

ZONE 7 WATER AGENCY



REQUEST FOR PROPOSALS

RFP No. 2025-20

PROFESSIONAL ENGINEERING SERVICES FOR SILVER OAKS PUMP STATION REPLACEMENT PROJECT

March 21, 2025

IMPORTANT DATES

**Questions due by 3:00 PM PST on April 7, 2025,
athena@zone7water.com.**

**Exceptions and Deviations due by 3:00 PM PST on April 15, 2025,
to athena@zone7water.com**

**Proposals due by 3:00 PM PST on April 15, 2025, to
athena@zone7water.com**

**Cost Proposals due by 3:00 PM PST on April 15, 2025, to
bwoods@zone7water.com**

Request for Proposals

SILVER OAKS PUMP STATION REPLACEMENT PROJECT

March 21, 2025

I. INTRODUCTION

Alameda County Flood Control and Water Conservation District, Zone 7 Water Agency (hereinafter referred to as "Zone 7"), is requesting proposals for the purpose of retaining a qualified engineering firm with experience in the design of pump stations for the replacement of Zone 7's Silver Oaks Pump Station in Livermore, California.

II. DESCRIPTION OF ZONE 7

Zone 7 is one of ten active zones of the Alameda County Flood Control and Water Conservation District, and is a special district established by State legislature in 1949. Zone 7 Water Agency was established by popular vote of the residents of the Livermore-Amador Valley in 1957 under an amendment to the District Act.

Zone 7 provides drinking water to over 250,000 customers within a service area of approximately 425 square miles in eastern Alameda and Contra Costa Counties. Drinking water is supplied to four retailers: California Water Service Company, City of Livermore, City of Pleasanton and Dublin San Ramon Services District. Approximately 80 percent of Zone 7's drinking water supply is from the State Water Project (South Bay Aqueduct and Lake Del Valle) and locally conserved surface water, with the remainder supplied from local groundwater sources (Livermore-Amador Groundwater Basin), which Zone 7 is responsible for managing. Untreated water from the South Bay Aqueduct is delivered to agricultural areas primarily located around the City of Livermore.

As the major water supply agency in eastern Alameda County, Zone 7 has an ongoing commitment to planning for existing and future needs, implementing needed projects, maintaining a reliable water delivery system, and providing a quality product and service to the community.

III. SCOPE OF WORK

A preliminary scope of work, provided as Attachment A, has been developed to assist the Proposer in gaining an understanding of Zone 7's goals as they relate to this effort. The final scope of work will be developed in cooperation with the selected Consultant and included as part of the contract between Zone 7 and the selected Consultant.

Zone 7 expects that the Consultant will use its expertise and knowledge to make recommendations and refine the Scope of Work needed to satisfy Zone 7's objectives for the project.

IV. CALENDAR OF EVENTS

Below are the major events planned to occur during the selection process in order to determine a Consultant. Please note that the schedule is subject to change.

Event	Scheduled Date
RFP Issue Date	March 21, 2025
Questions Due	April 7, 2025, at 3:00 p.m.
Submit Exceptions-Deviations Form (if needed)	April 15, 2025, at 3:00 p.m.
Proposals Due	April 15, 2025, at 3:00 p.m.
Panel Interviews	April 29-20, 2025
Notify Consultant of Intent to Award	May 2025
Anticipated Board Award	May 21, 2025
Execute Consultant Contract	Early June 2025

V. INSTRUCTIONS TO PROPOSERS

A. EXAMINATION OF PROPOSAL DOCUMENTS

By submitting a Proposal, the Proposer represents that it has thoroughly examined and become familiar with the work required under this RFP, and that it is capable of performing timely and quality work to the level of Zone 7's expectations and achievement of its objectives.

B. ADDENDA/CLARIFICATIONS

Questions or comments regarding this RFP shall be submitted via email to the Zone 7 Project Manager, Athena Watson, at athena@zone7water.com and responses from Zone 7 will be issued via an addendum posted on Zone 7's website.

C. SUBMISSION OF PROPOSALS

All Proposals are to be submitted via email under the subject title "**Silver Oaks Pump Station Replacement Project**" to the Zone 7 Project Manager listed above no later than the date and time shown in the Calendar of Events. Proposals received after this time will not be accepted. It is the responsibility of the Proposer to ensure that the Proposal was received by the Zone 7 Project Manager.

The Proposer shall submit the a Cost Proposal (shown as a cost matrix) for design phase services, and a Cost Proposal (shown as a cost matrix) for construction phase engineering support services to Brandon Woods at bwoods@zone7water.com. The firm's rates shall remain valid for the duration of the design phase.

D. PROPOSAL DOCUMENTS INCLUSION

At the sole discretion of Zone 7, the Proposal documents may be deemed a part of the contract resulting from this RFP, if awarded.

E. WITHDRAWAL OF PROPOSALS

A Proposer may withdraw its Proposal at any time before the Proposal due date and time by sending an email with a request for withdrawal sent by, or on behalf of, the Proposer to the Zone 7 Project Manager. The Proposer assumes the risk of any failed delivery. It is the responsibility of the Proposer to ensure that the email was received by the Zone 7 Project Manager.

F. RIGHTS OF ZONE 7

This RFP does not commit Zone 7 to enter into a contract, nor does it obligate Zone 7 to pay for any costs incurred in the preparation and submission of Proposals or in anticipation of a contract.

Zone 7 may investigate the qualifications of any Proposer under consideration, require confirmation of information furnished by the Proposer, and require additional evidence of qualifications to perform the services described in this RFP.

Zone 7 reserves the right to:

1. Reject any or all Proposals.
2. Issue subsequent Requests for Proposals.
3. Postpone opening for its own convenience.
4. Remedy technical errors in the Request for Proposal process.
5. Approve or disapprove the use of particular subcontractors.
6. Negotiate with any, all, or none of the Proposers.
7. Solicit best and final offers from all or some of the Proposers.
8. Award a contract to one or more Proposers.
9. Award a contract to a team created by Zone 7 from the Proposers and/or its subcontractors.
10. Award a contract to a Proposer other than the one with the lowest rates.
11. Waive informalities and irregularities in Proposals.

G. CONTRACT TYPE

Selection of a firm or firms will result in a Standard Agreement for the Professional Engineering Services for Silver Oaks Pump Station Replacement Project. This Agreement will begin on the date it is executed, which is expected to be around the date shown in the Calendar of Events. It is anticipated that an amendment for Engineering Services During Construction (ESDC) would be awarded at a later date. The total cost of services shall be proposed by each firm and is subject to negotiation between Zone 7 and the selected Consultant or Consultants. All services are to be billed on a time-and-materials basis.

VI. PROPOSER'S MINIMUM QUALIFICATIONS

The Proposer shall meet the following minimum qualifications:

- A. The Proposer shall submit the required Certificate(s) of Insurance (if Consultant has been selected).
- B. The Proposer shall comply with applicable federal, state, and local regulations concerning equal employment opportunity requirements.
- C. The Proposer shall possess expert knowledge and extensive experience in the design, permitting, construction, operation, and maintenance of water systems and shall be familiar with local conditions relating to these services in Zone 7's service area.
- D. The Proposer is required to list the key individuals who will be assigned to the project, their qualifications and disciplines, and each individual's degree of input and commitment.
- E. The Proposer shall provide a resume for each named key personnel that includes but is not limited to the following information:
 1. Name and proposed assignment (do not include personal information such as home addresses or phone numbers)
 2. Years of experience
 3. Education – degrees, schools & dates for each
 4. Professional Registration(s) or Certification(s)
 5. Experience directly related to the proposed assignment
 6. At least two client references, including contact names, addresses and telephone numbers
 7. Description of projects of a similar nature worked on in the past 5 years
- F. If the Consultant intends to use drones, the following items shall also apply:

1. Drone Insurance (Attachment E) will also be required (in addition to standard insurance).
2. The Consultant shall have a Remote Pilot Certification and registration from the Federal Aviation Administration (FAA) per Code of Federal Regulations, Title 14, Part 107 when operating drones on District property. Additionally, drone operators working on District property shall have a certified operator if the drone is less than 55 pounds. If the drone is greater than 55 pounds, the Consultant shall have a certified operator and an FAA Section 333 exemption that encompasses the intended operation; the Consultant shall also confirm that the District's operations comply with the third party operator's FAA Section 333 exemption. Drone data or video collected on District property shall be provided to the District. Contractor shall have insurance coverage and indemnity for any drone accident or incident that may result in liability.

VII. PROPOSAL FORMANT AND CONTENT

A. FORMAT

The Proposal shall be organized and prepared according to the Content section that follows, with attention given to the following:

1. The project team including the organizational chart and commitment (hours/%) of the team during the course of the project. The Consultant's Project Manager should lead the oral presentation.
2. A record of experience and qualifications of the project members. Zone 7 is interested in the experience of project members themselves in addition to the firm. Provide relevant examples of the project personnel experience as it relates to the Scope of Work (Attachment A), local experience, water/wastewater pump station design, and water transmission system design.
3. Any additional relevant services performed by your firm that were not outlined in the Scope of Work.
4. Submittals and cost proposals shall be submitted via email to bwoods@zone7water.com. Two (2) separate cost proposals shall be included as separate submissions in matrix format with proposed staff and corresponding hourly rates for performing the services discussed in the Scope of Work. These are as follows:
 1. Design phase support services through award of the construction contract.
 2. ESDC from award of the construction contract through construction closeout.

Consultant Rate Sheets shall be provided for design phase support services through the award of the construction contract. Hourly rates shall remain the same for the duration of design phase support services through award of the construction contract and may be adjusted with the contract amendment for ESDC through construction closeout. Rate Sheets must show proposed job classifications and corresponding hourly rates. Indicate your firm's name on all file names. It must show proposed staff including, but not limited to, the project manager and key staff, and corresponding hourly rates for performing the services discussed in the Scope of Work. The rate information will not be used during the Proposals review.

B. CONTENT

1. **Summary and Overview** – Use this section to summarize your approach to the topics identified in the Scope of Work (Attachment A), the strengths of your project team, and why your firm should be selected.
2. **Team Personnel and Qualifications** – Include a team organizational chart and commitment (hours/%) of the team during the course of the project. Identify the key project personnel and their roles associated with the tasks listed in the Preliminary Scope of Work. Include a summary of their qualifications, expertise, certifications, and project experience as it relates to the Preliminary Scope of Work, with specific emphasis on the proposed project manager and lead engineer(s). Provide brief summaries of a minimum of three (3) relevant projects of similar size and complexity completed by the firm and a minimum of two (2) relevant projects of similar size and complexity completed by the proposed project manager, as they relate to the project team, Preliminary Scope of Work, local experience, and experience with designing pump stations. Zone 7 is interested in the experience of the project members themselves in addition to the firm. The Proposer's Project Manager and key personnel assigned to the project will be an important factor considered by the Zone 7 selection committee. There shall be no change of key personnel once the Proposal is submitted without the prior written approval of Zone 7's Project Manager. The Project Manager listed should lead the oral presentation (if interviews are requested).
3. **Comments on Scope of Work** – This may be used as an opportunity to expand upon your team's specific experience and expertise, which may be applicable to the Scope of Work, and to outline any scope modifications you believe would be more effective at achieving Zone 7's goals and objectives.
4. **Work Plan** – Describe how the project team will fulfill the scope of work, including a detailed preliminary project schedule. Include a matrix of

personnel and tasks. To illustrate your strategy, describe tools and techniques that you will use, and challenges you anticipate, in addressing specific issues identified in the Scope of Work.

5. **References** – From recent applicable experience of the project manager or key personnel, list at least three (3) relevant projects, and include the agency, staff contact name, address, email, and telephone number for each.
6. **Resumes** – for the project manager and key personnel.
7. **Cost Proposal and Fees** – Consultant must provide an estimate to complete the Scope as described above as well as a current fee schedule on company letterhead and submit as a separate file to the bwoods@zone7water.com.
8. **Exceptions or Deviation Form** – Exceptions and/or deviations, if any, to the RFP and its exhibits are to be submitted as stated in the Calendar of Events (Attachment F).
9. **Total Proposal Length** – Proposal shall not exceed 10 pages excluding cover letter, resumes, cost proposal, and fees.
10. **Proposal Page Size** - The proposal shall be on 8.5-inch by 11-inch paper size. The cost proposal and fees, and the Microsoft Project Gantt chart for the work plan can be up to 11-inch by 17-inch paper size.

VIII. EVALUATION AND SELECTION

Evaluation and selection will be based on a two-step process. An overview is described below:

- a. Proposals have a maximum score of 100 points.
- b. Typically, the top three (3) consultants will be invited to an interview.
- c. Interviews will have a maximum score of 100 points.
- d. The Proposals and interviews will be evaluated equally.

A. EVALUATION PROCEDURE

A Review Board, generally made up of Zone 7 staff, will review the Proposals submitted, establish a list of finalists based on pre-established review criteria, interview the finalist Consultants if necessary, and select the successful Proposer based on demonstrated competence and necessary qualifications. Negotiations of the contracts, the detailed scope of work, and the fee are not within the scope of the Review Board.

Members of the Review Board will review the Proposals to determine those Consultants to be invited for an in-person or virtual interview. Approximately 45 minutes will be allowed for each oral interview and questions and answers. The Consultant’s proposed Project Manager must lead the presentation before the Review Board. Proposers should also be aware that award might be made without interviews or further discussion.

Interviews are tentatively scheduled as shown in the Calendar of Events.

B. EVALUATION CRITERIA

The following criteria will be used to evaluate written proposals that are submitted. The Consultant will be evaluated separately for the interview process.

Table 1. Proposal Evaluation Criteria

PROPOSAL EVALUATION CRITERIA	POINTS
Project Understanding: General response to this RFP; adherence to submittal formatting and content requirements, goals, schedule, and objectives.	20
Team Experience: Technical experience in performing work of a similar nature and complexity (Attachment A); qualifications of key personnel; key personnel’s level of involvement performing related work; adequacy of labor commitment; concurrence in the restrictions on changes in key personnel; experience working with water supply public agencies and/or municipalities; record of performing right-of-way services for a public agency (right-of-way team); record of completing work on schedule; strength and stability of the firm; technical experience and strength and stability of proposed subcontractors. Experience with public agencies will be prioritized over private companies.	25
Project Manager Qualifications and Expertise: Experience overseeing successful implementation of projects of similar scope, size, and complexity; experience working with California water supply agencies and/or municipalities; record of completing work on schedule. Experience with public agencies will be prioritized over private companies.	20
Technical Approach: Demonstrated understanding of the project requirements; comments on scope and project approach as outlined in Attachment A; proposed project schedule and deliverables.	25

Client References: Assessments by client references. Experience with public agencies will be prioritized over private companies.	10
Total:	100

Table 2. Interview Evaluation Criteria

PRESENTATION EVALUATION CRITERIA	POINTS
Interest and Enthusiasm: Do the interview participants demonstrate interest and enthusiasm in the project?	5
Demonstration of How the Work Will Be Performed: Is the presentation informative and does it instill confidence that the project will be successfully executed? Does the consultant demonstrate how the work will be performed?	25
Project Manager and Team: Is the firm’s project manager and team present? Do the project manager and team actively participate in the presentation?	20
QUESTION AND ANSWER EVALUATION CRITERIA	POINTS
Responses to Structured Questions	30
Responses to Additional Questions	20
Total:	100

C. AWARD

When the Review Panel has completed its review, Proposers will be advised of the number one selection. A contract will then be negotiated with the selected firm for the extent of services to be rendered and for the method of compensation. Agreements in excess of \$50,000 require Zone 7 Board of Directors approval. Any award requiring Board approval is to be made at the nearest upcoming Board meeting.

IX. COMPLIANCE WITH LAWS; CONFLICT OF INTEREST

Consultant agrees to comply with all applicable federal and state laws, regulations and policies, as amended, including those regarding discrimination, unfair labor practices, collusion and conflicts of interest.

X. PUBLIC RECORDS ACT REQUESTS

Zone 7 believes that the public interest is served by securing the best quality work at

the lowest price. Accordingly, we request information about your company's qualifications, past experience and other similar items. Under California law, if requested to provide a copy of your proposal to a third party, we will do so in order to comply with the California Public Records Act.

If you believe that any information that you will be providing to Zone 7 is confidential or is subject to protection as a trade secret, please clearly mark that information as confidential in your submittal. You may highlight the confidential information in yellow or otherwise mark it so that Zone 7 personnel clearly know that it is confidential or trade secret information.

Zone 7 will do its best not to disclose confidential or trade secret information that is clearly marked as such, but you should know that you bear the risk of marking the confidential/trade secret information sufficiently clearly so as to allow Zone 7 personnel to redact that information prior to providing it to a requestor. Zone 7 assumes no responsibility for any failure on your part to mark the information sufficiently clearly so as to allow our staff to redact the information at the appropriate time.

Prior to disclosing your proposal to a requestor, Zone 7 will provide you with reasonable notice of the request and a reasonable opportunity to seek a protective order from a court of competent jurisdiction. Zone 7 will not contest your request for a protective order but will also not contest a request for your response to the request for proposals. Zone 7 will comply with any order regarding disclosure from a court of competent jurisdiction.

XI. ATTACHMENTS

- A. Attachment A – Preliminary Scope of Work
- B. Attachment B – Existing Site Schematic
- C. Attachment C – Sample Professional Services Agreement
- D. Attachment D – Design Professional Insurance Requirements
- E. Attachment E – Drone Insurance Requirements
- F. Attachment F – Exceptions-Deviations Form
- G. Attachment G – Zone 7 CAD Standard

ATTACHMENT A PRELIMINARY SCOPE OF WORK

A preliminary scope of work, provided below, has been developed to assist the Proposer in gaining an understanding of Zone 7's goals as they relate to this effort. The final scope of work will be developed in cooperation with the selected Consultant and included as part of the contract between Zone 7 and the selected Consultant.

General Information and Project Background:

Zone 7's water system includes approximately 40 miles of pipelines ranging in diameter from 18-inch to 48-inch, two surface water treatment plants, a reverse osmosis facility, three (3) pump stations, and ten (10) groundwater production wells. The prevailing slope of the service area is approximately 350 feet, mean sea level (MSL) on the west end (Dublin/Pleasanton) and approximately 650 feet MSL on the east end (Livermore).

Zone 7's existing Silver Oaks Pump Station is located at the end of Silver Oaks Way at 3928 Duke Way in Livermore, California. The pump station can pump approximately 5,600 gallons per minute (GPM) of treated water to east Livermore, supplementing Zone 7's Patterson Pass Water Treatment Plant during high demand periods or limited surface water conditions. The pump station needs to be replaced due to aging components and relocated to a site with a larger footprint to accommodate all required improvements by fall 2028.

The scope of work should include the following tasks to be performed by the selected Consultant:

Task 1 – Comprehensive Evaluation of Existing Pump Station, Hydraulic Analysis, Electrical Evaluation, and Identification of Interim Measures to Ensure Continued Reliability Prior to Completion of the New Facility

Comprehensive Evaluation of Existing Pump Station - The Consultant shall conduct a comprehensive evaluation of the existing pump station including its current condition, performance parameters, maintenance records, and operational efficiency assessments. The comprehensive evaluation shall identify deficiencies and limitations of the existing pump station and provide justification for the replacement of the pump station in its entirety. Justification should include discussions regarding the age of equipment, site restrictions for access and maintenance, site security, water supply demand, regulatory compliance, energy consumption and efficiency, risk mitigation, and potential cost savings of a new facility, among other factors that the Consultant deems

applicable. Interviews with Zone 7's Operations and Maintenance departments can be conducted as needed.

Hydraulic and Surge Analysis - The Consultant shall perform a detailed hydraulic analysis to determine, among other things, proposed pump station capacity, taking into account current and projected future water demands and best siting location accounting for transmission system pressures and flows. A detailed surge analysis shall be performed to determine what, if any, protective measures need to be incorporated into the pump station design to ensure reliable, safe and long-term performance of both the pump station and transmission system. The surge analysis should include pertinent data including, but not limited to, pressure spikes, durations, the various operating conditions that could lead to such spikes and a detailed comparative analysis of the different options for system and station protection. Design demand is anticipated to be approximately twelve (12) million gallons per day (MGD). Operations and Maintenance input should be gathered as needed to determine probable water demand projections, potential pump sizes, and desirability of standby pump(s).

Electrical System and Equipment Evaluation - The Consultant shall:

1. Identify the energy supply requirements for the new pump station and recommended equipment, including options to energize the new site, potential need for backup power generator(s), and baseline energy usage.
2. Assess the existing facility's electrical system and describe any issues affecting power reliability or capacity at the facility during normal operations. Identify and describe the potential reliability benefits of any recommended equipment maintenance, rehabilitation or replacement.
3. Based on the facility's typical use, define the minimal backup power needs. Provide comparative information on potential system types and technologies, and provide a trade-off analysis with respect to performance, greenhouse gas emissions, cost and schedule. Make an equipment selection recommendation for inclusion in the project design.
4. Evaluate the installation of energy efficient pumps. Determine if pump tests are needed to provide a baseline for such comparison. Provide comparative information about available pumps and technologies and provide a trade-off analysis with respect to energy use, performance, cost and schedule. Make an equipment selection recommendation.
5. When evaluating and comparing the cost of different equipment options, identify and include the potential benefits of available energy efficiency rebates, incentives, or grant programs that may be applicable.

6. Any suggested new equipment and control system must be compatible with Zone 7's existing SCADA system.

Identification of Contingency Measures to Ensure Continued Reliability Prior to Completion of the New Facility – Silver Oaks Pump Station and Kitty Hawk Pump Station are similar in age, type of pumps, capacity, and overall condition. It is imperative that both pump stations maintain the ability to continue operating. Although the Silver Oaks Pump Station is the primary focus of this RFP and is the only pump station that will be replaced at this time, the Consultant shall look at contingency measures for both pump stations to allow for continued operations. This task shall include working with Zone 7 Maintenance staff to understand what specific components should have spare parts, compiling applicable equipment specifications, and assisting with outreach to possible vendors to procure/fabricate the parts. This work is an early deliverable which shall be completed with the Basis of Design and shall be documented in a technical memorandum and/or Excel spreadsheet, whichever is the most appropriate.

Deliverables and Meetings:

1. Provide technical memoranda summarizing findings from the comprehensive evaluation.
2. Provide technical memoranda summarizing hydraulic analysis methods, surge analysis, findings, and recommended design demand.
3. Provide documentation summarizing the energy efficiency and equipment evaluation.
4. Provide technical memoranda and/or Excel spreadsheet with needed spare parts.
5. Consultant shall include budget for meetings to address Task 1.

Task 2 – Site Selection and Land Acquisition

Zone 7 does not have a site selected for the new pump station, but anticipates that a potential suitable location for the new pump station would be between Stanley Boulevard/Fenton Street to the west, and the current pump station location on the east. The Consultant shall identify a minimum of three potential location alternatives for the new pump station by considering the current land use of the property, the accessibility for construction and on-going operations and maintenance activities, area and site layout, proximity to Zone 7's transmission system, topography, geological conditions, community considerations, environmental impacts, and any potential impacts the new location may have on the transmission system.

The Consultant shall present findings and site recommendations to Zone 7 staff for a collaborative determination of the preferred site for relocation. The Consultant shall also prepare a site evaluation technical memorandum (TM) to document the purpose of the new facility and site selection process and findings. The TM shall include a thorough discussion of the process, provide approximate costs (or ranges) for the purchase of property(ies), and what impact the site purchase and pump station facility could have on the community. The TM shall include specific reasons why certain properties were not selected and why one is the recommended location. The TM shall include aerial images (such as Google Earth) that show the sites that were considered, and a facility footprint shown on the sites, that includes the traveled way, ingress and egress. The TM shall also include a discussion of all necessary permits and approvals for such site development. The TM will be used to support the property acquisition and CEQA processes. The Consultant shall provide a 70% and 95% draft for review and comment, and a final document.

The Consultant shall support Zone 7 in land negotiations, Right of Entry Agreement (between Zone 7 and the landowner) to begin work and property acquisition once the site has been selected (in collaboration with Zone 7 staff). The Consultant shall provide appraisal support to determine fair market value and review existing right-of-way documents and identify all encumbrances, including but not limited to easements, license agreement(s), and encroachment permit(s) of the selected site. The Consultant shall acquire title reports and utilize a land surveyor to prepare plat maps and legal descriptions, perform boundary and record of survey(s), and identify the limits of the recommended easement or land purchase needed (Zone 7 will determine if it intends to request to purchase an easement or land in fee title).

The Consultant shall support Zone 7 in all corresponding meetings with landowners and/or government agencies by preparing all meeting agendas, presentations, minutes, and deliverables. The Consultant will be responsible for facilitating meetings as requested by the Zone 7 project manager.

The Consultant shall support Zone 7 to work with the appropriate agency to assign a site address, if one does not currently exist at this location.

Deliverables and Meetings:

1. Deliverables for this task should include any documentation related to the property acquisition, and all communications with property owners, stakeholders, or government agencies which shall be provided in PDF for

- Zone 7 records.
2. Prepare a Site Evaluation TM.
 3. Consultant shall include budget for meetings to discuss Task 2.

Task 3 – New Pump Station Design

In conjunction with Task 1, the Consultant shall identify the comprehensive design criteria for the new pump station. Criteria shall include, but not limited to, design pressures based on the hydraulic and surge analysis, current and anticipated future demand, recommended operating point of the pump station, range of operating flows based on variable operating conditions, number of pumps and recommended sizes, recommended pump redundancy, pipeline sizes and electrical sizing.

The pump station must be capable of delivering flows from 0 to 7,000 gpm with static system pressures on the suction side of the station typically 40 pounds per square inch (psi) (+/- 10 psi) and 60 psi (+/- 10 psi) on the discharge side of the station, and shall include, but not be limited to, the following improvements:

- New power service (PG&E and PWRPA), if needed.
- New pumps, pump equipment, piping, valves, instrumentation and appurtenances
- New control station
- Piping to connect the new pump station to the existing transmission system
- New electrical and controls equipment (i.e. switchgear, motor starters, motor control centers, transformer(s), programmable logic control, SCADA, human machine interface, etc.) with a dedicated electrical room
- Permanent, stationary backup power on a concrete pad
- New pump station building, and any necessary ancillary structures
- Landscape improvements
- Driveway and hardscape improvements
- Compliance with Municipal Regional Stormwater NPDES Permit, Provision C3
- Site security (such as fencing, exterior lighting, camera system, access control system, and intrusion alarms)
- Demolition and disposal of the existing facility (only after the new facility is in-service)

The Consultant shall review the proposed scope and recommend any adjustments or additions as needed. The Consultant shall prepare detailed drawings and specifications of the new facilities, electrical equipment, piping, and any other improvements that are to be constructed. The Consultant shall provide all necessary geotechnical engineering,

land surveying, and any other disciplines required for planning and design phase services. The Consultant will also need to provide technical information that is requested by Zone 7's CEQA consultant.

Additionally, the Valley Pump Station, located on the northwest corner of Valley Avenue and Stanley Boulevard in Pleasanton, may be used by the Consultant as a reference and guide for Zone 7's general preference for the new pump station and building.

Deliverables and Meetings:

1. The Consultant shall prepare engineering drawings and project specifications suitable for bidding and construction of the project. The drawings shall be prepared in accordance with Zone 7 CAD Standards (Attachment B). The project will use Zone 7's Division 0 and 1 specification template. The Consultant's specifications shall be in Tahoma 12 font and CSI format and shall coordinate numerically with Zone 7's five-digit Division 0 and 1 document and specification numbers. The Consultant will be required to provide all applicable technical specifications for the project, in addition to technical assistance to Zone 7 with the preparation of the Division 0 and 1 specifications. At a minimum, design submittals to Zone 7 are required at the following points during the design development process: Basis of Design, 30%, 60%, 90% and 100%. At each stage, except for the 100% complete stage, draft drawings (in PDF) and specifications (in Microsoft Word and PDF) shall be submitted to Zone 7 for review and input, and up to four (4) hours of design review workshops will be held to review each submittal with Zone 7. The design review workshops will be held in person at the Zone 7 Administrative Office. The Consultant must schedule the design review workshops a minimum of one month in advance. During each workshop, the Consultant shall present and thoroughly discuss with Zone 7 the design plans and other deliverables submitted. The Consultant shall submit the updated opinion of probable cost and schedule with each design submittal. The Consultant shall prepare meeting minutes and submit them to Zone 7 within one week after each workshop. The Consultant will record in the workshop minutes all direction received from Zone 7 and all decisions reached during the meeting. Decisions will be recorded in a Decision Log, which will be submitted to Zone 7 along with the meeting minutes. The Consultant will provide submittals ten (10) working days ahead of the scheduled design review workshop. Within fifteen working days from receipt of the minutes, it is anticipated that Zone 7 will submit any additional written comments to the Consultant regarding the design package submitted and its contents. The

Consultant shall incorporate Zone 7's comments into the subsequent submittal or provide a written explanation of why the comments should not be incorporated. This task will culminate in bid-ready contract documents for the Silver Oaks Pump Station Replacement Project.

2. The Consultant shall prepare assessments of fair market value for land acquisition (assume fee title) of all potentially viable parcels.
3. The Consultant shall prepare Basis of Design, 30%, 60%, 90%, and 100% submittal cost estimates and submit to Zone 7 in both PDF and Excel formats. At the 90% and 100% submittals, the Consultant shall also provide the cost breakdown in the same format following the Bid Form in the Division 0 specifications. Identify assumptions and basis for the estimate, including, but not necessarily limited to, quantities, pricing, equipment costs, material costs, allowances and contingencies. The cost estimate shall be based on forecast market rates, taking into account inflation and other factors predicated on the construction schedule. The cost estimate will represent the anticipated cost for capable contractors to construct the Project under normal conditions, and for supply of equipment by approved manufacturers. The cost estimate prepared at each submittal milestone shall be in accordance with the requirements of the Association for the Advancement of Cost Engineering (AACE) International and shall be prepared under the supervision of an AACE certified estimator.
4. As part of the 30% deliverable, the Consultant shall perform an electrical load study and assess the status of the electrical service (if any) at the proposed project site, determine if additional electrical service is required, and adequately size the switchgear for future electrical loads from the pump station. The Consultant shall evaluate emergency backup power necessary to continue operation of the pump station in the event of a power outage. The Consultant shall provide supporting documents and lead all project coordination efforts with PG&E and Power and Water Resources Pooling Authority (PWRPA) if additional or new electrical service is required and/or if electrical service provider(s) requires review of new electrical equipment.
5. The Consultant shall include budget for meetings to discuss Task 3 in coordination with Zone 7 staff as needed.

Task 4 – Project Management

Project management shall include routine communication with Zone 7 staff, weekly progress meetings, monthly reports, and maintenance of overall project budget and schedule. Detailed project management tasks are outlined below:

1. **Kick-Off Meeting** – Upon contract execution, the Consultant shall schedule a project kick-off meeting with Zone 7 staff and all key members of the Consultant’s project team to discuss the scope of work and project roles and responsibilities of each project member.
2. **Design Workshops and Monthly Progress Meetings** – The Consultant shall hold in-person design workshops (up to four hours each) with Zone 7 staff for the Basis of Design, 30%, 60%, and 90% design submittals in addition to weekly progress meetings. Additionally, at each phase listed above, the Consultant shall assist the Zone 7 Project Manager to prepare a PowerPoint presentation that will be presented to the Zone 7 executive team. The Consultant may be required to attend and lead the presentation at these in-person meetings (one hour each). Consultant will maintain a Decision Log as a record of all decisions made during monthly progress meetings, and pending decisions, during the design phase. In addition to the Decision Log being updated and provided to Zone 7 after each design workshop, it shall also be continuously updated and available for review upon request.
3. **Monthly Progress Reports** - Monthly progress reports shall accompany invoices and include sufficient detail for Zone 7 to track progress by task and see expected upcoming activities for all active tasks. Monthly progress reports shall include a status report by task and subtask breakdown, a brief description of the work performed, cost status including employees’ names, classifications, hours and hourly rates, original budget, current invoice, cost to date, remaining budget, percent budget, and percent of project completed to date, work projected for the next 30-day period, and identification of critical path items and potential issues.
4. **CEQA Assistance** – Provide assistance to Zone 7’s environmental consultant for preparation of CEQA documents.
5. **Public Outreach Assistance** - Provide assistance to Zone 7’s outreach consultant.

Task 5 – Provide Engineering Support During Bid Phase

Consultant shall assist Zone 7 staff in conducting a pre-bid meeting and tour of the project site, prepare responses to technical questions from prospective bidders, subcontractors, and suppliers during the advertisement period, prepare up to five (5) addenda to the contract specifications and drawings during the advertisement period to clarify and revise project requirements; perform bid review and evaluation; and prepare conformed specifications and drawings based on all addenda issued.

Deliverables and Meetings:

1. The Consultant shall provide meeting agenda and minutes for pre-bid meeting and site tour.
2. Prepare responses to questions about contract requirements and prepare up to five (5) addenda to specifications and drawings.

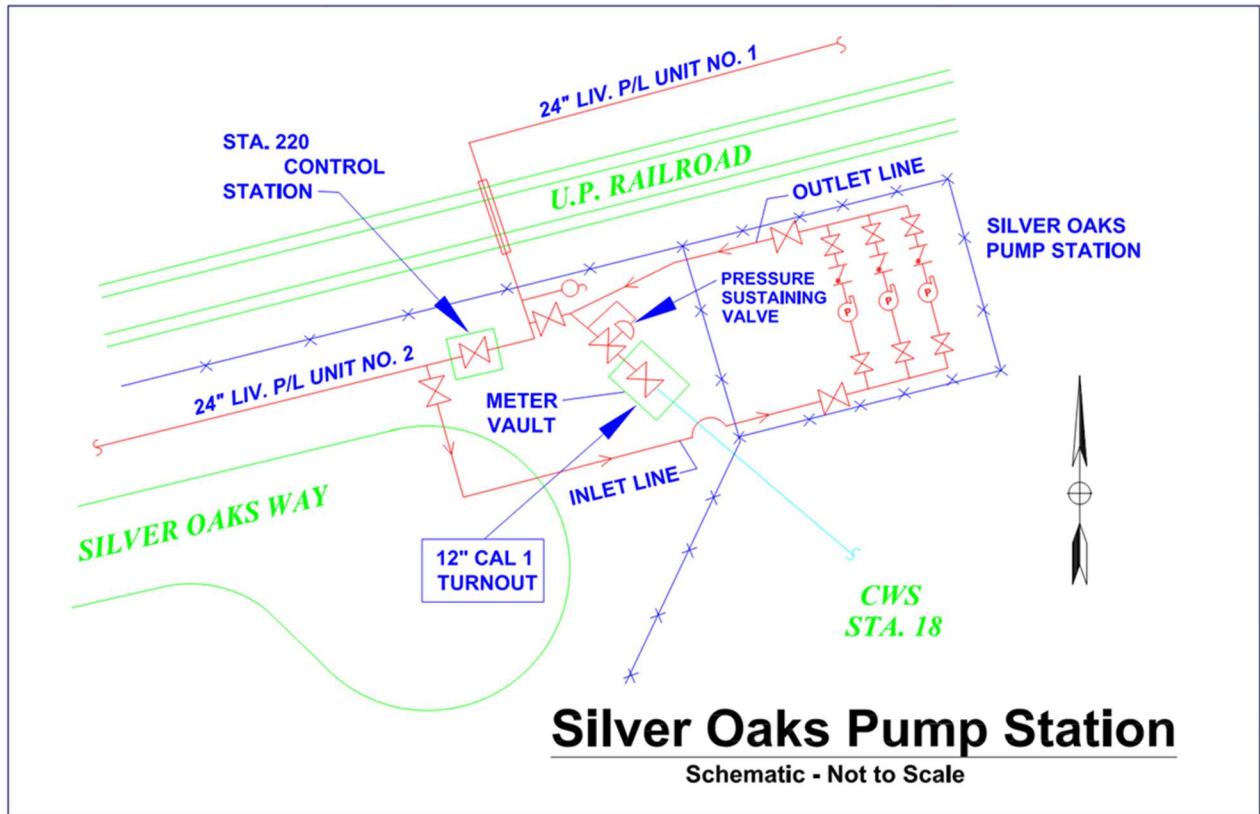
Task 6 – Provide Engineering Support During Construction

The Consultant shall provide all typical construction phase engineering support including, but not limited to, the following tasks:

1. Progress meetings – attending and preparing meeting agendas and minutes for all project progress meetings, assumed to be in-person weekly, along with all supplemental or project specific meetings.
2. Submittals and Requests for Information (RFIs) – reviewing all project submittals and RFIs from the contractor and their suppliers, vendors or subcontractors. The Consultant shall provide review disposition of each submittal and provide comprehensive responses to RFIs.
3. Document review and issuance – review and provide comment on all project schedule updates and contractor submitted progress payments. Consultant shall provide and issue all required design clarifications to meet project intent or correct design mistakes as well as review all change orders and change order requests including costs proposals.
4. Construction observation and record drawings – perform all required site observation visits, including any specialty inspection required by the contract documents. The Consultant shall also prepare record drawings in accordance with Zone 7 CAD Standards.
5. Provide Operations & Maintenance manuals and operator and maintenance training and startup support, and Computerized Maintenance Management System Support (CMMS).
 - a. The Consultant shall prepare a process operations and maintenance manual and provide operator training, and startup and testing support for the project.
 - b. The manual shall consist of reference guides to the physical facilities. The Consultant shall prepare new, and update the existing, standard operating procedures (SOPs). The Consultant shall use Zone 7's SOP template. Each section or guide shall be dedicated to an individual facility process or major support system of the new facilities, and shall highlight any potential impact on, or changes to, existing facility functions. Each section or guide shall include, but not be limited to, the following:

- i. Introduction. Briefly describe the purpose and theory of the process and its relationship to other processes.
 - ii. Process Components. Describe the process elements including equipment nameplate details, equipment operating mode(s) and design intent, and process instrumentation and controls.
 - iii. Process Analysis and Control. This section is to include a process description, which presents the operational intent of the particular process and equipment, how it functions, manual and automatic operation steps as applicable, and alarms. SCADA screenshots and equipment tag identification numbers are to be incorporated into this section as appropriate to facilitate explanation of the process and control logic.
 - iv. Maintenance. This section will include recommended routine/preventative maintenance and daily inspection activities. Identify key process components for monitoring and maintenance tracking via KloudGin, Zone 7's Computer Maintenance Management System (CMMS). The Consultant shall provide a comprehensive list of all new assets including, but not limited, to such information as, tag numbers (which must be coordinated with Zone 7), model numbers, serial numbers, asset class, asset function, etc. Zone 7 to provide CMMS asset template for Consultant's completion. The Consultant and the Contractor shall provide the list of new assets to Zone 7, and Zone 7 will upload the new assets onto the CMMS system directly.
- c. The draft manual shall be submitted for review. The final manual shall incorporate Zone 7's comments.

Attachment B – Existing Site Schematic



ATTACHMENT C

SERVICES AGREEMENT

between

**ALAMEDA COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT, ZONE 7**

and

Consultant Name

for

Project/Program Name

Contract No. _____

Dated _____

This Professional Services Agreement ("**Agreement**") is made effective as of _____, by and between the Alameda County Flood Control and Water Conservation District, Zone 7 commonly known as ZONE 7 WATER AGENCY, hereinafter referred to as ("**Agency**"), a public body, corporate and politic, duly organized and existing under and by virtue of the laws of the State of California and _____, a **DESCRIBE BUSINESS ENTITY, E.G., PROFESSIONAL CORPORATION** ("**Consultant**") (collectively, the "Parties"), at Livermore, California, with reference to the following facts and intentions:

WHEREAS, The Agency is engaging in _____ ("**Project**"); and

WHEREAS, The Agency requires a highly qualified consultant with the requisite knowledge, skill, ability and expertise to provide the necessary services for the Project ("**Services**"); and

WHEREAS, Consultant represents to the Agency that it is fully qualified and available to perform the Services for and as requested by the Agency.

NOW, THEREFORE, in consideration of the mutual promises, covenants, and terms and conditions herein, the Parties agree as follows:

1. SCOPE OF WORK

- 1.1. Consultant shall provide all services set out in Appendix A, Scope of Work, attached and incorporated here to the satisfaction of the Agency.
- 1.2. **Independent Contractor; Agency** - The Consultant is acting hereunder as an independent contractor and not as an agent or employee of the Agency. The Consultant is thus not eligible to receive workers' compensation, medical, indemnity or retirement benefits, including but not limited to enrollment in the Alameda County Employees' Retirement Association (ACERA). Except as expressly provided herein, the Consultant is not eligible to receive overtime, vacation or sick pay. The Consultant shall not represent or otherwise hold out itself or any of its directors, officers, partners, employees, or agents to be an agent or employee of the Agency.
- 1.3. **Extra Services** - Before performing any services outside the scope of this Agreement ("**Extra Services**"), Consultant shall submit a written request for approval of such Extra Services and receive written approval from the Agency. The Agency shall have no responsibility to compensate Consultant for any Extra Services provided by Consultant without such prior written approval.
- 1.4. **Methods** - Consultant shall have the sole and absolute discretion in determining the methods, details and means of performing the Services

required by the Agency. The Agency shall not have any right to direct the methods, details and means of the Services; however, Consultant must receive prior written approval from the Agency before assigning or changing any assignment of Consultant's project manager or key personnel and before using any Sub-consultants ("Sub-consultants") or Sub-consultant agreements for services or materials under this Agreement and any work authorizations.

- 1.5. **Review** - Consultant shall furnish the Agency with reasonable opportunities from time to time to ascertain whether the Services of Consultant are being performed in accordance with this Agreement. All work done and materials furnished shall be subject to final review and approval by the Agency. The Agency's review and approval of the Services shall not; however, relieve Consultant of any of its obligations under this Agreement.

2. COMPENSATION

- 2.1. **Amount** – As consideration for the Services described above, THE AGENCY will pay the Consultant an amount not to exceed \$_____ ("Maximum Amount"). DESCRIBE ANY PERIODIC BILLING REQUIREMENTS, EXPECTATIONS OR OTHER PARTICULARS, E.G., NOT TO EXCEED \$_____ PER MONTH, OR CONSULTANT SHALL NOTIFY THE AGENCY WHEN TOTAL INVOICED AMOUNT EQUALS 80% OF MAXIMUM AMOUNT.

Payments will be made at the rates set forth in the Fee Schedule which is attached hereto within and incorporated herein as though fully set forth ("Fee Schedule" – Appendix B). Consultant shall submit an invoice within ten (10) days after the end of each month during the term of this Agreement describing the Services performed for which payment is requested.

- 2.2. **Invoicing** – The invoice shall identify and describe the activities performed by Consultant and state the total cost of the Services for the period of the invoice; the hours worked; the name and title of the person(s) performing the work; the hourly rate for the person(s) performing the work; the accrued reimbursable expenses; and the budget amount and percentage remaining (after invoice payment), without reduction for retentions. The invoice shall also identify expenses for which reimbursement is requested and attach supporting documentation, including original receipts and/or bills. Any expenses exceeding \$500 shall require written approval from the Agency. Reimbursable costs shall not include any administrative or overhead expenses and shall be reimbursable as described in the Fee Schedule.

Costs or expenses not designated or identified in the Fee Schedule shall not be reimbursable unless otherwise provided in this Agreement. Only actual time in providing the Services will be charged. The Agency will not make any payments for Consultant's travel time incurred in providing the Services, and

Consultant agrees not to invoice the Agency for any travel time incurred in providing the Services.

The Agency shall review and approve all invoices prior to payment. Consultant agrees to submit additional supporting documentation to support the invoice if requested by the Agency. If the Agency does not approve an invoice, the Agency shall send a notice to the Consultant setting forth the reason(s) the invoice was not approved. Consultant may re-invoice the Agency to cure the defects identified in the Agency notice. The revised invoice will be treated as a new submittal. If the Agency contests all or any portion of an invoice, the Agency and the Consultant shall use their best efforts to resolve the contested portion of the invoice.

The Agency shall pay approved invoice amounts within thirty (30) days of receipt. The Agency's determinations regarding verification of Consultant's performance, accrued reimbursable expenses, and percentage of completion shall be binding and conclusive. Consultant's time records, invoices, receipts and other documentation supporting the invoices shall be available for review by the Agency upon reasonable notice and shall be retained by Consultant for three (3) years after completion of the Project.

All invoices submitted for payment must indicate the Agreement number and either are to be emailed to accountspayable@zone7water.com or a hard copy mailed to Zone 7 Water Agency, 100 North Canyons Parkway, Livermore, CA 94551, Attention: Accounts Payable.

- 2.3. **Withholding Payment** – In the event the Agency has reasonable grounds for believing Consultant will be unable to materially perform the Services under this Agreement or unable to complete the Services within the Maximum Amount described in this Agreement, or if the Agency becomes aware of a potential claim against Consultant or the Agency arising out of Consultant's negligence, intentional act or breach of any provision of this Agreement, including a potential claim against Consultant by the Agency, then the Agency may withhold payment of any amount payable to Consultant that the Agency determines is related to such inability to complete the Services, negligence, intentional act, or breach.

3. TAXES; INSURANCE; PERMITS; LICENSES

- 3.1. **Taxes** - Consultant shall be solely responsible for the payment of all federal, state and local income tax, social security tax, worker's compensation insurance, state disability insurance, and any other taxes or insurance Consultant, as an independent contractor, is responsible for paying under federal, state or local law. Consultant is aware of the provisions of Section 3700 of the California Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and Consultant

shall comply with such provisions before commencing the performance of the Services under the Agreement. Consultant and its Sub-consultants shall maintain applicable workers' compensation insurance for their employees in effect during all work covered by the Agreement.

- 3.2. **Permits and Licenses** - Consultant shall procure and maintain all permits, and licenses and other government-required certification necessary for the performance of the Services, all at the sole cost of Consultant. None of the items referenced in this section shall be reimbursable to Consultant under the Agreement. Consultant shall comply with any and all applicable local, state, and federal regulations and statutes including Cal/OSHA requirements.

4. RISK TRANSFER PROVISIONS

- 4.1. **Workers' Compensation Insurance** - By his/her signature hereunder, Consultant certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and he/she will comply with such provisions before commencing the performance of the work of this Agreement.

- 4.2. **Indemnification** - To the fullest extent permitted by law, Consultant will immediately defend, indemnify and hold harmless the Agency, its directors, officers, employees, or authorized volunteers, and each of them (collectively "the Agency") from and against:

4.2.1. All claims, demands, liabilities and losses arising out of the performance (or actual or alleged non-performance) of the services by Consultant, including its agents and employees, under this Agreement, for damages to persons or property arising, pertaining to or relating to the Consultant's negligent acts or omissions or willful misconduct or the failure of Consultant to comply with any professional standard of care applicable to Consultant's services.

4.2.2. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the intentional or negligent violation of any governmental law or regulation, compliance with which is the responsibility of Consultant.

4.2.3. Any and all losses, expenses, damages (including damages to the work itself), attorneys' fees, and other costs, including all costs of defense, including but not only costs of counsel acceptable to the Agency, which the Agency may incur with respect to the failure, neglect, or refusal of Consultant to perform the Services or its obligations under the Agreement. Such costs, expenses, and damages shall include all costs,

including attorneys' fees, incurred by the Agency in any lawsuit to which it is a party. Upon the Agency's tender, Consultant shall immediately defend, at its own cost, expense and risk, any and all such suits, actions or other legal proceedings, with counsel acceptable to the Agency. Consultant shall further defend itself against any and all liabilities, claims, losses, damages, and costs arising out of or alleged to arise out of performance or non-performance of the work hereunder, and shall not tender such claims to the Agency nor to its directors, officers, employees, or authorized volunteers, for defense or indemnity.

4.2.4. Consultant shall pay and satisfy any judgment, award or decree that may be rendered against the Agency or its directors, officers, employees, or authorized volunteers, in any and all such aforesaid suits, actions, or other legal proceedings if arising as provided in the previous subsections of this Section.

4.2.5. Consultant shall reimburse the Agency or its directors, officers, employees, or authorized volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith.

Consultant's indemnification obligations shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Consultant, its agents, employees under any applicable Worker Compensation Act, Disability Benefits Act, or other employee benefit act. Consultant's obligation to defend and indemnify shall not be restricted by the insurance requirements of this Agreement or to insurance proceeds, if any received by the Agency, or its directors, officers, employees, or authorized volunteers.

Notwithstanding the foregoing obligations, Consultant shall not at any time be responsible for any claims, liabilities or demands to the extent that they arise from the negligence or willful misconduct of the Agency, provided, however, that contributory negligence will not relieve Consultant of its obligation to defend unless the claims, liabilities or demand are the result of the sole negligence or willful misconduct of Agency.

The indemnity provided under this indemnification provision is intended to and will survive the expiration or termination of the Agreement and remain in full force and effect until barred by the applicable statute of limitations.

5. GENERAL CONDITIONS

5.1. **Laws, Regulations and Permits** -The Consultant shall give all notices required by law and comply with all laws, ordinances, rules, and regulations pertaining to the conduct of the work. The Consultant shall be liable for all violations of the law in connection with work furnished by the Consultant. If the Consultant performs any work knowing it to be contrary to such laws,

ordinances, rules and regulations, the Consultant shall bear all costs arising therefrom.

- 5.2. **Safety** - The Consultant shall execute and maintain his/her work so as to avoid injury or damage to any person or property.

In carrying out his/her work, the Consultant shall at all times exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed, and be in compliance with all applicable federal, state and local statutory and regulatory requirements including State of California, Department of Industrial Relations (Cal/OSHA) regulations, and the U.S. Department of Transportation Omnibus Transportation Employee Testing Act. Safety precautions, as applicable, shall include but shall not be limited to: adequate life protection and life-saving equipment; adequate illumination; instructions in accident prevention for all employees, such as the use of machinery guards, safe walkways, scaffolds, ladders, bridges, gang planks, confined space procedures, trenching and shoring, fall protection, and other safety devices; equipment and wearing apparel as are necessary or lawfully required to prevent accidents, injuries, or illnesses; and adequate facilities for the proper inspection and maintenance of all safety measures.

- 5.3. **Labor Compliance Requirements** - Labor Compliance requirements (Prevailing Wage, SB 854): Contractor/Vendor must comply with all labor compliance requirements including but not limited to prevailing wage requirements, SB 854, Labor Code sections 1771.1(a) & 1725.5, Public Works Contractor Registration Program, and Electronic Certified Payroll Records to Labor Commissioner. Additional information about these requirements and the new public works program regarding compliance monitoring, administration and enforcement are available at the Department of Industrial Relations. **[For Public Works Contracts]** Copies of the rate of per diem prevailing wage shall be on file at the principal office of the Agency, and shall be made available to any interested party upon request.

6. REQUIRED INSURANCE

Liability Insurance - The Consultant shall provide and maintain at all times during the performance of the work under this Agreement, the following commercial general liability, professional liability and automobile liability insurance. All of the insurance shall be provided on policy forms and through companies satisfactory to the Agency.

- 6.1. **Coverage** - Coverage shall be at least as broad as the following or as provided in Appendix C:

- 6.1.1. Coverage for Professional Liability appropriate to the Consultant's profession covering Consultant's wrongful acts, negligent actions, errors

or omissions. **If Claims Made Policies:** the Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work; insurance must be maintained and evidence of insurance must be provided **for at least five (5) years after completion of the contract of work;** and if coverage is canceled or non-renewed, and not **replaced with another claims-made policy form with a Retroactive Date** prior to the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of **five (5)** years after completion of contract work.

6.1.2. Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 0001).

6.1.3. Insurance Services Office (ISO) Business Auto Coverage (Form CA 0001), covering Symbol 1 (non-owned and hired automobiles).

6.2. **Limits** - The Consultant shall maintain limits no less than the following:

6.2.1. Professional Liability – One million dollars (\$1,000,000) per claim and Two million (\$2,000,000) annual aggregate.

6.2.2. Commercial General Liability – Two million dollars (\$2,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater for bodily injury, personal injury and property damage and products & completed operations liability. If Commercial General Liability Insurance or other form with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (with the ISO CG 25 03, or ISO CG 25 04, or insurer's equivalent endorsement provided to the Agency) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.

6.2.3. Automobile Liability – One million dollars (\$1,000,000) for bodily injury and property damage each accident limit.

6.2.4. Excess Liability – The limits of insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of the Agency (if agreed to in a written contract or agreement) before the Agency's own primary or self-Insurance shall be called upon to protect it as a named insured.

6.3. **Required Provisions** - The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

- 6.3.1. The Agency, its directors, officers, employees, and authorized volunteers are to be given insured status at least as broad as ISO endorsement CG 20 10 10 01 specifically naming all of the Agency parties required in this Agreement, or using language that states "as required by contract"). All Sub-consultants hired by Consultant must also have the same forms or coverage at least as broad; as respects: liability arising out of activities performed by or on behalf of the Consultant; products and completed operations of the Consultant; premises owned, occupied or used by the Consultant; and automobiles owned, leased, hired or borrowed by the Consultant. The coverage shall contain no special limitations on the scope of protection afforded to the Agency, its directors, officers, employees, or authorized volunteers.
- 6.3.2. Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Agency. Additionally, Consultant shall give Agency thirty (30) days written notice prior to any material change or cancellation of said coverage.
- 6.3.3. For any claims related to this project, the Consultant's insurance shall be primary insurance as respects the Agency, its directors, officers, employees, or authorized volunteers, using the ISO CG 20 01 04 13 or coverage at least as broad. Any insurance, self-insurance, or other coverage maintained by the Agency, its directors, officers, employees, or authorized volunteers shall be in excess of the insurance required under this Agreement, and shall not contribute to it.
- 6.3.4. Any failure to comply with the reporting or other provisions of the policies including breaches and warranties shall not affect coverage provided to the Agency, its directors, officers, employees, or authorized volunteers.
- 6.3.5. Such liability insurance shall indemnify the Consultant and his/her Sub-consultants against loss from liability imposed by law upon, or assumed under contract by, the Consultant or his/her Sub-consultants for damages on account of such bodily injury (including death), property damage, personal injury, completed operations, and products liability.
- 6.3.6. The general liability policy shall cover bodily injury and property damage liability, owned and non-owned equipment, blanket contractual liability, completed operations liability.
- 6.3.7. The automobile liability policy shall cover all owned, non-owned, and hired automobiles.
- 6.4. **Workers' Compensation and Employer's Liability Insurance** - The Consultant and all Sub-consultants shall cover or insure under the applicable laws relating to workers' compensation insurance, all of their employees employed directly by them or through Sub-consultants in carrying out the

work contemplated under this Agreement, all in accordance with the "Workers' Compensation and Insurance Act", Division IV of the Labor Code of the State of California and any Acts amendatory thereof, with statutory limits. The Consultant shall provide employer's liability insurance with limits of no less than \$1,000,000 each accident, \$1,000,000 disease policy limit, and \$1,000,000 disease each employee. **Waiver of Subrogation:** The insurer(s) named above agree to waive all rights of subrogation against the Agency, its elected or appointed officers, officials, agents, authorized volunteers and employees for losses paid under the terms of this policy which arise from work performed by the Named Insured for the Agency; but this provision applies regardless of whether or not the Agency has received a waiver of subrogation from the insurer.

- 6.5. **Deductibles and Self-Insured Retentions** - Any deductible or self-insured retention must be declared to and approved by the Agency. At the option of the Agency, the insurer shall either reduce or eliminate such deductibles or self-insured retentions. Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named or additional insureds, co-insurers, and/or insureds other than the First Named Insured.
- 6.6. **Acceptability of Insurers** - Insurance is to be placed with insurers having a current A.M. Best rating of no less than A:VII or equivalent or as otherwise approved by the Agency.
- 6.7. **Evidences of Insurance** - Prior to execution of the Agreement, the Consultant shall file with the Agency a certificate of insurance (Acord Form 25 or equivalent) signed by the insurer's representative evidencing the coverage required by this Agreement. Such evidence shall include (1) attached additional insured endorsements with primary & non-contributory wording, (2) Workers' Compensation waiver of subrogation. The Agency reserves the right to obtain complete, certified copies of all required insurance policies, at any time. Consultant shall maintain the Insurance required by this Agreement throughout the term of the Agreement and for a period of not less than 5 years following the termination of completion of this Agreement. Consultant further waives all rights of subrogation under this Agreement. Failure to continually satisfy the Insurance requirements is a material breach of contract.

The Consultant shall, upon demand of the Agency, deliver to the Agency such policy or policies of insurance and the receipts for payment of premiums thereon.

- 6.8. **Continuation of Coverage** - If any of the required coverages expire during the term of this Agreement, the Consultant shall deliver the renewal certificate(s) including the general liability additional insured endorsement to the Agency at least ten (10) days prior to the expiration date. Failure to

comply with any of the Insurance requirements shall constitute material breach of contract. The insurance requirements in this Agreement do not in any way represent or imply that such coverage is sufficient to adequately cover the Consultant's obligations under this Agreement. All Insurance or self-insurance coverage and limits applicable to a given loss or available to the named insured shall be available and applicable to the additional insured. The insurance obligations under this Agreement are independent of and in addition to the defense and indemnity obligations contained elsewhere in this Agreement and shall not in any way act to limit or restrict the defense or indemnity or additional insure obligations of the Consultant or the Consultant's insurance carrier, and shall be for (1) the full extent of the insurance or self-insurance overages and limits carried by or available to the Consultant, or (2) the minimum insurance coverage and amounts shown in this Agreement; whichever is greater. Agency reserves the right to add such other parties as may be required in the future to the indemnity and additional insured requirements of this Agreement.

- 6.9. **Sub-Consultants** - In the event that the Consultant employs other consultants ("Sub-consultants") as part of the services covered by this Agreement, it shall be the Consultant's responsibility to require and confirm that each Sub-consultant meets the minimum insurance requirements specified above.

7. LABOR AND MATERIALS

Consultant shall furnish, at its own expense, all labor, materials, equipment, tools, transportation and services necessary for the successful completion of the Services to be performed under this Agreement. Consultant shall give its full attention and supervision to the fulfillment of the provisions of this Agreement by its employees and Sub-consultants and shall be responsible for the timely performance of the Services required by this Agreement. Consultant's standard schedule of fees and charges is attached, which is incorporated herein as though fully set forth in the Fee Schedule attached hereto (Appendix B). All compensation for Consultant's Services under this Agreement shall be pursuant to the Fee Schedule.

8. TERM OF THE AGREEMENT

- 8.1. **Period of Services** – This Agreement between the Agency and Consultant begins upon its execution by both Parties and ends DATE, subject to the termination provisions herein.
- 8.2. **Termination** – The Agency may terminate this Agreement for any reason by giving Consultant at least thirty (30) days or earlier (depending on nature of services) prior written notice of such termination. Such termination shall not relieve the Agency from responsibility for payment for Services rendered by Consultant prior to the date of termination but shall relieve the Agency of

its obligations for the full payment of compensation due under the Agreement for the Services of Consultant after the notice of termination.

8.3. **Termination for Cause** – The Agency may terminate the Agreement for cause, effective immediately upon written notice of such termination to Consultant, based upon the occurrence of any of the following events:

8.3.1. Material breach of the Agreement by Consultant

8.3.2. Cessation of Consultant to be licensed, as required by law

8.3.3. Failure of Consultant to substantially comply with any applicable federal, state or local laws or regulations

8.3.4. The voluntary or involuntary filing of any petition under any law for the relief of debtors with respect to Consultant

8.3.5. Conviction of Consultant of any crime other than minor traffic offenses

8.4. **Compensation Upon Termination** - If the Services of Consultant are terminated, in whole or in part, Consultant shall be compensated as provided herein for all Services and approved Extra Services performed prior to the date of such termination.

9. CALIFORNIA LABOR CODE REQUIREMENTS

9.1. Consultant is aware of the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., which require the payment of prevailing wage rates and the performance of other requirements on certain “public works” and “maintenance” projects. If the services are being performed as part of an applicable “public works” or “maintenance” project, as defined by the Prevailing Wage Laws, and if the total compensation is \$1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws, if applicable. Consultant shall defend, indemnify and hold the Agency, its elected officials, officers, employees and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws. It shall be mandatory upon the Consultant and all sub-consultants to comply with all California Labor Code provisions, which include but are not limited to prevailing wages, employment of apprentices, hours of labor and debarment of contractors and subcontractors.

9.2. **Effective March 1, 2015**, if the services are being performed as part of an applicable “public works” or “maintenance” project, in addition to the foregoing, then pursuant to Labor Code sections 1725.5 and 1771.1, the Consultant and all sub-consultants must be registered with the Department of Industrial Relations (“DIR”). Consultant shall maintain registration for the

duration of the project and require the same of any sub-consultants. This project may also be subject to compliance monitoring and enforcement by the DIR. It shall be Consultant's sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

10. INTERESTS OF CONSULTANT

- 10.1. Consultant represents and warrants that it presently has no interests, and covenants that it will not acquire any interests, direct or indirect, financial or otherwise, that would conflict with the performance of the Services to be provided by Consultant under the Agreement. Consultant further covenants that, in the performance of the Agreement, it will not employ any Sub-consultant or employee with any such interest. Consultant certifies that no one who has or will have any financial interest under this Agreement or within Consultant is a director, officer or employee of the Agency.
- 10.2. Although Consultant is retained as an independent contractor, Consultant's employees or agents may still be required under the California Political Reform Act and the Agency Conflict of Interest Code to file annual financial disclosure statements. Consultant agrees that its employees and/or agents will file with the Agency in a timely manner those financial disclosure statements that the Agency determines Consultant is required to file pursuant to the Political Reform Act. Failure to file such financial disclosure statements by Consultant and any of its employees or agents is grounds for termination of this Agreement.

11. COMPLETED WORK AND WORK PRODUCT

In the event of termination or completion of the Services under the Agreement, Consultant shall, at the Agency's request, promptly surrender to the Agency all completed work and work in progress and all materials, records and notes developed, procured, or produced pursuant to the Agreement. Consultant may retain copies of such work product as a part of its record of professional activity.

12. CONFIDENTIALITY AND RESTRICTIONS ON DISCLOSURE

- 12.1. **Confidential Nature of Materials** - The Consultant understands that all documents, records, reports, data, or other materials (collectively "Materials") provided by the Agency to the Consultant pursuant to the Agreement, including but not limited to draft reports, final report(s) and all data, information, documents, graphic displays and other items that are not proprietary to the Consultant and that are utilized or produced by the Consultant pursuant to the Agreement are to be considered confidential for all purposes.

12.2. **No Disclosure of Confidential Materials** - The Consultant shall be responsible for protecting the confidentiality and maintaining the security of the Agency documents and records in its possession. All Materials shall be deemed confidential and shall remain the property of the Agency. The Consultant understands the sensitive nature of the above and agrees that neither its officers, partners, employees, agents or Sub-consultants will release, disseminate, or otherwise publish said reports or other such data, information, documents, graphic displays, nor other materials except as provided herein or as authorized, in writing, by the Agency. The Consultant agrees not to make use of such Materials for any purpose not related to the performance of the Services under the Agreement. The Consultant shall not make written or oral disclosures thereof, other than as necessary for its performance of the Services hereunder, without the prior written approval of the Agency. Disclosure of confidential Materials shall not be made to any individual, agency, or organization except as provided for in the Agreement or as may be required by law, or by a court of competent jurisdiction.

12.3. **Protections to Ensure Control over Materials** - All confidential Materials saved or stored by the Consultant in an electronic form shall be protected by adequate security measures to ensure that such confidential Materials are safe from theft, loss, destruction, erasure, alteration, and any unauthorized viewing, duplication, or use. Such security measures shall include, but not be limited to, the use of current virus protection software, firewalls, data backup, passwords, and internet controls.

The provisions of this Section survive the termination or completion of the Agreement.

13. OWNERSHIP OF DOCUMENTS AND DISPLAYS

All original written or recorded data, documents, graphic displays, reports or other materials which contain information relating to the Consultant's performance hereunder and which are originated and prepared for the Agency pursuant to the Agreement shall be "work for hire" and shall be the property of the Agency. The Consultant hereby assigns all of its right, title and interest therein to the Agency, including but not limited to any copyright interest. In addition, the Agency reserves the right to use, duplicate and disclose in whole, or in part, in any manner and for any purpose whatsoever all such data, documents, graphic displays, reports or other materials delivered to the Agency pursuant to this Agreement and to authorize others to do so.

To the extent that the Consultant utilizes any of its property (including, without limitation, any hardware or software of Consultant or any proprietary or confidential information of Consultant or any trade secrets of Consultant) in performing services hereunder, such property shall remain the property of Consultant, and the Agency shall acquire no right or interest in such property.

14. ASSIGNMENT PROHIBITED

The Consultant shall not assign, transfer, convey, or otherwise dispose of its rights, title or interest in or to this Agreement or any part thereof without the previous written consent of the Agency.

15. REPRESENTATIVES OF THE PARTIES AND SERVICE OF NOTICES

15.1. **Designated Representatives** – The Agency representative designated below shall be the principal representative of the Agency for purposes of the Services that are the subject of this Agreement. Consultant shall designate, in writing, Consultant's project engineer and/or project manager for the performance of the Services under this Agreement, which designation shall be subject to the Agency's reasonable approval.

The representatives of the Parties who are authorized to administer this Agreement and to whom formal notices, demands and communications shall be given are as follows:

ZONE 7 WATER AGENCY Representative:

Name
Title
Zone 7 Water Agency
100 N. Canyons Parkway
Livermore, CA 94551

Consultant:

Name
Title
Firm Name
Address
Firm Tax ID

15.2. **Notices** - Formal notices, demands and communications to be given hereunder by either Party shall be made in writing and may be effected by personal delivery or fax or by registered or certified mail, postage prepaid, return receipt requested to the address set out below and shall be deemed communicated as of the date of mailing. If the name or address of the person to whom notices, demands or communications shall be given changes, written notice of such change shall be given, in accordance with this section within five (5) working days.

16. MISCELLANEOUS PROVISIONS

- 16.1. Integration – This Agreement represents the complete Agreement of the parties and supersedes any other Agreements between the parties, whether written or oral.
- 16.2. No Waiver – No waiver by either parties of any term or condition of this Agreement shall be a continuing waiver thereof.
- 16.3. Modification – This Agreement only may be amended in writing, signed by all parties.
- 16.4. Attorneys' Fees – In any proceeding to enforce this Agreement, the prevailing party shall be entitled to attorneys' fees and costs in any amount determined by the court.
- 16.5. Choice of Laws/Venue – This Agreement shall in all respects be governed by the laws of the State of California applicable to Agreement executed and to be wholly performed with the State. Any action regarding this Agreement shall be brought in Alameda County Superior Court.
- 16.6. Counterparts – This Agreement may be executed in separate counterparts that, together, shall constitute and be one and the same instrument.
- 16.7. No Third Party Beneficiaries – This Agreement is for the sole benefit of the parties hereto and their permitted assigns (if any), and nothing herein expressed or implied shall give or be construed to give to any person, other than the parties hereto and such assigns any legal or equitable rights hereunder.
- 16.8. No Presumption Regarding Drafter – The parties to this Agreement acknowledge that its terms and provisions have been negotiated and discussed among them and that it reflects their mutual agreement regarding its subject matter. Therefore, neither party shall be deemed to be the drafter of this Agreement nor shall there be no presumption for or against the drafter in its interpretation or enforcement.

IN WITNESS WHEREOF, the Parties have executed this Agreement at the place and as of the date first written above.

ALAMEDA COUNTY FLOOD CONTROL and WATER CONSERVATION DISTRICT, Zone 7, commonly known as ZONE 7 WATER AGENCY ("Agency")

Consultant

Valerie L. Pryor
General Manager

Date

Signature

Date

Print Name & Title

Address

Telephone

TIN or SS Number

APPROVED AS TO FORM: – (check with GM or Assistant General Manager if needed to be reviewed by legal. If not, delete this legal section)

Downey Brand LLP

By:

Rebecca Smith, General Counsel

Date:

ATTACHMENT D

**APPENDIX D
INSURANCE**

This is an appendix attached to, and made a part of, the Services Agreement dated _____ (“Agreement”) between THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7 commonly known as ZONE 7 WATER AGENCY (“District”) and _____ (“Vendor”), for the provision of services agreement (“Services”).

Minimum Insurance Requirements: Design Professional shall procure and maintain for the duration of the contract insurance against claims for injuries or death to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Design Professional, his agents, representatives, employees or subcontractors.

Coverage – Coverage shall be at least as broad as the following:

1. **Commercial General Liability (CGL)** – Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury with limit of at least two million dollars (\$2,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater for. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to the District) or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability** – (If necessary) Insurance Services Office (ISO) Business Auto Coverage (Form CA 0001), covering Symbol 1 (any auto) or if Design Professional has no owned autos, Symbol 8 (hired) and 9 (non-owned) with limit of one million dollars (\$1,000,000) for bodily injury and property damage each accident.
3. **Workers' Compensation Insurance** – as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease. Waiver of Subrogation: The insurer(s) named above agree to waive all rights of subrogation against the District, its directors, officers, employees, and authorized volunteers for losses paid under the terms of this policy which arise from work performed by the Named Insured for the Agency; but this provision applies regardless of whether or not the District has received a waiver of subrogation from the insurer.
4. **Professional Liability** – (also known as Errors & Omission) Insurance appropriate to the Design Professional profession, with limits no less than \$1,000,000 per occurrence or claim, and \$2,000,000 policy aggregate.

If Claims Made Policies:

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Design

Professional must purchase “extended reporting” coverage for a minimum of five (5) years after completion of contract work.

If the Design Professional maintains broader coverage and/or higher limits than the minimums shown above, the District requires and shall be entitled to the broader coverage and/or higher limits maintained by the Design Professional. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the District.

Other Required Provisions – The Commercial General Liability policy must contain, or be endorsed to contain, the following provisions:

1. **Additional Insured Status:** Zone 7 Water Agency, its directors, officers, employees, and authorized volunteers are to be given insured status insurance (at least as broad as ISO Form CG 20 10 10 01 with respect to liability arising out of work or operations performed by or on behalf of the Design Professional including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Design Professional’s insurance.
2. **Primary Coverage:** For any claims related to this project, the Design Professional’s insurance coverage shall be primary at least as broad as ISO CG 20 01 04 13 as respects to the District, its directors, officers, employees, and authorized volunteers. Any insurance or self-insurance maintained by the District, its directors, officers, employees, and authorized volunteers shall be excess of the Design Professional’s insurance and shall not contribute with it.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the District.

Self-Insured Retentions – Self-insured retentions must be declared to and approved by the District. The District may require the Design Professional to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or District.

Acceptability of Insurers – Insurance is to be placed with insurers having a current A.M. Best rating of no less than A: VII or as otherwise approved by District.

Verification of Coverage – Design Professional shall furnish the District with certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the District before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Design Professional’s obligation to provide them. The District reserves the right to require complete, certified copies of all required insurance policies, including policy Declaration and Endorsements pages listing all policy endorsements.

Subcontractors – Design Professional shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Design Professional shall ensure that District is an additional insured on insurance required from subcontractors.

APPENDIX C – INSURANCE

This is an appendix attached to, and made a part of, the Services Agreement dated _____ (“Agreement”) between THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7 commonly known as ZONE 7 WATER AGENCY (“District”) and _____ (“Vendor”), for the provision of services agreement (“Services”).

Minimum Insurance Requirements: Design Professional shall procure and maintain for the duration of the contract insurance against claims for injuries or death to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Design Professional, his agents, representatives, employees or sub-contractors.

Coverage - Coverage shall be at least as broad as the following:

1. **Commercial General Liability (CGL)** - Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury with limit of at least two million dollars (\$2,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to the District) or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability** - Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01), covering Symbol 1 (any auto) or if Design Professional has no owned autos, Symbol 8 (hired) and 9 (non-owned) with limit of one million dollars (\$1,000,000) for bodily injury and property damage each accident.
3. **Workers' Compensation Insurance** - as required by the State of California, with Statutory Limits, and Employer’s Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease. Waiver of Subrogation: The insurer(s) named above agree to waive all rights of subrogation against the District, its elected or appointed officers, officials, agents, authorized volunteers and employees for losses paid under the terms of this policy which arise from work performed by the Named Insured for the Agency; but this provision applies regardless of whether or not the District has received a waiver of subrogation from the insurer.
4. **Professional Liability** - (Also known as Errors & Omission – Insurance appropriate to the Design Professional profession, with limits no less than \$1,000,000 per occurrence or claim, and \$2,000,000 policy aggregate.

If Claims Made Policies:

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.

2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Design Professional must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

5. Aviation Liability Insurance - on an "occurrence" basis, including products and completed operations, property damage, bodily injury with limits no less than \$1,000,000 per occurrence, and \$2,000,000 in the aggregate or the full per occurrence limits of the policies available, whichever is greater. This coverage may also be provided by endorsement to a **Commercial General Liability** policy. In that event then: **Commercial General Liability (CGL)** - Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including, property damage, bodily injury, personal and advertising injury with limit of at least two million dollars (\$2,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to Member Water Agency) or the general aggregate limit shall be twice the required occurrence limit.

If the Design Professional maintains broader coverage and/or higher limits than the minimums shown above, the District requires and shall be entitled to the broader coverage and/or higher limits maintained by the Design Professional. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the District.

Other Required Provisions - The general liability policy must contain, or be endorsed to contain, the following provisions:

1. **Additional Insured Status:** Zone 7 Water Agency, its directors, officers, employees, and authorized volunteers are to be given insured status (at least as broad as ISO Form CG 20 10 10 01), with respect to liability arising out of work or operations performed by or on behalf of the Design Professional including materials, parts, or equipment furnished in connection with such work or operations.
2. **Primary Coverage:** For any claims related to this project, the Design Professional's insurance coverage shall be primary at least as broad as ISO CG 20 01 04 13 as respects to the Zone 7 Water Agency, its directors, officers, employees and authorized volunteers. Any insurance or self-insurance maintained by the Member Water Agency its directors, officers, employees and authorized volunteers shall be excess of the Design Professional's insurance and shall not contribute with it.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the District.

Self-Insured Retentions - Self-insured retentions must be declared to and approved by the District. The District may require the Design Professional to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the

retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or the District.

Acceptability of Insurers - Insurance is to be placed with insurers having a current A.M. Best rating of no less than A: VII or as otherwise approved by the District.

Verification of Coverage – Design Professional shall furnish the District with certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the District before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Design Professional 's obligation to provide them. The District reserves the right to require complete, certified copies of all required insurance policies, including policy Declaration pages and Endorsement pages.

Sub-contractors - Design Professional shall require and verify that all sub-contractor maintain insurance meeting all the requirements stated herein, and Design Professional shall ensure that Zone 7 Water Agency, its directors, officers, employees, and authorized volunteers are an additional insured are an additional insured on Commercial General Liability Coverage.

**Attachment F
Exceptions or Deviations**

List below exceptions and/or deviations, if any, to the RFP and its exhibits and submit with your proposal.

The District is under no obligation to accept any exceptions and/or deviations and may be used in the evaluation of proposals.

Item No.	Reference To:		Description
	Page No.	Paragraph No.	

_____ Bidder Name	_____ Bidder Signature	_____ Date
-----------------------------	----------------------------------	----------------------

SECTION 1

1 INTRODUCTION

This manual describes the application of Computer Aided Design (CAD) standards and procedures for **ZONE 7 Water Agency**.

The quality and consistency of drafting on drawings and exhibits is important to the overall satisfaction with the project. The purpose of this manual is to establish CAD drafting standards and procedures that will help maintain uniformity throughout the set of drawings. There shall be no deviation from this set of standards without permission of the ZONE 7 PROJECT CAD LEAD. Any deviations from the set standards may cause production deficiencies and may cause delays in meeting project deadlines.

This manual is intended to provide **ZONE 7** CAD staff and ZONE 7 CONSULTANTS with the necessary information required to provide a consistent and thorough product to ZONE 7.

This manual assumes CAD fluency by the user. This manual is not intended to substitute for specific training in the use of CAD or CAD related software packages.

ZONE 7 will NOT allow deviations from the standard requirement specified and/or referenced in this manual.

2 DRAWING ORGANIZATION

PURPOSE

This section details the strategies for the organization of CAD files to support the various stages and multi-discipline projects that we produce. The procedures described here are used extensively in the design industry to gain the greatest productivity from CAD users.

2.1 File Types

To minimize repetitious drafting, information shall be organized into two file types, "Model Files" and "Sheet Files".

2.1.1 Model (Base) Files

Project model files contain project specific geometry currently being designed such as structures, piping, equipment and sections. A "Model File" contains all the line work for a specific discipline on the project (see 2.4 Separation of Information). The "Model Files" created will be combined into one or more "Sheet Files" to obtain a project deliverable. All elements of the "Model File" are drawn at "real world" size (1:1) and at "real world" coordinates, based on the site drawing provided for the project. This method assures that all "Model Files" are referenced in at 0,0,0.

"Model Files" shall not contain borders, leaders, dimension or annotations. Plan and profiles created with Autodesk Civil 3D or another Advanced CAD package may keep all data required to maintain the intelligence of the file in the "Model Files".

2.1.2 Sheet (Layout) Files

A "Sheet File" represents one plotted drawing. Multiple layout tabs will **NOT** be allowed. "Sheet Files" are plotted at full size (1:1) and the origin of each sheet is 0,0. Sheet files contain drawing specific information such as borders, north arrows, graphic scales, dimensions and annotations as well as the "Model Files" needed to create the plotted sheet. Xrefs, annotations and dimensions shall be placed in the model space of the "Sheet File". North arrows, graphic scales, sheet titles and sheet notes can be placed in paperspace of the "Sheet File". A "Sheet File" shall not be reference to another "Sheet File" to create a final product.

2.1.3 Project Border Files

A "Project Border File" will be established at the beginning of each project.

2.2 Reference Files

Model Files and Project borders are reference files (XREF). Reference files are the single most powerful capability of CAD and therefore it is important to understand what they are and how they are to be used.

AutoCAD (XREF) function allows graphic information in one file to be reference into other files. The value in referencing these files is that information will only need to be added once and edited in one place. The information can be distributed to multiple

SECTION 2

drawings, and as the base information changes, each of the associated drawings will be updated automatically. (Fig 2-2)

On a multi-discipline project, this allows disciplines to work on their respective drawings without delaying others. As their work is completed the other disciplines files will automatically update with the changes. The benefit of this is a consistent and organized design that minimizes on redundancy that impacts a projects schedule.

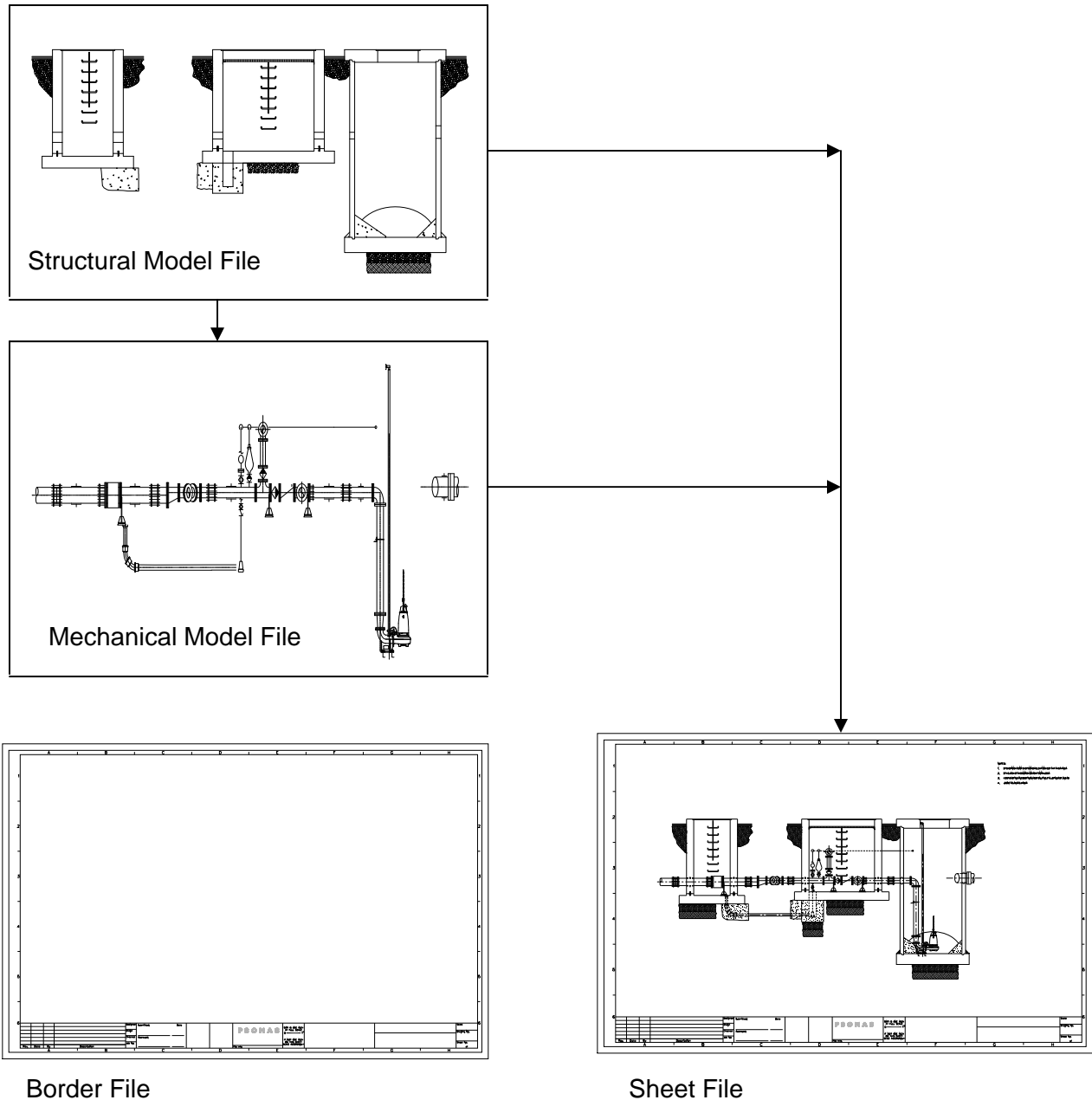


Fig 2-2

2.3 Reference File Attachments

AutoCAD has two options for attaching reference files, “attach” and “overlay”. ALL reference files are to be loaded using the “overlay” method. This will avoid circular xrefs and problems caused by nested xrefs. All xrefs will be inserted on the G-ANNO-XREF layer.

2.4 Separation of information

Each “Model File” shall contain information associated with one discipline (i.e. Civil, Structural, Mechanical, etc.). On a given project, there shall be one “Model File” per discipline per structure. It is important to note that this separation of information is to be maintained even if the same person is working on more than one discipline. For example, if a mechanical CAD designer is working on both the mechanical and structural portions of a structure, he/she must create a “Model File” for the mechanical information and a “Model File” for the structural information. Both files are referenced, as necessary, to create “Sheet Files”, but the information is never combined into one “Model File”.

2.5 Scales, Units and Coordinates

“Model Files” are always drawn 1:1. Civil Plans are to use decimal units and building plans are to use architectural units (yard piping, although plotted at a civil scale, are to be created using architectural units). Civil “Model Files” are created so that the information contained in the file is in its proper geographical position in the design plane. This position is defined by X and Y coordinates or Northing and Easting. Schematic drawings such as Process & Instrumentation Drawings (P&ID’s) shall be developed using a grid. The grid is a pattern of dots that extend over the drawing area. Grid spacing of .10” and a snap of 0.05” is preferred.

2.6 Rotation

Views may be rotated to create a more desirable display without affecting the actual coordinates of the design data. “Model File” design data shall not be rotated from their real world coordinates. View rotation does not affect the way a design file appears when referenced to another file.

When referencing a file into a space that has a rotated view, remember to set the UCS to world.

2.7 Linetypes

All lines shall be drawn “bylayer”, except for single line piping. All typical piping shall be placed on the same layer (color “bylayer”) but will utilize the linetypes provided.

SECTION 3

3 FILE NAMING CONVENTION

PURPOSE

This section details the strategies for the naming of “Model Files” and “Sheet Files” to support multi-discipline projects. The naming convention allows for easy identification on the contents of a CAD file without the need to view it. It also provides a convenient and clear structure for organizing files. The procedures described here are used extensively in the design industry to gain the greatest productivity from CAD users.

3.1 Model, Reference and Image Files

Names for “Model Files” are derived from the discipline, the facility and the type of information contained in the files. It is preferred that 4 characters be used for all groups but due to the number of facilities in larger treatment plants and the need to be descriptive, a modified NCS guideline will be used for all projects. All “Model File” names shall be capitalized.

A-BBBB-CCCC-DDDD-EEEE.dwg

- A - Discipline Code
- B - Major Group (8 characters max)
- C - Minor Group (8 characters max)
- D – Sub Group
- E – Status Code (optional)

Discipline Code:

- | | | | |
|----------|-----------------|----------|----------------------|
| A | Architectural | L | Landscape |
| C | Civil | M | Mechanical (Process) |
| E | Electrical | P | Plumbing |
| G | General | S | Structural |
| H | HVAC | | |
| I | Instrumentation | | |

Major Group

The major group field refers to the facility being designed. For each facility, the naming shall be consistent between disciplines. All facility names shall be finalized before detailed design begins. A maximum of 8 characters can be used to describe the facility being designed.

Examples of Major Group:

PRETREAT	Pretreatment	ACTIFLO	Actiflo
DRYBED	Drying Beds	FILTERS	Filters
LAB	Laboratory	ADMIN	Administration
SITE	Sitework	GRADPAVE	Grading & Paving

SECTION 3

Minor Group

The minor group field will be used to identify the different models belonging to the same facility, i.e. operating floor plan and foundation plan. The minor group is an option and does not need to be used. A maximum of 8 characters can be used to describe the facility being designed.

Examples of Minor Group:

ROOF	Roof
FNDN	Foundation
FLOR	Floor

Sub Group

The sub group field will be used to identify the different types of models belonging to the same facility, i.e. plan and sections. The minor group is an option and does not need to be used. Names should be reduced to 4 characters

Examples of Sub Group:

PLAN	Plans
SECT	Sections

Status

The status field is a single character designator the differentiates the type of file.

DEMO	Demolition
EXST	Existing
FUTR	Future

3.2 Sheet Files

The naming convention for “Sheet Files” is determined on a project basis. Two methods are available to use and are described below.

Method 1 is preferred on projects that will have multi-discipline input. This method is required for large treatment facilities.

Method 2 is for single discipline project, such as pipelines, which have plan and profiles in sequential order.

Method 1

Names for “Sheet Files” are derived from the discipline, building code, drawing type and sequence number.

ABCDD.dwg

A – Discipline Code
B – Building Code
C – Drawing Type
D - Sequence No. for 01-99

SECTION 3

Discipline Code:

A	Architectural	L	Landscape
C	Civil	M	Mechanical (Process)
E	Electrical	P	Plumbing
G	General	S	Structural
H	HVAC		
I	Instrumentation		

Building Code

Please note that the building code must be identified before “Sheet Files” can be created.

Drawing Type

0	Discipline Specific General
1	Plans, Enlarged Plans – Horizontal Views
2	Elevations – Vertical Views
3	Sections
4	User Defined
5	Details
6	Electrical One-Lines
7	Electrical Schematics
8	User Defined
9	User Defined
-	Not associated with a facility

Sequence No.

Sequential numbering from 01 – 99

Examples:

G-001	General, (not associated with a facility) General, Sheet 2
SM101	Structural, Membrane Building, Plan, Sheet 1

Method 2

The names for the “Sheet Files” are constructed from the discipline and the sequence number. (See Method 1 for discipline codes)

A-BB.dwg

A – Discipline Code

B – Sequential numbering from 01 – 99

SECTION 4

4 LAYERING GUIDELINES

PURPOSE

This section details a modified AIA CAD layer guideline. The guideline incorporates five components – discipline designator, major group, minor group, minor group and color code.

A-BBBB-CCCC-DDDD-EEE

- A - Discipline Designator
- B - Major Group
- C - Minor Group (optional)
- D – Minor Group (optional)
- E – Color Code

4.1 Discipline Designator:

A	Architectural	L	Landscape
C	Civil	M	Mechanical
E	Electrical	P	Plumbing
G	General	S	Structural

4.2 Major Group

The major group designation identifies the building system. Although major groups are logically grouped with specific discipline codes, it is possible to combine major groups with any of the discipline designators.

4.3 Minor Group (optional)

This group is used for further differentiation of major groups. The minor group can be defines by the user, which allows additional layers to be added to accommodate special project requirements. This should only be done if a defined layer does not apply to a project.

4.4 Minor Group (optional)

To ensure that all linetypes are drawn bylayer, this group will be used to identify the linetype used. (Continuous linetype is considered the default linetype).

4.5 Color Code

To properly show depth on drawings, one layer name may be needed to produce different plotted lineweights. To ensure that all entities are drawn bylayer the color number will append all layers. The code will be 3 digits (i.e. color red will be 001). The number will correspond with the color being used.

SECTION 4

4.6 Common Layers

This is not intended to represent all the layers that will be used on a project. The layers shown are common examples and should be used as a guideline when creating layers for your project. Some CAD programs will automatically assign layer names for object to be drawn on; it is not the intent of this section to create more work for the user. The layers provided by the CAD program will not be modified, but additional layers that the user creates shall follow this guideline.

* Represents discipline code **** Represents any major group

4.6.1 Annotation Layers

Layer Name	Color	Linetype	Description
*-ANNO-TEXT			Text
*-ANNO-WIPE	255		Wipeouts
*-ANNO-REDL			Redline
*-ANNO-SYMB			Symbols
*-ANNO-SEAL			Engineers seal
*-ANNO-DIMS			Dimensions
*-ANNO-TTLB			Border and Title Block
*-ANNO-NPLT			Construction lines, non-plotting info
*-ANNO-REVS			Revisions
*-ANNO-XREF	6		Referenced model files

4.6.2 Common Layers

Layer Name	Color	Linetype	Description
*-LNWK			Miscellaneous linework

4.6.3 Common Modifiers

Layer Name	Color	Linetype	Description
*_****-PATT			Cross-hatching, poche
*_****-IDEN			Identification tags
*_****-ELEV			Elevation (vertical surfaces)
*_****-DASH			Dashed/hidden linework
*_****-MATC			Match lines
*_****-SPCL			Special lines
*_****-CNTR			Center lines
*_****-OTLN			Outlines

SECTION 4

4.7 Architectural

4.7.1 Drawing Type: Ceiling plan

Layer Name	Color	Linetype	Description
A-CLNG			Ceiling information
A-CLNG-GRID			Ceiling grid

4.7.2 Drawing Type: Elevation

Layer Name	Color	Linetype	Description
A-ELEV			Interior & exterior elevations

4.7.3 Drawing Type: Floor plan

Layer Name	Color	Linetype	Description
A-FLOR-AREA			Area calculation boundary lines
A-FLOR-COLS			Columns
A-FLOR-DOOR			Doors
A-FLOR-DOORJAMB			Door jamb
A-FLOR-DOOROTLN			Door outlines
A-FLOR-EQPM			Equipment
A-FLOR-EQPMIDEN			Equipment identification numbers
A-FLOR			Floor plan information
A-FLOR-IDEN			Room numbers, names, etc.
A-FLOR-OTLN			Floor or building outline
A-FLOR-FURN			Furniture
A-FLOR-GLAZ			Windows, glazed partitions
A-FLOR-GRID			Planning grid or column grid
A-FLOR-PMFN			Materials and finish plan
A-FLOR-STRS			Stairs
A-FLOR-WALL			Exterior/Interior walls
A-FLOR-WALLCNTR			Wall centerlines

4.7.4 Drawing Type: Roof plan

Layer Name	Color	Linetype	Description
A-ROOF			Roof information
A-ROOF-OTLN			Roof outline

4.8 Civil**4.8.1 Drawing Type: Topo (Grading)**

Layer Name	Color	Linetype	Description
C-TOPO-ALGN			Horizontal Alignment
C-TOPO-MAJR			Proposed major contour lines
C-TOPO-MNOR			Proposed minor contour lines
C-TOPO-TEXT			Contour elevations
C-TOPO-SPOT			Proposed spot elevations
C-TOPO-SURV			Benchmarks, survey control lines
C-TOPO-BORW			Borrow/spoil area

4.8.2 Drawing Type: Site improvements

Layer Name	Color	Linetype	Description
C-SITE-AREA			Area code boundary (process areas)
C-SITE-BLDG			Bldg., primary structures
C-SITE-FNCE			Fencing
C-SITE-MNHL			Manholes
C-SITE-PAVE			Edge of pavement
C-SITE-PKNG			Parking lots
C-SITE-PKNG-DRAN			Parking lot drainage slope indicators
C-SITE-PKNG-ISLD			Parking islands
C-SITE-PKNG-STRP			Parking lot striping, handicapped
C-SITE-PROP			Property lines, survey benchmarks
C-SITE-PROP-ESMT			Easements, right-of-ways, setbacks
C-SITE-RAIL			Railroad outlines, centerlines
C-SITE-ROAD			Roadway
C-SITE-ROAD-CNTR			Roadway Center lines
C-SITE-CURB			Curbs
C-SITE-STAG			Construction staging
C-SITE-STRM			Storm drainage, catch basins, inlets
C-SITE-SWAL			Swale
C-SITE-TUNL			Tunnel outlines
C-SITE-TUNL-CNTR			Tunnel centerlines
C-SITE-VEGE			Vegetation
C-SITE-WALK			Walkway
C-SITE-WATR-FIRE			Fire water
C-SITE-WRKA			Work area, project boundary

4.9 Electrical**4.9.1 Drawing Type: Site improvements**

Layer Name	Color	Linetype	Description
E-SITE-ALRM			Alarm systems
E-SITE-AUXL			Auxiliary systems
E-SITE-CCTV			Closed circuit TV
E-SITE-COMMFOC			Fiber optic cable, telecommunications
E-SITE-COMMVALT			Fiber optic vaults, telecommunications
E-SITE-DUCT			Electrical conduit, duct bank
E-SITE-VALT			Electrical vaults
E-SITE-GRND			Ground system
E-SITE-HDHL			Handhole
E-SITE-LITE			Lighting
E-SITE-LITEEQPM			Major lighting equipment
E-SITE-LITEPNLS			Lighting panels
E-SITE-LITEPOLE			Lighting pole
E-SITE-MNHL			Electrical/communications manhole
E-SITE-SERT			Security
E-SITE-SOUN			Sound/PA Systems
E-SITE-POWRPOLE			Power pole
E-SITE-POWREQPM			Major power equipment

4.9.2 Drawing Type: Floor plan

Layer Name	Color	Linetype	Description
E-GRND			Ground system
E-LITE-CLNG			Ceiling mounted lights
E-LITE-EXIT			Exit signs
E-LITE-EXTR			Exterior lighting
E-LITE-EQPM			Miscellaneous lighting equipment
E-LITE-JBOX			Lighting junction box
E-LITE-FLOR			Floor mounted lighting
E-LITE-PANL			Lighting panel
E-LITE-SPCL			Special
E-LITE-SWCH			Light switches
E-LITE-WALL			Wall mounted lighting
E-POWR-CABL			Cable tray
E-POWR-DUCT			Electrical conduit, duct bank
E-POWR-EQPM			Miscellaneous Power equipment

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E-POWR-JBOX			Electrical junction box
E-POWR-PANL			Power Panel

4.10 Instrumentation**4.10.1 Process & Instrumentation Diagrams**

Layer Name	Color	Linetype	Description
I-PID-MAJR	8		Major Process Lines
I-PID-SECD	5		Secondary Process Lines
I-PID-MISC	2		Miscellaneous Process Lines
I-PID-ELEC	1	Cedashed	Electrical Connection Lines
I-PID-LNWK			Miscellaneous Line Work

4.10.2 Instrument Loop Diagrams (ILD)

Layer Name	Color	Linetype	Description
I-LOOP-LNWK			Major Process Lines

4.11 Landscape**4.11.1 Drawing Type: Site Improvements**

Layer Name	Color	Linetype	Description
L-DEMO			Demolition
L-IRRI			Irrigation
L-PLNT			Plant and landscape materials
L-WALK			Walks and steps
L-HYDR			Hydroseeding, seed, sod
L-TURF			Mulching outline
L-SEED			Seed, sod

4.12 Mechanical**4.12.1 Drawing Type: Piping and Equipment**

Layer Name	Color	Linetype	Description
M-CHEM-UNKN			Unknown chemical
M-****-EQPM			Equipment
M-****-PIPE			Pipe
M-****-PIPE-CNTL			Pipe centerline

**** indicates pipe contents. Code abbreviation shall be four (4) characters and shall be consistent with projects P&ID system codes.

4.12.2 Drawing Type: HVAC

Layer Name	Color	Linetype	Description
H-CONT-THER			Thermostats
H-CWTR			Cold water system
H-CWTR-EQPM			Cold water equipment
H-CWTR-PIPE			Cold water piping
H-DAMP			Dampners
H-SDFF			Supply diffusers
H-DUCT-SPLY			HVAC ductwork (supply)
H-RDFF			Return diffusers
H-DUCT-RTRN			HVAC ductwork (return)
H-HOTW			Hot water heating system
H-HOTW-EQPM			Hot water equipment
H-HOTW-PIPE			Hot water piping
H-REFG			Refrigeration systems
H-REFG-EQPM			Refrigeration Equipment
H-REFG-PIPE			Refrigeration Piping
H-PADS			HVAC equipment pads

4.12.3 Drawing Type: Mechanical systems

Layer Name	Color	Linetype	Description
M-GATE			Sluice Gate
M-MACT			Motorized actuator
M-MOTR			Motors
M-****-PANL			Mechanical control panels
M-****-PUMP			Pumps
M-****-SAMP			Sample
M-SUMP			Sump

4.12.4 Drawing Type: Plumbing

Layer Name	Color	Linetype	Description
P-DOMW			Domestic hot/cold water system
P-DOMW-EQPM			Domestic hot/cold water equipment
P-DOMW-CPIP			Domestic cold water pipe
P-DOMW-HPIP			Domestic hot water pipe
P-DRAN-FLOR			Floor drains
P-EQPM			Plumbing miscellaneous equipment
P-FIXT			Plumbing fixtures
P-NPWR			Non-potable water
P-SANR			Sanitary system
P-SANR-EQPM			Sanitary equipment
P-SANR-FIXT			Sanitary fixtures
P-SANR-FLDR			Sanitary floor drains
P-SANR-PIPE			Sanitary pipe
P-SANR-RISR			Sanitary risers
P-WASH			Emergency shower, eyewash

4.13 Structural**4.13.1 Drawing Type: Elevation**

Layer Name	Color	Linetype	Description
S-ELEV			Interior & exterior elevations

4.13.2 Drawing Type: Foundation plan

Layer Name	Color	Linetype	Description
S-STEL(CONC)-BEAM			Beams
S-STEL(CONC)-COLS			Primary & secondary columns
S-CONC			Concrete
S-CONC-CURB			Curb
S-CONC-ENCS			Concrete encasement
S-CONC-FNDN			Footings, grade beams, piles
S-GRAD			Elevated grading, floor grading
S-STEL(ALUM)-GRAT			Elevated grating, catwalks
S-GRID			Grid lines, column tags
S-STEL(ALUM)-HRAL			Handrails
S-JOIN			Construction joints, expansion joints
S-STEL(ALUM)-LADR			Ladders
S-METL			Miscellaneous metal
S-CONC-OPNG			Opening

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S-CONC-PADS			Support pads
S-PIPE			Piping within structural elements
S-PIPE-WFTG			Pipe wall fitting
S-POST			Posts
S-CONC-RAMP			Ramps
S-RBAR			Rebar
S-SLAB			Slab outline, control joints
S-SPPT			Miscellaneous fasteners, anchor bolts
S-STEL			Structural steel
S-STRS			Stair control joints, ladders
S-TRCH			Trench
S-VALT			Vaults
S-CONC-WALL			Concrete walls, CMU walls
S-WALL-RETG			Retaining wall
S-WEIR			Weir

SECTION 5

- Column centerlines with bubble callout.
- Miscellaneous information:
 - Gas mask cabinets
 - Dock bumpers
 - Splash blocks and downspouts
 - Ladders
 - Handrails
 - Monorail systems
- If project is an addition to an existing structure, show enough of existing structure to denote tie in between old and new.

Plans

- Preferred scale for plans is 1/4"=1'-0".
- All plans shall be displayed with north oriented to the top or left of the drawings. The preferred location of north arrows on all plans is the upper left corner of the drawing. Drawings with multiple plans will require a north arrow for each plan. All plans of a facility will be oriented the same across all disciplines.
- All enlarged plans shall have the same north orientation as the smaller scaled plans.
- Do not annotate or dimension information that is called out in the small scale plan.
- All plans of the same facility shall be plotted at the same scale.
- Number and give each room a designation. Provide finish floor elevation under designation if at different elevations.
- If equipment is outlined (bold) indicate what it is.
- Show all section cuts
- Roof plans shall indicate all openings in roof for power ventilators, skylights, hatches, drawings and expansion joints.

Sections

- Preferred minimum scale for sections shall be 3/8" = 1'-0"
- Cross sections and longitudinal sections shall show structural system, key elevations and materials. All mechanical sections shall indicate the elevation of all pipes in the view.

SECTION 5

- Show in background – all structural and architectural information. Be sure cut placement reflects view shown.
- Elevations to the nearest 100th shall be used instead of vertical dimensions. (Exception: a vertical dimension shall be used for slab/foundation thickness.)
- Sections shall be arranged with equal elevations in alignment.
- Sections are letters and shall be placed on the drawings from left to right. Do not use the letters “I” or “O”.

Structural Sections

- Reinforcement abbreviations:
Abbreviations shall be placed immediately after bar size and spacing. Bar size shall not contain a space. Example: #5@12”EWEF.
 - EF – Each Face
 - EW – Each Way
 - EWEF – Each Way Each Face
 - T&B – Top & Bottom
 - EWT&B – Each Way Top & BottomEW and EWEF shall be used for vertical reinforcing
T&B and EWT&B shall be used for horizontal reinforcing
- Callouts using “EWEF” or “EWT&B” requires only one leader pointing to the middle of the wall or slab. Callouts using “EF” or T&B shall point to steel being described.
- Reinforcing callouts shall be placed on the side nearest the bar that is being described. Avoid crossing to opposite face if possible.
- Special bar identification tags and abbreviations shall be placed immediately after the bar size. Example: #5DWLS@12”.
 - DWLS – Dowels
 - TIES – Horizontal reinforcing in vertical elements
 - STIRRUPS – Vertical reinforcing in horizontal elements.TIES & STIRRUPS set a pattern of multiple bars referenced by pointing at one of the bars in the pattern.
- The word LAP shall be included in all lap dimensions.
- The length of bar shall be called out after the bar spacing, e.g. #5@12”x1’-0”.
- The abbreviation “CTRD” shall be added following the spacing if reinforcing is to be centered in the wall or slab, e.g. #5@12”EW CTRD.

SECTION 5

- The use of bar bend diagrams should be limited to cases where actual shapes cannot be seen in section. When required, the diagram shall be placed at the end or below the callout.
- Concrete anchors shall have the depth of the embedment included at the end of the callout, e.g. 1" EXP ANCHORS @2'-0" (W/5" EMBED).
- If the word WATERSTOP (WS) is spelled out, it will be one word. BOND BREAKER will be two.

Details

- Do not repeat detail information. Mark as (TYP).
- Keep dimensions on one side and notes, in line, on the other.
- Details are numeric and shall be placed on the drawings from left to right. Do not use the number "0".
- Do not crowd details.

Dimensions

It is the responsibility of the CAD technician to ensure that all objects are drawn to scale so that the dimension are correct. If a change to an object is required, the object shall be modified. DO NOT just modify the dimension.

- Column grid bubbles shall have alpha characters in the horizontal and numerical in the vertical. Preferred method is to place the bubbles across to top and down the left side.
- Overall dimensions are out to out of masonry, where masonry occurs, or out to out of concrete for structural walls and foundation.
- Whenever possible, keep dimensions in a continuous string.
- Reference from a common fixed point, such as column lines, foundations etc. When masonry occurs around columns, do not dimension each column or pilaster. If it is typical, mark as (TYP).
- Place dimension lines so they will not run through equipment or other congested areas.
- Do not repeat dimensions.
- Dimension openings in interior masonry walls. Be sure masonry courses.
- Use nominal wall thickness.

SECTION 5

Screening and Wipeouts

Visual representation is the job of all CAD technicians, the project is being built on what we produce and it is our goal to provide clear, easy to follow drawings to the engineer and the client.

We all know that screening is used for existing objects and linework. To increase the look and feel of our drawings, screening will also be used when creating sheet files by referencing drawings from other disciplines. Example: when a mechanical sheet is being created it will require a structural and mechanical xref. The structural xref is supporting the mechanical xref; our sheet file will only contain annotations on the mechanical elements. Therefore the structural xref would be screened, to highlight the mechanical, but is still visible for the contractor. Another way of thinking about it is that by the time the mechanical is going to be put in; the structure will already be completed, so it actually exists.

Wipeouts and text masks are to be used to clean up drawings. These are mainly used when we have notes and callouts that have linework running through them. If we are putting a note or call out on the drawing, then the contractor must be able to read it. If the note or callout is over something important, move the note or callout.

Hatching

Hatching, when used correctly, will enhance the look of the drawings sets. Although over use of hatch can create larger and slower files that are distracting to the contractor. Common hatching used that will be presented on multiple discipline drawings shall be placed in the xrefs. This will decrease the amount of hatching in each sheet file and maintain a consistency between files. The hatch that is in the xref must be placed on the correct layer so that the disciplines using the xref can toggle it on and off as needed for the creation on their sheets.

- Concrete hatch shall only be used in existing concrete (screened) and concrete that is not part of a structure, i.e. concrete fill, concrete encasement.

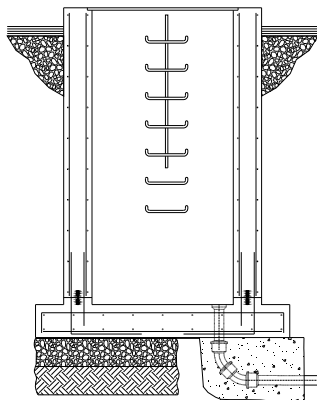


Fig 5-1

SECTION 5

Standard Drawing Requirements

This section establishes additional standards and procedures.

- Repetitious drafting should be avoided. Only the information associated with the work being performed should be detailed
- All objects will be drawn at 1=1 scale in model space of the “XREF”. These files will contain all the geometry and linework. Each discipline can have multiple “XREF” files per building, and/or per floor.
- There will be “**NO**” text, annotations or dimensions in the “XREF” file. “Xref” files will be referenced into the sheet files. All text, annotations and dimensions will be placed in the model space of the sheet file at the correct plotting scale.
- All referenced files will be “overlaid” into the sheet file at 0,0,0 and placed on layer G-ANNO-XREF. In general, data that will be shared between multiple disciplines will be contained in separate files. Xrefs are always referenced by other files, sheet files are never referenced by other files.
- **Drawings created by Civil 3D will contain information automatically generated by the software, this includes text and cross-sections. It is the responsibility of the CAD technician to ensure that these items are controllable by the other disciplines and DO NOT impact the way other drawing are viewed.**
- All discipline plans of the same area shall have the same plotting scale. However, if any area requires only minimal information, a smaller, more efficient plotting scale may be used.
- The north orientation of the general layout and all building plans will be straight up or to the left and this orientation will be used on similar plans of the other disciplines. The north arrow will be placed in the upper left hand of the drawing.
- In plan views, the viewport will extend .5” (in paperspace) beyond any matchline. Objects between the matchline and the edge of the viewport window will not be called out.
- All new elevations will be indicated to two decimal places except finish grade, which will be one decimal place and a +/-.
- All sanitary sewer (drain) waste lines and storm sewer profile/section information shall be based upon the invert elevations; all other pipeline information will be based upon centerline elevations.
- Floor drain elevations are to be shown on plans, or called out in a note on the drawing where floor drains are shown.

SECTION 5

- Plant Piping
 - Mechanical process piping 4” and smaller will be drawn as single line. All piping 5” and larger shall be double line.
 - All piping materials and connection joints shall be determined by the Engineer prior to drafting.
 - Where piping is shown in different elevations, the section should be cut to show all piping. However, if this is not possible, the piping of least importance shall be omitted to show important fittings.

- All wall pipes and wall sleeves shown on plans and sections will be drawn as if not in section.

- Operator positions, on valves 12” and larger, are to be shown in plans larger than 3/16” plotting scale and in section views. For special operators, or where conflicts may occur, operators may be shown on smaller valves.

- The current Edition of AISC will govern for structural steel callouts and weld symbols.

- Section cuts on plan sheets are to be looking up or to the left. Show horizontal dimension on sections only if they are not clearly apparent on the plan views.

-

5.2 Plotting Lineweights

The eight line weights defined below are considered sufficient and should not be expanded unless an appreciable improvement in drawing clarity or contrast can be realized.

AutoCAD Color	Plotted Width (In.)	AutoCAD Colors (Screening)	Plotted Width (In.)
1 (Red)	0.005	9	0.005
2 (Yellow)	0.010	10	0.010
3 (Green)	0.015	11	0.015
4 (Cyan)	0.020	12	0.020
5 (Blue)	0.025	13	0.025
6 (Magenta)	0.030	14	0.030
7 (White)	0.035	15	0.035
8 (Gray)	0.040	16	0.040

SECTION 5

The following are typical usage for the line widths shown:

- 1 (Red) Used for depicting dimension lines, dimension leader/witness lines, note leader lines, line terminators, phantom lines, hidden lines, center lines, long break lines, schedule grid lines, and other object lines seen at a distance.
- 2 (Yellow) Used for depicting minor object lines, text for notes, callouts, and schedule text.
- 3 (Green) Medium lines should be used for depicting minor object lines.
- 4 (Cyan) Used for major object lines, cut lines, section cutting plane lines, and titles.
- 5 (Blue) Used for Match lines.
- 8 (Gray) Used for Electrical One-Line Diagrams (BUS)

Note: *The use of AutoCAD Polylines with a variable width is discouraged.*

5.3 Plotting Scales

Table 0-1		
Drawing Type	Preferred Drawing Scale	
Site plans	1" = 10' 1" = 20' 1" = 40' 1" = 100'	
Floor plans	1/4" = 1' – 0"	
Plan and Profiles	Horizontal 1" = 50'	Vertical 1" = 5'
Sections	3/8" = 1' – 0"	
Details	1/4" = 1' – 0" 3/8" = 1' – 0" 1/2" = 1' – 0" 3/4" = 1' – 0" 1" = 1' – 0"	
Schematics	NTS	

All scales are subjective. The intent of this chart is to show the baseline standard. It is the CAD Professional's responsibility to ensure that the drawing is clear and complete, based on the Engineer's design.

SECTION 5

5.4 *Text Styles/Fonts*

Zone 7 uses Simplex for all drawing text.

- **All General text shall be:**
0.10" Plotted Height
- **All Subtitle text shall be:**
Underlined
0.15" Plotted Height
- **All Title text shall be**
Underlined
0.1875" Plotted Height

Text callouts are left justified. Periods will not be used after an abbreviation.