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PROPOSAL

FEBRUARY 24, 2022

San Lorenzo Valley Water District
Consolidation of the Bracken Brae and Forest Springs
Mutual Water Companies

Sandis Civil Engineers Surveyors and Planners
1700 S. Winchester Blvd., Suite 200, Campbell, CA 95008

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COVER LETTER

February 24, 2022

Josh Wolff, PE
District Engineer
San Lorenzo Valley Water District
13060 Highway 9
Boulder Creek, CA 95006

RE: San Lorenzo Valley Water District, Consolidation of the Bracken Brae and Forest Springs Mutual Water Companies RFP

Dear Josh,

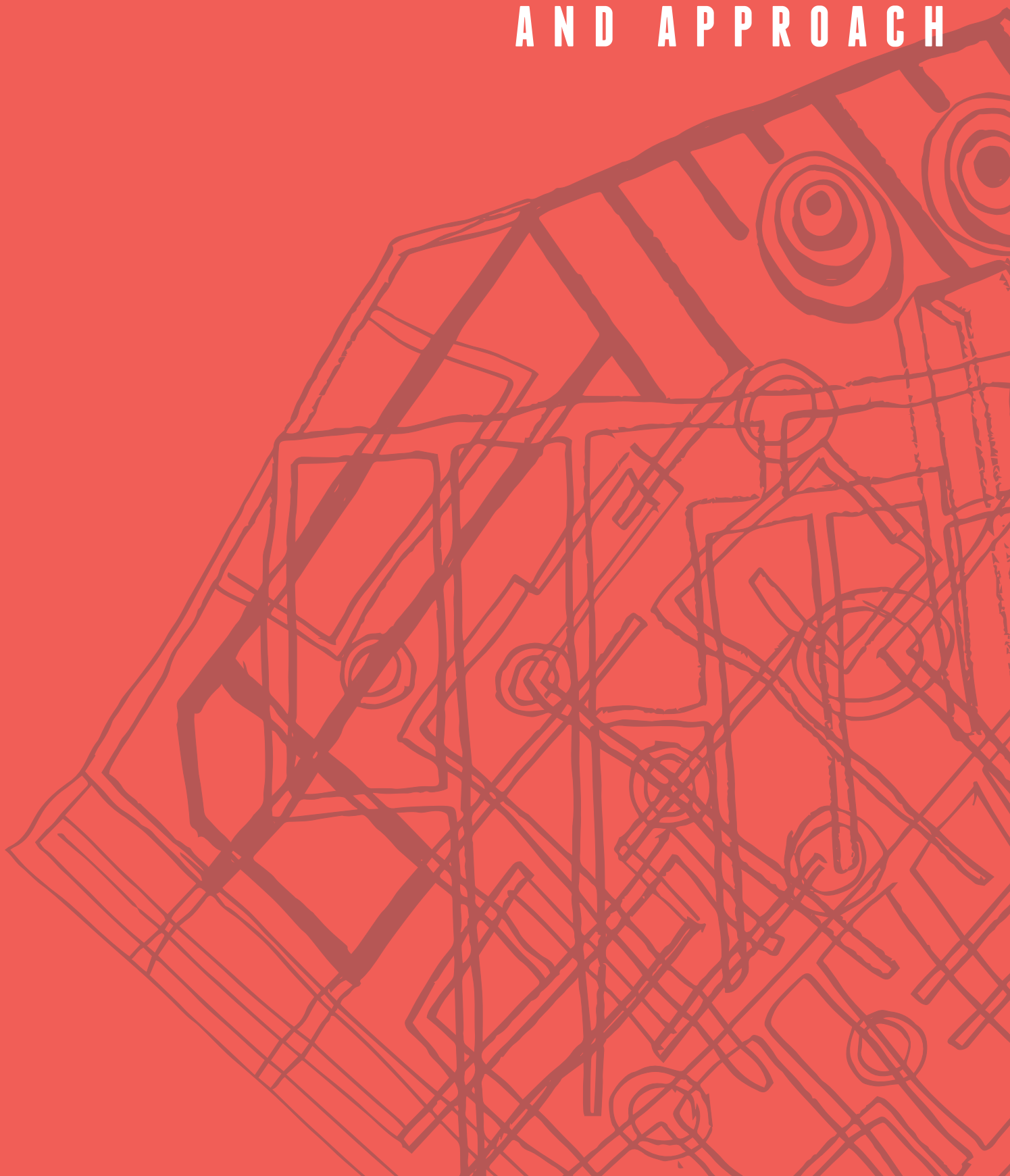
Thank you for the opportunity to submit our response to the District's request for proposal to provide professional design services to the San Lorenzo Valley Water District for the Consolidation of the Bracken Brae and Forest Springs Mutual Water Companies. We are extremely excited about this project and believe that we possess the knowledge, expertise, and trained resources required to meet the project demands. Our team includes Haro, Kasunich and Associates for geotechnical engineering as well as our own in-house Topographic Survey, Utility Locating, and Civil Engineering teams.

Our design team is again led by Ron Sanzo, PE, Principal- in-Charge, and Brian Cancimilla, PE, Project Manager. Brian's team of engineers will soon be completing the SLVWD 2021 CIP and FEMA projects and are anxious to continue working with SLVWD to help maintain the high quality water services the District provides. We have studied the RFP as issued, we have conducted our own site visits, and we have prepared our thoughts on how to best design the project. We look forward to the opportunity to collaborate with you and others at SLVWD to expand your system and meet the needs of the San Lorenzo Valley community.

Thank you,

Jeff Setera, PE, QSD/P, LEED AP
President
408.892.3792 | jsetera@sandis.net
1700 S. Winchester Blvd., Suite 200
Campbell, CA 95008

PROJECT DESCRIPTION AND APPROACH



PROJECT DESCRIPTION

The proposed project consists of the consolidation of the Bracken Brae Mutual and Forest Springs Improvement and Maintenance Association into the San Lorenzo Valley Water District (SLVWD). SLVWD serves a population of approximately 25,485 residents through two permitted water systems. The project intent is to provide District standardized improvements to benefit the two communities: approximately 152 connections serving a population of 440 residents. The Bracken Brae Mutual Water service area is located off Big Basin Way, topographically above and on the North side of Bracken Brae Creek. The Forest Springs Improvement and Maintenance Association is also located off Big Basin Way topographically above and on the South side of both Bracken Brae Creek and Big Basin Way. Conceptually the project includes up to two storage tanks, a duplex booster pump station, zone pressure control valve(s), approximately 2,000 lineal feet of water main to serve Bracken Brae, 3,000 lineal feet to serve Forest Springs, almost 4,000 lineal feet of water main extension to replace an existing undersized District pipeline (ex 2-inch), and other typical water main appurtenances such as air relief valves, blow off valves, and fire hydrants.

KEYS TO PROJECT SUCCESS

PROJECT MANAGEMENT

- Detailed work plan
- Clear communication inter-team and with client
- Understanding of client goals and measures of success
- Total quality management

CIVIL

- System element (pumps, tanks, control valve, pipeline) sizing
- Single vs two tank options
- Caltrans coordination for bridge crossings
- Execution of project work plan

GEOTECHNICAL

- Rapid soils investigation to allow design to move forward.
- Slope stability above and below tank sites
- Seismic and landslide potential

SURVEY/UTILITY LOCATING

- Rapid field data collection and development of an accurate base plan for improvements.

PROJECT APPROACH OUTLINE

1. Review and understand available system information, operational records, and District goals.
2. Prepare a study to explore options and make recommendations. Preliminary Design Report.
3. Conduct field survey and utility locating.
4. Conduct geotechnical investigation.
5. Study special tank foundation requirements for high angle sites.
6. Initial coordination with Santa Cruz County and Caltrans for encroachment permit and pipeline bridge crossings.
7. Preliminary Design Calculations, Plans, and Cost Estimate.
8. Coordinate and submit applications with Santa Cruz County and Caltrans for encroachment permits and pipeline bridge crossings.
9. Prepare Final Design.
10. Prepare Bid Documents, contract, bid form, construction logistics, permits, and schedule requirements.
11. Bid Project and conduct pre-bid meeting.
12. Answer bidder questions and issue clarifications as required.
13. Conduct pre-construction meeting and construction administration duties.

LESSONS LEARNED FROM SLVWD 2021 CIP & FEMA PROJECTS

1. Add a distinct Preliminary Design Report deliverable and present early (within 3 weeks of project kick off) for District input.
2. Ask questions of District staff, vendors, and consultants at the onset of preliminary design.
3. Conduct site visits as required early to completely answer field fit questions.
4. Bring design challenges to District immediately for discussion.
5. Develop and execute a highly detailed workplan.
6. Meet the client schedule.
7. Exceed client expectations.

PROJECT CONSIDERATIONS

1. Single vs Dual storage tank option, elevations of tank within Forest Springs may be able to supply sufficient pressure to both parts of the system.
2. Geologic review for landslide and near fault issues at tank sites and pump station site.
3. Standardized boost pump station equipment (duplex pump/VFD controls and generator set).
4. Water quality issues: disinfectant residual, disinfection by products, etc.
5. Interface/coordination with District Water Quality Manager.
6. Storage Tank mixing system.
7. Pipeline bridge crossings and related Caltrans coordination of design.
8. Assistance with permitting with Water Board, Department of Drinking Water (DDR).
9. Interface/coordination with SLVWD consultant for water system modeling, ex 2-inch main in Hwy 236 to prop 8-inch main under various flow conditions (baseline demand, peak demand, fire flow demand).

PROJECT APPROACH

We hope to rapidly gain knowledge and understanding of both the Bracken Brae and Forest Springs systems, in particular, pipe sizes, pipe materials, system pressures, baseline demands, and peak demands so we may include them in our analysis and develop options for connection and zone control. We intend to initiate the project immediately following kick off with the development of a Preliminary Design Report that will be prepared by a team of Sandis Principals so that we can, in an abbreviated period, exercise all reasonable options and develop a set of project recommendations, exhibits, and cost estimates for presentation to the District. Once completed and reviewed by the District, the Preliminary Design Report will serve as a guide for our project team to execute both preliminary and final designs for the Project.

The extensive work along Big Basin Way or Highway 236 (cut and cover trenching plus pipeline bridge crossings) will necessitate early outreach coordination, sharing of preliminary details and submission of final design to Caltrans to mitigate schedule impacts. We assume the District has already or will complete any environmental reviews and documentation required for the Project. If that is not the case, we will be happy to engage in those activities on behalf of the District as required.

For the preliminary design that follows the preliminary design report, we will use the field topographic survey data, utility locating data and geotechnical investigation to graphically depict the system layout and early details for system components. Our preliminary design will take advantage of insights and new standards developed as part of the San Lorenzo Valley Water District 2021 CIP and FEMA projects. A full presentation to the District including a top to bottom review of the preliminary design plans, details, and cost estimate will be the last task during this phase.

Final design will incorporate all District comments and expand the level of detail required to complete a set of fully coordinated design documents. After another presentation to the District, any last comments and/or revisions will be incorporated into the bid documents. The bid documents will include plans, specifications, engineers estimate, bid form, construction logistics, construction schedule, and District standard contract. We will deliver documents ready for bidding on or before August 1st, 2022.

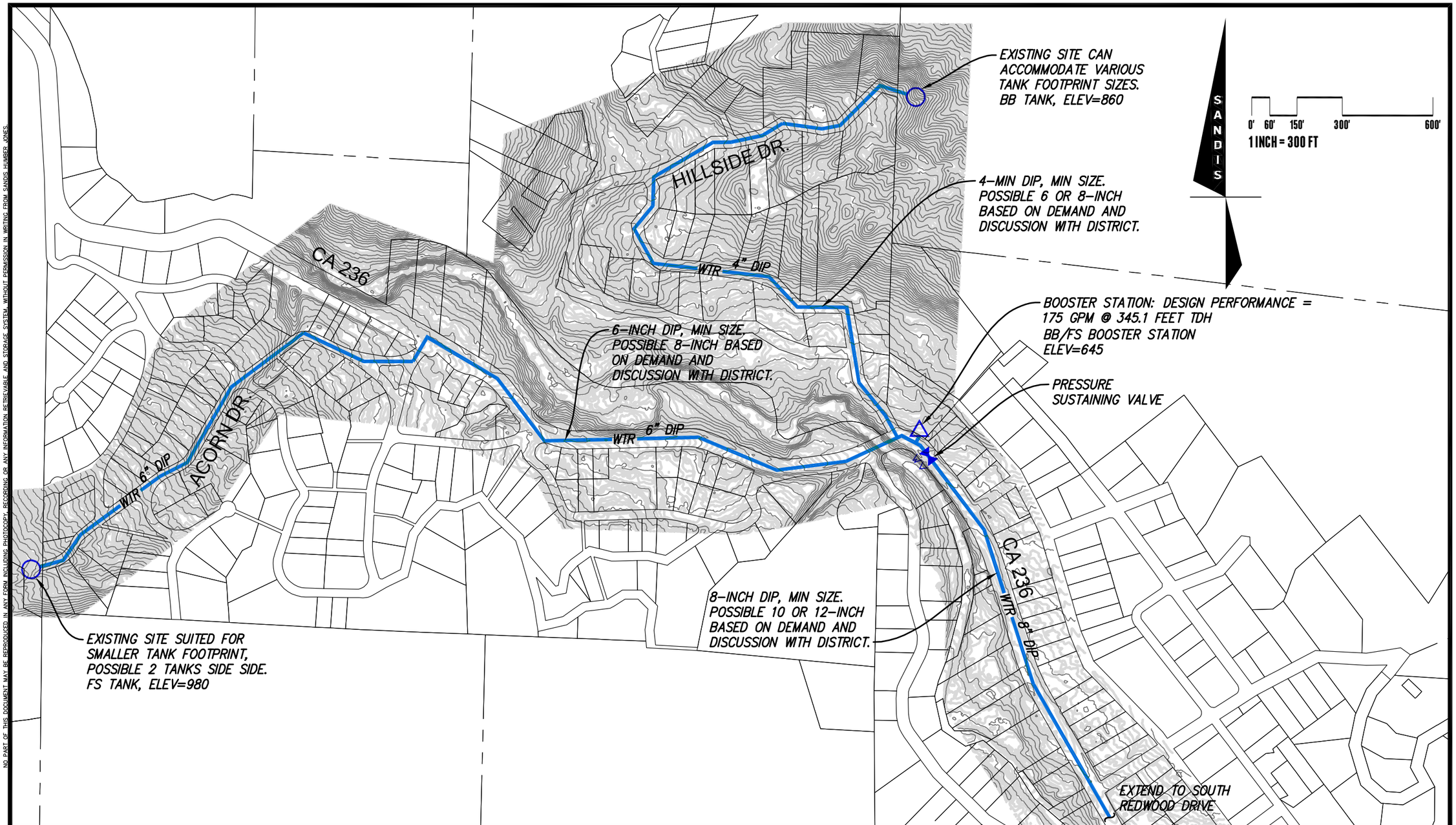
LIST OF EXHIBITS:

Exhibit 1: System Layout Graphic

Exhibit 2: Booster Pump Station Concept

Exhibit 3: Preliminary Calculations

Exhibit 4: Tank Seismic Sloshing Wave Height Analysis



SANDIS BUILD ON. SANDIS.NET

DATE: 02-14-2022
SCALE:
BY: GL
PROJECT No.:

SAN LORENZO VALLEY WATER DISTRICT
BOULDER CREEK CALIFORNIA

BB AND FS TANK EXHIBIT

SHEET
EX-1

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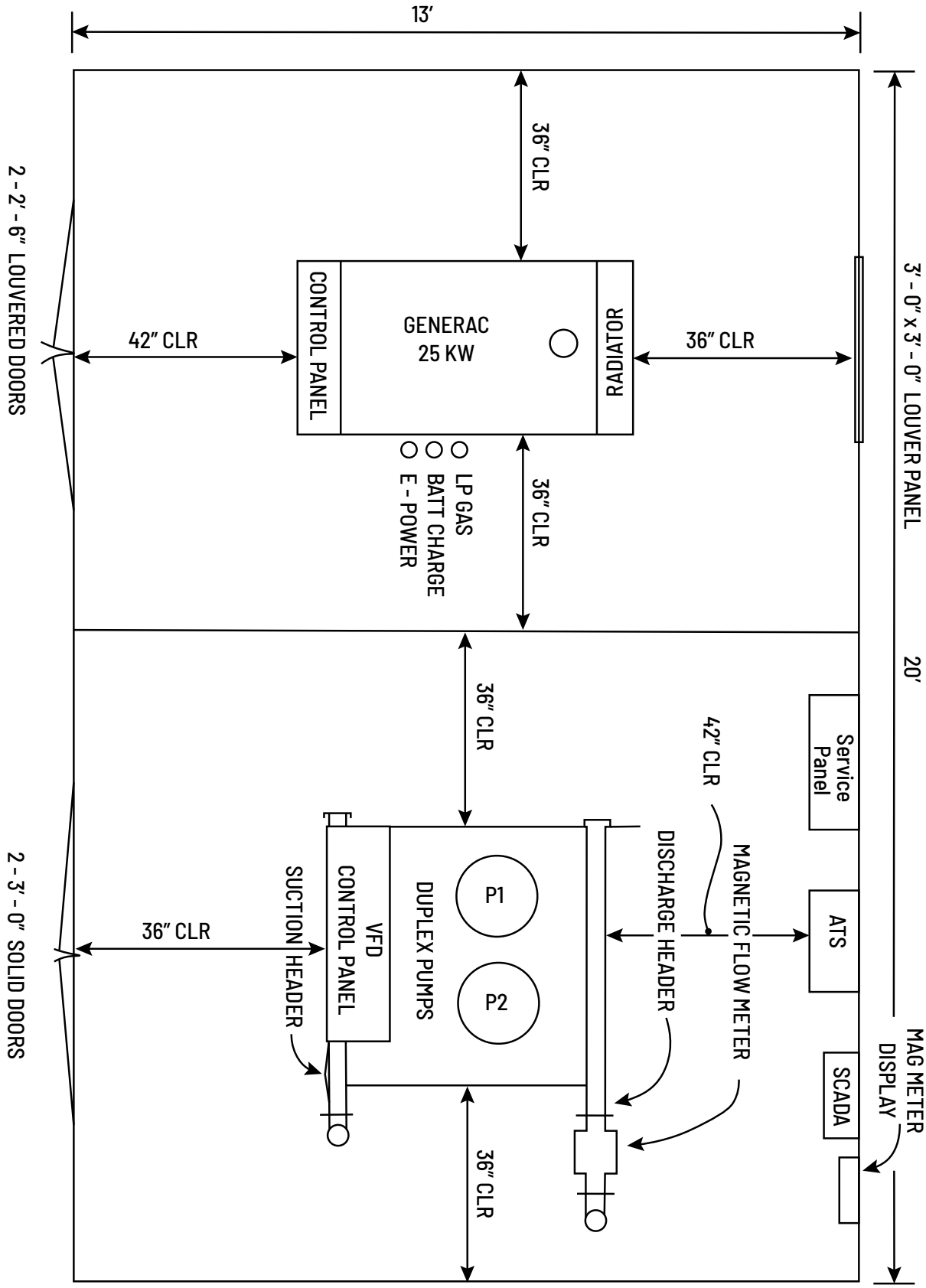
BRACKEN BRAE BOOSTER PUMP STATION WITH GEN SET



PRELIMINARY CALCULATIONS

EXHIBIT 3

Water Demand Calculations			
	Bracken Brae	Forest Springs	
Population	69	370	
Connections	24	128	
Baseline	50	50	gpd based on code min
Peaking Factor	4	4	PF range (1.5 to 6)
Base Demand	3,468	18,496	gpd
Peak Demand	13,872	73,984	gpd
Instantaneous Base	2	13	
Instantaneous Peak	10	51	gpm
Design Demand	61		gpm, system total
Design Volume	87,856		gallons, tank volume
Water Aging, Base	4.75		days of storage
Water Aging, Peak	1.00		days of storage

Hazen Williams Calculator Preliminary Calculations for 4 Inch Pipe ID	
Pipe ID (Inches)	4.18
Pipe Roughness	120
Pipe Length (Feet)	3500
Elev Difference (Feet)	157.8
Q, Flow Rate (gpm)	175.0
V, Flow Velocity (fps)	4.09
Head Loss (Feet)	69.75

Pipe Roughness Values	
PVC	140
HDPE	150
Steel	120
DIP, Mortar Lined	120
Fire Hose (Rubber Lined)	135

Calculations	
Pipe Area	0.09529708
Pipe Perimeter	1.09432052
Hydraulic Radius R	0.08708333
Pipe Slope S	0.04508571

Hazen Williams Calculator Preliminary Calculations for 6 Inch Pipe ID	
Pipe ID (Inches)	6.24
Pipe Roughness	120
Pipe Length (Feet)	3500
Elev Difference (Feet)	157.8
Q, Flow Rate (gpm)	175.0
V, Flow Velocity (fps)	1.84
Head Loss (Feet)	9.93

Pipe Roughness Values	
PVC	140
HDPE	150
Steel	120
DIP, Mortar Lined	120
Fire Hose (Rubber Lined)	135

Calculations	
Pipe Area	0.21237148
Pipe Perimeter	1.6336268
Hydraulic Radius R	0.13
Pipe Slope S	0.04508571

SEISMIC WAVE HEIGHT ANALYSIS FOR BOLTED STEEL STORAGE TANKS

References: ASCE 7-16; Superior Tank Website and Download Brochure Data

ANALYSIS PROCEDURES

1. Determine Risk Category, see ASCE 7-16, Section 1.5, Table 1.5-1 , Page 4, Risk Category IV = Buildings and other structure designated as essential facilities. Potable water storage tanks provide water for drinking and fire suppression.

2. Determine Seismic Importance Factor: I_e=1.0 for tanks in Risk Category IV

3. Find Seismic Response Data (specific to tank location): use website https://seismicmaps.org/ values for S_1, S_{ds}, T_L

4. Calculate value for S_{m1}, $S_{m1}=F_v * S_1$, see Section 11.4, find value on Table 11.4.2

5. Calculate value for S_{d1}, $S_{d1}=2/3*S_{m1}$, see Section 11.4

6. Calculate Sloshing Period T_c: T_c = 2(3.14159)((D/3.68g Tan H (3.68*H)/D)^0.5; see Section 15.7, equation 15.7-12

7. Calculate Spectral Acceleration of sloshing liquid S_{ac}: $S_{ac} = 1.5(S_{d1})/T_c$ </= S_{ds}, See section 15.7, equation 15.7-10, compare value of Tc </= TL

8. Calculate Height of Sloshing Liquid δ: $\delta = 0.42*D*I_e*S_{ac}$; see Section 15.7, equation 15.7-13

9. Test various tank diameters and heights based on desired storage volume, you may need to increase volume to account for wave height and loss of active storage.

10. Present calculations and recommended tank volume and dimensions for independent 3rd party review.

11. Upon approval of tank size, test tank on project site for fitment.

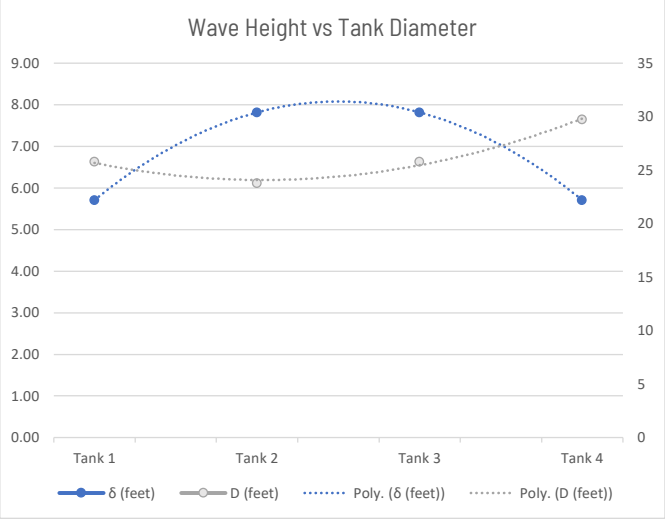
TRIAL TANK SIZES

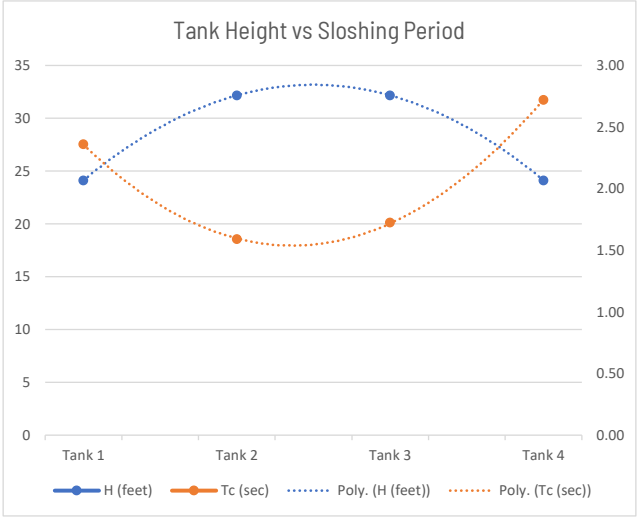
	D (feet)	H (feet)	Vol (gallons)
Tank 1	25.78125	24.125	94,208
Tank 2	23.7656	32.1667	106,741
Tank 3	25.78125	32.1667	125,612
Tank 4	29.719	24.125	125,186

I_e	T_c (sec)	S_{d1}	S_{ds}	S_{ac} (sec)	δ (feet)
1.00	2.36	0.83	1.55	0.53	5.71
1.00	1.59	0.83	1.55	0.78	7.82
1.00	1.72	0.83	1.55	0.72	7.82
1.00	2.72	0.83	1.55	0.46	5.71

Gallons/foot H	Active Vol (gallons)
3,903	71,913
3,316	80,817
3,903	95,104
5,186	95,561

Note: Tank dimensions provided by Superior Tank, *Standard Bolted Steel Tank Capacities, NSF 61/372*





IDENTIFICATION OF PRIME CONSULTANT

Legal Name
Sandis Civil Engineers Surveyors Planners

Headquarter Office
1700 S. Winchester Blvd., Suite 200
Campbell, CA 95008
P: 408.636.0900
F: 408.636.0999

Additional Offices
Oakland, CA
Pleasanton, CA
Modesto, CA
Roseville, CA
Spokane, WA

Primary Contact
Jeff Setera, PE, QSD/P, LEED AP
President
408.892.3792
jsetera@sandis.net

Firm Type
California Corporation

Year Established
1965

Number of Employees
114

Sandis' In-House Services
Traffic Engineering, Civil Engineering, Surveying and Mapping, 3D Laser Scanning, QSP/QSD, Planning, Utility Locating

FIRM BACKGROUND AND SERVICES

Sandis is a professional services firm specializing in civil engineering, traffic engineering, land surveying, stormwater management, QSP/D, utility locating, 3D laser scanning, construction staking, and planning. Established in Northern California in 1965, Sandis is a California Corporation comprised of 114 employees. Sandis employs the best and the brightest in our industry. We recruit well rounded individuals committed to innovation, excellence, leadership and environmental stewardship. Sandis' expertise is expansive. We service private and public clients in the academic, hospitality, healthcare, civic, justice, public works, corporate, and commercial sectors. Sandis' designs achieve economic, social and ecological sustainability.

PROJECT QUALIFICATIONS

Sandis has a working relationship with the District and has performed a variety of civil engineering and surveying services in the past year and a half, including emergency repair and restoration, pipeline and tank replacements, and construction management services. The team presented herein is backed by decades of successful civil engineering design services for a variety of projects and will use this experience to guide the District's work to completion.

CLAIMS, LITIGATION, ARBITRATION

Sandis has never been terminated from a contract for default or cause as a consultant or sub consultant, nor has Sandis ever filed for bankruptcy. Within the past five years, Sandis has had a claim with American River College for an issue with the tennis court pavement condition. Sandis is working directly with the Webcor/Watry and American River College to resolve the project. A resolution is expected this year, 2022.

Staff	Discipline/ Job Title	Role
Jeff Setera, PE, QSD/P, LEED AP	President	Technical Advisor, Quality Control
Ron Sanzo, PE, TE, PTOE	Principal-in-Charge	Principal-in-Charge
Brian Cancimilla, PE	Project Manager	Project Manager
Ivan Walynetz	Project Engineer	Project Engineer
Kelly Johnson, PLS	Senior Project Manager, Surveying	Senior Project Manager, Surveying
Chris Cintean, PLS	Project Manager, Surveying	Project Manager, Surveying
Nicole Cooper	Project Manager, Utility Locating	Project Manager, Utility Locating
Michael Sullivan	Utility Locator	Utility Locator

Legal Name
Haro, Kasunich and Associates

Headquarter Office
Haro, Kasunich and Associates
116 East Lake Ave.
Watsonville, CA 95076

Years in Business 38
Founded 1984

Primary Contact
John Kasunich, PE, GE
Principal Engineer
831.722.4175
jkasunich@harokasunich.com

Number of Staff 18

Haro, Kasunich and Associates ' In-House Services
Geotechnical Engineering
Coastal Engineering
Earthwork Construction Testing & Support
Civil Engineering
Forensic Engineering & Litigation
Laboratory & Field Testing Services

Bankruptcy Filings
Haro, Kasunich and Associates (HKA) has never filed for Bankruptcy

FIRM BACKGROUND AND SERVICES

Haro, Kasunich and Associates (HKA) is a professional consulting firm dedicated to providing quality geotechnical and coastal engineering services to private and public clients throughout the Central Coast of California.
HKA's staff consists of a team of professionals and technical specialists recognized for their expertise in the fields of geotechnical engineering, coastal engineering, earthwork construction testing and expert testimony. The firm offers a local presence with 35+ years experience and practice in Santa Cruz and Monterey Counties as prime and/or sub consultant's on over 12,000 projects.

HKA is a full capacity, geotechnical engineering consulting firm specializing in soil, foundation and coastal engineering for public works, industrial, commercial, water district, residential, highway, bridge and reservoir/dam developments. The range of public projects typically supported by HKA includes streets, bridges, water service infrastructure, parks, wastewater treatment facilities, schools, fire stations, and other buildings.

PROJECT QUALIFICATIONS

HKA staff has completed projects for both private and public clients, including landslide repairs, hillside improvement modifications, residential subdivisions, commercial buildings, parks, schools, hospitals and public infrastructure (including major bridges) projects. HKA has worked with the San Lorenzo Valley Water District on the Lyon Tank Access Road Landslide Repair, providing geotechnical design criteria to restore the roadway. HKA has been a reliable partner on SLVWD projects, and is a trusted sub consultant for the Sandis team.

Staff	Discipline/ Job Title	Role
John Kasunich, PE, GE	Principal Engineer, Geotechnical Engineer	Principal Geotechnical and Coastal Engineer
Andrew Kasunich, PE	Staff Engineer, Geotechnical	Staff Engineer
Ashton Buckner, GE	Staff Engineer, Geotechnical	Staff Engineer

PROJECT ORGANIZATION AND EXPERIENCE OF THE PROJECT TEAM

PROJECT MANAGEMENT APPROACH

The key elements in our approach to project management are the following:

- Detailed design work plan
- Complete and accurate topographic surveys
- Design schedule development and maintenance
- Regular communication with the District
- Principal level involvement
- Total quality control
- Accurate project cost modeling

EFFECTIVE COMMUNICATION

The key elements in our approach to communication are the following:

- Dedicated design team
- Principal level involvement
- Regular progress meetings
- Face to face design phase presentations
- Appropriate utilization of virtual meetings
- Face to face project kickoff
- Effective document control

RESOURCE MANAGEMENT

- Detailed workplan, including tasks subtasks and checklists
- Weekly review of progress
- Time tracking against work tasks
- Project schedule development and maintenance
- Ability to add resources as needed

QUALITY CONTROL SYSTEM

The key elements in our approach to quality control are the following:

- Thorough understanding of project scope
- Development of thorough preliminary design
- Knowledge of pipeline alignment, physically walk alignment
- Principal review of preliminary design and supporting calculations
- Accurate transfer of design ideals to plans
- Independent Principal review
- Use of cloud-based collaboration tools

WORK LOCATION

- Campbell and Oakland office support
- Remote working with professional staff located even closer to the District
- Close proximity to the District will allow for regular field visits and meetings

CAPACITY TO PERFORM SERVICES

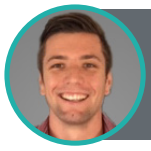
Sandis is powered by over 114 professional engineers and surveyors, spanning across six offices. Our team of experts, dispersed across the Bay Area, allow us to seamlessly perform our services for multiple clients simultaneously. LiquidPlanner has increased Sandis' ability to share project data, update project progress, and assign staff to necessary tasks. Our heightened form of communications have propelled the speed and quality of our services. Due to our well trained staff of professionals, adherence to regular communication, and use of technology, Sandis is well versed in managing concurrent complex and fast track contracts. Our extensive use of advanced technology allows us to: **Have immediate and constant contact with field operations and engineering team; Adjust staffing based on project needs and productivity; Utilize real time information.**

San Lorenzo Valley WATER DISTRICT

Jeff Setera PE, QSD/P, LEED AP
President, Technical Advisor/
Quality Control

Ron Sanzo, PE, TE, PTOE
Principal-In-Charge

Brian Cancimilla,PE
Project Manager



Ivan Walynetz
Project Engineer

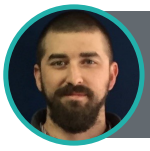
SURVEYING

Kelly Johnson, PLS
Senior Project Manager

Chris Cintean, PLS
Project Manager

UTILITY LOCATING

Nicole Cooper
Project Manager,
Utility Locating



Michael Sullivan
Utility Locator

SUB CONSULTANT

HARO, KASUNICH, ASSOCIATES
Geotechnical Engineering

John Kasunich, PE, GE
Principal Engineer

Andrew Kasunich, PE
Staff Engineer

Ashton Buckner, PE
Staff Engineer

UNIQUE QUALIFICATIONS

The technical requirements of the Consolidation of Bracken Brae and Forest Springs Mutual Water Systems Project require experience and expertise in pipeline, storage and pump station design and construction. The Project also includes unique elements, such as overcoming challenges of the topography and extrapolating District standards into a new area of service. The key is to understand the Project holistically then divide the project into increments for rapid design execution. This project represents a significant capital investment and an expansion of service responsibility. Sandis has a proven track record and established processes of project and schedule management to keep this Project aligned with District expectations. Sandis embodies the required technical experience, management experience, and client commitment that will drive the Project to success. And while we have recent successes working for the District, we will continue to strive for excellence.

PROJECT MANAGER AND TEAM EXPERIENCE

Brian Cancimilla, PE is a licensed Civil Engineer with over 15 years of experience. Brian has served as an integral part of Sandis for over 12 years and has led our proposed team as Project Manager on nearly a hundred successful projects. He brings his passion of civil engineering and his dedicated work ethic to every project he manages. His broad range of infrastructure design, site development, hydrology, stormwater management design, utility layout, and grading and drainage design allows him to tackle complex engineering problems while working seamlessly within project and client teams. Having served as the Project Manager for both SLVWD 2021 CIP and FEMA projects, Brian Cancimilla is intimately familiar with the requirements of District projects and will use this to guide the success of the Bracken Brae and Forest Springs Consolidation Project.

Brian is backed by an exceptional team of Principals, Engineers, and Surveyors who have worked in step as a team on dozens of projects that are similar in size and scope. His similar experience includes SLVWD 2021 CIP and FEMA projects, City of Napa's Milliken Pipeline Improvements project and Stanford University Arboretum HDPE water mains, valving and metering work. He is known for his ability to bring teams together to collaborate, work through, and find the best and most reliable solutions for clients.

Principal-in-Charge **Ron Sanzo, PE, TE, PTOE** has over 16 years of civil and traffic engineering experience, including 14 years with Sandis. Ron has guided the Sandis team through hundreds of complex projects and has extensive experience in the design and implementation of public works and infrastructure improvement projects. Through experience on similar projects, Ron is fully aware of the importance of early and regular communication with agencies, contractors, and the District to ensure that all parties understand the project objectives and goals.

In the last two years, Ron has served as the Principal-in-Charge on numerous projects of a similar scope, including his involvement in the SLVWD 2021 CIP and FEMA projects, SLVWD District Foreman Intake to WTP Pipeline project and the City of Napa Milliken Pipeline Improvements project. In recent years, Ron has also led Sandis' civil engineering design work for similar projects including Coalinga Secure Treatment Facility, Aptos High School Storage Tank Replacement, and several pipeline improvement projects for public agencies in the Bay Area.

Ron's experience coordinating the implementation of water pipeline, utilities, and roadway improvement projects affords him the ability to foresee project challenges during the design stage and suggest appropriate measures to help mitigate impacts to the project site as well as adjacent facilities and roadways. An excellent communicator, Ron strives to partner with clients and project teams to design innovative yet practical solutions to complex utility problems.

JEFF SETERA, PE, QSD/P, LEED AP

PRESIDENT, TECHNICAL ADVISOR/ QC

32 Years of Experience
32 Years with Sandis

Professional Civil Engineer
CA #62793

Qualified SWPPP Developer/ Practitioner (QSD/P)
#340

BS, Civil Engineering
San Jose State University

LEED™ Accredited Professional, USGBC

About

Jeff Setera is Principal and President of Sandis Civil Engineers Surveyors Planners and has been with the firm for 32 years. Jeff is state renown for his leadership in engineering design and project management of utility and infrastructure projects for public agencies, hospital, and educational facilities. His vision as President is to ensure Sandis' processes bring out high quality, technically competent and client-focused design solutions. Jeff has extensive experience working with Water Districts throughout Northern California. His familiarity and insights across a wide range of water and pipeline projects are invaluable on teams when facing complex project challenges.

Relevant Experience

SLVWD Foreman Intake to WTP Pipeline Santa Cruz, CA
Principal. Jeff has served as Principal and has played an integral role in working closely with the San Lorenzo Valley Water District to assist in the destroyed or heavily damaged parts of the District's water pipeline systems and storage tanks. For the Foreman Intake, Jeff provided engineering and construction management of 3,500 l.f. of pipeline to replace a surface mounted pipeline that was destroyed during the CZU fire of 2020. He provided rapid evaluation and assessment of damage, planning and design of replacement, inclusion of pipeline hardening/ protections and alignment revision to provide pipeline accessibility. The new 12-inch and 8-inch lines were designed and installed in rapid fashion to meet the District demands (Pipeline feed raw water to WTP) immediately and long term. Jeff worked with the District within days of the fire to assist the District with complete turn-key services to replace the pipeline. Services were provided in a timely manner and on budget.

SLVWD Big Steel to Lyon Tank Interconnect Pipeline Santa Cruz, CA
Principal. Jeff has served as Principal throughout the District's water pipeline infrastructure repair and construction work. Jeff was part of the rapid assessment team providing critical engineering assessment and design of 1,200 l.f. of surface mounted pipeline destroyed during the CZU fire of 2020. Sandis provided turn-key services to assess damage, plan, design, and manage the reconstruction. Jeff has worked with the District, County and other agencies to overcome and solve project challenges such as high angle topography, fire damaged trees, and limited equipment access to make way for the repair and construction of the Big Steel Lyon Tank interconnect pipeline. Jeff quickly deployed a team of surveyors and engineers to develop a plan, work with a contractor to refine, and procure materials, as well as management of construction activities.

Additional Relevant Experience

Altamont Landfill Livermore, CA
Aptos High School Storage Tank Replacement Aptos, CA
Stanford University Arboretum Palo Alto, CA
City of Napa Milliken Pipeline Improvements Napa, CA

RON SANZO, PE, TE, PTOE

PRINCIPAL-IN-CHARGE

About

As Sandis' Principal-in-Charge, Ron has extensive experience in the design and implementation of public works and infrastructure improvement projects. Ron understands the importance of early and regular communication with agencies and contractors to ensure that all parties are aware of the project objectives and goals. His experience coordinating the implementation of water pipeline, utilities, and roadway improvement projects affords him the ability to foresee project challenges during the design stage and suggest appropriate measures to help mitigate impacts to the project site as well as adjacent facilities and roadways. An excellent communicator, Ron strives to partner with clients and project teams to design innovative yet practical solutions to complex utility problems.

Relevant Experience

San Lorenzo Valley Water District CIP Pipeline Improvements Santa Cruz County, CA
Principal-in-Charge. Ron served as Principal-in-Charge providing engineering services for San Lorenzo Valley Water District' CIP Pipeline Replacement project. Sandis is providing professional engineering services for the construction of approximately 1.61 miles of new pipeline to replace pipeline that has reached its efficiency and effectiveness for the District's use, and to improve fire flow and water quality. Ron is providing project coordination, oversight, and quality assurance/ quality control.

San Lorenzo Valley Water District Foreman Intake to WTP Pipeline Santa Cruz County, CA
QA/QC. Sandis provided engineering and design review to assist the San Lorenzo Valley Water District with 3,500 l.f. of pipeline to replace a surface mounted pipeline that was destroyed during the CZU fire of 2020. The Sandis team provided rapid evaluation and assessment of damage, planning and design of replacement, inclusion of pipeline hardening/protections and alignment revision to provide pipeline accessibility. The new 12-inch and 8-inch lines were designed and installed in rapid fashion to meet the District demands (Pipeline feed raw water to WTP) immediately and long term. Ron and the Sandis team provided engineering and construction management within days of the fire to assist the District with complete turn-key services to replace the pipeline.

Additional Relevant Experience

SLVWD 2021 FEMA Pipeline Improvements Santa Cruz County, CA
City of Napa Milliken Pipeline Improvements Napa, CA
Aptos High School Storage Tank Replacement Aptos, CA
Santa Clara Valley Water District, Wolfe Road Recycled Water Pipeline Santa Clara, CA
City of Antioch Hillcrest/Donlon Booster Pump Station Improvements Antioch, CA
Westside Pumping Plant Replacement and Pipeline Improvements Orinda, CA
College of San Mateo Water Tank San Mateo, CA
Battle Creek Meadows Ranch Tank Replacement Marysville, CA

16 Years of Experience
14 Years with Sandis

BS, Forest Engineering and Environmental Resources
State University of New York

Professional Civil Engineer
CA #79305

Professional Traffic Engineer
CA #2693

Professional Traffic Operations Engineer

BRIAN CANCIMILLA, PE

PROJECT MANAGER

15 Years of Experience
12 Years with Sandis

Professional Civil Engineer
CA #81830

BS, Civil Engineering
California State University, Chico

About
Brian has 15 of years experience in managing infrastructure design, site development, hydrology, stormwater management design, utility layout, site layout, and grading and drainage design projects for healthcare facilities. Always innovating, Brian develops more efficient processes to meet stormwater permitting requirements that win approval. He has strong communication skills, developing good rapport with clients and agencies. Brian will work closely with Ron on the implementation of the permit requirements throughout the project.

Relevant Experience

San Lorenzo Valley Water District CIP Pipeline Improvements Santa Cruz County, CA
Project Manager. Brian serves as Project Manager for the civil engineering services for the construction of approximately 1.61 miles of new pipeline replacement to improve fire flow and water quality. Replacement pipelines will be installed at six different locations and vary in size from 1,375 to 2,900 l.f with upgrades in pipe diameter varying from existing 1.25 in to 6 in pipes replaced by 8 in diameter pipelines. Brian is leading the Sandis engineering team through the District's pipeline water system improvements, working closely with staff to continuously improve, repair, and update the pipeline system.

San Lorenzo Valley Water District FEMA Pipeline Improvements Santa Cruz County, CA
Project Manager. Brian serves as Project Manager for the civil engineering services for the design of 2,195 LF of new and replacement pipeline and a new duplex booster station. The new and replaced below-grade ductile iron pipeline will replace damaged pipeline from the 2020 CZU wildfires. Brian is leading the Sandis engineering team through the District's pipeline water system improvements, working closely with staff to continuously improve, repair, and update the pipeline system.

City of Napa Milliken Pipeline Improvements Napa, CA
Project Manager. Sandis is executing repairs to the existing City of Napa Milliken 16-inch steel pipeline that was damaged during the 2017 and 2020 wildfires. The focus of Phase 1 is to effect repairs required to reactivate the pipeline to allow the Milliken Treatment Plant to restart and provide water to the City. As Project Manager, Brian is responsible for coordination with the City, meeting attendance, site visits, design coordination, developing and revising control plans, preparing as-builts, and coordination with the contractor.

Additional Relevant Experience
Stanford University Arboretum Palo Alto, CA
MacArthur Davenport & International Boulevard Pipeline Replacement Oakland, CA
Alameda Fire State 3 & EOC Alameda, CA
Fire Station No.36 San Jose, CA

IVAN WALYNETZ

PROJECT ENGINEER

10 Years of Experience
2 Years at Sandis

Bachelor of Engineering
University of Auckland

About
Ivan Walynetz offers over 10 years of engineering experience in civil infrastructure and land development. Ivan's strengths include creative problem-solving, strong communication skills and building and maintaining professional networks. Ivan is highly skilled at developing effective solutions to challenging engineering problems. Some of Ivan's technical capabilities include: site engineering, contract and construction management; civil infrastructure including water supply and services relocation; stormwater catchment analysis and hydraulic modeling; erosion and sediment control design; and pipeline condition assessment and rehabilitation design.

Relevant Experience

City of Napa Milliken Pipeline Improvements Napa, CA
Project Engineer. Sandis provided repairs to the existing City of Napa Milliken 16-inch steel pipeline that was damaged during the 2017 and 2020 wildfires. The focus of Phase 1 of the project was to reactivate the pipeline to allow the Milliken Treatment Plant to restart and provide water to the City. The existing pipeline is now more than 60 years old and has sustained damage not only from wildfire but also tree and rockfalls as well as normal pipe corrosion. The pipeline is located in the steep canyon on a rock ledge with very limited access. Special attention was made to habitat, personal safety along with careful selection of construction means and methods. A high level of collaboration between the City and the design-build team has been required due to the unique nature of the project. As Project Engineer, Ivan coordinated site visits, reviews and updates as-builts, and coordinates with Project Manager Brian Cancimilla.

San Lorenzo Valley Water District CIP Pipeline Improvements Santa Cruz County, CA
Project Engineer. Sandis is serving as civil engineer for the construction of approximately 1.61 miles of new pipeline replacement to improve fire flow and water quality. Replacement pipelines will be installed at six different locations and vary in size from 1,375 to 2,900 l.f with upgrades in pipe diameter varying from existing 1.25 in to 6 in pipes replaced by 8 in diameter pipelines. As Project Engineer, Ivan's responsibilities have included utility research, grading at tank area, meetings with the District, tank sizing calculation reviews, preliminary plan review, coordination, and more.

Additional Relevant Experience
San Lorenzo Valley Water District FEMA Pipeline Improvements Santa Cruz County, CA
Presidio Trust Tunnel Tops San Francisco, CA
Las Positas College Campus Livermore, CA
Chabot-Las Positas CCD Safety Center Livermore, CA

KELLY JOHNSON, PLS

SENIOR PROJECT MANAGER, SURVEYING

19 Years of Experience
9 Years with Sandis

Professional Land Surveyor
California #9126

Professional Land Surveyor
Washington #48759

Certificate, Land Surveying
Renton College

About

Kelly Johnson has over 19 years of experience in land surveying and has worked closely with our in-house surveying team on the preparation of topographic and boundary surveys. His background includes an extensive knowledge and expertise in post data collection processes; preparation of calculations; preservation of project field control; maintaining documentation i.e. reports, project plans, specifications, and as-builts; and managing project budget and change orders.

Relevant Experience

San Lorenzo Valley Water District Santa Cruz County, CA
As Senior Project Manager of Surveying, Kelly was responsible for survey coordination and data review, topographic survey review, boundary survey - control survey, and right-of-way review. Sandis has worked closely with SLVWD to provide emergency repair to the District's water system damage by 2020 fires. Kelly has played a vital role in the timely and efficient delivery of surveying services throughout Sandis' contract. Kelly's experience surveying the SLVWD locale has afforded him great insight into the area and the necessary components to successfully completing surveying work for the District.

Additional Relevant Experience

San Lorenzo Valley Water District Boulder Creek, CA

- Alta Via Water Pipeline
- Erosion Control Measures for Raw Water Intakes
- Erosion Control Measures for the Water Treatment Plant
- Erosion Control Measures for Foremen Utility Corridor

San Lorenzo Valley Water District Big Steel to Lyon Interconnect Pipeline Boulder Creek, CA

Santa Clara Valley Water District On-Call Land Surveying Santa Clara, CA

San Jose Water Company On-Call Surveying San Jose, CA

Foreman Intake and Utility Corridor to Water Treatment Plant Boulder Creek, CA

UCSC Mount Hamilton SCU Fire Disaster Assessment & Repairs Mount Hamilton, CA

Street Improvement - Perimeter at Stevens Creek Cupertino, CA

Roadway Design for Panama Mall Via Ortega Stanford, CA

Churchill Avenue Corridor Palo Alto, CA

Derby Street San Francisco, CA

Persian Drive Sidewalk Addition Sunnyvale, CA

Jefferson Avenue & Cleveland Street Intersection Redwood City, CA

Paradise Drive Roadway Improvements Fairfield, CA

CHRIS CINTEAN, PLS

PROJECT MANAGER, SURVEYING

16 Years of Experience
5 Years with Sandis

Professional Land Surveyor
California #8941

Associates of Art
San Joaquin Delta College and San Jose Evergreen Valley College

About

Chris Cintean has 16 years of experience in land surveying and has worked with both the public and private sectors. Chris' expertise is enhanced by his wealth of experience in the preparation of boundary and topographic surveys. His background includes an extensive knowledge and expertise in boundary identification/validation; post data collection processes; preparation of calculations; preservation of project field control; maintaining documentation i.e. reports, project plans, specifications, and as-builts; and managing project budget and change orders.

Relevant Experience

Stanford University Medical Center Arboretum Palo Alto, CA
Project Manager, Surveying. Sandis provided right-of-way surveying, water system modeling, project planning, and engineering design services for the replacement and improvement of the City of Palo Alto water system that feeds both Stanford Shopping Center and Stanford University Medical Center on Welch, Quarry, and Arboretum Roads. As Project Manager of surveying, Chris was responsible for the right-of-way survey.

Additional Relevant Experience

Los Trancos County Water District San Mateo County, CA
Menlo Park Groundwater Monitoring Wells Menlo Park, CA
Monterey Mechanical, Waste Water Treatment Plant San Mateo, CA
City of Santa Clara - Central Park Santa Clara, CA
ADA Boat Access at Vasona Lake County Park Los Gatos, CA
Palo Alto Bicycle Boulevards Palo Alto, CA
San Rafael Public Safety Center San Rafael, CA
San Rafael Fire Station 52 & Training Tower San Rafael, CA
San Rafael Fire Station 57 San Rafael, CA
Mountain View Police and Fire Building Mountain View, CA
1601 & 1677 Mariposa San Francisco, CA
Beresford Playground San Mateo, CA
Mount Umunhum Summit Santa Cruz Mountains, CA
Mount Umunhum Roadway Design Santa Cruz Mountains, CA
Berkeley Rose Garden Berkeley, CA
Woodminster Ampitheater Phase 2 ADA Oakland, CA
Pacifica CA Esplanade Coastal Trail Pacifica, CA
Cupertino UPRR Trail Feasibility Study Cupertino, CA

NICOLE COOPER

PROJECT MANAGER, UTILITY LOCATING

14 Years of Experience
5 Years with Sandis

BS, Project Management
Devry University

About
Nicole is Sandis' utility locating manager with over 14 years of experience managing multimillion dollar public works projects in the construction industry. Nicole has spent 10 years specializing in water/wastewater infrastructure, water pumping plants, reservoirs, discharge lines, and pipelines. At Sandis, Nicole has spearheaded all utility location services projects.

Nicole has established protocol for identifying and labeling underground utility mains and lateral service lines for location identification. These utility lines include but are not limited to sanitary sewer, storm drain, telephone, electricity, natural gas, cable television, traffic signal lines/loops, water mains, and some fiber optics.

Relevant Experience
San Lorenzo Valley Water District 2021 CIP Pipeline Improvements Santa Cruz County, CA
Utility Locating Project Manager. Sandis is providing professional engineering services for the construction of approximately 1.61 miles of new pipeline to replace pipeline that has reached its efficiency and effectiveness for the District's use, and to improve fire flow and water quality. As Project Manager of Utility Locating, Nicole's responsibilities include field coordination, coordination with Sandis' survey team, schedule review, and quality assurance/quality control.

San Lorenzo Valley Water District 2021 FEMA Pipeline Improvements Santa Cruz County, CA
Utility Locating Project Manager. Sandis is providing engineering services for San Lorenzo Valley Water District's 2021 FEMA Pipeline project. The project includes the design of 2,195 LF of new and replacement pipeline and a new duplex booster station. Nicole's project responsibilities include scope review, field work review, field coordination, and quality assurance/quality control.

Additional Relevant Experience
ADA Boat Access at Vasona Lake County Park Los Gatos, CA
Menlo Park Groundwater Monitoring Wells Menlo Park, CA
Sanborn Park ADA and Trail Improvements Saratoga, CA
Berkeley Marina Roadway Improvements Berkeley, CA
Jefferson Avenue & Cleveland Street Intersection Redwood City, CA
Laurelwood Road and Victor Street Santa Clara, CA
City of Cupertino Library Renovation Cupertino, CA
Rengstorff Park Mountain View, CA
JR Simplot Well, Pump Station and Pipeline Project Lathrop, CA

MICHAEL SULLIVAN

UTILITY LOCATOR

8 Years of Experience
3 Year with Sandis

BS, Psychology
San Diego State

Traffic Flagger & Technician Cal/OSHA Certification

About
Michael Sullivan has over 8 years of experience as an utility locator in California. Michael has experience providing a variety of utility locating services including non-invasive utility locating, utility sweeping prior to excavation, and engineering and surveying departments support. Michael has proficiency in using pipe and cable locators, Ground Penetrating Radar (GPR), and Leak Detection Equipment to name a few. He is knowledgeable of California government codes and regulations.

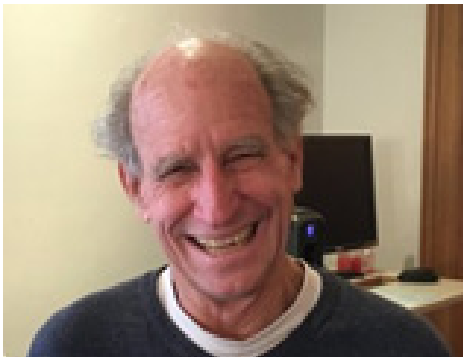
Relevant Experience
San Lorenzo Valley Water District CIP Pipeline Improvements Santa Cruz County, CA
Utility Locator. Sandis is providing professional engineering services for the construction of approximately 1.61 miles of new pipeline to replace pipeline that has reached its efficiency and effectiveness for the District's use, and to improve fire flow and water quality.

San Lorenzo Valley Water District FEMA Pipeline Improvements Santa Cruz County, CA
Utility Locator. Sandis is providing engineering services for San Lorenzo Valley Water District's 2021 FEMA Pipeline project. The project includes the design of 2,195 LF of new and replacement pipeline and a new duplex booster station.

Additional Relevant Experience
San Lorenzo Valley Water District CZU Wildfire Damage Repairs Santa Clara, CA
Rengstorff Park Mountain View, CA
Sanborn Park ADA and Trail Improvements Saratoga, CA
Jefferson Avenue & Cleveland Street Intersection Redwood City, CA
14th Avenue Streetscape Oakland, CA
Calderon Avenue Bike Lane Improvements Phase II Mountain View, CA
Laurelwood Road and Victor Street Santa Clara, CA
Rinconada Water Treatment San Mateo, CA
JR Simplot Well, Pump Station and Pipeline Project Lathrop, CA

JOHN KASUNICH, PE, GE

PRINCIPAL ENGINEER, GEOTECHNICAL ENGINEER



About

Mr. Kasunich is a Principal Geotechncial Engineer managing field investigations and design for various roadside stability projects, coastal protection structures and coastline/streambank erosion projects. Responsibilities include interacting with clients, field analysis, and report preparation. Mr. Kasunich uses his decades of experience to think outside of the box for solutions on challenging limited access coastal and geotechnical engineering projects.

Relevant Experience

San Lorenzo Valley Water District Boulder Creek, CA
Decades of experience inventorying road failures, utility line and tank sites, and landslide repair. Most recently involved in the landslide study of a broad soil mass that disconnected from the hillside undermining Madrone Road during the winter rain season of 2016/2017. Provided geotechnical design criteria to restore the roadway and stabilize the soil mass.

Dark Gulch Crossing Stabilization Project Old Haul Road San Mateo County, CA
Provided design criteria, recommendations, and construction oversight for repair of an 80-foot-deep stream crossing failure on Old Haul Road. The project included removal of unstable fill material and crib logs, installation of a 66-inch x 240 ft new culvert and reconstruction of the fill embankment to restore road access.
Sara Polgar, Conservation Program Specialist
San Mateo Resource Conservation District
650-669-9077

Alpine Road Trail Improvement Alpine Road San Mateo County, CA
Provided geotechnical design criteria for proposed road and trail improvements along approximately 7,400 LF of existing road within the Coal Creek Open Space Preserve.
Bryan Apple
Midpeninsula Regional Open Space District
650-691-1200

35 Years of Experience
35 Years with Haro, Kasunich & Associates, Inc.

Professional Civil Engineer
PE #33177

Professional Geotechnical Engineer
GE #455

Bachelors of Science, Masters of Science
University of California Los Angeles

ANDREW KASUNICH, PE

STAFF ENGINEER, GEOTECHNICAL ENGINEER

5 Years with Haro, Kasunich & Associates, Inc.

Professional Civil Engineer
PE #93471

BS, Civil Engineering & Environmental Engineering
University of California, Davis

About

Andrew has been working in the geotechnical consulting field at HKA for 5 years. His experience includes geotechnical site characterization, foundation design, retaining wall design, landslide slope stability, coastal bluff analysis, soil nail and tieback anchor design, and various civil/coastal engineering projects. Andrew is also responsible for management of both the design and construction observation phase of projects. He most recently managed the construction and oversight of the 100 Esplanade Seawall & Trail Rehabilitation Project in Pacifica, California. He prides himself on his ability to listen to his client's needs and develop engineered solutions that meet those needs.

Relevant Experience

Seawall & Public Access Trail Restoration City of Pacifica, CA
Consulting services for a new 3.5 mile loop trial. The project initiated with a feasibility and constraint analysis of potential trail alignments followed by determination of final trail alignment, preparation of an engineering geologic report and construction documents, preparation of SWPPP, project management and construction observation.

Dark Gulch Crossing Stabilization Project Old Haul Road San Mateo County, CA
Provided design criteria, recommendations, and construction oversight for repair of an 80-foot-deep stream crossing failure on Old Haul Road. The project included removal of unstable fill material and crib logs, installation of a 66-inch x 240 ft new culvert and reconstruction of the fill embankment to restore road access.
Sara Polgar, Conservation Program Specialist
San Mateo Resource Conservation District
650-669-9077

Alpine Road Trail Improvement Project Alpine Road San Mateo County, CA
Provided geotechnical design criteria for proposed road and trail improvements along approximately 7,400 LF of existing road within the Coal Creek Open Space Preserve.
Bryan Apple
Midpeninsula Regional Open Space District
650-691-1200

ASHTON BUCKNER, PE

STAFF ENGINEER, GEOTECHNICAL ENGINEER

5 Years with Haro, Kasunich & Associates, Inc.

Professional Engineer
PE #93365

BS, Civil Engineering and Environmental Engineering
San Jose State University

About
Ashton has been working in the geotechnical consulting field at HKA for about 5 years. His experience includes geotechnical site characterization, foundation design, retaining wall design, landslide slope stability, liquefaction analysis, tieback anchor design, grading and drainage plans, and various civil/coastal engineering projects. Ashton is also responsible for management of both the design and construction observation phase of projects.

Relevant Experience
College Lake Pipeline City of Watsonville and County of Santa Cruz, CA
Provided geotechnical investigation for a new 6-mile underground pipeline project in the City of Watsonville and surrounding outskirts. HKA's scope of services for the design phase of this project included preliminary analysis and site reconnaissance, hazard analysis (liquefaction/lateral spreading, seismic shaking, slope stability, erosion), geotechnical field exploration, laboratory testing, and technical analysis/report prep. Site investigation included borings and CPT soundings with the City of Watsonville and agricultural lands at roughly 500 foot intervals along the pipeline, with special coverage in liquefiable zones and road crossings.

Fox Creek Farms East Carmel Valley, CA
Provided design criteria, recommendations, and consulting oversight for the development of water tanks, fire retention ponds, employee housing, kitchen, greenhouse, barns, and wash sheds at Fox Creek Farms. Performed extensive field investigation and laboratory testing in conjunction with a geologist to identify and mitigate landslide and faulting hazards across the site.

Lyon Tank Big Basin Highway, Boulder Creek, CA
Provided geotechnical investigation for slope stabilization project at San Lorenzo Valley Water District Lyon Tank site in Boulder Creek, CA. Geotechnical services included field exploration, laboratory testing, slope stability analysis, repair alternatives, and report. Recommendation included multiple secant walls or secant wall and buttress fill slope combo to stabilize large slope failure. Key design constraint was preventing soil from mobilizing off property.

EXPERIENCE AND PAST PERFORMANCE

Santa Cruz County, CA
2021 - Active

SAN LORENZO VALLEY WATER DISTRICT - 2021 FEMA PIPELINE IMPROVEMENTS

Sandis is providing engineering design services for San Lorenzo Valley Water District's 2021 FEMA Pipeline project. The project includes the design of 2,195 L.F. of new and replacement pipeline and a new duplex booster station.

The 2021 FEMA pipeline project provides the design for replacement of approximately 2200 feet of existing District pipeline and replacement damaged existing booster pump station. The purpose of this project is to replace damaged infrastructure with new materials adequately sized for the demands in each of the two zones including the new booster station will provide increased additional zone capacity, flow rates and pressures. The focus for the project team is to execute the management, design, and construction in a manner to control project cost and impact to the community with careful alignment planning and well thought out traffic controls to minimize impact to traffic patterns and access to properties.

The pipeline replacement will mainly add piping in street alignments that do not currently include water mains which will allow for the construction, inspection, disinfection, and testing prior to connections and activation without disrupting existing connections. The replacement booster station will be relocated to the Ridge Drive right of way and sized to meet current demands and use profile. We expect the geotechnical report prepared for the District to provide soils and geologic information for the booster station site as well as for each of the pipeline replacement segments. The footprint of the booster station will be sized as needed for the duplex pumps and motor controls as well as appropriate operations and maintenance access.

Owner San Lorenzo Valley Water District
Contact Rick Rogers, 831.818.3207, rrogers@slvwd.com
Project Size 2,195 L.F.
Design Budget $170,000
Total Value of Completed Design N/A, Ongoing
Budgeted Project Design Schedule November 2021 - March 2022
Total Time to Project Completion July 2022 - January 2023
Estimated Contract Costs $1.5M
Actual Contract Costs N/A, Ongoing

Santa Cruz County, CA
2021 - Active

SAN LORENZO VALLEY WATER DISTRICT - 2021 CIP PIPELINE IMPROVEMENTS

Sandis is providing professional engineering services for approximately 1.61 miles of new pipeline to replace aging infrastructure, and to improve fire flow and water quality.

The 2021 CIP pipeline project provides the design for replacement of approximately 1.6 miles (8,490 feet) of existing District pipeline and replacement of an existing redwood tank with a new bolted steel tank. The purpose of this project is to replace aging infrastructure with new materials adequately sized for the demands in each of the different zones including the new storage tank will provide additional zone capacity. The secondary objective of the project is to execute the management, design, and construction in a manner to control project cost and impact to the community with careful alignment planning and well thought out traffic controls to minimize impact to traffic patterns and access to properties.

The pipeline replacement will parallel the existing District pipelines to the extent possible to allow for the construction, inspection, disinfection, and testing prior to connections and activation. The replacement storage tank will also require careful planning to select an adequately sized tank pad and clearing of trees to provide for maintenance access as well as adequate defendable space. We expect the geotechnical report prepared for the District to provide soils and geologic information for the tank site as well as for each of the pipeline replacement segments. The storage tank location appears to be on steep terrain with evidence of movement. The replacement tank will have a larger footprint than the existing redwood tank. We will work closely with the geotechnical consultant to determine the best siting and foundation type for site conditions.

Owner San Lorenzo Valley Water District
Contact Rick Rogers, 831.818.3207, rrogers@slvwd.com
Project Size 1.6 Miles
Design Budget $285,000
Total Value of Completed Design N/A, Ongoing
Budgeted Project Design Schedule November 2021 - March 2022
Total Time to Project Completion July 2022 - March 2023
Estimated Contract Costs $3.75M
Actual Contract Costs N/A, Ongoing

San Jose, CA
2016 - 2017

COUNTY OF SANTA CLARA MALECH ROAD WATER LINE REPAIR

Photo Credit: San Jose Spotlight

Sandis managed a multi-disciplined team of civil engineers, drillers, electrical engineers, fire protection engineers, environmental engineers, geologists, and land surveyors in the analysis, design and implementation of $3 million improvements to 5,560 L.F. of water supply to the Malech Road Complex.

Engineering services included: an analysis of an existing water supply; initial project scoping and programming; erosion control; and demolition of the roadway, creek crossing and two culverts.

Following the completion of the analysis and feasibility study, Sandis provided full plan and profile drawings for the new water main. The new water main scope included a new domestic and fire water booster pump station. The 12 x 30 building, located within County ROW, provided domestic and fire duplex pumps, controls and MCC as well as primary emergency power. This phase of the project also included: domestic water line; survey of the pathway of the new water line; water modeling of the new system; cost estimates; new water line easements; and security measures (cameras and gates).

Sandis coordinated closely with the Great Oaks Water Company and regulatory agencies, including County of Santa Clara, County Roads and Airport and coordination with the Dept. of Fish & Game, Army Corps of Engineers, SCVWD, and the Regional Water Quality Control Board.

Owner County of Santa Clara
Contact Rudy Castelo, PE, County of Santa Clara Parks and Recreation Department, 408.355.2212, rudy.castelo@prk.cggov.org
Project Size 5,560 L.F.
Design Budget $260,000
Total Value of Completed Design $262,610
Budgeted Project Design Schedule January 2013 - October 2013
Total Time to Design Completion January 2014 - January 2015
Estimated Contract Costs $3M
Actual Contract Costs $3.75M, Environmental field conditions

EXCEPTIONS TO RFP

Sandis has carefully read through the District's RFP and does not wish to make any exceptions or modifications to the RFP.

CONTRACTUAL SCOPE OF SERVICES

SCOPE OF SERVICES

We have read and understand the project RFP and its intent. Our proposal represents an optimization of design from a performance, first cost and future operations and maintenance perspectives. Our intent is to provide investigation and design services for a consolidation of Bracken Brae and Forest Springs using a single storage tank location (Forest Springs), a booster pump station and pipeline that provides the necessary flow rates, pressures and water quality required by DDW as well as the Community that it serves.

PRELIMINARY DESIGN PHASE

1. Consult with District Staff to determine preferred design choices, construction types, and materials to be used in design of new pipelines, pump station(s) and tanks;
2. Prepare preliminary design phase documents consisting of final design criteria, preliminary drawings, outline specifications and a preliminary cost estimate;
3. Provide preliminary schedule identifying delivery dates for all preliminary deliverables identified in 2, above, and 5, below;
4. Provide necessary field surveys, topographic and utility mapping for design purposes. Utility mapping will be based upon information obtained by consultant from utility owners and field locates; and
5. Provide necessary geotechnical analysis of the various sites, as required to properly design new or replacement mains, booster station(s), and tanks.
6. Coordinate preliminary bridge crossing designs with Caltrans.
7. Furnish a .pdf of the preliminary design phase documents and any other deliverables to District and review them with District, provide hard copy of documentation if required by District.

FINAL DESIGN

1. Prepare final drawings, specifications and engineer's estimate indicating the scope, extent, and character of the Work to be performed and furnished by Contractor. Pothole existing utilities at critical crossing and connection points.
2. Provide support to the District as needed to obtain permits from or approvals of Santa Cruz County Public Works, Caltrans, and any other governmental authorities having jurisdiction to review or approve the final design of the project, assist District in consultations with such authorities, and revise the drawings and specifications in response to directives from such authorities.
3. Prepare and furnish bidding documents for review by the District, its legal counsel, and regulatory agencies. Assist District in the preparation of other related documents.
4. Revise the bidding documents in accordance with comments and instructions from District staff, as appropriate, and submit one mylar plan set, a .pdf of the completed documents, and electronic copies of all documents in their native format (Word, AutoCAD, etc.)

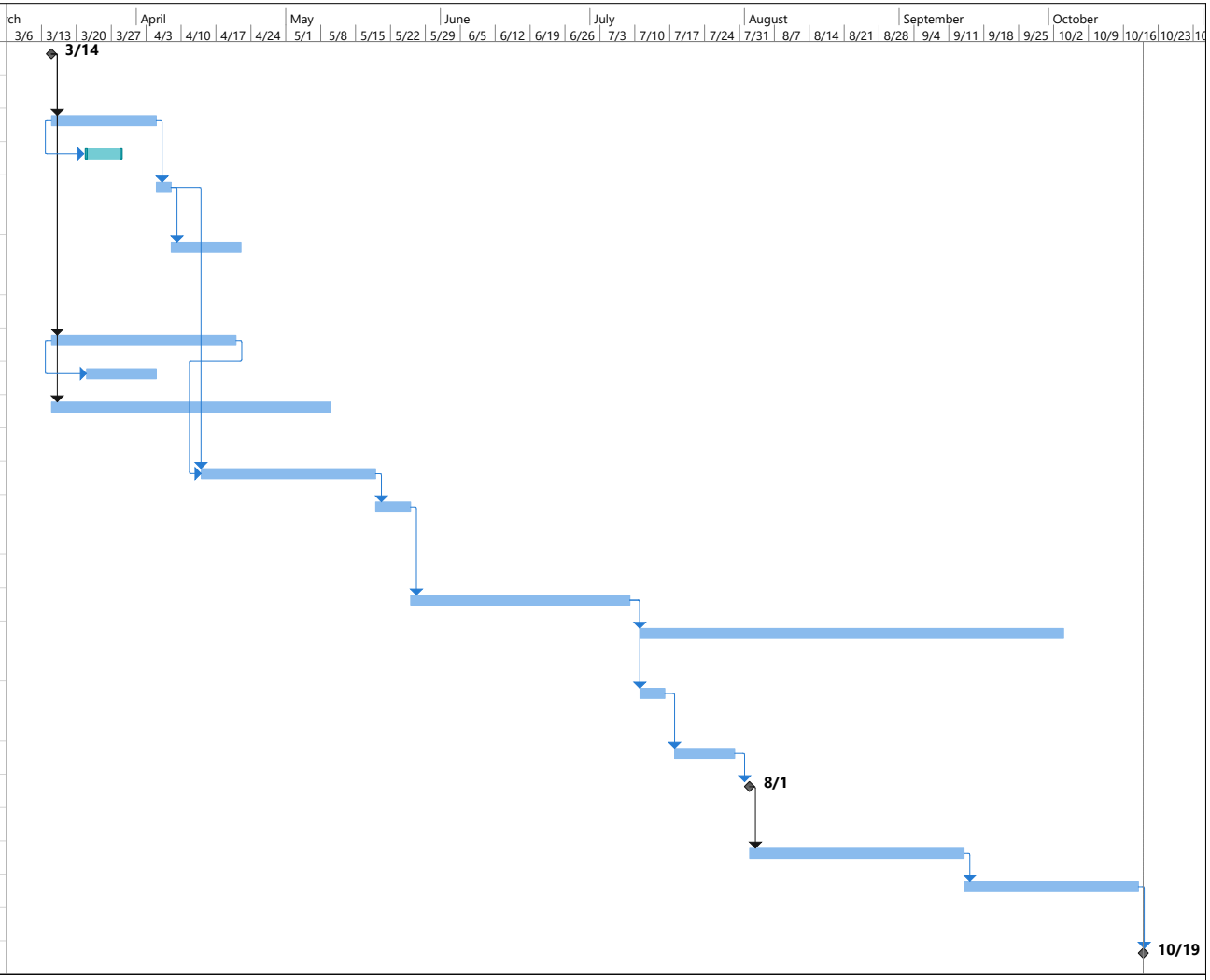
BIDDING PHASE

1. Assist District in advertising for and obtaining bids for the work and, where applicable, maintain a record of prospective bidders to whom bidding documents have been issued. Attend pre-bid conferences.
2. Prepare addenda as necessary to clarify, correct or change the bidding documents.
3. Provide information or assistance needed by District in the course of any negotiations with prospective contractors.
4. Consult with District as to the acceptability of subcontractors, suppliers, and other individuals and entities proposed by prospective contractors for those portions of the work as to which such acceptability is required by the bidding documents.
5. Determine the acceptability of substitute materials and equipment proposed during the bidding or negotiating phase when substitution prior to the award of contracts is allowed by the bidding documents.
6. Assist District in evaluating bids and in assembling and awarding contracts for the Work.

CONSTRUCTION PHASE

1. Issue necessary clarifications and interpretations of the contract documents as appropriate to the orderly completion of contractor's work. Such clarifications and interpretations will be consistent with the intent of and reasonably inferable from the contract documents.
2. Review and approve or take other appropriate action with respect to shop drawings and samples and other data which contractor is required to submit, but only for conformance with the information given in the contract documents and compatibility with the design concept of the completed project as a functioning whole as indicated by the contract documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Engineer shall meet any contractor's submittal schedule that engineer has accepted.
3. Evaluate and determine the acceptability of substitute or "or- equal" materials and equipment proposed by contractor.

ID	Task Name	Duration	Start	Finish
1	Project Kick off	1 day	Mon 3/14/22	Mon 3/14/22
2				
3	Preliminary Design Report	15 days	Tue 3/15/22	Mon 4/4/22
4	Geologic Invest: Slope & Fault	5 days	Tue 3/22/22	Mon 3/28/22
5	District Presentation + review period	3 days	Tue 4/5/22	Thu 4/7/22
6	Initial County and Caltrans coordination	10 days	Fri 4/8/22	Thu 4/21/22
7				
8	Field Survey	27 days	Tue 3/15/22	Wed 4/20/22
9	Utility Location	10 days	Tue 3/22/22	Mon 4/4/22
10	Geotechnical Investigation	40 days	Tue 3/15/22	Mon 5/9/22
11				
12	Preliminary Design	25 days	Thu 4/14/22	Wed 5/18/22
13	District Presentation + review period	5 days	Thu 5/19/22	Wed 5/25/22
14				
15	Final Design	30 days	Thu 5/26/22	Fri 7/8/22
16	Submit to Caltrans and County for approvals/permits	60 days	Mon 7/11/22	Mon 10/3/22
17	District Presentation + review period	5 days	Mon 7/11/22	Fri 7/15/22
18	Schedule Float	10 days	Mon 7/18/22	Fri 7/29/22
19	Issue for Bid	1 day	Mon 8/1/22	Mon 8/1/22
20				
21	Bid Phase	30 days	Tue 8/2/22	Tue 9/13/22
22	Board Action + Award	25 days	Wed 9/14/22	Tue 10/18/22
23				
24	Construction Start	1 day	Wed 10/19/22	Wed 10/19/22



Project: SLVWD Bracken Brae a
Date: Wed 2/23/22

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

Page 1

INSURANCE

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 2/1/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
AssuredPartners Design Professionals Insurance Services, LLC
3697 Mt. Diablo Blvd Suite 230
Lafayette CA 94549

License#: 6003745

CONTACT NAME: Jennifer Aguirre
PHONE (A/C, No, Ext): (510) 465-3090 **FAX (A/C, No):**
E-MAIL ADDRESS: DesignProCerts@AssuredPartners.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Continental Insurance Company	35289
INSURER B : American Casualty Company of Reading PA	20427
INSURER C : Travelers Casualty and Surety Co of America	31194
INSURER D : Transportation Insurance Company	20494
INSURER E :	
INSURER F :	

INSURED
Sandis Civil Engineers Surveyors Planners
3007 Douglas Blvd, Suite 105
Roseville CA 95661

SANDICIVI

COVERAGES **CERTIFICATE NUMBER:** 1782637130 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR X Contractual Liab X XCU Included GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:	Y	Y	6075819456	3/3/2022	3/3/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 1,000,000 $ 1,000,000 $ 15,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY	Y	Y	6075819473	3/3/2022	3/3/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
	UMBRELLA LIAB OCCUR **EXCESS LIAB** CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE 	$ $ $
D B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	6075819425 6075819411	3/3/2022 3/3/2022	3/3/2023 3/3/2023	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
C	Professional Liability			107211098	3/3/2022	3/3/2023	Per Claim Annual Aggregate	$2,000,000 $4,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
FOR PROPOSALS. An Actual Certificate will be issued upon the request of the Named Insured.

CERTIFICATE HOLDER

For Proposal Purposes

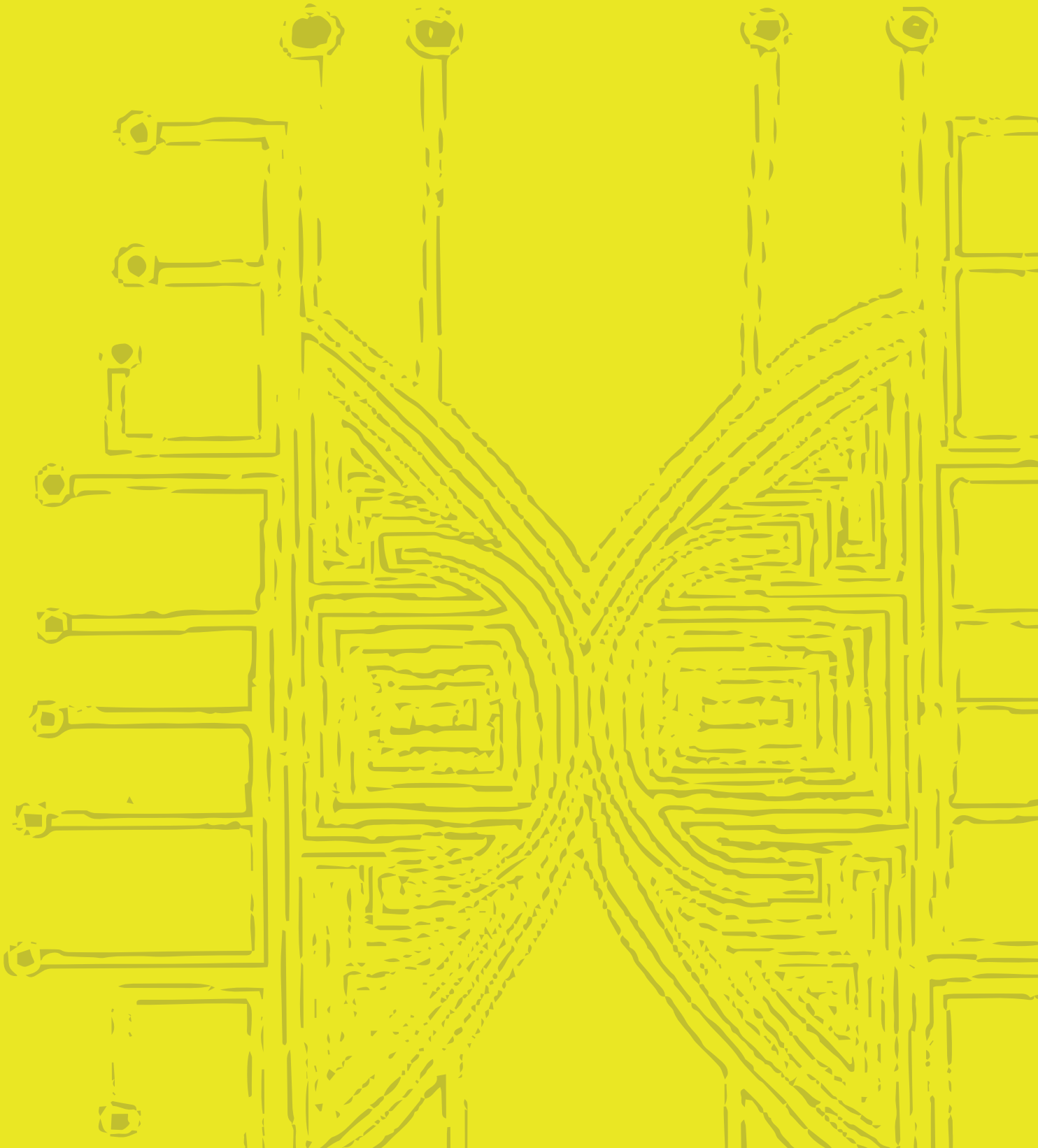
CANCELLATION 30 Day Notice of Cancellation

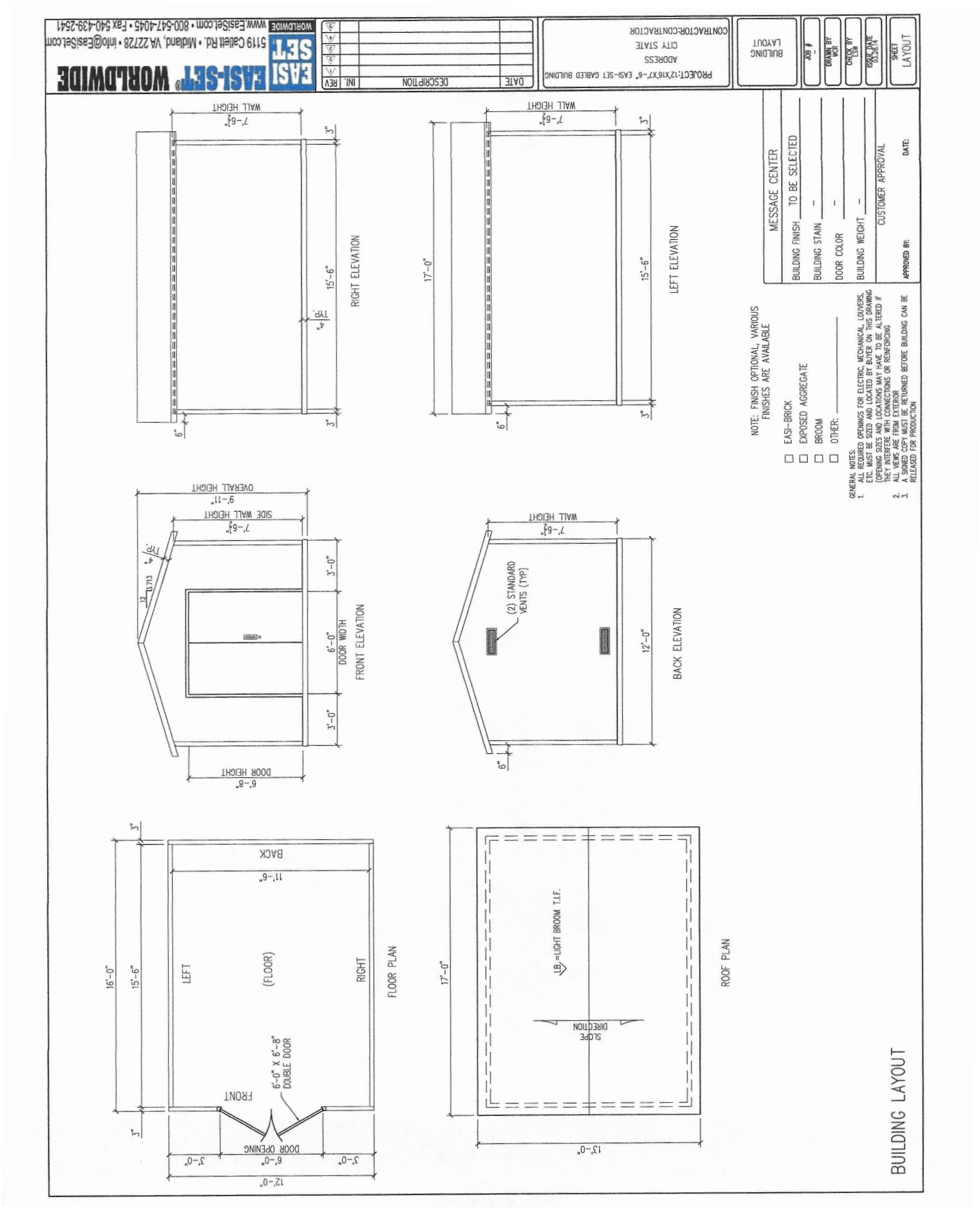
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

ACORD 25 (2016/03) **The ACORD name and logo are registered marks of ACORD**

APPENDIX




EASI-SET® WORLDWIDE
WORLDWIDE
5119 Caliett Rd. • Midland, VA 22728 • info@EasiSet.com
www.EasiSet.com • 800-547-4045 • Fax 540-439-2541
DATE
DESCRIPTION
INI.
REV
CONTRACTOR:CONTRACTOR
ADDRESS
CITY STATE
PROJECT:12'x16'x7'-6" EASI-SET GABLED BUILDING
BUILDING LAYOUT
JOB #
DRAWN BY MCR
CHECK BY ESW
ISSUE DATE 03.28.14
SHEET LAYOUT
MESSAGE CENTER
BUILDING FINISH TO BE SELECTED
BUILDING STAIN –
DOOR COLOR –
BUILDING WEIGHT –
CUSTOMER APPROVAL
APPROVED BY:
DATE:
NOTE: FINISH OPTIONAL, VARIOUS FINISHES ARE AVAILABLE
EASI-BRICK
EXPOSED AGGREGATE
BROOM
OTHER:
GENERAL NOTES:
1. ALL REQUIRED OPENINGS FOR ELECTRIC, MECHANICAL, LOUVERS, ETC. MUST BE SIZED AND LOCATED BY BUYER ON THIS DRAWING (OPENING SIZES AND LOCATIONS MAY HAVE TO BE ALTERED IF THEY INTERFERE WITH CONNECTIONS OR REINFORCING
2. ALL VIEWS ARE FROM EXTERIOR
3. A SIGNED COPY MUST BE RETURNED BEFORE BUILDING CAN BE RELEASED FOR PRODUCTION
WALL HEIGHT
7'-6½"
3"
15'-6"
6"
RIGHT ELEVATION
17'-0"
LEFT ELEVATION
OVERALL HEIGHT
9'-11"
SIDE WALL HEIGHT
TYP.
12
10.713
3'-0"
6'-0"
DOOR WIDTH
FRONT ELEVATION
DOOR HEIGHT
6'-8"
(2) STANDARD VENTS (TYP)
12'-0"
BACK ELEVATION
16'-0"
BACK
11'-6"
LEFT
(FLOOR)
RIGHT
FRONT
6'-0" X 6'-8" DOUBLE DOOR
DOOR OPENING
3'-0"
12'-0"
FLOOR PLAN
LB =LIGHT BROOM T.I.F.
SLOPE DIRECTION
13'-0"
ROOF PLAN

CLA-VAL®

—MODEL— 650-90

Pressure Sustaining Valve

Schematic Diagram

Item	Description
1	100-20 Hytrol Main Valve
2	X58C Restriction Assembly
3	CRL5A Pressure Relief Control

Optional Features

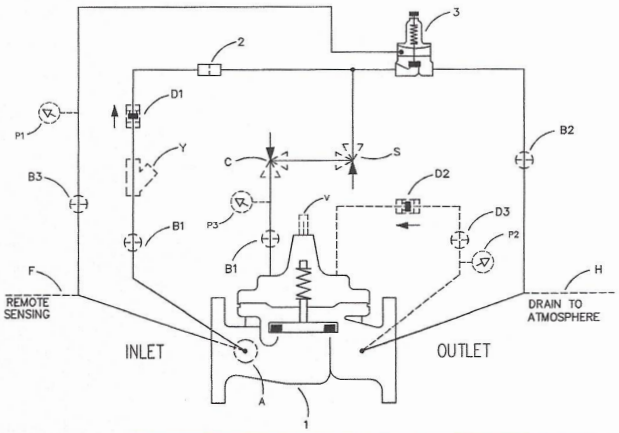
Item	Description
A	X46A Flow Clean Strainer
B	CK2 Isolation Valve
c	CV Speed Control (Closing)
D	Check Valves with Isolation Valve
F	Remote Pilot Sensing
H	Drain to Atmosphere
P	X141 Pressure Gauge
S	CV Speed Control (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer

- **Accurate Pressure Control**
- **Optional Check Feature**
- **Fast Opening to Maintain Line Pressure**
- **Slow Closing to Prevents Surges**
- **Completely Automatic Operation**

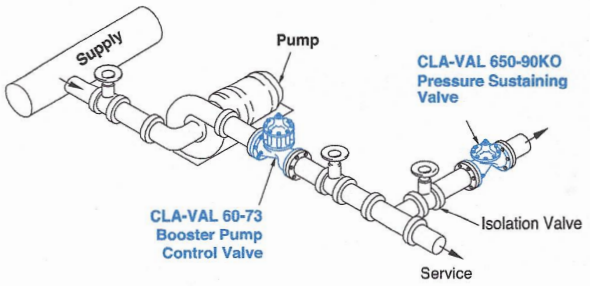
The Cla-Val Model 650-90 Pressure Sustaining Valve is a hydraulically operated, pilot-controlled, modulating valve designed to maintain constant upstream pressure within close limits. This valve can be used for pressure relief, pressure sustaining, back pressure, or unloading functions in a by-pass system.

In operation, the valve is actuated by line pressure through a pilot control system, opening fast to maintain steady line pressure but closing gradually to prevent surges. Operation is completely automatic and pressure settings may be easily changed.

If a check feature is added, and a pressure reversal occurs, the downstream pressure is admitted into the main valve cover chamber, closing the valve to prevent return flow.

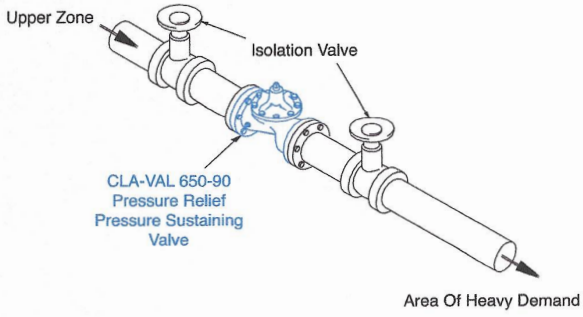


Typical Applications



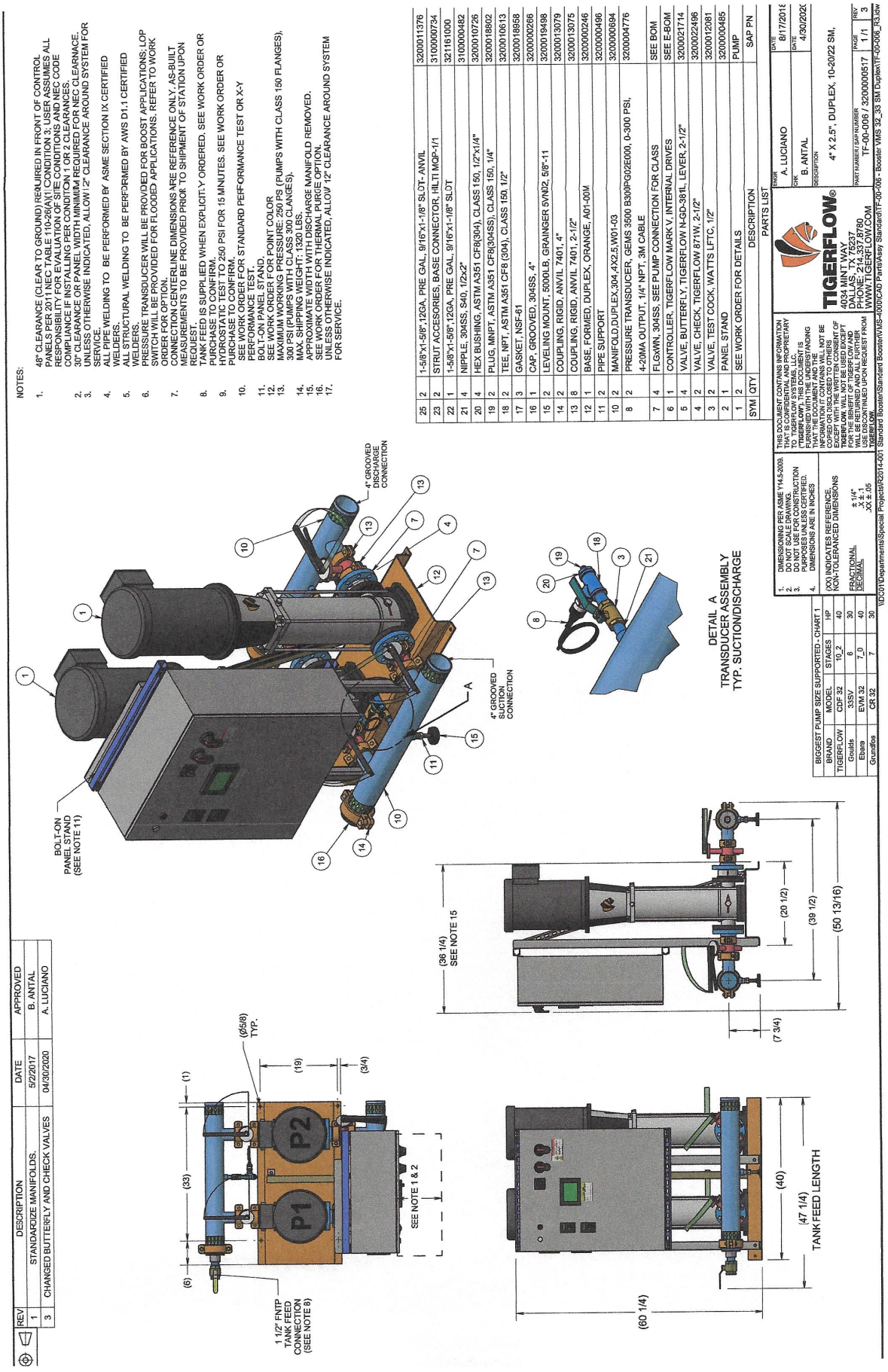
Pressure Service

This typical application controls the maximum system pressure when VFD pumps are at minimum speed.



Pressure Sustaining Service

When installed in a line between an upper zone and a lower area of heavy demand, the valve acts to maintain desired upstream pressure to prevent "robbing" of the upper zone. Water in excess of pressure setting is allowed to flow to an area of heavy demand, control is smooth, and pressure regulation is positive.



REV	DESCRIPTION	DATE	APPROVED
1	STANDARDIZE MANIFOLDS.	5/2/2017	B. ANTAL
3	CHANGED BUTTERFLY AND CHECK VALVES	04/30/2020	A. LUCIANO

SYM	QTY	DESCRIPTION	SAP PN
		PARTS LIST	
1	2	SEE WORK ORDER FOR DETAILS	PUMP
2	1	PANEL STAND	3200000485
3	2	VALVE, TEST COCK, WATTS LFTC, 1/2"	3200012081
4	2	VALVE, BUTTERFLY, TIGERFLOW N-GD-381L, LEVER, 2-1/2"	3200022496
5	4	VALVE, CHECK, TIGERFLOW 871W, 2-1/2"	3200021714
6	1	CONTROLLER, TIGERFLOW MARK V, INTERNAL DRIVES	SEE E-BOM
7	4	FLGxWN, 304SS, SEE PUMP CONNECTION FOR CLASS	SEE BOM
8	2	4-20MA OUTPUT, 1/4" NPT, 3M CABLE	3200019498
9	1	PRESSURE TRANSDUCER, GEMS 3500 B300PG02E000, 0-300 PSI,	3200019476
10	2	MANIFOLD,DUPLEX,304,4X2.5,W01-03	3200000694
11	2	PIPE SUPPORT	3200000496
12	1	BASE, FORMED, DUPLEX, ORANGE, A01-00M	3200000246
13	8	COUPLING, RIGID, ANVIL 7401, 2-1/2"	3200013075
14	2	COUPLING, RIGID, ANVIL 7401, 4"	3200013079
15	2	LEVELING MOUNT, 5000LB, GRAINGER 5VN92, 5/8"-11	3200019498
16	1	CAP, GROOVED, 304SS, 4"	3200000266
17	3	GASKET, NSF-61	3200018958
18	2	TEE, NPT, ASTM A351 CF8 (304), CLASS 150, 1/2"	3200010613
19	2	PLUG, MNPT, ASTM A351 CF8(304SS), CLASS 150, 1/4"	3200018802
20	4	HEX BUSHING, ASTM A351 CF8(304), CLASS 150, 1/2"x1/4"	3200010726
21	4	NIPPLE, 304SS, S40, 1/2x2"	3100000482
22	1	1-5/8"x1-5/8",12GA, PRE GAL, 9/16"x1-1/8" SLOT	321161000
23	2	STRUT ACCESORIES, BASE CONNECTOR, HILTI MQP-1/1	3100000734
25	2	1-5/8"x1-5/8",12GA, PRE GAL, 9/16"x1-1/8" SLOT- ANVIL	3200011376

BIGGEST PUMP SIZE SUPPORTED - CHART 1			
BRAND	MODEL	STAGES	HP
TIGERFLOW	CDF 32	10_2	40
Goulds	33SV	6	30
Ebara	EVM 32	7_0	40
Grundfos	CR 32	7	30

1. DIMENSIONING PER ASME Y14.5-2009.
2. DO NOT SCALE DRAWING.
3. DO NOT USE FOR CONSTRUCTION PURPOSES UNLESS CERTIFIED.
4. DIMENSIONS ARE IN INCHES

(XX) INDICATES REFERENCE, NON-TOLERANCED DIMENSIONS

FRACTIONAL	± 1/4"
DECIMAL	.X ± .1
	.XX ± .05

ENGR	A. LUCIANO	DATE	8/17/2016
CHK	B. ANTAL	DATE	4/30/2020

DESCRIPTION: 4" X 2.5" , DUPLEX, 10-20/22 SM,

PART NUMBER/ SAP NUMBER: TF-00-006 / 3200000517 | PAGE: 1/1 | REV: 3

TIGERFLOW®
4034 MITTEL WAY
DALLAS, TX 75237
PHONE: 214.337.8780
WWW.TIGERFLOW.COM

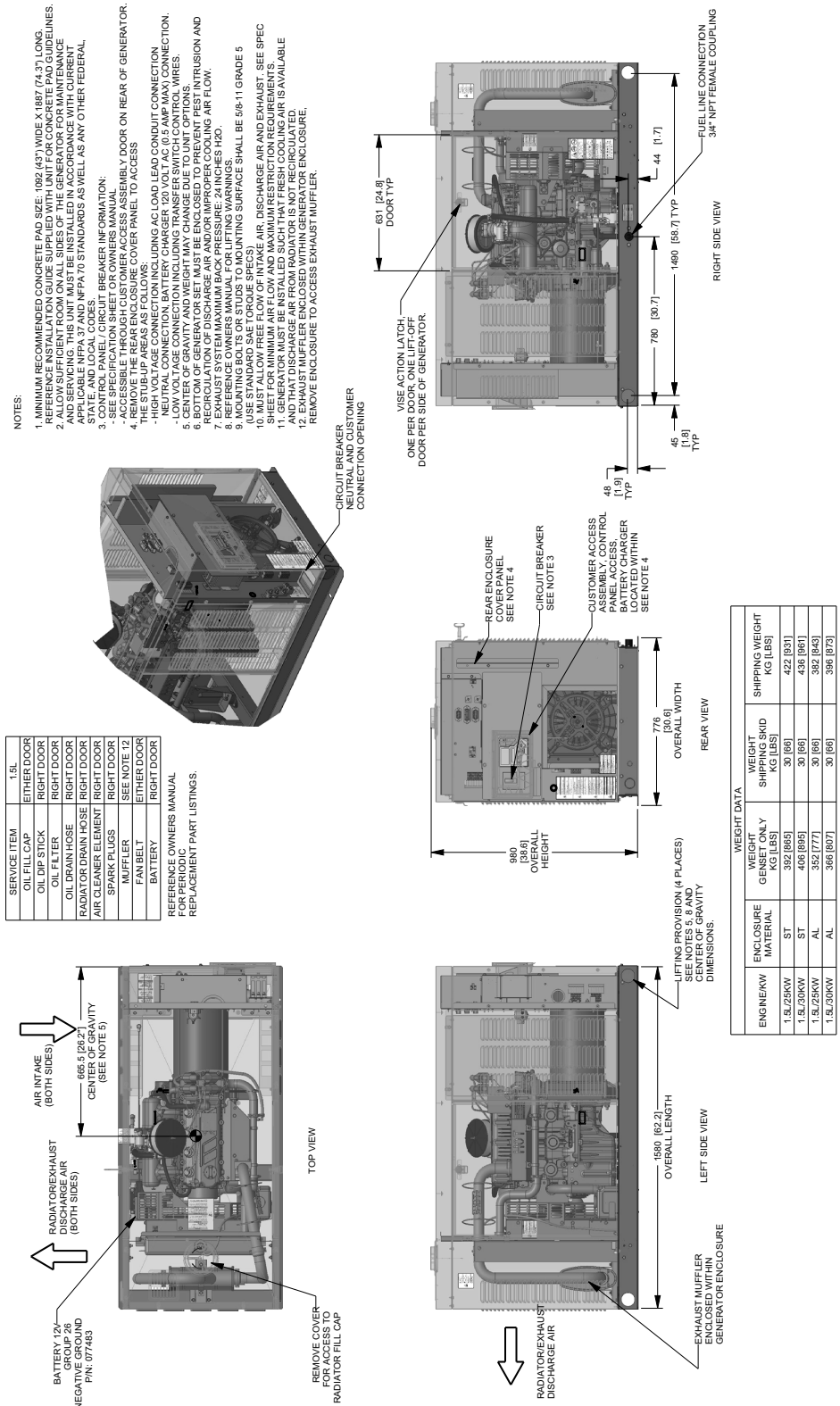
\\DC01\Departmental\Special Projects\R2014-001 Standard Booster\Standard Booster\VMS-4000\CAD Parts\Assy Standard\TF-00-006 - Booster VMS 32_33 SM Duplex\TF-00-006_R3.idw

GENERAC®

25 & 30 kW

installation layout

Drawing #0K8420-B (1 of 2)



SERVICE ITEM	1.5L
OIL FILL CAP	EITHER DOOR
OIL DIP STICK	RIGHT DOOR
OIL FILTER	RIGHT DOOR
OIL DRAIN HOSE	RIGHT DOOR
RADIATOR DRAIN HOSE	RIGHT DOOR
AIR CLEANER ELEMENT	RIGHT DOOR
SPARK PLUGS	RIGHT DOOR
MUFFLER	SEE NOTE 12
FAN BELT	EITHER DOOR
BATTERY	RIGHT DOOR

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS.

WEIGHT DATA				
ENGINE/KW	ENCLOSURE MATERIAL	WEIGHT GENSET ONLY KG [LBS]	WEIGHT SHIPPING SKID KG [LBS]	SHIPPING WEIGHT KG [LBS]
1.5L/25KW	ST	392 [865]	30 [66]	422 [931]
1.5L/30KW	ST	406 [895]	30 [66]	436 [961]
1.5L/25KW	AL	352 [777]	30 [66]	382 [843]
1.5L/30KW	AL	366 [807]	30 [66]	396 [873]

SLVWD CONSOLIDATION OF BRACKEN BRAE AND FOREST SPRINGS

Preliminary Project Construction Cost Estimate

Item Description	Units	Quantity	Unit Price	Price
Demo Ex FS Tank & equipment	LS	1	$15,000.00	$15,000
New FS Tank subgrade preparation	SF	1250	$2.50	$3,125
New FS storage tanks (60,000 gal)	GAL	120000	$1.50	$180,000
New storage tank deep foundation	SF	1000	$10.00	$10,000
Grade and prep new pump station pad	SF	300	$10.00	$3,000
New 14x20 Pre-Fab Bldg.	EA	1	$140,000.00	$140,000
New PS Foundation/Slab & Equip Pads	SF	300	$50.00	$15,000
New gravel pad around PS, 6" 1-1/2" crushed rock	SF	1400	$5.00	$7,000
New duplex pumps (175gpm), skid mount	EA	1	$35,000.00	$35,000
New generator set (25kw), skid mount	EA	1	$35,000.00	$35,000
New LP tank and concrete pad	EA	1	$7,500.00	$7,500
New power + telecom connections	LS	2	$5,000.00	$10,000
New PS electrical + telecom misc.	LS	1	$15,000.00	$15,000
New site drainage and stabilization	SF	4000	$2.00	$8,000
New 8" DIP	LF	6870	$325.00	$2,232,750
New 6" DIP	LF	2090	$275.00	$574,750
New pressure control/sustaining valve	EA	1	$10,000.00	$10,000
New fire hydrants	EA	10	$10,000.00	$100,000
New service laterals	EA	152	$2,500.00	$380,000
New Air Release Valves	EA	6	$3,000.00	$18,000
New Blow off valves	EA	6	$3,000.00	$18,000
New Bridge Crossings	EA	2	$75,000.00	$150,000
New SCADA system	EA	2	$7,500.00	$15,000
Mobilization	LS	1	$30,000.00	$30,000
Traffic Control (HWY 236)	LF	3870	$5.00	$19,350
Startup, testing and validation	LS	1	$10,000.00	$10,000
Subtotal				**$4,041,475**
Contractor GC+OH+P (15%)				$606,221
Escalation (3.5%/yr.)				$162,669
Owner Contingency (5%)				$240,518
Total				**$5,050,884**

SANDIS

ENGINEER | SURVEY | PLAN

CAMPBELL
OAKLAND
PLEASANTON
MODESTO
SACRAMENTO
SPOKANE

FEE SCHEDULE

FEBRUARY 24, 2022

San Lorenzo Valley Water District
Consolidation of the Bracken Brae and Forest Springs Mutual Water Companies

Sandis Civil Engineers Surveyors and Planners
1700 S. Winchester Blvd., Suite 200, Campbell, CA 95008

SCOPE OF SERVICES: BRACKEN BRAE + FOREST SPRINGS RFP	QC	PIC	PM	PE	DE	CAD Tech	Survey Tech	Survey PM	Proj Surveyor	Survey Crew	UL PM	UL	Principal Geotech	Geotech PM	Geotech Eng	Driller + Traffic Control	Task Hours	Total Task Fee
*2022 Hourly Charge Rate**	$350	$250	$235	$155	$135	$125	$124	$185	$145	$325	$150	$175	$215	$185	$150	$750		
Task 1: Project Initiation																		
Preliminary Schedule & Kick Off Meeting	2	2	2										1		1		8	$2,035
Task 2: Preliminary Design Report																		
Prepare Prelim Design Report	16	16				12							1		1		46	$11,465
Geologic Investigation: Landslide & Near Fault Phase 1 Study			2										40		8		50	$10,270
Issue Report & Presentation to District	2	2	8			8											20	$4,080
Task 3: Field Survey + UL																		
Topographic Survey			2				80	40	32	110							264	$58,180
Utility Locating			2				40	4			16	100					162	$26,070
Task 4: Geotechnical Investigation																		
Research & County Permit													1	2	40		43	$6,585
Soil Investigations (FS Tank Site +PS) + Eng Analysis													8	4	75	24	111	$31,710
Prepare Geotechnical Report													16	24	40		80	$13,880
Task 5: Preliminary Design																		
Pipeline Design			16		40	20											76	$11,660
Booster Pump Station Design			2		12	12											26	$3,590
Storage Tank Design			2		8	8											18	$2,550
Bridge Crossings Design			2		8	8											18	$2,550
Zone Control, Hydrants, ARV, BO			2		4	4											10	$1,510
County & Caltrans Coordination			12	12													24	$4,680
Geotech Review of Plans			2										2		4		8	$1,500
Cost Estimate			2	8	4	8											22	$3,250
Preliminary Design Package	4	8	2		8	8											30	$5,950
Electrical Design		2	4		8												14	$2,520
SCADA Design		1	2		4												7	$1,260
Presentation to District	2	2	2	2													8	$1,980

SCOPE OF SERVICES: BRACKEN BRAE + FOREST SPRINGS RFP	SANDIS/HKA																Task Hours	Total Task Fee
	QC	PIC	PM	PE	DE	CAD Tech	Survey Tech	Survey PM	Proj Surveyor	Survey Crew	UL PM	UL	Principal Geotech	Geotech PM	Geotech Eng	Driller + Traffic Control		
*2022 Hourly Charge Rate**	$350	$250	$235	$155	$135	$125	$124	$185	$145	$325	$150	$175	$215	$185	$150	$750		
Task 6: Final Design																		
Integrate District Comments			2	4	8	8											22	$3,170
Pipeline Design	2		4	8	16	24											54	$8,040
Booster Pump Station Design	2		4	8	16	24											54	$8,040
Storage Tank Design	2		4	8	8	8											30	$4,960
Bridge Crossings Design			4	12	12	16											44	$6,420
Zone Control, Hydrants, ARV, BO	2			2	8	8											20	$3,090
County & Caltrans Coordination + Applications		2	8	8	12												30	$5,240
Cost Estimate			4	8	8												20	$3,260
Geotech Review of Plans			2										4		8		14	$2,530
Erosion Control + SWPPP			4	12	12												28	$4,420
Traffic Control Design		8	4		8	8											28	$5,020
Electrical Design	2		2	8	8	8											28	$4,490
SCADA Design			2	4		4											10	$1,590
Final Design Package	8	8	8	8	16	20											68	$12,580
Presentation to District	2	2	2	4													10	$2,290
Integrate Final District Comments			2	4	8	8											22	$3,170
Task 7: Bid Package																		
Prepare Bid Form, Schedule, Permits, Logistics, District Contract	1		4	8	12										4		29	$4,750
Prepare and Issue Bid Package	1		2	2	4	8											17	$2,670
Task 8: Bid Phase																		
Pre Bid Meeting			2	4											2		8	$1,390
Bidder Questions and Clarifications			2	8	8	8											26	$3,790
Task 9: Construction Administration																		
Pre Construction Meeting		4	4	4										2			14	$2,930
Site Visits (6)		4	4	24	12												44	$7,280
Geotech Testing		2	2										4	8	8		24	$4,510
Special Inspection, Bridge Crossings		2	8														10	$2,380
Material Submittals			4	4	12												20	$3,180
RFIs			10	20	40												70	$10,850
Field Changes Review & Approval		2	8	12	12												34	$5,860
Punch List & Letter of Acceptance			2	12	8									4			26	$4,150
Close Out: Start Up and Testing	2	4	4	8													18	$3,880
Totals	50	71	178	226	344	240	120	44	32	110	16	100	77	44	191	24	1867	**$343,205**
Project Expenses Estimate																		

Notes:

1. Hours and staff assignments may be adjusted by the consultant as needed to implement the tasks described during the course of the project.
2. Estimates for services based on a single storage tank location (Forest Springs site) and may include two tanks at that location. Booster pump station and pipeline optimized to provide the flow rates and pressures determined through modelling and approved by the District.

Estimates for possible Additional Services:

1. Additional soil borings (4) + analysis: $7,500 (alternate pump station location)
2. Additional topographic survey: $4,000 (alternate pump station location)
3. Construction Period Geotechnical Observation and Testing: $79,000
4. Geologic Investigation Phase 2 Study: $50,000

STANDARD HOURLY CHARGE RATES

Enforced: January 1, 2022 through December 31, 2022

ENGINEERING SERVICES / QSD & QSP SERVICES

Project Specialist/Clerical		$105.00
Computer/Field/Engineer Technician	Level I	$105.00
	Level II	$115.00
	Level III	$125.00
Sr. Engineer Technician		$130.00
Design Engineer	Level I	$120.00
	Level II	$125.00
	Level III	$130.00
Project Engineer/Traffic Engineer	Level I	$150.00
	Level II	$170.00
	Level III	$180.00
Senior Engineer	Level I	$190.00
Engineering Project Manager	Level I	$195.00
	Level II	$235.00
Associate Principal/Sr. Project Manager/Sr. Traffic Engineer		$285.00
Principal		$350.00
Forensic Review/Analysis/Claim Support		$285.00

SURVEYING SERVICES / HIGH DEFINITION SCANNING/3-D MODELING SERVICES

Computer/Surveying/Scanning Technician	Level I	$105.00
	Level II	$110.00
	Level III	$125.00
Project Surveyor/Scanning Specialist	Level I	$135.00
	Level II	$145.00
	Level III	$175.00
Survey Project Manager	Level I	$195.00
	Level II	$235.00
Senior Field Survey Supervisor/AISC/Manager		$285.00
Utility Locating Services 1-Person Crew		$175.00
Utility Locating Services 2-Person Crew		$290.00
Utility Locating Manager		$165.00
1-Person Survey Crew		$195.00
2-Person Survey Crew		$325.00
2-Person Survey Crew with Apprentice		$450.00
3-Person Survey Crew		$500.00
Union Field Surveyor Official Travel		$75.00

REIMBURSABLE COSTS: Printing, monuments, materials, outside services and consultants, courier/delivery services, express/overnight mail, travel/per diem, agency fees advanced, etc., at cost plus 10%.

OVERTIME: All overtime charges are invoiced on the basis of one and one-half times the above rates. Double time invoiced at two times above rates.

ESCALATION: Escalation for future years shall be at a minimum of 3.5% increase per year.

Sandis at its sole discretion may utilize its subsidiaries to perform the services presented in this proposal.

HARO, KASUNICH AND ASSOCIATES, INC.

CONSULTING GEOTECHNICAL & COASTAL ENGINEERS

FEE SCHEDULE
15 October 2021

The following schedule presents the rates for professional services and laboratory tests. If desired, services other than construction observation and testing can be contracted on a negotiated fixed fee basis. Hours for professional and technical services are charged portal-to-portal from our office. Services during construction such as testing and observation of grading require both professional and technical services. Depending on the scope and duration of the construction project, budgets can be estimated. Minimum fee for any project is $950.00.

PROFESSIONAL SERVICES

Principal Consultant	$265.00 per hour
Principal Engineer	$215.00 per hour
Coastal Engineer	$205.00 per hour
Coastal Engineering Geologist	$205.00 per hour
Senior Engineer	$185.00 per hour
Staff Engineer	$150.00 per hour
CAD Technician/Designer	$115.00 per hour
Computer Technician/Engineer Assistant	$108.00 per hour
Initial Project Research and Administration (IPRA)	$750.00

Expert Witness Fees including Preparation, Consultation, Arbitration, Deposition, Hearings and Court Appearance, including travel time to and from will be billed at one and half (1.5) times the hourly rates indicated above.

Consultation meetings and telephone consultation will be billed at the hourly rate indicated.

ENGINEER OVERTIME RATES

Principal Engineer, Engineering Geologist, Senior Engineer, Staff Engineer
(In excess of 8 hours day and Saturdays, 1.5 times the stated rate)

Principal Engineer, Engineering Geologist, Senior Engineer, Staff Engineer
(Sundays and Company Holidays, 1.8 times the stated rate)

PERSONNEL CHARGES

Technical Assistant	$ 70.00 per hour
Clerical Administration	$ 50.00 per hour
Field Technician	$108.00 per hour
Prevailing Wage Field Technician (PWT) (Subject to DIR)	$150.00 per hour

TECHNICIAN OVERTIME HOURLY WAGES

Weekdays (in excess of 8 hours/day 1.5 times)	$165.00 per hour
Saturdays (initial 8 hours - 1.5 times)	$165.00 per hour
Saturdays (in excess of 8 hours - 2.0 times)	$215.00 per hour
Sundays and Holidays (2.0 times)	$215.00 per hour

- Field services are billed portal-to-portal in accordance with the following minimum charges: 2 hours minimum charge for inspections, sampling, testing operations or show-up time;
- Per diem for all personnel will be billed cost plus 20% but not less than $150.00/day per person.

OUTSIDE CONSULTANTS/CONTRACTORS

Outside Consultants and Contractors fees and costs are subject to a markup for handling, administration, coordination and management up to 10%.

MILEAGE AND INCIDENTAL EXPENSES

Auto Mileage	$ 0.60/mile

Incidental expenses, such as consultant's fee, special services, equipment rental, aerial photographs, out-of-town travel, etc., are reimbursable at cost plus 15%.

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DRILLING AND SAMPLING

Drilling rig, crawler or truck mounted with crew and engineer supervision basic rates:

Mobilization		
Straight Time	(This includes portal to portal, yard prep, de-prep and tooling)	$425.00 - $460.00 per hour
Overtime		$475.00 - $540.00 per hour
Double Time (Holidays and Sundays)		On Request Cost Plus 15%
Prevailing Wage Drilling		$560.00 - 680.00 per hour
Prevailing Wage Overtime		$650.00 - $800.00 per hour

Portable Drill Rigs

Stated Rate plus an additional $65.00/hour for additional crew member.
Overtime Rate in excess of 8 hours = $90.00 per hour for additional crew member.

Above charges are subject to change dependent upon engaged Drilling Company.

For portable rigs, crawler-mounted or rotary-wash type drilling rigs, and support equipment the rate is cost plus 15%. Drilling is charged at 5 hours minimum. Time is charged portal-to-portal from yard of engaged Drilling Contractor. Casing, Shelby Tubes and any special sampling or subcontract equipment and related support services will be charged at cost plus 15%.

FIELD TESTS

Plate bearing load, pile load and vane shear tests; piezometer and slope indicator installations; and other special tests will be charged at standard engineering and personnel rates plus cost of and including 15% surcharge for special equipment/personnel.

LABORATORY TESTS

Sample Preparation, per hour		$ 100.00
Sieve Analysis, pit run with 200 wash, ASTM D-422, per test		$ 150.00
Percent Passing #200 Sieve (wash)		$ 100.00
Short Hydrometer Analysis (without Sp. Gr.) ASTM D-422		$ 220.00
Specific Gravity (Sand and Gravel) ASTM D-854		$ 120.00
Moisture Determination, ASTM D-2216		$ 24.00
Unit Weight		$ 44.00
Sand Equivalent		$ 180.00
Atterberg Limits:	a. Plasticity Index, ASTM D-4318 Wet	$ 275.00
	b. Plasticity Index, ASTM D-4318 Dry	$ 231.00
Unconfined Compression, ASTM D-2166		$ 110.00
Swell Test Shrink-Swell & Expansion Pressure		$ 385.00
Direct Shear, per point ASTM D3080		$ 180.00
Residual Direct Shear (Modified ASTM)		$Quote
CU Modified ASTM per point		$ 110.00
Consolidation full curve		$ 495.00
R-Value		$ 385.00
R-Value, Cement, Lime or other additives		$Quote
Compaction Curve	a. Modified, 4" mold, ASTM D-1557	$ 300.00
	b. Modified, 6" mold, ASTM D-1557	$ 350.00
	c. Impact, California State Highway	$ 350.00
	d. 1 Point Verification	$ 150.00
Soil Corrosivity Tests (PH, Resistivity, Soluble Chloride & Sulfate)		$ 330.00
Triaxial, permeability and other special tests at hourly rates or as quoted.		$1,950.00

Notes: Consultation meetings will be billed at the hourly rates indicated. Field services are billed portal-to-portal with a 2-hour minimum charge. Hourly rates shown are for ordinary engineering services and include all payroll, office overhead, taxes, supplies and insurance. Higher rates are applicable for extra services such as special certifications and projects which require professional liability insurance, etc. Invoices will be prepared at the completion of work or at monthly intervals and are payable upon presentation. Invoices 30 days past due will be assessed a service charge of 1.5% per month.

Note: In the event consultant's fee schedule changes due to any increase of costs such as the granting of wage increases and/or other employee benefits to office employees due to the terms of any labor agreement, or rise in the cost of living, during the lifetime of the agreement, a percentage increase shall be applied to all remaining compensation.

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