



April 21, 2025

Project No. 24-5-140

Mike Yeraka, P.E.
Projects Manager
Town of Discovery Bay CSD
1800 Willow Lake Road
Discovery Bay, CA 94514

SUBJECT: Scope and Budget for Sand Point Pipeline Replacement Project for Engineering Design, Bidding Support and Construction Services for the Town of Discovery Bay

Dear Mr. Yeraka,

Luhdorff & Scalmanini, Consulting Engineers (LSCE) is pleased to present this detailed work plan, scope, and budget for design and bidding support services for the Sand Point Road Pipeline Replacement Project, including the underwater crossing between Sand Point Court and Newport Lane.

The existing 8-inch underwater pipeline between Sand Point Court and Newport Lane is undersized, creating a hydraulic bottleneck when either the Willow Water Treatment Plant (WTP) or Newport WTP is offline. To enhance system reliability and capacity, the existing pipeline will be replaced with a 12-inch HDPE pipeline section installed via horizontal directional drilling (HDD). Additionally, approximately 3,400 linear feet of asbestos cement (AC) pipe along Sand Point Road - extending from Sand Point Court to the intersection with Discovery Bay Boulevard - will be replaced.

PROJECT UNDERSTANDING

This project involves replacing the existing water main along Sand Point Road, extending from Discovery Bay Boulevard to Sand Point Court, as well as replacing the Newport Bay underwater crossing between Sand Point Court and Newport Lane. The existing water main along Sand Point Road consists of approximately 1,285 feet of 12-inch AC pipe from Discovery Bay Boulevard to River Lake Road, followed by 2,055 feet of 8-inch AC pipe from River Lake Road to Sand Point Court. Additionally, the Newport Bay underwater crossing consists of approximately 620 feet of 8-inch ductile iron and AC pipe, which will be replaced with a new 12-inch HDPE pipeline installed via HDD. See attached project area map. In total, the project will replace approximately 4,000 linear feet of aging pipeline infrastructure to improve hydraulic capacity, and enhance overall distribution reliability in this area of the system.

The Sand Point Pipeline Replacement Technical Memorandum developed by Consor in April 2024 indicates that the proposed alignment for the replacement pipe will be located approximately 7 feet outside of the TODB's existing 10-foot easement. Therefore, TODB will need to secure a new easement from Reclamation District 800 and the landowner on the Sand Point Court side of the project. In this collaborative effort, Consor will be responsible for designing the HDD pipeline alignment, while LSCE will design the connections to the existing pipeline. The existing underwater crossing will be abandoned in place.

The scope of work outlined below includes tasks and subtasks necessary to finalize the Sand Point Road Pipeline Replacement Technical Memorandum, conduct a topographic survey and develop a basemap, design the HDD crossing, and prepare a legal description and plat map, and prepare site plan design drawings/details and technical specifications for the in-street pipeline replacement portion of work. Additional support includes CEQA assistance and bidding assistance. LSCE will provide a separate scope for construction services at a future stage. The proposed work plan has been developed based on our understanding of the TODB's needs and our experience with similar projects, with tasks and subtasks arranged in the order they are expected to be completed.

WORK PLAN

The Scope of Work is outlined in the following tasks:

- Task 1 – Project Coordination, Meetings, and Administration
- Task 2 – Preliminary Pipeline Design Activities
- Task 3 – Pipeline Design Plans and Specifications
- Task 4 – Bidding Assistance
- Task 5 – Construction Services

Task 1. Project Coordination, Meetings, and Administration

Task 1.1. Kickoff

LSCE's work on the project will begin with a kickoff meeting with TODB to discuss a chain of command, project expectations, respective roles and responsibilities, schedule, design preferences and parameters, construction concepts and site constraints at the kick-off meeting.

Task 1.2. Project Coordination, Meetings, and Administration

Key LSCE team members will attend design meetings with the TODB to discuss various aspects of the project through the design and bidding phases of the project. LSCE will also provide frequent updates via email or telephone throughout the project as needed. LSCE assumes a total of approximately six project coordination meetings will occur throughout the anticipated project duration completion date of June 2025. This task also provides project management and administrative activities such as (a) Contractual Arrangements, (b) Ongoing Examination Regarding Adherence to the Scope, Budget, and Schedule, (c) Coordination of Staff Resources, (d) Internal Review of Work Products, (e) Management of Subcontractors, (f) Billing Review, and (g) Scoping and Budgeting.

Task 2. Preliminary Pipeline Design Activities

CEQA

LSCE's subconsultant will develop a project description and assist with the determination of the appropriate CEQA documentation. A CEQA Notice of Exemption for Categorical Exemption Class 2 (replacement) for the project will first be explored. If that is sufficient, a Notice of Exemption (NOE) and supporting memorandum will be prepared. This scope does not include preparation of an Initial Study/Mitigated Negative Declaration. Construction for the HDD portion of the project will be under the

Delta waters and the HDD pits will be within existing disturbed areas (cul-de-sacs). LSCE assumes the Town will pay the filing fee for the NOE with the Contra Costa County Clerk.

Topographic Survey and Basemap

LSCE's surveying subconsultant will develop the requisite AutoCAD topographic basemap of the site for LSCE's and our HDD sub-consultant's use to prepare the engineering design drawings for the project. Completion of a topographic survey basemap in AutoCAD format will be needed for the project site. The base map will be used for the preliminary layout of the pipeline replacement project, development of the easement, legal description, plat maps and for preparing the engineering design drawings.

LSCE's surveying subconsultant will prepare two (2) legal descriptions and accompanying plat maps for the new pipeline alignment. The information will be utilized to obtain new easements from Reclamation District 800 and the impacted landowners on Sand Point Court. LSCE assumes processing/recording will be handled by the TODB.

Bathymetric Survey

LSCE will also work with our subconsultant (Meridian Survey) who will perform a bathymetric survey of the bay along the proposed alignment. The survey will include 25-foot minimum intervals between survey lines. LSCE's subconsultant will develop a contour plot using AutoCAD.

Potholing

LSCE will identify potholing locations and work with a sub-contractor (WR Forde) to perform potholing work along the pipeline alignment and tie-in locations to assist in the development of the design plan and profile drawings and identify potential conflicts that could affect the design and construction of the project. LSCE plans to pothole the existing sewer, storm or other utilities as necessary (in consultation and coordination with the TODB) to obtain the location, depth, materials, and sizes of utilities at mutually agreeable street/road intersections along the pipeline alignment.

LSCE's sub-contractor will coordinate with utility owners (e.g., USA Dig Alert) and also provide basic traffic control services as necessary associated with potholing activities. LSCE's sub-contractor will provide sawcutting and hydro excavation as required to collect data, backfill with sand/pea gravel and place replacement asphalt for each excavated hole to match existing AC thickness.

Potholing will be performed as an allowance-based task, utilizing LSCE's experience with similar projects and coordination with WR Forde to establish pricing. The number of potholes will be determined during preliminary design.

Deliverables:

- Topographic basemap in AutoCAD format and PDF to be used in the design drawings.
- Legal descriptions and accompanying plat maps.
- CEQA Notice of Exemption form and memo.
- Bathymetric Survey – AutoCAD drawing file with sounding lines

- Pothole results summary (tabular data) which includes map of locations, utility types, depths, sizes, and materials.

Task 3. Pipeline Design Plans and Specifications

After the survey basemap has been completed, LSCE will attend one field meeting with the District to assess field conditions and design considerations of the District.

LSCE will review pertinent as-built drawings, water service records and other relevant historical information of the project site for inclusion into the engineering design. The design drawings will be developed for the pipeline replacement, service tie overs, and provisional stub-outs as deemed appropriate. The design will specify materials in accordance with the District standards and operating pressure. Project specifications will be a separate bound Technical Specification. Cathodic protection designs will be performed by the corrosion engineer sub-consultant (JDH Corrosion Consultants).

For the Horizontal Directional Drilling (HDD) design, LSCE will work with our trenchless technologies subconsultant who will provide technical oversight including evaluating the existing subsurface conditions and surface constraints to develop trenchless design for the undercrossing. HDD subconsultant will also provide undercrossing design recommendations (alignment, profile, tie-ins, bore pit locations, etc.). The HDD subconsultant will also develop the HDD specification.

LSCE will coordinate with affected utility agencies and companies within the extents of the pipeline construction footprint. The utility coordination will identify design conflicts with utilities and address the conflicts in the plans.

An estimate of the plan set sheets is as follows:

- G-1: Cover Sheet, Vicinity Map and TOC
- G-2: General Notes, Legend and Abbreviations
- G-3: Project Location Map
- C-1 to C-7: Plan sheet only, no profile (Sand Point Road)
- C-8: Plan Sheet only, no profile (Newport Lane)
- C-9 and C-10: Plan and Profile Sheet (Newport Bay Crossing)
- C-11 and C-12: Underwater Crossing Tie-in Details
- C-12 to C-16: Project Details
- CP-1 to CP-12: Cathodic Protection Plans and Details

LSCE assumes a SWPPP is not required as this project will not disturb more than 1 acre.

LSCE assumes that the design will be completed at 50% and 100% stages. LSCE will develop an Engineer's Estimate at each stage of the design. In the 50% stage, the design submittal will include design plans from all disciplines (civil, corrosion, HDD) and proposed technical specifications and provide sufficient detail to outline the fundamental components and scope of the project for the TODB to review. Digital copies of the 50% plans and specifications will be submitted to the TODB for review.

After review of the 50% by the TODB, LSCE will prepare the complete set of plans and specifications at the 100% stage, incorporating any comments received in the previous design review. The 100% design plans and specifications will build upon the 50% set, incorporating additional civil and HDD plan details and technical specifications as needed. Digital copies of the 100% plans and specifications will be submitted to the TODB for bidding.

LSCE will also assist the TODB with preparing the necessary boilerplate front-end contractual documents for bidding purposes to be incorporated with LSCE's technical documents. LSCE, including subcontractors, will stamp the final bid documents for the construction drawings and technical specifications. LSCE will submit electronic files to the TODB via email.

Deliverables:

- Final Trenchless Design Memorandum
- Plans, Specifications and Cost Estimate for the 50-percent and 100-percent completion in PDF form.

Task 4. Bidding Assistance

LSCE will issue the bidding documents to local plan houses and bid boards for competitive bid proposals on behalf of the TODB in conformance with the TODB's bidding requirements. LSCE will also act on the TODB's behalf to respond to any requests for information from prospective contractors and prepare and issue any bid addendums as needed throughout the bidding phase. LSCE will conduct a mandatory pre-bid conference for prospective contractors with TODB and LSCE project managers present.

LSCE will review and tabulate all formal bids to ensure responsiveness with the contract requirements. A thorough background check on qualifications and references will be conducted on the lowest responsible bidder and the findings of that review will be discussed with the TODB. LSCE will prepare a formal bid summary and make a recommendation for award to the lowest responsible bidder.

Deliverable:

- Plan holders list, agendas and meeting minutes for both the pre-bid meeting and bid opening.
- Responses to contractor questions, up to two (2) addendums, bid tabulations, and a recommendation letter for award.

Task 5 – Construction Services

LSCE will provide the following engineering services during construction. Resident inspection during construction is not included; it is assumed the District will perform daily monitoring. LSCE services include the following:

Conferences/Meetings: A pre-construction conference with the general contractor and District will be held onsite to confirm the contractor's understanding of the intent of the contract documents. Construction meetings and coordination with the contractor and District staff will be held weekly through construction to discuss construction progress, inspections, and technical issues during construction. Final site visitation (post-construction) with the contractor and District

will be made to confirm all final installation, cleanup and restoration of the project. Project management and meetings are assumed to occur for a 4-month construction period.

Cathodic Protection System Checkout: JDH will provide on-site assistance during construction to ensure the system is installed correctly and applies proper exothermic welding procedures. A system checkout will be performed and a Letter of Certification accepting the work completed.

Submittals, RFIs, Change Order Review: Review all submittals to ensure all products used during construction are consistent with the plans and specifications. Review RFIs from the contractor and respond as needed. Review any proposed contract change orders during construction based on changes to the contract documents and provide recommendation to the District. Provide any negotiation or pricing verification necessary.

Field Visits: LSCE assumes no more than six (6) site visits will be required. LSCE will prepare a site visit report for each site visit indicating the dates and times, people onsite, material delivered, work completed and noted corrections.

Progress Payments: Review, approval, and recommend payment on the contractor's progress billings.

As-Builts: Prepare project as-builts using the contractor's redline markup set maintained during construction to show the final location and details of the installation.

Assumptions:

- This project falls under CEQA exemption as a Class 2 exemption.
- District will pay all permit and review fees.
- SWPPP will not be required since the disturbed area is anticipated to be less than one (1) acre.
- Contractor will submit the Encroachment Permit Application.
- Contractor will prepare the Traffic Control Plan with the Encroachment Permit Application.
- Contractor will perform construction staking as will be dictated in the Plans and Specifications.

Services not provided:

- Any services not specifically identified in this scope of work.
- Construction staking. It is assumed that the Contractor will perform if needed.
- TODB or General Contractor to provide soil compaction, concrete and pavement strength testing.

SCHEDULE

LSCE is prepared to begin work on this project immediately. LSCE's project team members have all worked together on similar projects and have the experience to effectively gauge workloads and commitments to other projects. Prior to preparing this work plan, team members reviewed the scope of work described, current workloads, and current project schedules and confidently concluded that LSCE can manage, staff, and complete the project in a timely and efficient manner.

LSCE assumes the project design and bidding phase will be completed within four (4) months of obtaining the "Notice to Proceed". Construction is assumed to occur over a 4-month period. The estimated completion of the project may change (shorten or lengthen) based on the responsiveness of the TODB and other agencies with regard to information requests, the availability of subconsultants to schedule work, and the ability to perform some project tasks concurrently.

COST ESTIMATE

LSCE's estimated cost to complete the scope of work outlined in this proposal is based on our current understanding of the project and what would be typically and reasonably required to complete the tasks described above based on our prior experience. The table below summarizes the estimated costs per Task.

PROJECT BUDGET

Table 1. Estimated Project Cost				
Task Description	LSCE Costs	Outside Costs ¹	Reimbursable Costs	Total
Task 1. Project Coordination, Meetings, and Administration	\$12,896	\$0	\$125	\$13,021
Task 2. Preliminary Pipeline Design Activities	\$11,208	\$128,662 ²	\$0	\$139,870
Task 3. Pipeline Design Plans and Specifications	\$78,464	\$46,082	\$250	\$124,796
Task 4. Bidding Assistance	\$9,040	\$4,384	\$125	\$13,549
Task 5. Construction Services	\$63,788	\$32,613	\$875	\$97,276
Totals	\$175,396	\$211,740	\$1,375	\$388,511
Contingency (10%)				\$38,851
Total w/Contingency				\$427,362
1. Outside costs include subcontracted engineering services and outside service providers.				
2. An assumed budget of \$69,000 has been allocated under Task 2 for potholing services.				

The cost estimate includes the following:

- All work outlined in this proposal
- All expenses (mileage, per diem, materials, miscellaneous expenses)

The attached cost estimate worksheet details the number of hours each job classification is anticipated to apply to each task as outlined in the above Work Plan. Hours and cost for each task are tabulated to show the number of total hours per job classification and total cost for each task. Estimated costs for subconsultants are included in their relevant tasks. LSCE's direct costs (mileage, misc. supplies) are estimated for each relevant task. In the event that the TODB directs LSCE to deviate from the proposed scope of work or as dictated by unforeseen conditions or events beyond LSCE's control, LSCE will provide notification of any potential changes in the estimated cost to complete the work. LSCE will not proceed

Mr. Yeraka
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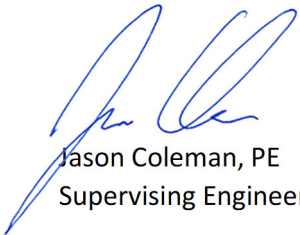
with any work that deviates from the approved scope and budget until approval to proceed is granted by the TODB.

LSCE will invoice monthly for labor, subcontracted services, and materials as incurred in accordance with our 2025 Schedule of Fees for Engineering and Field Services (attached). Fees shall remain in effect for the full contract period. LSCE will prepare monthly budget summaries, including budget expended and remaining to accompany billing.


We appreciate the opportunity to provide you with this scope and budget. We would be pleased to respond to any questions regarding our work plan or budget.

Sincerely,

LUHDORFF AND SCALMANINI
CONSULTING ENGINEERS



Jason Coleman, PE
Supervising Engineer



Oscar Serrano, PE
Supervising Engineer

Attachments: Project Area Map
Detailed Cost Estimate Worksheet
2025 Schedule of Fees for Engineering and Field Services



PROJECT AREA MAP




Imagery ©2022 Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO, Map data ©2022 500 ft

Project Disturbing Area:

- * Newport Lane. (Newport Bay Crossing)
- * Sand Point Ct. (Newport Bay Crossing & Mainline)
- * Sand Point Rd. (Mainline)

Cost Estimate for Town of Discovery Bay for Sand Point Pipeline Replacement

 Luhdorff & Scalmanini Consulting Engineers		Supervising Professional	Senior Professional	Project Professional	Staff Professional	Clerical	Meridian Survey (Bathymetric Survey)	Conсор (HDD)	JDH (Cathodic Protection)	Harris (CEQA)	WR Forde (Potholing)	HUMANN (Surveying)	Direct Expenses	Summary
Task	Description	\$248	\$220	\$192	\$170	\$105	Incurred	Incurred	Incurred	Incurred	Incurred	Incurred	Incurred	
Task 1 – Project Coordination, Meetings, and Administration														
Task 1.1 – Kickoff	Task Hours	16	0	0	0	0								16
	Task Cost	\$3,968	\$0	\$0	\$0	\$0								\$3,968
	Direct Expenses												\$125	\$125
	Outside Services													\$0
	SubTotal	\$3,968	\$0	\$0	\$0	\$0								\$4,093
Task 1.2 – Project Coordination, Meetings, and Administration	Task Hours	36	0	0	0	0								36
	Task Cost	\$8,928	\$0	\$0	\$0	\$0								\$8,928
	Direct Expenses													\$0
	Outside Services													\$0
	SubTotal	\$8,928	\$0	\$0	\$0	\$0								\$8,928
Total Task Cost Estimate													\$13,021	
Task 2 – Preliminary Pipeline Design Activities														
Task 2 - Preliminary Pipeline Design Activities	Task Hours	26	0	0	28	0								54
	Task Cost	\$6,448	\$0	\$0	\$4,760	\$0								\$11,208
	Direct Expenses													\$0
	Outside Services						\$10,580			\$7,912	\$69,000	\$41,170		\$128,662
	SubTotal	\$6,448	\$0	\$0	\$4,760	\$0								\$139,870
Total Task Cost Estimate													\$139,870	
Task 3 – Pipeline Design Plans and Specifications														
Task 3 -Pipeline Design Plans and Specifications	Task Hours	58	0	0	372	8								438
	Task Cost	\$14,384	\$0	\$0	\$63,240	\$840								\$78,464
	Direct Expenses												\$250	\$250
	Outside Services							\$33,144	\$12,938					\$46,082
	SubTotal	\$14,384	\$0	\$0	\$63,240	\$840								\$124,796
Total Task Cost Estimate													\$124,796	
Task 4 – Pipeline Bidding Assistance														
Task 4 - Pipeline Bidding Assistance	Task Hours	20	0	0	24	0								44
	Task Cost	\$4,960	\$0	\$0	\$4,080	\$0								\$9,040
	Direct Expenses												\$125	\$125
	Outside Services							\$4,384						\$4,384
	SubTotal	\$4,960	\$0	\$0	\$4,080	\$0								\$13,549
Total Task Cost Estimate													\$13,549	
Task 5 – Construction Services														
Task 5 - Construction Services	Task Hours	101	0	0	218	16								335
	Task Cost	\$25,048	\$0	\$0	\$37,060	\$1,680								\$63,788
	Direct Expenses												\$875	\$875
	Outside Services							\$26,863	\$5,750					\$32,613
	SubTotal	\$25,048	\$0	\$0	\$37,060	\$1,680								\$97,276
Total Task Cost Estimate													\$97,276	
SUMMARY	Total LSCE Hours	257	0	0	642	24								923
	Total LSCE Cost	\$63,736	\$0	\$0	\$109,140	\$2,520								\$175,396
	Direct Expenses												\$1,375	\$1,375
	Outside Services						\$10,580	\$64,391	\$18,688	\$7,912	\$69,000	\$41,170		\$211,740
Total Cost Estimate													\$388,511	
Contingency (10%)													\$38,851	
Total Cost Estimate w/Contingency													\$427,362	



Woodland-Roseville-Chico-Daly City-Boise, ID

2025 SCHEDULE OF FEES

ENGINEERING AND RELATED FIELD SERVICES

Professional*

Senior Principal	\$280/hr.
Principal Professional.....	\$260/hr.
Supervising Professional	\$248/hr.
Senior Professional	\$220/hr.
Project Professional	\$192/hr.
Staff Professional	\$170/hr.

Technical

Data Management Specialist**	\$160/hr.
Senior GIS Analyst	\$160/hr.
GIS Specialist.....	\$120/hr.
Engineering Asst./Scientist.....	\$120/hr.

Project Admin Support

Word Processing, Clerical.....	\$105/hr.
Digital Communications Specialist.....	\$120/hr.
Project Administrator	\$120/hr.

Vehicle Use	\$0.70/mi (or curr. IRS rate)
Subsistence	Cost Plus 15%
Field Equipment (Flow Meters, Transducers, etc.)	\$25 to \$100/day
Copies	\$0.20 ea.
Professional or Technical Testimony	200% of Regular Rates
Technical Overtime (if required)	150% of Regular Rates
Outside Services/Rentals	Cost Plus 15%
Services by Associate Firms	Cost Plus 15%
Prevailing Wage Rate	\$210/hr.

* Engineer, Geologist, Hydrogeologist, and Hydrologist

**Information Systems Analyst and Database Specialist

Note: Send invoice payments to Accounts Receivable, 500 1st Street, Woodland, CA 95695