



RFP10-01

**Request for Proposals
for
On-Call
Professional Services**

Appraisal Services

Arborist

Cultural Studies

Dam Safety Engineering

Drafting

**Electrical/Instrumentation/SCADA
Systems Integration**

Environmental – Biological Studies

Environmental – CEQA/NEPA

General Engineering

**Geographic Information System
(GIS)**

Geotechnical

Hydroelectric Compliance

IT Infrastructure

Legal Services – Labor/HR

Legal Services – Water Rights

Painting Inspection

Registered Professional Forester

Regulatory Permitting

Surface Water Hydrology

Survey

**Water/Wastewater Laboratory
Analysis**

JULY 28, 2010

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ATTACHMENTS:

EXHIBIT A – ANTICIPATED SCOPE OF WORK FOR EACH
ON-CALL SERVICE CATEGORY

EXHIBIT B – PROFESSIONAL SERVICES AGREEMENT

I. INTRODUCTION

El Dorado Irrigation District (District), an irrigation special district organized and existing under the California Irrigation District Law (Water Code § 20500, et seq.), hereby gives notice that it is now accepting proposals for each of the following professional services to be performed on an on-call basis over the course of the next three (3) years from January 1, 2011 – December 31, 2013:

- Appraisal Services
- Arborist
- Cultural Studies
- Dam Safety Engineering
- Drafting
- Electrical/Instrumentation/SCADA Systems Integration
- Environmental – Biological Studies
- Environmental – CEQA/NEPA
- General Engineering
- Geographic Information System (GIS)
- Geotechnical
- Hydroelectric Compliance
- IT Infrastructure
- Legal Services – Labor/HR
- Legal Services – Water Rights
- Painting Inspection
- Registered Professional Forester
- Regulatory Permitting
- Surface Water Hydrology
- Survey
- Water/Wastewater Laboratory Analysis

II. PROPOSAL SUBMISSION

Sealed proposals will be received by the District at its front desk of the first floor lobby of the District's Customer Service Building located at 2890 Mosquito Road, Placerville, California 95667, until 3:00 p.m. on August 31, 2010. All proposal envelopes will be timed stamped to reflect their submittal date and time. Proposals received after the submission deadline will be returned unopened to proposer. The District will not accept proposals submitted by e-mail or facsimile transmission.

Proposer should label its proposal envelope: "Proposal for the District for [list service category] On-Call Professional Services – Attention: Ms. Lori Bazinet." The District may reject a proposal as non-responsive for failure to provide all information requested in this Request for Proposals (RFP).

A proposer may submit proposals for more than one service category, provided each such proposal is submitted in a separate sealed envelope labeled in the manner indicated above, containing all of the information requested herein.

III. BACKGROUND INFORMATION

The District is located in El Dorado County, on the western slope of the Sierra Nevada Mountains. Its contiguous service area covers approximately 220 square miles and 100,000 residents, ranging from El Dorado Hills in the west to Pollock Pines in the east, and from the South Fork American River in the north to the Cosumnes River in the south. The District also owns and operates Project 184, a FERC-licensed hydroelectric project including high mountain lakes in the vicinity of Lake Tahoe.

The District provides treated water, wastewater treatment and disposal, recycled water, recreation services and operates Project 184. It is a local public agency, governed by a five-member, elected Board of Directors. Additional information about the District is available at its website, www.eid.org.

IV. ANTICIPATED SCOPE OF WORK

The anticipated scope of work for each service category listed in Section I above is found in Exhibit A attached to this RFP. The successful proposal(s) will demonstrate sufficient staff resources, expertise, relevant experience, and lack of disabling professional conflicts to perform the anticipated scope of work for that service category, along with demonstrated commitments to cost-control and client service that meet the District's needs.

V. QUESTIONS/ADDENDA

Any questions about this RFP or any information contained herein must be submitted in writing (via U.S. mail or e-mail) to Ms. Lori Bazinet at the following address:

El Dorado Irrigation District
Attn: Ms. Lori Bazinet, Contract Management
2890 Mosquito Road
Placerville, CA 95667
E-mail: lbazinet@eid.org

To be considered, questions must be received by the District no later than 5:00 p.m. on August 18, 2010. The District may, if deemed necessary, respond to such questions by issuance of formal written addenda, interpreting or clarifying the requirements of this RFP. The District may also issue addenda to modify the RFP as deemed advisable by the District. All such addenda shall be part of this RFP and binding upon each proposer. The District may, upon inquiry, orally direct a firm's attention to specific provisions of the RFP which cover the subject of the inquiry. However, all supplemental information provided by the District during the RFP process shall not be binding unless communicated by formal written addenda. All addenda will be posted on the District's website. Each proposer is solely responsible for obtaining all addenda posted on the District's website.

VI. INFORMATION TO BE SUBMITTED IN PROPOSAL

A. CONTENT

Each proposal shall be **limited to 14 pages** (not including transmittal letter, table of contents, tabs, dividers, and resumes) and shall follow the outline below:

- **Section 1 – Scope of Work**
State in succinct terms your understanding of the anticipated scope of work in the RFP for the service category for which you are proposing. Identify additional tasks, if any, that you believe are essential or advisable to constitute a more complete scope of work.
- **Section 2 – Relevant Experience and Expertise**
Describe in narrative form the experience and expertise of your firm and/or project team members in providing the service sought by District. Identify representative clients. Compare and contrast their size, public or private-sector status, location, and operational activities to those of the District. Include a description of the project organization and project team experience.
- **Section 3 – Project Team**
Identify each individual you expect to work on the project team, including sub-consultants, if any. Provide resumes for each member of the team. Describe with particularity the specific areas of expertise of each team member, and the specific education, experience, or other information that substantiates that expertise. Note that project team members may not be substituted during the Contract term without the written approval of District.

- **Section 4 – Quality Assurance and Control; Conflicts**
Describe your approach to Quality Assurance and Control for your firm’s work product. Identify all current and reasonably foreseeable actual or potential professional conflicts that could hinder the provision of the requested services, and propose means of managing any such conflicts.
- **Section 5 – Client References**
Provide contact information for representatives of three former or current clients for whom your firm or project team members have performed similar services so that the District may interview these references.
- **Section 6 – Contract and Insurance Requirements**
All successful proposers will be required to execute a contract in the form shown in Exhibit B attached hereto and to meet the insurance requirements of Appendix C to that Exhibit. Please indicate your firm’s willingness and ability to comply with these requirements.

B. COST OF SERVICES

With the exception of the Water/Wastewater Laboratory Services, all proposals must include a complete and current table of hourly rates and charges for all timekeepers (including any subconsultants) that are reasonably anticipated to perform work under the proposed contract. The hourly rates are to remain constant over the entire 3-year contract period. No increases in the rates or charges shall be allowed.

For the Water/Wastewater Laboratory Services, use the rate tables attached to the scope of services (Exhibit A). The rate tables must be completed and submitted with the proposal for the Water/Wastewater Laboratory Services category.

Award of an on-call contract does not in-and-of-itself entitle the selected firm to any work of the District or payment from the District but instead provides the District with a list of contracted firms from which to solicit proposals if and when the District decides to use the on-call services in performance of a project. At that time, the District will solicit proposal(s) from on-call firm(s) to perform the project under the on-call contract and, upon selecting a proposal, will enter into a Statement of Work (in the form attached as Exhibit 1 to Appendix A of the Professional Services Agreement attached to this RFP as Exhibit B) for performance of the project. Each such project entered into under the on-call contract shall be performed on a time and materials basis, at the rates listed in the on-call contract and for the not-to-exceed price listed on the Statement of Work. No such individual project shall total more than \$100,000. Projects in excess of \$50,000 must be approved by the District’s Board of Directors prior to entering into a Statement of Work.

The hourly rates provided **shall include all overhead rates to cover costs and other compensation** of consultant's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, specialists, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by consultant whether at the site or in his principal or a branch office for general administration of the work and not specifically included in the list of personnel, consultant's principal and branch offices other than consultant's office at the site. Hourly rates shall also include any part of consultant's capital expenses, including necessary transportation, travel and subsistence expenses of consultant's employees incurred in discharge of duties connected with the Work. **The hourly rate shall also include minor expenses connected with the Work such as copies, computers, software, on-line legal research, office supplies, postage, faxes, long-distance telephone calls, telephone, and any other expense incurred to accomplish the work. Note that no separate charges for these items will be allowed. Note also that no administrative charges will be allowed, except a markup of five percent (5%) on sub-consultants' billings.**

Project-specific expenses outside of the normal expenses routinely incurred to perform the anticipated scope of work may be authorized by the District on a case-by-case basis at the time it requests proposals for an individual project depending upon the circumstances of the individual project, such as, for example, if the project is located in a remote area. Any such additional costs will not, however, be paid unless expressly listed in the project's scope of work executed by Consultant and District.

C. NON-DISCLOSURE AND DISCLOSURE OF PROPOSALS

Proposals will be held in confidence during the evaluation process until District staff issues Notice of Intent to Award the on-call contracts. Thereafter, all proposals will be treated as documents subject to disclosure under the California Public Records Act (Act).

If proposer believes any portion of its proposal contains confidential or proprietary information, exempt from public disclosure under the Act, proposer must submit that information with its proposal in a separate sealed envelope labeled "Confidential Information." Except as compelled by court process, the District will not release any such documentation claimed to be exempt that is submitted in said manner without prior written notice to the proposer.

VII. SELECTION CRITERIA

A. GENERAL

The proposals received shall be subject to an evaluation by the District as deemed appropriate for purposes of selection. The evaluation will be made according to the following criteria:

1. Responsiveness to RFP
2. Experience and expertise
3. Project team makeup and capabilities
4. Hourly rates, affordability and cost control

B. FINAL SELECTION

Proposals will be rated based on the merit of the entire proposal. District staff presently anticipates making contract award recommendations to the District's Board of Directors at its regularly scheduled meeting of October 12, 2010. Notice of Intent to Award the on-call professional service contracts will be issued at least ten (10) calendar days prior to the Board meeting.

District staff anticipates recommending award of multiple contracts for each service category listed in Section I above except as otherwise indicated in the attached Scope of Work for a particular service. In the event the District receives less than three proposals for one of the service categories listed above or staff finds that less than three proposals received for a service category rate high enough to be considered for award of a contract, the District may, in its discretion, reject all proposals received for that service category.

The District reserves the right to reject any or all proposals and to re-issue this RFP. The District may waive any minor informalities or irregularities in any proposal that are immaterial and inconsequential in nature. The District reserves the right to request additional written or oral information from proposers to obtain clarification of their proposals.

All proposals become the property of the District. All costs associated with development of the proposal shall be the sole responsibility of the proposing firm and shall not be charged in any manner to the District.

C. PROTEST PROCEDURE

Any protest concerning the rating of any proposal or award of any contract hereunder must be submitted in writing to the District's Senior Deputy General Counsel at 2890 Mosquito Road, Placerville, CA 95667 on or before 5:00 p.m. of the tenth (10th) calendar day following the District's posting of Notice of Intent to Award the on-call professional service contracts at the entry to the District's Customer Service Building at the aforementioned address and on the District's website at www.eid.org. The procedure and time limit set forth in this paragraph are mandatory and are proposer's sole and exclusive remedy in the event of a protest of the rating of its proposal or award of the on-call contract(s) and failure to pursue said remedy shall constitute a waiver of any right to further pursue said protest, including filing a Government Code claim or legal proceedings.

ATTACHMENTS:

EXHIBIT A – Anticipated Scope of Work for Each On-Call Service Category

EXHIBIT B – Professional Services Agreement

EXHIBIT A TO RFP

**ANTICIPATED SCOPE OF WORK
FOR EACH ON-CALL
SERVICE CATEGORY**

EXHIBIT A

(Appraisal Services)

Typical Appraisal Services work to be performed for the District may include, but is not limited to, the following:

- Provide professional services in performing complete independent appraisals, in accordance with the Uniform Standards of Professional Appraisal Practice (USPAP)
- Prepare appraisal reports of District lands and/or requisite easements to be acquired by the District
- Review completed appraisal reports with District staff
- Upon District's request, the contract appraiser shall, in any judicial proceedings, testify as to the value of any and all property included in appraisal report as of the valuation date

EXHIBIT A

(Arborist)

Typical Arborist work to be performed for the District may include, but is not limited to, the following:

- Perform tree surveys
 - identify species
 - determine age, size and condition
 - map tree locations
 - make recommendations
- Perform tree health evaluations
- Prune limbs and roots and make recommendations to safeguard trees prior to or during construction of underground pipelines and other water and sewer facilities
- Conduct remedial activities to restore tree health
- Plant trees and prepare written monitoring reports relative to tree growth and condition in accordance with requirements of local, state and federal agencies
- Perform other related tasks

EXHIBIT A
(Cultural Studies)

Typical Cultural Resources work to be performed for the District may include, but is not limited to, the following:

- Conduct background research, including records searches, literature review, archival research
- Conduct cultural resources pedestrian surveys
- Evaluate cultural resources for eligibility for listing in the CRHR and/or the NRHP
- Recommend appropriate mitigation or treatment measures as needed
- Prepare technical reports, EIR sections
- Consult with State Historic Preservation Officer, Native American tribes, other appropriate agencies, and other interested parties

EXHIBIT A

(Dam Safety Engineering)

Typical Dam Safety Engineering work to be performed for the District may include, but is not limited to, the following:

- Studies/reports preparation
- Engineering calculations
- Design drafting
- Assistance in bidding
- Assistance during construction
- Specialty dam inspections
- DSOD and FERC regulatory support
- Instrumentation reports preparation
- Structural analysis
- Geotechnical exploration and laboratory analysis, geologic mapping
- Stability and seismic analysis
- Hydraulic and hydrologic modeling
- Emergency Action Plan Development
 - Facilitation of annual drills, Tabletops exercises, functional exercises

EXHIBIT A

(Drafting)

Typical Drafting work to be performed for the District may include, but is not limited to, the following:

- Planning and design activities for suggested projects
 - Needs assessments of proposed projects
 - Accurate estimation of time required for proposed projects
 - Knowledge of EID engineering CAD document standards available on our website at:
 - http://www.eid.org/doc_lib/02_dist_info/CompleteStandardDetailDrawings.pdf
 - http://www.eid.org/doc_lib/02_dist_info/wsrwdandcstandards.pdf
 - http://www.eid.org/doc_lib/02_dist_info/TechnicalSpecifications.pdf
- Data gathering and collection
 - Research existing data sources if required, including surveys, parcel & subdivision maps
 - Data acquisition and importation from electronic and hard copy data sources
- Data creation/manipulation
 - Training of District personnel
 - Importation/processing of existing collected data
 - Paper map/photograph raster/vector conversion as required
- Map production
 - Assisting District Personnel in creation/use/assimilation of maps
- Data analysis & reporting
 - Provide services after project is created as required
 - Data processing/Data entry/Plotting/Training as required
 - Project coordination meetings at designated intervals may be required

EXHIBIT A

(Electrical/Instrumentation/SCADA Systems Integration)

This category is split into two groups; A) Electrical control and power design, and B) System Integration. Consultant may submit for either A, B, or both A and B groups.

A) Electrical Control and Power Design,

Typical Electrical Control and Power Design work to be performed for the District may include, but is not limited to, the following:

- Prepare electrical and instrumentation reports, studies, plans and specifications for water, wastewater, recycled water, and hydro facilities. Consultant shall have a demonstrated familiarity with these types of facilities.
- Assist in preparation of electrical and instrumentation design standards.
- Provide electrical inspection(s) in the field to review and comment on contractor workmanship, specification compliance, completeness of work and proper function. Provide summary and conclusive reports on findings.
- Oversee and witness electrical factory tests. Comment on supplier workmanship, specification compliance, completeness of work and proper equipment/panel function. Provide summary and conclusive reports on findings.
- Assist in electrical start-up of treatment facilities, booster and lift stations.
- Provide electrical calculation and PG&E load sizing.
- Review electrical designs prepared by other consultants.
- Attendance at project coordination meetings at designated intervals may be required.
- Many of these tasks will require an immediate response and expedited preparation.

B) System Integration

Typical System Integration Design work to be performed for the District may include, but is not limited to, the following:

Note: The District utilizes the Wonderware Galaxy/Archestra platform for SCADA. Any person working on District SCADA programming shall be Wonderware Orchestra certified, no exception. Proposed consultant shall have Orchestra certified personnel engaged as regular employee of the firm.

- Participate in design, development, installation, modification, troubleshooting and maintenance of the District's SCADA system.
- Perform complex software development, including SCADA graphical interfaces and databases, on a multiplatform environment with different communication protocols.

- Write, simulate, troubleshoot and maintain programs for a variety of PLC's, RTU's, and HMI's.
- Install, program, troubleshoot and maintain network interface devices among PLC's, RTU's, servers, workstations and Terminal Services client nodes.
- Implement and troubleshoot communication strategies between remote PLC's and SCADA central locations, utilizing radio, telecom, and Ethernet based systems.
- Program, troubleshoot and maintain alarm notification software and hardware.
- Advise District on advances in technology, new control strategies, and potential upgrades to existing system.
- Provide training and support for operations staff in the use of SCADA systems.
- Attendance at project coordination meetings at designated intervals may be required.
- Many of these tasks will require availability for immediate response and expedited preparation.

EXHIBIT A

(Environmental – Biological Studies)

Typical Biological Studies work to be performed for the District may include, but is not limited to, the following:

- Biological Reconnaissance Surveys
- Protocol-level Botanical Surveys
- Protocol-level Wildlife Surveys
- Regulatory Agency Permitting (1600, 401, 404 Wetland delineations)

EXHIBIT A

(Environmental – CEQA/NEPA)

Typical CEQA/NEPA Documentation work to be performed for the District may include, but is not limited to, the following:

- Categorical Exemption/Exclusion Review
- Environmental Assessments
- Initial Studies
- Negative Declarations/Finding of No Significant Impact
- Environmental Impact Reports/Statements
- Technical studies necessary to support preparation of these documents

EXHIBIT A
(General Engineering)

Typical General Engineering work to be performed for the District may include, but is not limited to, the following:

- Studies/report preparation
- Engineering calculations
- Preliminary design
- Preparation of plans and specifications
- Assistance in bidding
- Engineering support during construction
- Peer review

EXHIBIT A

(Geographic Information Systems, GIS)

Typical Geographic Information Systems work to be performed for the District may include, but is not limited to, the following:

- Planning and design activities for suggested projects
 - Advise EID on how GIS would enhance & assist in core duties
 - Give examples of possible GIS applications
 - Needs assessments of proposed projects
 - Feasibility studies for individual and District-wide projects
- Data gathering and collection
 - Research existing data sources
 - Data acquisition and importation
- Data creation/manipulation
 - GPS field collection and processing
 - Training of District personnel
 - Importation/processing of existing collected data
 - Paper map/photograph raster/vector conversion
- Map/atlas production
 - Assisting District personnel in creation/use/assimilation
 - Geo reference of existing/created data
- Data analysis & reporting
 - Provide services after GIS is created as required
 - Data processing/data entry
- Project coordination meetings at designated intervals may be required
- Aerial/Imaging
 - Acquisition, (outside services or in-house services)
 - Post, processing of photos
 - Publishing

EXHIBIT A
(Geotechnical)

Typical Geotechnical work to be performed for the District may include, but is not limited to, the following:

- Geotechnical investigation reports
- Soil compaction and material testing during construction
- Hazardous materials investigations and remediation
- Project coordination meetings at designated intervals may be required
- Concrete and material testing during construction
- Geotechnical inspection during construction
- Preparation of plan sheets or specifications for construction purposes
- Many of these tasks will require an immediate response and expedited preparation

EXHIBIT A
(Hydroelectric Compliance)

Typical Hydroelectric Compliance work to be performed for the District may include, but is not limited to, the following:

- Conduct biological surveys
 - Amphibians
 - Riparian vegetation species composition and recruitment
 - Macroinvertebrates
 - Geomorphology
 - Fish populations
 - Water Temperature
 - Water Quality
- Analyze survey data and prepare technical reports

EXHIBIT A
(IT Infrastructure)

The District seeks to augment its IT support staff with contracted resources on an as-needed basis. The successful proposal(s) will demonstrate sufficient staff resources, relevant experience, and demonstrated commitment to cost-control and customer service excellence that meet the District's needs.

Typical IT Infrastructure work performed for the District may include, but is not limited to, the following:

- Assessments, including audits and forensics related to:
 - Security
 - Capacity
 - Performance
 - Process
- Planning, design and implementation services to various degrees of scope, including:
 - Tasks
 - Project phases
 - Entire projects
 - Master Plans
- Encompassing:
 - Technology systems
 - Technology services
 - Technology architectures
- Providing expert technical skills, process methodology, and best-practice knowledge, including:
 - Documentation
 - Configuration
 - Testing
 - Training
 - Cut-over support

The District's IT Infrastructure systems may include, but are not limited to, the following:

- Data Cabling Installers with Electronics Technicians Association International DCIC certification or equivalent to work on:
 - Copper and fiber structured wiring systems located in office and industrial environments
- Cisco Engineers with CCNP certification or higher to work on technologies including:
 - Routers
 - Switches

- Wireless Access Points
 - VoIP phone system
- Microsoft Engineers with MCSE/MCITP/MCSD certification or higher to work on technologies including:
 - Windows Server
 - ISA Server
 - SQL Server
 - Exchange Server
 - SharePoint Server
 - .NET Framework
 - System Center Suite
 - Active Directory/Group Policy
 - Windows Client
 - Office Suite
- VMware Engineers with VCP certification or higher to work on technologies including:
 - vSphere Server
 - View
- Security Experts with CISSP certification or equivalent
- Information Technology Project Managers with PMP certification or equivalent

EXHIBIT A

(Legal Services – Labor/HR Counsel)

El Dorado Irrigation District (EID or District) is seeking specialized legal services on an on-call basis to serve as special counsel for various public-sector human resources and labor relations matters from January 1, 2011 through December 31, 2013. In general, the purpose of the services is to supplement the District's internal General Counsel and Human Resources capabilities, and to enable the General Counsel's office to avoid professional conflicts arising from dual representation responsibilities and similar situations.

Services will include legal advice and consultation, disciplinary investigations, representation of management in internal disciplinary appeals, counsel to *Skelly* officers or the Board of Directors in internal disciplinary appeals, and defending the District in litigation and third-party administrative proceedings. Services will be under the direction of the General Counsel, Human Resources Director or their designees, except where professional conflict issues exist.

The District anticipates selecting and contracting with multiple qualified providers to be utilized on an on-call, project-specific basis for the next three years.

The District is subject to the Meyers-Milias-Brown Act. Between half and two-thirds of all District employees are represented; representation is provided on an "agency shop" basis by a single non-affiliated union, the Association of El Dorado Irrigation District Employees (Association). The Association has two units – a general unit and a small Engineers' unit. The Association's legal representative is the Rose Law Firm, P.C., of Folsom. The current Memorandum of Understanding between the District and the Association became effective January 1, 2010 and expires December 31, 2013. The Memorandum of Understanding is the primary source of governance for personnel and labor matters involving represented employees. Other sources of governance for both represented and non-represented employees are the District's Board Policies, Administrative Regulations, and employee handbook.

The District seeks one or more law firms qualified and experienced in providing the legal services required by the District, on an on-call basis, as special counsel. Services would be provided pursuant to a contract in substantially the form attached as Exhibit A to this Request for Proposals. The District would retain the discretion to hire other counsel for the same types of legal services.

The District's General Counsel function was brought in-house in late 2002. The Office of the General Counsel consists of the General Counsel, the Senior Deputy General Counsel, a Paralegal, two contract administration employees (represented), a Risk Analyst (represented), a Real Property Program Administrator, and a Forester (represented). The District's in-house Human Resources department consists of the

Director of Human Resources, a Senior HR Analyst, three HR Analysts, the Safety and Security Officer, and a Human Resources Technician.

In coordination with the District's Human Resources staff, the Office of the General Counsel advises the District's departments on personnel matters, including leave, benefits, and discipline. The Office of the General Counsel typically represents District management in post-*Skelly* proceedings appealing discipline. At times, the Office of the General Counsel conducts or assists in the investigation of charges of employee misconduct. Major disciplinary actions are ultimately appealable to the District's Board of Directors; in those situations, the Office of the General Counsel either counsels and represents senior management during the disciplinary and intermediate appeal processes, or represents and advises the Board when it hears and decides the matter. The role not performed by the Office of the General Counsel requires the retention of outside counsel.

In labor matters, the Director of Human Resources, the General Manager, the Office of the General Counsel, and/or their designees (including outside counsel) represent District management and the Board of Directors in negotiations and elections. In grievance procedures, the Office of the General Counsel either counsels and represents the Director of Human Resources and the General Manager in the first stages of the grievance process, or represents and advises the Board when it hears and makes the ultimate decision on unresolved grievances. Again, the role not performed by the Office of the General Counsel requires the retention of outside counsel.

The required services fall into four categories:

- Providing specialized expertise on state and federal law applicable to public-sector human resources, when such services exceed the resources of the Office of the General Counsel.
- Providing counsel and/or representation to District management, *Skelly* officers, or the Board of Directors when necessary to avoid a professional conflict within the Office of the General Counsel.
- Conducting factual investigations of charges alleging employee misconduct, when such services exceed the resources of in-house District personnel or are necessary or desirable to avoid the appearance or reality of a professional or personal conflict within the District's in-house functions.
- Representing the District, its Board of Directors and management in selected litigation and third-party administrative proceedings involving personnel or labor issues.

The successful proposal(s) will demonstrate sufficient staff resources, expertise, relevant experience, and lack of disabling professional conflicts to provide the needed services, along with demonstrated commitments to cost-control and client service that meet the District's needs.

SCOPE OF SERVICES

On the basis described in the previous section, the District seeks on-call legal services that could include, but may not be limited to, the following tasks:

- Provide counsel and advice on employment, leave, and benefit-related federal and state laws and regulations applicable to the District and its employees, including the following:
 - Fair Labor Standards Act
 - Health Insurance Portability and Accountability Act
 - Comprehensive Omnibus Budget Reconciliation Act
 - Americans with Disabilities Act and state disability laws
 - Worker's compensation
 - State disability insurance laws
 - State unemployment insurance laws
 - Public Employees' Retirement Law
 - Meyers-Miliias-Brown Act
 - Family Medical Leave Act
 - California Family Rights Leave Act
 - Other federal and state leave laws
 - Title VII, the Civil Rights Act of 1964
 - Fair Employment and Housing Act
 - Age Discrimination in Employment Act
 - Federal and state "whistleblower" laws
 - Employee privacy rights
 - Employee free speech rights
 - Federal and state laws governing employees' pre-and post-disciplinary due process rights
- Perform and report on factual investigations into charges of employee misconduct
- Serve as counsel to *Skelly* conference officers
- Serve as counsel to the Board of Directors in internal disciplinary appeals
- Serve as counsel to District management in internal disciplinary hearings and appeals
- Represent District management in labor negotiations
- Defend the District, its Directors, and management in litigation and third-party quasi-judicial administrative proceedings involving personnel or labor issues

Services will generally be provided under the direction of the Office of the General Counsel, except when client convenience or the avoidance of perceived, potential, or actual professional conflict issues dictate otherwise. In such cases, services will be under the direction of the Board of Directors, the General Manager or designee, the Director of Human Resources or designee, or a *Skelly* officer.

EXHIBIT A

(Legal Services – Water Rights)

El Dorado Irrigation District (EID or District) is seeking specialized legal services on an on-call basis to serve as special counsel for various water-right and water-quality related matters from January 1, 2011 through December 31, 2013. In general, the purpose of the services is to supplement the District's internal General Counsel capabilities.

Services will include legal advice and consultation, regulatory and permitting interactions with the State Water Resources Control Board, Regional Water Quality Control Board, and United States Bureau of Reclamation, and regulatory, permitting, and other water-related interactions with numerous local, state, and federal agencies. Services will be under the direction of the General Counsel or his designees.

The District anticipates selecting and contracting with a single qualified provider to be utilized on an on-call, project-specific basis for the next three years.

The District holds a complex portfolio of water rights and entitlements, including pre-1914 appropriative rights associated with Gold Rush-era water systems, permitted and licensed appropriative water rights, a Central Valley Project Water Service Contract, and a Warren Act Contract. It also has a 21-megawatt Federal Energy Regulatory Commission-permitted hydroelectric project, Project 184. Additionally, it has five permitted water treatment facilities, four permitted wastewater treatment facilities, and a Master Reclamation Permit for its recycled water deliveries. The District is actively pursuing a second Warren Act Contract, and it would be a primary beneficiary of a Central Valley Project Water Service Contract being sought by the El Dorado County Water Agency under Public Law 101-514, as well as a Petition for Assignment of State Filing being sought by the El Dorado Water and Power Authority.

The District seeks a single law firm qualified and experienced in providing the legal services required by the District, on an on-call basis, as special counsel. Services would be provided pursuant to a contract in substantially the form attached as Exhibit A to this Request for Proposals. The District would retain the discretion to hire other counsel for the same types of legal services.

The District's General Counsel function was brought in-house in late 2002. The Office of the General Counsel consists of the General Counsel, the Senior Deputy General Counsel, a Paralegal, a Real Property Program Administrator, and four other employees.

In coordination with the District's Engineering and Operations departments, the Office of the General Counsel advises the District and its departments on water rights, water quality, the Federal Power Act, and allied issues. This work also includes

representation of the District in administrative litigation, administrative proceedings, regulatory and permitting interactions, and other interactions and coordinating activities with numerous local, state, and federal agencies.

The required services fall into the following categories:

- Providing specialized expertise on state water rights law, to protect, defend, and enhance the District's water rights portfolio.
- Providing specialized expertise on state and federal water-quality law applicable to the District's facilities and operations.
- Counseling and representing the District in informal regulatory, permitting, and other water-rights and water-quality interactions with local, state, and federal agencies.
- Representing the District in selected litigation and formal administrative proceedings involving water-rights and water-quality issues associated with District facilities, operations, and interests.

The successful proposal(s) will demonstrate sufficient staff resources, expertise, relevant experience, and lack of disabling professional conflicts to provide the needed services, along with demonstrated commitments to cost-control and client service that meet the District's needs.

SCOPE OF SERVICES

On the basis described in the previous section, the District seeks on-call legal services that could include, but may not be limited to, the following tasks:

- Counsel and advise the District on the identification, exercise, reporting, and defense of water rights and entitlements it holds.
- Counsel and advise the District on the acquisition, retention, and renewal of water-quality permits associated with its facilities and operations.
- Counsel, advise, and represent the District in initiatives to expand its portfolio of water rights and entitlements.
- Counsel, advise, and represent the District in informal regulatory, permitting, and other interactions with numerous local, state, and federal agencies.
- Represent the District, its Directors, and management in litigation and administrative proceedings involving water rights and water quality.

Services will generally be provided under the direction of the Office of the General Counsel.

EXHIBIT A

(Painting Inspection)

Typical Painting Inspection work to be performed for the District may include, but is not limited to, the following:

- Determine suitability of protective coverings and the means employed to control project debris, dust, paint spills, and over spray, etc.
- Ambient conditions
- Surface preparation (solvent cleaning, pressure washing including chalk tests, hand/power tool or abrasive blast cleaning, etc.) with profile measurements
- Chloride remediation (if required)
- Coating application (specified materials, mixing, thinning, and wet/dry film thickness)
- Recoat times and cleanliness between coats
- Coating continuity and coverage (freedom from runs, sags, over spray, dry spray, pinholes, shadow-through, skips, misses, etc.)
- Dust mitigation from sand blasting

Inspection personnel shall possess a minimum classification as a National Association of Corrosion Engineers (NACE) Coating Inspector Technician, or shall provide evidence of successful training and experience inspecting of a minimum of 5 projects of similar or greater complexity and scope that have been completed in the last 2 years. Documentation of training shall be provided.

The coating inspector shall perform random spot checks of the wet film thickness to insure contractor application methods and wet film checks are correct. To the best of the ability of the consultant, the inspector assigned shall remain as the inspector for the entire project.

Consultant shall supply all necessary equipment to perform the quality control inspections. Equipment shall include the following at a minimum:

- Psychrometer or comparable equipment for the measurement of dew point and relative humidity, together with all necessary weather bureau tables or psychrometric charts.
- Surface temperature thermometer
- Hypodermic Needle Pressure Gage for determining blasting pressure at the nozzle
- SSPC Visual Standards VIS 1 for abrasive blast cleaning, VIS 3 for hand/power tool cleaning, VIS 4 for water jetting, and/or VIS 5 for wet abrasive blast cleaning, as applicable.
- Commercially available putty knife of a minimum thickness of 1mm (40 mils) and a width between 25 and 75 mm (1 and 3 in.) Note that the putty knife is only required for projects in which the existing coating is being feathered and must be tested with a dull putty knife.

- Testex Press-O-Film Replica Tape and Spring Micrometer
- Bresle Cell Kits or CJLOR*TEST kits for chloride determinations, or equivalent
- Wet Film Thickness Gage
- Blotter paper and plate glass for compressed air cleanliness checks
- Type 2 Magnetic Dry Film Thickness Gage per SSPC-PA2 (or ultrasonic)
Capable of down loading PA-2 readings
- NBS calibration standards for dry film thickness gage
- Holiday test type equipment per NACE RPD SPO-188
- High voltage, low current, spark type detector such as, manufactured by D.E. Sterns 14/20
- Elocometer adhesion test equipment at a minimum type 2 and 5

SECTION 09905
PAINING AND PROTECTIVE COATINGS

PART 1 - GENERAL

1.01 SCOPE. Provide all labor, materials, apparatus, scaffolding, and all apparatus work in connection with painting and protective coatings, complete as indicated, specified and required.

A. Work Included in This Section. Principal items include:

1. All new and altered exposed piping, conduits, and other metal surfaces, interior and exterior, except as hereinafter specifically excluded.
2. All submerged and intermittently submerged new and altered existing metal surfaces, except stainless steel.
3. All new or altered existing structural and miscellaneous steel.
4. Equipment furnished with and without factory finished surfaces.
5. Equipment, on which factory applied finishes have been marred, abraded, scratched, nicked, or otherwise damaged.
6. Except as hereinafter specifically excluded, repainting of existing interior and exterior painted surfaces from architectural break to architectural break where damaged or altered in performance of work of this General Contract.
7. The Contractor shall furnish to the Owner, at no charge for use during this Project, the necessary dry film thickness gages and electrical flaw detection equipment required, and inspection equipment to ensure conformance with all specifications and standards included herein.

B. Related Work Not Included in This Section. The following surfaces, in general shall not be painted:

1. Concrete surfaces subject to pedestrian or vehicular traffic, except as herein specified.
2. Plastic surfaces, except as specified for identification purposes.
3. Nonferrous metals and stainless steel unless otherwise noted or indicated. Galvanized metal shall not be considered a nonferrous metal.

1.02 GUARANTEE. A three (3) year guarantee which commences on the date of acceptance against failure of all coatings shall be provided unless otherwise specified, the longer period of warranty shall prevail. Failure of any coating during the guarantee period shall be repaired by the Contractor who shall absorb all costs related to the repair of the coating, including inspection. The contractor shall provide a three year warranty bond.

1.03 REFERENCE SPECIFICATIONS AND STANDARDS.

A. American Society for Testing and Materials (ASTM):

1. D 4262-83 - Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces.

2. D 4263-83 - Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.
 3. D4285-83 - Test Method for Indicating Oil or Water in Compressed Air.
 4. D4541-93 - Test Method for Pull-off Strength of Coatings Using Portable Adhesion Testers.
- B. NACE International, The Corrosion Society (NACE):
1. RPO188-99 - Discontinuity (Holiday) Testing of Protective Coatings.
- C. National Association of Pipe Fabricators (NAPF):
1. NAPF 500-03 - Surface Preparation Standard for Ductile Iron Pipe and Fittings Receiving Special External Coatings and/or Special Internal Linings.
- D. NSF International (NSF):
1. NSF 61 - Drinking Water System Components - Health Effects.
- E. SSPC – Society for Protective Coatings:
1. SSPC SP1 - Solvent Cleaning.
 2. SSPC SP2 - Hand Tool Cleaning.
 3. SSPC SP3 - Power Tool Cleaning.
 4. SSPC SP5 - White Metal Blast Cleaning.
 5. SSPC SP6 - Commercial Blast Cleaning.
 6. SSPC SP7 - Brush-Off Blast Cleaning.
 7. SSPC SP10 - Near-White Blast Cleaning.
 8. SSPC SP 11 - Power Tool Cleaning to Bare Metal.
 9. SSPC-SP 12 - High- and Ultrahigh-Pressure Water Jetting.
- F. Underwriters' Laboratory (UL):
1. UL 3P83 - Drinking Water System Components - Health Effects.
- G. Unless otherwise specified, all work and materials for the preparation and coating of all metal surfaces shall conform to the applicable requirements specified in the Steel Structures Painting Manual, Volume-2, Systems and Specifications, latest edition, published by the Steel Structures Painting Council.

1.04 DEFINITIONS

- A. Submerged Metal: Steel or iron surfaces below tops of channel or structure walls which will contain water even when above expected water level.
- B. Submerged Concrete and Masonry Surfaces: Surfaces which are or will be:
1. Underwater.
 2. In structures which normally contain water.
 3. Below tops of walls of water containing structures.
- C. Exposed Surface: Any metal or concrete surface, indoors or outdoors that is exposed to view.
- D. Dry Film Thickness (DFT): Thickness of fully cured coating, measured in mils.

- E. Volatile Organic Compound (VOC): Content of air polluting hydrocarbons in uncured coating product measured in units of grams per liter or pounds per gallon, as determined by EPA Method 24.
- F. Ferrous: Cast iron, ductile iron, wrought iron, and all steel alloys except stainless steel.
- G. Where SSPC surface preparation standards are specified or implied for ductile iron pipe or fittings, the equivalent NAPF surface preparation standard shall be substituted for the SSPC standard.

1.05 SUBMITTALS.

- A. Shop Drawings: Include schedule of where and for what use coating materials are proposed in accordance with requirements for Product Data.
- B. Color Schedule. Finish coat colors for all painting and protective-coating systems shall match existing colors as closely as possible unless otherwise specified by Owner. New piping shall receive finish coats of the same color as existing piping which it replaces. Contractor shall prepare and submit for Owners approval a color schedule for finish coatings for all piping, mechanical equipment, electrical equipment and other surfaces to be protected. Owner shall approve of color selections prior to Contractors delivery of surplus.
- C. Samples:
 - 1. Prepare and submit for Owner's approval one (13) copies of color samples on 8 1/2" x 11" size cards for each protective coating system. Each sample card shall clearly show each coat of the finish system, and shall be clearly marked with the manufacturer's name and product identification, and shall be submitted in sufficient time to allow for approval and, if necessary, disapproval and resubmittal without causing any delay of the Project.
 - 2. As hereinbefore specified, Contractor shall furnish one (1) sq. ft. steel panels to be abrasive blasted in accordance with the abrasive blasting specifications and to be coated with a non-yellowing shellac, to be used as the standard for preparation of steel surfaces for the duration of this Project unless otherwise specified by Owner.
- D. Product Data Sheets: Contractor shall submit paint and coatings material manufacturers' printed technical data sheets for products intended for use in each of various paint and coating system. Data sheets shall fully describe material as to its intended use, make-up, recommended surface preparation and application conditions, primers, material mixing and application, minimum and maximum re-coat times (including recommended dry mil thickness), precautions, safety and maintenance cleaning directions.
- E. Manufacturer's Instructions: Include the following:
 - 1. Special requirements for transportation and storage.
 - 2. Mixing instructions.
 - 3. Shelf life.
 - 4. Pot life of material.
 - 5. Precautions for applications free of defects.
 - 6. Surface preparation.

7. Method of application.
 8. Recommended number of coats.
 9. Recommended dry film thickness (DFT) of each coat.
 10. Recommended total dry film thickness (DFT).
 11. Drying time of each coat, including prime coat.
 12. Required prime coat.
 13. Compatible and non-compatible prime coats.
 14. Recommended thinners, when recommended.
 15. Limits of ambient conditions during and after application.
 16. Time allowed between coats (minimum and maximum).
 17. Required protection from sun, wind and other conditions.
 18. Touch-up requirements and limitations.
 19. Material Safety Data Sheet.
- F. Quality Assurance Submittals:
1. Quality Assurance plan.
 2. Qualifications of coating applicator including List of Similar Projects.
- G. Submit Notarized Certificate that:
- a. All paints and coatings to be used on this project comply with the State of California Air Resources Board Rule 1113 VOC Regulations effective as of January 1, 2006; and that
 - b. All paints and coatings to be used on this project comply with the VOC regulations of the State of California Air Management District in which the coatings will be used, effective January 1, 2006.
- H. Coating Materials List:
1. The Contractor shall provide three (3) copies of a paint and coating materials list which indicates the manufacturer and paint number, keyed to the Painting and Coating Schedules herein, for approval of the Owner prior to or at the time of submittal of samples required herein.
 2. The Contractor shall include with his submittal, his protective coating schedule for shop and field coatings of items to receive protection. The schedule shall conform to the specified requirements for surface preparation, priming, and coating for items covered, and shall follow the same requirements for similar work where such work has not been specifically called out. No bare ferrous nonworking surfaces shall be omitted from the schedule. Particular care shall be taken to cover in sufficient detail the coating of mechanical joints and other mechanical devices which shall conform to the recommended practice of the manufacturer of the joint or other mechanical devices.
 3. For all patching of existing surfaces, Contractor shall verify the type of existing coating on the surface whose new coatings are to be applied. Contractor shall include in his submittal documentation that new coatings to be applied are compatible with existing coatings.
 4. Submittal shall be sufficiently early to permit Owner's review and then Contractor's coordination with affected material and equipment suppliers to assure their use of approved shop coats of same manufacture as field coats and compatibility with field applied coats for respective coating systems.

5. Coatings to be used on plastic and fiberglass materials shall be certified as acceptable by all plastic and fiberglass manufacturers whose products are to be coated. Certification copies shall be submitted to the Owner. The Contractor shall be certified in writing by the painting and coating material manufacturers as a qualified applicator of their products for the past five years, and copies of the certification submitted to the Owner.

1.06 QUALITY ASSURANCE

- A. Applicator Qualifications:
 1. Minimum of 5 years experience applying specified type or types of coatings under conditions similar to those of the Work.
 - a. Provide qualifications of applicator and references listing five similar projects completed in the past two years.
 2. Manufacturer approved applicator when manufacturer has approved applicator program.
 3. Approved and licensed by polymorphic polyester resin manufacturer to apply polymorphic polyester resin coating system.
 4. Approved and licensed by elastomeric polyurethane (100 percent solids) manufacturer to apply 100 percent solids elastomeric polyurethane system.
 5. Applicator of off-site application of coal tar epoxy shall have successfully applied coal tar epoxy on similar surfaces in material, size, and complexity as on the Project.
- B. Regulatory Requirements: Comply with governing agencies regulations by using coatings that do not exceed permissible volatile organic compound limits and do not contain lead.
 1. Do not use coal tar epoxy in contact with drinking water.
- C. Certification: Certify that applicable pigments are resistant to discoloration or deterioration when exposed to hydrogen sulfide and other sewage gases and product data fails to designate coating as "fume resistant."
- D. Field Samples: Prepare and coat a minimum 100 square foot area between corners or limits such as control or construction joints of each system. Approved field sample may be part of Work.
- E. Compatibility of Coatings: Use products by same manufacturer for prime coats, intermediate coats, and finish coats on same surface, unless specified otherwise.
- F. Services of Coating Manufacturers Representative: Arrange for coating manufacturers representative to attend pre-installation conferences. Make periodic visits to the project site to provide consultation and inspection services during surface preparation and application of coatings, and to make visits to coating plants to observe and approve surface preparation procedures and coating application of items to be "shop primed and coated".

1.07 PROTECTION OF WORK. The Contractor shall be responsible for any and all damage to his work or the work of others during the time his work is in progress, including any over spray claims.

1.08 EXTRA STOCK. The Contractor shall deliver to the Owner a minimum of two (2) one (1) gallon cans of each type and color of finish paint and coating used on the project and one (1) one (1) gallon cans of each primer or two (2) percent of each type and color of finish paint and coating used on the project and one (1) percent of each primer, which ever is greater. Each container shall be unopened and properly labeled for identification.

1.07 RIGHT OF REJECTION. The Owner shall have the right to reject all material or work that is unsatisfactory, and require the replacement of either or both at the expense of the Contractor.

1.08 JOB CONFERENCE. Prior to commencing work a pre-job conference shall be held for the purpose of reviewing and clarifying the painting and coating requirements of the project. The Owner, Contractor, Applicator, Coatings and Paint Manufacturers representative, and the Owner designated Inspector shall be present. A schedule of work to be accomplished will be established.

PART 2 PRODUCTS

Coating systems specified herein may be superseded by the manufacturer during the period of the on call contract. If a coating system is superseded by the manufacturer, the contractor shall supply in writing a letter from the manufacturer which states the system has been superseded, the new system components, changes in handling, application and preparation necessary.

2.1 GENERAL

- A. Surfaces to receive paint or other protective coating materials as herein specified in this Section shall be coated in conformance with the applicable coating systems specified herein. All materials specified by name and/or manufacturer or selected for use under these Specifications, shall be delivered unopened at the job site in their original containers and shall not be opened until inspected by the Owner. No coating shall be over 12 months from manufacturing date. Whenever a manufacturer's brand name is specified, it is intended to define the general type and quality of paint or coating desired. Other coatings or paints of equal quality may be used. Coating materials shall be a product of Ameron, Carboline, Porter International, Tnemec; or equal. All paint and coatings shall be produced and applied as herein called for or, if not specifically called for, shall be applied in accordance with the manufacturer's printed recommendations as approved by Owner. So far as possible, all paint and coating materials shall be provided by a single source supplier.
- B. Surface Preparation Salt Testing and Removal: Abrasive blasted and machine tooled surfaces (Service Condition A, B, C, D, and E) to be coated shall be tested within one hour for chloride, sulfate and nitrate salt contamination using the CHLOR*TEST 'CSN' Test Kit, or equal. An "or equal" test kit shall conform to the following requirements: (1) Kit will contain all materials, supplies, tools and instructions for field testing and on-site quantitative analysis; (2) Kit extraction solution shall be acidic, factory pre-measured, pre-packaged, and uniform concentration; (3) Kit components shall be mercury free and environmentally friendly; (4) Kit shall contain a factory sealed titration device; (5) Kit shall contain new materials and solutions for each test; (6) Test container shall create a sealed, encapsulated environment during sample extraction; (7) All tests should read direct measurements in micrograms per square centimeter without the need for conversion charts or tables. Tests shall be performed on metal loss areas when present. Metal loss areas are those areas that show evidence corrosion or pitting. When metal loss areas are not evident, tests shall be performed adjacent to weld areas, if present. Otherwise, test sites shall be selected to representative of the surface as a whole.

For Service Condition A, and E, the floor, ceiling and side walls shall be considered three separated areas.

- Each area shall be tested at the rate of three tests per 1000 ft² or part thereof.
- One or more chloride measurements greater than 3 µg/cm² are evidence of excessive chloride contamination.
- One or more sulfate measurements greater than 10 µg/cm² are evidence of excessive sulfate contamination.
- One or more nitrate measurements greater than 5 µg/cm² are evidence of excessive nitrate contamination.

Excessively contaminated surfaces shall be considered non-compliant and washed with water modified with CHLOR*RID, a soluble salt remover and

allowed to dry, or equal. An "or equal" chemical removal product shall meet the following criteria: (1) Remover shall be acidic; (2) remover shall be biodegradable; (3) nontoxic; (4) non-corrosive; (5) non-flammable. Washing will require a minimum of 3000psi using a spinner nozzle held no further than 10 inches from the surface. The operator shall apply the wash solution at the rate of approximately 300 square feet of surface area per 100 US gallons of wash solution. Manufacturer's directions shall be followed.

Re-test and re-wash until all required tests show allowable results.

For Service Condition B, C, and D, test at the rate of three tests for the first 1000 ft² or part thereof and one test for each additional 3000 ft² or part thereof.

- One or more measurements greater than 5 µg/cm² are evidence of excessive chloride contamination.
- One or more sulfate measurements greater than 15 µg/cm² are evidence of excessive sulfate contamination.
- One or more nitrate measurements greater than 5 µg/cm² are evidence of excessive nitrate contamination.

Excessively contaminated surfaces shall be considered non-compliant and washed with water modified with CHLOR*RID, a soluble salt remover and allowed to dry, or equal as defined above. Washing will require a minimum of 3000psi using a spinner nozzle held no further than 10 inches from the surface. The operator shall apply the wash solution at the rate of approximately 300 square feet of surface area per 100 US gallons of wash solution. Manufacturer's directions shall be followed.

Re-test and re-wash until all required tests show allowable results.

2.2 PAINT AND COATING MATERIALS

- A. Definitions: The term "coating materials," as used herein, shall include enamels, paints, sealers, epoxy resins, and all other paints and protective coatings, excepting galvanizing, whether used as a pretreatment, primer, intermediate coat, or finish coat.
- B. General:
Decorative and protective coating materials shall be sealed in containers that plainly show the designated name, formula or specification number, batch number, color, date of manufacture, manufacturer's directions, and name of manufacturer, all of which shall be plainly legible at the time of use. Pigmented paints shall be furnished in containers not larger than five (5) gallons. Materials shall conform to the specifications shown herein and to the requirements hereinafter specified.
- C. Compatibility: Only compatible materials shall be used in the Work. Particular attention shall be directed to compatibility of primers and finish coats. If necessary, subject to approval of the Owner, a compatible barrier coat shall be applied between all existing prime coat and subsequent field coats to insure compatibility.
- D. Colors: All colors and shades of colors of all coats of paints and protective coating material shall be as selected by the Owner. Each coat shall be of a slightly different

shade, as directed by the Owner to facilitate inspection of surface coverage of each coat.

2.3 SERVICE CONDITION SUMMARY

<u>Condition</u>	<u>Description</u>
A	Ferrous, submerged, wet
B	Ferrous, normal air exposure, galvanized
C	Ferrous, corrosive atmosphere
D	Non-ferrous, corrosive atmosphere
E	Moving parts, submerged
F	Concrete, submerged, corrosive
G	Concrete, concrete block, exterior normal exposure
H	Concrete, concrete block, interior normal exposure
I	FRP pipe
J	Ferrous, concrete, buried
K	Ferrous, non-galvanized, submerged, wet for potable water
L	Metal/plastic pipe, interior
M	Wood, interior, exterior
N	Gypsum, interior
O	Overhead rolling doors
P	Wood trim, interior
Q	Concrete block exterior clear sealant

2.4 SERVICE CONDITION A

Ferrous metals, other than stainless steel, submerged or intermittently submerged in water, sludge, sewage, chemical mixtures or similar corrosive liquid shall be prepared and coated in accordance with the following requirements.

- A. Surface Preparation: All metal surfaces shall be field sandblasted in accordance with Steel Structures Painting Council Specification SSPC-SP10 (Near White Blast Cleaning). Weld surface, edges, and sharp corners shall be ground to a curve and all weld splatter removed.
- B. Application: Application shall be in strict conformance with the manufacturer's printed recommendations. All sharp edges, nuts, bolts, or other items difficult to coat shall receive a brush only-applied coat of the specified coating prior to application of each coat.
- C. Coating System A: Except as otherwise noted, the prime coat shall have a minimum thickness of 4 mils and the two finish coats shall have a minimum total dry film thickness of 12 mils and a maximum of 20.0 mils. If finish coat is not applied within manufacturer's recommended time period, the coating shall be sweep blasted or abraded to remove all gloss.

Carboline		
System:	Primer - 890 Carboguard	4.0 to 5.0 mil
	Intermediate - 890 Carboguard	4.0 to 5.0 mil
	Finish Coats - 890 Carboguard	4.0 to 5.0 mil

Devoe		
System:	Primer - 236 Bar-Rust	4.0 to 5.0 mil
	Intermediate - 236 Bar-Rust	4.0 to 5.0 mil
	Finish Coats – 236-Bar-Rust	4.0 to 5.0 mil
Tnemec		
System:	Primer – 69-1255HB	4.0 to 5.0 mil
	Intermediate – 69-1255HB	4.0 to 5.0 mil
	Finish Coats – 691255HB	4.0 to 5.0 mil
PPG		
System:	Primer – Amercoat Amerlock 2-400 VOC	4.0 to 8.0 mils DFT
	Intermediate – Amercoat Amerlock 2-400 VOC	4.0 to 8.0 mils DFT
	Finish Coat – Amercoat Amerlock 2-400 VOC	4.0 to 8.0 mils DFT

2.5 SERVICE CONDITION B

Ferrous metals, other than stainless steel, subject to normal air exposure at the Project location or equivalent chemical attack, shall be prepared and coated in accordance with the following requirements.

- A. Surface Preparation: All surfaces shall be free of dirt, dust, grease, or other foreign matter before coating. Ferrous surfaces shall be cleaned in accordance with the Steel Structures Painting Council specification SSPC-SP10 (Near White Blast Cleaning), and galvanized surfaces shall be cleaned in accordance with SSPC-SP1 (Solvent Cleaning). Weld surfaces and rough edges shall be ground as required to make the piece neat and for proper application of coating, and weld splatter shall be removed. Prepare substrate surfaces in accordance with these Specifications and the printed instructions and recommendations of the manufacturer of each product applied.
- B. Application: Application shall be in strict conformance with tile manufacturer's printed recommendations. All sharp edges, nuts, bolts, or other items difficult to coat shall receive a brush-applied coat of the specified coating prior to application of each coat.
- C. Coating Systems B: Prepare all surfaces to receive coatings in accordance with these Specifications and the printed instructions and recommendations of the protective coating manufacturer for each product applied.

Carboline	Interior Exposure - Ferrous Metals	
System:	Primer - 890 Carboguard	4.0 to 6.0 mils
	Finish - 890 Carboguard	4.0 to 6.0 mils
	Exterior Exposure - Ferrous Metals	
	Primer - 890 Carboguard	4.0 to 6.0 mils
	Finish - Carbothane134 H.S.	3.0 to 4.0 mils
Devoe	Interior Exposure - Ferrous Metals	
System:	Primer - 236 Bar-Rust	4.0 to 6.0 mils
	Finish – 236 Bar-Rust	4.0 to 6.0 mils
	Exterior Exposure - Ferrous Metals	
	Primer – 236 Bar-Rust	4.0 to 6.0 mils
	Finish – 379H Devthane	3.0 to 4.0 mils

Tnemec's	Interior Exposure- Ferrous Metals	
System:	Prime Coat - 69-1255HB	4.0 to 6.0 mils
	Finish Coat - 69-1255 HB	4.0 to 6.0 mils
	Exterior Exposure- Ferrous Metals	
	Prime Coat - 69-1255HB	4.0 to 6.0 mils
	Finish Coat – 1075	3.0 to 4.0 mils
PPG		
System:	Interior Exposure – Ferrous Metals	
	Primer – PPG/Amercoat Amerlock 2VOC	4.0 to 8.0 mils DFT
	Finish – PPG/Amercoat Amerlock 2VOC	4.0 to 8.0 mils DFT
	Exterior Exposure – Ferrous Metals	
	Primer – PPG/Amercoat Amerlock 2VOC	4.0 to 8.0 mils DFT
	Finish – PPG/Amercoat Amershield 2VOC	3.0 to 5.0 mils DFT

- D. Coating System B on Zinc Alloy or Galvanized Ferrous Metals. Degrease, and abrade all surfaces, then apply the following coating system. Provide on metal doors, frames and metal decks and ceilings and all zinc alloy or galvanized ferrous metal pipe.

Carboline	Interior Exposure-Zinc Alloy or Galvanized Metal	
System:	Pretreat Coat-Rustbond Sealer	1.0 to 2.0 mils
	Primer Coat – 890 (Galvanized)	4.0 to 6.0 mils
	Finish Coat – 890 Carbogard	4.0 to 6.0 mils

	Exterior Exposure -Zinc Alloy or Galvanized Metal	
	Pretreat Coat-Rustbond Sealer	1.0 to 2.0 mils
	Primer Coat – 890 Carbogard	4.0 to 6.0 mils
	Finish Coat – 134 Carbothane	3.0 to 4.0 mils

Devoe	Interior Exposure-Zinc Alloy or Galvanized Metal	
System:	Primer Coat – 203WB (Galvanized)	3.0 to 4.0 mils
	Finish Coat – 236 Bar-Rust	4.0 to 6.0 mils

	Exterior Exposure -Zinc Alloy or Galvanized Metal	
	Primer Coat – 203WB Devran	4.0 to 6.0 mils
	Finish Coat – 379 Devthane	3.0 to 4.0 mils

Tnemec's	Interior Exposure	
System:	Primer Coat - Series 69-1255 HB	4.0 to 6.0 mils
	Finish Coat - Series 69-HB.	4.0 to 6.0 mils

	Exterior Exposure	
	Primer Coat - Series 69-1255HB	4.0 to 6.0 mils
	Finish Coat - Series 1075	3.0 to 6.0 mils

PPG		
System:	Interior Exposure – Ferrous Metals	
	Primer – PPG/Amercoat Amerlock 2VOC	4.0 to 8.0 mils DFT
	Finish – PPG/Amercoat Amerlock 2VOC	4.0 to 8.0 mils DFT

Exterior Exposure – Ferrous Metals	
Primer – PPG/Amercoat Amerlock 2VOC	4.0 to 8.0 mils DFT
Finish – PPG/Amershield VOC	3.0 to 5.0 mils DFT

2.6 SERVICE CONDITION C

Ferrous metals, other than stainless steel, within wet wells and similar locations subject to a corrosive atmosphere and condensation shall be prepared and coated in accordance with the following requirements.

- A. Surface Preparation: All metal surfaces shall be abrasive blasted in accordance with Steel Structures Painting Council Specification SSPC-SP5 (White Metal Blast Cleaning). Weld surface, edges and sharp corners shall be ground to a radius and all weld splatter removed.
- B. Application: Application shall be in strict conformance with the manufacturer's printed recommendations. A minimum of 12 hours time is required before additional coats may be applied to the prime coat. Application shall be in strict conformance with tile manufacturer's printed recommendations. All sharp edges, nuts, bolts, or other items difficult to coat shall receive a brush-applied coat of the specified coating prior to application of each coat.
- C. Coating Systems C: Except as hereinafter specified, the prime coat shall have a minimum dry film thickness of 5 mils; the intermediate coat, 5 mils; and the final coat, 5 mils. The total system shall have a minimum dry film thickness of 15 mils.

Carboline System:	Primer – Carboguard 890	5.0 to 6.0 mils
	Intermediate Carboguard 890	5.0 to 8.0 mils
	Finish Coat – Carboguard 890	5.0 to 8.0 mils

Devoe System:	Primer – Bar-Rust 236	5.0 to 6.0 mils
	Intermediate- Bar Rust 236	5.0 to 8.0 mils
	Finish Coat – Bar-Rust 236	5.0 to 8.0 mils

Tnemec System:	Primer – Series 69	5.0 to 8.0 mils
	Intermediate- series 69	5.0 to 8.0 mils
	Finish Coat – Series 69	5.0 to 8.0 mils

PPG System:	Primer–PPG/Amercoat Amerlock 2VOC	5.0 to 8.0 mils DFT
	Intermediate-PPG/Amercoat Amerlock 2VOC	5.0 to 8.0 mils DFT
	Finish Coat-PPG/Amercoat Amerlock 2VOC	5.0 to 8.0 mils DFT

2.7 SERVICE CONDITION D

Coating aluminum and non-ferrous metal surfaces, including undersides of access hatches and frames, subject to corrosive atmosphere and condensation shall be prepared and coated in accordance with the following requirements.

- A. Surface Preparation: Clean non-ferrous surfaces in accordance with SSPC-SP1 (Solvent Cleaning). Abrade surface to achieve 2.0 mil profile, or as specified by the coating manufacture.
- B. Application: Application shall be in strict conformance with manufacturer's printed recommendations, as approved by Owner.
- C. Coating System D: Conform with the following to provide minimum total dry mil thickness of 10.0 mils:

Carboline System:	Pretreatment –Rustbond Sealer	1.0 to 2.0 mils
	Intermediate- Carboguard 890	3.0 to 4.0 mils
	Finish Coat – Carboguard 890	3.0 to 4.0 mils
Devoe System:	Primer – 236 Bar Rust Primer	3.0 to 4.0 mils
	Intermediate- 236 Bar-Rust	3.0 to 4.0 mils
	Finish Coat – 236 Bar-Rust	3.0 to 4.0 mils
Tnemec System:	Primer- Series	3.0 to 4.0 mils
	Finish Coat – 435 Series	16.0 to 20.0 mils
PPG System:	Primer-PPG/Amercoat Amerlock 2VOC	4.0 to 8.0 mils DFT
	Finish-PPG/Amercoat Amerlock 2VOC	4.0 to 8.0 mils DFT

2.8 SERVICE CONDITION E

Submerged moving parts including cables, chains, gears, pulleys, etc. shall be prepared and coated in accordance with the following requirements.

- A. Surface Preparation: All rust, scale, dust, and foreign mater removed by power or hand tool cleaning, as per SSPC/SP#2
- B. Application: Application shall be in strict accordance with manufacturer's recommendations.
- C. Coating System E: The system shall have a total thickness of 25 mils and shall consist of the following:

Chevron - E. P. Roller Grease
 Texaco - Rust Inhibitive Grease

2.9 SERVICE CONDITION F

Where designated in the coating schedule, concrete which is subject to submergence and intermittent submergence in water, sludge and chemical mixtures, or which is exposed to corrosive atmospheres shall be prepared and coated in accordance with the following requirements.

- A. Surface Preparation: All surfaces shall be cleaned of all dirt, dust, form oil, curing compounds, and other deleterious compounds. Abrasive blast to open all bug holes and provide a profile equal 40 to 80 grit sandpaper. Contractor shall perform plastic sheet test (ASTM D-4263) 24 hours prior to application of coatings. All concrete surfaces shall be vacuumed prior to application of coating system. All surfaces shall be completely dry before application of the coating. A key way shall be saw cut at all termination points. See service Condition F paragraph G for more information.
- B. Application: Application shall be in strict conformance with the manufacturer's printed recommendations. All coats shall be applied within 24 hours of the previous coat. No drum band heaters shall be used. A ratio check and weight check when utilizing expanded material shall be preformed in the presence of the owner or owner's representative prior to the start of any lining applications. Hardness check will be preformed at the end of each coating application shift.
- C. Coating System F: (EXHIBITS TIGHT CEMENT AND EXPOSED AGGREGATE THAT IS ONE INCH OR LESS) The total system shall be 150.0 mils minimum, 100.0 mils being expanded and the 50.0 mils being solid. (EXHIBITS TIGHT CEMENT AND EXPOSED AGGREGATE THAT IS ONE INCH OR MORE) The system shall be 250.0 mils minimum, 200.0 mils being expanded and 50.0 being solid.
- D. Voids, bug holes, tie holes, or cracks in the concrete should be filled using standard "Concrete Institute" approved methods. Resurfacing procedures that are acceptable shall include back rolling a 10 – 15 mil base coat of the specified lining material or a 2:1 ECOSYSTEM expansion of a 20 mil solid film of the same material as required depending on the size of the of the voids to be filled. For severely deteriorated concrete surfaces containing exposed aggregate with a severe peak-to- valley profile, ENDURA-TUF 2000 may be applied – Reference the ENDURA-TUF 2000 Guide Specification, Direct-to Concrete for details. Other resurfacing methods shall be acceptable such as sacking with an approved cementitious grout, or use of a filled epoxy system. If an epoxy system is employed it shall be 100 percent volume solids. For sub grade cracks it is recommended that a suitable moisture resistant caulk such as Sika-Flex 1-A be used.
- E. Fins and sharp offsets, protrusions, or similar irregularities projecting from the concrete surface shall be removed back to the surface by chipping, brush hammering, needle gunning, or other mechanical means. Sharp offsets in the surface, such as those caused by form work misalignments, should be mechanically abraded to provide gradual and smooth transitions between the offset surfaces.
- F. Expansion joints shall be sealed with a bond breaker tape (polyethylene-backed adhesive tape acceptable). Prior to installation of the bond breaker tape, round-off sharp edges, remove debris/dust, and inspect to assure that joint compound is reasonably flush with top edge of expansion joint. Apply a tack coat of EF-1988 material to adjacent areas, followed immediately with installation of the tape. The tape shall be installed centered over the joint and be of sufficient width to extend a minimum of one inch onto the concrete on both sides of the joint. Tape thickness should be no more than 50 percent of the specified coating thickness. The bond breaker tape shall be top coated with EF-1988 to the minimum specified thickness.

- G. Leading edges: A mechanical anchor for the leading edge of the applied material shall be installed. This leading edge mechanical anchor shall consist of a saw cut to a minimum depth of ¼ inch and width of 1/8 inch. Sharp edges of the saw cut shall be rounded, dried, and cleaned of debris. After cleaning, the EF-1988 solid base coat shall be applied into the saw cut, taking care to penetrate to full depth (the use of a trowel or putty knife might be required). After installation of the leading edge, the area shall be top coated with EF-1988 composite material. Adjacent areas not scheduled for coating shall be taped off and protected from over-spray.
- H. Water seeping or flowing into or through the concrete must be stopped by epoxy injection before the system is applied.
- I. Concrete Surface Cleanliness: Sprinkle water on the dried suspect concrete surface. If the water spreads out immediately instead of standing as droplets, it may be concluded that the surface is not contaminated by oils or dust. If droplets are found, use the procedure stated in paragraph A.
- J. Chemical Cleaning: The site shall be maintained free of debris, water, oil, grease, silicones, wax, pitch, and other types of oily substances. Surfaces showing evidence of such contaminants shall be cleaned using solutions of trisodium phosphate, and or steam cleaning with a bio degradable degreaser. They should be applied with vigorous scrubbing, followed by flushing with fresh clean water to remove all traces of both the detergent and contaminant.
- K. Approved Products/System F:
 - 1. Contractor Qualifications: The contractor shall submit qualifications and certification that they are licensed to apply the proposed polyurethane product per patient # 4,590,218 for expanded polyurethane films.
 - 2. Manufacturer's Representative Site Visits: The manufacturer's representative shall visit the job site for the purposes of assisting the owner or owner's representative in the verification of surface preparation and applied liner as to consistency with manufacturer's recommendations.
 - 3. Application Equipment: The application equipment shall be able to heat and proportion the polyurethane material per the manufacturer's requirements. Band heaters shall not be used.
 - 4. Product: The product shall be an ASTM Type V elastomeric polyurethane that is proportioned in a 2A:1B ratio. The proposed product shall contain no silica or other fillers or extenders. The proposed product shall have no more than 65% and no less than 40% elongation. The product shall exhibit tensile strength of 2800 psi to 3000 psi.
 - 5. Approved Manufacturer: Prepared manufacturer is Global Echo Technologies of Pittsburgh, CA Endura-Flex EF-1988 or pre-approved equal. Proposed equal products shall be considered so long as they are submitted and pre approved a minimum of 15 days prior to bid date.
 - 6. The System: The system shall consist of type v elastomeric polyurethane applied in expanded form per patient #4,590,218 for expanded polyurethane films at an expansion rate of 2:1. Expanded base shall have a solid film cap. Expansion technologies that depend on chemical reaction with the polyurethane to expand or that are open cell in nature shall not be used.

- 7. Application: The liner shall be applied one (aggregate one inch or more exposed)
 - (to a total film thickness of 200 mils of which a minimum of 50 mils is solid)
 - (to a total film thickness of 250 mils of which a minimum of 50 mils is solid)

L. Carboline Polibrid 705 is acceptable for Condition F.

2.10 SERVICE CONDITION G

Poured in place concrete or concrete block subject to normal or salt air exterior exposure shall be prepared and coated in accordance with the following requirements.

- A. Surface Preparation: All surfaces shall be free of dirt, dust, grease or other foreign matter and be dry before coating. Water blast at 3,500 P.S.I. minimum.
- B. Application: Application shall be in strict conformance with the manufacturer's printed recommendations as approved by the Owner.
- C. Coating System G: Conform with the following to provide a minimum dry film thickness of 12.0 mils.

		<u>Dry Film Mils</u>
Carboline	Prime Coat – Sanitile 100	10.0-12.0
System:	Finish Coat – Sanitile 155	<u>3.0- 4.0</u>
	Total Dry Film Mils	13.0-16.0

		<u>Dry Film Mils</u>
Devoe	Prime Coat- 4000 Bloxfil	10.0-12.0
System:	Finish Coat- 2200 Dulux	<u>4.0- 5.0</u>
	Total Dry Film Mils	14.0-17.0

		<u>Dry Film Mils</u>
Tnemec's	Block Filler-Series 130-6602 Environfill	8.0-10.0
System:	2 Finish Coat- Series W180 Tneme-Crete	<u>4.0- 5.0</u>
	Total Dry Film Mils	14.0-20.0

PPG		<u>Dry Film Mils</u>
System:	Prime Coat - 4-100 Perma-Crete 100% Acrylic	
	LTC Concrete Block & Masonry Surface/Filler	9.0 to 11.0 mils DFT
	Finish Coat- 4-22 Perma-Crete 100% Acrylic	
	Topcoat	<u>3.0 to 5.0 mils DFT</u>
		12.0 to 16.0 mils DFT

2.11 SERVICE CONDITION H

Poured in place concrete, or concrete block subject to normal interior exposure shall be prepared and coated in accordance with the following requirements.

- A. Surface Preparation: Water blast at 3,000 P.S. I. Minimum. All surfaces shall be free of dirt, dust, grease and other foreign matter and be dry before coating.

- B. Application: Application shall be in strict conformance with the manufacturer's printed recommendations as approved by the Owner.
- C. Coating System H on Poured in Place Concrete: Conform with the following to provide a minimum total dry mil thickness of 9.0 mils.

		<u>Dry Film Mils</u>
Carboline:	Prime Coat – Sanitile 100	10.0-12.0
System:	Finish Coat – Sanitile 155	<u>2.0- 3.0</u>
	Total Dry Film Mils	12.0-15.0

		<u>Dry Film Mils</u>
Devoe:	Prime Coat-167 Pre-prime	1.0- 1.5
	Finish Coat-235V Bar-Rust	<u>8.0-10.0</u>
	Total Dry Film Mils	9.0-11.5

		<u>Dry Film Mils</u>
Tnemec's	Prime Coat - Series 69 (Color)	
System:	H.B. Epoxoline II	4.0- 6.0
	Finish Coat- Series 69 (Color)	<u>5.0- 7.0</u>
	Total Dry Film Mils	9.0-13.0

PPG		
System:	Primer – PPG/Amercoat Amerlock 2VOC	5.0 to 8.0 mils DFT
	Finish – PPG/Amercoat Amerlock 2VOC	<u>5.0 to 8.0 mils DFT</u>
		10.0 to 16.0 mils DFT

- D. Coating System H on Concrete Block: Conform with the following to provide a minimum total dry mil thickness, of 8.0 mils plus block filler:

Carboline System:		<u>Dry Film Mils</u>
	Prime Coat - Flexside masonry block filter @ (75 s q./ft./gal)	
	Intermediate Coat – Sanitile 100	10.0-12.0
	Finish Coat – Sanitile 555	<u>3.0- 4.0</u>
	Total Dry Film Mils	13.0-16.0

Devoe System:		<u>Dry Film Mils</u>
	Prime Coat – 4000 Blox-fill @ rate of 75 sq. ft./gal.	
	Intermediate Coat: 235V Bar-Rust	4.0- 6.0
	Finish Coat: 235V Bar-Rust	<u>4.0- 6.0</u>
	Total Dry Film mils	8.0-12.0

Tnemec's System:		<u>Dry Film Mil</u>
	Prime Coat - Series 130-6602 @ rate of (75 s q./ft./gal)	
	Intermediate Coat – Series 69	4.0- 6.0
	Finish Coat- Series 69	<u>4.0- 6.0</u>
	Total Dry Film Mils	8.0-12.0

PPG

System: Primer – 4-100 Perma-Crete 100% Acrylic
LTC Concrete Block & Masonry Surface/Filler
@ spread rate of 80 sq. ft per gallon

Intermediate – PPG/Amercoat Amerlock 2VOC
Finish Coat – PPG/Amercoat Amerlock 2VOC

4.0 to 8.0 mils DFT
4.0 to 8.0 mils DFT
8.0 to 16.0 mils DFT

2.12 SERVICE CONDITION I

Coating for plastic and fiberglass reinforced plastic (FRP) pipe for purposes of color coding and label stenciling. Coatings to be used for this category shall be certified by the pipe manufacturer to be completely acceptable and non-injurious to the pipe.

- A. Surface Preparation. Lightly abrade and degloss pipe and wipe with a solvent to degrease and clean surface.
- B. Application. Application shall be in strict conformance with manufacturer's printed recommendations.
- C. Coating System I. Two (2) coats @ 3.0 mils each having a total dry film thickness of 6.0 mils.

Carboline Prime coat: Rustbond Sealer
System: Finish coat: 134 H.3WB. "Carbothane"

Devoe System: Primer – 235V Bar-Rust.
Finish – 379HDevthane

Tnemec's System: Primer: Series 69 H.B. Epoxoline II
Finish: Series #1075 Endura Shield

PPG

System: Primer – Amercoat Amerlock 2VOC 4.0 to 8.0 mils DFT
Finish – PPG/Amercoat Amerlock 2VOC 3.0 to 5.0 mils DFT

2.13 SERVICE CONDITION J

- A. Type of Coating: Coal Tar Solution
- B. Surface: Buried ferrous metals and concrete
- C. Surface Preparation: Ferrous Metals: SSPC-SP-7
Concrete: Acid etch or light abrasive blast
- D. Coatings and Dry Film Thickness (DFT):

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>Tnemec Series</u>	<u>Devoe Series</u>
2	15	46-450	247

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>PPG/Amercoat</u> Amercoat 78HB
1	16	

2.14 SERVICE CONDITION K

- A. Type of Coating: Epoxy
- B. Surface: Non-galvanized ferrous metals, submerged or subject to submergence in potable water.
- C. Surface Preparation: Ferrous Metals: SSPC-SP-10
- D. Coatings and Dry Film Thickness (DFT):

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>Tnemec Series</u>	<u>Devoe Series</u>
1	5.0	140HB-1255	233H
2	6.0	140HB-AA90	233H

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>PPG/Amercoat</u>
1	5.0	Amerlock 2 VOC
2	5.0	Amerlock 2 VOC

2.15 SERVICE CONDITION L

- A. Type of Coating: Epoxy or epoxy urethane, color required.
- B. Surface: Interior non-submerged metals, plastic piping, concrete, mild or severe chemical or corrosion exposure.
- C. Surface Preparation: Ferrous Metals: SSPC-SP-6
Plastic Piping: SSPC-SP-1
Galvanized and Nonferrous Metals: SSPC-SP-1
Concrete: Acid etch or abrasive blast

D. Coatings and Dry Film Thickness (DFT):

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>Tnemec Series</u>	<u>Devoe Series</u>
2	10 (metals & concrete) 6.0 (plastics)	69	same as System D
<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>PPG/Amercoat</u>	
1	6.0	Amerlock 2VOC	
1	6.0	Amerlock 2VOC	

2.16 SERVICE CONDITION M

- A. Type of Coating: Modified acrylate
- B. Surface: Interior or exterior wood.
- C. Surface Preparation: As specified elsewhere in this Section.
- D. Coatings and Dry Film Thickness (DFT):

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>Tnemec Series</u>	<u>Devoe Series</u>
1	1.5	151	3210
1	4.0	156	Exterior 2406 Interior 4216
<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>Pittsburgh Paints</u>	
1	1.5	17-921 Seal Grip 100% Acrylic Primer	
2	3.0	76-45 Sun-Proof 100% Acrylic Exterior	

2.17 SERVICE CONDITION N

- A. Type of Coating: Acrylic.
- B. Surface: Gypsum drywall, pipe insulation.
- C. Surface Preparation: Clean and dry.
- D. Coatings and Dry Film Thickness (DFT):

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>Tnemec Series</u>	<u>Devoe Series</u>
1	1.0	51-792	3210
2	6.0	113	1201 (Flat) devoe

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>PPG/Pittsburgh Paints</u>
1	1.5	17-921 Seal Grip 100% Acrylic Primer
2	6.0	98-1 Aquapon WB Polyamide Epoxy

2.18 SERVICE CONDITION O

- A. Type of Coating: Aliphatic polyurethane.
- B. Surface: Overhead rolling doors (both sides).
- C. Surface Preparation: SSPC-SP-1.
- D. Coatings and Dry Film Thickness (DFT):

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>Tnemec Series</u>	<u>Devoe Series</u>
1	4.0	135	231VH
1	2.0	75	379H

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>PPG/Amercoat</u>
1	4.0	Amerlock 2VOC
1	4.0	Amershield VOC

2.19 SERVICE CONDITION P

- A. Type of Coating: Polyurethane varnish.
- B. Surface: Interior wood, including shelving, benches, cabinets, doors and elsewhere that a clear finish is indicated.
- C. Surface Preparation: Sanding.
- D. Two coats PPG/Pittsburgh Paints 77-49 Rez Clear Polyurethane.

2.20 SERVICE CONDITION Q

- A. Type of Coating: Clear penetrating sealer - exterior.
- B. Surface: Concrete block and concrete.
- C. Surface Preparation:
 - 1. New concrete block and concrete to cure for a minimum of thirty days before being coated.
 - 2. Moisture content to be no higher than 15 percent as registered on an electronic moisture meter.
 - 3. All cracks, other than hairline cracks to be tuck-pointed or caulked. All voids and bee holes in masonry units shall be filled. Defective mortar joints shall be routed out and pointed with mortar, or caulked and tooled.
 - 4. Remove any soil, mud, efflorescence, excessive mortar, etc. Use "dry" cleaning method, if possible. If wet cleaning is required, allow adequate time in drying.
 - 5. Sealer shall be applied under factory supervision, and shall be warranted to perform for five years.
- D. Coatings and Dry Film Thicknesses (DFT):

<u>Minimum No. of Coats</u>	<u>Total DFT</u>	<u>Manufacturer</u>
1	N/A	Rainguard STD-E with Micro-Lok; Professional; Prosoco, or equal.

- E. Application Method: Coating shall be flood coated on properly prepared vertical surfaces. Application rate shall be as recommended by the manufacturer for the surface receiving the coating.

2.21 PATCH COAT FOR GALVANIZED SURFACES

- A. All galvanized surfaces which are scratched, marred, or otherwise damaged shall be patched with Carboline's Carbo Zinc 11, "Drygalv" by American Solder and Flux Co., or equal, prior to application of other coatings required for designated service condition.

2.22 MISCELLANEOUS COATINGS

- A. Hand wheels and operating handles of all valves and equipment shall be safety red, matching OSHA Safety Red Color, using Coating System "B" in non-corrosive atmosphere and Coating System "C" in corrosive atmosphere and high humidity exposures.

2.23 PRIMER OVER BITUMINOUS COATING

- A. 2 coats, Bar-Rust 236, Tnemec 69-1211, Amerlock 2VOC, or equal.

2.24 HEAT RESISTANT COATINGS

- A. To insure proper coating selections, accurately measure surface temperatures. Surface preparation shall be performed in strict conformance with manufacturer's printed directions and treated surfaces shall be coated as soon as possible to avoid surface contamination. Mix and apply coats of each system in conformance with printed directions of manufacturer as it concerns curing before recoating or before run-in to surface operating temperature. Contingent upon expected temperature range apply one of the following or equal systems, and avoid excessive film build.

Devoe
System: to 200 F 236 Epoxy
to 400°F 403 HT VOC
to 450°F 304 Catha Coat

Carboline
System: to 200 F 890 Epoxy
to 400°F Thermaline 4900 VOC
to 450°F Thermaline 4900 VOC

PPG
System: to 200° F Amerlock 2 VOC
to 400° F PPG 97-673 Metalhide 1001 Inorganic Zinc

2.25 REWORK OF PROTECTIVE COATINGS WITHIN ALTERED EXISTING PROCESS FACILITIES

Perform hereinafter specified surface preparation, mixing and application operations on respective altered existing surfaces. Use like materials by manufacturers as those used in coating respective new surfaces.

- A. Submerged and Intermittent Submerged Existing Ferrous Metals. Perform work as specified for Service Condition "A" in Article 2.03.
- B. Ferrous Metals Subject to Normal Air Exposure at Project Location or Similar Chemical Attack. Perform work as specified for Service Condition "B" in Article 2.04.
- C. Ferrous Metals Subject to Corrosive Atmosphere and Condensation. Perform work as specified for Service Conditions "C" in Article 2.05.
- D. Non-Ferrous Metal Surfaces Subject to Condensation and Corrosive Atmospheres. Perform work as specified for Service Condition "D" in Article 2.06.
- E. Existing and Altered Moving Parts Such as Cables, Chains, Gears, Pulleys, etc. Perform work as specified for Service Condition "E" in Article 2.07.
- F. Existing and Altered Concrete Surfaces Subject to Submergence and Intermittent Submergence. Perform work as specified for Service Condition "F" in Article 2.08.

2.26 VINYL ESTER COATING

- A. Apply Vinyl Ester Coating in Secondary Containment areas. All concrete surfaces inside chemical containment areas, including inside wall surfaces, top of wall surfaces, sump area, tank fill area, equipment pads, and tank pads. Use system as manufactured by one of the following or equal:
 - 1. Carboline: Semstone 870
 - 2. Ceilcote: 664 Ceilcrete
 - 3. Dudick: Protecto-Line 800
 - 4. Tnemec; Series 120
- B. Suitable for 72 hours immersion in:
 - 1. 12 percent to 15 percent sodium hypochlorite.
 - 2. 39 percent to 47 percent ferric chloride solution.
 - 3. 40 percent active polymer.
 - 4. 10 percent citric acid.
- C. Preparation:
 - 1. Prepare surfaces in accordance with coating manufacturer's recommendations and as directed and approved by coating manufacturer's Technical Service Department.
- D. Application:
 - 1. Apply prime coat, as required by coating manufacturer, base coat, glass mat, and topcoat to total dry film thickness of 125 mils minimum:
 - a. Final topcoat on floors shall include non-skid surface, applied in accordance with manufacturer's instructions.
 - 2. Perform holiday detection test over 100 percent of coated surface areas to ensure pinhole free finished coating system.
 - 3. All work shall be accomplished in strict accordance with coating manufacturer's instructions and under direction of coating manufacturer's representative.

PART 3 EXECUTION

3.01 GENERAL

- A. All surface preparation, coating and painting shall conform to applicable standards of the National Association of Corrosion Engineers, the Steel Structures Painting Council, the American Concrete Institute, the Forest Products Research Society and the

Manufacturer's printed instructions. Material applied prior to approval of surface by the Owner or owner's representative shall be removed and re-applied to the satisfaction of the Owner or owner's representative at the expense of the Contractor.

- B. All work shall be performed by skilled craftsmen qualified to perform the required work in a manner comparable with the best standards of practice.
- C. Dust, dirt, oil, grease or any foreign matter that will affect the adhesion or durability of the finish must be removed by washing with clean rags dipped in an approved cleaning solvent and wiped dry with clean rags.
- D. Where prime coatings are shop applied, instruct suppliers to provide the prime coat compatible with the finish coat specified. Any off-site work which does not conform to the specification is subject to rejection by the Owner or owner's representative.

Shop applied prime coatings which are damaged during transportation, construction or installation shall be thoroughly cleaned and touched up in the field as directed by the Owner or Owner's representative. Use repair procedures which insure the complete protection of all adjacent primer. The specified repair method and equipment may include wire-brushing, hand or power tool cleaning or dry air blast cleaning. In order to prevent injury to surrounding painted areas blast cleaning may require use of lower air pressure, smaller nozzle and abrasive particle sizes, short blast nozzle distance from surface, shielding and masking. If damage is too extensive or uneconomical to touch-up, the item shall be re-cleaned and coated or painted as directed by the Owner or Owner's representative.

- E. Previously painted surfaces: Repair surface defects. Remove grease, oil and other contaminants as specified for steel surfaces. Scrape carefully to remove deteriorated coatings. Glossy or very hard coatings should be sanded lightly to promote maximum adhesion of the subsequent coating. Surface must be thoroughly dry before coating.
- F. The coating and painting equipment shall be designed for application of materials and shall be maintained in first class working condition. Compressors shall have suitable traps and filters to remove water and oils from the air. The equipment shall be subject to approval by the Owner or Owner's representative.
- G. Application of the first coat shall follow immediately after surface preparation and cleaning and within an eight hour working day. Any cleaned areas not receiving first coat within eight-hour period shall be re-cleaned prior to application of first coat.
- H. Prior to assembly, all surfaces made inaccessible after assembly shall be prepared as specified herein and shall receive the coating or paint system specified.
- I. Material that Contractor believes may be hazardous waste or hazardous material, as defined in Section 25117 of the Health and Safety Code (including, without limitation, asbestos, lead, PCBs, petroleum and related hydrocarbons, and radioactive material) that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law ("hazardous material").
- J. Work involving lead and/or zinc are subject to regulation. Contractor agrees to provide the required notice of intent to renovate or demolish to the appropriate state or federal

agency having jurisdiction, by certified mail, return receipt requested, or by some other method of transmittal for which a return receipt is obtained, and to send a copy of that notice to District. Contractor shall not conduct any Work involving lead-containing materials or zinc unless Contractor has first confirmed that the appropriate agency having jurisdiction is in receipt of the required notification. All permits, licenses, bonds required by governmental or quasi-governmental authorities, fees, deposits, tap fees, offsite easements and lead and zinc disposal facilities necessary for the prosecution of the Work shall be procured and paid for by Contractor. Contractor shall give all notices and comply with the Law bearing on the conduct of the Work as drawn and specified. If Contractor observes or reasonably should have observed that Plans and Specifications and other Contract Documents are at variance there with, it shall be responsible for promptly notifying District in writing of such fact. If Contractor performs any Work contrary to the Law without such notice to District, it shall bear all costs arising there from.

- K. When applicable, contractor shall submit and execute a Lead Compliance Program in accordance with CCR Title 8, Section 1532.1 (Cal/OSHA). The plan shall include the following items:
- Training, medical, and respirator approval documentation for all employees who will work at the site.
 - The identity of the Competent Person, as defined by Cal/OSHA.
 - Material Safety Data Sheets for hazardous materials brought onto the site.
 - The Contractor's procedures for identifying and reporting unforeseen hazards.
 - The names and addresses of the waste hauler and the landfill for hazardous and non-hazardous wastes.

3.02 SURFACE PREPARATION, METALLIC SURFACES

- A. Surface preparation will be based on comparison with: "Pictorial Surface Preparation Standards for Painting Steel Surfaces", SSPC-Vis 1, ASTM Designation D220: "Standard Methods of Evaluating Degree of Rusting on Painted Steel Surfaces", SSPC-Vis 2, ASTM Designation D610; "Visual Standard for Surfaces of New Steel Air-blast Cleaned with Sand Abrasive", NACE Standard TM-01-70; and as described below. Anchor profile for prepared surfaces shall be measured by use of a non-destructive instrument such as a Keane-Tator Surface Profile Comparator or Testex Press-O-Film System.

To facilitate inspection, on the first day of abrasive blast cleaning operations, blast clean metal panels to the standard specified. These panels shall be equivalent to the supplied plate stock which is to be coated or painted and shall have minimum measurements of 8-1/2 inches by 11 inches. After agreeing a specific panel meets the requirements of the specification, it shall be initialed by the Contractor and Owner or Owner's representative prior and coated with a clear non-changing finish. Panels shall be utilized for inspection purposes throughout the duration of blast cleaning operations.

- B. Heavy deposits of grease or oil shall be removed with solvent oil cleaner and any chemical contamination shall be neutralized and/or flushed off prior to any other surface preparation.
- C. Surfaces scheduled for Near White or Commercial Blast Cleaning shall have all welds, edges, and sharp corners ground to a 1/16-inch radius and have all weld splatter removed. Sandblast in accordance with Steel Structures Painting Council Specifications, removing mill scale, rust, dirt, paint, or other foreign matter, leaving a slightly roughened surface to form a suitable anchor pattern for the coating application. Do not leave blasted surfaces overnight before coating. Remove all sand from the surface by brush or industrial vacuum.
- D. All other steel not scheduled for blast cleaning shall have all weld splatter removed, and rough edges and rough welds ground, and shall be cleaned by means of hand or power tools, in accordance with Steel Structures Painting Council Specification No. 2 or No. 3, removing all loose mill scale rust, dirt, paint, or other contaminants. Blast cleaning may be used if practical. The remaining mill scale, rust, and paint must be sufficiently abraded to provide for good bonding of the coating.
- E. Field blast cleaning for all surfaces shall be dry method unless otherwise directed.
- F. Particle size of abrasives used in blast cleaning shall be that which will produce a 2 mil (50.0 microns) surface profile or in accordance with recommendations of the manufacturer of the specified coating or paint system to be applied.
- G. Abrasive used in blast cleaning operations shall be new, washed, graded and free of contaminants that would interfere with adhesion of coating or paint and shall not be reused unless specifically approved by the Owner or Owner's representative.
- H. During blast cleaning operations, caution shall be exercised to insure that existing coatings or paints are not exposed to abrasion from blast cleaning.
- I. Keep the area of work in a clean condition and do not permit blasting materials to accumulate as to constitute a nuisance or hazard to performance of work or operation of existing facilities.
- J. Blast cleaned surfaces shall be cleaned prior to application of specified coatings or paints by a combination of blowing with clean dry air, brushing/brooming and/or vacuuming as directed by the Owner or Owner's representative.
- K. All welds shall be cleaned with a suitable chemical compatible with the specified coating materials.
- L. Specific Surface Preparation: Surface preparation for the specific system shall be as designated in the Systems Index, Part 2.05 of these specifications.
- M. Application SSPC specifications are as follows:
 - 1. Solvent Cleaning (SSPC-SP1): Removal of oil, grease, soil and other contaminants by use of solvents, emulsions, cleaning compounds, steam cleaning or similar materials and methods which involve a solvent or cleaning action.

2. Hand Tool Cleaning (SSPC-SP2): Removal of loose rust, loose mill scale and other detrimental foreign matter to degree specified by hand chipping, scraping, sanding, and wire-brushing.
3. Power Tool Cleaning (SSPC-SP3): Removal of loose rust, loose mill scale and other detrimental foreign matter to degree specified by power wire-brushing, power impact tools or power sanders.
4. White Metal Blast Cleaning (SSPC-SP5): Blast cleaning to a gray-white uniform metallic color until each element of surface is free of all visible residues.
5. Commercial Blast Cleaning (SSPC-SP6): Blast cleaning until at least two-thirds of each element of surface area is free of all visible residues.
6. Brush-off Blast Cleaning (SSPC-SP7): Blast cleaning to remove loose rust, loose mill scale and other detrimental foreign matter to degree specified.
7. Near White Blast cleaning (SSPC-SP10): Blast cleaning to nearly white metal cleanliness, until at least 95 percent of each element of surface area is free of all visible residues.

3.03 SURFACE PREPARATION, CONCRETE AND MASONRY TO BE PAINTED

- A. This section specifies surface preparation for all concrete and masonry that will be painted.
- B. Concrete and masonry shall cure at least 28 days and have a moisture content prior to coating or painting below 8 percent as measured by an instrument such as a Delmhorst Model DP, unless recommended otherwise by the paint manufacturer.
- C. All surfaces shall be thoroughly cleaned by abrasive blasting (ASTM D4259), wire-brushing acid etching (ASTM D4260), or other approved methods, removing all traces of foreign materials. Remove all loose concrete and masonry by chipping or other approved methods to leave only a sound, firmly bonded substrate. Cracks and voids shall be repaired or filled as directed by the Owner or Owner's representative with approved suitable materials, mixed and applied in strict accordance with the Manufacturer's printed instructions. In general, final surface shall be smooth and free of voids, cavities, dirt, dust, oils, grease, or other contaminants.
- D. Where oil or grease deposits are present, prior to above surface preparation, clean surfaces by scrubbing with a solution of one and one-half ounces (44.4 ml) tri-sodium phosphate (TSP) and one and one-half ounces (44.4 ml) of non-sudsing detergent mixed into one gallon (3.785 liters) of warm water. Surfaces shall then be flushed clean with fresh water.
- E. Specific Surface Preparation: Surface preparation for the specific system shall be as designated in the Systems Index, Part 2.05 of these specifications.

3.04 SURFACE PREPARATION, CONCRETE AND MASONRY TO BE SEALED

- A. This section specifies surface preparation for all concrete and masonry that will be sealed.
- B. Concrete and masonry shall cure at least 28 days and have a moisture content prior to coating or painting below 8 percent as measured by an instrument such as a Delmhorst Model DP, unless recommended otherwise by the paint manufacturer.

- C. All surfaces shall be thoroughly cleaned by abrasive blasting (ASTM D4259), wire-brushing acid etching (ASTM D4260), or other approved methods, removing all traces of foreign materials. Remove all loose concrete and masonry by chipping or other approved methods to leave only a sound, firmly bonded substrate. Cracks and voids shall be repaired or filled as directed by the Owner or Owner's representative with approved suitable materials, mixed and applied in strict accordance with the Manufacturer's printed instructions. In general, final surface shall be smooth and free of voids, cavities, dirt, dust, oils, grease, or other contaminants.
- D. Where oil or grease deposits are present, prior to above surface preparation, clean surfaces by scrubbing with a solution of one and one-half ounces (44.4 ml) tri-sodium phosphate (TSP) and one and one-half ounces (44.4 ml) of non-sudsing detergent mixed into one gallon (3.785 liters) of warm water. Surfaces shall then be flushed clean with fresh water.
- E. Specific Surface Preparation: Surface preparation for the specific system shall be as designated in the Systems Index, Part 2.05 of these specifications.

3.05 SURFACE PREPARATION, WOOD AND COMPOSITION MATERIALS

- A. Wood and composite materials shall have a moisture content prior to coating or painting below 15 percent as measured by an instrument such as a Delmhorst Model BD-7, unless recommended otherwise by the paint manufacturer.
- B. All surfaces shall be thoroughly cleaned by use of mineral spirits, scrapers, sandpaper, or wire brushes to remove all dirt, oil, grease or other foreign substances. Finished surfaces exposed to view shall, if necessary, be made smooth by planing or sandpapering. Small, dry, seasoned knots shall be scraped, sandpapered, and thoroughly cleaned, and shall be given a thin coat of WP-578 Western Pine Association knot sealer before application of the priming coat. Large, open unseasoned knots, and all beads or streaks of pitch shall be scraped off, or if the pitch is still soft, it shall be removed with mineral spirits and the resinous area shall be thinly coated with knot sealer. After priming, all holes and imperfections shall be filled with putty or plastic wood (colored to match the finish wood), allowed to dry, and sandpapered smooth. Painting of interior wood and composite materials shall proceed insofar as practicable, only after masonry work has dried. Existing surfaces shall be cleaned of all loose or flaking paint and sandpapered as required.
- C. Specific Surface Preparation: Surface preparation for the specific system shall be as designated in the Systems Index, Part 2.05 of these specifications.

3.06 MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Remove grilles, covers and access panels for mechanical and electrical system from location and coat separately.
- B. Finish coat primed equipment with color selected by the owner or owner's representative.

- C. Prime and coat insulated and bare pipes, conduits, boxes, insulated and bare ducts, hangers, brackets, collars and supports, except where items are plated or covered with prefinished coating.
- D. Replace identification markings on mechanical or electrical equipment when coated over or spattered.
- E. Coat interior surfaces of air ducts, convector and baseboard heating cabinets that are visible through grilles and louvers with 1 coat of flat black paint, to limit of sight line.
- F. Coat dampers exposed immediately behind louvers, grilles, convector and baseboard cabinets to match face panels.
- G. Coat exposed conduit and electrical equipment occurring in finished areas with color and texture to match adjacent surfaces.
- H. Coat both sides and edges of plywood backboards for electrical equipment before installing backboards and mounting equipment on them.
- I. Color code equipment, piping, conduit and exposed ductwork and apply color banding and identification, such as flow arrows, naming and numbering, in accordance with painting schedule and the latest release of the UPC.

3.07 SPECIAL REQUIREMENTS FOR GALVANIZED AND NON-FERROUS METALS

- A. Where galvanized or non-ferrous metals are scheduled to be painted, the surface shall be coated before application of the prime coat with a passivator or vinyl acid wash compound in accordance with the recommendations of the manufacturer of the prime and finish coatings to be used. The thickness of this coating and the zinc galvanizing (if present) shall not be included within the total system thickness as specified in this section.

3.08 MANUFACTURER'S RECOMMENDATIONS

- A. Unless otherwise specified herein, the paint and coating manufacturer's printed recommendations and instructions for thinning, mixing, handling, applying, minimum and maximum re-coat windows, sweat in times, and protection of his coating materials; for preparation of surfaces for coating; and for all other procedures relative to coating shall be strictly observed. Use only manufactures thinners. No substitutions or other deviations will be permitted without written permission of the Owner.

3.09 DELIVERY, STORAGE, AND HANDLING

- A. Delivery:
 - 1. Deliver abrasive grit in original moisture-proof bags or airtight bulk containers.
 - 2. Deliver coating system materials in original, unopened containers with seals unbroken and labels intact. Labels shall identify type of material, color, date of manufacture, and batch number. No batch shall be over twelve months from original date of manufacture.
- B. Storage:

1. Store materials in a single, approved location.
2. Store coating system materials in enclosed and ventilated structures. Maintain temperature inside the structure within the temperature range recommended by the manufacturer.
3. Coating materials and equipment shall be stored in designated areas. Coating containers shall be opened only when required for use. Coatings shall be mixed only in designated rooms or spaces in the presence of the Owner's Representative. Coating shall be thoroughly stirred, boxed or agitated utilizing air powered or electric drills to uniformly smooth consistency and prepared and handled in a manner to prevent deterioration and inclusion of foreign matter. Unless otherwise specified or approved, no materials shall be reduced, changed, or used except in accordance with the manufacturer's label or data sheet. All coatings shall be VOC compliant.

3.10 SAFETY REQUIREMENTS

- A. In accordance with the requirements of the applicable OSHA Regulations for Construction, the Contractor shall provide and require the use of personal protective lifesaving equipment for all persons working in or about the project site.
- B. Respirators shall be worn by all persons engaged in, and assisting in, spray painting. In addition, workers engaged in or near the work during sandblasting shall wear eye and face protection devices meeting the requirements of ANSI Z87.1 latest revision, and approved OSHA Regulations for abrasive blasting operations and approved air-purifying, half-mask or mouthpiece respirator with appropriate filter. All blast line couplings shall be equipped with cable chokers and automatic shut off devices.
- C. Ventilation. Where ventilation is used to control potential exposure to workers as set forth in Section 1914.94 of the OSHA Regulations for Construction, ventilation shall be adequate to reduce the concentration of the air contaminant to the degree that a hazard to the worker does not exist. Methods of ventilation shall meet the requirements set forth in ANSI-Z9.2, latest revision.
- D. Sound Levels. In accordance with Sections 1926.52 and 1926.101 of OSHA Regulations For Construction, whenever the occupational noise exposure exceeds maximum sound levels as set forth in Table D-2 ear protective devices shall be fitted and determined individually and used, and a continuing, effective hearing conservation program shall be administered.
- E. Storage and mixing of coating materials shall be performed only in those areas designated by the Owner. All coatings and thinners shall be stored in a locked container with proper ventilation. All compressors shall be placed in secondary containment.
- F. Cloths and cotton waste that might constitute a fire hazard shall be placed in closed metal containers or destroyed at the end of each work day.

3.11 STORAGE MIXING AND THINNING

- A. Paint and coating materials shall be protected from exposure to cold weather, and shall be thoroughly stirred, strained, and kept at a uniform consistency during application. Materials of different manufacturers shall not be mixed together. Packaged materials

may be thinned immediately prior to application in accordance with the manufacturer's directions. Only mixing of full kits will be allowed, No splitting of kits.

3.12 WORKMANSHIP

- A. Skilled craftsmen and experienced supervision shall be used on all work.
- B. All paint and coatings shall be applied in a workmanlike manner so as to produce an even film of specified uniform thickness. Edges, corners, crevices, and joints shall receive special attention to insure that they have been thoroughly cleaned and that they receive an adequate thickness of paint. The finished surfaces shall be free from runs, drops, drips, ridges waves, laps, brush marks, and variations in color, texture, and finish. The hiding shall be so complete that the addition of another coat of paint would not increase the hiding. All coats shall be applied so as to produce a film of uniform thickness. Special attention shall be given to insure that edges, corners, crevices, welds, and similar areas receive a film thickness equivalent to adjacent areas, and installations shall be protected by the use of drop cloths or other approved precautionary measures.

3.13 PREPARATION FOR PAINTING AND PROTECTIVE COATING

- A. All surfaces to receive paint and protective coatings shall be cleaned as specified herein prior to application of coating materials. The Contractor shall examine all surfaces to be coated, and shall correct all surface defects before application of any coating material. Beginning the work of this Section without reporting unsuitable conditions to the Owner constitutes acceptance of conditions by the Contractor. Any required removal, repair, or replacement of this work caused by unsuitable conditions shall be done at no additional cost to the Owner. All marred or abraded spots on shop-primed and factory-finished surfaces shall receive touch-up restoration prior to any other coating application.

3.14 ITEMS NOT TO BE COATED

- A. Hardware, hardware accessories, name plate data tags, machined surfaces and similar items in contact with coated surfaces not to be coated shall be removed or masked prior to surface preparation and painting operations. Following completion of coating of each piece, removed items shall be reinstalled. Such removal and installation shall be done by workmen skilled in the trades involved.

3.15 ABRASIVE BLASTING

- A. All abrasive blasting shall be done in strict accordance with the referenced specifications of the Steel Structures Painting Council and shall conform to all regulations of the local and State (CARB) Air Pollution Control Agency.
- B. When items are to be shop primed or shop primed and finish coated in the shop, surface preparation shall be as specified in this Section. The Owner shall have the right to witness, inspect, and reject any Abrasive blasting done in the shop. If automatic blast units are used the working mixture of abrasive shall be 75% grit and 25% shot.

- C. For treatment plant facilities and other applicable areas- Contractor shall provide suitable protection from inclement weather while Abrasive blasting is in progress to ensure that all required standards for surface preparation are met. Should unforeseen difficulties develop in performing abrasive blasting outside the plant, Owner may allow temporary relocation of materials and equipment to designated areas inside the plant to maintain progress. Such permission shall be granted entirely at Owners discretion, must be in writing, and shall not relieve Contractor's responsibility for maintaining required standards of quality and progress on the work. When abrasive blasting is done inside the plant, care shall be taken to prevent damage to structures and equipment. The work area shall be enclosed by tarps and or dust collectors and, in addition, pumps, motors, and other equipment shall be shielded, covered, or otherwise protected to prevent the entrance of abrasive or dust. No dust or overspray shall leave the tarp enclosure. Contractor shall be responsible for all over-spray and dust claims and any related damage. All blast equipment shall be equipped with oil/water separators and dryers. Air stream testing shall be performed daily in accordance with ASTM D 4285.
- D. No Abrasive blasting may begin before the Owner inspects and approves the protective measures. The Contractor shall be responsible for all damage caused by or resulting from Abrasive blasting in all cases. Contractor shall be responsible for disposal of all blast residue in accordance with applicable Federal, State and Local regulations.
- E. After abrasive blasting, dust and spent sand shall be removed from the surfaces by brushing and vacuum cleaning. Contractor shall be responsible for all cost for disposal of all blast residue in accordance with applicable Federal, State and Local regulations.
- F. Dispose of all wastes from abrasive blasting, and any other wastes generated during the Work. Sample and test wastes as required by regulatory agencies, and as necessary for classification of wastes prior to disposal. This work includes all costs for waste sampling, testing, accumulation, transport, and disposal, including the cost for wastes classified as hazardous and non-hazardous.
- G. To facilitate inspection, the Contractor shall, on the first day of abrasive blasting operations, provide and abrasive blast metal panels to the degree called for in the Specifications and as noted above. After Owner and Contractor mutually agree that a specific panel meets the requirements of the Specification, the panel shall be initialed by the Contractor and Owner and then be coated with a clear, non-yellowing finish. Panels shall be prepared for each type abrasive blasting specified and shall be maintained and utilized by the Inspector throughout the duration of abrasive blasting operations.

If lead is present on the project, a lead stabilization system may be used such as: Enviro-Prep 33010, manufactured by Hoffers Coatings, or equal. The system Chemical stabilization process shall render the paint non-hazardous which shall be tested and verified by the contractor. The material shall be disposed appropriately according to current regulations.

3.16 APPLICATION OF PROTECTIVE COATINGS

- A. Shop Coating: Fabricated metalwork and equipment which requires coating may be shop primed with specified primer, the field top coat will be from the same manufacture.

Any such work delivered to the job site with any other shop coat shall have this coating removed and the specified coating applied in the field. Contractor shall be fully aware of all maximum re-coat times. Manufactured equipment with approved corrosion resistant factory finishes and galvanized finishes shall be exempt from this requirement of stripping. No red primers shall be allowed.

B. Application of Field Coatings:

1. Except where in conflict with the manufacturer's printed instructions, or where other wise specified herein, the Contractor may use brush, roller, air spray, or airless spray application; however, any spray painting must first have the approval of the Owner. Rollers for applying enamel shall have a short nap. Areas inaccessible to spray coating or rolling shall be coated by brushing or other suitable means.
2. The Contractor shall give special attention to the work to insure that edges, corners, crevices, welds, bolts, and other areas, as determined by the Owner, receive a film thickness at least equivalent to that of adjacent coated surfaces. All coatings shall be uniform in gloss, color and appearance.
3. All protective coating materials shall be applied in strict accordance with the manufacturer's printed instructions.
4. Prime coat shall be applied to cleaned surfaces within a four hour period of the cleaning, and prior to deterioration or oxidation of the surface and in accordance with the manufacturer's recommendations. Drift from Abrasive blasting procedures shall not be allowed to settle on freshly painted surfaces, work area shall be clear of all visible dust.

All coatings shall be applied in dry and dust-free environment. Do not apply coatings when air temperature is less than 5 degrees F above dew point. No, coating or paint shall be applied when the surrounding air temperature, measured in the shade, is below 50 degrees F.

5. The Contractor shall provide a heated environment to obtain temperature and humidity conditions if necessary to meet schedule requirements at no additional cost to the Owner.
6. Do not abrasive blast when air temperature is less than 5 degrees F above dew point. No coating or paint shall be applied when it is expected that the relative humidity will exceed 85 percent or that the air temperature will drop below 55 degrees F. within eight hours after the application of the coating or paint. Dew or moisture condensation should be anticipated and if such conditions are prevalent, coating or painting shall be delayed until mid-morning to be certain that the surfaces are dry. The day's coating or painting shall be completed well in advance of the probable time of day when condensation will occur, in order to permit the film a sufficient drying time prior to the formation of moisture or reaching the dew point.
7. Each coat shall be applied evenly, at the proper consistency, and free of brush marks, sags, runs, over spray, pin holes and other evidence of poor workmanship.

Care shall be exercised to avoid lapping paint on glass or hardware. Coatings shall be sharply cut to lines. Finished coated surfaces shall be free from defects or blemishes. Protective coverings shall be used to protect floors, -fixtures, and equipment. Care shall be exercised to prevent paint from being spattered onto surfaces from which such paint cannot be removed satisfactorily. Surfaces from which paint cannot be removed satisfactorily shall be painted or repainted as required to produce a finish satisfactory to the Owner. Whenever two (2) coats of a dark, colored paint, are specified, the first coat shall lighter color to act as an indicator of proper coverage, or the two (2) coatings shall be of a contrasting color.

8. Touch-up of all surfaces shall be performed after installation.
 9. All surfaces to be coated shall be clean and dry at the time of application.
 10. Holiday test 100% per NACE RPO-188 all coatings in immersion and vapor areas, until no holidays are detected.
- C. Time of Coating:
1. Manufacturer's recoat time shall be strictly complied with. Sufficient time shall be allowed to elapse between successive coats to permit satisfactory recoating, but, once commenced, the entire coating operation shall be completed without delay. No additional coating of any structure, equipment, or other item designated to be painted shall be undertaken without specific permission of the Owner until the previous coating has been completed for the entire structure, piece of equipment, or other item.
 2. Piping shall not be finish coated until it has been pressure tested and approved.
- D. Thickness of Coating: The dry film mil-thickness specified shall be achieved and verified for each coat, before applying next coat.

3.17 TESTING AND INSPECTION

- A. Inspection Devices:
1. The Contractor shall furnish, until final acceptance of coating and painting, inspection devices in good working condition for detection of holidays and measurement of dry-film thickness of coatings and paints.
 2. The Contractor shall also furnish U.S. Department of Commerce, National Bureau of Standards certified thickness calibration plates to test accuracy of dry-film thickness gauge and certified instrumentation to test accuracy. Dry-film thickness gauges shall be made available for the Inspector's use at all times until final acceptance of application. Holiday detection devices shall be operated in the presence of the Inspector. Inspection devices shall be operated in accordance with the manufacturer's instructions at the direction of the Owner's Representative.
- B. The Inspector and Contractor shall conduct film thickness measurements and electrical holiday inspection of the coated surfaces with equipment furnished by him and shall recoat and repair as necessary for compliance with the Specifications. Contractor shall provide all manpower to move scaffolding and or ladders.

1. After repaired and recoated ferrous metals areas have cured, final inspection tests will be conducted by the Owner or Owner's Representative. Coating thicknesses specified in mils on ferrous substrates will be measured with a nondestructive magnetic type dry-film thickness gage such as the Positech 6000. Discontinuities, voids and pinholes in the coatings will be determined with a nondestructive type electrical holiday detector. Epoxy coatings and other thin film coatings will be checked for discontinuities and voids with a low voltage detector of the wet-sponge type, such as Model M1 as manufactured by Tinker and Razor. Use a non-sudsing type wetting agent, such as Kodak Photo-Flo, which shall be added to the water prior to wetting the sponge. A high voltage, low current, spark type detector such as, manufactured by D.E. Sterns 14/20. Contractor shall supply three 14" wire brush wands. Tape type coatings will be inspected for holidays using a device designed for use in detecting such flaws. All pinholes shall be marked, repaired in accordance with the manufacturer's printed recommendations and retested. No pinholes or other irregularities will be permitted. Coatings not in compliance with the Specifications will not be acceptable and shall be replaced, and re-inspected at Contractor's expense until the Specifications are met.
2. Provide adequate lighting, without shadows, during all phases of work to insure that work is performed as specified. Illuminate entire area of work.
3. Provide ground supported scaffolding and lighting, as determined by the Inspector, to facilitate visual and instrument inspection by the Inspector of each phase of the work and of the completed work. Place as directed to minimize glare and shadows.
4. Provide personnel to move scaffolding and furnish other assistance to the District or District's representative as required.
5. Inspector will examine surfaces after blast cleaning to verify that all deposits of contaminants have been removed. Contractor shall blow down, and vacuum all surfaces prior to inspection.
6. Verify at a minimum of two times daily that air supply is free of oil and moisture contamination. Effective oil and water separators shall be used in all main compressor- airlines and shall be placed as close as practicable to the equipment. Prior to using compressed air, quality of air downstream of the separators shall be tested at suitable outlets by blowing the air on clean white blotter for 2 minutes to check for any contamination, oil, or moisture.
7. Measure air temperature, humidity, relative humidity, and metal surface temperature, and determine dew point and relative humidity prior to abrasive blasting or painting each day. Provide portable temperature / humidity recorders to provide continuous permanent hard copy of the reservoir conditions. Repeat measurements and determination of dew point as often as the Inspector deems necessary but not less often than every four hours.
8. Maintain a written record of measurements and dew points, and time that measurements were taken. Make record available to Inspector immediately on request.
9. Inspector will evaluate surface preparation using field abrasive blasting standards, and Testex tape. Evaluation will include inspection of blasted surfaces for dust and abrasive residue, using clear adhesive coated tape. Evaluation will be made immediately prior to coating application. Contractor will furnish 4 rolls of Testex tape 1.5 to 2.5 mils X-course prior to the start of abrasive blasting.
10. Verify cleanliness of all spray application equipment prior to, or no later than, time of mixing coating material.

11. Measure wet film thickness during coating application of coating to ensure adequate coating thickness. Take at least one measurement every 100 square feet.
 12. Measure dry film thickness after each coat using a non-destructive magnetic dry film thickness gauges.
 13. Inspector will also measure coating thickness, at random locations, after each coat.
 14. Inspector will evaluate cleanliness of coated surface immediately prior to application of a subsequent coat.
- C. Contractor shall test all coated surfaces for pinholes and holidays after application of the final coat in accordance with the following:
1. Perform test in presence of Inspector, or the inspector has the right to perform all testing.
 2. Perform test after coating has cured as recommended by the manufacturer. Immersion coatings: Contractor shall provide letter that coating is fully cured and ready to be placed in service.
 3. Re-test after coating repairs.
 4. On non-ferrous surfaces, dry film thickness readings shall be taken at random locations with a Tooke Gauge at the rate of approximately five readings per 100 square feet of surface. Grooves cut into coating shall be repaired by application of all coats of paint or coating film being tested. The average of all readings for a given area or surface shall be within required dry film thickness range and no individual reading shall be more than .1 percent below the recommended dry film thickness. Any areas that are found to be below standard shall be marked and recoated to obtain proper film thickness.
- D. Warranty Inspection: Warranty inspection shall be conducted during the warranty period following completion of all coating and painting work. All personnel present at the Pre-Job Conference shall attend this inspection. All defective work shall be repaired in accordance with this specification and to the satisfaction of the Owner or his appointed representative. The inspection shall be conducted in coordination with the owner prior to the 3-year warranty expiration unless otherwise agreed upon by Owner.

3.18 CLEANUP

- A. Upon completion of the work, staging, scaffolding, and containers shall be removed from the site or destroyed in an approved manner. Paint spots, oil, or stains upon adjacent surfaces shall be removed.
- B. The Contractor shall clean the site in accordance with the requirements for "Cleaning Up" in the "General Conditions."

3.19 COATING SCHEDULE

- A. General: The following Coating System Schedule shall indicate the coating system to be used. The list shall not be construed as a complete list of all surfaces to be coated but rather as a guide as to the application of the various coating systems. All Contractor installed surfaces shall be painted except those specifically deleted herein.

The Owner shall select the colors. Where reference is made to ferrous metal in this schedule, it shall not include stainless steel.

COATING SYSTEM SCHEDULE

Item	Service Condition
B. General	
Submerged and intermittently submerged ferrous metals	A
Ferrous metals subject to corrosive atmospheres and, condensations	C
Aluminum and nonferrous metals in corrosive atmospheres and condensation	D
Submerged and intermittently submerged moving parts	E
Submerged and intermittently submerged concrete surfaces	F
Exposed ferrous and galvanized metals-normal interior and exterior atmospheres	B
All exposed ferrous piping, brackets and fittings	B

SECTION 01411

REGULATORY REQUIREMENTS - HAZARDOUS MATERIALS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Regulatory requirements applicable to Work in connection with hazardous waste abatement and disposal including, but not limited to, asbestos and asbestos-containing materials, lead-based paint, polychlorinated biphenyls, petroleum-contaminated soils and materials, construction and demolition debris and any other hazardous substance or hazardous waste.
- B. This Section supplements Section 01410 (Regulatory Requirements) and the Work-specific listings of applicable regulatory requirements elsewhere in the Specifications.

1.2 REFERENCES TO REGULATORY REQUIREMENTS

- A. Codes, laws, ordinances, rules and regulations applicable to the Work shall have full force and effect as though printed in full in Contract Documents. Codes, laws, ordinances, rules and regulations are not furnished to Contractor, because Contractor is assumed to be familiar with their requirements. The listing herein of applicable codes, laws, and regulations for hazardous waste abatement work is supplied to Contractor as a courtesy and shall not limit Contractor's responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements of or with these Specifications exists, the most stringent requirements shall be used.
- B. Conform to all applicable codes, laws, ordinances, rules and regulations that are in effect on date of contracting.

1.3 LAWS, ORDINANCES, RULES, AND REGULATIONS

- A. During prosecution of Work under Contract Documents, Contractor shall comply with applicable laws, ordinances, rules and regulations including, but not limited to, those listed below.
- B. Federal:
 - 1. Statutory Requirements:
 - a. Resource Conservation and Recovery Act, 42 U.S.C. Sections 6901 *et seq.*
 - b. Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U. S.C. Sections 9601 *et seq.*
 - c. Toxic Substances Control Act of 1976, 15 U.S.C., Sections 2601 *et seq.*
 - d. Hazardous Materials Transportation Act of 1975, 49 U.S.C. Sections 1801 *et seq.*
 - e. Clean Water Act, 33 U.S.C. Sections 1251 *et seq.*
 - f. Safe Drinking Water Act, 42 U.S.C., Sections 3001 *et seq.*

- g. Clean Air Act, Section 112, 42 U.S.C., Section 7412
 - h. Occupational Safety and Health Act of 1970, 29 U.S.C., Sections 651 *et seq.*
 - i. Underground Storage Tank Law, 42 U.S.C., Sections 6991 *et seq.*
 - j. The Emergency Planning and Community Right to Know Act of 1986, 42 U.S.C., Sections 11011 *et seq.*
2. Environmental Protection Agency (EPA):
- a. 40 C.F.R. Parts 260, 264, 265, 268, 270
 - b. 40 C.F.R. Parts 258 *et seq.*
 - c. 40 C.F.R. Part 761
 - d. 40 C.F.R. Parts 122-124
3. Occupational Safety and Health Administration (OSHA):
- a. OSHA Worker Protection Standards, Title 29 C.F.R. Part 1926.58, Construction Standards and 29 C.F.R. 1910.1001 General Industry Standard
 - b. OSHA, 29 C.F.R. Part 1926.1101, Construction Standards for Asbestos
 - c. OSHA, Lead Exposure in Construction: Interim Final Rule, 29 C.F.R. 1926.62
 - d. National Emission Standard for Hazardous Air Pollutants, Title 40 C.F.R. Part 61
 - e. Asbestos Hazardous Emergency Response Act, Title 40 C.F.R. 763
4. Department of Transportation:
- a. Title 49 C.F.R. 173.1090
 - b. Title 49 C.F.R. 172
 - c. Title 49 C.F.R. 173
 - d. DOT, HM 181 and MH126f
- C. State of California Requirements:
1. Statutory Law:
- a. The Carpenter-Presley-Tanner Hazardous Substance Account Act, Health & Safety Code, Sections 25300 *et seq.*
 - b. Health and Safety Code, Section 25359.4
 - c. Hazardous Waste Control Law, Health & Safety Code, Sections 25100 *et seq.*
 - d. Porter-Cologne Water Quality Control Act, Water Code, Sections 13000 *et seq.*
 - e. Health and Safety Code, Sections 25915-25924
 - f. California Labor Code Chapter 6, including, without limitation, Sections 6382, 6501.5-6501.9, 6503.5, 9021.5, 9080
 - g. Business and Professions Code, including without limitation, Sections 7058.5, 7065.01, 7118.5
 - h. Underground Storage of Hazardous Substance Act, Health and Safety Code, Sections 25280 *et seq.*
 - i. Petroleum Underground Storage Tank Cleanup, Health and Safety Code, Sections 25299.10 *et seq.*
 - j. Safe Drinking Water and Toxic Enforcement Act of 1986, Health & Safety Code, Sections 25249.5 *et seq.* (Proposition 65)

- k. Above Ground Petroleum Storage Act, Health and Safety Code, Sections 25270 *et seq.*
- l. Hazardous Materials Release Response Plans and Inventory, Health and Safety Code, Chapter 6.95
- 2. Administrative Code and Regulations:
 - a. Title 22 CCR Division 4.5, Environmental Health Standards for the Management of Hazardous Waste, Sections 6600 *et seq.*
 - b. Cal/OSHA Worker Protection Standards, Title 8 CCR, Sections 1529, 5208
 - c. Title 8 CCR, Section 1532.1, Lead in Construction
 - d. Title 23 CCR, Sections 2610 *et seq.*
- 3. Local Agency Requirements:
 - a. Central Valley Air Quality Management District, Fugitive Dust Rules
 - b. Central Valley Air Quality Management District Regulation
 - c. State Water Resource Control Board, General Construction Activity Stormwater Permit Requirements (Order 92-OS DWQ)
- 4. Local Agency Requirements:
 - a. **[none]**

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

EXHIBIT A

(Registered Professional Forester)

Typical Registered Professional Forester work to be performed for the District may include, but is not limited to, the following:

- Develop timber harvest documents, including without limitation, timber harvest plans and timber sale contracts and documents for related activities such as mastication
- Develop timber management plan(s) for District properties
- Administer all stages of timber harvests and related activities such as mastication, including without limitation, the bidding process and performance of each project
- Cruise timber for such purposes as, for example, estimating volume and assessing forest health (i.e. pest and disease infestation, etc.)
- Mark timber and perimeter of harvest areas
- Maximize value received for timber harvest products
- Prepare, file and obtain necessary applications and other approvals from, and interface with, federal, state and local regulatory agencies, including without limitation, California Department of Forestry and Fire Protection, California Department of Fish and Game, and the Regional Water Quality Control Board
- Interface with licensed timber operators and others in the timber industry, including without limitation, sawmill operators, and interface with others performing related services such as brush removal and machine mastication
- Develop Vegetation Management Plan(s) in cooperation with California Department of Forestry and Fire Protection and California Department of Fish and Game
- Prepare applications and administer contracts for cost share programs
- Prepare memos and make presentations to District staff and the Board of Directors regarding timber management and harvests and water shed issues
- Work with affected landowners and District staff to avoid and/or mitigate potential conflicts and land use issues
- Participate in public outreach concerning timber harvests and/or management
- Provide expertise regarding timber harvests and management as well as related areas such as brush removal and fire hazard reduction
- Perform other related tasks

EXHIBIT A

(Regulatory Permitting)

Typical Regulatory NPDES and WDR Permitting work to be performed for the District may include, but is not limited to, the following:

- Studies/reports preparation
- Collection of Data
- Meetings with Regulatory Agency(s)
- Preparing permit applications(s)
- Project coordination meetings at designated intervals may be required

EXHIBIT A
(Surface Water Hydrology)

Typical Surface Water Hydrology work to be performed for the District may include, but is not limited to, the following:

- Model Development
- Assistance in Model Implementation
- Studies/Reports
- Regulatory Support

These services will be needed in the following disciplines:

- Watershed Hydrology
- Statistical Hydrology
- Hydroelectric Project Operations
- Flood Analysis
- Water Rights
 - Technical analysis
 - Accounting
- Water Supply
 - Reliability and availability of water supply
 - Water supply forecasting procedures

EXHIBIT A
(Survey)

Typical Survey work to be performed for the District may include, but is not limited to, the following:

- Preparation of easement legal descriptions and exhibit plats
- Preparation of detailed topographic map(s) for specific sites and strips for design of projects
- Three point reference within boundaries of survey noting coordinates based on North American Datum 1984, California State Plane II Feet (NAD 84, CA-IIF)
- Provide horizontal and vertical control for design and construction
- Prepare “As-Builts” surveys
- Conduct aerial survey
- Attendance at Project coordination meetings at designated intervals may be required
- Provide electronic survey data for use in design drawings

The District utilizes AutoCAD for the design of District facilities. All survey data supplied to the District shall be in AutoCAD in an electronic format. Enclosed are the District’s standard layer conventions.

All work submitted to the District will be required to be certified by a licensed land surveyor.

Definition of Survey Layers:

Layer	State	Color	Linetype
0	On	7	CONTINUOUS
E-pl	On	4	PHANTOM
S-BND-TEXT	On	3	CONTINUOUS
DESC	On	4	CONTINUOUS
E-ASPHALT	On	8	CONTINUOUS
E-BUILDING	On	1	DASHED
E-CL	On	50	CENTER
E-CONC	On	9	CONTINUOUS
E-CURB	On	7	CONTINUOUS
E-DITCH	On/Frozen	140	CONTINUOUS
E-DRIVEWAY	On	9	DASHED
E-ELEC	On	10	CONTINUOUS
E-FENCE	On	7	CONTINUOUS
E-FLOWLINE	On	4	CONTINUOUS
E-GAS	On	50	CONTINUOUS
E-BRIDGE	On	2	CONTINUOUS
E-IRRIGATION	On	150	CONTINUOUS

E-RAILROAD	On	200	CONTINUOUS
E-ROAD-PAVE	On/Frozen	2	DASHED
E-WETLANDS	On	190	DASHDOT
E-SIGN	On	7	CONTINUOUS
E-STORM	On	140	CONTINUOUS
E-WALK	On	8	CONTINUOUS
E-WALL	On	1	DASHED
E-WATER	On	1	DASHED
S-MON-FD	On	6	CONTINUOUS
S-MON-SET	On	3	CONTINUOUS
PNTS	On	6	CONTINUOUS
ELEV	On	3	CONTINUOUS
E-ASPHALT-PT	On/Frozen	8	CONTINUOUS
E-GRND-BNK-BT-PT	On/Frozen	240	CONTINUOUS
E-GRND-BNK-TP-PT	On/Frozen	200	CONTINUOUS
E-BUILDING-PT	On/Frozen	1	CONTINUOUS
E-CL-PT	On/Frozen	50	CONTINUOUS
E-CONC-PT	On/Frozen	9	CONTINUOUS
E-CURB-LIP-PT	On/Frozen	4	CONTINUOUS
E-CURB-TOP-PT	On/Frozen	6	CONTINUOUS
E-DITCH-PT	On/Frozen	140	CONTINUOUS
E-DRIVEWAY-PT	On/Frozen	7	CONTINUOUS
E-ELEC-PT	On/Frozen	10	CONTINUOUS
E-FENCE-PT	On/Frozen	7	CONTINUOUS
E-FLOWLINE-PT	On/Frozen	4	CONTINUOUS
E-GAS-PT	On/Frozen	50	CONTINUOUS
E-BRIDGE-PT	On/Frozen	4	CONTINUOUS
E-GRND-PT	On/Frozen	4	CONTINUOUS
E-IRRIGATION-PT	On/Frozen	4	CONTINUOUS
E-RAILROAD-PT	On/Frozen	4	CONTINUOUS
E-ROAD-DIRT-PT	On/Frozen	4	CONTINUOUS
E-ROAD-PAVE-PT	On/Frozen	7	CONTINUOUS
E-ROAD-SHLD-PT	On/Frozen	40	CONTINUOUS
E-WETLANDS-PT	On/Frozen	190	CONTINUOUS
E-SIGN-PT	On/Frozen	4	CONTINUOUS
E-STORM-PT	On/Frozen	140	CONTINUOUS
E-WALK-PT	On/Frozen	8	CONTINUOUS
E-WATER-PT	On/Frozen	170	CONTINUOUS
S-CALC-PT	On/Frozen	7	CONTINUOUS
S-MON-FD-PT	On/Frozen	6	CONTINUOUS
S-MON-SET-PT	On/Frozen	3	CONTINUOUS
S-TRAV-PT	On/Frozen	9	CONTINUOUS
E-MAIL	On	6	CONTINUOUS
E-PAINT-BLUE	On	180	BORDER
E-PAINT-GREEN	On	100	BORDER
E-PAINT-ORANGE	On	30	BORDER
E-PAINT-RED	On	10	BORDER
E-PAINT-YEL	On	50	BORDER

E-SANITARY	On	100	CONTINUOUS
E-MAIL-PT	On/Frozen	6	CONTINUOUS
E-SANITARY-PT	On/Frozen	100	CONTINUOUS
S-TRAV	On	9	CONTINUOUS
E-ELEC-OH	On	10	DASHDOT
E-TREE	On	3	CONTINUOUS
E-TREE-PT	On/Frozen	4	CONTINUOUS
E-BRUSH	On	3	CONTINUOUS
E-BRUSH-PT	On/Frozen	3	CONTINUOUS
E-TRAF	On	7	CONTINUOUS
E-TRAF-PT	On/Frozen	4	CONTINUOUS
E-CURB-BACK-PT	On/Frozen	4	CONTINUOUS
E-TRASH	On	6	CONTINUOUS
E-TRASH-PT	On/Frozen	6	CONTINUOUS
E-GRND-FAULT	On/Frozen	40	CONTINUOUS
E-GRND-FAULT-PT	On/Frozen	50	CONTINUOUS
E-GRND-ROCK-PT	On/Frozen	45	CONTINUOUS
E-PAINT-BLUE-PT	On/Frozen	180	BORDER
E-PAINT-GREEN-PT	On/Frozen	100	BORDER
E-PAINT-ORGE-PT	On/Frozen	30	BORDER
E-PAINT-RED-PT	On/Frozen	10	BORDER
E-PAINT-YEL-PT	On/Frozen	50	BORDER
E-TRAF-YEL-STP	On	50	CONTINUOUS
E-TRAF-WH-STP	On	7	CONTINUOUS
E-WALL-TOP-PT	On/Frozen	50	CONTINUOUS
E-WALL-BOT-PT	On/Frozen	4	CONTINUOUS
S-ADJOINERS	On	3	DIVIDE
S-BND-DIMS	On	3	CONTINUOUS
E-easement	On	3	DASHED
S-PARCELS	On	2	DASHED
S-RW	On	1	CONTINUOUS
E-index	On	1	DOT3
E-interm	On	3	DOT4
S-CALC	On	7	CONTINUOUS
S-CONT-SET-PT	On/Frozen	40	CONTINUOUS
S-CONTROL	On	40	CONTINUOUS
E-WALL-PT	On/Frozen	6	CONTINUOUS
E-CONTOUR-TEXT	On	3	CONTINUOUS
E-GRND-ROCK	On	45	CONTINUOUS
E-ROAD-DIRT	On	9	CONTINUOUS
NOTES	On	3	CONTINUOUS
E-BUILDING-FF-PT	On/Frozen	210	CONTINUOUS
S-PARCELS-TEXT	On	3	CONTINUOUS
E-CURB-FL-PT	On/Frozen	2	CONTINUOUS
A-FRAME	On	1	CONTINUOUS
E-VINEYARD-PT	On/Frozen	4	CONTINUOUS
A-TEXT	On	3	CONTINUOUS
S-CONT-SET	On	7	CONTINUOUS

E-MISC-PT	On/Frozen	7	CONTINUOUS
E-CONTOUR-BORDER	On/Frozen	2	CONTINUOUS
S-RADIAL	On	7	DOT
DEFPOINTS	On	7	CONTINUOUS
DCA_INFO	On	7	CONTINUOUS
SRF-FLT	On/Frozen	7	CONTINUOUS
1-DETAILROAD	On	1	CONTINUOUS
NORTH-ARROW	On	7	CONTINUOUS
P-tank	On	5	CONTINUOUS
P-wl	On	6	CONTINUOUS
P-index	On	1	CONTINUOUS
P-interm	On	4	CONTINUOUS
P-conc	On	32	CONTINUOUS
P-text	On	3	CONTINUOUS
HC-ESMT-EX	On	2	HIDDEN2
HC-ADJ-LOTS	On	2	HIDDEN2
HC-RW-OFFSITE	On	4	PHANTOM
HC-CL-OFFSITE	On	2	CENTER2
STALBL	On	7	CONTINUOUS
STAPTS	On	7	CONTINUOUS
DAYLIGHT	On	7	CONTINUOUS
EOP	On	2	CONTINUOUS
DITCH	On	6	REY-SWA1
GRAD-SLOPE	On	4	CONTINUOUS
EOR	On	4	CONTINUOUS
STA-TEMP	On/Frozen	120	CONTINUOUS
FTR-CL	On	4	CENTER2
FTR-RW	On	5	HIDDEN
TEXT	On	3	CONTINUOUS
A-FENCE	On	9	CONTINUOUS
A-UTIL	On	8	CONTINUOUS
A-CONC	On	9	CONTINUOUS
A-H_WATER_LINE	On	9	CONTINUOUS
A-ROCK_O	On/Frozen	9	CONTINUOUS
A-BRUSH	On/Frozen	9	CONTINUOUS
A-GRASS	On/Frozen	9	CONTINUOUS
A-TREE_D	On	9	CONTINUOUS
A-H_INTERM	On	14	CONTINUOUS
SHED	On	3	CONTINUOUS
E-ESMT	On	4	DASHED
BORDER	On	6	CONTINUOUS
LINES	On	7	CONTINUOUS
PAPER	On/Frozen	7	CONTINUOUS
morss-cl	On	3	CENTER
shldr	On	1	CONTINUOUS
EP	On	2	CONTINUOUS
interm-rd	On	3	CONTINUOUS
STORM-DRAIN	On	240	CONTINUOUS

CONT-MJR	On	5	CONTINUOUS
CONT-MNR	On	2	CONTINUOUS
proposed-rw	On	4	PHANTOM
ditch-pr	On	2	SWALE
HC-OWNERS-TXT	On	2	CONTINUOUS
HC-ESMT-EX-TXT	On	2	CONTINUOUS
SRF-VIEW	On	7	CONTINUOUS
S-EASEMENT	On	6	CONTINUOUS
E-TREE-SIZE	On	3	CONTINUOUS
P-EP	On	55	HIDDEN2
P-TOE_TOP	On	190	DIVIDE2
A-FND	On	8	CONTINUOUS
P-ESMT	On	3	DASHED
P-FENCE	On	6	FENCELINE2
VP-1TEXT	On	2	CONTINUOUS
VP-2TEXT	On	2	CONTINUOUS
P-cl	On	4	CENTER2
A-D_ROAD	On	9	CONTINUOUS
E-36WL	On	1	DASHED
P-WL-STA	On	3	CONTINUOUS
FTR-EP	On	2	DASHED
FTR-CURB	On	30	HIDDEN
E-wl	On	1	DASHED
Vp	On	6	CONTINUOUS
PROFILE	On	1	CONTINUOUS
TITLE	On	2	CONTINUOUS
P-press-tk	On	5	CONTINUOUS
P-pmp-bld	On	1	CONTINUOUS

EXHIBIT A

(Water/Wastewater Laboratory Analysis)

This category is split into two groups; A) Drinking Water/Surface Water, and B) Wastewater/Biosolids. Consultant may submit for either A, B, or both A and B groups.*

To be considered a “qualified laboratory” the candidate must be able to, at a minimum, meet the following conditions:

- Provide all necessary analytical services, including but not limited to organic, inorganic, radiological, and/or bacteriological analyses on drinking water / surface waters and/or wastewater/biosolids.
- Posses a current certification from the California Department of Health Services Environmental Laboratory Accreditation Program.
- Perform all required quality assurance and quality assurances (QA/QC) analyses and provide reports as requested by EID.
- Final reports shall included, at a minimum, sample description, unique laboratory identification number, date and time sampled, date and time analyzed, analytical result, test method, reporting limit (RL), QA/QC summary and a copy of the chain of custody provided. Upon request, shall include method detection limit (MDL) and any estimated hits between RL and MDL.
- Provide all electronic and special reporting in compliance with various EPA, State, local agencies and EID needs.
- Cost shall include all required collection bottles, labels, blank chain of custody sheets, and coolers.
- Ability to provide labor to collect samples as necessary.
- Provide courier service from various EID facilities. The furthest EID facility is within 75 miles of EID Headquarters in Placerville, CA.

*(The Rate Table(s) attached must be submitted with your proposal. Please submit appropriate rate table(s) that corresponds to the group that you are proposing for.)

Water/Wastewater Laboratory Analysis - Rate Table

GROUP A: DRINKING WATER / SURFACE WATER

I. Microbiological

Constituent	Test Method (s)	Individual Unit Price	Group Price
Total Coliform and E.Coli Bacteria by Quanti-Tray			N/A
Total Coliform and E.Coli Bacteria (Absent/Present)			N/A
Total Coliform , E.Coli, Fecal - 25 Tube Method			
Heterotrophic Plate Count, Simplate			N/A
Cryptosporidium			N/A
Giardia			N/A

II. Inorganic Chemicals - Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Chromium			
Fluoride			
Lead			
Mercury			
Nickel			
Selenium			
Thallium			

III. Cyanide - Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Cyanide			N/A

IV. Nitrate/Nitrite - Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Nitrate (as NO ₃)			
Nitrite (as N)			
Nitrate + Nitrite			

V. Perchlorate- Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Perchlorate			N/A

VI. Asbestos- Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Asbestos			N/A

Water/Wastewater Laboratory Analysis - Rate Table

GROUP A: DRINKING WATER / SURFACE WATER

VII. Secondary Standards- Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Aluminum			
Color			
Copper			
Aggressive Index (Corrosivity)			
Foaming Agents (MBAS)			
Iron			
Manganese			
Odor			
Silver			
Turbidity			
Zinc			
Total Filterable Residue (TDS)			
Specific Conductance (E.C.)			
Chloride			
Sulfate			

VIII. General Mineral- Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Bicarbonate (HCO ₃)			
Carbonate (CO ₃)			
Hydroxide (OH)			
Total Alkalinity (as CaCO ₃)			
pH			
Total Calcium (CO ₃)			
Magnesium			
Sodium			
Total Hardness (as CaCO ₃)			

IX. Volatile Organic Chemicals- Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Benzene			
Carbon Tetrachloride			
1,2-Dichlorobenzene			
1,4-Dichlorobenzene			
1,1-Dichloroethane (1,1-DCA)			
1,2-Dichloroethane (1,2-DCA)			
1,1-Dichloroethylene (1,1-DCE)			
cis-1,2-Dichloroethylene			
trans-1,2-Dichloroethylene			
Dichloromethane (Methylene Chloride)			
1,2-Dichloropropane			
1,3-Dichloropropene			
Ethylbenzene			
Methyl-tert-butyl ether (MTBE)			
Monochlorobenzene (Chlorobenzene)			
Styrene			
1,1,2,2-Tetrachloroethane			
Tetrachloroethylene (PCE)			

Water/Wastewater Laboratory Analysis - Rate Table

GROUP A: DRINKING WATER / SURFACE WATER

IX. Volatile Organic Chemicals- Chapter 15, Title 22 (Continued)

Constituent	Test Method (s)	Individual Unit Price	
Toluene (Methylbenzene)			
1,2,4-Trichlorobenzene			
1,1,1-Trichloroethane			
1,1,2-Trichloroethane			
Trichloroethylene (TCE)			
Trichlorofluoromethane (Freon 11)			
1,1,2-Trichloro-1,2,2-Trifluoroethane			
Vinyl Chloride (VC)			
Total Xylenes (m,p & o)			

X. Non-Volatile Synthetic Organic Chemicals- Chapter 15, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Alachlor			
Atrazine			
Bentazon			
Benzo(a)pyrene			
Carbofuran			
Chlordane			
2,4-D			
Dalapon			
Dibromochloropropane (DBCP)			
Di(2-ethylhexyl)adipate			
Di(2-ethylhexyl)phthalate (DEHP)			
Dinoseb			
Diquat			
Endothall			
Endrin			
Ethylene Dibromide			
Glyphosate			
Heptachlor			
Heptachlor Epoxide			
Hexachlorobenzene			
Hexachlorocyclopentadiene			
Lindane			
Methoxychlor			
Molinate			
Oxamyl			
Pentachlorophenol			
Picloram			
Polychlorinated Biphenyls (PCBs)			
Simazine			
Thiobencarb			
Toxaphene			
2,3,7,8-TCDD (Dioxin)			
2,4,5-TP (Silvex)			

Water/Wastewater Laboratory Analysis - Rate Table

GROUP A: DRINKING WATER / SURFACE WATER

XI. Other Constituents of Concern or Interest

Constituent	Test Method (s)	Individual Unit Price	Group Price
Total Organic Carbon (SM5310C)			N/A
Total Chlorine Residual (Total and Free)			N/A
Dissolved Organic Carbon			N/A
UVA -254 and SUVA			N/A
Orthophosphate			N/A
Total Suspended Sediments (EPA 160.2)			N/A
Bromide			N/A

XII. Disinfection Byproducts

Constituent	Test Method (s)	Individual Unit Price	Group Price
Total Trihalomethanes			
Haloacetic Acids (HAA5)			

XIII. Lead and Copper - Chapter 17.5, Title 22

Constituent	Test Method (s)	Individual Unit Price	Group Price
Lead			
Copper			

XVI. Field Services

Service	Test Method (s)	Individual Unit Price	Group Price
Field Sampler Hourly or Daily rate (Indicate Unit on price sheet)	N/A		N/A
Courier Charge (Farthest EID facility is no further than 75 from EID HQ)	N/A		N/A
Calibrate 3 YSI meters no more than twice a month	N/A		N/A
Holiday Fees - Perform Courier Services and Lab Services on major holidays.	N/A		N/A

Footnote:

- (1) For drinking water samples all reporting limits (RLs) must meet the Detection Limit Required (DLR) as outlined in the Title 22 Drinking Water Regulations.
- (2) For surface water samples all reporting limits must meet Title 22 Drinking Water Regulations, Central Valley Regional Water Quality Control Board Basin Plan, the State Implementation Policy for Surface Waters, Enclosed Bays and Estuaries, California

Water/Wastewater Laboratory Analysis - Rate Table

GROUP B: WASTEWATER / BIOSOLIDS

CALIFORNIA TOXIC RULE / NATIONAL TOXIC RULE - PRIORITY POLLUTANTS:

I. Conventional Chemistry Parameters

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Chromium (VI)	5b			N/A
Cyanide	14			N/A

II. Metals

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Aluminum (Al)	n/a			
Antimony (Sb)	1			
Arsenic (As)	2			
Barium (Ba)	n/a			
Beryllium (Be)	3			
Cadmium (Cd)	4			
Chromium (Cr)	5a			
Copper (Cu)	6			
Lead (Pb)	7			
Mercury (Hg) Low Level (EPA 1613E)	8			
Nickel (Ni)	9			
Selenium (Se)	10			
Silver (Ag)	11			
Thallium (Tl)	12			
Zinc (Zn)	13			

III. Organochlorine (OC) Pesticides

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Aldrin	102			
4,4'-DDD	110			
4,4'-DDE	109			
4,4'-DDT	108			
Alpha BHC	103			
alpha-Endosulfan	112			
Beta BHC	104			
beta-Endosulfan	113			
Chlordane	107			
Delta BHC	106			
Dieldrin	111			
Endosulfan sulfate	114			
Endrin	115			
Endrin Aldehyde	116			
Gamma BHC	105			
Heptachlor	117			
Heptachlor epoxide	118			
Toxaphene	126			

Water/Wastewater Laboratory Analysis - Rate Table

GROUP B: WASTEWATER / BIOSOLIDS

IV. Polychlorinated Biphenyls (PCBs)

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Polychlorinated biphenyls (PCBs)	119			
Polychlorinated biphenyls (PCBs)	120			
Polychlorinated biphenyls (PCBs)	121			
Polychlorinated biphenyls (PCBs)	122			
Polychlorinated biphenyls (PCBs)	123			
Polychlorinated biphenyls (PCBs)	124			
Polychlorinated biphenyls (PCBs)	125			

V. Polynuclear Aromatic Hydrocarbons (PAHs)

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Acenaphthene	56			
Acenaphthylene	57			
Anthracene	58			
Benzo (a) anthracene	60			
Benzo (a) pyrene	61			
Benzo (b) fluoranthene	62			
Benzo (g,h,i) perylene	63			
Benzo (k) fluoranthene	64			
Chrysene	73			
Dibenzo (a,h) anthracene	74			
Fluoranthene	86			
Fluorene	87			
Indeno (1,2,3-c,d) pyrene	92			
Naphthalene	94			
Phenanthrene	99			
Pyrene	100			

VI. Semivolatile Organic Compounds (SVOCs)

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
1, 2-Diphenylhydrazine	85			
2,4,6-Trichlorophenol	55			
2,4-Dichlorophenol	46b			
2,4-Dimethylphenol	47			
2,4-Dinitrophenol	49			
2,4-Dinitrotoluene	82			
2,6-Dinitrotoluene (2,6 DNT)	83			
2-Chloronaphthalene	71			
2-Chlorophenol	45			
2-Methyl-4,6-Dinitrophenol	48			
2-Nitrophenol	50			
3,3'-Dichlorobenzidine	78			
3-Methyl-4-Chlorophenol	52			
4-Bromophenyl phenyl ether	69			

Water/Wastewater Laboratory Analysis - Rate Table

GROUP B: WASTEWATER / BIOSOLIDS

VI. Semivolatile Organic Compounds (SVOCs) (Continued)

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
4-Chlorophenyl phenyl ether	72			
4-Nitrophenol	51			
Benzidine	59			
Bis (2-chloroethoxy) methane	65			
Bis (2-chloroethyl) ether	66			
Bis (2-chloroisopropyl) ether	67			
Bis (2-ethylhexyl) phthalate	68			
Butyl benzyl phthalate	70			
Diethyl phthalate	79			
Dimethyl phthalate	80			
Di-n-butyl phthalate	81			
Di-n-octyl phthalate	84			
Hexachlorobenzene	88			
Hexachlorocyclopentadiene	90			
Hexachloroethane	91			
Isophorone	93			
Nitrobenzene	95			
N-Nitrosodimethylamine	96			
N-Nitroso-di-n-propylamine	97			
N-Nitrosodiphenylamine	98			
Phenol	54			

VII. Volatile Organic Compounds (VOCs)

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Benzene	19			
Dichlorobromomethane	27			
Bromoform	20			
Methyl bromide	34			
Carbon Tetrachloride	21			
Chlorobenzene	22			
Chloroethane	24			
2-Chloroethyl vinyl ether	25			
Chloroform	26			
Chlorodibromomethane	23			
1,3-Dichloropropylene	32			
Methyl chloride	35			
1,2-Dichlorobenzene	75			
1,3-Dichlorobenzene	76			
1,4-Dichlorobenzene	77			
1,1-Dichloroethane	28			
1,2-Dichloroethane	29			
1,1-Dichloroethylene	30			
1,2-Trans-dichloroethylene	40			
1,2-Dichloropropane	31			

Water/Wastewater Laboratory Analysis - Rate Table

GROUP B: WASTEWATER / BIOSOLIDS

VII. Volatile Organic Compounds (VOCs) (Continued)

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Ethylbenzene	33			
Hexachlorobutadiene	89			
Methylene chloride	36			
1,1,2,2-Tetrachloroethane	37			
Tetrachloroethylene	38			
Toluene	39			
1,2,4-Trichlorobenzene	101			
1,1,2-Trichloroethane	42			
1,1,1-Trichloroethane	41			
Trichloroethylene	43			
Vinyl Chloride	44			

VIII. Acrolein & Acrylonitrile

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Acrolein	17			
Acrylonitrile	18			

IX. Chlorinated Herbicides

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
2,4-D	46a			
Pentachlorophenol	53			

X. Asbestos

CTR/NTR Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Asbestos	15			N/A

XI. Dioxins

CTR/NTR Constituent Name	CTR #	Test Method (s)	Price	Group Price
2,3,7,8-TCDD	16			N/A

OTHER CONSTITUENTS OF INTEREST:

XII. Persistent Chlorinated Hydrocarbon Pesticides

Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Captan	n/a			
2,4-D	n/a			
2,4-DB	n/a			
2,4-D Compounds: (2,4-D, 2,4-DB, 2,4-DDD, 2,4-DDE, 2,4-DDT, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene)	n/a			
Dalapon	n/a			
Dicamba	n/a			
Dichloran	n/a			
Dichloroprop	n/a			
Dicofol	n/a			

Water/Wastewater Laboratory Analysis - Rate Table

GROUP B: WASTEWATER / BIOSOLIDS

XII. Persistent Chlorinated Hydrocarbon Pesticides (Continued)

Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Dinoseb	n/a			
Isodrin	n/a			
Kepone	n/a			
MCPA	n/a			

XII. Persistent Chlorinated Hydrocarbon Pesticides (Continued)

Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
MCPD	n/a			
Methoxychlor	n/a			
Mirex	n/a			
PCNB (pentachloronitrobenzene)	n/a			
Perthane	n/a			
Strobane	n/a			
2,4,5-T	n/a			
2,4,5 TP(Silvex)	n/a			
2,4,5-T compounds	n/a			

XIII. Metals and Inorganic Constituent

Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Ammonia	n/a			N/A
Biological Oxygen Demand (BOD)	n/a			N/A
Formaldehyde	n/a			N/A
Grease and Oil (EPA 1664.1)	n/a			N/A
Iron (Fe)	n/a			N/A
Manganese (Mn)	n/a			N/A
Molybdenum (Mo)	n/a			N/A
Nitrate	n/a			N/A
Nitrite	n/a			N/A
Percent Moisture	n/a			N/A
Total Dissolved Solids (TDS)	n/a			N/A
Total Suspended Solids (TSS)	n/a			N/A

XIV. Volatile Organic Compounds (VOCs)

Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
MTBE	n/a			N/A
Total Trihalomethanes (TTHM)	n/a			N/A

Water/Wastewater Laboratory Analysis - Rate Table

GROUP B: WASTEWATER / BIOSOLIDS

XV. Standard Minerals

Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Total Alkalinity as CaCO ₃ (including series)	n/a			
Bicarbonate	n/a			
Carbonate	n/a			
Hydroxide	n/a			
Boron	n/a			
Calcium	n/a			
Chloride	n/a			
Hardness, Total	n/a			
Magnesium	n/a			
Phosphorus	n/a			
Potassium	n/a			
Sodium	n/a			
Cation/Anion Balance	n/a			

XVI. Organic Constituents

Constituent Name	CTR #	Test Method (s)	Individual Unit Price	Group Price
Chlorpyrifos	n/a			
Dibromochloropropane	n/a			
Diquat	n/a			
Thiobencarb	n/a			

XVII. Microbiological

Constituent	CTR #	Test Method (s)	Individual Unit Price	Group Price
Total Coliform and E.Coli Bacteria by 15 -tube	n/a			N/A

XVIII. Field Services

Field Sampler Hourly or Daily rate (indicate Unit on price sheet)	n/a			N/A
Rental of 24 hour Composite Equipment	n/a			N/A

Footnote:

- (1) All wastewater analysis shall be accordance with 40 CFR Part 122, 136 et all.
- (2) All biosolids analysis shall be in accordance with EPA 503 regulations.

EXHIBIT B TO RFP

PROFESSIONAL SERVICE AGREEMENT

PROFESSIONAL SERVICES AGREEMENT

Between

EL DORADO IRRIGATION DISTRICT

And

[Consultant Name]

for the

On-Call Professional Services

January 1, 2011 through December 31, 2013

[Service Category]

Dated January 1, 2011

EL DORADO IRRIGATION DISTRICT

AGREEMENT BETWEEN
EL DORADO IRRIGATION DISTRICT AND

TYPE CONSULTANT NAME IN CAPS

THIS PROFESSIONAL SERVICES AGREEMENT (“**Agreement**”) is dated this 1st day of January, 11, in the City of Placerville, State of California, by and between **NAME ALL CAPS**, a **TYPE CONSULTANT NAME IN CAPS**, with a principal place of business at **TYPE CONSULTANT NAME IN CAPS**, hereinafter referred to as “**Consultant**” and the EL DORADO IRRIGATION DISTRICT, an irrigation special district organized and existing under the California Irrigation District Law (Water Code §20500, *et seq.*), hereinafter referred to as “**District.**”

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, stipulated and agreed, the parties agree as follows:

1. Scope of Professional Services. The Consultant shall perform all services described in Appendix A (“**Services**”), for the compensation set forth in Appendix B (“**Compensation**”), which appendices are attached and made a part of this Agreement.

2. Term. This Agreement shall become effective upon the date first listed above and shall continue until December 31, 2013. All Services whenever performed shall be deemed performed under this Agreement, and all compensation paid to Consultant on account of the Services performed shall be deemed as payments of the Compensation.

3. Standard of Performance. Consultant represents that it is qualified to perform the Services and that it possesses and will continue to possess at its sole cost and expense, all necessary licenses, registrations, permits, and personnel or will obtain such licenses, registrations, permits and personnel prior to the time required. Consultant also represents that it has extensive knowledge of, and will comply with, all applicable building codes, laws, regulations and ordinances.

4. Subconsultants. Consultant shall perform the Services using the personnel and subconsultants listed in Appendix A. Consultant shall hire only qualified persons or firms who are experienced in performing work of like nature and complexity to the Services, and who agree to be bound to the terms of the Agreement to the extent of this scope of services. Consultant may substitute personnel or subconsultants prior to any such subconsultants commencing work only upon District’s written consent, which may be withheld or delayed in District’s discretion.

5. Representatives for Both Parties. Both parties shall designate a representative, authorized to act on the parties’ behalf with respect to this Agreement. The parties or such authorized representatives shall render required decisions promptly, to avoid unreasonable delay in the progress of Consultant’s services. The parties may delegate all or some of the representatives’ role and function to some other representative.

6. Indemnification and Liability.

6.1 To the fullest extent permitted by law (including, without limitation, California Civil Code Section 2782), Consultant shall defend (with legal counsel reasonably acceptable to District), indemnify and hold harmless District and its officers, agents, departments, officials, representatives and employees (collectively “**Indemnitees**”) from and against any and all claims, loss, cost, damage, injury (including, without limitation, injury to or death of an employee of Consultant or its sub-consultants), expense and liability of every kind, nature and description (including, without limitation, incidental and consequential damages, court costs, attorneys’ fees, litigation expenses and fees of expert consultants and/or expert witnesses incurred in connection therewith and costs of investigation) that arise from or relate to, directly or indirectly, in whole or in part, but only to the extent that any

of the above are actually caused by, any negligent act or omission of Consultant, any sub-consultant, anyone directly or indirectly employed by them, or anyone that they control (collectively "Liabilities"). Such obligations to defend, hold harmless and indemnify any Indemnitee shall not apply to the extent that such Liabilities are caused in whole or in part by the sole negligence, active negligence, or willful misconduct of any Indemnitee.

6.2 Consultant shall defend (with legal counsel reasonably acceptable to District), indemnify and hold harmless the Indemnitees from all loss, cost, damage, expense, liability or claims, in law or in equity, including attorneys' fees, court costs, litigation expenses and fees of expert consultants or expert witnesses, that may at any time arise for any infringement of the patent rights, copyright, trade secret, trade name, trademark, service mark or any other proprietary right of any person or persons in consequence of the use by District, or any of the other Indemnitees, of articles or Services to be supplied in the performance of this Agreement.

6.3 Not used.

6.4 Consultant shall place in its subconsulting agreements and cause its subconsultants to agree to indemnities and insurance obligations in favor of District and other Indemnitees in the exact form and substance of those contained in this Agreement.

6.5 Not used.

7. **Notices.** District and Consultant shall provide notices to the other in the form of a writing, sent by certified mail return receipt requested, or by overnight courier or delivery service with signature required, as follows:

**El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667
Attn: Contract Management**

**[Consultant Name]
[Consultant Address]**

Attn: [REDACTED]

or to such other place as either party may similarly in writing designate to the other. Notices shall be effective three business days after mailing by certified mail, or upon receipt if delivered by overnight courier or delivery service.

8. **Insurance.** Consultant shall comply with all requirements of Appendix C, which is attached and made a part of this Agreement.

9. **Independent Contractor.** Consultant shall at all times be deemed an independent contractor wholly responsible for the manner in which it performs the Services, and fully liable for the acts and omissions of its employees, subconsultants and agents. Under no circumstances shall this Agreement be construed as creating an employment, agency, joint venture or partnership relationship between District and Consultant, and no such relationship shall be implied from performance of this Agreement. Terms in this Agreement referring to direction from District shall be construed as providing for direction as to policy and the result of services only, and not as to means and methods by which such a result is obtained. Consultant shall pay all taxes (including California sales and use taxes) levied upon this Agreement, the transaction, or the Services and/or goods delivered pursuant hereto without additional compensation, regardless of which party has liability for such tax under applicable law, and any deficiency, interest or penalty asserted with respect thereto. Consultant represents that it will collect, report, and pay all sales and or use taxes to the State Board of Equalization. Upon full payment, the Consultant will issue District a receipt pursuant to California Revenue and Taxation Code Section 6203, relieving District of all liability for any tax relating to the scope of this Agreement. The Consultant shall pay all other taxes including but not limited to any applicable city, county or other business tax, not explicitly assumed in writing by District hereunder. The Consultant shall comply with all valid administrative regulations respecting the assumption of liability for the payment of payroll taxes and contributions as above described and to provide any necessary information with respect thereto to proper authorities.

10. Conflict of Interest; Confidentiality.

10.1 Consultant represents that it is familiar with Sections 1090 et seq. and Section 87100 et seq. of the Government Code of the State of California, and that it does not know of any facts that constitute a violation of said sections. If, following execution of this Agreement, Consultant becomes aware of any such facts, whether presently existing or after-arising, Consultant shall promptly inform District of same, along with a proposal for remedying the violation. District may determine whether the proposal, or any other proposed resolution, is satisfactory, in its sole discretion.

10.2 Consultant represents that it has completely disclosed to District, and if applicable will disclose in the future, all facts bearing upon any possible interests, direct or indirect, which Consultant believes any member of District, or other officer, agent or employee of District or any department presently has, or will have, in this Agreement, or in the performance thereof, or in any portion of the profits thereunder. Willful failure to make such disclosure, if any, shall constitute ground for termination of this Agreement by District for cause. Consultant agrees to comply with all conflict of interest codes adopted by the District and its reporting requirements, including without limitation the Conflict of Interest Code for the El Dorado Irrigation District.

10.3 Consultant covenants that it presently has no interest, and shall not have any interest, direct or indirect, which would conflict in any manner with the performance of Services required under this Agreement. Without limitation, Consultant represents to and agrees with District that Consultant has no present, and will have no future, conflict of interest between providing District the Services hereunder and any interest Consultant may presently have, or will have in the future, with respect to any other person or entity (including but not limited to any federal or state wildlife, environmental or regulatory agency) which has any interest adverse or potentially adverse to District, as determined in the reasonable judgment of District. The provisions of this Section 10 shall remain fully effective indefinitely after termination of Services to District hereunder.

10.4 Consultant acknowledges and agrees that, in the performance of the Services under this Agreement or in the contemplation thereof, Consultant may have access to private or confidential information which may be owned or controlled by District and that such information may contain proprietary or confidential details, the disclosure of which to third parties may be damaging to District. Consultant agrees that all information disclosed by District to or discovered by Consultant shall be held in strict confidence and used only in performance of the Agreement. Consultant shall exercise the same standard of care to protect such information as a reasonably prudent Consultant would use to protect its own proprietary data, and shall not accept employment adverse to District's interests where such confidential information could be used adversely to District's interests. Consultant agrees to notify District immediately in writing if it is requested to disclose any information made known to or discovered by Consultant during the performance of or in connection with this Agreement.

10.5 Any publicity or press releases with respect to the Project or Services shall be under District's sole discretion and control. Consultant shall not discuss the Services or Project, or matters pertaining thereto, with the public press, representatives of the public media, public bodies or representatives of public bodies, without District's prior written consent. Consultant shall have the right, however, without District's further consent, to include representations of Services among Consultant's promotional and professional material, and to communicate with persons or public bodies where necessary to perform under this Agreement.

10.6 The provisions of this Section 10 shall remain fully effective indefinitely after termination of Services to District hereunder.

11. Suspension and Termination of Services.

11.1 District may direct Consultant to suspend, delay or interrupt Services, in whole or in part, for such periods of time as District may determine in its sole discretion. District may issue such directives without cause. District will issue such directives in writing. Suspension of Services shall be treated as an excusable delay.

11.2 District may terminate performance of the Services under this Agreement in whole, or from time to time in part, for default, should Consultant commit a material breach of this Agreement, or part thereof, and not cure such breach within ten (10) calendar days of the date of District's written notice to Consultant

demanding such cure. In the event District terminates this Agreement for default, Consultant shall be liable to District for all loss, cost, expense, damage and liability resulting from such breach and termination.

11.3 District may terminate performance of the Services under this Agreement in whole, or from time to time in part, for convenience, whenever District determines that such termination is in District's best interests. In the event District terminates this Agreement for convenience, Consultant shall be entitled to be paid for Services satisfactorily performed to the termination date, but may recover no other cost, damage or expense.

11.4 Following any termination under this Section 11, Consultant shall:

11.4.1 Stop Services under the Agreement on the date and to the extent specified in the notice of termination;

11.4.2 Terminate and settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with approval or ratification of District to the extent District may require.

11.4.3 Assign to District in the manner, at times, and to the extent directed by District, all right, title, and interest of Consultant under orders and subcontracts so terminated; and

11.4.4 Complete performance of any part of the Services which were not terminated; and

11.4.5 Take such action as may be necessary, or as District may direct, for the protection and preservation of property related to this Agreement which is in Consultant's possession and in which District has or may acquire an interest.

12. Ownership of Work Product/Public Records Act. Any interest (including copyright interests) of Consultant or its subconsultants, in studies, reports, memoranda, computational sheets, drawings, plans or any other documents (including electronic media) prepared by Consultant or its subconsultants at any time in connection with the Services, shall be, immediately upon its creation, the property of District. To the extent permitted by Title 17 of the United States Code, work product produced under this Agreement shall be deemed works for hire and all copyrights in such works shall be the property of District. In the event that it is ever determined that any works and any former works created by Consultant or its subconsultants under this Agreement are not works for hire under U.S. law, Consultant hereby assigns to District all copyrights to such works when and as created. With District's prior written approval, Consultant may retain and use copies of such works for reference and as documentation of experience and capabilities. Both parties understand and agree that District must comply with the California Public Records Act ("Act"). If Consultant believes that any document or information furnished to District in connection with Consultant's performance of Services is exempt from public disclosure under the Act, it shall so advise District in writing at the time the document or information is furnished.

13. Audit/Inspection of Records.

13.1 Consultant shall maintain all documents and records prepared by or furnished to Consultant during the course of performing the Services for at least three (3) years following completion of the Services, except that all such items pertaining to hazardous materials shall be maintained for at least thirty (30) years. Such records include, but are not limited to, correspondence, internal memoranda, calculations, books and accounts, accounting records documenting its work under its Agreement, and invoices, payrolls, records and all other data related to matters covered by this Agreement. Consultant shall permit District to audit, examine and make copies, excerpts and transcripts from such records. The State of California or any federal agency having an interest in the subject of Agreement shall have the same rights conferred to District by this section. Such rights shall be specifically enforceable.

13.2 The Consultant shall maintain full and adequate records in accordance with District requirements to show the actual costs incurred by the Consultant in the performance of this Agreement. If such books and records are not kept and maintained by Consultant within a radius of seventy-five (75) miles from the offices of District at 2890 Mosquito Road, Placerville, California 95667, Consultant shall, upon request of District,

make such books and records available to District for inspection at a location within said seventy-five (75) mile radius or Consultant shall pay to District the reasonable, and necessary costs incurred by District in inspecting Consultant's books and records, including, but not limited to, travel, lodging and subsistence costs. Consultant shall provide such assistance as may be reasonably required in the course of such inspection. District further reserves the right to examine and reexamine said books, records and data during the three (3) year period following termination of this Agreement or completion of all work hereunder, as evidenced in writing by District, and the Consultant shall in no event dispose of, destroy, alter, or mutilate said books, records, accounts, and data in any matter whatsoever for three (3) years after District makes the final or last payment or within three (3) years after any pending issues between District and Consultant with respect to this Agreement are closed, whichever is later.

14. Non-discrimination. Consultant shall not discriminate against any employee or applicant for employment, nor against any subconsultant or applicant for a subcontract, because of race, color, religious creed, age, sex, actual or perceived sexual orientation, national origin, disability as defined by the ADA or veteran's status. To the extent applicable, Consultant shall comply with all federal, state and local laws (including, without limitation, County ordinances, rules and regulations) regarding non-discrimination, equal employment opportunity, affirmative action and occupational-safety-health concerns, shall comply with all applicable rules and regulations thereunder, and shall comply with same as each may be amended from time to time. Consultant shall provide all information reasonably requested by District to verify compliance with such matters. Consultant stipulates, acknowledges and agrees that District has the right to monitor Consultant's compliance with all applicable non-discrimination requirements, and may impose sanctions upon a finding of a willful, knowing or bad faith noncompliance or submission of information known or suspected to be false or misleading.

15. Disputes. Consultant shall continue its work throughout the course of any dispute, and Consultant's failure to continue work during a dispute shall be a material breach of this Agreement. Consultant shall continue to receive payment under this Agreement for work that is unrelated to the dispute and completed in accordance with this Agreement.

16. No incidental, etc. damages. Notwithstanding any other provision of this Agreement, in no event shall District be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits or revenue, arising out of or in connection with this Agreement or the Services performed in connection with this Agreement.

17. California Law. This Agreement shall be deemed to have been executed in the City of Placerville, El Dorado County, California. Enforcement of this Agreement shall be governed by the laws of the State of California, excluding its conflict of laws rules. Venue for all litigation arising from or relating to this Agreement shall be in El Dorado County, California. Should any clause, provision or aspect of this Agreement be determined at any time to be unenforceable or in contravention of law, then the remaining clauses and provisions of this Agreement shall be enforceable to the fullest extent permitted by law and construed to give effect to fullest extent possible the intent of this Agreement.

18. No Third Party Beneficiaries. Except as expressly provided in this Agreement, nothing in this Agreement shall operate to confer rights or benefits on persons or entities not party to this Agreement. Time is of the essence in the performance of this Agreement.

19. Entire Agreement. This Agreement and any written modification shall represent the entire and integrated agreement between the parties hereto regarding the subject matter of this Agreement, shall constitute the exclusive statement of the terms of the parties' agreement, and shall supersede any and all prior negotiations, representations or agreements, written or oral, express or implied, that relate in any way to the subject matter of this Agreement or written modification. All prior negotiations are merged into this Agreement and shall be inadmissible in any enforcement of this Agreement.

20. No Waiver. The granting of any payments, and any inspections, reviews, approvals or oral statements by any District representative, or certification by any governmental entity, shall in no way limit Consultant's obligations under this Agreement. Either party's waiver of any breach, or the omission or failure of either party, at any time, to enforce any right reserved to it, or to require strict performance of any provision of this Agreement, shall not be a waiver of any other right to which any party is entitled, and shall not in any way affect, limit, modify or waive that party's right thereafter to enforce or compel strict compliance with every provision hereof. This Agreement may not be modified, nor may compliance with any of its terms be waived, except by written instrument executed and approved by fully authorized representatives of District and Consultant.

21. Statutes of Limitation. As between the parties to this Agreement, any applicable statute of limitations for any act or failure to act shall commence to run on the date of District's issuance of the final Certificate for Payment, or termination of this Agreement, whichever is earlier, except for latent defects. The commencement and running of the statute of limitations for latent defects shall be as provided by California Code of Civil Procedure section 337.15 or any successor statute.

22. Survival. Without limiting any of the parties' other rights or obligations arising from this Agreement, and in addition to all other provisions indicated as surviving the termination or expiration of this Agreement, the following provisions will survive any termination or expiration hereunder: 6, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 22 and 23.

23. Miscellaneous. Consultant shall not subcontract, assign or delegate any portion of this Agreement or any duties or obligations hereunder unless approved by District in a written instrument executed and approved by District in writing. Subject to the foregoing, this Agreement shall bind the parties, and their permitted successors and assigns. Any provision or portion thereof of this Agreement prohibited by, or made unlawful or unenforceable under any applicable law of any jurisdiction, shall as to such jurisdiction be ineffective without affecting other provisions or portions thereof of this Agreement. If the provisions of such applicable law may be waived, they are hereby waived to the end that this Agreement may be deemed to be a valid and binding agreement enforceable in accordance with its terms to the greatest extent permitted by applicable law. Captions to sections and subsections are for the convenience of the parties, and are not to be considered when construing this Agreement. The agreements contained herein shall not be construed in favor of or against any party, but shall be construed as if all parties prepared this Agreement. All terms not otherwise defined in this Agreement shall have the meanings provided in the Appendices or, if applicable, in the construction contract with the general contractor on the Project.

24. Attorneys' Fees. If either party institutes or is required to defend any legal proceeding, action or motion to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to recover all costs and expenses, specifically including, but not limited to, reasonable attorneys' fees.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day first mentioned above.

“District”

EL DORADO IRRIGATION DISTRICT

By: _____
General Manager

Approved as to form:

Office of the General Counsel

THIS AGREEMENT SHALL NOT BE VALID OR EFFECTIVE FOR ANY PURPOSE UNLESS AND UNTIL SIGNED BY THE DISTRICT’S OFFICE OF THE GENERAL COUNSEL.

“Consultant”

CONSULTANT’S NAME ALL IN CAPS

By: _____

Its: _____

By: _____

Its: _____

LIST OF APPENDICES AND SCHEDULES

Appendix A	Scope of Services
Exhibit 1 to Appendix A	Form Scope of Work
Exhibit 2 to Appendix A	District's Request for Proposals for On-Call Professional Services (and all addenda thereto)
Exhibit 3 to Appendix A	Consultant's Proposal for On-Call Professional Services
Appendix B	Payments to Consultant
Appendix C	Insurance

APPENDIX A – SCOPE OF SERVICES

This is an appendix attached to, and made a part of, the Professional Services Agreement dated January 1, 2011 (“**Agreement**”) between the EL DORADO IRRIGATION DISTRICT (“**District**”) and **CONSULTANT’S NAME ALL IN CAPS** (“**Consultant**”), for the provision of professional services (“**Services**”).

- 1. Scope of Work.** The Services to be performed by Consultant shall be defined at the time District requests proposal(s) for performance of a specific task. Each task to be completed by Consultant under this Agreement shall be set forth in the form of a written Scope of Work executed by both parties to this Agreement using the form attached hereto and incorporated herein by reference as Exhibit 1 to this Appendix A (“**Scope of Work**”) prior to commencement of each such task. All such Scopes of Work executed by Consultant and District during the term of this Agreement are hereby incorporated herein by reference. Consultant shall perform all Services described in each such Scope of Work in strict accordance with all terms and conditions of this Agreement and all attachments hereto. Notwithstanding the foregoing, however, the parties understand and agree that nothing contained herein guarantees Consultant any work of the District and that Consultant shall not be entitled to any payment hereunder unless and until the parties hereto mutually execute Scope(s) of Work in the manner described above and Consultant performs the Services described therein. The parties further understand and agree that District’s procurement of any on-call services under this Agreement is subject to the requirements of District’s Board Policies and Administrative Regulations, which are available to Consultant upon request.
- 2. Request for Proposals and Proposal.** Attached hereto and incorporated herein by reference as Exhibits 2 and 3 to this Appendix A, respectively, are District’s Request for Proposals for On-Call Professional Services, and all addenda thereto, (“**RFP**”) and Consultant’s Proposal submitted in response thereto.
- 3. Personnel and Subconsultants.** Except as otherwise agreed by District, in its discretion, in advance and in writing, Consultant shall only use the personnel and subconsultants listed in Consultant’s Proposal attached hereto as Exhibit 3 to this Appendix A in performing the Services. The parties understand, however, that for tasks outside the anticipated scope of work contained in District’s RFP attached as Exhibit 2 to this Appendix A, it may be necessary to use other personnel and/or subconsultants with different expertise and/or experience, in which event, said other personnel and/or subconsultants and their hourly billing rates shall be expressly listed in the Scope of Work for said task mutually agreed to by the parties as provided herein.
- 4. Conflicts in Documents.** This Appendix A and its exhibits and all Scopes of Work executed in the manner described herein are deemed complimentary; what is called for by one is as binding as if called for in all and shall be performed by Consultant. In the case of direct conflict, then the requirement, providing District with the broader scope of services shall have precedence.
- 5. Deliverables Required Under This Agreement.** Required deliverables will be listed in each Scope of Work executed hereunder. Each deliverable shall be reviewed with representatives of District. Consultant shall promptly correct deficiencies in deliverables and shall promptly make modifications to conform with Project requirements and modifications to achieve acceptability of deliverables to District, and the cost thereof included in the fee for Basic Services.
- 6. Electronic Documents.** As requested by District, Consultant shall communicate with the District and/or provide copies of all deliverables in any electronic form reasonably requested by District.

END OF APPENDIX A

APPENDIX B - PAYMENTS TO CONSULTANT

This is an appendix attached to, and made a part of, the Professional Services Agreement dated January 1, 2011 (“**Agreement**”) between the EL DORADO IRRIGATION DISTRICT (“**District**”) and **CONSULTANT’S NAME ALL IN CAPS** (“**Consultant**”), for the provision of professional services (“**Services**”).

1 Amount of Compensation for Services of Consultant

The Guaranteed Maximum Payment to Consultant for all Services performed for any project under this Agreement shall not exceed the amount stated in the Scope of Work for that particular project executed by both parties in the manner described herein, referred to hereafter as the Guaranteed Maximum Price (“**GMP**”). The GMP includes within its scope the cost of all subconsultants and shall constitute full compensation for the Services.

- 1.1 Consultant shall be paid for its Services (and for services of its subconsultants) rendered based upon the hourly “Billing Rates” of each Consultant and subconsultant employee as described below, but except for Additional Services, in no event shall Consultant invoice or receive (including subconsultants) any payment exceeding the GMP.
- 1.2 The Billing Rates used as a basis for payment apply to all of Consultant’s and subconsultants’ principals, professional personnel and others engaged directly on the Project. The Billing Rates shall remain constant throughout this Agreement, and shall not be adjusted for inflation, salary adjustments, cost changes, or any other reason.
- 1.3 Not used.
- 1.4 Consultant may not invoice or receive payment for the GMP greater than Consultant’s percentage completion of the Services, as determined by District based on Services performed. In no event shall Consultant invoice or receive (including subconsultants) payment for fees exceeding the GMP.
- 1.5 The Billing Rates shall include all overhead rates to cover costs and other compensation of Consultant’s officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, specialists, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Consultant whether at the site or in his principal or a branch office for general administration of the Services and not specifically included in the list of personnel, Consultant’s principal and branch offices other than Consultant’s office at the site. In addition, the hourly rates shall include any part of Consultant’s capital expenses, including necessary transportation, travel and subsistence expenses of Consultant’s employees, incurred in discharge of duties connected with the Services. The Billing Rates shall also include minor expenses connected with the Services such as copies, computers, software, office supplies, postage, faxes, long-distance telephone calls, telephone, and any other expense incurred to accomplish the Services.

2 Not used.

3 Methods of Payment to Consultant

- 3.1 Consultant shall submit monthly invoices with reasonable detail of the daily time incurred by personnel assigned to the Project, supported by invoices and appropriate backup documentation. Each invoice shall report on Consultant’s total billings. Subconsultants shall be billed at the amount billed to Consultant therefore times 1.05.
- 3.2 Not used.

4 Definitions

4.1 Not used.

4.2 The “**Billing Rates**” are the hourly rates indicated in Consultant’s Proposal attached hereto as Exhibit 3 to Appendix A.

END OF APPENDIX B

APPENDIX C - INSURANCE

This is an appendix attached to, and made a part of, the Professional Services Agreement dated January 1, 2011 (“**Agreement**”) between the EL DORADO IRRIGATION DISTRICT (“**District**”) and **CONSULTANT’S NAME ALL IN CAPS** (“**Consultant**”), for the provision of professional services (“**Services**”).

1. Consultant’s Duty to Show Proof of Insurance. Prior to the execution of this Agreement, Consultant shall furnish to District satisfactory proof, in the form of certificates of insurance and/or policy endorsements, that Consultant has taken out for the entire period required by this Agreement, as further described below, the following insurance, in a form satisfactory to District and with an insurance carrier satisfactory to District, authorized to do business in California and rated by A. M. Best & Company A- or better, financial category size VII or better, which will protect those described below from claims described below which arise or are alleged to have arisen out of or result from the acts or omissions of Consultant for which Consultant may be legally liable, whether performed by Consultant, or by those employed directly or indirectly by it, or by anyone for whose acts Consultant may be liable:

1.1 Commercial General Liability Insurance

Commercial general liability insurance, written on an “occurrence” basis, which shall provide coverage for bodily injury, death and property damage resulting from operations, products liability, blasting, explosion, collapse of buildings or structures, damage to underground structures and utilities, liability for slander, false arrest and invasion of privacy arising out of construction management operations, blanket contractual liability, broad form endorsement, products and completed operations, personal and advertising liability, with per location limits of not less than \$2,000,000 general aggregate and \$1,000,000 each occurrence, subject to a deductible of not more than \$25,000 payable by Consultant.

1.2 Business Automobile Liability Insurance

Business automobile liability insurance with limits not less than \$1,000,000 each occurrence including coverage for owned, non-owned and hired vehicles, subject to a deductible of not more than \$25,000 payable by Consultant.

1.3 Workers’ Compensation Insurance

Workers’ Compensation Employers’ Liability limits not less than the amounts required by law. Consultant’s Workers’ Compensation Insurance policy shall, by endorsement, contain a Waiver of Subrogation as to each named and additional insured. In the event Consultant is self-insured, it shall furnish Certificate of Permission to Self-Insure signed by Department of Industrial Relations Administration of Self-Insurance, State of California.

1.4 Professional Liability Insurance

Professional Liability Insurance, either (a) specific to this Project only, with limits not less than \$1,000,000 each claim, or (b) limits of not less than \$1,000,000 each claim and aggregate, all with respect to negligent acts, errors or omissions in connection with services to be provided under this Agreement, and any deductible not to exceed \$25,000 for each claim, with no exclusion for claims of one insured against another insured. Consultant shall maintain said insurance coverage for a period of five (5) years after the completion of the Services and shall, upon request of District, provide certificates of insurance evidencing Consultant has maintained said coverage.

2. Insurance policies shall contain an endorsement containing the following terms:

2.1 Status of El Dorado Irrigation District as Additional Insured.

On Consultant's Commercial General Liability policy and Automobile Liability Policy, the El Dorado Irrigation District, and its affiliates, directors, officers, officials, partners, representatives, employees, consultants, subconsultants and agents, shall be named as additional insureds, but only with respect to liability arising out of the activities of the named insured.

2.2 The policies shall apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of the company's liability.

2.3 Written notice of cancellation, non-renewal or of any material change in the policies shall be mailed to District thirty (30) days in advance of the effective date thereof.

2.4 Insurance shall be primary insurance and no other insurance or self insured retention carried or held by any named or additional insureds other than that amount Consultant shall be called upon to contribute to a loss covered by insurance for the named insured.

2.5 Certificates of Insurance and Endorsements shall clearly describe the coverage and shall contain a provision requiring the giving of written notice described above in subsection 2.3.

2.6 Other than Professional Liability, any insurance policy written on a claims-made basis is subject to the approval of the District's Legal Counsel.

2.7 Nothing herein contained shall be construed as limiting in any way the extent to which Consultant or any of its permitted subcontractors or subconsultants may be held responsible for payment of damages resulting from their operations.

2.8 If Consultant fails to maintain any required insurance, District may take out such insurance, and deduct and retain amount of premium from any sums due Consultant under this Agreement.

END OF APPENDIX C