Attachment 1

SCOPE OF SERVICES
OUTLINE

Final Design Services for the
MARIN ATMOSPHERIC RIVER CAPTURE PROJECT

TASK 1 - PROJECT MANAGEMENT

1.01 - Project Administration

Consultant will administer the project to maintain project schedule and budget. The project progress and budget status will be included in monthly progress reports that will be attached to billing invoices submitted to the District. Additionally, the monthly progress report will include a list of work completed for the invoice period and anticipated work efforts for the next invoice period. Consultant will also develop a detailed Project Work Plan (PWP). The PWP will serve as both a project procedures manual to govern day to day direction, including schedules, budgets, resource utilization, and information management systems as well as how the project will be implemented.

This task also includes internal project team meetings to coordinate the project discipline teams. Internal team meetings will occur on a bi-weekly basis, will be one (1) hour in length, and will be held virtually between the project team leads.

1.02 - Conduct Project Status Meetings

The Consultant will attend and manage the project kickoff meeting. Topics of discussion will include communications, schedule of meetings, project schedule and coordination between all parties. Consultant will provide an agenda prior to the meeting and meeting minutes and action items.

Consultant will conduct Bi-weekly project coordination meetings with District staff to keep the project team up to speed on all ongoing activities. Meetings will be conducted using a platform agreeable to the District such as MSTeams, Zoom, Skype, or Go to Meeting. Consultant will prepare a standing agenda and meeting minutes for each meeting. Bi-weekly project coordination meetings will be one (1) hour in length on a mutually agreed upon day of the week.

1.03 - Implement Quality Management

Consultant will implement and maintain its standard Quality Management Program for the project. All deliverables will be reviewed in accordance with the quality management program prior to being submitted to the District for review.

1.04 - Board Presentation Assistance

Under this task, the Consultant will coordinate with District staff to prepare presentation materials and present project information to the MMWD Board of Directors as requested. It is assumed that a total of six (6) Board meetings will be attended.

Task 1 Deliverables:

- Monthly progress reports.
- Project Work Plan (PWP). (PDF)

- Meeting agendas and notes.
- Board meeting presentation information.

Task 1 Assumptions:

- Schedule to be eighteen (18) to twenty (20) months.
- Kickoff meeting to be in person at District offices.
- Bi-Weekly Project Status meetings to be virtual. (Total of 36 meetings)
- Internal bi-weekly discipline team meetings. (Total of 36 meetings)

TASK 2 - DEVELOP BASIS OF DESIGN REPORT (BODR)

2.01 - Review Existing Information

A review of existing information, related documents, hydraulic model information and record drawings will be performed for the District's existing facilities affected by this project and any other water facilities that may be within the project limits. District to provide all relevant existing information for review.

2.02 - Conduct Field Visit

This task includes a one (1) day field site visit to familiarize the project team of the pipeline alignment and potential site(s) for the pump station(s), dichlorination facility and the reservoir discharge facility. This field visit will be attended by the main discipline leads.

2.03 - Identify Project Design Criteria

The Consultant, with District input, will identify the design criteria for the project facilities under this task. This will include review of any existing District standard design criteria and Consultant recommendations.

2.04 - Conduct Hydraulic Analysis and Facility Sizing

Consultant will conduct hydraulic modeling analysis of the project facilities to identify required components. The modeling will identify components such as pipeline diameter, pump station(s) sizing, storage tank sizing, shut off valve(s), and other required hydraulic components.

2.05 - Confirm Pipeline Alignment

This task will include confirmation of the identified pipeline alignment as identified in the Water Supply Conveyance Improvements Project Technical Memorandum No. 3 Preferred Alternative Selection, dated February 2025. The alignments will be reviewed for constructability, maintenance, and operation. Any recommended revisions will be identified and documented.

2.06 - Confirm Pipe Materials

This task will confirm the proposed pipe materials that will be used for the construction of the project facilities. This information will then be incorporated into the final design process.

2.07 - Evaluate Pipeline Construction Techniques

This task will include a review of construction techniques that will be included along the pipeline alignment(s). This will include both open cut trenching as well as trenchless

technologies to mitigate impacts of the construction efforts on the surrounding areas. that may include trenchless construction techniques. The appropriate construction techniques will be documented and discussed with the District.

2.08 - Evaluate Pump Station Alternatives

This task will include the evaluation of both horizontal centrifugal versus vertical turbine pump station configurations for the design of the pump station(s). Each alternative will be evaluated for constructability, maintenance, and operations requirements.

2.09 - Evaluate Dechlorination Alternatives

This task will include the evaluation of alternatives for Dechlorination Facility configurations. Each alternative will be evaluated for constructability, maintenance, and operations requirements and discussed with the District.

2.10 - Evaluate Reservoir Discharge Facility Alternatives

This task will include the evaluation of alternatives for Reservoir Discharge Facility configurations. Each alternative will be evaluated for constructability, maintenance, and operations requirements and discussed with the District.

2.11 - Conduct Transient Analysis

Under this task, a transient analysis will be conducted to evaluate the surge protection facilities required for the project. This analysis may include the development of a surge tank facility for the pump station site(s) and/or the development of air release and air vacuum valve facilities along the pipeline alignment.

2.12 - Conduct Project Facilities Alternatives Workshop

At the conclusion of the development of the above items, a workshop will be conducted with District staff to review and discuss the pump station, dechlorination facility and Nicasio Reservoir Discharge Facility alternatives. At the conclusion of the workshop, the recommended pump station(s), dechlorination and reservoir discharge configurations will be identified for further development in the final design stage.

2.13 - Refine Desktop Geotechnical Evaluation

Consultant’s geotechnical subconsultant, Miller Pacific Engineering Group, previously completed a geotechnical desktop evaluation of the conveyance pipeline alignments that were considered by the District as alternatives for the new aqueduct, as discussed in the Water Supply Conveyance Improvements Project Technical Memorandum No. 3 Preferred Alternative Selection, dated February 2025. Under this task, the Consultant will include updating the desktop evaluation to address the Nicasio Aqueduct pipeline alignment, pump stations and other improvements. This updated report will include recommendations and a preliminary plan for future subsurface exploration. It is anticipated that the report will be used to guide geotechnical-related portions of project planning and preliminary design of the project facilities.

2.14 - Develop Preliminary Construction Cost Estimate

Under this task, a Preliminary Construction Cost Estimate will be developed for the project facilities. This cost estimate will be consistent with the Association for the Advancement of

Cost Engineering (AACE) International Class 4 estimate with an accuracy range of +50 percent to -30 percent of the actual project cost.

2.15 - Identify Permitting Agencies and Requirements

Under this task, the Consultant will identify permitting agencies to be coordinated with for pipeline alignment, pump station locations and all of the facilities associated with the project.. The actual permit such as encroachment, license or easement will be identified along with permit requirements. Approximate permit fees will also be identified. A contact person for each permitting agency will be identified with full contact information for future use.

2.16 - Develop Construction Schedule and Sequencing

This task includes the development of a proposed construction scheduling and sequencing for the project facilities. It is assumed that two (2) separate construction packages will be developed under the final design process.

2.17 - Develop Preliminary (30%) Drawings and Specification TOC

Development of a 30% Project document submittal will be completed under this task. The 30% design documents will include the following:

- Pipeline Plan and Profile drawings (Only plan view shown)
- Dechlorination Facility layout drawing(s)
- Reservoir Discharge Facility layout drawing(s)
- Pump Station(s) site layout drawing(s)
- Pump Station(s) mechanical layout drawings
- Pump Station(s) structural plan drawings
- Storage tank layout drawings
- Instrumentation P&ID’s
- Technical Specifications Table of Contents (TOC)

One PDF of the plans (half-size), and technical specifications TOC will be provided to the District for review.

2.18 - Evaluate Kastania Pump Station for Future Expansion

Under this task, the Consultant will conduct a brief review of the existing Kastania Pump Station to identify required improvements for expansion of the pump station as identified in the Water Supply Conveyance Improvements Project Technical Memorandum No. 3 Preferred Alternative Selection, dated February 2025. The evaluation will review the ability of the required pumping capacity to be incorporated into the existing facility. The review will focus on the space available, mechanical and electrical requirements that might be incorporated into the existing structure. A seismic evaluation of the existing structure is not included in this evaluation.

2.19 - Develop Draft BODR

This task will include the development of the draft Basis of Design Report (BODR) that will identify the components and facilities for the project to be implemented during the final design process. The draft BODR will be submitted to the District for review.

2.20 - Conduct Draft BODR Review Workshop

At the conclusion of the District review process for the draft BODR, the Consultant will conduct a review meeting to discuss the District's review comments and questions. All District review comments will be documented for formal response.

2.21 - Develop Final BODR

This task will include the development of the final BODR document and include responses to all of the District review comments. District review comments and formal responses will be included in a review comment response log spreadsheet. The final BODR document will be submitted to the District.

Task 2 Deliverables:

- Project Facilities Alternatives Workshop agenda and materials (as required).
- Draft BODR report. (PDF)
- Draft BODR Review Workshop agenda and materials (as required).
- Review comment response log. (Excel spreadsheet)
- 30% Plans (Half size) and Technical Specifications TOC. (PDF)
- Final BODR report. (PDF)

Task 2 Assumptions:

- Field visit to include Kastania Pump Station.
- Assumes ultimate system layout of the Nicasio Aqueduct pipeline and two (2) pump stations for BODR level design.
- District to provide one (1) O&M staff member for Kastania Pump Station site visit for site access and questions & answers.

TASK 3 - FIELD INVESTIGATIONS

3.01 - Conduct Field Topographic Survey

Consultant's subconsultant, Cinquini & Pastorini (C&P), will conduct a topographic survey of the project limits. The topographic survey will include:

Field Topographic Survey

C&P will prepare the project base mapping and right-of-way for the project. The survey will be based upon a project specific control network established using a combination of static GPS observations on newly set control monument tied to California Spatial Reference Center (CSRC) continuous global positioning stations (CGPS). We propose establishing the survey on California Coordinate System of 1983 (NAD83), Zone 2, Epoch 2017.5. The survey will vertically relate to North American Vertical Datum of 1988 based upon the application of GEOID18 to the orthometric heights of CGPS stations as determined CSRC. All primary and supplementary control will be determined using a least-squares adjustment process for increased project accuracy.

C&P will perform an aerial survey along the proposed pipeline alignment. The aerial mapping will be drawn at a scale of 1" = 40' and include a strip of land approximately 200 feet in width. The results of the aerial survey will produce a color orthophoto for the project along with a cad file and digital terrain model.

C&P will perform supplemental ground surveys along the proposed alignment to collect features not seen on the aerial survey due to site conditions such as tree canopies and foliage. The supplemental mapping will include locating visible utility features at ground level. Surface evidence of underground utilities will be mapped to a Utility Quality Level D in accordance with ASCE Standard 38-22. Existing utility mapping, if provided to C&P, will be incorporated into the base mapping as a part of this task.

Topographic survey will include all necessary work to produce a topographic map, including features such as, but not limited to; building corners, curb lines, water meters, sewer cleanouts, valves, manholes (including rim, invert and pipe information), utility markings on the pavement, utility poles, driveway locations, sidewalks, trees 6-inches and larger where they may conflict with the pipeline, retaining walls and any other pertinent information that could apply to the project during design within the public right-of-way.

Full terrestrial based topographic surveys will be performed at the locations of the proposed pump stations. This mapping will be depicted at a drawing scale of 1 inch = 10 feet or 1 inch = 20 feet, as appropriate.

Right-of-Way Retracement Survey

C&P will prepare right-of-way retracements of roadways and the parcels involved with the proposed pipeline. This work includes records research and review of existing record maps, county maps, Caltrans mapping, deeds and other pertinent document for the roadway right-of-way along project corridor. Where the alignment runs along the private properties or where parcel acquisitions for pump stations occur, sufficient parcel boundary research will be performed so that easement acquisitions may take place, if needed. Once the records research and field monument ties have been completed, we will determine the right-of-way and provide the information to the design team for their use. Titled reports provided for the affected properties will be reviewed as a part of this work. Procurement of the title reports is not a part of this scope of work. It is anticipated that one or more Records of Survey will be required as a part of this project.

3.02 - Conduct Geotechnical Investigation

Consultant's subconsultant, Miller Pacific Engineering Group (Miller Pacific), will conduct a geotechnical investigation of the project limits. The geotechnical investigation will include:

Permitting

Permits will be obtained for subsurface exploration, as required by the County of Marin, Environmental Health Services. Additionally, encroachment permits from the City of Novato and Marin County for work within their right-of-way will be acquired. This will include preparing permit applications, developing site plans which show proposed exploration locations and providing any other information required by the respective permitting agency.

Traffic Control

Extensive traffic control services will be required to complete the permitting and fieldwork portions of the investigation. Miller Pacific will retain a professional traffic control subcontractor to assist in developing traffic control plans for inclusion with the encroachment permit applications. The subcontractor will also manage all traffic control-related services throughout the field investigations.

Borings and Cone Penetration Tests

The field investigation will include drilling borings throughout the pipeline alignment and at the pump station sites. It is expected that minimizing impacts to traffic and neighboring properties will be a key consideration for the project team and stakeholders. An assumption that two truck-mounted drilling rigs will be operated when working within the roadways as a means of expediting the work and reducing potential impacts. The initial phase of subsurface exploration will include eight days of drilling to complete borings spaced at about 1,000 to 1,500 feet along the pipeline alignment. It is anticipated that about 50 to 60 borings to depths of 15 feet during this initial phase will be completed.

Upon completion of the initial borings, laboratory testing of samples will be tested and boring logs will be prepared and provided to the project team for review. As project design advances, a second phase of subsurface exploration will utilize cone penetration testing (CPTs) and additional borings will be completed. The scope includes completing a CPT at both proposed pump stations to characterize subsurface conditions and to generate a shear wave velocity profile to aid in seismic design. Three (3) borings at each of the pump stations will be completed to obtain samples for laboratory testing and further characterize subsurface conditions.

The second phase of subsurface exploration will also include an additional seven (7) days of drilling to further explore subsurface conditions along the pipeline alignment. Similar to the initial phase, it is anticipated that utilizing two drill rigs to complete about 50 to 60 borings to depths of about 15 feet will be required. While the final locations of these borings will be determined during design, it is expected they will be located between the initial borings to achieve an average spacing of about 500 to 750 feet throughout the pipeline alignment. The borings may also be located and deepened as required to further evaluate specific geotechnical considerations such as areas that include trenchless crossings, landslides or potentially difficult excavation conditions due to hard bedrock. Upon completion of the field investigation and laboratory testing, CPT and boring logs will be prepared and reviewed by the project team.

Groundwater Monitoring

The scope will include groundwater monitoring for a period of several months to aid in estimating groundwater levels for project design. Vibrating monitoring piezometers will be installed at up to 15 boring locations and each piezometer will be equipped with a data recorder to measure fluctuations in water levels with time. Periodic site visits to t the piezometer locations will be conducted to download the data and include the results of the monitoring in the geotechnical reports.

Seismic Refraction Surveys

The potential for hard rock excavation conditions was identified throughout portions of the proposed aqueduct alignment as part of the previous desktop evaluation. Included in this scope are seismic refraction surveys to aid in estimating the depth and rippability of various bedrock units throughout the alignment. A total of five (5) seismic refraction survey transects locations along the alignment are included. The need for and locations of these surveys will be determined following the initial phase of borings when subsurface conditions are better defined.

Laboratory Testing

Laboratory testing on soil samples obtained from the borings to estimate pertinent engineering properties will be performed. The type and frequency of laboratory testing used to develop the budget estimate is summarized below and is primarily based on experience with similar projects and anticipated subsurface conditions. Based on experience various bedrock units may include naturally occurring asbestos which can result in cost and safety considerations. Therefore, asbestos testing so that this potential hazard can be further evaluated has been included. A testing program may be modified based upon conditions encountered during the subsurface exploration and input from the project team.

Laboratory Test	Soil Property	ASTM Test Method	Estimated Number of Tests
Water Content	Moisture	D2216	200
No. 200 Sieve	Fine-grained	D1140	120
Sieve Analyses	Gradation	D6913	60
Unit Weight	Density	D7263	200
Atterberg Limits	Plasticity	D4318	20
Unconfined Strength	Strength	D2166	120
Corrosivity of Soil	Corrosivity	Caltrans	20
Asbestos	Asbestos	CARB	5

Geotechnical Reports

Upon completion of the field investigation and laboratory testing, geotechnical reports which summarize our subsurface exploration and laboratory data and provide geotechnical recommendations and design criteria will be prepared. It is anticipated that separate construction documents will be developed for the pipeline and pump stations, and separate reports to include with each set of documents will be developed. The reports will address new foundations, seismic design, excavation conditions, site grading, trench backfill, temporary shoring and dewatering, lateral earth pressures for below-grade structures, pavements and other geotechnical-related items.

3.03 - Conduct Existing Utility Research and Coordination

Under this task, Consultant will perform existing utility research within the project area in accordance with the American Society of Civil Engineers (ASCE) 38-02 - Level “C” standard guidelines. A log of received information and responses will be maintained. If no response is received within 30 days, a second letter and phone call will be made to ensure contact. Utility mapping received will be compiled in a utility base map file that can externally referenced into the field topographic survey.

3.04 - Develop Potholing Plan

A potholing plan will be developed for utilities deemed as “High Risk” facilities if determined to be required. The potholing plan will be reviewed by the District and any requested revisions incorporated into the plan.

3.05 - Conduct Potholing

After the potholing plan is approved by the District the potholing will be executed to identify more precise locating both in horizontal and vertical location of existing utilities (as required). It is assumed that 50 potholes are included in this task.

3.06 - Conduct Cathodic Protection Field Investigation

Consultant’s subconsultant, JDH Corrosion Consultants, Inc. (JDH), will conduct a corrosion field investigation of the project limits. The corrosion field investigation will include:

- Perform site alignment reconnaissance to identify locations suitable for rectifiers and/or locations that could indicate potential stray current.
- Conduct in-situ soil resistivities at an approximate 2,000 ft. interval along the pipeline alignment using the Wenner 4-pin technique. In-situ resistivities will be measured at 2.5, 5, 7.5, 10 and 15 foot depths using a Soil Resistivity Meter. Barnes layer calculations will be performed to determine the corrosivity of the different soil layers to the proposed pipeline materials.
- Collect soil samples from the project Geotechnical Consultant, who will be collecting soil samples as a part of their soil investigation along the proposed pipeline alignment(s), at the proposed pump station sites, and at the proposed dechlorination facility site for chemical analysis. (Assumes 35 samples; one sample approximately every 2000-ft. of pipeline alignment.)
- The soil samples should be collected from pipe depth and transferred to CERCO Analytical, Inc., located in Concord, CA for chemical analysis. The soil samples will be analyzed for pH, chlorides, sulfates, resistivity, and Redox potential using ASTM test methods as detailed in the table below. The preparation of the soil samples for chemical analysis will be in accordance with the applicable specifications. JDH will coordinate with the geotechnical engineer to pickup and deliver the samples to the laboratory for testing.

Soil Chemical Analysis Test Methods

Chemical Analysis	ASTM Method
Chlorides	D4327
pH	D4972
Resistivity (as received and @ 100% saturation)	G57
Sulfate	D4327
Redox Potential	D1498

- Evaluate the results of the chemical analysis and determine the corrosivity of the soils along the pipeline alignments to the proposed materials of construction (e.g. mortar-coated steel, dielectric-coated steel and concrete cylinder pipe, etc.).
- Review the plans and profiles for the new transmission pipeline prepared by Consultant for construction details and proposed pipeline materials and determine the suitability of the proposed materials based on the collected field and laboratory data. An alignment corrosivity study report will be prepared which will provide a summary of the field data collected along with the chemical analysis of the soil samples and an analysis of this data. The potential for corrosion on the various material options for the new transmission pipeline will be determined based on the analysis and recommendations for the long-term prevention of corrosion will be included for all pipe material options. All fieldwork and recommendations will be in compliance with applicable NACE/AMPP and Local Water District Design Standards.
- Assist with contacting adjacent utilities to notify and request relevant information regarding existing cathodic protection systems that may be near the Project.
- Review provided Geotechnical Engineering exploration/boring plans, logs, and reports.
- Stray current analysis. (Assumed not required)
- Prepare Basis of Design Report outlining corrosion control design approach for each pipe material option. Engineering Technical Memorandum to summarize cathodic protection system recommendations.

Task 3 Deliverables:

- Topographic survey. (AutoCAD format).
- Sealed hardcopy of Topographic and Boundary Survey Map.
- Draft Geotechnical Report. (PDF)
- Final Geotechnical Report. (PDF)
- Utility coordination letters. (PDF)
- Potholing plan. (PDF)
- Pothole investigation summary report. (PDF)
- Cathodic protection field investigation and corrosion protection recommendations technical memorandum. (PDF)

Task 3 Assumptions:

- Drilling permits will be obtained from the County's Environmental Health Services for up to 125 borings and CPTs at the rate of $125 per boring or CPT which is the rate published on the County's website.
- Encroachment permits will be obtained from the City of Novato and the County of Marin for work within their respective right-of-way.
- Traffic control services will include up to 12 Traffic Control Plans prepared by professional traffic control subcontractor, and up to 20 days of traffic control field services at Prevailing Wage rates.
- Any permission and arrangements for site access at locations within private properties or other areas will be handled by others.
- Prevailing Wage rates will apply for our drilling and CPT subcontractors. Subsurface exploration for the pipeline will be completed with two drilling rigs operated

simultaneously, whereas exploration for the pump stations will be completed with a single drill and CPT rig.

- The boring and CPT locations are located on relatively level grade and accessible to truck-mounted drilling equipment. No provisions have been included for site clearing.
- The borings and CPTs will be located using a handheld GPS receiver. Surveyor will formally survey geotechnical boring locations and include in topographic survey information.
- Provisions to mark the work areas and notify Underground Service Alert (USA) prior to the drilling so that utility owners can mark any underground utilities near the proposed borings is included.
- Total of two (2) utility coordination meetings per known utility company.
- A total of fifty (50) potholes are included.
- Corrosion field investigation assumes 35 samples; one (1) sample approximately every 2000-ft. of pipeline alignment.

TASK 4 - PERMITTING AND STAKEHOLDER COORDINATION

4.01 - Provide Permitting Agency Assistance

This task includes the permitting with the local regulatory agencies for the defined pipeline alignments. The Consultant will prepare and submit to the City the required regulatory agency permits as identified below:

- County of Sonoma - Encroachment Permit
- County of Marin - Encroachment Permit
- City of Novato - Encroachment Permit

4.02 - Provide Stakeholder Coordination Assistance

Under this task, stakeholder coordination assistance will be provided. Consultant will attend coordination meetings with identified stakeholders to address project concerns. The District will be the main point of contact for all stakeholder meetings. It is assumed that a total of six (6) stakeholder meetings will be attended.

4.03 – Public Outreach Assistance (Optional Task)

As an optional task the Consultant's subconsultant, Katz and Associates (K&A), can assist in the public outreach portion of the project. The public outreach task will include the following:

Project Outreach Plan

To raise awareness among project stakeholders about the purpose and benefits of the project, and ensure consistent, timely, accurate and proactive information sharing and engagement with stakeholders, K&A will prepare a Public Outreach Plan (Plan).The Plan serves as a road map for engaging with key stakeholders and external audiences including elected officials, civic and business leaders, community and industry groups, environmental organizations and NGOs, media, area residents and interested members of the public. This Project will garner varied levels of stakeholder interest and inquiries, and this Plan is intended to prepare the Project team in advance for appropriate stakeholder outreach and engagement. This Plan will be the first deliverable for the outreach work.

Materials Development

K&A will develop a suite of informational materials that can be provided to the public or internal stakeholders. Informational materials and tools will be tailored to different audiences, address specific concerns and information needs as well as a varying knowledge base to convey program messages in a consistent manner. These materials will provide objective, general information about the Project, and be written and illustrated using understandable terminology and images for the layperson. All materials should be brief and visually appealing. All informational materials will be reviewed for cultural sensitivity and appropriateness and distributed in print and electronic formats to reach diverse audiences. These initial materials would include a project fact sheet, FAQ, content for a project website and a PowerPoint presentation template for future internal and external presentations.

Preliminary Design Outreach Workshop

Planning and implementation of Project workshops for stakeholders to provide input on draft Project designs, once the initial design work has been completed will be included under this task. The workshops will allow the public to learn basic information about the Project and provide input on the elements pre-determined by the Project team to be open to public input. The workshops will be developed and planned in coordination with the Project team and is assumed to take place in-person with a member of the outreach team and District representatives. As design progresses, it will be important to share updated information and how feedback from the public was incorporated into the design for the project. It is assumed that a total of five (5) workshops will be included.

Task 4 Deliverables:

- Draft Permit application packages. (As required)
- Final Permit application packages. (As required)
- Stakeholder coordination meeting agenda, meeting minutes and materials.
- Public Outreach meeting agenda, meeting minutes and materials.

Task 4 Assumptions:

- District to pay all permitting fees directly.
- Total of six (6) stakeholder coordination meetings.
- Total of five (5) public outreach workshops.
- Permitting Agency coordination meetings to be virtual.

TASK 5 - EASEMENT AND PROPERTY ACQUISITION ASSISTANCE

5.01 - Provide Permanent and Temporary Construction Easement Acquisition Assistance

C&P will assist the project team with identifying the limits of permanent and temporary construction easements that may be necessary for the project. C&P will prepare legal descriptions and plats for permanent and temporary easement acquisitions and any easement vacations or quitclaims that may occur. An estimate of fifteen (15) legal descriptions and plats are assumed for the project under this task.

5.02 - Provide Property Acquisition Assistance

C&P will assist the project team with identifying the limits of permanent property acquisitions that may be required for the project. C&P will prepare legal descriptions and plats for

permanent property acquisitions and any easement vacations or quitclaims that may occur. An estimate of five (5) legal descriptions and plats are assumed for the project under this task.

Task 5 Deliverables:

- Draft and Final easement acquisition plats and descriptions.
- Draft and Final property acquisition plats and descriptions.

Task 5 Assumptions:

- A total of fifteen (15) draft easement acquisition plats and descriptions.
- A total of fifteen (15) final easement acquisition plats and descriptions.
- A total of five (5) draft property acquisition plats and descriptions.
- A total of five (5) final property acquisition plats and descriptions

TASK 6 - DISTRICT CEQA CONSULTANT COORDINATION

6.01 - Attend CEQA Coordination Meetings

This task includes California Environmental Quality Act (CEQA) coordination meetings with the District's environmental consultant to coordinate environmental and cultural impacts of the project facilities. It is assumed that a total of four (4) meetings will be conducted. These meetings will be virtual and one (1) hour in length.

6.02 - Provide Technical Support for CEQA Development

Consultant will provide technical information, as required, to the District's environmental consultant to inform the assessment of environmental and cultural impacts of the project facilities. Consultant will incorporate mitigation requirements of environmental and cultural impact results provided by the District's environmental consultant into the overall final design of the project facilities.

Task 6 Deliverables:

- Technical information for CEQA development. (As required)

Task 6 Assumptions:

- District consultant to be lead contact for CEQA coordination meetings
- Four (4) CEQA coordination meetings.
- Coordination meetings to be virtual.
- CEQA mitigation requirements to be incorporated into final design efforts.

TASK 7 - COORDINATION WITH OTHER DISTRICT CONSULTANTS AND AGENCIES

7.01 - Coordination with Other District Consultants

Consultant will attend coordination meetings with the District's other consultant teams as needed. A budget allowance of 48 hours for this task has been assumed for this task.

7.02 - Coordination with Other Agencies (Sonoma Water, NMWD, Others)

This task includes the coordination with other agencies as required. The project facilities will be tying into facilities owned and operated by others and coordination with the affected

agencies will be required. The Consultant will be directed by the District on this task and the District will be the lead. A budget allowance of 132 hours for this task has been assumed for this task.

7.03 - Coordination with Pacific Gas and Electric (PG&E)

Coordination with Pacific Gas and Electric (PG&E) will be required to connect the project facilities to the electrical power grid owned and operated by PG&E. This task includes coordination and application for the power connection. The Consultant will assist the District in completing the power connection application and coordinating power requirements. Any fees for the service connection application(s) will be directly paid for by the District.

7.04 - Funding Strategy Assistance

Under this task, Consultant will research and compile a list of potential federal, state, and local grant and loan opportunities that may be available for the project.

Consultant will develop a brief Funding Strategy Project Memorandum summarizing the approach to the funding opportunities identified/considered. The resulting funding opportunities will be documented in a Funding Matrix (within the memorandum) which will include details such as funding agency, program, description of funding program eligibility, requirements and limitations, total funding provided, documentation requirements, timing, relevance to the project, and the next steps to take toward securing funding.

Findings of the funding search will be presented to the District in a meeting (MS Teams format). Consultant will update the Funding Strategy Project Memorandum based on review input from the District and discussions from the meeting.

Task 7 Deliverables:

- Technical information. (As required)
- Draft PG&E Service application package.
- Final PG&E Service application package.
- Draft Funding Strategy Project Memorandum.
- Final Funding Strategy Project Memorandum.

Task 7 Assumptions:

- Coordination efforts with Other District Consultants includes an allowance of 48 hours.
- Coordination efforts with Other Agencies includes an allowance of 132 hours.
- PG&E service application fees to be paid directly by the District.
- If District decides to move forward with funding opportunities, Consultant will provide additional budget request for additional funding assistance.

TASK 8 - DEVELOP PIPELINE CONSTRUCTION DOCUMENTS (PACKAGE NO. 1)

8.01 - Develop 60% Pipeline Submittal Package

Development of a 60% Pipeline document submittal will be completed under this task. One PDF of the plans (full-size), plans (half-size), and specifications will be provided to the District for review.

8.02 - Develop 60% Pipeline Opinion of Probable Construction Cost (OPCC)

Development of the 60% Pipeline Opinion of Probable Constriction Cost (OPCC) will be completed under this task. The 60% Pipeline OPCC will be provided to the District for review approximately two (2) weeks after the 60% Pipeline plans and specification submittal. This cost estimate will be consistent with the Association for the Advancement of Cost Engineering (AACE) International Class 2 estimate with an accuracy range of +20 percent to -15 percent of the actual project cost.

8.03 - Conduct 60% Pipeline Review Meeting

A design review meeting will be conducted to discuss the 60% Pipeline plans and specification submittal and any questions that the District may have after the review period. It is assumed that the District will require two (2) weeks for the review period.

8.04 - Develop 90% Pipeline Submittal Package

Development of a 90% Pipeline document submittal will be completed under this task. Review comments from the 60% design review will be incorporated into the design and response to comments log will be developed and provided to the District. One pdf of the plans (full-size), plans (half-size), and specifications will be provided to the District for review.

8.05 - Develop 90% Pipeline Opinion of Probable Construction Cost (OPCC)

Development of the 90% Pipeline Opinion of Probable Constriction Cost (OPCC) will be completed under this task. The 90% Pipeline OPCC will be provided to the District for review approximately two (2) weeks after the 90% Pipeline plans and specification submittal. Review comments from the 60% design review of the Pipeline OPCC will be incorporated and response to comments log will be developed and provided to the District. This cost estimate will be consistent with the Association for the Advancement of Cost Engineering (AACE) International Class 2 estimate with an accuracy range of +20 percent to -15 percent of the actual project cost.

8.06 - Conduct 90% Pipeline Review Meeting

A design review meeting will be conducted to discuss the 90% Pipeline plans and specification submittal and any questions that the District may have after the review period. It is assumed that the District will require two (2) weeks for the review period.

8.07 - Develop 100% (FINAL) Pipeline Submittal Package

Development of a 100% (FINAL) Pipeline document submittal will be completed under this task. Review comments from the 90% design review will be incorporated into the design and response to comments log will be developed and provided to the District. One pdf of the plans (full-size), plans (half-size), and specifications will be provided to the District for review.

8.08 - Develop 100% (FINAL) Pipeline Opinion of Probable Construction Cost (OPCC)

Development of the 100% (FINAL) Pipeline Opinion of Probable Constriction Cost (OPCC) will be completed under this task. The 100% (FINAL) Pipeline OPCC will be provided to the District for review approximately two (2) weeks after the 100% Pipeline plans and specification submittal. Review comments from the 90% design review of the Pipeline OPCC

will be incorporated and response to comments log will be developed and provided to the District. This cost estimate will be consistent with the Association for the Advancement of Cost Engineering (AACE) International Class 1 estimate with an accuracy range of +15 percent to -10 percent of the actual project cost.

Task 8 Deliverables:

- 60% Pipeline Submittal package. (PDF - Full size (22x34))
- 60% Pipeline Submittal package. (PDF - Half size (11x17))
- 60% Pipeline Review Meeting agenda and materials.
- 60% Pipeline Review comment response log.
- 90% Pipeline Submittal package. (PDF - Full size (22x34))
- 90% Pipeline Submittal package. (PDF - Half size (11x17))
- 90% Pipeline Review Meeting agenda and materials.
- 90% Pipeline Review comment response log.
- 100% (Final) Pipeline Submittal package. (PDF - Full size (22x34))
- 100% (Final) Pipeline Submittal package. (PDF - Half size (11x17))

Task 8 Assumptions:

- Pipeline to be designed as:
    - Total approximately 13.2 miles in length.
    - Diameter of 36-inches.
- District 60% Pipeline review period to be two (2) weeks.
- District 90% Pipeline review period to be two (2) weeks.
- Review meetings to be in person and held at District offices.

TASK 9 - DEVELOP PUMP STATION CONSTRUCTION DOCUMENTS (PACKAGE NO. 2)

9.01 - Develop 60% Pump Station Submittal Package

Development of a 60% Pump Station document submittal will be completed under this task. One PDF of the plans (full-size), plans (half-size), and specifications will be provided to the District for review.

9.02 - Develop 60% Pump Station Opinion of Probable Constriction Cost (OPCC)

Development of the 60% Pump Station Opinion of Probable Constriction Cost (OPCC) will be completed under this task. The 60% Pump Station OPCC will be provided to the District for review approximately two (2) weeks after the 60% Pump Station plans and specification submittal.

9.03 - Conduct 60% Pump Station Review Meeting

A design review meeting will be conducted to discuss the 60% Pump Station plans and specification submittal and any questions that the District may have after the review period. It is assumed that the District will require two (2) weeks for the review period.

9.04 - Develop 90% Pump Station Submittal Package

Development of a 90% Pump Station document submittal will be completed under this task. Review comments from the 60% design review will be incorporated into the design and response to comments log will be developed and provided to the District. One pdf of the

plans (full-size), plans (half-size), and specifications will be provided to the District for review.

9.05 - Develop 90% Pump Station Opinion of Probable Constriction Cost (OPCC)

Development of the 90% Pump Station Opinion of Probable Constriction Cost (OPCC) will be completed under this task. The 90% Pump Stations OPCC will be provided to the District for review approximately two (2) weeks after the 90% Pump Station plans and specification submittal. Review comments from the 60% design review of the Pump Stations OPCC will be incorporated and response to comments log will be developed and provided to the District.

9.06 - Conduct 90% Pump Station Review Meeting

A design review meeting will be conducted to discuss the 90% Pump Station plans and specification submittal and any questions that the District may have after the review period. It is assumed that the District will require two (2) weeks for the review period.

9.07 - Develop 100% (FINAL) Pump Station Submittal Package

Development of a 100% (FINAL) Pump Station document submittal will be completed under this task. Review comments from the 90% design review will be incorporated into the design and response to comments log will be developed and provided to the District. One pdf of the plans (full-size), plans (half-size), and specifications will be provided to the District for review.

9.08 - Develop 100% (FINAL) Pump Station Opinion of Probable Constriction Cost (OPCC)

Development of the 100% (FINAL) Pump Station Opinion of Probable Constriction Cost (OPCC) will be completed under this task. The 100% (FINAL) Pump Station OPCC will be provided to the District for review approximately two (2) weeks after the 100% Pipeline plans and specification submittal. Review comments from the 90% design review of the Pump Station OPCC will be incorporated and response to comments log will be developed and provided to the District.

Task 9 Deliverables:

- 60% Pump Station Submittal package. (PDF - Full size (22x34))
- 60% Pump Station Submittal package. (PDF - Half size (11x17))
- 60% Pump Station Review Meeting agenda and materials.
- 60% Pump Station Review comment response log.
- 90% Pump Station Submittal package. (PDF - Full size (22x34))
- 90% Pump Station Submittal package. (PDF - Half size (11x17))
- 90% Pump Station Review Meeting agenda and materials.
- 90% Pump Station Review comment response log.
- 100% (Final) Pump Station Submittal package. (PDF - Full size (22x34))
- 100% (Final) Pump Station Submittal package. (PDF - Half size (11x17))

Task 9 Assumptions:

- Assumes only Pump Station “A” will be included in the final design.

- Pump station to be designed as:
    - Initially 10.4 million gallons per day (mgd)
    - Buildout of 30.0 mgd in the future.
- One (1) 1.0 to 1.5 million gallon tank to be required.
- District 60% Pump Station review period to be two (2) weeks.
- District 90% Pump Station review period to be two (2) weeks.
- Review meetings to be in person and held at District offices.

TASK 10 - PIPELINE BID PHASE SERVICES (PACKAGE NO. 1)

10.01 - Attend Pre-Bid Meeting

Under this task Consultant will attend a pre-bid meeting for the Pipeline Project (Package No. 1) to answer questions and discuss overall project intent. The District will facilitate this meeting and issue meeting minutes.

10.02 - Answer Bidder Questions/Provide Addendums

This task includes providing assistance, to the District during the bidding period of the Pipeline Project (Package No. 1). The scope of work includes responding to bidders' questions, preparing addenda to the contract documents during the advertisement period, and providing ongoing consultation and interpretation of the construction documents.

10.03 - Develop Conformed Documents

Following the bid period for the Pipeline Project (Package No. 1), Consultant will prepare conformed construction documents (plans and specifications) and provide copies to the District for use during construction.

Task 10 Deliverables:

- Pre-Bid meeting agenda
- Addenda materials (As required). (PDF)
- Conformed documents. (PDF)

Task 10 Assumptions:

- Pre-Bid meeting to be in-person and held at District offices.
- Meeting minutes to be developed by District and reviewed by the Consultant.
- District to pay any encroachment permit fees (if required).
- Total of three (3) addenda.

TASK 11 - PUMP STATION BID PHASE SERVICES (PACKAGE NO. 2)

11.01 - Attend Pre-Bid Meeting

Under this task Consultant will attend a pre-bid meeting for the Pump Station Project (Package No. 2) to answer questions and discuss overall project intent. The District will facilitate this meeting and issue meeting minutes.

11.02 - Answer Bidder Questions/Provide Addendums

This task includes providing assistance, to the District during the bidding period of the Pump Station Project (Package No. 2). The scope of work includes responding to bidders'

questions, preparing addenda to the contract documents during the advertisement period, and providing ongoing consultation and interpretation of the construction documents.

11.03 - Develop Conformed Documents

Following the bid period for the Pump Station Project (Package No. 2), Consultant will prepare conformed construction documents (plans and specifications) and provide copies to the District for use during construction.

Task 11 Deliverables:

- Pre-Bid meeting agenda
- Addenda materials (As required). (PDF)
- Conformed documents. (PDF)

Task 11 Assumptions:

- Pre-Bid meeting to be in-person and held at District offices.
- Meeting minutes to be developed by District and reviewed by the Consultant.
- District to pay any encroachment permit fees (if required).
- Total of five (5) addenda.