



Memorandum

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

Reviewed by: 

Date: 3/12/21

General Manager

DATE: March 15, 2021
TO: General Manager
FROM: Director of Engineering & Compliance - District Engineer
SUBJECT: Approve Proposal for Professional Engineering Services from Kennedy Jenks Consultant, Inc. of San Francisco, CA in the amount of \$117,026 for the Monterey One Water (M1W) and Monterey Regional Waste Management District (MRWMD) Electrical Connection Final Design and Bidding Phases

RECOMMENDATION: That the Board authorize the General Manager to execute a contract with Kennedy Jenks of San Francisco, CA in the amount of \$117,026 for the Monterey One Water (M1W) and Monterey Regional Waste Management District (MRWMD) Electrical Connection Final Design and Bidding Phases.

BACKGROUND

Providing renewable energy that is generated by the District's Landfill Gas to Energy (LFGTE) to public water treatment facilities, be it the proposed desalination plant by California American Water or the Advanced Water Filtration Plant (AWPF) by Monterey 1 Water (M1W), has been under discussion with the Board on the order of a decade now. In March 2016 the M1W and MRWMD Boards authorized the execution of an agreement for the District to provide a minimum of 1.8 megawatts (MW) of power to the AWPF at rates generally defined to equal to PG&E Industrial Rate Schedule, E-20 Primary Firm, Winter Part-Peak Energy plus a customer metering charge of \$1,000 per month. The District would also provide an easement across District property to M1W for the purposes that M1W would design, build, own, operate, and maintain the electrical transmission and controls infrastructure for the electrical connection to the AWPF.

Following commissioning and startup activities in 2019, the AWPF began drinking water production supply to the groundwater basin in February 2019. Prior to that, M1W retained Kennedy Jenks Consultants of San Francisco CA to prepare the design and bid documents for the MRWMD-to-M1W electrical connection. The project design for the electrical connection infrastructure was completed and put out for construction bidding on two different occasions, the most recent being April 2020. Due to a variety of reasons, very little response to both bid solicitations was received by M1W and the bids received were over the project cost estimates and approved budget. M1W subsequently put the project on hold at that time.

In the Fall of 2020, the District and M1W decided to switch roles on the project whereby the District would take the lead role and M1W would take a support role on delivering the project for both agencies. The District subsequently authorized Kennedy Jenks Consultants to assess the potential for value engineering design modifications and specification improvements. Their findings are presented in the attached Technical Memorandum dated March 11, 2021 and indicate the potential for cost savings through value engineering design modifications of the electrical transmission alignment and removal of several 'sole source' requirements for several switchgear, protective relay,

and control equipment. Their attached proposal for engineering services dated March 11, 2021 is the subject of this agenda item and is presented by staff for consideration of approval by the Board.

DISCUSSION

M1W constructed the AWPf as a part of the Pure Water Monterey Program and is currently served by a primary electrical connection with PG&E. The design of the MRWMD to M1W electrical connection would allow for both District power and PG&E power to flow across the private transmission line to the AWPf. This proposed private connection would become the primary electrical source to the AWPf and would cause the existing primary connection point with PG&E to become a secondary electrical service available in case of outages to the District's LFGTE facility. The proposed interconnection service falls under PG&E's Rule 21 and was previously submitted to their EGI department under application #112415 as part of Kennedy Jenk's work for M1W.

The AWPf has a Design Demand power usage on the order of 2.5 MW and is planned as a medium voltage 21kV transmission line. The Actual Demand power usage, based on historical data taken from March 2020 through February 2021, is approximately 1.2 MW for the advanced treatment of approximately 3.5 million gallons per day (mgd). At the AWPf's Phase I full capacity of 5 mgd, the Actual Demand power usage is expected to be on the order of 1.8 to 2 MW. This closely aligns with the 1.8 MW cited in the 2016 agreement between MRWMD and M1W for the minimum amount of renewable energy to be delivered by the District.

With MRWMD taking the project lead, the District requested that Kennedy Jenks perform value engineering assessments on the project design to evaluate modifications and optimizations to reduce project cost. Their attached technical memorandum summarizes the design changes that were investigated during the value engineering phase and their recommendations to the District for final modifications of the project design. Their attached proposal outlines the design and bidding phase engineering services to be provided to accomplish the design modifications.

As part of the project handoff to the District, both parties recognized that the delivery of the project by the District represents a significant change to that agreed to in the 2016 agreement for the electrical connection. The District has offered to deliver the project inclusive of final design, bidding, and construction as part of its lead role on the project. Prior bidding on the project indicated that construction costs were on the order of \$2.3 - \$2.5 million dollars. The two agencies are discussing the impacts of this change in lead role and are anticipating the need to modify the existing agreement. Possible changes to the ownership of the infrastructure, the party responsible for the infrastructure O&M, and the electrical rates are the main elements being discussed by the two agencies. Defining how the District is appropriately compensated for delivering the project (capital investment), and any other transfer of responsibility as a change of the 2016 agreement, is central to our discussions. Since these discussions will likely result in a change to the 2016 agreement, it will be necessary to bring such changes to the both agency's Boards for approval in the near future. Since a new agreement is not available at this time, staff is requesting the Board to approve engineering services in advance of a new agreement and for the purpose of advancing the design and limiting further delays on the project schedule.

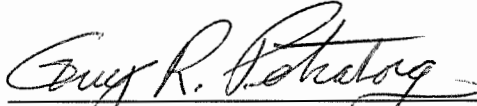
FINANCIAL IMPACT

Staff is requesting that the Board approve a contract with Kennedy Jenks of San Francisco, CA in the amount of \$117,026 for the Final Design and Bidding Phases of the electrical connection project. It is anticipated that 55-75% of this engineering cost will be incurred in the current fiscal year and the balance in the subsequent fiscal year starting July 1st. Funds for the engineering services were included in the mid-year revision to the FY2020/21 budget.

The 2016 agreement between the agencies indicates an improvement in the price of electricity sold by the District and that the District would realize financial benefits that will exceed the costs of generating power. The existing agreement indicates that electrical rates would be \$0.10 per kilowatt-hour (kwh) and greater. Compare those rates to the approximate \$0.04/kwh that the District has been receiving in recent times and the average cost of about \$0.16/kwh that has been experienced by M1W during the first year of AWPf operation. Should the two agencies subsequently agree to change the agreement such that the District will design, build, own, operate, and maintain the new 21kV medium voltage equipment and transmission line, than it is anticipated that the compensation to the District commensurate with that change will be made accordingly and that a capital recovery period of on the order of 5 to 7 years would be realized by the District. These represent sufficient benefits to the District for the Board to base its decision to approve professional engineering services for Kennedy Jenks at this time.

CONCLUSION

The renewable energy electrical connection between the District's LFGTE facility and M1W's AWPf facility for the production of drinking water will have multiple benefits to the communities served by the two agencies in addition to the long-term sustainable operations of both facilities. In order to accomplish those benefits it is necessary to complete the value engineering design, specifications, and bid documents for the project. Staff therefore recommends that the Board authorize the General Manager to execute a contract with Kennedy Jenks of San Francisco, CA in the amount of \$117,026 for the Monterey One Water and Monterey Regional Waste Management District Electrical Connection Final Design and Bidding Phases.


Guy R. Petrabor, P.E., G.E.

Attachments

11 March 2021

Technical Memorandum

To: Guy Petraborg, P.E., G.E.

From: Zach Devlin, P.E., Alex Page, P.E.

Reviewed By: Todd Reynolds, P.E.

Subject: MRWMD to AWPf Medium Voltage System - Value Engineering Technical
Memorandum
K/J 2168003*00

Background

The property adjacent to the Monterey Regional Waste Management District (District) is the Monterey One Water (M1W) regional wastewater treatment facility. M1W has recently completed the construction of a new onsite Advanced Water Purification Facility (AWPF). The AWPf was constructed as a part of the Pure Water Monterey Program. The initial source of power for the AWPf was provided by PG&E.

The AWPf demand power usage is approximately 1.2 MW when treating approximately 3.5 million gallons per day (mgd). This is based on historical data taken from March 2020 through February 2021. At the full capacity of 5 mgd, power usage is expected to be approximately 1.8 to 2 MW. The District and M1W have entered into an agreement for the District to provide power to the AWPf from the District's co-generation system. The long-term energy supply for the AWPf would come from the District.

Kennedy Jenks designed a medium voltage (MV) interconnection service between the District and AWPf, as a part of the Pure Water Monterey Program. The interconnection service falls under PG&E's Rule 21 and was submitted to their EGI department under application #112415. The current design completed by Kennedy Jenks in March 2020 complies with the Rule 21 requirements and has been approved for construction by PG&E. The project was publicly bid in April of 2020; however, due to several factors, the bids came in higher than expected and the project was put on hold by M1W.

The project is now being led by Monterey Regional Waste Management District with M1W in a support role. The District has requested that Kennedy Jenks perform value engineering on the project design to evaluate modifications and optimizations to reduce project cost. This technical memorandum summarizes the design changes that were investigated during the value engineering phase and Kennedy Jenks' recommendations.

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MRWMD to AWPf Medium Voltage System Project

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Design Optimizations

Eliminate Sole Sourcing Requirements

The original design included sole-source requirements for several electrical and controls equipment. The project equipment was evaluated, and it was determined that the following equipment do not need to be sole sourced for project bidding and delivery.

Switchgear

The design includes 21kV switchgear, which consists of several metal-enclosed compartments with circuit breakers to connect the WMD electrical system to the PG&E system and to the AWPf facility. The switchgear originally was specified to be manufactured by Eaton, with no equal allowed. There are multiple manufacturers that can provide switchgear of similar functionality and quality, including Schneider Electric, Siemens, and ABB. By opening up the specification to allow other manufacturers, more competitive pricing may be achieved. Kennedy Jenks recommends removing the sole sourced requirements from the project Contract Documents.

Metering Equipment

The design includes power metering components to be installed in the switchgear to measure the power flow between the WMD and AWPf facilities to allow for accurate billing. The metering equipment was specified to be by Schweitzer Engineering Labs (SEL). Bids revealed that SEL's pricing was substantially higher than anticipated, which resulted in increased project cost.

There are numerous manufacturers that could provide equipment that would perform the required functions. Revenue class power meters are available from Eaton, Schneider, Siemens, and other switchgear manufacturers. It is recommended that the metering equipment be provided by the same manufacturer as the switchgear under a single scope of supply. The meters would be factory-wired and covered by the switchgear manufacturer's warranty, compatibility would be ensured, and startup and testing would be made easier.

Protective Relaying

While low voltage electrical systems typically utilize entirely self-contained circuit breakers to protect the electrical system, medium voltage circuit breakers such as those in the proposed 21kV switchgear rely on auxiliary devices to control their system protection functions. These auxiliary protective relays allow tripping and closing of circuit breakers based on precise current, voltage, and time delay characteristics. In the original design, these protective relays were specified to be by SEL. The District currently utilizes SEL relays in other equipment on site, and SEL is an industry standard for this type of equipment, though the protective relaying functionality is not proprietary and other manufacturers such as GE Multilin and Beckwith would be able to provide functionally equivalent products. The cost of the protective relays was not a

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significant factor in the higher-than-expected bids received, though some cost savings would likely still be realized by opening up the specification to other manufacturers for competitive bidding.

Control Equipment

The design includes a control system that receives inputs from the power metering and protective relay devices to monitor the system status, log power consumption information, and annunciate alarms to the facility operators. The control system and associated programming could be procured separately from the switchgear. The control system will communicate with the metering and with the District's existing SCADA system via a communication protocol such as ethernet. It will be necessary to verify what communications protocol is used by the District's existing cogen control system to ensure that the specified equipment is capable of interfacing with it in order to successfully report consumption data to the District. Provided this compatibility is ensured, numerous manufacturers would be able to provide acceptable equipment, such as Rockwell Automation (Allen-Bradley), and Schneider Electric (Modicon). It is recommended that a performance specification be developed for this system. The specification would list the functional requirements and a detailed implementation plan would be left up to the equipment vendor.

A summary of these recommendations is shown on Figure 1 below.

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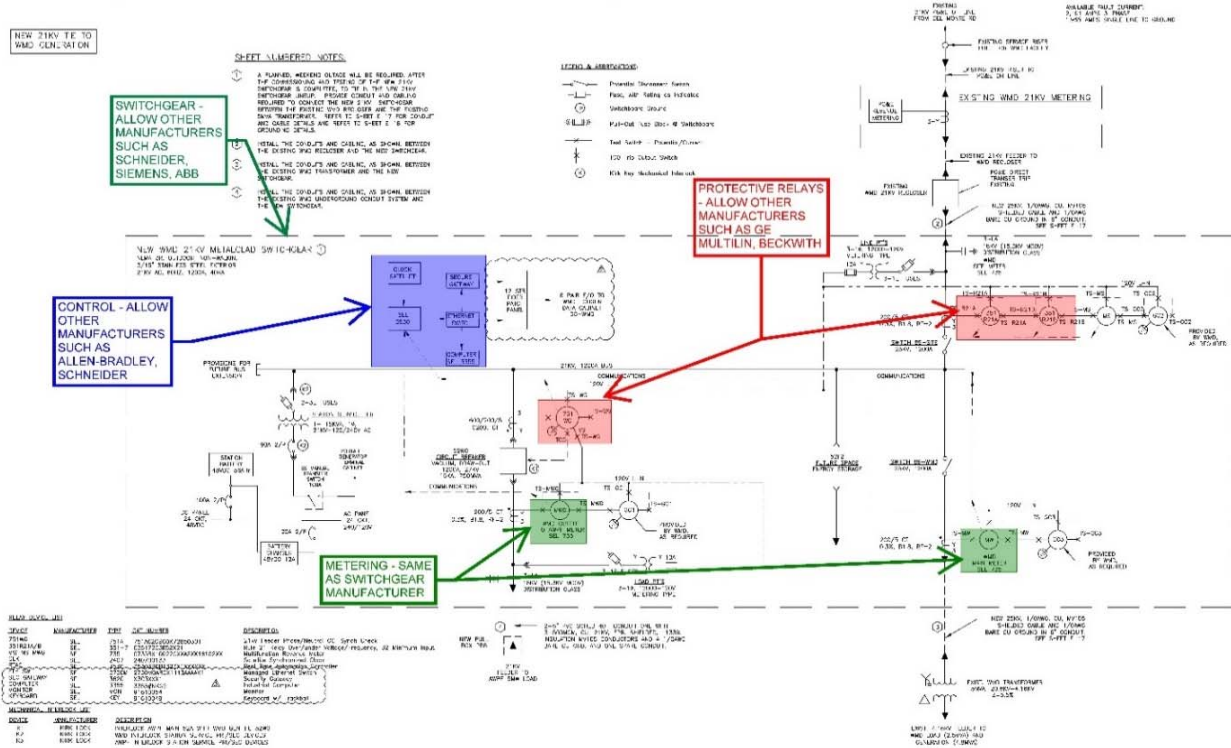


Figure 1: Single line diagram with systems that would be competitively bid

Optimize Alignment of Overhead Line

The original design included a new 21kV feeder from the proposed switchgear to the AWPf facility consisting of a combination of underground duct bank, and overhead powerline. Shown in Figure 2 below, the first half of the 21kV feeder will be installed underground in an existing duct bank (shown in grey). This existing underground infrastructure available to install the 21kV ends near District’s on-site gas station. At this point new infrastructure needs to be installed to complete the MV connection between the District and AWPf.

Kennedy Jenks’ original design shows the second half of the MV power distribution line installed to the west of the west of the truck yard. This will be referred to as “Alignment A”. During the Value Engineering process, the District informed Kennedy Jenks that there is an unused overhead PG&E alignment to the east of the truck yard. The District requested this alignment be considered as a potential alignment for the MV power transmission. The unused PG&E alignment will be referred to as “Alignment B”.

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Alignment B's advantages over Alignment A are:

- Requires little to no new underground construction. This is expected to reduce project costs and avoid unknown utility conflicts.
- Is located away from heavy on-site traffic at the composting facility.
- Has the potential to reuse the PG&E power poles that are in place but unused.

Kennedy Jenks recommends the design be revised to show Alignment B for the MV power transmission. This alternative routing is expected to reduce overall project costs. The District and a third-party consultant are investigating the potential to get PG&E approval to reuse their power poles on-site. It is unclear at this time if PG&E will provide this approval in a reasonable amount of time. However, to continue the project's progress new poles can be installed adjacent to the existing PG&E poles outside of the existing PG&E easement.

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Figure 2 – Proposed Power Line Alignment Alternatives

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Summary of Design Changes

Based on the above evaluations completed during the value engineering phase, Kennedy Jenks recommends the following design elements be revised and incorporated into the final contract documents for the District-to-AWPf Medium Voltage System Project.

1. Remove sole source requirements from the switchgear specification (includes metering equipment).
2. Remove sole source requirements from the protective relay equipment specification.
3. Remove sole source requirements from the control equipment specification.
4. Revised the medium voltage distribution line to follow Alignment B discussed above, contingent upon PG&E participation and abandoning their easement along this alignment.

Kennedy Jenks anticipates incorporating the above changes into the project design will reduce overall project cost.

11 March 2021

Mr. Guy Petraborg P.E., G.E.
Director of Engineering & Compliance
Monterey Regional Waste Management District
14201 Del Monte Blvd.
P.O. Box 1670
Monterey County, CA 93933-1670

Subject: Proposal for Professional Engineering Services for
Final Design, and Bidding Phase Services
District-to-AWPF Medium Voltage (21kV) System

Dear Mr. Petraborg:

In accordance with our discussions, Kennedy Jenks is submitting this proposal for engineering services to finalize the design of the medium voltage (21kV) electrical service from the Monterey Regional Waste Management District (District) to the Monterey One Water (M1W) Advanced Water Purification Facility (AWPF). This proposal also includes support to assist the District Staff to publicly bid the project, and assist in coordinating with PG&E for this medium voltage (21kV) system.

Project Background

The property adjacent to the District is the Monterey One Water (M1W), regional wastewater treatment facility. M1W has recently completed the construction of a new Advanced Water Purification Facility (AWPF). The AWPF was constructed as a part of the Pure Water Monterey Program. The power for the AWPF was initially provided through a medium voltage connection to PG&E.

The AWPF uses approximately 1.1 MW of energy when operating at 3.3 million gallons per day (mgd) and is expected to use approximately 1.8 or more when operating at 5 mgd capacity. The District and M1W have entered into an agreement for the District to provide power to the AWPF from the District's co-generation system. The long-term energy supply for the AWPF would primarily come from the District with additional demands being met by PG&E through the District service.

Kennedy Jenks designed a medium voltage (MV) interconnection service between the District and AWPF, as a part of the Pure Water Monterey Program. The interconnection service falls under PG&E's Rule 21 and was submitted to their EGI department under application #112415. The current design completed by Kennedy Jenks in March 2020 complies with the Rule 21 requirements and has been approved for construction by PG&E. The project was publicly bid

in April of 2020; however, due to a number of factors, the bids came in higher than expected and the project was put on hold by M1W.

Kennedy Jenks understands that the bidding, construction, and PG&E coordination of this project will now be funded and led by the District. As part of the process for the District to take over and lead the project, Kennedy Jenks worked with the District to evaluate value engineering recommendations and the potential for an alternative alignment for the project. The value engineering process focused on removing “sole source” requirements for several components; this should help provide more competitive bidding for the project. The District also identified a potential alternative alignment for the power line that could take advantage of a recently de-commissioned PG&E powerline and easement. This new alignment could potentially reduce the project cost and would be a preferred alignment for District site considerations. These changes are expected to be incorporated into the final design and contract documents.

The purpose of this proposal is to finalize the District-to-AWPF 21kV System design based on recommendations during the value engineering and alignment evaluation process and prepare the contract documents for public bidding and construction. This proposal includes the following overall services that are described in more detail below:

- Preparation of final contract documents for the District-to-AWPF MV System project.
- Support to the District during the public bidding of the District-to-AWPF MV Project.
- Provide as-needed support to the District for coordination with PG&E for the District-to-AWPF MV System.

Project Assumptions

The Projects scope of services is based on the following overall assumptions. Additional clarifying items and assumptions are discussed in the specific scope Tasks and Sub-Tasks below.

- The recommendations made during the value engineering and alignment review process will be incorporated into the final contract documents. Otherwise, the major elements of the project will remain similar to the March 2020 design.
- The M1W Division 0 Procurement and Contracting section of the contract documents will be replaced with new Division 0 Procurement and Contracting documents.
- The District will be responsible for advertising, distributing contract documents to prospective bidders, and managing the public bidding process.

Scope of Services

Kennedy Jenks proposes the following scope of services task structure for professional services for the District-to-AWPF MV Electrical System:

- Task 1: Project Management During Design
- Task 2: Finalize Design and Contract Documents
- Task 3: Bid Phase Services
- Task 4: Support with PG&E Coordination During Design

Task 1 – Project Management

Subtask 1.1 – Project Management

Kennedy Jenks will perform project management activities to ensure adherence to the project schedule and budget and provide communication and coordination with District staff and team members. The project management services are assumed to be over approximately four (4) months to include final design, and project bidding.

Kennedy Jenks will prepare project updates consisting of bi-weekly conference calls and monthly project status reports to the District. The updates and status reports will identify and discuss project issues, coordination efforts, critical path items, action items, schedule, budget, and other items of concern.

Deliverables:

- Monthly Project Status Report and invoice (one PDF copy)

Subtask 1.2 – Provide Quality Assurance/Quality Control

Kennedy Jenks will provide quality assurance and quality control (QA/QC) reviews throughout the course of this project consistent with Kennedy Jenks' policies. Our QA/QC and quality management procedures establish and maintain a structure for providing reviews of all work products and adherence to industry design standards.

QA/QC activities are integrated into Kennedy Jenks' project management system from project inception, through execution of final document submission. Kennedy Jenks uses experienced senior staff, familiar with, but not directly involved in the project work, to provide QA/QC review

of work products and project deliverables. All deliverables will be assigned to and reviewed by a designated and qualified quality reviewer prior to submittal to the District.

Task 2 – Finalize Design and Contract Documents

The design of the District-to-AWPF MV Project will be updated to include recommendation from value engineering and for the alternative alignment evaluation process. Services to the District under this task include:

- Incorporate recommended changes to the design and finalize the design drawings and technical specifications.
- Preparation of new Division 0 Contract Documents based on the District's Division 0 template documents.
- Preparation of Final Contract Documents and Drawings for public bidding.

Subtask 2.1 Finalize Design Drawings

Kennedy Jenks will incorporate the value engineering and design comments into the District-to-AWPF contract drawings and technical specifications. Revised 100% documents will be submitted to the District for review.

Deliverables:

- Revised 100% Drawings for review (one half-size (11"x17") PDF)
- Revised 100% Division 1 and Technical Specifications for review (one PDF copy, word documents of individual sections)

Subtask 2.2 Prepare New Division 0 Contract Documents

The current Division 0 procurement and contracting documents are from M1W and include requirements related to the Pure Water Monterey program. Because the District is now leading and funding the project, the Division 0 documents need to be changed.

Kennedy Jenks will work with the District to prepare the Division 0 Contract Documents based on the District's standard documents. The District will provide their Division 0 Documents in word format for Kennedy Jenks to update and insert text sections.

The previous Division 1 General Requirements will be updated for the current project.

Kennedy Jenks will submit the new Division 0 and 1 documents to the District for review.

Deliverables:

- New Division 0 Contract Documents for review (one PDF copy, word documents of individual sections)

Subtask 2.3 Submit Final Contract Drawings and Specifications

Kennedy Jenks will incorporate review comments received from the District on the revised 100% drawings, technical specifications and Division 0 and 1 documents, and prepare final signed and stamped technical drawings and specifications for public bidding of the District-to-AWPF Medium Voltage System.

Deliverables:

- Final stamped and signed Contract Drawings Submittal (half-size (11"x17") drawings, one PDF copy; electronic copy of drawings in AutoCAD)
- Final stamped and signed Contract Documents and Technical Specifications Submittal (one PDF copy; one editable electronic copy in Microsoft word)

Task 3 – Bid Phase Services

Kennedy Jenks understands that the District will be responsible for advertising, printing hard copies and/or electronically distributing contract documents to prospective bidders, organizing the Bid Period meetings, receiving questions regarding the bid documents and managing the public bidding process.

Kennedy Jenks will provide support for the bid phase of the project. These services include:

Subtask 3.1– Pre-Bid Meeting Attendance

Due to likely COVID restrictions during the bid period, this proposal assumes that there will be two (2) pre-bid meetings: one virtual pre-bid meeting to discuss the project and contractual requirements, and one site visit at the District and AWPF sites where the work will be accomplished. Kennedy Jenks and their electrical subconsultant, EMP, will attend both meetings. Kennedy Jenks will provide technical information and answer questions from Contractors. Kennedy Jenks will take note of all questions asked in the two pre-bid meetings. Kennedy Jenks will give a tour of the project at both the AWPF and District Site during the site visit. Kennedy Jenks will prepare an agenda and presentation to assist the District with holding the Pre-Bid Meeting for the project.

Deliverables:

- Mandatory Pre-Bid Meeting agenda and presentation (PowerPoint)

Subtask 3.2 – Addenda Period Support

While the project is out to bid, Kennedy Jenks will work with the District to respond to questions from prospective bidders via addendum. This proposal assumes there will be a total of 2 addenda issued, and that the District will issue the addenda to appropriate parties. The addenda will be submitted to the District for review and distribution.

Deliverables:

- (2) Two Addenda Packages

Subtask 3.3 – Bid Opening Meeting and Support

Kennedy Jenks and their electrical subconsultant, EMP, will participate in the bid opening via conference call. Kennedy Jenks will assist the District to review and evaluate the bids for the construction of the project. Kennedy Jenks will prepare a brief memorandum with results of our review and recommendation.

Subtask 3.4- Conformed Document Preparation

After the bidding of the Project is complete and all addenda have been issued, Kennedy Jenks will incorporate the appropriate addenda items and provide the District with the conformed set of Contract Drawings and Technical Specifications. The conformed Contract Documents will show changes made during the bid period by clouding the changes on the drawings, and underline and strike-through of the changes in the specifications.

Deliverables:

- Electronic PDF Copy of the Conformed Contract Drawings
- Electronic PDF Copy of the Conformed Contract Documents and Technical Specifications

Task 4 – Support with PG&E Coordination During Design

Kennedy Jenks, District Staff and M1W Staff have been working to coordinate the approval of the revised District-to-AWPF Rule 21 interconnection. There are two main milestones that remain to be completed with PG&E. These milestones are described further below. Both of these items will require multiple meetings and coordination with the PG&E EGI group and their inspectors. Kennedy Jenks understands that the District has retained a third-party electrical consultant to lead the final coordination efforts with PG&E. Kennedy Jenks and EMP will

provide support to the District Staff and third-party consultant to provide technical information for approval from PG&E to construct and connect the District-to AWPf MV system. These services include:

Subtask 5.1 – Coordination Assistance with PG&E Review and Approval Process

This proposal assumes that the District's third-party consultant will take the lead on communications with PG&E to set up a meeting and coordinate with the appropriate PG&E Staff to obtain approvals from PG&E.

Based on previous experience of working with PG&E, coordinating meetings and scheduling inspections typically takes multiple attempts and meetings. The hours proposed for this subtask provides time for both Kennedy Jenks and EMP to support the District's third-party consultant coordinate and attend meetings with PG&E. Kennedy Jenks Project Manager and EMP will attend two meetings. It is assumed the District's third-party consultant will provide an agenda and meeting minutes for all meetings with P&E.

Kennedy Jenks and EMP will also provide assistance to District's third-party consultant to provide technical information for approval from PG&E to construct and connect the District-to AWPf power system.

A budget allowance of approximately 24 hours from KJ and 12 hours from EMP is provided for this task.

Project Team

Kennedy Jenks will maintain team continuity during the execution of the services herein, under the Project Direction of Todd Reynolds, Project Management of Zach Devlin, and support from Paul Post, our Lead instrumentation and Controls Engineer, and Alex Page, who was the project engineer for the AWPf construction. Our key subconsultant, Rich Jones at Electrical Maintenance Planning Inc, will maintain his medium voltage design and support role from prior work. Technical oversight and QA/QC will be provided by Jeff Mohr.

Estimated Schedule

Our proposal scope and fee estimate assume the following general schedule of activities.

- Design and Contract Document Finalization – May 2021
- Bid Phase Support - June 2021
- Bid Award Date – July 2021

Mr. Guy Petraborg P.E., G.E.
 Monterey Regional Waste Management District
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- NTP Provided to Awarded Contractor – August 2021

Project Budget

The table below shows Kennedy Jenks proposed budget for the District-to-AWPF MV Project. An expanded budget spreadsheet showing the Tasks budgets by sub-task and showing hours and level of effort for Kennedy Jenks Team is attached.

Task	Task Budget , \$
1. Project Management During Design	\$11,800
2. Finalize Design and Contract Documents	\$63,206
3. Bid Phase Service	\$33,534
4. Support with PG&E Coordination During Design	\$8,486
Total	\$117,026

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Closing

The Kennedy Jenks Team is committed to meeting your goals for the District-to-AWPF MV Project and we look forward to continuing our work with you. If you have any questions on this proposal, please call Todd Reynolds at (415) 243-2453 or Zach Devlin at (702) 553-4340.

Very truly yours,
KENNEDY JENKS



Todd K. Reynolds, P.E.
Project Director



Zach Devlin, P.E.
Project Manager

Client: Monterey Regional Waste Management District

Contract/Proposal Date: March 11, 2021

Standard Conditions

January 1, 2017

CLIENT and KENNEDY/JENKS CONSULTANTS, INC. ("CONSULTANT") agree that the following provisions shall be a part of their agreement.

1. **TERMS OF PAYMENT.** CLIENT will be invoiced at the end of the first billing period following commencement of work and at the end of each billing period thereafter. Payment in full of an invoice must be received by CONSULTANT within thirty (30) days of the date of such invoice.
2. **EFFECT OF INVOICE.** The work performed shall be deemed approved and accepted by CLIENT as and when invoiced unless CLIENT objects within fifteen (15) days of invoice date by written notice specifically stating the details in which CLIENT believes such work is incomplete or defective, and the invoice amount(s) in dispute. CLIENT shall pay undisputed amounts as provided for in the preceding paragraph.
3. **INTEREST; SUSPENSION OF WORK.** Failure of CLIENT to make full payment of an invoice so that it is received by CONSULTANT within said thirty (30) days of the date thereof subjects the amount overdue to a delinquent account charge of one percent (1%) of the invoice amount per month, compounded monthly, but not to exceed the maximum rate permitted by law. Failure of CLIENT to submit full payment of an invoice within thirty (30) days of the date thereof subjects this agreement and the work herein contemplated to suspension or termination at CONSULTANT's discretion.
4. **ADVANCE PAYMENT: WITHHOLDING OF WORK PRODUCT.** CONSULTANT reserves the right to require payment in advance for work it estimates will be done during a given billing period. CONSULTANT, without any liability to CLIENT, reserves the right to withhold any services and work products herein contemplated pending payment of CLIENT's outstanding indebtedness or advance payment as required by CONSULTANT. Where work is performed on a reimbursable basis, budget may be increased by amendment to complete the scope of work. CONSULTANT is not obligated to provide services in excess of the authorized budget.
5. **STANDARD OF CARE.** CONSULTANT's services performed under this agreement will be performed in a manner consistent with the care and skill ordinarily exercised by members of the profession practicing under similar conditions at the same time and in the same or similar locality. When the findings and recommendations of CONSULTANT are based on information supplied by CLIENT and others, such findings and recommendations are correct to the best of CONSULTANT's knowledge and belief. No warranty, express or implied, is made or intended by this agreement, or by the foregoing statement of the applicable standard of care, or by providing consulting services or by furnishing oral or written reports of findings made. No entity other than CLIENT or CONSULTANT shall be construed as a beneficiary to this Agreement.
6. **INSURANCE COVERAGE.** CONSULTANT is protected by Worker's Compensation insurance as required by applicable state laws and will maintain employer's liability coverage. During the performance of this agreement CONSULTANT will maintain professional liability insurance with a limit of \$1 million on a claims made, annual aggregate basis, and commercial general liability and automobile liability insurance each with a limit of not less than \$1 million on an occurrence basis.
7. **ALLOCATION OF RISK.** CLIENT and CONSULTANT have discussed the risks associated with this project and the extent to which those risks should be shared by CLIENT and by CONSULTANT, and have agreed:
(a) To the fullest extent permitted by law, CLIENT agrees to limit the liability of CONSULTANT, its officers, employees, and subconsultants to CLIENT, all landowners, contractors, subcontractors, lenders, suppliers, manufacturers, third parties, and their employees such that the total aggregate liability, including all attorneys fees and costs shall not exceed \$50,000.00 or the total fees paid for CONSULTANT's services on this project, whichever is greater. (b) All damages such as loss of use, profits, anticipated profits, and the like losses are consequential damages for which CONSULTANT is not liable. (c) CLIENT shall give written notice to CONSULTANT of any claim of negligent act, error or omission within one (1) year after the completion of the work performed by CONSULTANT. Failure to give notice herein required shall constitute a waiver of said claim by CLIENT.
8. **SERVICES DURING CONSTRUCTION.** Any construction inspection or testing provided by CONSULTANT is for the purpose of determining compliance by contractors with the functional provisions of project documents only. CLIENT agrees that CONSULTANT will have no inspection responsibilities at the jobsite except to the extent specifically provided for in the agreed upon scope of work. CONSULTANT shall not be held in any way to guarantee any contractor's work, nor to assume responsibility for means, methods or appliances used by any contractor nor to assume responsibility for a contractor's compliance with laws and regulations or for contractor's errors, omissions, or defective work. CLIENT agrees that in accordance with generally accepted construction practices, the construction contractor will be required to assume sole and complete responsibility for jobsite conditions during the course of construction of the project, including safety of all persons and property and that this responsibility shall be continuous and not be limited to normal working hours. CLIENT agrees to require in all construction contracts for the project, provisions that CLIENT and CONSULTANT shall be defended and indemnified by the contractor and its subcontractors and named additional insureds on contractor's and subcontractor's insurance. Any statements of estimated construction costs furnished by CONSULTANT are based on professional opinions and judgment, and CONSULTANT will not be responsible for fluctuations in construction costs.
9. **SERVICES BY CLIENT.** CLIENT will provide access to site of work, obtain all permits, provide all legal services in connection with the project, and provide environmental impact reports and energy assessments unless specifically included in the scope of work. CLIENT shall pay the costs of checking and inspection fees, zoning application fees, soils engineering fees, testing fees, surveying fees, and all other fees, permits, bond premiums, and all other charges not specifically covered by the scope of work. CLIENT shall designate to CONSULTANT the location of all subsurface utility lines and other subsurface man-made objects (in this agreement collectively called "buried utilities") within the boundaries of the jobsite. CONSULTANT will conduct at CLIENT's expense such additional research as in CONSULTANT's professional opinion is appropriate to attempt to verify the location of buried utilities at the jobsite, but CLIENT shall remain responsible for the accurate designation of their location and, shall indemnify, defend, and hold CONSULTANT harmless from any claims or loss arising from the failure to accurately locate buried utilities.
10. **COMPLIANCE WITH LAWS.** CLIENT and CONSULTANT shall each use reasonable care in its efforts to comply with laws, codes, ordinances and regulations in force at the time of the performance by each under this agreement, insofar as such laws are applicable to a party's performance. Unless otherwise provided for in the scope of work of this agreement or by law, the responsibility for making any disclosures or reports to any third party, for notifying all governmental authorities of the discovery of hazardous materials on the jobsite, and for taking corrective, remedial, or mitigative action shall be solely that of CLIENT. It is CONSULTANT's belief that the work is not subject to California Prevailing Wage Law, unless expressly identified as such within the scope of work. Should it be alleged or determined that some or all of the work is subject to California's Prevailing Wage Law, then CLIENT shall reimburse CONSULTANT for the additional costs associated with CONSULTANT complying with those laws.
11. **USE OF DOCUMENTS.** Drawings, reports, writings and other original documents (documents) furnished by CONSULTANT are for the exclusive use of CLIENT and CONSULTANT retains all intellectual property rights including copyrights. Documents are furnished to CLIENT upon CLIENT's specific agreement that it assumes all liability resulting from the further distribution of such documents, or any portion of them,

Standard Conditions (Page 2)

January 1, 2017

and that CLIENT will indemnify CONSULTANT and hold it harmless against any claims associated with the unauthorized use of such documents. In no event will CLIENT or any person acting on its behalf edit, abridge, or modify any document prepared by CONSULTANT without CONSULTANT's express written consent.

12. **ELECTRONIC OR MAGNETIC DATA.** Documents provided by CONSULTANT in electronic or magnetic formats are provided under the following conditions unless detailed otherwise in the scope of work or by a written amendment. Documents are provided in CONSULTANT's standard software formats. CLIENT recognizes that electronic or magnetic data and its transmission can be easily damaged, may not be compatible with CLIENT'S software formats and systems, may develop inaccuracies during conversion or use, and may contain viruses or other destructive programs, and that software and hardware operating systems may become obsolete. As a condition of delivery of electronic or magnetic data, CLIENT agrees to defend indemnify and hold CONSULTANT, its subconsultants, agents and employees harmless from and against all claims, loss, damages, expense and liability arising from or connected with its use, reuse, misuse, modification or misinterpretation. In no event shall CONSULTANT be liable for any loss of use, profit or any other damage.
13. **TERMINATION.** This agreement may be terminated by either party by written notice should the other party fail substantially to perform its obligations under this agreement and continue such default after the expiration of a seven (7) day notice period. Either party may terminate this agreement without necessity of cause upon the expiration of a thirty (30) day notice period. If this agreement is terminated by CLIENT in the absence of default by CONSULTANT, CONSULTANT shall be paid for services performed and costs incurred by it prior to its receipt of notice of termination from CLIENT, including reimbursement for direct expenses due, plus an additional amount, not to exceed ten percent (10%) of charges incurred to the termination notice date, to cover services to orderly close the work and prepare project files and documentation, plus any additional direct expenses incurred by CONSULTANT including but not limited to cancellation fees or charges. CONSULTANT will use reasonable efforts to minimize such additional charges.
14. **PRECEDENCE OF CONDITIONS.** Should any conflict exist between the terms herein and the terms of any purchase order or confirmation issued by CLIENT, the terms of these Standard Conditions shall prevail in the absence of CONSULTANT's express written agreement to the contrary.
15. **ASSIGNMENT: SUBCONTRACTING.** Neither CLIENT nor CONSULTANT shall assign any of its rights including a right to sue, or delegate its duties under this agreement without the written consent of the other.
16. **FORCE MAJEURE.** Any delay or default in the performance of any obligation of CONSULTANT under this agreement resulting from any cause(s) beyond CONSULTANT's reasonable control shall not be deemed a breach of this agreement. The occurrence of any such event shall suspend the obligations of CONSULTANT as long as performance is delayed or prevented thereby, and the fees due hereunder shall be equitably adjusted.
17. **MERGER: WAIVER: SURVIVAL.** This agreement constitutes the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations and/or agreements, written or oral. One or more waiver of any term, condition or other provision of this agreement by either party shall not be construed as a waiver of a subsequent breach of the same or any other provision. Any provision hereof which is legally deemed void or unenforceable shall not void this entire agreement and all other provisions shall survive and be enforceable.
18. **APPLICABLE LAW.** This agreement shall be interpreted and enforced according to the laws of the State of California. In the case of invalidity or unenforceability of any provision or portion thereof, the provision shall be rewritten and enforced to the maximum extent permitted by law to accomplish as near as possible the intent of the original provision. Nothing herein shall be construed to provide for indemnification against damages arising from a party's gross negligence or willful misconduct.

Client/Address: Monterey Regional Waste Management District
 14201 Del Monte Blvd.
 P.O. Box 1670
 Monterey County, CA 93933-1670

Contract/Proposal Date: March 11, 2021

Schedule of Charges

January 1, 2021

PERSONNEL COMPENSATION

Classification	Hourly Rate
Engineer-Scientist-Specialist 1	\$135
Engineer-Scientist-Specialist 2	\$165
Engineer-Scientist-Specialist 3	\$190
Engineer-Scientist-Specialist 4	\$205
Engineer-Scientist-Specialist 5	\$220
Engineer-Scientist-Specialist 6	\$245
Engineer-Scientist-Specialist 7	\$275
Engineer-Scientist-Specialist 8	\$295
Engineer-Scientist-Specialist 9	\$310
CAD-Technician	\$130
Senior CAD-Technician	\$145
CAD-Designer	\$160
Senior CAD-Designer	\$175
Project Assistant	\$130
Administrative Assistant	\$110
Aide.....	\$90

In addition to the above Hourly Rates, a four percent Communications Surcharge will be added to Personnel Compensation for normal and incidental copies, communications and postage.

Direct Expenses

Reimbursement for direct expenses, as listed below, incurred in connection with the work, will be at cost plus ten percent for items such as:

- a. Maps, photographs, 3rd party reproductions, 3rd party printing, equipment rental, and special supplies related to the work.
- b. Consultants, soils engineers, surveyors, contractors, and other outside services.
- c. Rented vehicles, local public transportation and taxis, travel and subsistence.
- d. Project specific telecommunications and delivery charges.
- e. Special fees, insurance, permits, and licenses applicable to the work.
- f. Outside computer processing, computation, and proprietary programs purchased for the work.

Reimbursement for vehicles used in connection with the work will be at the federally approved mileage rates or at a negotiated monthly rate.

If prevailing wage rates apply, the above billing rates will be adjusted as appropriate.

Overtime for non-exempt employees will be billed at one and a half times the Hourly Rates specified above.

Rates for professional staff for legal proceedings or as expert witnesses will be at rates one and one-half times the Hourly Rates specified above.

Excise and gross receipts taxes, if any, will be added as a direct expense.

The foregoing Schedule of Charges is incorporated into the agreement for the services provided, effective January 1, 2021 through December 31, 2021. After December 31, 2021, invoices will reflect the Schedule of Charges currently in effect.

CLIENT Name: Monterey Regional Waste Management District
 PROJECT Description: District to AWPf MV
 Proposal/Job Number: B10682019

January 1, 2021 Rates	Eng-Sci-8 - TKR & JRM	Eng-Sci-6 - PP & ZD	Eng-Sci-5 - KJ	Eng-Sci-4 - AP	Eng-Sci-2 - RM	Project Administrator	Total	KJ Labor	Sub EMP, Inc. Fees	KJ Sub-Markup	Total Labor	Total Subs	Total Expenses	Total Labor + Subs + Expenses
Classification:							Hours	Fees	Fees	10%				Fees
Hourly Rate:	\$295	\$245	\$220	\$205	\$165	\$130								
Task 1 - Project Management During Design														
1.1 - Project Management	4	16		4		8	32	\$6,960		\$0	\$6,960	\$0	\$80	\$7,040
1.2 - Quality Assurance / Control	16						16	\$4,720		\$0	\$4,720	\$0	\$40	\$4,760
Task 1 - Subtotal	20	16	0	4	0	8	48	\$11,680	\$0	\$0	\$11,680	\$0	\$120	\$11,800
Task 2 - Finalize Design and Contract Documents														
2.1 - Finalize Design Drawings	4	24		16	16		60	\$12,980	\$17,462	\$1,746	\$12,980	\$19,208	\$150	\$32,338
2.2 - Prepare New Division 0 Contract Documents	2	16		12		4	34	\$7,490		\$0	\$7,490	\$0	\$85	\$7,575
2.3 - Submit Final Contract Documents	2	16		8	16	8	50	\$9,830	\$7,462	\$746	\$9,830	\$8,208	\$625	\$18,663
2.4 - Prepare Revised Opinion of Probable Construction Cost		12		8			20	\$4,580		\$0	\$4,580	\$0	\$50	\$4,630
Task 2 - Subtotal	8	68	0	44	32	12	164	\$34,880	\$24,924	\$2,492	\$34,880	\$27,416	\$910	\$63,206
Task 3 - Bid Phase Services														
3.1 - Pre-Bid Meeting Attendance		8		8	6		22	\$4,590	\$1,750	\$175	\$4,590	\$1,925	\$605	\$7,120
3.2 - Addenda Period Support		12		8	16	4	40	\$7,740	\$4,500	\$450	\$7,740	\$4,950	\$100	\$12,790
3.3 - Bid Opening Meeting and Support		4		4			8	\$1,800	\$600	\$60	\$1,800	\$660	\$20	\$2,480
3.4 - Conformed Document Preparation		4		12	20	4	40	\$7,260	\$2,240	\$224	\$7,260	\$2,464	\$1,420	\$11,144
Task 3 - Subtotal	0	28	0	32	42	8	110	\$21,390	\$9,090	\$3,054	\$21,390	\$9,999	\$2,145	\$33,534
Task 4 - Support with PG&E Coordination During Design														
5.1 - Coordination Assistance with PG&E Review and Approval Process	4	12		8			24	\$5,760	\$2,424	\$242	\$5,760	\$2,666	\$60	\$8,486
Task 5 - Subtotal	4	12	0	8	0	0	24	\$5,760	\$2,424	\$242	\$5,760	\$2,666	\$60	\$8,486
All Phases Total	32	124	0	88	74	28	346	\$73,710	\$36,438	\$3,644	\$73,710	\$40,082	\$3,235	\$117,027

March 19, 2021

MRWMD to AWP Medium Voltage Project

Board Presentation



Project Background

- *Monterey One Water (M1W) recently completed construction of the Advanced Water Purification Facility (AWPF) – February 2020*
- *The AWPF uses 1.1 to 1.8 MW of power*
- *The District has an agreement with M1W to provide energy to the AWPF from the District's co-generation system*
- *An electrical interconnection to provide this power was previously designed and bid by M1W*



Project Background - Current Design



Project Background

- Previous Bid Period
 - First bid in April 2020 at beginning of the COVID-19 pandemic
 - Received 1 bid, higher than anticipated
 - Industry intel indicated large amount of work - so low crew availability
 - Uncertainty due to pandemic
 - Supply chain issues
 - Site Access/Quarantine Requirements
 - Effects on labor availability
 - M1W put project on hold
- Current Status
 - Project is being led by MRWMD
 - M1W is in a support role
 - Update and optimize the design to reduce project cost
 - Expect a more favorable bidding climate

Value Engineering and Potential Design Changes

Next Steps for WMD Lead Project

1. *Evaluate potential design optimizations*
 - a. *Eliminate Sole Sourcing Requirements*
 - b. *Alternative overhead power line routing*
2. *Convert front end specifications from M1W to District Standards*
3. *Produce finalized drawings and specifications*
4. *Publicly bid the Project*
5. *Constructing the improvements*

Value Engineering – Eliminate Sole-Source for Switchgear

- *Original design included sole-sourcing switchgear.*
 - *Eaton*
- *Recommend naming several acceptable manufacturers, including:*
 - *Eaton*
 - *Schneider (Square D)*
 - *Siemens*
 - *ABB*
 - *Or equal*



Value Engineering – Eliminate Sole-Source for Power Metering

- *Original design included sole-sourcing metering equipment.*
 - *Schweitzer (SEL)*
- *Recommend requiring metering equipment by the same manufacturer as that of the switchgear*
 - *ease of startup and testing*
 - *single source responsibility*
 - *ensures compatibility and warranty.*



Value Engineering – Eliminate Sole-Source for Protective Relays

- *Original design included sole-sourcing of protective relays.*
 - *Schweitzer (SEL)*
- *Recommend naming several acceptable manufacturers, including:*
 - *Schweitzer (SEL)*
 - *GE Multilin*
 - *Beckwith*
 - *Or equal*



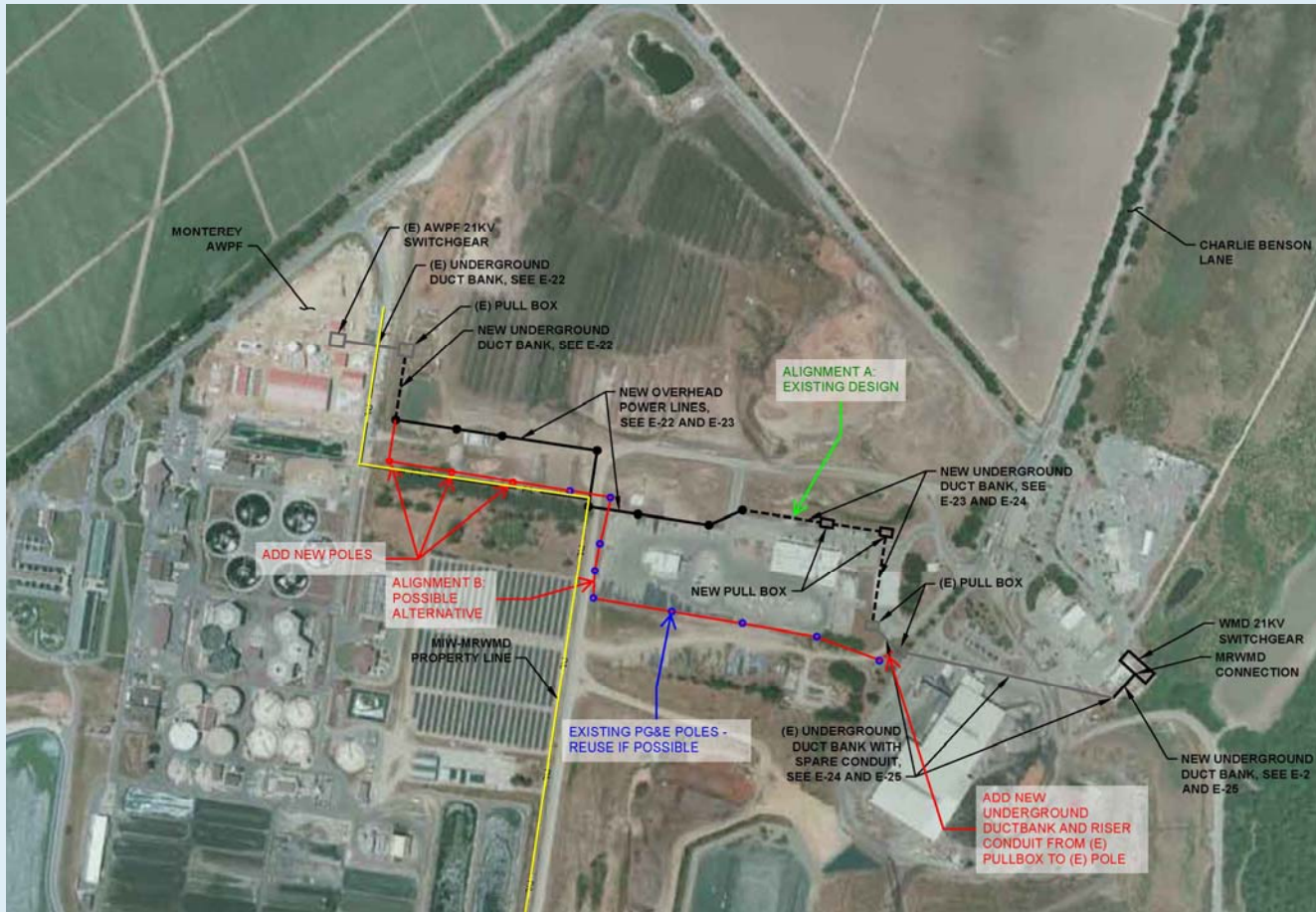
Value Engineering – Eliminate Sole-Source for Control/Programming

- *Original design included sole-sourcing of control system and associated programming.*
 - *Schweitzer (SEL)*
- *Recommend naming several acceptable manufacturers, including:*
 - *Schweitzer (SEL)*
 - *Rockwell Automation (Allen-Bradley)*
 - *Schneider Electric*
 - *Or equal*



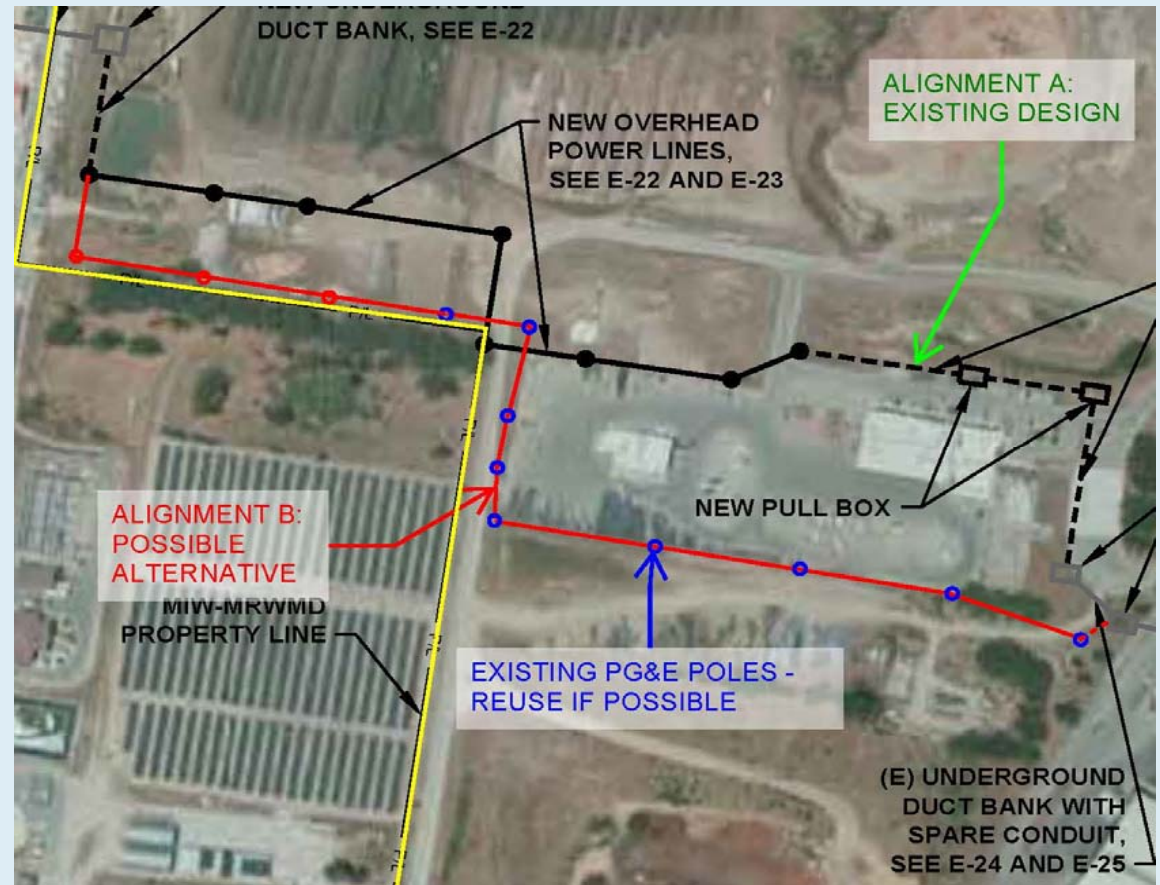
Overhead Power Line Alignment

Overhead Power Line could utilize “unused PG&E alignment”



Benefits of Alternative Overhead Power Line Alignment

- *Less new underground construction*
- *Fewer facility conflicts*
- *Optimize alignment*
- *Potential for reuse of existing PG&E power poles*



Next Steps

Design and Bid Phase Services

- *Kennedy Jenks will assist the District with the following tasks:*
 - *Finalize Design and Contract Documents*
 - *Bid Phase*
 - *Pre-Bid meeting attendance*
 - *Addenda Period Support*
 - *Bid opening meeting/support*
 - *Conformed documents preparation*
 - *As-needed support with PG&E coordination*

Project Schedule and Cost

- *Potential Project Schedule*
 - *Finalize design and contract documents – May 2021*
 - *Bid Phase Support – June 2021*
 - *Bid Award Date – July 2021*
 - *NTP to Awarded Contractor – August 2021*
 - *Project Construction – August 2021 – August 2022*
- *Potential Project Construction Cost*
 - *April 2020 Bid Cost: \$2.4M*
 - *Potential to reduce bid cost through value engineering and optimized alignment*

Q & A

Zach Devlin, P.E.

702-553-4340

ZachDevlin@KennedyJenks.com

