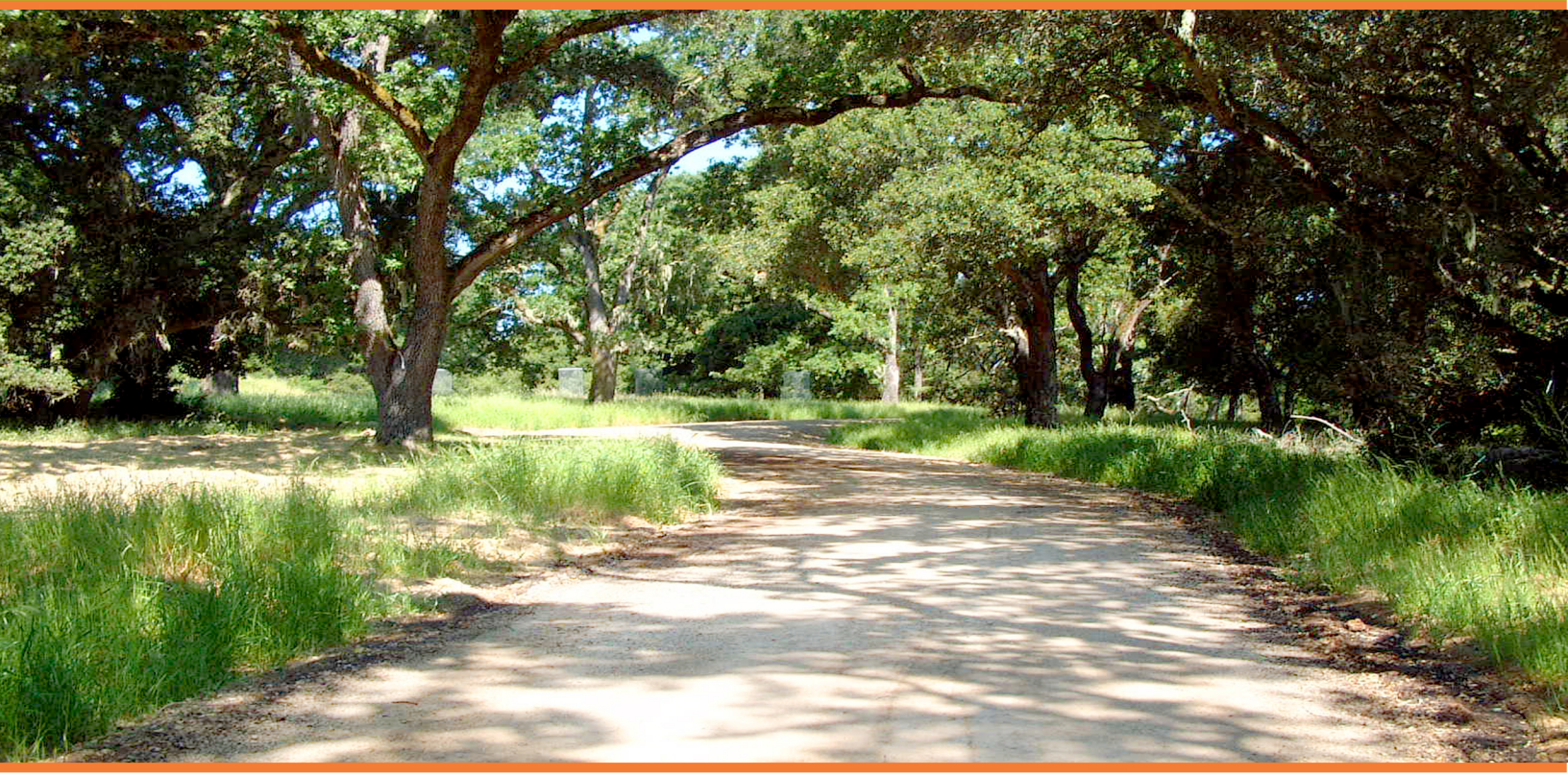
FREYER & LAURETA, INC.

Civil Engineers – Surveyors – Construction Managers



Proposal for Engineering Services Roadway Design Services to the San Lorenzo Valley Water District 2021 Lyon Complex Access Road

April 6, 2021

San Lorenzo Valley WATER DISTRICT

FREYER & LAURETA, INC. CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

April 6, 2021

San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006
Attn: District Engineer (Lyon Complex Access Road)

Subject: PROPOSAL – Engineering Services for the 2021 Lyon Complex Access Road Project

Dear Mr. Wolff,

Freyer & Laureta, Inc. (F&L) is pleased to submit this Proposal for the design of the 2021 Lyon Complex Access Road Project.

F&L has provided consulting engineering services for many public agencies throughout the Bay Area and excited for this opportunity to serve the San Lorenzo Valley Water District. These engineering services have included civil engineering design including roadway and utility design, land surveying, construction management, construction inspection, and project management services. For the project, F&L is teaming with Cal Engineering and Geology (CE&G) for the project geotechnical investigation and report, MIG to identify agencies with jurisdiction which will require permitting/coordination, and HMH for topographic surveying efforts. Our team is committed and extremely excited to perform engineering services for this project, working closely with the District toward a successful project.

Richard J. Laureta, President of F&L, will serve as F&L's principal-in-charge and project manager for this District project. Richard's information is:

Richard J. Laureta, P.E.
144 North San Mateo Drive
San Mateo, CA 94401
Telephone: (650) 208-2951
Email: laureta@freyerlaureta.com

Thank you for taking the time to review this proposal. Please call or email if you have any questions.

Very truly yours,
FREYER & LAURETA, INC.

Richard J. Laureta, P.E.
President

Table of Contents

A. Contractual Scope of Services

A.1 Project Understanding

The San Lorenzo Valley Water District (SLVWD) proposes to construct a new access road running from Madrone Drive to Big Steel tank and continuing to the Lyon tank complex. The District has issued this Request for Proposals (RFP) for a consultant team to provide roadway layout and design, geotechnical investigation, and jurisdictional permit determination. We understand that areas adjacent to the site have previously been geotechnically evaluated however there is a need to prepare site specific geotechnical investigations along the selected access road alignment. There are many challenges in determining a road alignment, notably for this project, the existing grade and the number of trees within the vicinity of the project area.

F&L will team with Cal Engineering and Geology, MIG, and HMH for this project, together referred to as the F&L Design Team. Scope of Work for each consultant is described in this Proposal.

A.2 Unique Capabilities and Proposed Approach

The F&L Design Team has the resources and the experience to help determine and design the road alignment within the project area and determine permitting required or the project. Our team understands that a key to successfully providing engineering services is to have an established framework for communication throughout the design process to ensure the District is obtaining the high level of service it deserves. Toward that goal, in addition to the Scope requirements of the RFP, **our team will conduct an Improvement Alternatives Workshop** with District staff to go over conceptual designs. This workshop will help inform our design effort by incorporating early feedback from District staff. The Design Team working closely with the District is the key to resolving the issues in the area.

Described below is our team's approach and unique capabilities we will apply towards a successful SLVWD project.

A.2. Scope of Services

A.2.1. Site Investigation, Data Collection, Record Research

As design engineers, surveying is a fundamental component of how we deliver our services. Field survey provides the baseline picture for our design team and begins the process needed for the existing topography needed for the design of this project. HMH will perform the survey for this project, utilizing the latest equipment to create detailed maps to establish existing conditions. This survey will not only

provide project area topography but also locate trees 12" in diameter or larger and utilities which may impact road alignment alternatives. With survey in hand, the F&L team will perform other field reconnaissance and review any other documents for the area that will influence alignment alternatives.

A.2.2 Project Development

During this initial phase of design, F&L will prepare three to four alternative roadway alignments for District review. These alignments will be studied against a 40' long truck with turning movements typical for this size vehicle. As discussed in the previous section, an Improvement Alternatives Workshop will be performed to narrow down, if not select, an alignment. Once an alignment is selected, CE&G will perform a geotechnical investigation of existing soil conditions and to provide recommendations for earthwork to be performed to construct the roadway.

CE&G will support the alternatives development and design effort by investigating the soil and bedrock conditions in the area of the proposed improvements and developing recommendations in support of the design. Site investigation and subsurface exploration effort is designed to focus on possible slope stability and landsliding issues and the potential need to evaluate the excavatability of relatively hard bedrock materials that may be encountered during site grading required to develop a new access road. CE&G scope of work for the Lyon Tank Complex Access Road Project includes the following tasks:

CE&G
CAL ENGINEERING & GEOLOGY

- Review available geologic and geotechnical reports and maps pertinent to the site and review of pertinent records provided to us by the design team and District staff.

- Reconnaissance of the project site to observe the current surface conditions, marking proposed boring locations, and coordination to check the locations for existing underground utilities. Notify Underground Service Alert (USA) for underground utility clearance. Complete geologic mapping of the surficial features at the site and in the vicinity. The mapping will be completed using the site survey as a base map.
- Conduct subsurface exploration by drilling and sampling three or four exploratory borings in the area of the potential new access road alignment to investigate stability and excavatability and to provide data for grading and/or retaining wall design criteria. This task will include developing a staging for drill rig mobilization and demobilization operations, including any needed brush clearing needed. CE&G does not propose to drill any additional borings in the area of the landslide since it was extensively investigated by others following the 2017 landslide. The borings will be drilled to depths ranging from 20 to 35 feet below the ground surface, unless drilling refusal is

encountered. CE&G budgeted two days to complete the field exploration. The borings will be advanced using a track-mounted drilling rig equipped with solid or hollow stem augers until hard rock is encountered, at which time drilling will switch to mud-rotary drilling techniques. If access conditions are too restrictive, portable drilling equipment will be used. Soil samples and penetration testing will be performed generally at 3 to 5-foot intervals. Recovered soil samples will be transported to our laboratory. The borings will be backfilled in general accordance with Santa Cruz County guidelines. Soil cuttings collected from the borings will be distributed unobtrusively on-site.

- Perform geotechnical laboratory testing on selected soil samples obtained from the borings to evaluate pertinent engineering properties. CE&G's proposed laboratory testing program is anticipated to include natural moisture content and dry density, shear strength, corrosion, grain size analysis, and percent passing a No. 200 sieve. The actual type and number of laboratory tests will depend on the materials encountered in our borings.
- Perform geotechnical engineering analysis on the collected data to support the design and construction of the proposed grading and earth retention improvements.
- Prepare a geotechnical investigation report for the planned improvements. The geotechnical investigation report will address the following:

  A. Introduction and description of the project;
  B. A summary of information from our data research and review;
  C. Discussion of site geology and site faulting;
  D. Description of our field investigation, and laboratory testing performed, site surface conditions, subsurface conditions and depth to groundwater, if encountered;
  E. Discussion of soil and bedrock conditions encountered;
  F. Discussion of our findings with regard to the access road alignment, grading, and earth retention system selection and design;
  G. Recommendations for earthwork, including temporary and permanent cut and fill slopes;
  H. Recommendations for earth retaining structure design and construction;
  I. Recommendations for access road pavements;
  J. A vicinity map and site plan showing the project location;
  K. A site plan showing site features we mapped and the locations of our explorations;
  L. Geologic cross-section(s) through the tank existing road and the potential new access road;
  M. Logs of the borings; and
  N. Results of laboratory tests.

Also, impacts for the alignment will be identified in order to determine jurisdictional agencies and permits that will need to be coordinated and obtained. MIG will be providing this service for the design team.

An opinion of probable construction cost will be prepared for the selected alignment for District use in budgeting for the project.

A.2.3 Contract Document Development

Our Design Team is highly experienced with development of clear and concise contract documents for roadway improvement projects. F&L leverages knowledge gained during performance of public agency improvement projects during all phases of contract document development and to provide solutions for a wide range of challenges.
For this project, we propose 3 project submittals: 60%, 90%, and 100% submittals.

60% Submittal
As part of the 60% submittal preparation, F&L will perform further validation that the alignment handles the design vehicle, perform earthwork calculations, and further the design of the project. A list of technical specifications will be provided as well as an updated opinion of probable construction costs.

90% Submittal
As part of the 90% submittal preparation, F&L will incorporate comments received from the District on the 60% submittal. Front end and technical specifications will be provided with this submittal, as well as an updated opinion of probable construction costs.

100% Submittal
As part of the 100% submittal preparation, F&L will incorporate comments received from the District on the 90% submittal. Front end and technical specifications will be provided with this submittal, as well as an updated opinion of probable construction costs.

A.2.4 Facilitate Design Reviews

F&L incorporates facilitated design review meetings into each submittal (as appropriate). The purpose of these meetings is to provide F&L staff an opportunity to present the submittal to key District staff that will be reviewing the technical information and engage those staff in open discussions. We have found that by utilizing a workshop setting to discuss the submittal that we can resolve District comments more efficiently than relying only on the typical submittal and resubmittal process. The workshops also provide an opportunity for our staff to explain detailed design assumptions that can help District staff better understand the selected solutions.

F&L will prepare detailed agendas that are distributed to all meeting attendees in advance for a workshop and F&L will be responsible for facilitating the discussions. It will be apparent when a specific comment or question cannot be resolved during the meeting and therefore it becomes F&L's responsibility to capture the comment/question including providing a timeline for when a response to the comment/question will be provided to the District. Finally, F&L will produce meeting minutes to memorialize the discussions and response to comments so that all team members will have a record of decisions for reference as the project moves forward.

A.2.5 Quality Assurance/Quality Control Program

In our experience, the engineering design effort to develop construction drawings, specifications, and opinion of probable construction costs requires both peer review during design development as well as principal level review prior to every submittal. F&L has created a proactive quality control (QC)

program for all our projects. We recognize that a passive review process where a reviewer is given a submittal at the last minute to review quickly before the submittal deadline does not provide the necessary oversight for our work product. All our staff are involved in the QC program because it takes active engagement from staff preparing the detailed calculations, drawings, specifications, etc. and the assigned QC officer to deliver a high quality and complete product to the client.
The QA/QC program proposed for the District's project includes:

- Written QA/QC work plan identifying key tasks from the scope of work and key deliverable dates. Using the key deliverable dates, an internal schedule is developed to guide staff in providing sufficient time for necessary QA/QC. The work plan will be amended for each task order is issued that contains the specific scope and budget.
- Throughout development of the project deliverables regular QC checks will be performed. The QC check involves bi-weekly team meetings where the project manager and key staff present progress to the QA/QC officer assigned to the project. The team meetings create an environment of team work and helps to minimize the potential for the project development process to get off track.
- For each submittal, a detailed QA/QC review is performed along with preparation of submittal review log to allow the team and QA/QC officer to document all comments along with responses to those comments.

B. Team Background

B.1 Project Team

Freyer & Laureta, Inc. (F&L) is an award-winning civil engineering and surveying firm with offices in San Mateo, Oakland, and San Francisco, California, founded in 1997. All work for this project will be performed out of the San Mateo office. F&L will leverage our experience with a

variety of infrastructure replacement projects to provide the District with a high-quality product on time and on budget. Furthermore, F&L is committing Principal level involvement to provide the District with the most skilled and experienced personnel available from our firm.

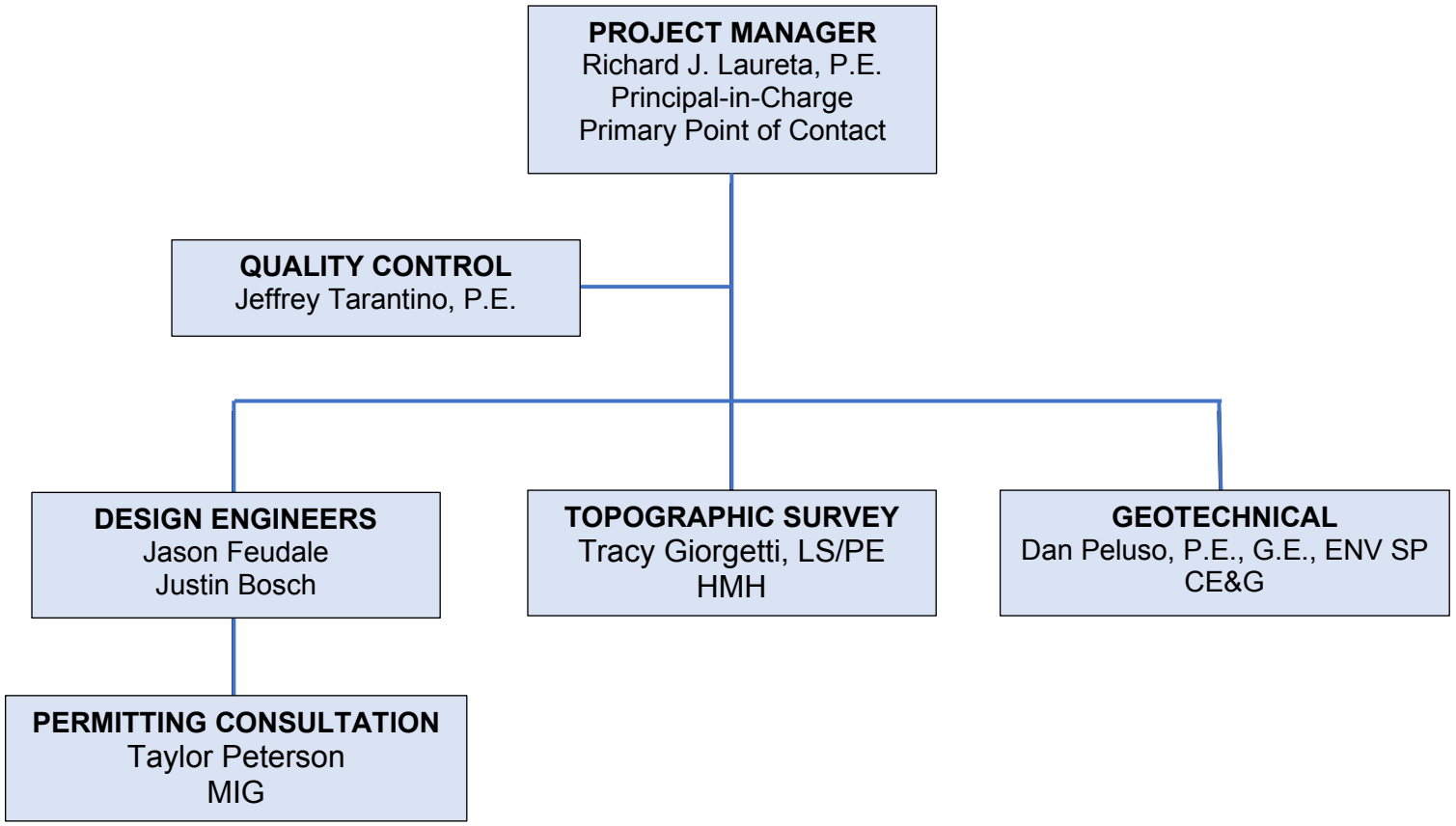
Since its founding in 1993, CE&G has provided award-winning geotechnical, geologic, and related civil engineering services to public agency clients throughout the Bay Area. In addition to a full-range of geotechnical consulting services, CE&G also has full design capabilities, in which they routinely prepare complete PS&E packages for public works agencies on geotechnical-related projects.

The professional engineers and geologists at CE&G have an average of 20+ years professional experience. More than 70% of our project managers have been with CE&G for 14+ years.

Accurate base mapping and location of existing features is essential to the successful implementation of any design. Each project presents unique conditions that require the use different instruments and techniques to efficiently and effectively acquire the necessary field data. HMH has both the experience and equipment to meet the demands of any topographic mapping task. With the use of their conventional tools, fully robotic instruments, Real Time Kinematic GPS survey equipment, the Trimble Virtual Reference Network, and aerial photogrammetry HMH is ready for this challenging project. Data acquired in the field is seamlessly transitioned into the office for clear and concise map creation to be used for this project.

MIG is a California Corporation headquartered in Berkeley, California with Northern California offices in San Jose and Sacramento. MIG is a multidisciplinary planning firm that offers comprehensive environmental consulting services with expertise in biological resource evaluations, resource agency permits, cultural resource management, environmental impact analysis under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), and construction monitoring. MIG offers a broad scope of services to clients with highly qualified, extensively experienced staff. MIG has built a reputation for preparing solid, defensible environmental documents in an efficient and cost-effective manner.

B.2 Organizational Capacity



B.3 References

FREYER & LAURETA, INC.

Bill Kitajima
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Aida Fairman, P.E.
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AFairman@losaltosca.gov

C. *Consultant's Expectations of Owner*

Below is a list of expectations that F&L has for the District:

- In order to meet our proposed schedule, we request a one-week period for the District to review alignment alternatives and design submittals.
- Provide our design team an average weekly truck trip to the tank site for design purposes.
- Provide a history of stormwater drainage issues, if any, from the project site.
- Borings logs from studies previously performed adjacent to the project site.
- History of repairs on the existing road, if any.
- Desired width of roadway.

D. Identification of Possible Extra Services

Below is a list of additional services not identified in this RFP that may be necessary to properly characterize the site and design the proposed access road.

- Staking the road alignment for visualization of the route. A fee for this is included in our Fee Proposal, listed as a potential added service with a budget for staking.
- Retaining wall design is potentially required for this project. A budget cost is included in our fee proposal.
- Please note that CEQA documentation and permitting is not included in this proposal because the project lacks definition to provide this service. Our team can provide this service however can not provide a fee for this service at this time.

E. Exceptions to this RFP

The F&L team has fully read the RFP and does not take exception(s) to any portion of the RFP.

F. Insurance Statement

F&L meets the insurance requirements listed in the RFP and will provide a certificate when selected for the project.

G. Total Professional Fee and Fee Schedules

The following pages show our proposed fee and proposed project schedule.

ESTIMATED BUDGET FOR ENGINEERING SERVICES
Lyon Complex Access Road
San Lorenzo Valley Water District

TASKS	ESTIMATED LABOR (Hours) Personnel & Rates ($/hr)														TOTAL LABOR COST ($)	EXPENSES AND ADMINISTRATION				ESTIMATED COST	
	F&L Administrative	F&L Staff Engineer IV	F&L Principal	MIG Senior PM	MIG Biologist	MIG Support	HMH Survey Crew	HMH Drafter	CE&G Principal	CE&G Associate	CE&G Senior Engineer	CE&G Project Engineer	CE&G GIS/CADD	CE&G Clerical		UNIT	QNTY	UNIT COST ($)	5% MARKUP ($)	TOTAL COST PER ITEM ($)	SUB TOTALS ($)
	85	140	235	205	137	100	407	131	268	221	205	173	142	95							
Task I - Project Management and Coordination																					
Project Coordination, monitoring, and administration			12							6			2		$4,427					$4,427	
Meetings			12						5	9					$6,143	Mileage	1	$285		$6,428	
Monitor budget and project schedule	12		6												$2,430					$2,430	
QA/QC			16												$3,760					$3,760	
Monthly progress and cost summary report, invoices	12														$1,020					$1,020	
Subtotal Labor Hours - Task I	24		46						5	15					**$17,780**	Estimated Cost - Task I					**$18,100**
Task II: Site Investigation, Data Collection, Record Research																					
Review existing records, drawings, limits of project, civil field reconnaissance		16	4							4		4			$4,755					$4,755	
Geotechnical Mapping			4												$940					$940	
Prepare Base Map										2			6		$1,292					$1,292	
Geologic Reconnaissance and Mapping										10					$2,205					$2,205	
Prepare Geologic Map										4			4		$1,449					$1,449	
Topographic Survey		4	4				40	16							$19,880					$19,880	
Prepare Survey Base for Design		16	2												$2,710					$2,710	
Subtotal Labor Hours - Task I		36	14				40	16							**$33,231**	Estimated Cost - Task II					**$33,200**
Task III: Project Development																					
Alignment Alternative Development and Selection		100	16												$17,760					$17,760	
Perform geotechnical investigation along alignment			8												$1,880					$1,880	
Fieldwork Coordination		1										2		2	$676					$676	
Permits												2		2	$536	Permits	1	$400		$936	
Location of Exploration Points, USA, marking												4			$693	Mileage	1	$400		$1,093	
Subsurface Exploration (assume 2 days, 3 borings)												22			$3,812	Drilling	1	$10,800		$14,612	
Laboratory Testing Plan										2		1		2	$803	Testing	1	$2,000		$2,803	
Coordinate Testing												1			$173					$173	
Slope Stability Analysis										2	8				$2,079					$2,079	
Access Road Retaining Structure and Pavement										2	10				$2,489					$2,489	
Draft Report			2						2	8		24	8		$8,062					$8,062	
Final Report			2						2	4		6	2		$3,211	Printing	1	$100		$3,311	
Identify Permitting Agencies and prepare memo			2	16	48	4									$10,697	Printing	1	$100		$10,797	
Prepare Opinion of Probable Cost		8	1												$1,355					$1,355	
Subtotal Labor Hours - Task II		109	31	16	48	4			4		18			6	**$54,224**	Estimated Cost - Task III					**$68,000**
Task IV: Preliminary Design (60% Design Submittal)																					
Prepare 60% Submittal Drawings		120	16												$20,560					$20,560	
Earthwork Calculations		8	1												$1,355					$1,355	
Prepare list of Technical Specifications and Updated Opinion of Probable Cost		8	1												$1,355					$1,355	
Subtotal Labor Hours - Task IV		136	18												**$23,270**	Estimated Cost - Task IV					**$23,300**
Task V: Design Submittal (90% Design Submittal)																					
Prepare 90% Submittal Drawings		40	4												$6,540					$6,540	
Prepare Updated Opinion of Probable Cost		4	1												$795					$795	
Prepare Front End and Technical Specifications		24	4												$4,300					$4,300	
Subtotal Labor Hours - Task V		68	9												**$11,635**	Estimated Cost - Task V					**$11,600**

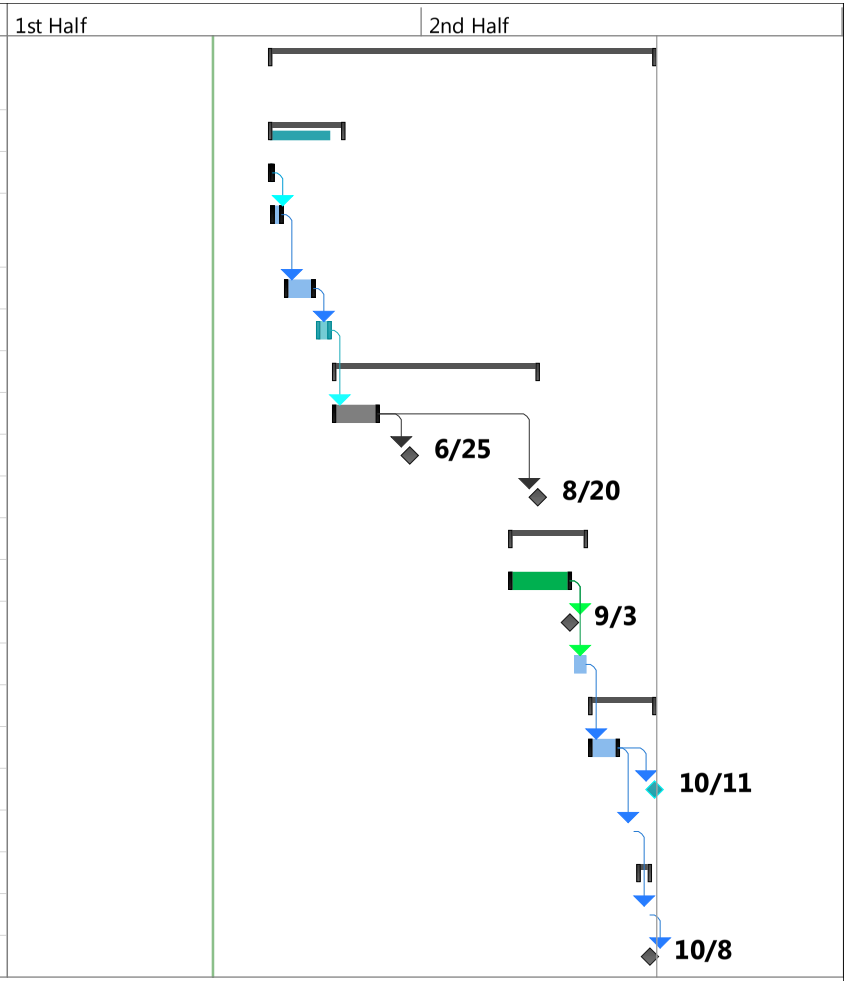
ESTIMATED BUDGET FOR ENGINEERING SERVICES
Lyon Complex Access Road
San Lorenzo Valley Water District

TASKS	ESTIMATED LABOR (Hours) Personnel & Rates ($/hr)														TOTAL LABOR COST ($)	EXPENSES AND ADMINISTRATION				ESTIMATED COST	
	F&L Administrative	F&L Staff Engineer IV	F&L Principal	MIG Senior PM	MIG Biologist	MIG Support	HMH Survey Crew	HMH Drafter	CE&G Principal	CE&G Associate	CE&G Senior Engineer	CE&G Project Engineer	CE&G GIS/CADD	CE&G Clerical		UNIT	QNTY	UNIT COST ($)	5% MARKUP ($)	TOTAL COST PER ITEM ($)	SUB TOTALS ($)
	85	140	235	205	137	100	407	131	268	221	205	173	142	95							
Task VI: Final Design Submittal (100% Design Submittal)																					
Prepare 100% Submittal Drawings		24	4												$4,300					$4,300	
Prepare Updated Opinion of Probable Cost		4	1												$795					$795	
Prepare Final Front End and Technical Specifications		16	2												$2,710					$2,710	
Subtotal Labor Hours - Task V		44	7												**$7,805**	Estimated Cost - Task VI					**$7,800**
Total Labor Hours	**24**	**393**	**125**	**16**	**48**	**4**	**40**	**16**	**9**	**53**	**18**			**6**	**$147,944**	**Total Estimated Cost**					**$162,000**

Potential Added Design Tasks																					
Survey - Alignment Staking (ROM Budget)		16	2				24								$12,478					$12,478	
Structural Design - Wall Design (ROM Budget)		80	12												$14,020					$14,020	
Potential Added Design Tasks		96	14				24								**$26,498**	Estimated Cost - Task VI					**$26,500**

Note: All subconsultant fees are marked up 5%

ID	Task Name	Start	Finish
1	**2021 LYON COMPLEX ACCESS ROAD PROJECT**	**Mon 4/26/21**	**Mon 10/11/21**
2	**Preliminary Studies/Report**	**Mon 4/26/21**	**Thu 5/27/21**
3	Kick-off Meeting	Mon 4/26/21	Mon 4/26/21
4	Review existing records, limits of project, field reconnaissance	Tue 4/27/21	Fri 4/30/21
5	Topographic Survey	Mon 5/3/21	Fri 5/14/21
6	Base Map Preparation	Mon 5/17/21	Fri 5/21/21
7	**Project Development**	**Mon 5/24/21**	**Fri 8/20/21**
8	Alignment Alternative Development	Mon 5/24/21	Fri 6/11/21
9	Permitting Agency Determination	Mon 6/14/21	Fri 6/25/21
10	Geotechnical Investigation/Report	Mon 6/14/21	Fri 8/20/21
11	**60% Design Drawings**	**Mon 8/9/21**	**Fri 9/10/21**
12	Prepare 60% PS&E	Mon 8/9/21	Fri 9/3/21
13	60% Design Submittal	Fri 9/3/21	Fri 9/3/21
14	District Review	Mon 9/6/21	Fri 9/10/21
15	**90% Design Drawings**	**Mon 9/13/21**	**Mon 10/11/21**
16	Prepare 90% PS&E	Mon 9/13/21	Fri 9/24/21
17	90% Design Submittal	Mon 10/11/21	Mon 10/11/21
18	Final District Review/Ready for Bid	Mon 9/27/21	Fri 10/1/21
19	**100% Design Drawings**	**Mon 10/4/21**	**Fri 10/8/21**
20	Prepare 100% PS&E	Mon 10/4/21	Fri 10/8/21
21	100% Design Submittal	Fri 10/8/21	Fri 10/8/21



Client: San Lorenzo Valley Water District

Task	Inactive Summary	External Tasks
Split	Manual Task	External Milestone
Milestone	Duration-only	Deadline
Summary	Manual Summary Rollup	Progress
Project Summary	Manual Summary	Manual Progress
Inactive Task	Start-only	
Inactive Milestone	Finish-only	

KEY STAFF RESUMES

FREYER & LAURETA, INC. CIVIL ENGINEERS · SURVEYORS · CONSTRUCTION MANAGERS

Richard J. Laureta, P.E.
President

Education: Bachelor of Science in Civil Engineering
California Polytechnic State University, San Luis Obispo

Professional Qualification: Registered Civil Engineer – California No. 55783
Registered Civil Engineer – Hawaii No. 10545

Mr. Laureta has broad experience in civil engineering design and construction. In his 25 years of professional engineering experience, he has participated in the design, project management, and construction coordination of private sector engineering projects, as well as city, county, state and federal rehabilitation projects. His broad experience gives him the knowledge necessary to be an integral part of multi-disciplined teams in the planning, design and installation of challenging civil engineering projects. Mr. Laureta has a growing reputation in urban master planning and wastewater collection design and construction management. He serves as the District Engineer for the West Bay Sanitary District in Menlo Park and the East Palo Alto Sanitary District. The combination of his design experience and his expertise in computer-aided drafting ensures accurate design drawings. His experience and dedication to the profession allows him to be a contributor to the success of diverse engineering projects. A representative sampling of past and current projects includes:

District Engineer/Public Works Projects
West Bay Sanitary District, District Engineer
East Palo Alto Sanitary District, District Engineer
Silicon Valley Clean Water, Conveyance System
City of San Leandro, Wastewater Collection Systems
City of Burlingame, Storm Drain Collection Systems
University of San Francisco, Misc. Projects

Office/Commercial/Residential Projects
Britannia Oyster Point, South San Francisco
Hercules Properties PUD, Hercules
McGrath Rentcorp Offices, Livermore
Childrens' Center, NAS North Island, San Diego
Marriott Courtyard, So. San Francisco
Bay West Cove, So. San Francisco
Sutro Tower Improvements, San Francisco

Infrastructure Master Planning and Design
Mission Bay Residential Area
Mission Bay Park NP 1-2 Project
Mission Bay Park NP 3-5 Project
Mission Bay Park P16
Mission Bay Drive and Circle Project
Mission Bay Blocks 29 - 32 and 33 - 34
Utility Master Plan, South of Channel

Roadway and Infrastructure Projects
Naval Training Center Drainage Design, San Diego
Rankin Pump Station Design, San Francisco
Ralston Avenue Grade Separation, Belmont
Special Weapons Area Pump Station, NAS North Island
Pier 45 Seismic Retrofit, San Francisco
Guadalupe River Retaining Walls, San Jose
Bollman Water Treatment Plant Expansion, Concord

Phone: 415-534-7070
E-mail: laureta@freyerlaureta.com
150 Executive Park Blvd., Suite 4200
San Francisco, CA 94134

FREYER & LAURETA, INC. CIVIL ENGINEERS · SURVEYORS · CONSTRUCTION MANAGERS

Jeffrey J. Tarantino, P.E.
Vice-President

Education: Bachelor of Science in Civil Engineering
Santa Clara University

Professional Qualification: Registered Civil Engineer – California No. 63936

Mr. Tarantino has extensive experience in civil engineering design and construction that has been developed during his 20 years of civil and environmental work experience. Mr. Tarantino has served as project manager on numerous program management, planning, design, permitting and construction management projects. His project experience includes civil site development, water supply treatment and distribution , wastewater treatment and collection, water reuse treatment and distribution, flood control , groundwater extraction and treatment systems, and water quality. Mr. Tarantino serves as the primary point of contact with permitting and environmental resources agencies on behalf of clients to facilitate open dialogue with the agencies. Mr. Tarantino has demonstrated a unique ability to assist clients to bridge technical and non-technical challenges to deliver multi-beneficial projects within budget and on schedule. A representative sampling of past and current projects includes:

Development and Campus Projects

UCSF, Minnesota Street Student Housing
UCSF, Campus Wide Technical Criteria Development
1000 Channel Street (SF) Owner, One Mission Bay
Uber Headquarters, 1455 and 1515 Third Street
TNDC, Candlestick Block 10A
Alexandria Real Estate Equities (ARE), 1450 Owens
UC Berkeley, Berkeley Way Project
UCSF, Weill Institute for Neuroscience
Mission Bay, Park P2-P8
Mission Bay, Park P3
TNDC, 681 Florida Street
ARE, Confidential Site (San Mateo County

Infrastructure Projects

City of Burlingame, Water Distribution
Valley of the Moon Water District, Water Distribution
City of Calistoga, Water Treatment
Mission Bay, Wastewater Collection
City of Pacifica, Wastewater Collection
Town of Hillsborough, Creek Stabilization
UCSF, 2nd Parcel Infrastructure
Town of Hillsborough, Water Distribution
City of San Mateo, Wastewater Collection
Coastside County Water District, Water Distribution
City of Burlingame, Storm Drain Collection
City of Pacifica, Stormwater Collection
City of San Mateo, Stormwater Collection
UCSF, Surcharge Removal

Environmental Projects

SLAC National Laboratories, Groundwater Treatment
Aircraft Service International Group, Groundwater Treatment
City of Emeryville, Soil Remediation
Peninsula Open Space Trust, Soil Remediation

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FREYER & LAURETA, INC. CIVIL ENGINEERS · SURVEYORS · CONSTRUCTION MANAGERS

Jason J. Feudale
Associate Engineer

Education: Bachelor of Science in Civil Engineering, California State University Chico

Mr. Feudale has 15 years of experience in municipal and construction engineering. The experience he has gained in grading, drainage, erosion control, and utility design provides Freyer & Laureta a high level of independent and efficient production of civil engineering construction documents. Mr. Feudale has also gained a great deal of experience in construction inspection. He serves as the construction inspector for both the West Bay Sanitary District and the East Palo Alto Sanitary District, and Erosion Control Inspector for the town of Portola Valley. Past engineering project experience includes:

Infrastructure Planning and Design

Blocks 11-12 Public Infrastructure, San Francisco
Illinois Pump Station, East Palo Alto
Stowe Lane Pump Station, San Mateo County
Foothills Park Maintenance and Parking Lot, Palo Alto
Neighborhood Storm Drain Project # 1, Burlingame
Neighborhood Storm Drain Project # 2, Burlingame
2010 Sanitary Sewer Improvement Project, East Palo Alto
West Bay Sanitary District Offices Building, Menlo Park
Britannia Oyster Point, So San Francisco
Village Square Pump Station, Portola Valley
Sewer Pipe line Replacement, San Leandro
Sewer Point Repair, San Leandro
Wicks & Blue Dolphin Pump Stations, San Leandro
Menalto Pedestrian Improvements, Menlo Park
Sewer Trunkline Realignment, East Palo Alto
West Bay Sanitary District Belle Haven, Menlo Park

Construction Management and Inspection

Kebcenell Residence Drive Way, Portola Valley
Peak Lane Grinder Pump Force Main, Portola Valley
Cervantes Road Grinder Pump Force Main, Portola Valley
Westridge Drive Sewer Project, Portola Valley
Pope Street Emergency Sewer Project, Menlo Park
Los Trancos Sewer Project, San Mateo County
Sewer Trunkline Realignment, East Palo Alto
Veterans Hospital Sewer, Menlo Park
Royal Oak Sewer, Menlo Park
Lane Woods Sewer, Menlo Park
Heritage Oaks Sewer, Menlo Park
Morgan Lane Sewer I & II, Menlo Park
Gloria Way Well Treatment Project, East Palo Alto
Sewer Siphon Replacement, East Palo Alto

GIS Mapping

West Bay Sanitary District
East Palo Alto Sanitary District

Sanitary Sewer Flow Metering

East Palo Alto Sanitary District

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DAN PELUSO, P.E., G.E., ENV SP

Senior Principal Engineer

CE&G

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RELEVANT EXPERIENCE

East Dunne Tank Geotech Engineering Investigation **Morgan Hill, CA**
Lead geotechnical engineer for investigation of site of new 850,000 steel water tank in problematic slope terrain, for City of Morgan Hill. Services included subsurface exploration on tank pad and along access road; laboratory testing of soil and rock samples; development of geotechnical design recommendations for tank foundation, soil nail walls supporting slope above the tank, access road and associated cantilever walls; and preparation of a design report. Considerations included weak bedrock interlayered with discontinuous hard/strong basalt layers, presenting both design challenges and potential for contractor change orders.

2019 Pipeline Project **Boulder Creek, CA**
Mr. Peluso served as Geotechnical Engineer and provided geotechnical design services to Schaaf & Wheeler for the 2019 pipeline Project, which is owned and maintained by SLVWD. The project included five pipeline segments located in the Santa Cruz Mountains. The purpose of CE&G's geotechnical investigation was to assess the existing surface and subsurface conditions along the planned pipeline alignments, develop geotechnical design recommendations, and prepare a geotechnical design report for the proposed installation of the new water pipelines.

El Toro Water Tank Access Road **Morgan Hill, CA**
Geologic and geotechnical study for the City of Morgan Hill for evaluation of unstable edge of access road and design for stabilization of roadway. Conducted a geotechnical investigation of a landslide/gully complex threatening the City reservoir, and of landsliding threatening the sole access road to the (steel tank) reservoir. Developed innovative, cost-effective approaches for both tight-access problem areas.

West Dunne Avenue Widening **Morgan Hill, CA**
Project engineer for geotechnical investigation for widening of a portion of West Dunne Avenue in Morgan Hill. The segment of roadway is approximately 2,500 feet and will accommodate 4 travel lanes plus a middle turn lane. The improvements included new pavements, pavement overlays, retaining walls, curb & gutters, as well as other associated improvements. As part of the roadway improvements, several residential driveways to private properties were reconfigured to accommodate grade changes at the street. Coordination with traffic control and obtaining an encroachment permit were required.

Uvas Road Repair and
Coyote Reservoir Road Repair **Santa Clara Co., CA**
Geotechnical investigations, structural design, and preparation of plans and specifications for the County Roads & Airports Department for two road repairs entailing construction of soldier beam retaining walls on the outboard side of the roads. Analysis and design for the Uvas Road repair included 144-foot long soldier beam and precast concrete lagging retaining wall up to 8 feet high, subdrains and surface drainage improvements. Analysis and design for the Coyote Reservoir Road repair included 282-foot long soldier beam and precast concrete lagging retaining wall up to 9 feet high, subdrains, erosion protection and surface drainage improvements.

Soquel San Jose Road Landslide Repair **Santa Cruz, CA**
Project engineer to provide emergency services for two sections of roadway (sections PM 5.91 and PM 5.36) in the Santa Cruz mountains after sustaining severe damage from 2016-2017 storm season. Provided geotechnical investigation and preparation for site survey, development and design of temporary bridge crossing, conceptual design alternatives, coordination with County staff applications for federal funding, PS&Es, bidding assistance, and engineering services during construction.

CERTIFICATIONS
CA Civil Engineer No. 49562
CA Geotechnical Engineer No. 2367

YEARS OF EXPERIENCE
36 (6 with CE&G)

EDUCATION
M.S., Civil Engineering (Geotechnical), San Jose State University
B.S., Geological Sciences, University of California at Santa Barbara

ACCOMPLISHMENTS
- Lecturer for Foundation Design at Santa Clara University
- Lecturer for Intro to Soil Mechanics at San Jose State University
- Peer review for municipal clients throughout the Bay Area
- Large bridge foundation design
- Expertise with Caltrans standards and requirements

Leavesley Road Widening beneath Highway 101 **Gilroy, CA**
Project management of geotechnical studies and construction monitoring for road widening and tieback retaining walls beneath existing overpass. Provided structures report and materials report in accordance with Caltrans standards. Work included 18 borings along Leavesley Road as well as within Caltrans ROW on the ramps and the existing bridge embankments, which required encroachment permit and traffic control. Design included tieback retaining walls adjacent to existing bridge abutments and new pavement section design. Project was reviewed by Caltrans.

Prescott Road landslide **Santa Cruz County, CA**
Project engineer for geotechnical investigation and repair concept development, for a landslide on steep slopes threatening a single-lane road providing sole access route to area residents and daycare business. Investigation and design concept considerations included: preserving emergency access during investigation and repair; nearby creekbank and necessity of reducing permitting requirements; weak bedrock. Developed innovative exploration program, and various repair concepts, including use of lightweight backfill. CE&G services included providing structural engineering input to County design.

Highway 17 Wildlife Undercrossing **Santa Cruz, CA**
Retained by MROSD c/o TrailPeople for a project to provide wildlife with a corridor by which various species can safely cross Highway 17, which acts as a wildlife barrier. CE&G is supplying geologic and geotechnical expertise to the process of identifying, ranking, and selecting undercrossing and overcrossing alternatives to pursue. Considerations include slope stability; potential for debris flows; geotechnical conditions for crossing elements; and constructability. Mr. Peluso is providing input to foundation design considerations and constructability.

Tasman Light Rail Extension **Santa Clara County, CA**
Project engineer for the geotechnical engineering of the West Extension of the VTA Tasman Light Rail Train. Extensive interfacing and coordination with other project design professionals, review agencies and VTA. Project included design for retaining walls, box culverts, shoring and dewatering specifications, bridge pile foundations, track bed foundation, bridge embankment construction and settlement monitoring.

Alta Via Road Landslide **Santa Cruz County, CA**
Project engineer for geotechnical investigation and repair of landslide compromising single-lane road on steep slopes. CE&G recognized importance of bedrock structure (dip-slope conditions) in slope behavior, and developed repair alternatives taking these into account. CE&G services included providing structural engineering input to County design.

Los Angeles Metro - Crenshaw Line Tunnels, **Los Angeles, CA**
Provided additional geotechnical services for the design-build project to evaluate the continuity, thickness, and feasibility of a natural clayey soil layer to serve as the aquitard below the station box, thus eliminating the need for an expensive jet grouting operation. The work included a series of CPT soundings to confirm the lateral extend of an aquitard (clay layer) and installation of a number of observation wells positioned around the station excavation as well as installation of a pump-test well centrally located in the station box to facilitate pumping test program. Also provided senior review of geotechnical reports by design team.

Fresno SR-180 Braided Ramp Connections **Fresno, CA**
Lead geotechnical engineer at bid design stage, during the design phase, and during construction for the Fresno 180 Braided Ramp Connections Project, one of the first design-build demonstration project by Caltrans. Arup, as lead designer for R&L Brosamer, a subsidiary of Walsh Construction, was pre-qualified to prepare a bid for this project. The project will replace an existing weave section on State Route 180 between State Route 41 and 168 in Fresno, CA. The scope of this project included constructing two new bridges, one existing bridge widening, approximately three miles of on-grade ramp connectors, and other associated work. The estimated project cost is approximately $40M.

Disaster Damage FEMA Region IX, San Francisco, CA
Repair Design
Geotechnical engineering review for design and construction of disaster-related damage repairs to public facilities. Assignment involved determining eligibility, construction cost estimation, familiarity with Title 44 (Fed. Code), liaison with FEMA management and public agency applicants.

Gerald Desmond Bridge Replacement Long Beach, CA
Geotechnical Engineer for on-going design/build replacement of the existing bridge at the Port of Long Beach. Geotechnical services include pre- and post-bid award design for the Shimmick-FCC-Impregilo Construction Joint Venture. The Gerald Desmond Bridge Replacement Design-Build project is located in the City of Long Beach, California along I-710. The Main Span Bridge is a cable stayed bridge with a 1,000-foot long main span with back-spans of 500 feet long each. The bridge structures will be supported on CIDH pile groups. During the design stage, prepared preliminary and final foundation reports for main span and approach bridges and MSE retaining walls, directed completion of geotechnical deliverables, and regularly interfaced with the contractor and Caltrans.

DAVE BURGER, P.G., E.G.

Principal Geologist

CE&G
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RELEVANT EXPERIENCE

Vasco Road Safety Improvements **Livermore, CA**
Project geologist representing Alameda County during construction for the realignment of an approximately 1.2 kilometer segment of Vasco Road. The project consisted of a large 25 meter cut into a faulted and intensely fractured bedrock situated along the active trace of the Greenville Fault. Responsibilities included observations of construction methods for the excavation of hillside, placement of fill, construction of retaining walls, placement of drainage systems, and recording and reporting information for the County. Other duties included approval of keyway excavations, subgrade prior to placement of fill, confirmation of drainage fall and placement, construction observations and recommendations during the construction of a 60 foot 2 tier keystone block geogrid reinforced retaining wall, construction observations for temporary roadways, and recommendations and design of a reinforced fill slope for an unstable cut slope encountered during the mass grading operation. Construction of the fill included use of geogrid reinforcement, relocation of existing utilities, and coordination with the contractors, County and adjacent properties. The project was located adjacent to an environmentally protected area and developed to increase safety for commuters along this segment.

Bailey Road Stabilization **Pittsburg, CA**
Project geologist for the stabilization of a failure along a approximate 100 foot section of the road way in Pittsburg. Duties included performing 2 exploratory borings utilizing mud rotary wash system along the edge of an 1:2 (H:V) slope. The project included coordination with local permitting agencies, overseeing traffic control measures, disposal of drilling spoils at the local landfill facility, and coordination with lab testing. Other duties included mapping the geomorphic conditions of the site, creation of geologic cross section, and development of the geotechnical report.

Sir Francis Drake Boulevard **Lagunitas, CA**
Senior geologist for subsurface investigation and design of a retaining wall with tiebacks for stabilization of a 140 foot length of roadway along Sir Francis Drake Boulevard near M.P. 15.43 adjacent to Lagunita Creek. Project included PS&E for design of the cast-in-drilled-hole piles providing: length, size, depth, spacing, and location; design of the concrete facing for the wall, design of tieback loads, and design of all reinforcing steel for the retaining wall.

McKillop Road Embankment Stabilization **Oakland, CA**
Project geologist for the geotechnical design of a double retaining wall system used to stabilize McKillop Road from a landslide migrating toward the street. Logged and sampled numerous borings as well as installed inclinometers and piezometers. Project included design of a 160 linear feet inner soldier pile wall with two rows of tiebacks, and 190 linear feet outer soldier pile shoring wall connected to the inner wall using tie rods.

Zander Drive Landslide **Orinda, CA**
Project geologist for the geologic and geotechnical characterization and stabilization alternatives and feasibility study for a 300 foot wide, 1,000 foot long and 105+ foot deep landslide below a city street and two city-owned parcels. Geotechnical investigations included the review of numerous previous reports and studies, completion of a subsurface exploration, instrumentation, monitoring, and testing program; preparation of a landslide characterization report and a design alternatives report, and cost estimating.

CERTIFICATIONS
- CA Professional Geologist No. 8632
- CA Engineering Geologist No. 2553
- Certified Professional in Erosion and Sediment Control (CPESC)
- SPRAT Level 1 Rope Acces Technician No. 181407
- ACI Concrete Field Testing Technician Grade 1 No. 01141910

YEARS OF EXPERIENCE
16 (16 with CE&G)

EDUCATION
B.S., Geology, University of California Davis, 2003

ACCOMPLISHMENTS
- Geologic and geotechnical investigations for public agencies
- Landslide repairs and geologic mapping projects
- Foundation studies for residential and commercial development
- Construction quality assurance for landfill liner placement and cell development
- Radiation safety officer
- American Concrete Institute-certified concrete field testing technician

Ironbark Circle Landslide Investigation & Monitoring **Orinda, CA**
Served as Project Geologist during on-call services to the City of Orinda, responding to a landslide impacting the street, sidewalk, and residential properties on Ironbark Circle. Responsibilities included completion of UAV basemap development, reconnaissance geologic and distress mapping, subsurface exploration, installation of an inclinometer and vibrating wire piezometer, periodic readings, and ongoing monitoring.

Rancho Rio Bridge **Ben Lomond, CA**
Conducted a geotechnical investigation and prepared a foundation report for the replacement of the Rancho Rio Avenue Bridge over Newell Creek located in Ben Lomond. The existing bridge was approximately 39 feet long and 12 feet wide. The bridge superstructure consisted of steel girders with a concrete deck and was founded on reinforced concrete abutment walls that were supported by spread footings. The bride deck surface was approximately 12 feet above the bottom of Newell Creek. The planned project consisted of a new two lane bridge that will be approximately 48 feet long and 29 feet wide and approximately 29 feet above the creek bottom and founded on CIDH piles supported reinforced concrete abutment walls.

Marburger Landslide Repair **Belmont, CA**
Project geologist responsible for the subsurface exploration including borehole logging, obtaining permits, USA marking, driller coordination, laboratory soils testing, and preparation of boring logs. The project included a soldier pile retaining wall with tie-back anchors. CE&G also provided a topographic survey of the site, review of geologic maps, engineering analyses, development of conceptual stabilization alternatives, and preparation of design parameters and preliminary design analyses for the recommended stabilization method.

Moller Ranch Development **Dublin, CA**
Senior geologist for a geologic review of a hillside residential development in east Dublin. One of three major subdivisions with multi-million cubic yards of hillside earthwork. On behalf of the City, provided geologic observations of subsurface during grading and reviewing modifications.

Camino Tassajara Widening **Danville, CA**
Cal Engineering and Geology completed a geotechnical investigation for the proposed improvements to the northern side of Camino Tassajara located between Finley Road and the Mustang Soccer Complex. The existing stretch of Camino Tassajara is a two lane asphalt paved rural road. The project will widen approximately 2,400 feet of the road along its current alignment by placing embankment fill adjacent to the downslope edge of the existing embankment. The new embankment fill will range from 1 to 16 feet tall and will widen the road by up to approximately 20 feet in some areas.

US 101 Undercrossing **Redwood City, CA**
Project geologist for a geotechnical investigation for a joint-use path along the north bank of Redwood Creek between Bair Island Road and Convention Way to improve pedestrian and bicyclist access. CE&G's scope included obtaining drilling and encroachment permits, completing a subsurface exploration including three borings between 10 and 20 feet deep, performing laboratory soils testing, preparing boring logs, completing geotechnical analyses and calculations for the proposed improvements, and developing geotechnical recommendations for design and construction.

SF Bay Trail - George Miller Trail **Martinez, CA**
Senior geologist for geotechnical, civil, planning study, conceptual plan development, alternatives analysis, design of landslide repairs, field observations, and laboratory testing for conversion of a 1.7 mile, landslide prone segment of Carquinez Scenic Drive into a segment of the Bay Trail. Services were completed for the Contra Costa County Public Works Department and East Bay Regional Park District. Work included geotechnical investigation of several landslides, development of alternatives, estimates, and preparation of geotechnical alternatives and planning reports. Project received CalGeo's 2015 Outstanding Project of the Year Award. Duties included the initial geologic mapping of the project alignment, subsurface exploration including coring, rotary wash and hollowstem borings, and exploratory test pits. Also, assisted in the construction observation, measurements, and testing during the construction of the debris catchment, soldier pile, and site retaining walls.

Blackhawk Slope Stabilization **Danville, CA**
Project geologist representing the Blackhawk Geologic Hazard Abatement District for the subsurface investigation of an unstable engineered fill slope adjacent and below several single family residences and commercial properties. Duties included drilling and sampling 3 exploratory borings adjacent to existing slope indicator monitoring wells exhibiting movement at specific depths. Other duties included coordination with the property owners and local permitting agencies, development of cross sections and recommendations for remediation methods.

Norton-Rettig Landslide **Oakland, CA**
Geologist for large landslide repair affecting 6 residential properties and a city street. The landslide resulted in a road closure and red tagging of the upslope residence. Repair included drilling approximately 30+ large diameter 45+ foot deep solider piles, tieback installation, approval for keyway and backcut excavations, geologic mapping, construction observations and testing services for engineered fill and multiple tiers of geogrid reinforced keystone block retaining walls, subdrains, and as-built drawing and documentation.

Taylor Peterson

DIRECTOR OF BIOLOGICAL ANALYSIS

AREAS OF EXPERTISE

Biology / Endangered Species / Wetlands / Habitat Conservation / Permits / CEQA / NEPA

QUALIFICATIONS

Since joining in 1980, Taylor Peterson has applied her technical expertise to assess the impacts of a wide range of projects including storm water management, trails, sanitary landfills, materials recovery and transfer stations, quarries, commercial or housing development, wastewater treatment plant expansion, water well development, habitat conservation plans and high-voltage transmission line alignments.

Ms. Peterson is currently the Director of Biological Analysis at MIG and oversees the work of several biologists. She provides technical expertise, quality control, and guidance on a variety of work products, including constraints analyses, biological assessments, wetland delineations, Initial Studies, EAs, EIRs/EISs, mitigation monitoring plans, natural environment studies, revegetation plans and applications for US Army Corps of Engineers, California Department of Fish and Wildlife, California Coastal Commission and Regional Water Quality Control Board permits.

Ms. Peterson has a background in biology and has been a long-time observer of California's natural history. She is experienced in plant and animal identification, vegetation mapping, wetland delineation, and in survey methods for several endangered species. She has worked on projects in sensitive habitats such as vernal pools, serpentine grassland, wetlands and riparian zones.

CERTIFICATIONS

- *Wetlands Training Institute, Wetlands Delineation Certificate*

EDUCATION

- *Bachelor of Arts, Human Biology, Emphasis in Animal Behavior, Stanford University*

RELEVANT EXPERIENCE

- *West Bay Sanitary District, Flow Equalization and Resource Recovery Project, Technical Studies, EIR Menlo Park, California, ongoing*
- *San Mateo County Project Development Unit, Cordilleras Mental Health Center Redevelopment Biological Technical Studies, Resource Agency Permits, EIR, construction monitoring, San Mateo County, California, 2014 - 2023*
- *Sunnyvale Public Works, Remington Court Outfall Repair, Wetland Delineation, Biological Resources Report, Permit Applications, Stevens Creek, Sunnyvale, California, ongoing*
- *City of Brisbane On-call Biological Services, technical reports and operating programs for projects within the San Bruno Mountain Habitat Conservation Plan, ongoing*
- *Purissima Hills Water District, Moody Road Adobe Creek Bank Stabilization and Mitigation, Technical Reports, Permit Applications, Compliance Monitoring, Los Altos Hills, California, 2018-2021*
- *Caltrain San Mateo Grade Separation Project, wetland delineation, restoration design, construction monitoring, San Mateo, California, 2014-present*
- *Caltrain Bridge Replacement at Los Gatos Creek Construction Monitoring and Biological Permit Compliance, San Jose, California, ongoing*
- *Caltrain Bridge Repair at Guadalupe River technical studies, San Jose, California, 2017-present*
- *Waste Management Kirby Canyon Recycling and Disposal Facility, biological compliance monitoring and reporting, San Jose, California 1983-present*
- *City of Pacifica/Caltrans Highway 1 Bridge Over San Pedro Creek Replacement Technical Documents and Permits, including USACE, USFWS, NOAA Fisheries, CDFW, RWQCB, Caltrans NES Pacifica, California*

Tracy has broad experience in civil engineering and land surveying with HMH for twenty-two years. She is a Civil Engineering graduate who gained surveying experience early in her professional career and earned professional licenses in both disciplines to develop a unique and highly valued set of skills. As Senior Land Surveyor, her current responsibilities include the oversight of all survey mapping including preparation of tract maps, ALTA/ASCM surveys, corner records, record of surveys, condominium plans and plat maps and legal descriptions.

EXPERIENCE 22 years
EDUCATION B.S. Civil Engineering - Santa Clara University

Tracy Giorgetti, LS/PE
Senior Land Surveyor

Land Surveyor
California #8720

Civil Engineer
California #63214

California Land
Surveyors Association

RELEVANT PROJECT INVOLVEMENT

215 Moffett, *Sunnyvale, CA*
Tracy was the Senior Land Surveyor for 215 Moffet, which included the following services: ALTA survey, boundary survey, topographic survey, plats and legals, and construction staking. The goal of the commercial office project was to create a sustainable solution by rehabbing an existing building into a Class A office building.

Caltrans Projects, *Bay Area, CA*
Tracy's experience also included: record mapping of Caltrans right-of-way, processing field topographic and 3D laser scanning data to produce a pavement survey exhibit for the I-880 Southbound High Occupancy Vehicle (HOV) project; Caltrans appraisal mapping with related legal descriptions for the I-880/Marina Boulevard Interchange; record of survey for US 101/Bailey Avenue Interchange Improvements; and provided title report review and easement plotting, Caltrans appraisal/right-of-way/hard copy mapping, and prepared associated plat maps and legal descriptions for the I-880/Dixon Landing Interchange.

BART - Bay Area Rapid Transit - SVBX (Silicon Valley Berryessa Extension), *Milpitas and San Jose, CA*
Tracy supervised topographic field surveys and coordinated pothole and as-built utility surveys for the Bay Area Rapid Transit (BART) Silicon Valley Berryessa Extension (SVBX). The BART Berryessa Extension is a 10-mile, two-station extension, beginning in Fremont south of the BART Warm Springs Station and proceeding in the former Union Pacific Railroad right-of-way through Milpitas and then to the Berryessa area of San Jose. HMH played a significant role in the solutions pertaining to the challenges associated with numerous utilities passing through five undercrossing structures along the project corridor.

Montague Expressway Widening Project, *San Jose, CA - County of Santa Clara*
As the Project Land Surveyor, Tracy reviewed title reports, provided easement plotting for 24 parcels; prepared a record boundary survey and prepared 70 plat maps and legal descriptions for right-of-way and public/private easement acquisitions. HMH supported the County of Santa Clara Roads and Airports Department for the design and environmental phases on the widening and raising of Montague Expressway and Milpitas Boulevard. A major element of the project was the replacement of the double-box culvert crossing of Berryessa Creek with a bridge structure, including raising the roadway profile approximately 6 feet to accommodate increased freeboard requirements.

Alum Rock and El Camino Bus Rapid Transit (BRT) Projects, *San Jose, Santa Clara, and Mountain View, CA*
Tracy prepared plat maps and legal descriptions, in VTA format, for the Santa Clara Alum Rock BRT project and prepared record right-of-way mapping for the El Camino BRT project that extended from Santa Clara to Palo Alto. The seven mile extension connects east San Jose to Downtown San Jose which adds convenience and enhances the transit environment.

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