

## AMENDMENT No. 1

to

### Agreement for Professional Services between

**Monterey County Water Resources Agency and AECOM Technical Services, Inc.**

The undersigned parties hereby agree to amend that certain Agreement for Professional Services between the Monterey County Water Resources Agency (hereinafter “Agency”) and AECOM Technical Services, Inc., (hereinafter “CONTRACTOR”) executed and effective on June 8, 2020 (hereinafter “Agreement”).

Section 1 of the Agreement is hereby amended to read as follows:

1. Employment of CONTRACTOR. Agency hereby engages CONTRACTOR and CONTRACTOR hereby agrees to perform the services set forth in Exhibits A, B, C, D and E in conformity with the terms of this Agreement.

(a) The work to be performed is generally described as follows:

*Engineering services for Nacimiento Dam and San Antonio Dam including seismic stability evaluation and dam surveillance and performance evaluation.*

(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.

Section 3 of the Agreement is hereby amended to read as follows:

3. Payment to CONTRACTOR; maximum liability. Subject to the limitations set forth herein, Agency shall pay to CONTRACTOR the amounts provided in Exhibits C and E for work completed pursuant this Agreement, summarized below:

Original Agreement: \$938,350

Amendment No. 1: \$ 56,666

Not to Exceed Total: \$995,016

Section 32 of the Agreement is hereby amended to read as follows:

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

- Exhibit A** - Nacimiento Dam Seismic Stability Evaluation  
Scope of Work and Work Schedule (Original Agreement)
- Exhibit B** - San Antonio Dam Surveillance and Performance Evaluation for 2020  
Scope of Work and Work Schedule (Original Agreement)
- Exhibit C** - Payment Provisions (Original Agreement)
- Exhibit D** - San Antonio Dam Surveillance and Performance Evaluation for 2021  
Scope of Work and Work Schedule (Amendment No. 1)
- Exhibit E** - Payment Provisions (Amendment No. 1)

All other provisions of the Agreement remain in full force and effect.

**IN WITNESS WHEREOF**, Agency and CONTRACTOR have caused this Amendment No. 1 to be executed as follows:

**MONTEREY COUNTY  
WATER RESOURCES AGENCY**



\_\_\_\_\_  
Brent Buche, General Manager

DATED: E-signed 8/2/21

**AECOM TECHNICAL SERVICES, INC.**

By   
\_\_\_\_\_  
(signature)

Theodore Feldsher, Vice President  
\_\_\_\_\_  
(print name and title)\*

DATED: 7/22/2021

By   
\_\_\_\_\_  
(signature)

Jacqueline C. Shulters, Vice President  
\_\_\_\_\_  
(print name and title)\*

DATED: 7/22/2021

\* 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.

**AECOM Technical Services, Inc.  
Amendment No. 1**

\* \* \* \* \*

Approved as to form:

  
Deputy County Counsel

DATED: July 27, 2021

Approved as to fiscal provisions:

  
CAO Analyst

DATED: 07/28/2021

  
Auditor-Controller

DATED: 7-27-2021

# EXHIBIT D

## San Antonio Dam Surveillance and Performance Evaluation SCOPE OF WORK and WORK SCHEDULE

### INTRODUCTION

San Antonio Dam is under jurisdiction of the California Department of Water Resources, Division of Safety of Dams (DSOD). Annual surveillance and performance evaluation of the dam is prudent and required by DSOD. This Scope of Work includes San Antonio Dam data review and on-call response for Fiscal Year 2021-22 and performance report for the 2021 calendar year.

Payment Provisions and Budget for this work are described in Exhibit E.

### SCOPE OF WORK

#### **TASK 1 - ANNUAL INSPECTION**

Provide on-site inspection of San Antonio Dam at a time to be scheduled by the Agency. The inspection will include, at a minimum, examination of the instrumentation, relief wells, drains, embankment slopes, dam crest, and spillway for visible signs of failure, distress, erosion, or maintenance needs, and observation of operating mechanisms, including but not limited to valves, gates, drains, and safety devices for signs of malfunction or wear.

**Deliverable:** AECOM will provide field notes to the Agency after inspection is completed and any appropriate recommendations. One inspection per year.

#### **TASK 2 - PIEZOMETER / DRAIN DATA REVIEW**

Review and evaluate bi-monthly data from approximately 85 piezometers, 34 drains, and 10 relief wells. Data will be collected and provided to AECOM by the Agency supplied in electronic spreadsheet format. This review includes comparison of current monitoring data with past data during periods of similar reservoir conditions and against original design assumptions and criteria, as appropriate, to check for development of significant trends or changes in the data. AECOM is to make recommendations for corrective action if required. Up to six (6) data sets will be provided to AECOM per year.

**Deliverables:** AECOM will provide the Agency a brief summary of data review conclusions and any appropriate recommendations, promptly upon each periodic review, and prior to development of the surveillance and performance evaluation report.

#### **TASK 3 - SURVEY DATA REVIEW**

Review and evaluate annual dam, spillway, and outlet tunnel survey displacement data supplied by the Agency. Include a comparison of current monitoring data with past data during periods of similar reservoir conditions and against original design assumptions and criteria, as appropriate, to check for development of significant trends or changes in the data. AECOM is to make recommendations for corrective action if required.

**Deliverable:** AECOM will provide a brief summary of data review conclusions and any appropriate recommendations upon review, and incorporate review and conclusions into the surveillance and performance evaluation report.

#### **TASK 4 - INSTRUMENTATION DATA PLOTS**

Generate piezometer and drain flow data plots, and survey displacement data plots from data provided by the Agency. AECOM shall organize and format the plots for ease of interpretation. The plots will include data for the past ten (10) years. The plots will be generated annually.

**Deliverable:** Included in Task 5 deliverables.

#### **TASK 5 - REPORTING**

Prepare an annual dam surveillance and performance evaluation report (report) for Agency submittal to DSOD. The report will include evaluation of the current annual piezometer, drain, and survey monitoring data with comparison to historic data and trends; documentation of the field inspection; conclusions regarding the current condition of the dam, appurtenant facilities, and instrumentation; and applicable recommendations for repair, maintenance, or adjustments to the instrumentation and surveillance program. The report will be submitted initially as a draft; after receiving and incorporating Agency comments, the report will be presented in final form.

##### **Deliverables:**

- Send via e-mail copy of draft report to Agency's Project Manager and provide up to three (3) hard copy draft reports upon Agency request.
- Three (3) bound copies of the final report, plus two (2) bound final reports with wet signature and engineer's stamp, totaling five (5) bound final reports.
- Copy of final report in Adobe® Portable Document Format (.PDF) on Compact Disc (CD).
- Electronic data shall be readable using Microsoft® Word, Excel, Project, and plan sets in AutoCAD by Autodesk®. ESRI ArcGIS® and AutoCAD, images to be imported in a document are to be provided at 300 dpi.
- Digital photos shall be 2048 x 1536 pixels at 72 pixels per inch or better, and delivered in .PDF, .TIFF or .JPEG formats.

#### **TASK 6 - MEETINGS**

AECOM will allow for additional meetings as required, in addition to the site inspection, with the Agency and/or DSOD. Such meetings are in addition to Task 1.

**Deliverables:** Allow for two (2) meetings per year.

#### **TASK 7 - ON-CALL RESPONSE**

AECOM shall be available on a time and expense basis in the event of a natural disaster or other threat to San Antonio Dam, or other unexpected urgent situation or unusual operating condition regarding the safety or integrity of the dam. AECOM, in the event of such situation, would be expected to inspect the dam within 24 hours, or provide detailed monitoring data review and evaluation as applicable, consult with the Agency as needed, and prepare written recommendations for the continued safe operation of the structure. This task would be funded on an as-needed basis.

**Deliverables:** Allow for one on-site inspection and inspection report per year, or equivalent data review and evaluation effort.

## **TASK 8 - EARTHQUAKE EVENT DATA REVIEW**

When requested by Agency in the event of a significant earthquake, piezometer, drain, and other data will be collected on a more frequent basis, perhaps daily or weekly. These additional data will need to be evaluated and incorporated in the surveillance and performance evaluation report. The evaluation may be requested at the time immediately after data collection for such event. This task would be funded on an as-needed basis.

**Deliverables:** Allow for up to 12 data sets to be evaluated and presented in the surveillance and performance evaluation report.

## **SCHEDULE**

The schedule for performing work associated with the 2021 annual surveillance program is based on receipt of all final monitoring data from the Agency by the end of January 2022. Submittal of the draft report is then anticipated by the end of March 2022, with receipt of Agency comments by the middle of April 2022, allowing submittal of the final report by the end of April 2022.

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# EXHIBIT E

## PAYMENT PROVISIONS

### **PAYMENT:**

For the Scopes of Work defined in Exhibits A, B and D, Agency shall pay Contractor on a time and expense basis an amount not to exceed \$995,016. Payable costs shall be the sum of direct labor costs, other direct costs and sub-consultant mark-up as defined below. If Contractor time and expense cost necessary to complete the Scopes of Work defined in Exhibits A, B and D are less than \$995,016 the Agency enjoys the savings. If Contractor requires time and expense to complete the Scopes of Work defined in Exhibits A, B and D over and above \$995,016 the maximum amount payable to Contractor remains \$995,016. Budget detail is shown in Exhibit C and Table 1 herein.

**Direct Labor Costs:** Are the hourly billing rate, per the Direct Labor Rate Schedule herein, times the number of hours worked by the personnel.

**Other Direct Costs:** Other Direct Costs are identifiable costs necessarily incurred to complete the Scope of Work. Such costs include, but are not limited to, travel and subsistence expenses, document reproduction costs, postal, and materials costs. Expenses shall be accounted for in each invoice by submittal of receipts for such costs and a description of their necessity. Monterey County Travel Policy requires overnight lodging, meals, and incidentals be billed at U.S. General Services Administration (GSA) rates, no mark-up; mileage is billable at IRS allowable rate at time of travel, no mark-up. Non-Travel Policy costs may be marked-up 10%.

**Sub-Contractor Mark-up** is the percentage multiplier designated for each sub-Contractor times the sum of sub-Contractor direct labor and other direct charges. All sub-Contractor mark-up multipliers shall not exceed 1.10 (10% mark-up).

### **DIRECT LABOR RATE SCHEDULE:**

The Direct Labor Rate Schedule herein replaces the Direct Labor Rate Schedule in Exhibit C beginning July 1, 2021 and shall be valid for a twelve-month period. The hourly billing rate schedule and other direct costs chargeable to the work may be modified as agreed by Agency and Contractor after said period of time. Any agreed labor rate increase shall not exceed the 12-month San Francisco Bay Area CPI for the prior February. The parties shall agree to such modifications in writing as an Amendment to the Agreement.

<b>AECOM Labor Rate Schedule</b>	<b>Rate/Hour</b>
Principal Engineer .....	\$264
Senior Technical Lead .....	\$229
Project Manager .....	\$213
Senior Engineer .....	\$188
Project Engineer/Geologist.....	\$157
Senior Staff Engineer .....	\$142
Staff Engineer .....	\$127
Support GIS .....	\$147
Support CAD.....	\$127
Support Administrative .....	\$105

**INVOICES:**

Invoices may be submitted monthly. Invoices shall include the direct labor costs by individual and task, showing the individual's hours charged, hourly rate and total amount charged to each task. Other direct charges shall be added to the sum of the direct labor costs by task. Other direct charges shall be accounted for in each invoice by submittal of receipts for such costs and description of their necessity. Percent of task completion shall be included on each invoice.

**NOTIFICATION:**

When, during performance of the work, Contractor incurs 75 percent of the total task cost allotted to a task, Contractor shall so notify the Agency to that effect. If Consultant has reason to believe that the costs which it expects to incur to finish the task, when added to the costs previously incurred, will exceed the total task cost, Contractor shall so notify the Agency to that effect. The notice shall state: (1) the estimated amount of additional funds required to complete the task; (2) justification for the need for additional funds; and (3) the estimated date Contractor expects its total costs incurred to meet the total task cost.

**Table 1. San Antonio Dam Surveillance and Performance Evaluation Budget for FY 2021-22.**

		Rate:	\$235.00	\$220.00	\$157.00	\$127.00	\$105.00			
Task No.	Task Description	Yadon Principal Engineer	Kline Sr Tech Lead	Project Engineer	Support CAD	Support Admin	Subtotal Manhours	Expenses	Task Cost Estimate	
1	Annual Inspection	0	10	0	0	0	10	\$200	\$2,400	
2	Piezometer / Drain Data Review	0	40	0	0	0	40	\$0	\$8,800	
3	Survey Data Review	0	16	0	0	0	16	\$0	\$3,520	
4	Instrumentation Data Plots	0	32	16	0	0	48	\$0	\$9,552	
5	Reporting	4	56	16	16	10	102	\$500	\$19,354	
6	Meetings	0	12	0	0	0	12	\$100	\$2,740	
7	On-Call Response	0	20	0	0	4	24	\$200	\$5,020	
8	Earthquake Event Data Review	0	24	0	0	0	24	\$0	\$5,280	
<b>Total:</b>		<b>4</b>	<b>210</b>	<b>32</b>	<b>16</b>	<b>14</b>	<b>276</b>	<b>\$1,000</b>	<b>\$56,666</b>	

**AMENDMENT NO. 2  
TO AGREEMENT BY AND BETWEEN  
MONTEREY COUNTY WATER RESOURCES AGENCY &  
AECOM TECHNICAL SERVICES, INC.**

**THIS AMENDMENT NO. 2** is made to the PROFESSIONAL SERVICES AGREEMENT for the provision of a time extension by and between **AECOM Technical Services, Inc.** hereinafter “CONTRACTOR”, and the Monterey County Water Resources Agency, a political subdivision of the State of California, hereinafter referred to as “Agency”.

**WHEREAS**, the Agency and CONTRACTOR wish to amend the AGREEMENT to reflect the Agency’s exercise of the option to extend the term of the agreement for three (3) years.

**NOW THEREFORE**, the Agency and CONTRACTOR hereby agree to amend the AGREEMENT in the following manner:

1. Section 2, Term of Agreement. The term of this agreement shall begin on June 1, 2020, by CONTRACTOR and Agency, and will terminate on June 30, 2025, unless earlier terminated as provided herein.
2. Except as provided herein, all remaining terms, conditions and provisions of the AGREEMENT are unchanged and unaffected by this AMENDMENT NO. 2 and shall continue in full force and effect as set forth in the AGREEMENT.
3. A copy of this AMENDMENT NO. 2 shall be attached to the original AGREEMENT dated June 1, 2020.

*This space left blank intentionally*

**IN WITNESS WHEREOF**, the parties have executed this AMENDMENT NO. 2 on the day and year written below.

MONTEREY COUNTY WATER  
RESOURCES AGENCY

  
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Brent Buche, General Manager

Dated: 6/29/2022 | 8:33 AM PDT

*Approved as to Fiscal Provisions:*

  
4E7E657875454AE...

Deputy Auditor/Controller

Dated: 6/22/2022 | 11:38 AM PDT

*Approved as to Liability Provisions:*

Risk Management

Dated:

*Approved as to Form:*

  
22D690CA05A940B...

Assistant County Counsel

Dated: 6/22/2022 | 9:16 AM PDT

CONTRACTOR

By: 

Signature of Chair, President, or  
Vice-President

Theodore Feldsher, Vice President

Printed Name and Title

Dated: April 23, 2022

By: 

(Signature of Secretary, Asst. Secretary, CFO,  
Treasurer or Asst. Treasurer)\*

Associate Vice President

Printed Name and Title

Dated: April 25, 2022

\*INSTRUCTIONS: If CONTRACTOR is a corporation, including limited liability and non-profit corporations, the full legal name of the corporation shall be set forth above together with the signatures of two specified officers. If CONTRACTOR is a partnership, the name of the partnership shall be set forth above together with the signature of a partner who has 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 the business, if any, and shall personally sign the Agreement.

**AMENDMENT No. 3**  
**to**  
**Agreement for Professional Services**  
**between**  
**Monterey County Water Resources Agency and AECOM Technical Services, Inc.**

The undersigned parties hereby agree to amend that certain Agreement for Professional Services between the Monterey County Water Resources Agency (hereinafter "Agency") and AECOM Technical Services, Inc., (hereinafter "CONTRACTOR") executed and effective on June 8, 2020 (hereinafter "Agreement").

Section 1 of the Agreement is hereby amended to read as follows:

1. Employment of CONTRACTOR. Agency hereby engages CONTRACTOR and CONTRACTOR hereby agrees to perform the services set forth in Exhibits A, B, C, D, E and F in conformity with the terms of this Agreement.
  - (a) The work to be performed is generally described as follows:  
*Engineering services for Nacimiento Dam and San Antonio Dam including seismic stability evaluation and dam surveillance and performance evaluation.*
  - (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.

Section 32 of the Agreement is hereby amended to read as follows:

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

- Exhibit A** - Nacimiento Dam Seismic Stability Evaluation  
Scope of Work and Work Schedule (Original Agreement)
- Exhibit B** - San Antonio Dam Surveillance and Performance Evaluation for 2020  
Scope of Work and Work Schedule (Original Agreement)
- Exhibit C** - Payment Provisions (Original Agreement)
- Exhibit D** - San Antonio Dam Surveillance and Performance Evaluation for 2021  
Scope of Work and Work Schedule (Amendment No. 1)
- Exhibit E** - Payment Provisions (Amendment No. 1)
- Exhibit F** - Payment Provisions (Amendment No. 3)

All other provisions of the Agreement remain in full force and effect.

**IN WITNESS WHEREOF**, Agency and CONTRACTOR have caused this Amendment No. 1 to be executed as follows:

**MONTEREY COUNTY  
WATER RESOURCES AGENCY**

DocuSigned by:  
  
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 \_\_\_\_\_  
 Brent Buche, General Manager

DATED: 11/3/2022 | 3:31 PM PDT

**AECOM TECHNICAL SERVICES, INC.**

By Theodore Feldsher  
 \_\_\_\_\_  
 (signature)

Theodore Feldsher, Vice President  
 \_\_\_\_\_  
 (print name and title)\*

DATED: September 30, 2022

By Gregory Glunz  
 \_\_\_\_\_  
 (signature)

Gregory Glunz, Associate Vice President  
 \_\_\_\_\_  
 (print name and title)\*

DATED: September 30, 2022

\* 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.

**AECOM Technical Services, Inc.  
Amendment No. 3**

\* \* \* \* \*

Approved as to form:

DocuSigned by:

*Kelly L. Doulon*

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Assistant County Counsel

DATED: 10/12/2022 | 2:32 PM PDT

Approved as to fiscal provisions:

DocuSigned by:

*Juan Pablo Lopez*

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CAO Analyst

DATED: 10/24/2022 | 10:59 AM PDT

DocuSigned by:

*Burcu Mousa*

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Auditor-Controller

DATED: 10/14/2022 | 9:06 AM PDT

**EXHIBIT F****PAYMENT PROVISIONS**

The Scopes of Work defined in Exhibits B and D are completed.

**PAYMENT:**

For the Scope of Work defined in Exhibit A, Agency shall pay Contractor on a time and expense basis an amount not to exceed \$883,000. Payable costs shall be the sum of direct labor costs, other direct costs and sub-consultant mark-up as defined below. If Contractor time and expense cost necessary to complete the Scope of Work defined in Exhibit A are less than \$883,000 the Agency enjoys the savings. If Contractor requires time and expense to complete the Scope of Work defined in Exhibit A over and above \$883,000 the maximum amount payable to Contractor remains \$883,000. Original budget is shown in Table 1 of Exhibit C.

**Direct Labor Costs:** Are the hourly billing rate, per the Direct Labor Rate Schedule herein, times the number of hours worked by the personnel.

**Other Direct Costs:** Other Direct Costs are identifiable costs necessarily incurred to complete the Scope of Work. Such costs include, but are not limited to, travel and subsistence expenses, document reproduction costs, postal, and materials costs. Expenses shall be accounted for in each invoice by submittal of receipts for such costs and a description of their necessity. Monterey County Travel Policy requires overnight lodging, meals, and incidentals be billed at U.S. General Services Administration (GSA) rates, no mark-up; mileage is billable at IRS allowable rate at time of travel, no mark-up. Non-Travel Policy costs may be marked-up 10%.

**Sub-Contractor Mark-up** is the percentage multiplier designated for each sub-Contractor times the sum of sub-Contractor direct labor and other direct charges. All sub-Contractor mark-up multipliers shall not exceed 1.10 (10% mark-up).

**DIRECT LABOR RATE SCHEDULE:**

The Direct Labor Rate Schedule herein replaces the Direct Labor Rate Schedule in Exhibit E beginning September 1, 2022. The hourly billing rate schedule and other direct costs chargeable to the work may be modified as agreed by Agency and Contractor after a 12-month period. Any agreed labor rate increase shall not exceed the 12-month San Francisco Bay Area CPI for the prior February. The parties shall agree to such modifications in writing as an Amendment to the Agreement.

<b>AECOM Labor Rate Schedule</b>	<b>Rate/Hour</b>
Principal Engineer .....	\$272
Senior Technical Lead .....	\$236
Project Manager .....	\$219
Senior Engineer/Geologist.....	\$194
Project Engineer/Geologist.....	\$162
Senior Staff Engineer/Geologist.....	\$146
Staff Engineer .....	\$131
Support GIS .....	\$151
Support CAD.....	\$131
Support Administrative .....	\$108

**INVOICES:**

Invoices may be submitted monthly. Invoices shall include the direct labor costs by individual and task, showing the individual's hours charged, hourly rate and total amount charged to each task. Other direct charges shall be added to the sum of the direct labor costs by task. Other direct charges shall be accounted for in each invoice by submittal of receipts for such costs and description of their necessity. Percent of task completion shall be included on each invoice.

**NOTIFICATION:**

When, during performance of the work, Contractor incurs 75 percent of the total task cost allotted to a task, Contractor shall so notify the Agency to that effect. If Consultant has reason to believe that the costs which it expects to incur to finish the task, when added to the costs previously incurred, will exceed the total task cost, Contractor shall so notify the Agency to that effect. The notice shall state: (1) the estimated amount of additional funds required to complete the task; (2) justification for the need for additional funds; and (3) the estimated date Contractor expects its total costs incurred to meet the total task cost.

**AMENDMENT No. 4  
TO  
AGREEMENT FOR PROFESSIONAL SERVICES  
BETWEEN  
MONTEREY COUNTY WATER RESOURCES AGENCY  
AND  
AECOM TECHNICAL SERVICES, INC.**

**THIS AMENDMENT No. 4** to the Agreement for Professional Services between the Monterey County Water Resources Agency, a political subdivision of the State of California, (hereinafter, “Agency”), and AECOM Technical Services, Inc., (hereinafter, “CONTRACTOR”) is hereby entered into between the Agency and the CONTRACTOR (collectively, the Agency and CONTRACTOR are referred to as the “Parties”).

**WHEREAS**, on June 8, 2020, the Parties entered into an Agreement for Professional Services (hereinafter, “Agreement”) with a term of June 1, 2020, through June 30, 2022, for a total contract amount of \$938,350.

**WHEREAS**, on August 2, 2021, the Parties entered into Amendment No. 1 to the Agreement, thereby amending the Agreement by adding \$56,666 for a total contract amount of \$995,016.

**WHEREAS**, on June 29, 2022, the Parties entered into Amendment No. 2 to the Agreement, thereby extending the term of the Agreement to June 30, 2025.

**WHEREAS**, on November 3, 2022, the Parties entered into Amendment No. 3 to the Agreement, thereby updating the payment provisions.

**WHEREAS**, the Parties wish to amend the Agreement by increasing the hourly labor rates for services identified in the Agreement.

**NOW THEREFORE**, the Parties agree to amend the Agreement as follows:

1. Amend Exhibit F “Payment Provisions” as follows:

Subject to the limitations set forth herein, Agency shall pay CONTRACTOR in accordance with the Direct Labor Rate Schedule set forth in Exhibit G.

2. Except as provided herein, all remaining terms, conditions and provisions of the Agreement shall remain in full force and effect.
3. This Amendment No. 4 shall be attached to the Agreement and incorporated therein as if fully set forth in the Agreement.

*This space left blank intentionally.*

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Amendment No. 4 – AECOM Technical Services, Inc.

**IN WITNESS WHEREOF**, the Parties hereto have executed this Amendment No. 4 to the Agreement as of the day and year written below:

**MONTEREY COUNTY WATER RESOURCES AGENCY**

DocuSigned by:  
*Ara Azhderian*  
By: 1F182FFB49A2435...  
Ara Azhderian, General Manager  
Date: 9/14/2023 | 12:34 PM PDT

**Approved as to Form and Legality  
Office of the County Counsel**

DocuSigned by:  
*Kelly L. Donlon*  
By: 22D690CA05A940B...  
Assistant County Counsel  
Date: 9/13/2023 | 9:23 AM PDT

DocuSigned by:  
*Ezequiel Vega Rios*  
By: 7D289913E628402...  
Administrative Office  
Date: 9/14/2023 | 9:33 AM PDT

**Approved as to Fiscal Provisions**

DocuSigned by:  
*Patricia Ruiz*  
By: E79EF64E67454F6...  
Auditor-Controller  
Date: 9/14/2023 | 8:52 AM PDT

**Approved as to Indemnity, Insurance Provisions**

By: \_\_\_\_\_  
Risk Management  
Date: \_\_\_\_\_

**CONTRACTOR**

AECOM Technical Services, Inc.

\*Contractor Legal Business Name (Print)

By: *Theodore Feldsher*  
\*(Signature of authorized company officer)

Theodore Feldsher, Vice President  
(Print Name and Title)

Date: September 11, 2023

By: *Attalla, Mourad*  
\*(Signature of authorized company officer)

Mourad Attalla, Vice President  
(Print Name and Title)

Date: September 12, 2023

\*INSTRUCTIONS: IF CONTRACTOR is a corporation, including limited liability and non-profit corporations, the full legal name of the corporation shall be set forth above together with the signatures of two specified officers. If CONTRACTOR is a partnership, the name of the partnership shall be set forth above together with the signature of a partner who has 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 the business, if any, and shall personally sign the Agreement.

## EXHIBIT G

### PAYMENT PROVISIONS

CONTRACTOR shall be compensated for the work as set forth in the Scope of Work and for other services as directed by the Agency on a Time and Materials basis in accordance with the following hourly labor rates:

#### DIRECT LABOR RATE SCHEDULE:

The Direct Labor Rate Schedule (Table 1) herein is effective beginning September 5, 2023. The labor hourly billing rate schedule and other direct costs chargeable to the work may be modified as agreed by Agency and Contractor after a 12-month period. Any agreed labor rate increase shall not exceed the 12-month San Francisco Bay Area CPI for the prior February. The parties shall agree to such modifications in writing as an Amendment to the Agreement.

Table 1. Direct Labor Rate Schedule

AECOM Labor Category	Rate/Hour
Principal Engineer.....	\$280
Senior Technical Lead .....	\$243
Project Manager .....	\$226
Senior Engineer/Geologist.....	\$200
Project Engineer/Geologist .....	\$167
Senior Staff Engineer/Geologist .....	\$150
Staff Engineer/Geologist.....	\$135
Support GIS .....	\$156
Support CAD .....	\$135
Support Administrative.....	\$111

**AMENDMENT NO. 5 TO  
AGREEMENT FOR SERVICES  
BETWEEN MONTEREY COUNTY WATER RESOURCES AGENCY AND  
AECOM TECHNICAL SERVICES, INC.**

**THIS AMENDMENT NO. 5** to the Agreement for Services between the Monterey County Water Resources Agency, a political subdivision of the State of California (hereinafter, “Agency”) and AECOM Technical Services, Inc (hereinafter, “CONTRACTOR”) is hereby entered into between the Agency and the CONTRACTOR (collectively, the Agency and CONTRACTOR are referred to as the “Parties”).

**WHEREAS**, CONTRACTOR entered into an Agreement for Services with the Agency on June 1, 2020 (hereinafter, “Agreement”);

**WHEREAS**, on August 2, 2021, the Parties entered into Amendment No. 1 to the Agreement, thereby amending the Agreement by adding \$56,666 for a total contract amount of \$995,016.

**WHEREAS**, on June 29, 2022, the Parties entered into Amendment No. 2 to the Agreement, thereby extending the term of the Agreement to June 30, 2025.

**WHEREAS**, on November 3, 2022, the Parties entered into Amendment No. 3 to the Agreement, thereby updating the payment provisions.

**WHEREAS**, on September 14, 2023, the Parties entered into Amendment No. 4 to the Agreement, thereby updating the payment provisions.

**WHEREAS**, the Parties wish to amend the Agreement with a dollar amount increase of \$230,000.00, not to exceed \$1,225,016.00, to continue providing services identified in the Agreement.

**NOW, THEREFORE**, the Parties agree to amend the Agreement as follows:

1. Amend Section 3, “Payments to CONTRACTOR; maximum liability”, to read as follows:

Subject to the limitations set forth herein, Agency shall pay CONTRACTOR in accordance with the fee schedule set forth in Exhibit G. The maximum amount payable to the contractor under this contract is One Million Two Hundred Twenty-five Thousand Four Hundred Twelve dollars (\$1,225,016.00)

Original Agreement	\$938,350
Amendment No. 1	\$ 56,666
<u>Amendment No. 5</u>	<u>\$230,000</u>
Not to exceed total:	\$1,225,016

Amendment No. 5 AECOM Technical Services, Inc.

- 3. All other terms and conditions of the Agreement remain unchanged and in full force.
- 4. This Amendment No. 5 shall be attached to the Agreement and incorporated therein as if fully set forth in the Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment No. 5 to the Agreement as of the day and year written below:

**MONTEREY COUNTY WATER RESOURCES AGENCY**

DocuSigned by:  
 Ara Azhderian  
 By: Ara Azhderian  
1F182FFB49A2436...  
 Ara Azhderian, General Manager  
 Date: 12/19/2023 | 10:10 AM PST

**CONTRACTOR:  
AECOM TECHNICAL SERVICES, INC.**

Theodore Feldsher  
 By: Theodore Feldsher  
(Signature of Chair, President or Vice President)  
 Title: Theodore Feldsher, Vice President  
(Print Name and Title)

Date: December 11, 2023

**Approved as to Form and Legality  
Office of the County Counsel**

DocuSigned by:  
 Kelly L. Donlon  
 By: Kelly L. Donlon  
22D690CA05A9408...  
 Assistant County Counsel  
 Date: 12/15/2023 | 10:18 AM PST

Attalla, Mourad  
 By: Attalla, Mourad  
(Signature of Secretary, Asst. Secretary, CFO,  
Treasurer or Asst. Treasurer)

Title: Mourad Attalla, Vice President  
(Print Name and Title)

Date: December 12, 2023

**Approved as to Fiscal Provisions**

DocuSigned by:  
 Jennifer Forsyth  
 By: Jennifer Forsyth  
4E7E66727445AAE...  
 Auditor-Controller  
 Date: 12/18/2023 | 9:13 AM PST

DocuSigned by:  
 Ezequiel Vega Rios  
 By: Ezequiel Vega Rios  
7D289913E628402...  
 Administrative Analyst  
 Date: 12/18/2023 | 10:14 AM PST

**Approved as to Indemnity, Insurance Provisions**

By: \_\_\_\_\_  
 Risk Management  
 Date: \_\_\_\_\_

\*INSTRUCTIONS: IF CONTRACTOR is a corporation, including limited liability and non-profit corporations, the full legal name of the corporation shall be set forth above together with the signatures of two specified officers. If CONTRACTOR is a partnership, the name of the partnership shall be set forth above together with the signature of a partner who has 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 the business, if any, and shall personally sign the Agreement.

Amendment No. 5 AECOM Technical Services, Inc.

**AMENDMENT NO. 6 TO  
AGREEMENT FOR SERVICES  
BETWEEN MONTEREY COUNTY WATER RESOURCES AGENCY AND  
AECOM TECHNICAL SERVICES, INC.**

**THIS AMENDMENT NO. 6** to the Agreement for Services between the Monterey County Water Resources Agency, a political subdivision of the State of California (hereinafter, “Agency”) and AECOM Technical Services, Inc (hereinafter, “CONTRACTOR”) is hereby entered into between the Agency and the CONTRACTOR (collectively, the Agency and CONTRACTOR are referred to as the “Parties”).

**WHEREAS**, CONTRACTOR entered into an Agreement for Services with the Agency on June 1, 2020 (hereinafter, “Agreement”);

**WHEREAS**, on August 2, 2021, the Parties entered into Amendment No. 1 to the Agreement, thereby amending the Agreement by adding \$56,666 for a total contract amount of \$995,016.

**WHEREAS**, on June 29, 2022, the Parties entered into Amendment No. 2 to the Agreement, thereby extending the term of the Agreement to June 30, 2025.

**WHEREAS**, on November 3, 2022, the Parties entered into Amendment No. 3 to the Agreement, thereby updating the payment provisions.

**WHEREAS**, on September 14, 2023, the Parties entered into Amendment No. 4 to the Agreement, thereby updating the payment provisions.

**WHEREAS**, the Parties wish to amend the Agreement with a dollar amount increase of \$420,673.00, not to exceed \$1,645,689.00, to continue providing services identified in the Agreement.

**NOW, THEREFORE**, the Parties agree to amend the Agreement as follows:

1. Amend Section 1, Agency hereby engages CONTRACTOR and CONTRACTOR hereby agrees to perform the services set forth in Exhibits A, B, D and H in conformity with the terms of this Agreement.
2. Amend Section 3, “Payments to CONTRACTOR; maximum liability”, to read as follows:

Subject to the limitations set forth herein, Agency shall pay CONTRACTOR in accordance with the fee schedule set forth in Exhibit I. The maximum amount payable to the contractor under this contract is One Million Six Hundred Forty-five Thousand Six Hundred Eighty-nine dollars (\$1,645,689.00)

Amendment No. 6 AECOM Technical Services, Inc.

Original Agreement \$938,350  
Amendment No. 1 \$ 56,666  
Amendment No. 5 \$230,000  
Amendment No. 6 \$420,673  
Not to exceed total: \$1,645,689

- 3. All other terms and conditions of the Agreement remain unchanged and in full force.
- 4. This Amendment No. <sup>6, NEF</sup> shall be attached to the Agreement and incorporated therein as if fully set forth in the Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment No. <sup>6, NEF</sup> 5 to the Agreement as of the day and year written below:

**MONTEREY COUNTY WATER RESOURCES AGENCY**

DocuSigned by:  
*Ara Azhderian*  
By: 4F192FFB49A2435...  
Ara Azhderian, General Manager  
12/19/2023 | 10:10 AM PST  
Date: \_\_\_\_\_

**CONTRACTOR:  
AECOM TECHNICAL SERVICES, INC.**

By: *Theodore Feldsher*  
(Signature of Chair, President or Vice President)

Title: Theodore Feldsher, Vice President  
  
(Print Name and Title)

Date: December 11, 2023

By: *Attalla, Mounad*  
(Signature of Secretary, Asst. Secretary, CFO, Treasurer or Asst. Treasurer)

Title: Mourad Attalla, Vice President  
(Print Name and Title)

Date: December 12, 2023

**Approved as to Form and Legality  
Office of the County Counsel**

DocuSigned by:  
*Kelly L. Doulon*  
By: 22D690CA05A920B...  
Assistant County Counsel  
12/15/2023 | 10:18 AM PST  
Date: \_\_\_\_\_

Amendment No. 6 AECOM Technical Services, Inc.

**Approved as to Fiscal Provisions**

By: DocuSigned by:  
Jennifer Forsyth  
4E7E657875444A5  
Auditor-Controller

Date: 12/18/2023 | 9:13 AM PST

By: DocuSigned by:  
Ezequiel Vega Rios  
7D289913F628402  
Administrative Analyst

Date: 12/18/2023 | 10:14 AM PST

**Approved as to Indemnity, Insurance Provisions**

By: \_\_\_\_\_  
Risk Management

Date: \_\_\_\_\_

\

\*INSTRUCTIONS: IF CONTRACTOR is a corporation, including limited liability and non-profit corporations, the full legal name of the corporation shall be set forth above together with the signatures of two specified officers. If CONTRACTOR is a partnership, the name of the partnership shall be set forth above together with the signature of a partner who has 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 the business, if any, and shall personally sign the Agreement.

# Exhibit H

## SCOPE OF WORK

### Nacimientto Dam Spillway Plunge Pool Rock Outcrop Removal

#### **TASK 1 - PROJECT MANAGEMENT AND COORDINATION**

This task includes overall project management and coordination services for the project including subconsultant coordination and management. Project participants will be kept informed of progress, technical issues, and planned activities and events. Project team meetings and workshops will be used to maintain open lines of communication and clear expectations throughout the duration of the project. A project kickoff meeting will be conducted to review the project intent, scope, approach, tasks, milestones, schedule of work, roles, and communication and coordination processes. Bi-weekly progress meetings will be conducted for the duration of the project along with other informal meetings as necessary.

#### *Task 1 Assumptions*

- The budget for this task is an allowance based on a typical level of project management effort for the estimated project duration.

#### *Task 1 Deliverables*

- Kickoff and Progress Meeting minutes and agendas
- Monthly progress reports and invoices
- Other items as necessary

#### **TASK 2 - EXISTING DATA REVIEW**

This task involves a review of the available information on the Nacimientto Dam Spillway plunge pool and rock outcrop and will include identification of any additional data needed to support the proposed work. The review will cover previous design documents, construction drawings, survey, hydraulic evaluations, and prior studies relevant to the plunge pool. The results of the data review will be documented in a section of the design report under Task 6.

The project documents anticipated for review include the following:

- Site topography
- LIDAR and survey including the 2019 Bathymetry Survey
- Previous relevant geotechnical and geologic investigation reports
- Design reports including the 2022 erosion protection alternatives analysis
- Construction plans, specifications, reports
- Historic photos
- FERC and DSOD reports and records

#### *Task 2 Assumptions*

- Available background data will be provided by MCWRA

***Task 2 Deliverables***

- None (writeup to be included under Task 6)

**TASK 3 - TOPOGRAPHIC AND BATHYMETRIC SURVEY**

Accurate topographic and bathymetric geometry of the ground surface in and around the plunge pool will be necessary in order to support the hydraulic modeling and design of the rock outcrop removal. Topographic and bathymetric surveys were previously carried out in 2019, however since that time rock riprap was placed in portions of the plunge pool and spill events have occurred which may have affected the pool bathymetry. This task therefore includes new surveys to map the basin bathymetry and topography around the basin edge to develop an updated map of existing conditions.

This scope assumes a 1-day ground survey of the above-water perimeter of the plunge pool, including the rock outcrop area, using GPS methods. The bathymetry of the plunge pool will be surveyed using single beam sonar from a small remotely piloted watercraft, similar to the survey carried out in 2019. The results of the surveys will be combined into a single updated topo- bathymetry base map for the plunge pool which will be incorporated into the hydraulic modeling and analysis under Task 5. The topo and bathymetry surveys will be carried out by subconsultant personnel under the supervision of AECOM staff.

***Task 3 Assumptions***

- Access will be provided by MCWRA
- Existing topographic and bathymetric data will be available for review and updating
- The degree of change since the prior survey is unknown so the budget for this task is an allowance

***Task 3 Deliverables***

- Updated topo-bathymetry base map for use in the design under Task 5.

**TASK 4 - GEOTECHNICAL FIELD INVESTIGATIONS AND LABORATORY TESTING****Task 4.1 - Geotechnical Work Plan**

A geotechnical investigation work plan will be developed as part of this task, assuming that FERC requirements for a Drilling Program Plan (DPP) will need to be met for the rock outcrop investigations. The DPP will be submitted for review and approval by MCWRA, DSOD, and FERC before the geotechnical investigations are carried out. The geotechnical work plan will describe the proposed investigation plans and procedures for the rock outcrop

borings. The scope of work for this task includes addressing up to two rounds of review comments from MCWRA, DSOD and FERC and incorporating the comments into a revised, final work plan. The revised work plan will be used to confirm the scope and budget for the drilling work and to guide the field activities.

#### Task 4.2 - Health and Safety Plan

A Health and Safety Plan (HASP) will be developed to describe required procedures for safe completion of the various field tasks included in the geotechnical investigation. The HASP will include descriptions of appropriate procedures and hazard mitigation measures relevant to each task. The HASP will provide contact information for AECOM site personnel as well as the Project Manager, Project Geotechnical Engineer, and Project Engineering Geologist. Directions to the nearest hospital and an associated map will also be included. The driller's own safety plan documents will be included as an appendix as appropriate.

#### Task 4.3 - Geophysical Surveys

Geophysical surveys will be carried out to quantify the characteristics of the rock outcrop. The proposed surveys include downhole sonic velocity logging in each borehole along with surface P- wave refraction survey profiles at selected cross sections of the outcrop. The downhole logging will be carried out for P-wave velocities to the full depth in 3 boreholes. The P-wave surface refraction survey will be carried out along two lines crossing the outcrop, assumed to be 80 feet and 250 feet in length respectively. The seismic refraction data will be processed using seismic tomography techniques and/or the generalized reciprocal method (GRM).

The fieldwork schedule for the geophysical surveys will be coordinated with the schedule for the exploratory drilling. Approximately one week is estimated to complete the geophysical field investigation activities, including the downhole surveys and surface refraction surveys. The tentative proposed locations for the refraction survey lines are indicated by the blue lines in the attached Figure 1, Preliminary Rock Outcrop Investigation Locations.

#### Task 4.4 - Drill and Sample Borings

Three core boreholes will be drilled in the rock outcrop to depths of approximately 30 feet using an appropriate drill rig (potentially track mounted, but the final decision will be dependent on access conditions). Drill cuttings and fluids will be collected and drummed for offsite disposal. Appropriate and effective spill prevention measures will be implemented to prevent drill fluids, cuttings, or other contaminants from entering the plunge pool or streambed. The drilling process will be observed and supervised by a qualified engineering geologist or geotechnical engineer. The recovered rock core samples will be carefully logged, described, and photographed before placing them in protective wooden core boxes for storage and transportation. The logs will document the rock type, degree of weathering and strength, presence of joints and other discontinuities, and other relevant information to help characterize the outcrop rock mass properties. Following drilling, downhole geophysical surveys will be conducted in each boring as described above to measure seismic wave

velocities. The borings will then be fully backfilled with neat cement bentonite grout, consistent with typical County drilling permit requirements. The tentative locations of the proposed borings are indicated in the attached Figure 1, Preliminary Rock Outcrop Investigation Locations.

#### Task 4.5 - Field and Laboratory Testing

Field tests such as point load testing of rock core samples will be carried out on site. A geotechnical laboratory testing program will also be carried out to provide index properties and engineering characteristics of the core samples. The testing program will be refined and finalized during field exploration activities, after the samples have been obtained and inspected in the laboratory. Reviewed field logs will support the basis for laboratory testing assignments.

The anticipated types of laboratory tests include but are not limited to the following:

- Index properties tests (rock unit weight, hardness, abrasiveness, etc.)
- Unconfined compressive strength of the rock

All testing will be performed at a qualified geotechnical testing laboratory. Test results will be included in the Geotechnical Design Memorandum under Task 4.6

#### Task 4.6 - Geotechnical Design Memorandum

A Geotechnical Design Memorandum will be prepared under this task. The memo will compile the results of the field investigation tasks, including survey results, boring logs, exploration data, as well as the laboratory testing results. The memo will also include a site map showing the geophysical survey and boring locations as well as the exploration findings on the rock outcrop. The memo will also present interpretations of the subsurface conditions and recommend material properties for use in the outcrop removal design.

#### *Task 4 Deliverables:*

- Draft Geotechnical Design Memorandum -- one (1) digital copy (pdf).
- Responses to comments on Draft Memorandum
- The Final Memorandum will be included as Appendix to the Design Report under Task 6.

#### *Task 4 Assumptions*

- The rock outcrop is accessible via land for the investigations
- Overwater access for investigations (i.e. by barge) is not included
- County drilling permits, if necessary, will be obtained by MCWRA
- DSOD permit fees, if any, will be covered by MCWRA

#### TASK 5 - HYDRAULIC ANALYSIS

As part of the previous plunge pool analysis, 1-D hydraulic modeling in HEC-RAS and 3-D

Computational Fluid Dynamics (CFD) modeling in FLOW-3D were carried out (AECOM, 2022). The hydraulics of the spillway plunge pool and the causes of the observed scour and erosion were assessed. As described in the report, the plunge pool has complicated hydraulics due to the large rock outcrop located at the southeast end. The outcrop appears to divert flows to the northwest (left bank when looking downstream) and may also obstruct flows during large spill events. This may be causing an increase in the size of the flow eddies forming along the sides of the pool, which have resulted in significant erosion of both the left and right banks. The analyses to date also suggest that the erosion patterns may change when the rock outcrop is submerged at higher flows of around 20,000 cfs. The previous hydraulic modeling also assessed several erosion mitigation strategies for the plunge pool, each of which included removal of the existing rock outcrop.

The scope of work under Task 5 includes performing additional hydraulic analysis to assess and define the extent of the rock outcrop removal and the potential shaping of the plunge pool needed to improve the hydraulic performance, in combination with potential future measures to reduce the potential for further erosion. The proposed analysis includes the following:

- Perform a preliminary assessment of the plunge pool shape using simplified methods to serve as input to the CFD modeling. Carry out energy dissipation calculations based on the pool dimensions, flow rates, and velocity parameters to help establish the expected plunge pool geometry for the conditions.
- Update the previously developed hydraulic models to reflect the latest existing topographic and bathymetric conditions from the survey carried out under Task 3.
- Update the previously developed one-dimensional HEC-RAS model (which includes the plunge pool, road crossing, and a portion of the river downstream of the road crossing) to incorporate the latest topographic and bathymetric data developed under Task 3. Use the model output from the model to develop an updated rating curve at the road crossing as the downstream boundary condition for the CFD model.
- Perform iterative CFD modeling to evaluate and optimize the design for the final shape of the rock outcrop removal. The aim will be to minimize scour potential elsewhere in the plunge pool and to be compatible with the previously proposed erosion protection alternatives. Analyze the rock outcrop shape and removal extent under multiple flow conditions and use the results as input to the rock removal design package developed under Task 6.
- Selected flow cases will be modeled for both the updated existing conditions and the post-rock-removal scenario. These include the following:
  1. The maximum observed spillway discharge (since the latest spillway modifications) of approximately 8,000 cfs. This flow was observed in both 2011 and 2017.
  2. Higher spillway discharge flow rates, where the rock outcrop removal may have an effect, up to the maximum discharge in a PMF event (approximately 100,000 cfs).

- The CFD model of the plunge pool will provide estimated velocity, shear stress, and stream power at the bottom and sides of the pool that will then be used to evaluate scour potential. The extent of the proposed CFD modeling will be based on the previously developed model, starting from upstream of the spillway (reservoir) and ending at an appropriate distance downstream of the plunge pool. The downstream boundary of the CFD model will be established by the tailwater elevation calculated by the HEC-RAS model as noted above.

#### *Task 5 Deliverables*

- HEC-RAS and CFD modeling descriptions and results, to be included as a section of the Design Report prepared under Task 6.

#### *Task 5 Assumptions*

- Selected modeling flow cases will be run as described above. Flow cases not significantly affected by the outcrop removal may be removed from further consideration.

### TASK 6 - DESIGN PACKAGE PREPARATION

A design package for the rock outcrop removal will be developed including the following components:

- Design Report: Detailing the hydraulic analysis, proposed final rock outcrop removal geometry and overall plunge pool shape, as well as the recommended rock outcrop removal procedure based on the Geotechnical Design Memorandum (included as an Appendix). Methods such as blasting, chipping or ripping will be evaluated based on the geotechnical investigation results for the rock outcrop. Recommendations for construction staging and rock disposal will be made. Potential impacts to water quality and the surrounding environment will be identified and measures to minimize impacts will be recommended.
- Design Drawings: The rock outcrop removal design is expected to include up to six sheets of drawings, including an overall location map and site plan, a rock outcrop removal grading plan, sections and details, and a site restoration plan and details. The drawings will be prepared in AutoCAD following generally accepted drafting standards.
- Technical Specifications: in Construction Specifications Institute (CSI) format including:
  - Site access and staging areas
  - Environmental and water quality protection requirements

Amendment No. 6 AECOM Technical Services, Inc.

- Rock outcrop removal (blasting or ripping)
  - Excavated materials handling and disposal
  - Measurement and payment provisions
  - Other technical specifications as needed
- Engineer's construction cost estimate for the rock outcrop removal (AACE Class 3).

Draft deliverables will be provided electronically for review and comment by MCWRA, DSOD and FERC. Comments will be addressed and incorporated into a revised set of deliverables for review and acceptance. Final deliverables including PE stamped drawings will be provided in hard copy as well as electronic format.

### *Task 6 Deliverables*

- Draft and Final Design Report in electronic format and hard copy
- Draft and Final Design drawings in electronic format and hard copy
- Technical specifications in pdf format and hard copy

### *Task 6 Assumptions*

- MCWRA will provide standard bid and contracting specifications and will assemble the overall contract bid package

## SCHEDULE

The estimated duration of the project is 6 months, including review periods. However, the review durations for DSOD and FERC are difficult to estimate and could result in a longer overall duration of work. Following Notice to Proceed (NTP), the project task milestones are estimated as follows:

<b>Project Milestone</b>	<b>Estimated Time to Completion</b>
<b>Task 2</b> – Existing Data Review	2 weeks after NTP
<b>Task 3</b> – Topographic and Bathymetric Surveys	4 weeks after NTP
<b>Task 4</b> – Geotechnical Field Investigations	10 weeks after NTP
<b>Task 5</b> - Hydraulic Analysis and Design	8 weeks after <b>Task 3</b> completion
<b>Task 6</b> - Draft Design Package	8 weeks after <b>Tasks 4</b> and <b>5</b> completion
<b>Task 6</b> - Final Design Package	4 weeks after receipt of comments

## **EXHIBIT I**

### **Fee Schedule**

CONTRACTOR shall be compensated for the work as set forth in the Scope of Work and for other services as directed by the Agency on a Time and Materials basis in accordance with the following hourly labor rates:

#### DIRECT LABOR RATE SCHEDULE:

The Direct Labor Rate Schedule (Table 1) herein is effective beginning September 5, 2023. The labor hourly billing rate schedule and other direct costs chargeable to the work may be modified as agreed by Agency and Contractor after a 12-month period. Any agreed labor rate increase shall not exceed the 12-month San Francisco Bay Area CPI for the prior February. The parties shall agree to such modifications in writing as an Amendment to the Agreement.

Table 1. Direct Labor Rate Schedule

<u>AECOM Labor Category</u>	<u>Rate/Hour</u>
Principal Engineer .....	\$280
Senior Technical Lead .....	\$243
Project Manager .....	\$226
Senior Engineer/Geologist .....	\$200
Project Engineer/Geologist .....	\$167
Senior Staff Engineer/Geologist .....	\$150
Staff Engineer/Geologist .....	\$135
Support GIS .....	\$156
Support CAD .....	\$135
Support Administrative .....	\$111

# Exhibit I

**MCWRA Nacimiento Dam  
Plunge Pool Rock Outcrop Removal Design**

**TABLE 1 - BUDGET ESTIMATE**

Role:	Senior Reviewer/PIC	Project Manager	Senior Geotech Lead	Project Geotech Engineer	Senior Geology Lead	Project Engineering Geologist	Senior Hydraulics Lead	Project Hydraulic Engineer	Senior Civil Design Lead	Project Civil Engineer	Staff Engineer	GIS	CAD	Admin	Senior Enviro Planner	Project Enviro Planner	Total Labor Hours	AECOM Labor Costs	Other Direct Costs	Total Costs
<b>2023 Billing Rate:</b>	<b>\$280.00</b>	<b>\$226.00</b>	<b>\$243.00</b>	<b>\$167.00</b>	<b>\$243.00</b>	<b>\$167.00</b>	<b>\$200.00</b>	<b>\$167.00</b>	<b>\$200.00</b>	<b>\$167.00</b>	<b>\$135.00</b>	<b>\$156.00</b>	<b>\$135.00</b>	<b>\$111.00</b>	<b>\$280.00</b>	<b>\$200.00</b>				
<b>Task 1 - Project Management and Coordination</b>	10	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130	\$ 29,920		\$ 29,920
<b>Task 2 - Existing Data Review</b>	0	0	10	10	4	4	10	10	0	0	10	10	0	0	0	0	68	\$ 12,320		\$ 12,320
<b>Task 3 - Topographic and Bathymetric Survey</b>	0	0	0	0	0	0	0	8	8	0	0	8	8	0	0	0	32	\$ 5,264	\$ 16,500	\$ 21,764
<b>Task 4 - Geotechnical Field Investigations and Laboratory Testing</b>	20	42	60	34	90	146	0	0	0	0	56	16	8	24	0	0	496	\$ 95,402	\$ 95,048	\$ 190,450
4.1 - Geotechnical Work Plan	4	8	16	16	16	32					16	8		8			124	\$ 23,016		\$ 23,016
4.2 - Health and Safety Plan		2	4		6	8					4			6			30	\$ 5,424		\$ 5,424
4.3 - Geophysical Surveys					8	16											24	\$ 4,616	\$ 22,770	\$ 27,386
4.4 - Drill and Sample Borings		8	8		40	60											116	\$ 23,492	\$ 69,278	\$ 92,770
4.5 - Field and Laboratory Testing		4	8	8	4						16			2			42	\$ 7,538	\$ 3,000	\$ 10,538
4.6 - Geotechnical Design Memorandum	16	20	24	10	16	30					20	8	8	8			160	\$ 31,316		\$ 31,316
<b>Task 5 - Hydraulic Analysis</b>	10	10	0	0	0	0	80	120	0	0	40	15	15	0	0	0	290	\$ 50,865		\$ 50,865
<b>Task 6 - Design Package Preparation</b>	10	32	16	32	0	0	50	100	0	0	110	20	80	20	0	0	470	\$ 76,954		\$ 76,954
<b>Task 7 - Environmental Permitting Assistance</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	80	160	\$ 38,400		\$ 38,400
<b>Task 8 - Bid, Award and Construction Phase Services</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	\$ -		\$ -
<b>Total Hours</b>	50	204	86	76	94	150	140	238	8	0	216	69	111	44	80	80	1,646			
<b>Total Labor Costs</b>	\$14,000	\$46,104	\$20,898	\$12,692	\$22,842	\$25,050	\$28,000	\$39,746	\$1,600	\$0	\$29,160	\$10,764	\$14,985	\$4,884	\$22,400	\$16,000	\$309,125	\$ 309,125	\$ 111,548	\$ 420,673

Notes:  
 1. Costs from Subs and ODC's include 10% markup.  
 2. Billing rates are for 2023 and will be adjusted annually