential downtime on site during the mapping.
- 2023 Fiscal year General Services Administration (GSA) current per diem rates for travel to Monterey County: \$240 per person for lodging; mileage, meal, and incidental expenses (M&IE): \$74 per person per full day (\$55.50 first/last day travel).

DELIVERABLES:

- Bidder question responses (PDF format).
- Five (5) bid addenda, as required (PDF format).
- Shop drawing and submittal reviews and comments (PDF format).
- RFI responses (PDF format).
- Weekly construction meeting minutes (PDF format).

TASK 13: POST-CONSTRUCTION SUPPORT

This task consists of collecting and assembling the red line as-built drawings into complete AutoCAD record drawings. McMillen and Slate will develop a Post Construction Report that would include the as-builts, laboratory testing results, description of changes in the design during construction, change management, and any pertinent information observed during construction.

ASSUMPTIONS:

- Assumes 0.5 hours per sheet of CAD time and 0.5 hours per sheet of engineer time to update complete 64 as-built design drawings.
- Detailed redlines will be provided by the Contractor.

DELIVERABLES:

- Complete electronic record drawings (PDF format) and associated AutoCAD files.
- DRAFT Post Construction Report (PDF format).
- Final Post Construction Report (PDF format).

BUDGET ESTIMATE

The budget estimate for work Tasks 1 through 13 is presented in the attached Table 1. McMillen proposes to complete the work outlined above on a time and materials basis, not to exceed \$2,139,980.

SCHEDULE

The Agency anticipates issuing a Notice to Proceed (NTP) on August 1, 2023. Attachment 2 includes the anticipated Project schedule with an assumed two-phase construction work period anticipated to occur from April through October of 2025 and April through October of 2026, with project close-out activities extending into November 2026.

We appreciate the opportunity to work with the Agency on the San Antonio Spillway Emergency Project. If you have any questions or need additional information, please contact me at (208) 342-4214.

Sincerely,



Jodi Burns
Civil Project Manager

cc Mara McMillen, President
File:

Work Schedule

Monterey County Resources Agency
 San Antonio Spillway Emergency Design Project
 Proposed Schedule

ID	Task Name	Duration	Start	Finish	2024				2025				2026					
					Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4			
1	Project NTP	0 days	9/1/23	9/1/23														
2	Review Data	10 days	9/1/23	9/14/23														
3	Project Kickoff Meeting & Site Visit	3 days	9/15/23	9/17/23														
4	Task 3: H&H	46 days	9/1/23	11/3/23														
5	H&H Analysis	14 days	9/1/23	9/18/23														
6	Submit DRAFT PMF Inflow Hydrograph Study	0 days	9/18/23	9/18/23														
7	DSOD & Agency Review Period	20 days	9/21/23	10/15/23														
8	PMF Work Session with DSOD	1 day	10/20/23	10/20/23														
9	Address DSOD and Agency Comments	9 days	10/21/23	11/3/23														
10	Submit Final DRAFT PMF Inflow Hydrograph Study	0 days	11/3/23	11/3/23														
11	Task 4: Spillway Alternatives Analysis	101 days	Fri 9/18/23	Fri 2/5/24														
12	Begin Spillway Alternatives Analysis	41 days	Fri 9/18/23	Fri 11/13/23														
13	Alternatives Analysis ITR	5 days	Mon 11/16/23	Fri 11/20/23														
14	Address ITR Comments	5 days	Mon 11/23/23	Fri 11/27/23														
15	Submit DRAFT Alternatives Analysis Report to DSOD and the Agency	0 days	Fri 11/27/23	Fri 11/27/23														
16	DSOD and Agency Review Period	25 days	11/30/23	1/1/24														
17	DSOD Alternatives Analysis Work Session	1 day	1/5/24	1/5/24														
18	Address DSOD Comments	4 days	1/7/24	1/12/24														
19	Alternatives Analysis	3 days	1/13/24	1/15/24														
20	Finalize Alternatives	15 days	1/18/24	1/5/24														

Monterey County Resources Agency
 San Antonio Spillway Emergency Design Project
 Proposed Schedule

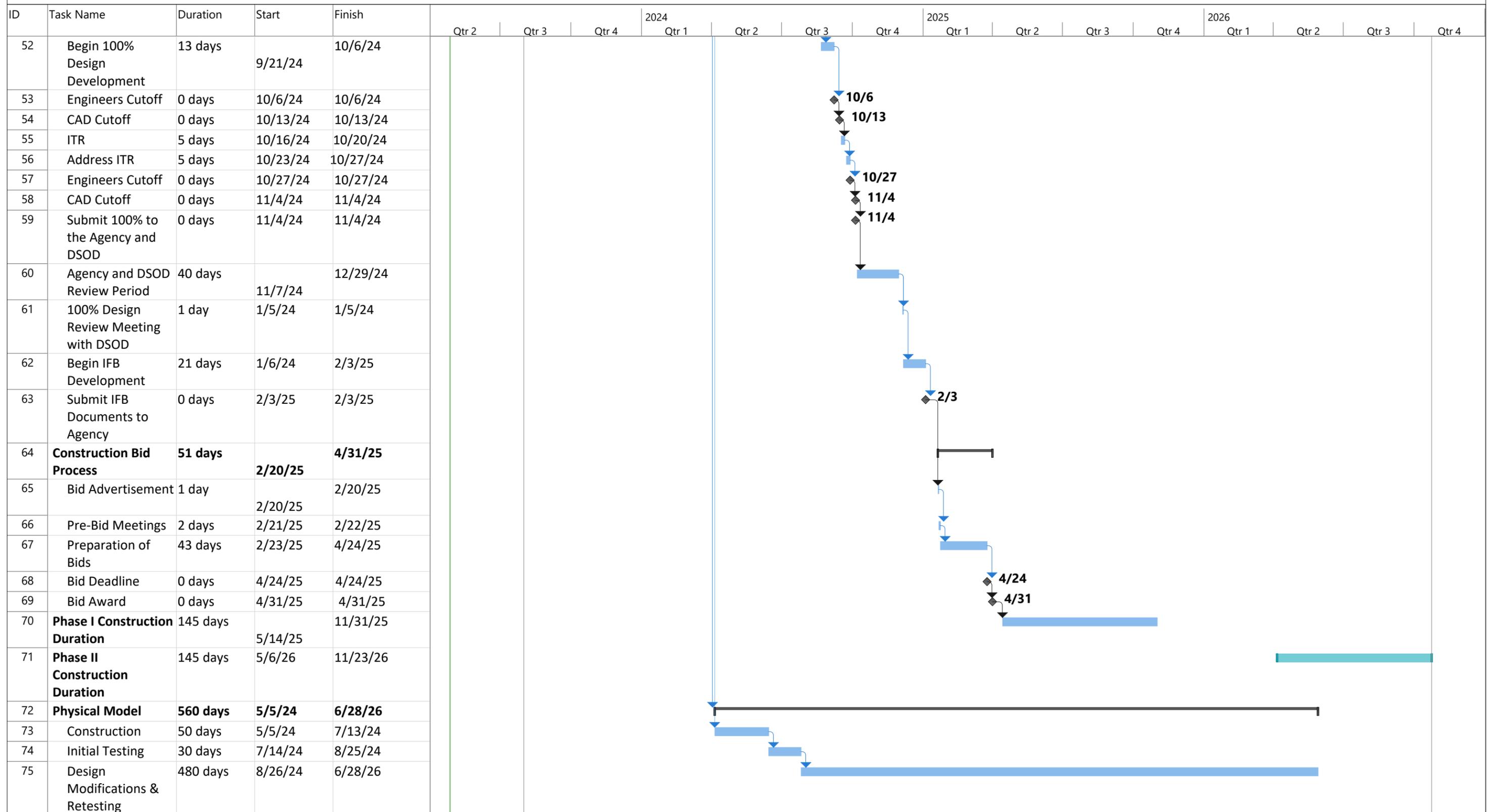


Exhibit B - Fee Schedule/Payment Provisions

Monterey County Water Resources Agency
San Antonio Spillway Replacement Project

Summary of Design Engineering Services (Assumes NTP on 5 SEP 2023)

Phase No.	Description	Budget	Schedule
Design Engineering Phase			
1.1	McMillen Tasks 1, 2, 3, 4, and 10 Management, Data Collection, Project Orientation, Field Investigation, Kickoff Meeting, Hydraulics and Hydrology Study, Spillway Alternatives Analysis, CEQA Exemption Support	\$434,500	Sep '23 to Early Feb '24
1.2	McMillen Tasks 1, 5, 6, and 11 Management, 30% and 60% Final Designs, and Construct Laboratory Physical Model	\$695,200	Feb to Jun '24
1.3	McMillen Tasks 1, 7, 8, 9, and 11 Management, 90% and 100% Final Designs, Package to Issue for Bidding, and Laboratory Analyses for Physical Modeling	\$610,800	Jul'24 to Feb '25
Post-Design Phase			
2.1	Bidding Phase	\$35,600	Feb to April '25
2.2	Construction Phase (two summer seasons)	\$295,400	Apr to Oct '25 and Apr to Oct '26
2.3	Post-Construction Phase (as-builts, final report)	\$68,600	Oct to Dec '26

Monterey County Water Resources Agency
 San Antonio Spillway Emergency Design Project
 Table 1. Proposed Budget

Staff	Principal (QC)	SME (QC)	Senior (QC)	Project Manager	Hydraulic Engineer	Civil Engineer	Structural Engineer	GIS Specialist	CAD	Tech Writer	Admin Support	Cost Estimator	Hours	Total Labor	Airfare	Hotel	Car	Meals	Slate Subs	University of Iowa Subs	Total Expenses	TOTAL
	McMillen	Trojanowski	Merklein	Burns	Klawitter	Wright	Thurman	Uhlmann	Neves													
Task 1: Project Management				136							104		240	\$ 41,000	\$ -	\$ -	\$ -	\$ -	\$ 18,360	\$ -	\$ 18,360	\$ 59,360
Contracting				16							16		32	\$ 5,200							\$ -	\$ 5,200
Risk Register				40							8		48	\$ 9,800							\$ -	\$ 9,800
Invoicing & Progress Report				80							80		160	\$ 26,000					\$ 18,360		\$ 18,360	\$ 44,360
Task 2: Data Collection & Site Visit			24	40		40	64						172	\$ 40,720	\$ 2,500	\$ 1,920	\$ 250	\$ 740	\$ 60,378	\$ -	\$ 65,788	\$ 106,508
Data Collection				8		16	32						56	\$ 13,240							\$ -	\$ 13,240
Kickoff Meeting and Site Visit			24	32		24	32				4		116	\$ 27,480	\$ 2,500	\$ 1,920	\$ 250	\$ 740	\$ 60,378		\$ 65,788	\$ 93,268
Task 3: Hydrologic & Hydraulic Analysis	20		4	4	108					8	4		148	\$ 29,380	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,380
Update Hydrologic Analysis - Inflow Case 1: No ILT	4				40								44	\$ 8,500							\$ -	\$ 8,500
Update Hydrologic Analysis - Inflow Case 2: ILT Included	4				24								28	\$ 5,620							\$ -	\$ 5,620
Develop PMF Inflow Hydrograph Study TM	8				40					8			56	\$ 10,840							\$ -	\$ 10,840
PMF Work Session with DSOD and Agency	4		4	4	4						4		20	\$ 4,420							\$ -	\$ 4,420
Task 4: Spillway Alignment/ Alternatives Analysis	28	36	68	64	252	44	176	40	156		6	64	934	\$ 192,200	\$ 2,500	\$ 1,920	\$ 250	\$ 740	\$ 58,074	\$ -	\$ 63,484	\$ 255,684
PMF Hydraulic Routing & Wave Runup - Case 1: No ILT	4				40		16						68	\$ 13,940							\$ -	\$ 13,940
PMF Hydraulic Routing & Wave Runup - Case 2: ILT and WSEL 780 ft	2				16		16						42	\$ 8,970							\$ -	\$ 8,970
PMF Hydraulic Routing & Wave Runup - Case 3: ILT and WSEL 780 ft	2				16		16						42	\$ 8,970							\$ -	\$ 8,970
Alternatives Analysis Development and Stability of Existing Ogee and Terminal Structure	8	8	40	24	24	40	100		72			40	356	\$ 77,840					\$ 58,074		\$ 58,074	\$ 135,914
Hydraulic Modeling (CFD/HECRAS Modeling)	8				120				60				188	\$ 33,800							\$ -	\$ 33,800
Wave Runup analysis of Dam	4			4	32								40	\$ 7,960							\$ -	\$ 7,960
DSOD Work Session		4	4	4	4	4	4				6		30	\$ 6,280							\$ -	\$ 6,280
Agency Alternatives Analysis Meeting		24	24	24	24		24						96	\$ 24,600	\$ 2,500	\$ 1,920	\$ 250	\$ 740			\$ 5,410	\$ 30,010
Develop Drawings to Support Right-of-way Procurement				8				40	24				72	\$ 9,840							\$ -	\$ 9,840
Task 5: Schematic Design (30% Design)	24	24	45	107	85	158	139	8	201	24	8	40	863	\$ 178,990	\$ -	\$ -	\$ -	\$ -	\$ 89,800	\$ -	\$ 89,800	\$ 268,790
30% Calculations		2	3	11	1	18	15						50	\$ 11,650					\$ 89,800		\$ 89,800	\$ 101,450
30% Design Drawings		13	17	71	6	115	92		201				515	\$ 105,190							\$ -	\$ 105,190
List of Specifications		1	1	3	-	5	4						14	\$ 3,300							\$ -	\$ 3,300
Cost Estimate			4	4		4	4					40	56	\$ 11,060							\$ -	\$ 11,060
Hydraulic Modeling (CFD/HECRAS Modeling)	16				60								76	\$ 16,000							\$ -	\$ 16,000
Design Documentation Report			4	4	16	8	16	8		24			80	\$ 14,560							\$ -	\$ 14,560
ITR	8	8	8	2									26	\$ 7,450							\$ -	\$ 7,450
Submittal				2							4		6	\$ 850							\$ -	\$ 850
Review Meeting				2	2						4		8	\$ 1,210							\$ -	\$ 1,210
Comments/response form.			4	4		4	4						16	\$ 3,860							\$ -	\$ 3,860
DSOD Work Session			4	4		4	4						16	\$ 3,860							\$ -	\$ 3,860
Task 6: Preliminary Design (60% Design)	49	25	32	97	61	150	130	8	200	56	24	32	864	\$ 177,435	\$ -	\$ -	\$ -	\$ -	\$ 40,500	\$ -	\$ 40,500	\$ 217,935
60% Calculations	1	1	1	3	-	5	4	-		32	-	-	-	\$ 7,785					\$ 40,500		\$ 40,500	\$ 48,285
60% Design	23	12	16	68	6	110	88	-	200		-	-	-	\$ 109,205							\$ -	\$ 109,205
60% Specifications	5	3	3	14	1	23	18	-			16	-	-	\$ 17,650							\$ -	\$ 17,650
Cost Estimate												32	32	\$ 5,760							\$ -	\$ 5,760
Hydraulic Modeling (CFD/HECRAS Modeling)	12				40								52	\$ 11,100							\$ -	\$ 11,100
Design Documentation Report			4	4	12	8	16	8		24			76	\$ 13,840							\$ -	\$ 13,840
ITR	8	9	8										25	\$ 7,275							\$ -	\$ 7,275
Submittal				2							4		6	\$ 850							\$ -	\$ 850
Review Meeting				2	2						4		8	\$ 1,210							\$ -	\$ 1,210
Comments/response form.			4	4		4	4						12	\$ 2,760							\$ -	\$ 2,760
Task 7: Draft Design (90% Design)	41	24	32	99	57	150	130	8	200	48	24	24	837	\$ 171,810	\$ -	\$ -	\$ -	\$ -	\$ 18,000	\$ -	\$ 18,000	\$ 189,810
90% Calculations	5	3	3	14	1	23	18	-		24	-	-	-	\$ 19,170					\$ 18,000		\$ 18,000	\$ 37,170
90% Design	19	10	14	57	5	92	74	-	200		-	-	-	\$ 96,780							\$ -	\$ 96,780
90% Specifications	5	3	3	14	1	23	18	-			16	-	-	\$ 17,650							\$ -	\$ 17,650
Cost Estimate												24	24	\$ 4,320							\$ -	\$ 4,320
Hydraulic Modeling (CFD/HECRAS Modeling)	4				40								44	\$ 8,500							\$ -	\$ 8,500
Design Documentation Report			4	4	8	8	16	8		24			72	\$ 13,120							\$ -	\$ 13,120
ITR	8	8	8	2									26	\$ 7,450							\$ -	\$ 7,450
Submittal				2							4		6	\$ 850							\$ -	\$ 850
Review Meeting				2	2						4		8	\$ 1,210							\$ -	\$ 1,210
Comments/response form.			4	4		4	4						12	\$ 2,760							\$ -	\$ 2,760
Task 8: Final Design (100% Design)	14	13	21	55	12	79	73	4	67	40	24	8	410	\$ 83,850	\$ -	\$ -	\$ -	\$ -	\$ 12,300	\$ -	\$ 12,300	\$ 96,150
100% Calculations	1	1	1	3	-	5	4	-		16	-	-	-	\$ 5,705					\$ 12,300		\$ 12,300	\$ 18,005
100% Design	8	4	5	23	2	37	29	-	67		-	-	-	\$ 36,535							\$ -	\$ 36,535
100% Specifications	1	1	1	3	-	5	4	-			16	-	-	\$ 5,225							\$ -	\$ 5,225
Cost Estimate												8	8	\$ 1,440							\$ -	\$ 1,440
Design Documentation Report			4	4	8	8	16	4		24			68	\$ 12,700							\$ -	\$ 12,700
List of Technical Submittals			2	8		16	4						30	\$ 6,790							\$ -	\$ 6,790
List of Specialty Construction Inspections			2	2		8	8						12	\$ 3,000							\$ -	\$ 3,000
List of Tech Certs/Training.			2	2		4	4						12	\$ 2,860							\$ -	\$ 2,860
ITR	4	7	4	2									17	\$ 4,775							\$ -	\$ 4,775

Monetary County Water Resources Agency
 San Antonio Spillway Emergency Design Project
 Table 1. Proposed Budget

Staff	Principal (QC)	SME (QC)	Senior (QC)	Project Manager	Hydraulic Engineer	Civil Engineer	Structural Engineer	GIS Specialist	CAD	Tech Writer	Admin Support	Cost Estimator	Hours	Total Labor	Airfare	Hotel	Car	Meals	Slate Subs	University of Iowa Subs	Total Expenses	TOTAL
	McMillen	Trojanowski	Merklein	Burns	Klawitter	Wright	Thurman	Uhlmann	Neves													
Submittal				2							4		6	\$ 850							\$ -	\$ 850
Reiew Meeting				2	2						4		8	\$ 1,210							\$ -	\$ 1,210
Comments/response form.				4		4	4						12	\$ 2,760							\$ -	\$ 2,760
Task 9: Issue for Bid Design	-	8	18	18	-	44	56	2	24	4	-	-	174	\$ 39,230	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 39,230
IFB Calculations		8	4	4		8	12						36	\$ 8,920							\$ -	\$ 8,920
IFB Drawings			4	4		16	24	2	24				74	\$ 15,490							\$ -	\$ 15,490
IFB Specifications			4	4		8	8						24	\$ 5,720							\$ -	\$ 5,720
IFB Lists			2	2		4	4						12	\$ 2,860							\$ -	\$ 2,860
Design Documentation Report			4	4		8	8			4			28	\$ 6,240							\$ -	\$ 6,240
Task 10: CEQA Support	-	-	-	40	-	80	-	-	24	-	-	24	168	\$ 34,360	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 34,360
CEQA Support				40		80			24			24	168	\$ 30,040							\$ -	\$ 30,040
Task 11: Physical Model	-	-	-	48	64	-	16	-	24	-	-	-	152	\$ 30,160	\$ 3,200	\$ 784	\$ 400	\$ 826	\$ -	\$ 440,000	\$ 445,210	\$ 475,370
Physical Model				16	32		16		24				88	\$ 17,200						\$ 440,000	\$ 440,000	\$ 457,200
Trips to University of Iowa				32	32								64	\$ 12,960	\$ 3,200	\$ 784	\$ 400	\$ 826			\$ 5,210	\$ 18,170
Task 12: Construction Bid Support & ESDC	-	-	30	238	-	207	331	-	24	-	-	-	830	\$ 192,895	\$ 6,400	\$ 3,840	\$ 1,000	\$ 1,480	\$ 96,558	\$ -	\$ 109,278	\$ 302,173
Response to Bidder Questions				40		24	24						88	\$ 20,160							\$ -	\$ 20,160
Prepare Bid Addenda				8		8	12		24				52	\$ 10,360							\$ -	\$ 10,360
Shop Drawing and Submittal Review				48		24	64						136	\$ 31,960							\$ -	\$ 31,960
Response to RFIs				50		25	75						150	\$ 35,375							\$ -	\$ 35,375
Weekly Construction Meetings (Phase I & Phase II Construction)			30	60		30	60						180	\$ 43,200							\$ -	\$ 43,200
Civil and Structural Inspection Site Visits				32		96	96						224	\$ 51,840	\$ 6,400	\$ 3,840	\$ 1,000	\$ 1,480	\$ 96,558		\$ 109,278	\$ 161,118
Task 13: Post-Construction Support	8	8	8	32	-	44	77	-	64	16	-	-	257	\$ 55,230	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ 10,000	\$ 65,230
Record Drawings				16		20	17		64				117	\$ 22,390							\$ -	\$ 22,390
Post Construction Final Report	8	8	8	16		24	60			16			140	\$ 32,840					\$ 10,000		\$ 10,000	\$ 42,840
Total Hours	184	138	282	978	639	996	1,192	70	984	200	194	192	6,049									
Total Budget	\$ 59,800.00	\$ 37,950.00	\$ 77,550.00	\$ 220,050.00	\$ 115,020.00	\$ 214,140.00	\$ 298,000.00	\$ 7,350.00	\$ 157,440.00	\$ 26,000.00	\$ 19,400.00	\$ 34,560.00		\$ 1,267,260.00	\$ 14,600.00	\$ 8,464.00	\$ 1,900.00	\$ 3,786.00	\$ 403,970.00	\$ 440,000.00	\$ 872,720	\$ 2,139,980

Exhibit C Risk Register

Project: San Antonio Spillway Replacement Project

DRAFT

Subject: Project Risk Register

Last Updated: 04/11/2023 by Jodi Burns

Notes: This version was developed during the Project scoping process.

Risk Identification					Risk Assessment (for Monte Carlo)					Risk Assessment (for Risk Management)				Risk Mitigation					
Risk ID	Risk Category	Risk Description	Root Cause(s)	Phase When Actualized	Probability	Cost Impact Min	Cost Impact Max	Schedule Impact Min (Days)	Schedule Impact Max (Days)	Probability (P)	Impact (I)	Risk Weight (P x I)	Overall Rating	Justification	MCWRA Management Strategy	Risk Management Measure	Risk Owner	Primary Carrier	Secondary Carrier
Funding																			
1	Funding	Available Funding Due to budgetary issues the project budget may be reduced or eliminated. This may result in significant delays.	Budgetary issues	Design						#N/A	No impact		None	Probability:	Accept	Strict adherence to 218 funding agreement requirements	Owner	-	-
2	Funding	Desig Cost Changes Changes during design and contingency requirements due to risk exposure suggest potential funded level exceedance. This may result in de-scoping.	Changes during design and risk register projection suggest potential funded level exceedance	Design						#N/A	No impact		None	Probability:	Accept	Robust Engineer's estimate to include Monte Carlo analyses; Independent review of Engineer's estimate, Include adequate contingency for project risk; Utilize project delivery method that provides Contractor's progress cost estimates to control budget. Close coordination and transparency on costs and associated assumptions during progress cost estimated prepared by Engineer; Provide contract exit strategy that Owner can terminate for convenience and implement alternate delivery approaches.	Owner	-	-
3	Funding	Construction Cost Changes More Changes than anticipated may occur during construction, resulting in potential funded level exceedance. De-scoping during construction may result in delays to the project	Changes during construction and risk register projection suggest potential funded level exceedance	Construction						#N/A	No impact		None	Probability:	Accept	Robust Engineer's estimate to include Monte Carlo analyses; Independent review of Engineer's estimate, Include adequate contingency for project risk; Utilize project delivery method that provides Contractor's progress cost estimates to control budget. Close coordination and transparency on costs and associated assumptions during progress cost estimated prepared by Engineer; Provide contract exit strategy that Owner can terminate for convenience and implement alternate delivery approaches.	Owner	-	-
Environmental & Permitting																			
4	Environmental & Permitting	Legal Action - CEQA/ NEPA Outside entity sues the CEQA or NEPA documents or associated approval. This may result in additional cost and schedule delays.	Outside entity sues the CEQA or NEPA document or associated approvals	Construction						#N/A	No impact		None		Manage	Outreach and education; Attempt to negotiate local benefits; Close agency coordination; Prepare technical assessments that can hold up to scrutiny	Owner		-
5	Environmental & Permitting	DSOD - Existing Structures DSOD acceptance of re-using either or both the Ogee Weir Spillway Control Structure and/or Flip Bucket.	DSOD does not accept design approach based on previous rejection of rehabilitating portions of the spillway concrete.	Design												Obtain early confirmation with DSOD that they will accept existing structures.	Owner		
6	Environmental & Permitting	DSOD - Rinconada Fault DSOD's direction on design and construction of the spillway near/on the Rinconada Fault.	DSOD requires spillway to move away from the mapped fault.	Design												Obtain early confirmation with DSOD that they will accept the location of the existing structure and evaluate historic movement as the key indicator for potential future displacement.	Owner		
7	Environmental & Permitting	DSOD - Design Development Design assumes that reviews by DSOD will generally provide guidance and acceptance of the selected spillway alternative and design criteria progressively during the design process. DSOD decisions that alter previously accepted decisions may impact both schedule and fee. (e.g. acceptance of H&H, acceptance of geologic characterization of fault, acceptance of seepage analysis, acceptance of CFD model results, acceptance of geotechnical design criteria).	DSOD does not accept design approach.	Design						#N/A	No impact		None	Probability:	Transfer		Owner		-
Land Procurement/ROW																			

Attachment A Risk Register

Risk ID	Risk Category	Risk Description	Root Cause(s)	Phase When Actualized	Probability	Cost Impact Min	Cost Impact Max	Schedule Impact Min (Days)	Schedule Impact Max (Days)	Probability (P)	Impact (I)	Risk Weight (P x I)	Overall Rating	Justification	MCWRA Management Strategy	Risk Management Measure	Risk Owner	Primary Carrier	Secondary Carrier
8	ROW	Easement Restrictions ROW/construction easements may be denied for spillway alignment.	Insufficient communication and compromise with property owner	Any time						#N/A	No impact		None	Probability: Negotiations with property owners have not yet started, and assume a delay is likely on a localized basis Impact: \$100k-\$300k for alternative approaches or above market rate costs	Manage	Proactive communication with land owner(s);	Owner		-
9	ROW	Easement Restrictions New Spillway Alignment requires ROW/land acquisition with nearby landowner(s) and terms are not agreed upon by all parties.	Insufficient communication and compromise with property owner	Any time						#N/A	No impact		None	Probability: Negotiations with property owners have not yet started, and assume a delay is likely on a localized basis Impact: \$100k-\$300k for alternative approaches or above market rate costs	Manage	Proactive communication with land owner(s);	Owner		-
10	ROW	Adjacent Properties Impacted Unforeseen impact to adjacent properties during construction.	Unanticipated impacts during roads work or downstream mitigations	Construction						#N/A	No impact		None	Probability: Assume not very likely that adjacent properties will be impacted Impact: \$1M-\$3M	Share	Contractor required to develop final design that considers adjacent properties; Early identification of property impacts	Owner		
Procurement																			
11	Procurement	Guaranteed Maximum Price Agreement Failure to agree to GMP during detailed design. This may lead to a schedule delay.	Disconnect between Contractor and Owner	Design						#N/A	No impact		None	Probability: Have completed robust engineer's estimate with Monte Carlo of cost estimate uncertainty and of risks. De-scope if needed.	Manage	Robust Engineer's estimate to include Monte Carlo analyses; Independent review of Engineer's estimate, include adequate contingency for project risk; Utilize project delivery method that provides Contractor's progress cost estimates to control budget. Close coordination and transparency on costs and associated assumptions during progress cost estimated prepared by Engineer; Provide contract exit strategy that Owner can terminate for convenience and implement alternate delivery approaches.	Owner		-
Design																			
Pre-Construction NTP																			
12	Design	Rinaconda Fault Design evaluation of fault that may require the control structure to move and the ogee crest structure cannot be reused.	Stability Analysis	Design						#N/A	No impact		None	Probability:	Accept		Owner		
12	Design	Rinaconda Fault Uncertainty in fault activity or location that may require additional geologic evaluations and subsequent redesign.	Uncertainty in geologic characterization of low-activity fault in deformed Monterey Formation bedrock.	Design						#N/A	No impact		None	Probability:	Accept		Owner		
13	Design	Geotechnical - New Spillway Alignment During the alternatives analysis it may be determined that a new spillway alignment will be chosen. Additional borings will be required if a different alignment than the current is chosen.	Alternatives Analysis determines that the best alternative is a new spillway location.	Design						#N/A	No impact		None	Probability:	Accept		Owner		
14	Design	Geotechnical - Limited Explorations Limited number of borings along the spillway alignment.	Limited number of borings along the spillway alignment.	Design						#N/A	No impact		None	Probability:	Accept	Review boring information and obtain additional borings, if budget allows and the design requires additional borings.	Owner		
15	Design	MCWRA Go/No Go - SA Spillway Raise Design will be affected by a Go/No Go decision on the SA Spillway Raise. DSOD will require a Dam Stability Analysis and dam geotechnical investigation on the existing dam to determine if existing soil strength data is sufficient. Will cause a schedule impact on the Spillway Project.	MCWRA determines that they will go forward with the spillway raise project.	Design						#N/A	No impact		None	Probability:	Transfer	Assess scheduling impacts if additional borings or investigations are required and work with MCWRA to DSOD to accelerate any additional exploration work.	Owner		-
16	Design	MCWRA Go/No Go - Interlake Tunnel Design will be affected by a Go/No Go decision on the Interlake Tunnel Project.	The ILT Project is determined by 218 Funding and if the land owners vote to go forward with the ILT Project.	Design						#N/A	No impact		None	Probability:	Transfer	Decision on project is made prior to completions of alternatives analysis for spillway.	Owner		-
Post-Construction NTP																			

Attachment A Risk Register

Risk ID	Risk Category	Risk Description	Root Cause(s)	Phase When Actualized	Probability	Cost Impact Min	Cost Impact Max	Schedule Impact Min (Days)	Schedule Impact Max (Days)	Probability (P)	Impact (I)	Risk Weight (P x I)	Overall Rating	Justification	MCWRA Management Strategy	Risk Management Measure	Risk Owner	Primary Carrier	Secondary Carrier
17	Design	Errors and Omissions Design errors or omissions lead to Project delays or cost overruns	Designer error	Construction	10%	-	-	30	90	2 Unlikely (10-19%)	2 Low	4	Low	Probability: Assume less likely to occur Impact: 1-3 mo delay	Transfer	Comprehensive design review; proactive QA/QC.	Owner's Egr		
Field Conditions																			
18	Field Conditions	Field Conditions Field data has not been collected from the installed piezometers to inform the spillway analysis for seepage and drain design.		Design	10%					2 Unlikely (10-19%)	1 Very Low	2	Low		Manage	Verify that measurements are being collected and continue to be collected through the design period.	Owner		
19	Field Conditions	Field Conditions General changed field condition (geotechnical, geological, existing utilities, hazardous materials, and biological resources) leads to redesign, project delays and/or cost overruns.	Field condition differs from documented findings	Construction	20%					3 Less Likely (20-39%)	1 Very Low	3	Low	Probability: Assume less likely based on field investigations to date Impact:	Manage	Comprehensive field investigation and documentation.	Owner		
20	Field Conditions	Quantity Overruns Quantity overruns on earthwork, concrete demolition, etc.	Existing as-built data, exploratory data not adequate or accurate	Construction	5%					1 Very Unlikely (1-9%)	2 Low	2	Low	Probability: Since have acquired recent topo and bathymetry, assume very unlikely Impact: \$XXX for add'l material excavation and hauling Rock Foundation Removal and Preparation including dental work is difficult to determine prior to inspection.	Manage	Obtain new topographic and bathymetric data for use by Designer and Contractor; Rigorous QA by Owner on design calculations and assumptions related to earthwork volumes. Contract should include base price for calculated quantities and unit price for overages.	Owner		
Construction																			
21	Construction	Cofferdam Failure Failure of temporary cofferdams result in demolition delays	Unconservative design of cofferdams; unanticipated foundation conditions	Construction	5%					1 Very Unlikely (1-9%)	2 Low	2	Low	Probability: Assume unlikely Impact: \$100k-\$500k for add'l cofferdam costs and X mo delay	Transfer	Comprehensive field investigation, review of original construction, and design review Design robust cofferdam that meets stability requirements of permanent control structures.	Contractor		
External Events																			
22	External Events	Uncontrolled Circumstances Uncontrollable circumstances (e.g. force majeure, war, terrorism)	Uncontrolled circumstances	Construction	0.01%					1 Very Unlikely (1-9%)	1 Very Low	1	Low	Probability: Assume these particular uncontrolled circumstances are very unlikely Impact: \$100M-\$500M assuming dam failure caused by terrorist action	Accept	Prepare Emergency Response Plan (PERP) and require Contractor to prepare their own PERP	Owner / Contractor / Force Majeure		
23	External Events	Wet Weather Wetter-than-expected weather or flows higher than expected during instream construction window increases costs and causes delays.	Climate change; Hydrology	Construction	5%					1 Very Unlikely (1-9%)	1 Very Low	1	Low	Probability: super wet weather is very unlikely during the summer construction window. Impact: \$100k-\$300k for add'l work	Accept	Rigorous flow analyses during planning/design; Consider defining anticipated rain days in contract as a number greater than average; Define flow return period; Contract requirement for contractor plan for wetter-than-expected weather.	Owner / Contractor / Force Majeure		
24	External Events	On-site Fire Fire in watershed causes on-site fire damage	Lightning; Accidental; Arson	Construction	5%					1 Very Unlikely (1-9%)	1 Very Low	1	Low	Probability: Unlikely chance of a fire in the watershed Impact: 5-20d delay due to evacuations	Share	Contractor will be required to prepare their own Fire Management Plan.	Owner / Contractor / Force Majeure		
25	External Events	Extreme Weather Hotter- or colder-than-expected weather causes work stoppage and schedule delays	Climate change	Construction	5%					1 Very Unlikely (1-9%)	1 Very Low	1	Low	Probability: Assume very unlikely Impact: \$100k-\$300k for add'l measures and 5-15d delay	Accept	Weather analysis during construction planning needs to foresee heat/cold delays; consider including greater than average number of excessive heat/cold days; for hot weather, consider ways to increase night work without affecting noise levels	Owner / Contractor / Force Majeure		