



Report to the City Council
Council Meeting of July 12, 2016

Agenda Section: Consent

Subject: Consideration and proposed approval of a resolution approving a First Amendment to the Professional Services Agreement with Kleinfelder Incorporated in the amount of \$66,039 for additional work required for the Geotechnical and Seismic Analysis of the St Helena Lower Dam, Capital Improvement Project W-108, for a total agreement amount of \$156,734

CEQA Status: Categorically Exempt, Section 15301 and 15304, Existing Facilities, and Minor Alteration to Land

Prepared By: Tobias Barr, Public Works Project Manager
Steven Palmer, PE, Director of Public Works/City Engineer

Approved By: Noah Housh, Acting City Manager/Planning and Community Improvement Director NJH

BACKGROUND

The St. Helena Lower Dam, like all municipally owned dams in the state, is regulated under the jurisdiction of the State Water Resources Divisions of Safety of Dam (DSOD). DSOD regularly inspects St. Helena Lower Dam and keeps extensive records on the facility. Under the regulatory program, DSOD has presented a number of concerns to the City of St. Helena for approximately over the last 10 years. Concerns include the stability of the St. Helena Lower Dam during a seismic event. DSOD believes that under a seismic event, the St. Helena Lower Dam could be subject to liquefaction and experience a catastrophic failure. As such the DSOD has restricted the amount of water storage capacity the City is permitted to store in the Lower York Creek Reservoir and directed the city to perform a geotechnical analysis. If the city continues to not address DSOD's concerns, they can further restrict storage capacity and levy other requirements on the City if necessary.

Previously the City released a request for proposals and solicited consultants who were qualified to perform the geotechnical and seismic stability evaluations. Kleinfelder was selected and on January 12, 2016 (Resolution 2016-3) City Council authorized the City Manager to enter into a Professional Services Agreement with Kleinfelder.

Since that time, Kleinfelder and Public Works Staff developed and presented a Draft Work Plan to DSOD. DSOD reviewed the Draft Work Plan, provided comments, and required additional geotechnical work. The effort to negotiate with DSOD, address the comments, and the incorporate the additional geotechnical exploration and testing requires an increase in the scope of the project and increases the cost of the project for the City.

DISCUSSION

Due to the additional work required to negotiate with and address DSOD comments, perform additional research of the history of the facility, and the additional field geotechnical exploration and laboratory testing, a budget increase will be required. City Staff has been working with Kleinfelder to understand the scale and scope of work to complete the mandatory work required by DSOD. After gathering and assessing information and negotiating with Kleinfelder, City Staff has determined the necessary budget adjustments required to perform the work and meet the DSOD requirements for stability assessment. The table below summarizes the additional work that needs to be added to the existing Professional Service Agreement with Kleinfelder.

Additional Scope of Work	Amount
Additional Work to Complete Final Work Plan	\$ 10,159
Additional Drilling, Sampling and Laboratory Work	\$ 37,260
Piezometer Data Evaluation (Bell Canyon)	\$ 3,620
Contingencies	\$ 15,000
Total Additional Work	\$ 66,039

Contingencies were included in the budget due to the unknown factors that could require the project to utilize more resources to complete the work. Contingencies were included for the field drilling, sampling, testing, and a possible future meeting required by DSOD. The contingencies provide insurance to the Project that will allow staff to navigate changing conditions if unpredicted field conditions or other issues arise during the project. Not having a contingency budget could cause the Project drilling to be halted if changing conditions arise in the field or additional meetings are required by DSOD.

FISCAL IMPACT

The total cost of the contract will increase by \$66,039 from \$90,695 to \$156,734. This exceeds the current Project budget for this work of \$100,000.

The increased budget has been included in the updated Five Year Capital Improvement Plan for 2016-2021 which is scheduled for adoption by the City Council at tonight's City

Council meeting. If the updated Five Year Capital Improvement Plan for 2016-2021 is not approved by City Council tonight, separate action by City Council will be required to increase the Project budget.

RECOMMENDED ACTION

The City has a responsibility to address regulatory requirements and provide reassurance to regulators that City facilities meet engineering, safety and environmental standards. Postponing or not addressing the required work will result in restrictions to the capacity of the City's reservoir, and possible fines from regulators. For these reasons, City Staff recommends City Council approve the First Amendment augmenting Kleinfelder Incorporated's Professional Services Agreement.

ATTACHMENTS

1. Resolution
2. First Amendment to the Professional Services Agreement with Kleinfelder Incorporated

CITY OF ST. HELENA

RESOLUTION NO. 2016-

**RESOLUTION APPROVING FIRST AMENDMENT TO THE
PROFESSIONAL SERVICES AGREEMENT WITH KLEINFELDER, INC.
IN THE AMOUNT OF \$66,039 FOR ADDITIONAL WORK REQUIRED
FOR THE GEOTECHNICAL AND SEISMIC ANALYSIS OF THE ST
HELENA LOWER DAM, CAPITAL IMPROVEMENT PROJECT W-108,
FOR A TOTAL AGREEMENT AMOUNT OF \$156,734**

RECITALS

- A. The City has been notified by the Department of Safety of Dam's to perform to analyses to ensure the safety of the City's reservoir at St Helena Lower Dam; and
- B. Previously in Resolution 2016-3 a Professional Services Agreement with Kleinfelder Incorporated for the geotechnical and seismic evaluation of the St. Helena Lower Dam was approved; and
- C. City Staff, working with Kleinfelder Incorporated and the Division of Safety of Dams, has developed an acceptable Work Plan for the geotechnical and seismic stability evaluation at the dam facility; and
- D. The Work Plan includes additional work and tasks not included in Kleinfelder's original Professional Services Agreement's Scope-of-Work; and
- E. City Staff has conducted a comprehensive review of the updated Project budget; and
- F. The additional work must be completed to satisfy regulatory requirements for dam safety.

RESOLUTION

NOW, THEREFORE, the City Council of the City of St. Helena resolves as follows:

- 1. Approve the First Amendment to Professional Service Agreement with Kleinfelder Incorporated.
- 2. The City Manager is authorized to execute the First Amendment to Professional Services Agreement with Kleinfelder, Incorporated.

Approved at a Regular Meeting of the St. Helena City Council on July 12, 2016, by the following vote:

Mayor Galbraith: _____
Vice Mayor White: _____
Councilmember Crull: _____
Councilmember Dohring: _____
Councilmember Pitts: _____

APPROVED:

ATTEST:

Alan Galbraith, Mayor

Cindy Black, City Clerk

**FIRST AMENDMENT
TO PROFESSIONAL SERVICES AGREEMENT
WITH KLEINFELDER .**

This First Amendment to Agreement for Professional Services dated January 12th 2016 ("Agreement") is made as of this 12th day of July 2016 by and between the City of St. Helena, a municipal corporation ("City"), and Kleinfelder Incorporated. ("Consultant").

RECITALS

- A. On January 12th, 2016 the City and Consultant entered into the Agreement for Consultant to provide professional engineering services for the St. Helena Lower Dam Geotechnical and Seismic Evaluation, Capital Improvement Project W-108
- B. Kleinfelder Incorporated, the City of St. Helena, and the Division of Dam Safety reached an agreement on Project Work Plan for the geotechnical exploration and seismic assessment; and
- C. The approved Project Work Plan requires significant more work then is provided in the original Scope-of-Services; and
- C. City and Consultant now desire to amend the Agreement with Consultant for the purpose of including the additoinal work required to execute the approved Project Work Plan and complete the assessment of the dam's safety.

AGREEMENT

NOW, THEREFORE, in consideration of the promises and of the mutual covenants and agreements herein contained, for good and valuable consideration, the adequacy of which is hereby acknowledged, the parties agree to amend the Agreement as follows:

1. Section 1. Basic Services

Exhibit A-1 to the Agreement is replaced with the attached Exhibit A-2.

2. Section 4. Compensation and Method of Payment

Section 4.A is amended to increase the total compensation payable to Consultant under the Agreement by \$66,038.50 to read as follows:

"Subject to any limitations set forth in this Agreement, City agrees to pay consultant the amount specified in Exhibit B-2, "Compensation," attached hereto and made a part hereof. Total compensation shall not exceed \$156,733.50, unless additional compensation is approved in accordance with Section 2."

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

Entered as of the day and year first above stated.

CONSULTANT:

Kleinfelder Incorporated.
2240 Northpoint Parkway
Santa Rosa, California 95407

Signatures of Authorized Persons

By: *[Handwritten Signature]*

Print Name: *William V. McCormick*

Title: *Area Manager*

CITY OF ST. HELENA

a Municipal Corporation

By: _____

Print
Name: _____

Director, _____ Department
Title: _____

APPROVED AS TO FORM:

City Attorney

ATTEST:

City Clerk

Attachments:

- Exhibit A-2, "Scope of Services"
- Exhibit B-2, "Compensation"

EXHIBIT A-2 – SCOPE OF SERVICES

- **Task 1: Project Work Plan (PWP)**

Prior to field mobilization, the proposed subsurface investigation program will be described in a Project Work Plan (PWP) to be submitted and approved by DSOD. Consultant shall perform the necessary work to complete a PWP that is satisfactory to DSOD and is subsequently approved by DSOD.

The work will include:

- Project description and objectives of the study
- Review of DSOD file data and summary of construction history
- Plan drawing of proposed boring locations
- Detailed description of drilling and sampling procedures, including drilling methods, field testing and logging procedures
- Piezometer Installation Details
- Laboratory Test Program

Additionally Work May Include:

- Site plan drawing showing existing boring and other items of interest from our review of existing available information
- Geologic Cross Sections along the upstream/downstream profile and along the crest of the dam
- Meetings and Phone calls with DSOD
- Updating geotechnical exploration methods
- Updating laboratory testing methods
- Revising Work Plans
- Participating in Phone Calls with City of St. Helena Staff

The final PWP may include additional items requested by DSOD. Consultant shall accommodate additional items that are reasonable and fall within the scope of the general project.

- **Task 2: Geotechnical Investigation**

2A Geotechnical Investigation Research and Review

The Consultant shall review published geologic and seismic mapping (including faulting, historic seismicity and anticipated ground motions) from both the City's files, DSOD's files, and available published literature and

documents, including information within the Consultants files. Consultant will coordinate and schedule the site exploration with the City of St. Helena and DSOD.

After Consultants Review, the Consultant shall provide the gathered information and details of Consultants assumptions for the City and DSOD to comment. Consultant will participate in a phone conference with the City and DSOD to will allow all parties to understand the collective data obtained to-date and Consultants assumptions. Consultant shall incorporate any comments from DSOD and the City before providing the final baseline assumptions required for investigation and engineering analyses work.

2B Site Exploration

Consultant shall conform to the requirements approved by DSOD in the final Project Work Plan. The scope below is intended to summarize the Project Work Plan. Consultant is require to confirm to the requirements within the final approved Project Work Plan. Consultant shall subcontract to a qualified drilling subcontractor for the following:

- Two borings along the crest and one boring at the toe of the dam
- Sampling spacing shall be every 2.5 feet.
- Appropriate sampling for the required laboratory testing
- One full day of Cone Penetration Tests
 - One CPT located at the area of the proposed 3rd crest boring (western side of embankment) which extends approximately 60 ft. below the ground surface or until practical refusal.
 - One CPT adjacent to the KB1 drilling in the approved Project Work Plan. CPT shall calibrate/correlate the CPT results with the boring logs.
 - Two CPTs at downslope face of the embankment using a track CPT rig.
 - One additional CPT along the crest of the embankment.

The Consultant Shall:

- Align the downstream CPTs to align with the CPTs on the crest in order to obtain cross section along the maximum/critical sections.
- Perform dissipation tests on CPTs to define phreatic surface.
- Push CPTs first, before drilling in order to adjust soil sampling based on the CPT results such that any suspected weak layers can be targeted for sampling/laboratory testing.

2C Laboratory Testing

The Consultant is required to conform to the laboratory testing and standards in the final Project Work Plan approved by DSOD. The Final Work Plan shall include the addition of:

Page 4 of 7

First Amendment to Professional Services Agreement St. Helena Lower Dam Geotechnical and Seismic Evaluation.

- Triaxial Consolidated-Undrained (TXCU) with pore pressure measurements
- Sieve Analysis (ASTM D422)
- Atterberg Limits (ASTM D4318)

Consultant assumes all responsibility for the integrity of laboratory testing results.

2D Field Related Contingencies

This task is included to cover additional costs related to a change in conditions during the field portion of Task 2. Expenses billed to this task must be approved in writing by the Director of Public Works prior to commencing any contingency work.

- **Task 3: Engineering Analysis and Report**

Based on the results of the data compilation, review of existing data, the field investigation, laboratory testing program, and interactions with the City and DSOD, the Consultant shall perform engineering analysis for soil liquefaction potential and embankment stability analyses. Additionally, the Consultants analysis shall include and conform to all the requirements in the Project Work Plan approved by DSOD. This will include the analysis of the additional testing and CPTs required by DSOD.

The Consultant shall, based on the results of the DSOD approved engineering analyses, provide the City and DSOD civil engineering recommendations for required compliance, if the results of the analyses indicate the dam does not currently meet seismic standards.

A draft version of the report will be provided to the City and DSOD for their respective review. The final report will incorporate the comments from DSOD and the City. One round of review is assumed by Consultant.

- **Task 4: Analysis of Piezometer Data at Bell Canyon Reservoir**

The Consultant shall complete their summary of past work and analysis and provide the City with their letter discussing Consultants conclusions.

- **Task 5: Meeting and Misc. Contingencies**

This task is intended to cover additional meetings or other requirements from DSOD or the City of St. Helena to complete the project. Prior to starting any work under this task written authorization must be provided by the Director of Public Works.

EXHIBIT B-2 – COMPENSATION

Unless authorized by the Project Manager, compensation shall adhere to the labor and task categories outlined in the tables below.

LABOR FEE									
St. Helena Lower Dam Geotechnical and Seismic Evaluation									
LABOR CATEGORY	13 - Senior Project Manager	12 - Principal Professional	10 - Project Professional	9 - Staff Professional II	8 - CADD Operator	7 - Project Controls Specialist I	7 - Project Administrator I	TOTAL HOURS	TOTAL TASK FEE
	<i>Labor Factor</i> <i>Billing rate (\$/hr)</i>	Regular Time \$220.00	Regular Time \$220.00	Regular Time \$140.00	Regular Time \$120.00	Regular Time \$120.00	Regular Time \$127.00		
Task 1 - Project Work Plan (Additional Scope)	21	22.25	19.25		13	3.25	6.75	85.5	\$14,756.50
Task 2A - Research and Review	2	4	12					18	\$3,000.00
Task 2B - Site Exploration (original 3 borings from 20-70 feet in depth PLUS additional Sampling Frequency PLUS one day of CPTs)	6	6	91					103	\$15,380.00
Task 2C - Laboratory Testing (Original Proposed Scope PLUS additional lab testing)	4	6	12					22	\$3,880.00
Task 2D - Field Contingency (20%) - [On Approval from City]		1.25	20					21.25	\$3,075.00
Task 3 - Engr. Analysis & Geotech Report (one cross sections assumed)	2.4	28	104		18	4	2	158.4	\$24,085.00
Task 3.1 Seismic Engineering Analyses		24	60					84	\$13,680.00
Task 4 - Analysis of Piezometer Data, Bell Canyon	7.8	7.5	23	0			0	38.3	\$6,590.00
Task 5 Meeting (One Meeting) - [On Approval from City]	6	11	0					17	\$3,740.00
LABOR HOURS	49.2	110	341.25	0	31	7.25	8.75	547.5	
LABOR FEE	\$10,827	\$24,200	\$47,775	\$0	\$3,720	\$921	\$744		\$88,186

TASK	HOURS	LABOR BUDGET	REIMB. EXPENSE BUDGET	LAB BUDGET	SUB BUDGET	TOTAL
Task 1 - Project Work Plan (Additional Scope)	85.5	\$14,756.50	\$302.00	\$0.00	\$0.00	\$15,058.50
Task 2A - Research and Review	18	\$3,000.00	\$0.00	\$0.00	\$0.00	\$3,000.00
Task 2B - Site Exploration (original 3 borings from 20-70 feet in depth PLUS additional Sampling Frequency PLUS one day of CPTs)	103	\$15,380.00	\$325.00	\$0.00	\$40,040.00	\$55,745.00
Task 2C - Laboratory Testing (Original Proposed Scope PLUS additional lab testing)	22	\$3,880.00	\$0.00	\$19,695.00	\$0.00	\$23,575.00
Task 2D - Field Contingency (20%) - [On Approval from City]	21.25	\$3,075.00	\$0.00	\$0.00	\$7,925.00	\$11,000.00
Task 3 - Engr. Analysis & Geotech Report (one cross sections assumed)	158.4	\$24,085.00	\$0.00	\$0.00	\$0.00	\$24,085.00
Task 3.1 Seismic Engineering Analyses	84	\$13,680.00	\$0.00	\$0.00	\$0.00	\$13,680.00
Task 4 - Analysis of Piezometer Data, Bell Canyon	38.3	\$6,590.00	\$0.00	\$0.00	\$0.00	\$6,590.00
Task 5 Meeting (One Meeting) - [On Approval from City]	17	\$3,740.00	\$260.00	\$0.00	\$0.00	\$4,000.00
TOTALS	547.5	\$88,186.50	\$887.00	\$19,695.00	\$47,965.00	\$156,733.50