

**Borrego Water District Board of Directors**  
**Regular Meeting**  
**December 17, 2019 @ 9:00 a.m.**  
**806 Palm Canyon Drive**  
**Borrego Springs, CA 92004**

**I. OPENING PROCEDURES**

- A. Call to Order:
- B. Pledge of Allegiance
- C. Roll Call
- D. Approval of Agenda
- E. Approval of Minutes
  - 1. November 12, 2019 Board Meeting (3-6)
  - 2. November 20, 2019 Board Meeting (7-8)
- F. Comments from the Public & Requests for Future Agenda Items (may be limited to 3 min)
- G. Comments from Directors
- H. Correspondence Received from the Public: See Item II.B

**II. ITEMS FOR BOARD CONSIDERATION AND POSSIBLE ACTION**

- A. Presentation and Acceptance of 2018-2019 Audited Financial Statements – Mike Zizzi, Leaf and Cole Auditors & K Pitman, BWD (9-53)
- B. Overview of 30-Day Stipulated Agreement Public Review Period– G Poole (54)
- C. Acceptance of Plans/Specifications/Bid Documents & Authorization to Bid De Anza Drive, Yaqui Road and Fairway Lane – G Poole (55-314)
- D. Policy for Periodic Cyber Security Assessments – L Brecht/G Poole (315)
- E. Indirect Costs Policy – L Brecht/G Poole (316-318)
- F. University of California, Irvine: Air Quality Monitoring Agreement – G Poole (319-339)
- G. LACFO Special Districts Advisory Committee Election – G Poole (340-343)

**III. STANDING AND AD-HOC BOARD COMMITTEE REPORTS –**

- A. STANDING:
  - 1. Operations and Infrastructure – Delahey/Duncan
- B. AD-HOC:
  - 1. SGMA Compliance – Brecht/Duncan
  - 2. Risk – Brecht
  - 3. Grant Funding – Dice/Johnson
  - 4. Association of California Water Agencies/Joint Powers Authority – Dice/Johnson
  - 5. Organizational Staffing - Dice/Duncan
  - 6. Prop 218 Preparation - Brecht
  - 7. Air Quality Monitoring – K Dice

AGENDA: December 17, 2019

All Documents for public review on file with the District's secretary located at 806 Palm Canyon Drive, Borrego Springs CA 92004

Any public record provided to a majority of the Board of Directors less than 72 hours prior to the meeting, regarding any item on the open session portion of this agenda, is available for public inspection during normal business hours at the Office of the Board Secretary, located at 806 Palm Canyon Drive, Borrego Springs CA 92004.

The Borrego Springs Water District complies with the Americans with Disabilities Act. Persons with special needs should call Geoff Poole – Board Secretary at (760) 767 – 5806 at least 48 hours in advance of the start of this meeting, in order to enable the District to make reasonable arrangements to ensure accessibility.

If you challenge any action of the Board of Directors in court, you may be limited to raising only those issues you or someone else raised at the public hearing, or in written correspondence delivered to the Board of Directors (c/o the Board Secretary) at, or prior to, the public hearing.

#### **IV. STAFF REPORT**

- A. Financial Reports (344-354)
  - October 2019
  - November Deferred to January Regular Board Meeting
- B. Water and Wastewater Operations Report (355-357)
  - October 2019
  - November 2019
- C. Water Production/Use Records: (358-360)
  - October 2019
  - November 2019
- D. General Manager Report: Status Update and Verbal Discussion of: (361-365)
  - a. BS Basin Ground Water Monitoring & Water Quality Monitoring Program (including well abandonment)
  - b. RH agreement for Spare Capacity -
  - c. RH Flood Control Facilities
  - d. CIP Schedule Update
  - e. Projected Bond Financed Project Expenditures Jan 2020 thru Jul 2022

#### **V. CLOSED SESSION:**

- A. Conference with Legal Counsel - Significant exposure to litigation pursuant to paragraph (3) of subdivision (d) of Section 54956.9: (Three (3) potential cases)
- B. Performance Evaluation of General Manager: GM Performance Review – Conference for Public Employee Performance Evaluation - Title: General Manager Employee Performance Review- pursuant to subdivision (d) (4) of Government Code Section (Government Code § 54957)

#### **II. ITEMS FOR BOARD CONSIDERATION AND POSSIBLE ACTION – CONT.**

- H. General Manager Compensation

#### **VI. CLOSING PROCEDURE**

The next Board Meeting is scheduled for January 14, 2020. A Special Board Meeting is tentatively scheduled for January 7, 2020, for Consideration of the Stipulated Agreement

AGENDA: December 17, 2019

All Documents for public review on file with the District's secretary located at 806 Palm Canyon Drive, Borrego Springs CA 92004

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**Borrego Water District Board of Directors**

**MINUTES**

**Regular Meeting**

**November 12, 2019 @ 9:00 a.m.**

**806 Palm Canyon Drive**

**Borrego Springs, CA 92004**

**I. OPENING PROCEDURES**

- A.** Call to Order: President Dice called the meeting to order at 9:00 a.m.
- B.** Pledge of Allegiance: Those present stood for the Pledge of Allegiance.
- C.** Roll Call:     Directors:     Present:     President Dice, Vice President  
Brecht, Secretary/Treasurer  
Duncan, Delahay, Johnson

Staff:             Geoff Poole, General Manager

Wendy Quinn, Recording Secretary

Public:           Meet Panchal             Bob Krasowski

Harry Ehrlich             Rick Alexander, TRAC

Randal Stane

- D.** Approval of Agenda: *MSC: Brecht/Delahay approving the Agenda as written.*

- E.** Approval of Minutes:

1. October 8, 2019 Special Board Meeting

*MSC: Brecht/Delahay approving the Minutes of the Special Meeting of October 8, 2019 as corrected (Item II.B.1.a, first paragraph, last sentence, revise to read, "The two who voted 6 . . . ; Item II.B.1.c, last sentence before the motion, correct the spelling of "important").*

2. October 22, 2019 Regular Board Meeting

*MSC: Brecht/Delahay approving the Minutes of the Regular Meeting of October 22, 2019 as written.*

**F.** Comments from the Public and Requests for Future Agenda Items: Harry Ehrlich congratulated Director Johnson on her appointment to the Board and thanked the Board for his opportunity to serve on it. He offered to provide input to the District upon request.

**G.** Comments from Directors: Director Duncan referred to the prior request from Mesquite Trails for an extension to pay its sewer connection fees. He suggested it was time to revisit the issue, and President Dice agreed to put it on the next Agenda.

- H.** Correspondence Received from the Public: None

**II. ITEMS FOR BOARD CONSIDERATION AND POSSIBLE ACTION**

- A.** Borrego Water District:

1. Air Quality Monitoring Interim Funding. Geoff Poole reported that staff and Rick Alexander had been working to obtain interim funding for the Air Quality Monitoring System, a joint effort by UCI, BWD and the Borrego Valley Endowment Fund. The program was established in 2016, and the original funding from BVEF will run out at the end of the calendar year. Options to pay for the program's continuance include non-water and non-sewer revenue (ad valorem taxes) and revenue from the anticipated cell tower on Yaqui Pass.

Mr. Alexander reported that the program has been successful. To extend it another five years would cost \$300,000, and he has been exploring grant opportunities. The County Air Pollution Control District is one source, and Mr. Alexander had forwarded documents from the AQMS Director, Charles Zender, a UCI professor. Mr. Alexander had also been working with David Garmon, BVEF Trustee. Another potential funding source is the California Air Resources Board, which has an air quality grant program. Mr. Alexander spoke to a CARB representative, who asked for a written request and agreed to circulate it. He added that for now he hoped to fund the first year while continuing to work on a five-year source.

Director Brecht explained that BWD entered into the AQM program because of the connection between farmland fallowing and air quality, and the anticipated need for CEQA compliance. It is important to establish a baseline, and to prevent disruption of the program and data gaps. He further noted that BVEF had established a policy of only funding direct costs, which would reduce the annual price. BVEF wants to finalize an agreement with Dr. Zender now, and has agreed to provide \$22,500, hopefully to be matched by BWD, while continuing to pursue grants for the long term. Staff is also talking to the County about using Proposition 1 funds from DWR, originally earmarked for GSP-related CEQA work, which may be available for other environmental efforts once the Stipulation is finalized. Director Brecht pointed out that there are similar health impacts related to water quality degradation and air quality degradation.

Director Delahay noted that Borrego's air quality could also be degraded by air from the Salton Sea, which could support future grant applications. President Dice added that air quality is part of the overall health of the community. ***MSC: Brecht/Johnson approving a contribution of up to \$22,500 in matching funds from non-water and non-sewer revenue for direct costs for Dr. Zender's Air Quality Monitoring System.***

Bob Krasowski suggested posting the AQM results on the BWD website, and Mr. Poole agreed to look into it. Director Johnson mentioned IVAN, a community based air monitoring system funded by the Air Resources Board, and Mr. Alexander agreed to look into it. Mr. Ehrlich suggested investigating grant reimbursement for the first year expenditure. Mr. Poole will write to BVEF informing them of the Board's approval of the matching funds.

***MSC: Brecht/Delahay directing Mr. Poole and legal counsel to draft a policy providing that BWD will pay only direct costs for contracted work.***

Mr. Alexander asked whether the Board wanted to manage any grant money received, and Director Duncan thought it would be reasonable for BWD to be the fiscal agent. The Board concurred.

2. Prop One/68 Land Acquisition Update. Mr. Poole reported that he had been looking for a willing seller in order to apply for the Proposition 1/68 land acquisition grant. After investigating Oasis Ranch, the owners decided not to sell. However, Jack McGrory is interested in selling the Roadrunner Tree Farms, with a BPA of 1,200 afy. If land is restored to a desert wash condition, it could provide a habitat for the flat-tailed horned lizard in compliance with the in-lieu fee program, and the Viking Ranch property could also be considered. With appraisals and CEQA compliance required, the grant application will not be ready by the November 20 deadline. However, the program will open again in March, and Mr. Poole recommended applying at that time. Mr. Alexander recommended that a grant application also be filed with the Bureau of Reclamation. Director Brecht noted that the appraisal should not consider the agricultural land an ongoing business, since it will be fallowed upon purchase.

3. Board Meeting Schedule for November and December 2019. On Mr. Poole's recommendation, the Board agreed to hold one meeting each in November (today) and December (12/17). Depending upon when the Stipulation is finalized, a special meeting may be called.

**B. Borrego Springs Sub Basin:**

1. Update on Release of Stipulated Agreement Between Borrego Springs Pumpers. Mr. Poole reported that the attorneys are continuing their review of the Stipulation documents, and he believed all parties are satisfied. The final draft may be ready on Monday or Tuesday.

a. Overview of how public input has been handled in other adjudicated basins. Director Johnson explained that the WaterMaster Board will probably meet quarterly, but can meet more frequently, particularly at first. Director Delahay pointed out that many people think the WaterMaster is one person, while it will actually be a Board. Director Johnson added that there will be confusion as to whether a particular issue should be brought to the WaterMaster Board or the BWD Board. The Core Team will address these issues.

b. Discussion of Public Meeting Schedule and Structure for 30-day review period. Mr. Poole reported that Rams Hill has solicited the advice of a public relations firm to help with the Stipulation public review process. A slightly different format from the Town Hall Meetings is anticipated. There may be topic-based workstations around a big room, and the public can come and go and circulate among the stations. The Core Team will continue to work with the other pumpers on the meeting schedule. One or two meetings are contemplated, with written comments and responses.

Discussion followed regarding responses to the comments, and how to respond to comments that were previously made regarding the GSP. Is it acceptable to give the same response or say it has already been answered? Director Brecht suggested telling the public up front that the District reserves the right to comment or decline to do so. President Dice suggested acknowledging the comments without responding. Mr. Poole will work with Directors Duncan and Brecht to develop an appropriate strategy, and perhaps consult Mr. Anderson.

2. Update on Well Count in Borrego Springs Sub Basin. Mr. Poole reported that over the last few months, staff has been researching how many wells are in the Valley. The County has records from the 1970s, and Dudek also has a list. They do not match. Meet Panchal reported that he had compared the two lists. The County list shows 87 wells, and Dudek's shows 52. The County's shows APNs and addresses, but it is difficult to coordinate the two lists. President Dice suggested that ABF might have APNs for the wells on Dudek's list, and Mr. Panchal agreed to check with them. Director Delahay pointed out that the County list shows well permits issued; it doesn't necessarily mean they were drilled. Director Duncan expressed concern regarding liability for abandoned wells. Mr. Poole reported that he is working with Jay Jones to identify the top ten wells for repurposing as monitoring wells, and to identify any hazards. Although the hazards are the County's problem, if they don't act, can BWD? Mr. Poole will investigate.

C. Status Update and Verbal Discussion of:

1. Critical Overdraft Plan Development. This was covered previously.
2. Proposition 218 Study Progress. Director Brecht Reported that staff had met with the consultants, and the internal model review will begin soon.
3. Water Quality Monitoring Plan Progress. Mr. Poole reported that he and Dr. Jones are continuing to look at repurposing abandoned wells with State grant funds. A report will be presented at the next meeting.
4. RH agreement for Spare Capacity. Rams Hill is obligated to purchase 1,000 acre-feet per year of water from BWD. They have prepaid, and deliveries to the golf course began two months ago. The District is providing 300 gallons per minute, except between 4:00 and 9:00 p.m.
5. BS Basin Groundwater Monitoring Program (including well abandonment). This was covered previously.
6. Status of Independent Cyber Security Evaluation. Mr. Poole will present the final report during closed session.
7. Status of RH flood control facilities. An inspection is scheduled this week. Director Delahay thought an inspection every three years would be sufficient unless there is a major rainstorm. Mr. Poole stated that in-house staff can look at it periodically and determine if an engineering inspection is needed. Director Brecht recommended a written policy.
8. Status of GSP Development Costs Reimbursement. Mr. Poole reported that the negotiators have completed discussions of costs to be included in the Stipulation. Further discussion will take place in closed session.

Director Brecht requested that CIP Bond Projects be added to the Status Updates.

### III. STANDING AND AD-HOC BOARD COMMITTEE REPORTS

#### A. STANDING:

1. Operations and Infrastructure. No report.

#### B. AD-HOC:

1. SGMA Compliance. No report.
2. Risk. No report.
3. Grant Funding. No report.
4. Association of California Water Agencies/Joint Powers Authority. No report.
5. Organizational Staffing. No report.
6. Prop 218 Preparation. No report.
7. Air Quality Monitoring. No report.

Director Brecht asked that the Audit Committee be added to the next Agenda.

### IV. STAFF REPORT

A. Financial Reports: Deferred to December 2019 Regular Meeting.

B. Water and Wastewater Operations Report: Deferred to December 2019 Regular Meeting.

C. Water Production/Use Records: Deferred to December 2019 Regular Meeting.

### V. CLOSED SESSION

A. Conference with Legal Counsel – Significant exposure to litigation pursuant to Government Code paragraph (3) of subdivision (d) of Section 54956.9 (Three (3) potential cases):

B. Replacement Well Number Two Site – Conference with Real Property Negotiators (Govt. Code Section 54956.8); Property APN: APN 198-021-08, 77.95 acres.

BWD Negotiator: Geoff Poole

Negotiating Parties: Geoff Poole, General Manager and Owner: Borrego Nazareth

Under Negotiation: Price and Terms of Payment:

C. Cyber Security – Government Code section 54957(a):

D. Performance Evaluation of General Manager: GM Performance Review – Conference for Public Employee Performance Evaluation – Title: General Manager Employee Performance Review – pursuant to subdivision (d)(4) of Government Code section 54957:

The Board adjourned to closed session at 10:50 a.m., and the open session subsequently reconvened. There was no reportable action.

### VI. CLOSING PROCEDURE

A. Suggested Items for Next/Future Agenda: Items for the next Agenda were discussed previously.

B. The next Meeting of the Board of Directors is scheduled for Tuesday, December 17, 2019 at 9:00 am. There being no further business, the Board adjourned.

**Borrego Water District Board of Directors**

**MINUTES**

**Special Meeting**

**November 20, 2019 @ 9:00 a.m.**

**806 Palm Canyon Drive**

**Borrego Springs, CA 92004**

**I. OPENING PROCEDURES**

- A. Call to Order: President Dice called the meeting to order at 9:00 a.m.
- B. Pledge of Allegiance: Those present stood for the Pledge of Allegiance.
- C. Roll Call:      Directors:      Present:      President Dice, Vice-President Brecht, Secretary/Treasurer Duncan, Delahay, Johnson  
Staff:              Geoff Poole, General Manager  
                            Wendy Quinn, Recording Secretary  
Public:             Meet Panchal             Michael Sadler, *Borrego Sun*  
                            Gary Haldeman          Martha Deichler, BSUSD  
                            Beth Hart                Rebecca Falk  
                            Bill Johnson, Borrego David Fleming, Borrego Springs Resort      Springs Resort  
                            Harry Turner, Rams    Bill Carpenter, Air Ranch Hill                 Laura Castro, BSUSD
- D. Approval of Agenda: **MSC: Brecht/Delahay approving the Agenda as written.**
- E. Comments from the Public and Requests for Future Agenda Items: None
- F. Comments from Directors: None
- G. Correspondence Received from the Public: None

**II. ITEMS FOR BOARD CONSIDERATION AND POSSIBLE ACTION**

- A. Borrego Water District:
  - 1. Public Release of Borrego Springs Subbasin Sustainable Groundwater Management Act (SGMA) alternative to a Groundwater Sustainability Plan (GSP) Stipulation Documents. Geoff Poole announced the unveiling of the Stipulation documents, an alternative to the GSP. The documents are now available on line, and today marks the beginning of a 30-day public review period. Approval to sign will be considered at a January 7 special meeting, and the documents can be changed during the comment period.

Mr. Poole presented a slide show outlining the BWD website, links and a list of documents: Settlement Agreement, Stipulation, Groundwater Management Plan, WaterMaster Rules and Regulations, frequently asked questions, and a request for public comments with comment form. Director Duncan explained that there are no substantive changes in the GMP as compared to the GSP – basically references to the WaterMaster instead of the Groundwater Management Agency.

Rebecca Falk asked who would be available to answer technical questions, and Mr. Poole said he would be happy to help. Director Johnson inquired about comments, and Mr. Poole replied that he hoped to focus on new comments, rather than those that were previously submitted regarding the GSP. A member of the public asked whether non-ratepayers could comment. Director Duncan explained that the District was asking for comments from customers on a document that may be signed on their behalf; however, anyone may comment. Also, DWR will have another public comment period after submission. Ms. Falk asked whether the public comments would be posted, and Mr. Poole replied that the District had not yet determined whether to share them. Michael Sadler requested that the comments be available to the *Borrego Sun* to be published.

In response to an inquiry regarding changes to the GSP in the GMP, President Dice explained that the GMP is more specific as to what will be done to reach sustainability. The timeline is different. For example, the GSP said there would be a metering program, whereas the GMP says it will start March 30, 2020. Also, the GSP provided for equal water use reduction in each of the 20 years of the plan, while the GMP calls for a 50 percent reduction during the first ten years.

Gary Haldeman agreed with Ms. Falk and Mr. Sadler that the comments should be shared with the public. Beth Hart inquired about the frequently asked questions, and Mr. Poole noted that they would be updated as comments are received. Discussion followed regarding publication of the names of the commenters. Mr. Poole pointed out that the name and address of the sender is requested on the comment form, but Mr. Sadler said the *Borrego Sun* would contact the writer before publishing their names. Mr. Poole agreed to add a statement in the comment form that the comments may be published.

Mr. Poole referred to the request from ratepayers that BWD not be required to reduce its water use, but explained that this was rejected during negotiations because all parties had to compromise in some way. He pointed out that the District has a relatively high BPA, 2,500 acre-feet per year, and currently uses 1,500 to 1,600 afy. Staff is looking for funding for land/water acquisition and plans to apply for a grant in March.

Mr. Haldeman questioned the decision to assign the State Park 20 afy non-reducible. Director Duncan explained that the State might shut down the campground under a water use reduction mandate. Additionally, the Park has a big impact on the economy.

President Dice reported that there would probably be two community meetings during the public comment period. Mr. Haldeman added that he was still communicating with the ratepayers via e-mail. Director Brecht reminded him that he will be asked to nominate a representative to the WaterMaster Board. He suggested that Mr. Poole send a list of qualifications to all AC members. Director Johnson pointed out that interested parties can nominate themselves, and suggested disseminating contact information for AC members. Mr. Poole will prepare a nomination procedure. Director Duncan explained that once the Stipulation is filed with the Court, an interim WaterMaster Board will be established.

2. Authorization to Commence Analysis of a 5 Year Annual Groundwater Production Exhibit by Pumper as required under the Stipulation Judgment. Mr. Poole requested Board approval of a \$7,980 expenditure for an analysis by Dudek of the annual groundwater production represented by all pumbers. This is required by the Stipulation, and BWD's expense will be reimbursed by other parties according to their BPAs once it is signed. BWD's final cost should be approximately \$800. *MSC: Brecht/Delahay authorizing staff to initiate the Dudek analysis of the most recent five-year annual groundwater production required for the Stipulated Judgment.*

### **III. CLOSED SESSION**

A. Conference with Legal Counsel – Significant exposure to litigation pursuant to paragraph (3) of subdivision (d) of Government Code Section 54956.9 (One (1) potential case): The Board adjourned to closed session at 10:45 a.m., and the open session reconvened at 11:45 a.m. There was no reportable action.

### **IV. CLOSING PROCEDURE**

The next Regular Meeting of the Board of Directors is scheduled for Tuesday, December 17, 2019 at 9:00 a.m. at the BWD offices... There being no further business, the Board adjourned at 11:45 a.m.



BORREGO WATER DISTRICT  
BOARD OF DIRECTORS MEETING  
DECEMBER 17, 2019  
AGENDA ITEM II.A

December 11, 2019

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Presentation and Acceptance of 2018-2019 Audited Financial Statements – M Zizzi, Leaf and Cole Auditors & K Pitman, BWD

**RECOMMENDED ACTION:**

Receive Annual Audit and Accept

**ITEM EXPLANATION:**

Attached are the Proposed Audited Financial Statements for FY 2018-2019. Staff will be available to answer any questions from the Directors or public at the meeting.

**NEXT STEPS**

Review documents and accept

**FISCAL IMPACT**

See Attachments

**ATTACHMENT**

1. Draft Audited Financial Statements for FY 2018-19

**BORREGO WATER DISTRICT**  
**FINANCIAL STATEMENTS**  
**JUNE 30, 2019**

DRAFT



*Leaf & Cole, LLP*  
*Certified Public Accountants*

**BORREGO WATER DISTRICT  
FINANCIAL STATEMENTS  
JUNE 30, 2019**

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DRAFT



December \_\_\_\_, 2019

To the Honorable President and Members of the Board of Directors and Customers of the Borrego Water District:

State law requires that all general-purpose local governments and special districts publish each fiscal year a complete set of financial statements presented in conformity with generally accepted accounting principles (GAAP) and audited in accordance with generally accepted auditing standards by a firm of licensed certified public accountants. The Annual Financial Report of the Borrego Water District (BWD; District) for fiscal year ended June 30, 2019 is hereby submitted as required by Leaf and Cole, LLP., a firm of licensed certified public accountants, who has audited the District's financial statements.

Generally Accepted Accounting Principles (GAAP) requires that management provide a narrative introduction, overview, and analysis to accompany the financial statements in the form of the Management's Discussion and Analysis (MD&A) section. This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The District's MD&A can be found immediately after the Independent Auditors' Report.

Management assumes full responsibility for the completeness and reliability of the information contained in this letter, the MD&A and the accompanying financial statements, based upon a comprehensive framework of internal controls that it has established for this purpose. Because the cost of internal controls should not exceed anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements.

The goal of the independent audit is to provide reasonable assurance that the financial statements of the District for the fiscal year ended June 30, 2019 are free of material misstatements. The independent audit involved examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; assessing the accounting principles used and significant estimates made by management; and evaluating the overall financial statement presentation. The independent auditor concluded based upon the audit, that there was a reasonable basis for rendering an unqualified opinion that the District's financial statements for the fiscal year ended June 30, 2019 are fairly presented in conformity with GAAP. The Independent Auditors' Report is presented as the first component of the financial section of this year's audit report.

## **PROFILE OF THE DISTRICT**

The District was established in 1962 as a State of California special district (Water Code § 35565) to provide water and sewer services and flood control and gnat abatement for areas in the Borrego Springs community. The District acquired neighboring Borrego Springs Water Company in 1997 and in 2009 acquired Borrego Springs Park Community Services District. The present size of the District's service area is approximately 50 square miles. Borrego Springs is an unincorporated destination community of approximately 3,500 full-time and approximately 8,000 winter residents, located in a remote northeast corner of San Diego County, approximately 90 miles drive from San Diego and 87 miles drive from Palm Springs.

Borrego Springs is surrounded on all sides by the Anza-Borrego Desert State Park (the Park). The Park, which encompasses over 248,880 hectares (615,000 acres) in and around the Borrego Valley, was established in 1933 to protect this unique desert environment. The military presence of both the Army and Navy during World War II brought the first paved roads and electricity to Borrego Springs. After the war, developers subdivided the area, attempting to create a resort community by capitalizing on the tourism generated by the Park. The Park is the largest state park in California. It was designated as a National Natural Landmark in 1974 and a Biosphere Reserve in the 1980's by the United Nations. The Park contains approximately 85% of State designated wilderness area within California and is approximately the size of Rhode Island. The Park attracts more than 500,000 visitors to the region on an average year. Borrego Springs can welcome more than a million visitors to its community on a super bloom year, as in the spring of 2017 and 2019. An economic study developed for the Anza-Borrego Foundation (ABF) estimates the revenue to the region generated by visitation to the Park during an average year is approximately \$40 million annually (BBC Consulting, 2012).

### ***Infrastructure***

The District has 9 production wells with a replacement cost of approximately \$1,500,000 each. These production wells are located primarily in the Central Management Area of the groundwater basin and are connected to approximately 100 miles of distribution lines. The District's water system serves approximately 2,059 residential, commercial, institutional, and irrigation customers. The District currently delivers approximately 1,600 acre-feet (521 million gallons) annually to its customers. The District also provides sewer and wastewater treatment services to approximately 830 customers located primarily in the Town Center, Club Circle and Rams Hill developments. The District's flood control authority is presently exercised only at Rams Hill. The estimated present replacement cost value of the District's water, sewer and wastewater treatment facilities infrastructure is approximately \$62,500,000.

### ***Governance***

A five-member board of directors work as a team to govern the affairs of the District. The board is elected at large by the registered voters residing within the District's boundaries, with vacant positions that occur between elections appointed by the existing board and during election years by the San Diego County Board of Supervisors if there is no competition for a seat on the board. The directors, who are elected or appointed, are residents and have similar concerns as their constituents. The board members, who serve four-year staggered terms, are responsible for establishing the direction of the District through adopting policies and ordinances for the smooth running of the District; ensuring that sound fiscal policy exists; that management practices and controls are in place for accountability; adopting the annual budget; approving personnel policies and organizational structure; hiring the District's General Manager; and hiring other advisors to the board, such as the District's legal counsel, financial and other advisors, as may be required. The General Manager is responsible for carrying out the policies and ordinances approved by the District's board, for overseeing the day-to-day operations of the District, and for meeting the customer service and financial objectives set forth in the annual operating and capital improvements projects (CIP) budget approved by the board.

### ***Groundwater Supply, Usage & Availability***

The Borrego Springs Subbasin (Subbasin) of the Borrego Valley Groundwater Basin is located at the western-most extent of the Sonoran Desert. The Borrego Springs community overlying the Subbasin relies on local groundwater resources as the sole source of municipal drinking water, domestic supply, and agricultural irrigation.

The California Department of Water Resources (DWR) has designated the 98-square-mile Subbasin as high priority and critically overdrafted. Chronic lowering of groundwater levels in the Subbasin's three aquifers has historically occurred and is ongoing. The critical overdraft annually exceeds the long-term sustainable yield of the Subbasin. Also, presently there is no viable alternative source of imported water supply.

The primary source of water to the Subbasin is surface water (storm water and ephemeral stream flow) that flows into the valley from adjacent mountain watersheds and infiltrates within the valley. The contributory watersheds are approximately 400 square miles (sq. mi) and much larger in area than the approximately 98 sq. mi (62,776 acres) Subbasin. Direct recharge by rainfall within the valley is very low compared to surface water inflows as the annual rainfall averages 5.8 inches per year (in/yr). Stream and flood flows from the adjacent watersheds provide the bulk of the water that enters the Subbasin.

The current hydrologic conceptual model for the aquifer system is that it consists of three unconfined aquifers named the upper, middle and lower aquifers. The upper and middle aquifers are the primary sources of water currently and are typically comprised of unconsolidated sediments. However, with time, the upper aquifer has already become or is expected to become dewatered and the lower aquifer will become a more important source of water as overdraft continues. These three aquifers, Pleistocene (2.5 million years ago) to Holocene (11,700 years ago) era fossil water deposits, are the community's sole source of water. In modern times, the upper and middle aquifers have been the principle sources for groundwater pumping in Borrego Valley.

Since 1945, when large scale pumping began in the Borrego Springs area following World War II, the cumulative volume loss within the Subbasin (which accounts for both annual inflows and outflows) has been approximately 520,000 acre-feet, equivalent to about one-third of the groundwater volume originally present.

At this time there are no plans to import water from outside the Borrego Valley due to the economic cost of a pipeline and the uncertainty of available and affordable imported supply from the Colorado River. Readers may consult the *Southeast California Regional Basin Study Evaluates Water Supply and Demand in Borrego, Coachella and Imperial Valleys* by the U.S. Bureau of Reclamation for more information. Importation of new supply from nearby groundwater basins has also been ruled out due to availability of potential adequate supply and cost. Readers may consult the *Borrego Spring Pipeline Feasibility Study: Final Report* by the U.S. Environmental Protection Agency – Region 9 (2012).

The net replenishment (natural recharge less outflows) of the basin of approximately 5,700 AFY annually is based on historical data (1945-2015). During this period the actual annual natural net recharge was highly variable, fluctuating from less than 1,000 AFY during long dry periods to more than 25,000 AFY in exceptionally wet years.

The current rate of groundwater pumping produces an average annual basin storage change (overdraft) of approximately 13,000 acre-feet (AF) of water per year based on estimated current withdrawal rates using evapotranspiration rates by crop type for agricultural and recreational withdrawals and municipal metered usage and the USGS' calculated average annual net replenishment rate. Over the past 65 years, groundwater levels have declined as much as 126 feet (average of nearly 2 feet per year) in the northern part of the Subbasin and about 87 feet (average of 1.3 feet per year) in the west-central part. In the southeastern part of the Subbasin where less groundwater has been pumped, groundwater levels have remained relatively stable during the same time period. At the current rate of use, the groundwater supply is not sustainable.

Presently, the Subbasin is usefully divided into three Basin Management Areas (South, Central, North) based on differences in transmissivity (how fast groundwater flows from one area to the next) and water quality. Depending on the Management Area location, wells are often screened in the three different aquifers of the basin and exhibit different water quality characteristics. Readers should review the USGS, *Hydrogeology, Hydrologic Effects of Development, and Simulation of Groundwater Flow in the Borrego Valley, San Diego County* (2015) for more complete information.

Sustaining groundwater use requires considering both water quantity and quality. As water levels continue to drop in the basin, water quality may also decline, which may require expensive additional treatment for municipal uses. Thus, the cost of municipal water supply for municipal uses will very likely continue to increase over time.

The District is not a member of the San Diego County Water Authority (SDCWA), the regional member of the Metropolitan Water District of Southern California (MWD) that imports supplemental water to San Diego County.

### ***Sustainable Groundwater Management Act of 2014 (SGMA)***

The overarching aim of SGMA is to establish and achieve a “sustainability goal” for the Subbasin through the development and implementation of a Groundwater Sustainability Plan (GSP). In enacting SGMA, the Legislature also set forward more specific purposes underlying the legislation, which include providing for sustainable management of groundwater, avoiding six designated “undesirable results” to groundwater resources that could occur without proper management, enhancing the ability of local agencies to take action to protect groundwater resources, and preserving the security of water rights to the greatest extent possible consistent with sustainable management of groundwater. As defined by SGMA: “A basin is subject to critical overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts.” Thus, the intent of the GSP is to achieve long-term groundwater sustainability by restoring balance to (i.e., reaching “sustainability”) in the Subbasin no later than January 2040, as mandated by SGMA.

The County of San Diego and BWD entered into a Memorandum of Understanding (MOU) for forming a multi-agency Borrego Valley Groundwater Sustainability Agency (GSA) to develop a GSP for the Subbasin. The intent of this GSP is to meet the requirements of SGMA. To this end, the GSP includes the scientific and other background information about the Subbasin required by SGMA and its implementing regulations. The GSP is also intended to provide a roadmap for how sustainability is to be reached in the Subbasin by January 2040.

### ***California's Ongoing Drought***

Because the Borrego Valley relies solely on the Subbasin for its municipal, recreational, and farming irrigation uses, the California drought has produced no physical impairment of water supply for the District and is not expected to do so in the near future. Although in 2017, the California drought was officially declared over, Borrego water users continue to make investments to use water more efficiently and to engage in water conservation programs. The desert environment provides more impetus to use water wisely than periodic drought declarations from Sacramento.

## **FACTORS AFFECTING FINANCIAL CONDITION**

The information presented in the financial statements is perhaps best understood when it is considered from the broader perspective of the specific environment within which the District operates.

## ***Local Economy***

Located in an arid desert climate, Borrego's present economy has been made possible by the overuse of groundwater supplies that have been depleted far faster than those supplies can be replenished. This is true of the agricultural, recreational and municipal water use sectors that bring on average 500,000 visitors to the Borrego Valley annually. Thus, uncertainty over the costs of long-term water supply, potential future costs for treating groundwater to meet safe drinking water quality standards, and the economic impacts of meeting SGMA objectives for the Subbasin may be slowing investments for new development in the Borrego Valley (Valley). For example, one result of SGMA is to change the present cost of the groundwater itself from zero dollars for use to as yet some undetermined positive amount. Borrego is considered a Severely Disadvantaged Community (SDAC). A SDAC is defined as a community with a median household income (MHI) of less than 60% of the California statewide MHI. The Valley is also considered an Economically Distressed Area (EDA). An EDA is defined as a geographic area with a population of 20,000 or less with an annual MHI that is less than 85% of the California statewide MHI, and with at least one of the following conditions, as determined by the Department of Water Resources (DWR): a) financial hardship; b) unemployment rate at least 2% higher than the statewide average; or c) low population density.

## ***Previous Fiscal Years Spending by the District***

The District has largely addressed the financial situation that was inherited from the 2007-2010 Board and general manager's decisions that between FY 2008 – FY 2011 spent more than \$6.3 million of the District's \$6.5 million cash reserves and potentially obligated the District to spend another \$7.0 million for unfunded projects. These spending and future obligations resulted in the District no longer having the financial stability to obtain new debt to pay for necessary long-term capital improvement projects (CIP). With the cancellation of many of the future obligations incurred by the 2007 board, reduction of annual operating and maintenance (O&M) expenses by more than \$1.2 million, careful cash flow management, and Proposition 218 approved rate increases during the period FY 2012-2019, the District then had sufficient annual cash flow and cash reserves for necessary borrowing to issue \$5.5 million in bonds to fund needed CIP for FY 2019-2021. The District's Board believes timely investments in CIP are necessary to produce the lowest economic cost provision of municipal water, sewer and wastewater treatment services over the long term for the District's customers.

## ***Environmental and Climate Change***

Decisions concerning land use, application to the land of substances that may contaminate groundwater, and the use of inadequate sureties for County grading permits in order to restore desert lands are some of the environmental changes that may cause additional costs for the District to provide potable municipal water to its customers. Additionally, with the advent of Anthropogenic Climate Disruption (climate change), the current scientifically accepted prognosis is for potentially greater future climate variability. Such variability may result in higher frequency of floods and longer periods of lower precipitation in the Park's watersheds that provide recharge to the Subbasin. Thus, climate changes may also introduce additional costs for the District to provide potable municipal water to its customers.



## ***Long-Term Financial Planning***

Through a coordinated strategic process, the Board has established a series of policies and plans to effectively meet the District's anticipated future revenue needs. The principles the District has adopted for maintaining revenue sufficiency and solid credit include: (a) the active management and projection of monthly cash flow during the year; (b) holding operating and maintenance (O&M) expenditures to the annual budget; (c) minimal increases in salaries and benefits for employees; (d) refinancing of existing debt obligations where such refinancing would produce reductions in future long term cash obligations; (e) minimizing its reliance of operating cash flow to fund CIP; (f) the active development of state and federal grant opportunities for funding CIP and SGMA-related costs; (g) implementing annual water and sewer rate increases to increase cash flow and to accumulate cash reserves; (h) the maintenance of sufficient cash reserves to address emergency and environmental and climate change risk factors; and (i) pursuing regular proactive Proposition 218 5-year rate increase approvals. The primary driver for the long-term financial viability of the District, as well as the economy of the Valley is the critical overdraft's potential impact on water quality (see section on Groundwater Supply, Usage & Availability above) and the need to relocate existing wells and add new wells as well production is impacted by water table declines due to the overdraft. Thus, to minimize economic risk, the District plans to maintain financial stability and a good credit standing with the debt markets in order to accommodate raising future new debt for its municipal operations.

## **RELEVANT FINANCIAL POLICIES**

### ***Reserve Policy***

The District has established a Reserve Funds Policy to anticipate and to prepare for future funding requirements as well as for unforeseen events. The Reserve Funds Policy establishes restricted and unrestricted reserves and describes the flow of funds to and from the various reserves. A copy of the District's updated and approved Reserve Funds Policy along with the projected reserve funds targets is available on the District's website as a component, of the FY 2019 budget document.

### ***Risk Management***

The District is a member of the California Joint Powers Insurance Authority (JPIA). The JPIA pools for the first \$500,000 of general, auto & public officials liability coverage and has purchased excess coverage up to \$60 million. The JPIA provides coverage on repair or replacement against loss of District property caused by earthquake or flood of \$20 million.

### ***Pension and Other Post-Employment Benefits***

The District contributes to the California Public Employees Retirement System (CalPERS), an agent multiple-employer public employees defined benefit pension plan for its personnel. CalPERS provides retirement and disability benefits, annual cost-of-living adjustments, and death benefits to plan members and beneficiaries. Additional information about the District's pension arrangements and post-employment benefits can be found in the notes to the financial statements.

### ***Investment Policy***

The Investment Policy establishes guidelines for the investment of available funds. The Investment Policy incorporates the Prudent Investor Standards. The primary objectives, in priority order, of the District's investment activities are the following: 1) safety, 2) liquidity, and 3) yield. The District's funds are invested in a variety of investments, in accordance with California government code, as described in the notes to the financial statements. The District minimizes interest rate risk by investing a greater portion of its funds in short term investments and minimizes credit risk by investing a majority of its funds diversified investment pools.

***Internal Controls***

The District is responsible for establishing and maintaining an internal controls structure designed to ensure that the District's assets are protected from loss, theft, or misuse, and to ensure that adequate accounting data are compiled for the preparation of financial statements in conformity with GAAP. The internal structure is designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that; 1) the cost of control should not exceed the benefits likely to be derived; and 2) the valuation of costs and benefits requires estimates and judgments by management.

Respectfully submitted,

General Manager

DRAFT



Leaf & Cole, LLP  
Certified Public Accountants  
A Partnership of Professional Corporations

## Independent Auditor's Report

To the Board of Directors  
Borrego Water District  
806 Palm Canyon Drive  
Borrego Springs, California 92004

We have audited the accompanying financial statements of Borrego Water District, which comprise the statement of net position as of June 30, 2019, and the related statements of revenues, expenses, and changes in net position and cash flows for the year then ended, and the related notes to the financial statements.

### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### *Auditor's Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the State Controller's Minimum Audit Requirements for California Special Districts. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Borrego Water District, as of June 30, 2019, and the changes in financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

**Other Matters**

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the required supplementary information on pages 33 to 34 as identified in the accompanying table of contents be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of the financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted on inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Our audit was conducted for the purpose of forming an opinion on the financial statements of the Borrego Water District. The schedule of assessed valuation and the introductory section are presented for purposes of additional analysis and are not a required part of the financial statements. The schedule of assessed valuation and the introductory section have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

San Diego, California  
December \_\_, 2019

## MANAGEMENT'S DISCUSSION AND ANALYSIS

Our discussion and analysis of the financial performance of Borrego Water District (District) provides an overview of the District's financial activities for the year ended June 30, 2019. Please read it in conjunction with the District's financial statements which begin on page 9.

### **Financial Statements**

This discussion and analysis provides an introduction and a brief description of the District's financial statements, including the relationship of the statements to each other and the significant differences in the information they provide. The Borrego Water District operates as a public utility and maintains its accounting records in accordance with generally accepted accounting principles for a proprietary fund as prescribed by the Government Accounting Standards Board (GASB). The financial statements of the District report information about the District using accounting methods similar to those used by companies in the private sector. These statements offer short and long-term financial information about its activities. The District's financial statements include five components.

- Statement of Net Position
- Statement of Revenues, Expenses and Changes in Net Position
- Statement of Cash Flows
- Notes to the Financial Statements.
- Other Information

The statement of net position includes all of the District's assets, deferred outflows of resources, liabilities, and deferred inflows of resources with the net difference reported as net position. Net position may be displayed in three categories:

- Net Investment in Capital Assets
- Restricted Net Position
- Unrestricted

The statement of net position provides the basis for computing rate of return, evaluating the capital structure of the District and assessing its liquidity and financial flexibility.

The statement of revenues, expenses and changes in net position presents information which shows how the District's net position changed during the year. The financial statements, except for the cash flow statement are prepared using the accrual basis of accounting, which means that revenues are recorded when earned and expenses are recorded when incurred regardless of the timing of cash receipts or payments. The statement of revenues, expenses, and changes in net position measures the success of the District's operations over the past year and determines whether the District has recovered its costs through user fees and other charges.

The statement of cash flows provides information regarding the District's cash receipts and cash disbursements during the year. This statement reports cash activity in four categories:

- Operating
- Noncapital financing
- Capital and related financing
- Investing

This statement differs from the statement of revenues, expenses and changes in net position because the statement accounts only for transactions that result in cash receipts or cash disbursements.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

### **Financial Statements (Continued)**

The notes to the financial statements provide a description of the accounting policies used to prepare the financial statements and present material disclosures required by generally accepted accounting principles that are not otherwise present in the financial statements.

In addition to the financial statements and accompanying notes, the financial statements also present certain required supplementary information, which follows the notes to the financial statements. This other information includes retirement funding schedules.

### **Financial Highlights**

During the fiscal year ended June 30, 2019, the following events impacted, or have the potential to impact, the finances of the District.

- The District's Board approved a budget for fiscal year 2020 that included sewer rate changes that will result in an approximate revenue increase of 4% for sewer service charges; an increase of 5% for water base rates; and an increase of 6% for water commodity rates over the fiscal year 2019 rates in effect. The new rates are effective July 1, 2019 and are reflected initially in customers' August 2019 billings.
- Total operating revenues increased \$331,151 with largest increase in water revenue. Other income increased because of solar rebates.
- Total operating expenses increased \$11,531. General and administrative costs fell due to fewer legal and engineering costs in ID4, while depreciation expense increased as the District improves its capital facilities.
- Non-operating expenses continue to exceed non-operating revenues as the increase in interest expense resulting from newly issued long-term debt exceeded the increases in both property taxes and investment income.
- Cash and cash equivalents increased to \$9,795,605 at June 30, 2019, from \$4,672,115 at June 30, 2018. Proceeds from the Installment Sale agreement are drawn down as needed to fund capital projects. Bond proceeds of \$4,641,507 to fund future capital projects remains on-hand at June 30, 2019.
- Capital assets increased to \$16,346,850 at June 30, 2019, from \$14,958,126 at June 30, 2018, including improvements to Production Well #1 and upgrades to Well #5.

More information about the overall analysis of the District's financial position and results of operations is provided in the following sections.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

### Financial Analysis of the District

#### Net Position

The following is a summary of the District's statements of net position at June 30:

	<u>2019</u>	<u>2018</u>	<u>Dollar Change</u>	<u>Percentage Change</u>
<u>Assets:</u>				
Cash and cash equivalents	\$ 9,795,605	\$ 4,672,115	\$ 5,123,490	109.66%
Capital assets	16,346,850	14,958,126	1,388,724	9.28%
Other assets	716,521	736,107	(19,586)	(2.66)%
Total Assets	<u>26,858,976</u>	<u>20,366,348</u>	<u>6,492,628</u>	31.88%
<u>Deferred Outflows of Resources</u>	<u>416,679</u>	<u>493,258</u>	<u>(76,579)</u>	
<u>Liabilities:</u>				
Current liabilities	1,616,208	731,511	884,697	120.94%
Noncurrent liabilities	8,382,305	3,719,131	4,663,174	125.38%
Total Liabilities	<u>9,998,513</u>	<u>4,450,642</u>	<u>5,547,871</u>	124.65%
<u>Deferred Inflows of Resources</u>	<u>34,862</u>	<u>104,328</u>	<u>(69,466)</u>	(66.58)%
<u>Net Position:</u>				
Net investment in capital assets	13,030,057	11,933,620	1,096,437	9.19%
Unrestricted	4,212,223	4,371,016	(158,793)	(3.63)%
Total Net Position	<u>\$ 17,242,280</u>	<u>\$ 16,304,636</u>	<u>\$ 937,644</u>	5.75%

From the table above, net position increased by \$937,644 from fiscal year 2018 to 2019. Looking more carefully you will note that most of the increase occurred in net investment in capital assets. While the District increased its long-term debt by over \$5 million, most of the proceeds from long-term debt are still on-hand at June 30, 2019. Meanwhile the District still added nearly \$1.4 million in capital assets, after adjusting for depreciation

## MANAGEMENT'S DISCUSSION AND ANALYSIS

### Revenues, Expenses and Change in Net Position

The following is a summary of the District's change in net position for the years ended June 30:

	<u>2019</u>	<u>2018</u>	<u>Dollar Change</u>	<u>Percentage Change</u>
<b><u>Operating Revenues:</u></b>				
Water sales	\$ 3,703,309	\$ 3,435,123	\$ 268,186	7.81%
Sewer service charges	630,595	606,802	23,793	3.92%
Availability charges	239,844	243,957	(4,113)	(1.69)%
Other income	43,785	500	43,285	86.57%
Total Operating Revenues	<u>4,617,533</u>	<u>4,286,382</u>	<u>331,151</u>	7.73%
<b><u>Operating Expenses:</u></b>				
Water operations	1,769,885	1,729,311	40,574	2.35%
Depreciation	643,648	569,396	74,252	13.04%
General and administrative	559,225	635,811	(76,586)	(12.05)%
Sewer operations	387,744	414,453	(26,709)	(6.44)%
Total Operating Expenses	<u>3,360,502</u>	<u>3,348,971</u>	<u>11,531</u>	0.34%
Operating Income	<u>1,257,031</u>	<u>937,411</u>	<u>319,620</u>	34.10%
<b><u>Nonoperating Revenues (Expenses):</u></b>				
Nonoperating revenues	147,612	43,945	103,667	235.90%
Nonoperating expenses	(466,999)	(160,700)	(306,299)	(190.60)%
Nonoperating Revenues (Expenses), Net	<u>(319,387)</u>	<u>(116,755)</u>	<u>(202,632)</u>	173.55%
Income Before Loss on Disposals	937,644	820,656	116,988	14.26%
Loss on Disposals	<u>-</u>	<u>(132,087)</u>	<u>132,087</u>	100.00%
Change in Net Position	937,644	688,569	249,075	36.17%
Net Position at Beginning of Year	<u>16,304,636</u>	<u>15,616,067</u>	<u>688,569</u>	4.41%
Net Position at End of Year	<u>\$ 17,242,280</u>	<u>\$ 16,304,636</u>	<u>\$ 937,644</u>	5.75%

A closer examination of the source of changes in net position reveals that the District's operating revenues increased by \$331,151 in fiscal year 2019 due to increased water consumption as compared to fiscal year 2018 as well as rate increases in both water and sewer. Nonoperating revenues increased by \$103,667 in fiscal year 2019 which is driven by a increase in property taxes and investment income. Nonoperating expenses, net, increased \$306,299 due to an increase in interest expense. Operating expenses, exclusive of depreciation decreased \$62,721 in fiscal year 2019 due to the District incurring fewer costs for legal and engineering services



## MANAGEMENT'S DISCUSSION AND ANALYSIS

### Capital Assets

Capital assets consist of the following at June 30:

	<u>2019</u>	<u>2018</u>	<u>Dollar Change</u>	<u>Percentage Change</u>
Land	\$ 1,013,650	\$ 1,013,650	\$ -	0.00%
Flood control facilities	4,287,340	4,287,340	-	0.00%
Sewer facilities	6,459,962	6,459,962	-	0.00%
Water facilities	11,621,512	11,621,512	-	0.00%
General facilities	1,006,881	1,006,881	-	0.00%
Telemetry system	46,459	46,459	-	0.00%
Equipment and furniture	550,853	539,063	11,790	2.19%
Vehicles	715,320	594,050	121,270	2.04%
Construction in progress	2,038,366	156,319	1,882,047	1203.98%
Fallowed water credits	953,650	953,650	-	0.00%
Water rights - ID #4	185,000	185,000	-	0.00%
Total Assets	<u>28,878,993</u>	<u>26,863,886</u>	<u>2,015,107</u>	<u>7.50%</u>
Less: Accumulated depreciation	<u>(12,532,143)</u>	<u>(11,905,760)</u>	<u>(626,383)</u>	<u>5.26%</u>
Net Capital Assets	<u>\$ 16,346,850</u>	<u>\$ 14,958,126</u>	<u>\$ 1,388,724</u>	<u>9.28%</u>

The net additions to capital assets for fiscal year 2019 totaled \$1,388,724. Significant capital asset additions include improvements to Well #1, upgrades to Well #5 and repairs to Well #12.

### Long-Term Debt

The following is a summary of long-term debt at June 30:

	<u>2019</u>	<u>2018</u>	<u>Dollar Change</u>	<u>Percentage Change</u>
Installment Purchase Agreement	\$ 5,235,000	\$ -	\$ 5,235,000	0.00%
Promissory Note 2018A	2,096,000	-	2,096,000	0.00%
Promissory Note 2018B	746,619	-	746,619	0.00%
Refunding Installment Purchase Agreement	-	2,180,000	(2,180,000)	(100.00)%
2015 Compass Bank Note	-	844,506	(844,506)	(100.00)%
Total Long-Term Debt	<u>\$ 8,077,619</u>	<u>\$ 3,024,506</u>	<u>\$ 5,053,113</u>	<u>167.07%</u>

The District increased its debt outstanding by \$5,053,113 during the year ended June 30, 2019, but extended the term of the debt by 11 years, thus smoothing the cash flows.

## MANAGEMENT’S DISCUSSION AND ANALYSIS

### Economic Factors and Future Year’s Budget and Rates

The District’s Board of Directors and management considered many factors when setting the fiscal year 2019 - 2020 budget, user fees and charges. The District attempts to balance revenues with operating expenses that have increased due to inflationary factors, such as cost of living, cost of water, and insurance coverage.

These indicators were taken into consideration when adopting the District’s budget for the fiscal year 2019 - 2020. The budget has been structured to contain costs, but at the same time, continue the District’s philosophy of providing the highest levels of service and continue efforts towards securing a sustainable water supply for the community.

### **Fiscal Year 2019 Actual vs. Fiscal Year 2020 Budget**

	<u>2020 Budget</u>	<u>2019 Actual</u>	<u>Variance</u>	
			<u>Dollar</u>	<u>Percentage</u>
<b><u>Revenues:</u></b>				
Operating revenue	\$ 4,294,700	\$ 4,617,533	\$ (322,833)	(6.99)%
Nonoperating revenue	158,300	147,612	10,688	7.24%
Total Revenue	<u>4,453,000</u>	<u>4,765,145</u>	<u>(312,145)</u>	(6.58)%
<b><u>Expenses:</u></b>				
Operating expenses	2,732,002	3,360,502	(628,500)	(18.70)%
Non-operating expenses	290,601	466,999	(176,398)	(37.67)%
Total Expenses	<u>3,022,603</u>	<u>3,827,501</u>	<u>(804,898)</u>	(21.05)%
<b>Change in Net Position</b>	<u>\$ 1,430,397</u>	<u>\$ 937,644</u>	<u>\$ 492,753</u>	52.55%

Borrego Water District does not budget for depreciation, but prefers to budget for actual capital assets using the internally generated 10 - year Capital Improvement Budget.

The District’s Board has been in negotiations with other pumpers of the Borrego Springs Subbasin (“Basin”) through December 2019 to apportion water rights through Judgment of the Basin. The Stipulated Judgment would define Basin water rights for each pumper producing two acre feet or more in the Basin and impose a “physical solution” regarding Basin management including use of Basin storage space, overseen by the Superior Court. Under the Sustainable Groundwater Management Act (SGMA), a Stipulated Judgment can serve as an “alternative” to a Groundwater Sustainability Plan (GSP) mandated by SGMA. If the terms of the Stipulated Judgment are agreed to by the pumpers of the Basin, the District would recover approximately \$300,000 in GSP development costs, have an obligation to pay along with other pumpers approximately \$40/acre-foot annually for extractions from the Basin, and likely obtain some amount of supplemental water supply to meet municipal needs beginning in approximately five years. Any agreement would not become binding until Board approval on January 7, 2020 and subsequent approval by major pumpers in the Borrego Valley, also expected in January 2020.

### Contacting the District’s Financial Manager

This financial report is designed to give ratepayers, customers, investors, and creditors a general overview of the District’s finances and to demonstrate the District’s accountability for the money it receives and the stewardship of the facilities it maintains. If you have questions about this report or need additional information, contact Geoff Poole, General Manager, or Kim Pitman, Fiscal Officer at the Borrego Water District, 806 Palm Canyon Drive, Borrego Springs, California, 92004 or by telephone at (760) 767-5806.

**BORREGO WATER DISTRICT  
STATEMENT OF NET POSITION  
JUNE 30, 2019**

**ASSETS**

**Current Assets:** (Notes 1, 2 and 9)

Cash and cash equivalents	\$ 5,140,398
Accounts receivable:	
Water and sewer, net of allowance	598,255
Inventory	112,302
Prepaid expenses	5,964
Total Current Assets	5,856,919

**Noncurrent Assets:** (Notes 1, 2, 3, 4 and 9)

**Restricted Assets:**

Cash and cash equivalents	4,655,207
Total Restricted Assets	4,655,207

**Capital Assets:**

Nondepreciable capital assets	4,190,666
Depreciable capital assets, net	12,156,184
Total Capital Assets	16,346,850

**TOTAL ASSETS**

26,858,976

**DEFERRED OUTFLOWS OF RESOURCES:** (Notes 1 and 6)

Deferred outflows related to refunding	105,620
Deferred outflows related to pensions	311,059
Total Deferred Outflows of Resources	416,679

The accompanying notes are an integral part of the financial statements.

**BORREGO WATER DISTRICT  
STATEMENT OF NET POSITION (CONTINUED)  
JUNE 30, 2019**

**LIABILITIES**

**Current Liabilities:** (Notes 1 and 5)

Accounts payable	\$ 850,895
Accrued interest payable	75,453
Customer deposits	13,700
Current portion of noncurrent liabilities	676,160
Total Current Liabilities	1,616,208

**Noncurrent Liabilities:** (Notes 1, 5 and 6)

Notes payable, net of current portion	7,479,875
Compensated absences	52,277
Net pension liability	850,153
Total Noncurrent Liabilities	8,382,305

Total Liabilities	9,998,513
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**DEFERRED INFLOWS OF RESOURCES:** (Notes 1 and 6)

Deferred inflows related to pensions	34,862
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**Commitments and Contingencies** (Notes 6 and 7)

**NET POSITION:** (Note 9)

Net investment in capital assets	13,030,057
Unrestricted	4,212,223
Total Net Position	\$ 17,242,280

The accompanying notes are an integral part of the financial statements.

**BORREGO WATER DISTRICT**  
**STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**  
**FOR THE YEAR ENDED JUNE 30, 2019**

<b><u>Operating Revenues:</u></b>	
Water sales	\$ 3,703,309
Sewer service charges	630,595
Availability charges	239,844
Other income	43,785
Total Operating Revenues	<u>4,617,533</u>
 <b><u>Operating Expenses:</u></b>	
Water operations	1,445,321
Depreciation	643,648
Sewer operations	387,744
Pumping	307,195
Treatment	17,369
General and administrative	559,225
Total Operating Expenses	<u>3,360,502</u>
 Operating Income	 <u>1,257,031</u>
 <b><u>Nonoperating Revenues (Expenses):</u></b>	
Property taxes	62,756
Investment income	84,856
Gain on disposal of capital assets	1,300
Interest expense	(468,299)
Total Nonoperating Revenues (Expenses)	<u>(319,387)</u>
 Change in Net Position	 937,644
 Net Position at Beginning of Year	 <u>16,304,636</u>
 <b>NET POSITION AT END OF YEAR</b>	 <b>\$ <u>17,242,280</u></b>

The accompanying notes are an integral part of the financial statements.

**BORREGO WATER DISTRICT  
STATEMENT OF CASH FLOWS  
FOR THE YEAR ENDED JUNE 30, 2019**

**Cash Flow From Operating Activities:**

Cash received from customers	\$ 4,447,226
Cash payments to suppliers for goods and services	(1,747,309)
Cash payments to employees for services	(1,086,974)
Other operating cash receipts	43,785
Net Cash Provided by Operating Activities	1,656,728

**Cash Flows From Noncapital Financing Activities:**

Receipts from property taxes	62,756
Net Cash Provided by Noncapital financing Activities	62,756

**Cash Flows From Capital and Related Financing Activities:**

Acquisition and construction of capital assets	(1,297,661)
Proceeds from sale of capital assets	1,300
District contribution to refunding	(32,647)
Proceeds from long-term debt	8,743,535
Principal paid on long-term debt	(3,690,422)
Interest paid on long-term debt	(404,955)
Net Cash Provided by Capital and Related Financing Activities	3,319,150

**Cash Flows From Investing Activities:**

Investment income	84,856
Net Cash Provided by Investing Activities	84,856

Net Increase in Cash and Cash Equivalents	5,123,490
Cash and Cash Equivalents at Beginning of Year	4,672,115
<b>CASH AND CASH EQUIVALENTS AT END OF YEAR</b>	<b>\$ 9,795,605</b>

(Continued)

The accompanying notes are an integral part of the financial statements.

**BORREGO WATER DISTRICT  
STATEMENT OF CASH FLOWS (CONTINUED)  
FOR THE YEAR ENDED JUNE 30, 2019**

**Reconciliation of Operating Income to Net**

**Cash Provided by Operating Activities:**

Operating income	\$ 1,257,031
<b>Adjustments to reconcile operating income to net cash provided by operating activities:</b>	
Depreciation	643,648
<b>Change in assets and liabilities:</b>	
Accounts receivable	(8,659)
Inventory	2,382
Prepaid expenses	25,863
Deferred outflows related to pensions	89,661
Accounts payable	(119,105)
Customer deposits	(117,863)
Compensated absences	14,981
Net pension liability	(61,745)
Deferred inflows related to pensions	(69,466)
Net Cash Provided by Operating Activities	<u><u>\$ 1,656,728</u></u>

**Cash and Cash Equivalents:**

**Financial Statement Classification**

Cash and cash equivalents	\$ 5,140,398
Restricted cash and cash equivalents	4,655,207
Total Cash and Cash Equivalents	<u><u>\$ 9,795,605</u></u>

**Supplemental Disclosure of Cash Flow Information**

Capital assets included in increase in accounts payable	\$ 734,711
Amortization of deferred outflows related to refunding	<u><u>\$ 19,565</u></u>

The accompanying notes are an integral part of the financial statements.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 1 - Organization and Significant Accounting Policies:**

**Organization**

Borrego Water District (the “District”) was established in 1962 pursuant to section 35565 of the California Water Code to provide water, sewer, flood control and gnat abatement services to properties in the District. The District is governed by a five member board of directors that are elected at-large by the registered voters residing in the boundaries of the District. The District has nine active wells and approximately 90 miles of distribution lines. In addition, the District provides sewer and wastewater services primarily in the Town Center, Club Circle, and Rams Hill Development.

The criteria used in determining the scope of the reporting entity are based on the provisions of GASB Cod. Sec. 2100 “Defining the Financial Reporting Entity”. The District is the primary government unit. Component units are those entities, which are financially accountable to the primary government, either because the District appoints a voting majority of the component unit’s board, or because the component unit will provide a financial benefit or impose a financial burden on the District.

The Borrego Water District Public Facilities Corporation (the Corporation) was organized in May 1996 under the nonprofit Public Benefit Corporation Law of the State of California to render assistance to the Borrego Water District and any Special Districts which are governed by the Board of Directors of the Borrego Water District with respect to providing various public facilities or services to or for the benefit of the District. The District has accounted for the Corporation as a blended component unit. Despite being legally separate, the Corporation is so intertwined with the District that the Corporation is in substance part of the District’s operations. Accordingly, the Corporation is included within the financial statements of the District.

**Significant Accounting Policies**

A summary of the District’s significant accounting policies consistently applied in the preparation of the accompanying financial statements follows:

**Method of Accounting**

The District utilizes accounting principles appropriate for an enterprise fund to record its activities. Accordingly, the statements of net position and the statements of revenues, expenses and changes in net position have been prepared using the economic resources measurement focus and the accrual basis of accounting.

Capital assets may be constructed by private developers and then dedicated to the District, which is then responsible for their future maintenance. These facilities are recorded as capital contributions when they pass inspection by the District and the estimated costs are capitalized.

The District has not elected to apply the option allowed in GASB Cod. Sec. P80.103, “Proprietary Fund Accounting and Financial Reporting” and as a consequence will continue to apply GASB statements and interpretations.



**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 1 - Organization and Significant Accounting Policies: (Continued)**

**Significant Accounting Policies (Continued)**

**Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities and deferred inflows of resources, and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Revenue Recognition**

The District recognizes revenues from water sales, sewer service charges, availability charges, and other income when they are earned. Operating activities generally result from providing services and producing and delivering goods. As such, the District considers fees received from water sales, sewer services and availability charges to be operating revenues. Taxes and assessments are recognized as revenues based upon amounts reported to the District by the County of San Diego.

**Allowance for Doubtful Accounts**

Bad debts are recognized on the allowance method based on historical experience and management's evaluation of outstanding accounts receivable. The allowance for doubtful accounts receivable totaled \$113,828 at June 30, 2019.

**Taxes and Assessments**

Property taxes and assessments are billed by the County of San Diego to property owners. The District's property tax calendar for the fiscal year ended June 30, 2019, was as follows:

Lien Date:	January 1
Levy Date:	July 1
Due Date:	First Installment - November 1 Second Installment - February 1
Delinquent Date:	First Installment - December 10 Second Installment - April 10

The County collects the taxes from the property owners and remits the funds to the District periodically during the year. The District has an arrangement with the County whereby the County remits taxes which are delinquent as of each June 30 to the District in exchange for the right to retain the delinquent taxes, penalties, and interest when these amounts are subsequently collected.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 1 - Organization and Significant Accounting Policies: (Continued)**

**Significant Accounting Policies (Continued)**

**Inventory**

Inventory consists primarily of materials used in the construction and maintenance of capital assets and is valued average cost.

**Capital Assets**

Capital assets purchased or acquired with a cost exceeding \$5,000 and an estimated useful life more than one year are reported at historical cost. Donated capital assets, donated works of art, and similar items, and capital assets received in service concession agreements are reported at acquisition value. Additions, improvements, and other capital outlays that significantly extend the useful life of an asset are capitalized. Other costs incurred for repairs and maintenance are expensed as incurred. Upon sale or disposition of property and equipment, the asset account is relieved of the cost and the accumulated depreciation account is charged with depreciation taken prior to the sale and any resultant gain or loss is credited or charged to earnings. Depreciation is calculated on the straight-line method over the following estimated useful lives:

Flood control facilities	100 years
Sewer facilities	7 - 50 years
Water facilities	20 - 50 years
General facilities	20 - 50 years
Telemetry system	5 - 6 years
Equipment and furniture	5 - 20 years
Vehicles	5 - 40 years

Depreciation aggregated \$643,648 for the year ended June 30, 2019.

**Interest**

The District incurred interest charges on long-term debt. No interest was capitalized as a cost of construction for the year ended June 30, 2019.

**Amortization**

The deferred amount on refunding is being amortized on the straight-line method over the remaining life of the related debt. Amortization of the deferred amount on refunding totaled \$19,565 for the year ended June 30, 2019 and is included in interest expense.

**Compensated Absences**

Accumulated and unpaid vacation and sick leave totaling \$130,693 is accrued when incurred and included in current and noncurrent liabilities at June 30, 2019.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 1 - Organization and Significant Accounting Policies: (Continued)**

**Significant Accounting Policies (Continued)**

**Deferred Outflows of Resources and Deferred Inflows of Resources**

Deferred outflows of resources and deferred inflows of resources are defined as a consumption of net assets by the District that is applicable to a future period and an acquisition of net assets by the District that is applicable to a future reporting period respectively. Deferred outflows of resources include a deferred amount on refunding. Deferred outflows of resources and deferred inflows of resources are more fully described in Note 6.

**Risk Management**

The District is a member of the Association of California Water Agencies Joint Powers Insurance Authority (Authority). The Authority is a risk-pooling self-insurance authority, created under provisions of California Government Code Sections 6500 et. seq. The purpose of the Authority is to arrange and administer programs of insurance for the pooling of self-insured losses and to purchase excess insurance coverage.

At June 30, 2019, the District participated in the self-insurance programs of the Authority as follows:

Property Loss - Provides for full value replacement of real and personal property owned by the District in the event of a loss. Actual cash value on licensed vehicles, mobile equipment and Hypalon reservoir covers. The JPIA pools for the first \$100,000 and has purchased excess coverage.

General and Auto Liability - Insured up to \$60 million per occurrence; the Authority is self-insured up to \$500,000 and excess insurance coverage has been purchased. The general and auto liability program has no deductible.

Public Officials' Liability - Insured up to \$60 million per occurrence; the Authority is self-insured up to \$500,000 and excess insurance coverage has been purchased.

Fidelity Bond - Insured up to \$1,000,000 per occurrence with a \$100,000 deductible.

Workers' Compensation - Insured up to the statutory limits; the Authority is self-insured up to \$2 million and excess insurance coverage has been purchased. Employer's liability is insured up to \$4 million.

Difference in Conditions - Provides coverage on a repair or replacement basis against loss of District property caused by earthquake or flood, up to \$25 million with a \$25,000 deductible.

The District pays annual premiums for this coverage. They are subject to retrospective adjustments based on claims experienced. The nature and amounts of the adjustments cannot be estimated and are charged to expense as invoiced. The District's insurance expense totaled \$55,578 for the year ended June 30, 2019. There were no instances in the past three years where a settlement exceeded the District's coverage.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 1 - Organization and Significant Accounting Policies: (Continued)**

**Significant Accounting Policies (Continued)**

**Pensions**

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by CalPERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value. CalPERS audited financial statements are publicly available reports that can be obtained at CalPERS website under Forms and Publications.

GASB 68 requires that the reported results must pertain to liability and asset information within certain defined timeframes. For this report the following timeframes are used:

Valuation Date	June 30, 2017
Measurement Date	June 30, 2018
Measurement Period	June 30, 2017 to June 30, 2018

**Fair Value Measurements**

Fair value accounting standards define fair value, establish a framework for measuring fair value, outline a fair value hierarchy based on inputs used to measure fair value and enhance disclosure requirements for fair value measurements. The fair value hierarchy distinguishes between market participant assumptions based on market data obtained from sources independent of the reporting entity (observable inputs that are classified within Level 1 or 2 of the hierarchy) and the reporting entity's own assumptions about market participant assumptions (unobservable inputs classified within Level 3 of the hierarchy).

- Level 1 inputs are quoted prices in active markets for identical investments that the investment manager has the ability to access at the measurement date.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the investment, either directly or indirectly.
- Level 3 inputs are unobservable inputs for the investment.

The District's statements of financial position includes the following financial instruments that are required to be measured at fair value on a recurring basis:

- Investments in the California Local Agency Investment Fund (LAIF) are considered Level 2 assets and are reported at the fair value of the underlying assets as provided LAIF.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 1 - Organization and Significant Accounting Policies: (Continued)**

**Significant Accounting Policies (Continued)**

**Economic Dependency**

The District pumps 100% of its water from the Borrego Springs Sub-basin of the Borrego Valley groundwater basin. Interruption of this source would impact the District negatively.

**Cash and Cash Equivalents**

For purposes of the statement of cash flows, the District considers all investment instruments purchased with a maturity of three months or less to be cash.

**Subsequent Events**

In preparing these financial statements, the District has evaluated events and transactions for potential recognition or disclosure through December \_\_\_, 2019, the date the financial statements were available to be issued.

**Note 2 - Cash and Investments:**

**Investment Authorized by the California Government Code and the District's Investment Policy**

The table below identifies the investment types that are authorized for the District by the California Government Code. The table also identifies certain provisions of the California Government Code that address interest rate risk, and concentration of credit risk. This table does not address investments of debt proceeds held by bond trustees that are governed by the provisions of debt agreements of the District rather than the general provision of the California Government Code or the District's investment policy:

<u>Authorized Investment Type</u>	<u>Maximum Maturity</u>	<u>Maximum Percentage of Portfolio</u>	<u>Quality Requirements</u>
Local Agency Bonds	5 years	None	None
U.S. Treasury Obligations	5 years	None	None
State Obligations	5 years	None	None
California Local Agency Obligations	5 years	None	None
U.S. Agency Securities	5 years	None	None
Bankers Acceptances	180 days	40%	None
Commercial Paper	270 days	25%	A1
Negotiable Certificates of Deposit	5 years	30%	None
Repurchase Agreements	1 year	None	None
Reverse Repurchase Agreements	92 days	20%	None
Medium-Term Notes	5 years	30%	A Rating
Mutual Funds	N/A	20%	Multiple
Money Market Mutual Funds	N/A	20%	Multiple
Collateralized Bank Deposits	5 years	None	None
Mortgage Pass-Through Securities	5 years	20%	AA Rating
Time Deposits	5 years	None	None
California Local Agency Investment Fund (LAIF)	N/A	None	None
County Pooled Investment Funds	N/A	None	None

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 2 - Cash and Investments: (Continued)**

**Investment Authorized by the California Government Code and the District's Investment Policy (Continued)**

The District's investment policy is more restrictive than the California Government Code. The District limits the percentage of its portfolio that can be invested in LAIF, certificates of deposit and savings accounts and U.S. Government bills, notes, bonds and overnight money market funds.

Cash and investments held by the District were comprised of the following at June 30, 2019:

	<u>Maturity in Years One Year or Less</u>
Cash on hand	\$ 107
California Local Agency Investment Fund (LAIF)	22,056
Deposits with financial institutions	9,773,442
Total Cash and Investments	<u>\$ 9,795,605</u>
 Financial Statement Classification:	
Cash and cash equivalents	\$ 5,140,398
Cash and cash equivalents - Restricted	4,655,207
Total Cash and Investments	<u>\$ 9,795,605</u>

**Disclosures Relating to Interest Rate Risk**

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The district manages its exposure to interest rate risk by purchasing shorter term investments and by timing cash flows from maturities so that a portion of the portfolio is maturing over time as necessary to provide the cash flow and liquidity needed for operations.

Information about the sensitivity of the fair values of the District's investments to market interest rate fluctuations is provided in the previous table that shows the distribution of the District's investments by maturity at June 30, 2019.

**Disclosures Relating to Credit Risk**

Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. Presented below is the actual rating as of the year for each investment type.

	<u>Rating as of Year End Standard &amp; Poor's</u>
California Local Agency Investment Fund (LAIF)	Not Rated

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 2 - Cash and Investments: (Continued)**

**Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude to the District's investment in a single issue.

The investment policy of the District contains limits on the amount that can be invested in any one issuer beyond that stipulated by the California Government Code as described below. At June 30, 2019, no investments represented more than 5% of the District's investment portfolio.

<u>Investment Type</u>	<u>Maximum Percentage of Portfolio</u>
California Local Agency Investment Fund	98%
FDIC Insured Institutions (C.D.'s or Savings)	95%
U.S. Government Bills, Notes, Bonds, etc	20%
Certificate of Deposit Account Registry	95%

**Custodial Credit Risk**

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the District will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counter-party (e.g., broker-dealer) the District will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The California Government Code and the District's investment policy do not contain legal or policy requirements that would limit the exposure to custodial credit risk for deposits or investments other than the following provision for deposits: The California Government Code requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law (unless so waived by the governmental unit). The market value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies. California law also allows financial institutions to secure District deposits by pledging first trust deed mortgage notes having a value of 150% of the secured public deposits.

At June 30, 2019, none of the District's deposits with financial institutions in excess of federal depository insurance limits were held in uncollateralized accounts.

**Investment in State Investment Pool**

The District is a voluntary participant in the California Local Agency Investment Fund (LAIF) that is regulated by California Government Code under the oversight of the Treasurer of the State of California. The fair value of the District's investment in this pool is reported in the accompanying financial statements at amounts based upon the District's pro-rata share of the fair value provided by LAIF for the entire LAIF portfolio (in relation to the amortized cost of that portfolio). The balance available for withdrawal is based on the accounting records maintained by LAIF, which are recorded on an amortized cost basis.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 2 - Cash and Investments: (Continued)**

**Investment in State Investment Pool (Continued)**

The statement of cash flows has been prepared by considering all investment instruments purchased with a maturity of three months or less to be cash equivalents. Following is a detail at June 30, 2019:

Deposits with financial institutions	\$ 9,773,442
California Local Agency Investment Fund (LAIF)	22,056
Cash on hand	107
	\$ 9,795,605

**Note 3 - Restricted Assets:**

Restricted assets were provided by, and are to be used for the following at June 30, 2019:

<u>Funding Source</u>	<u>Use</u>	
Bond proceeds and interest earnings	Capital facilities	\$ 4,641,507
Deposits	Deposits	13,700
		\$ 4,655,207

When both restricted and unrestricted resources are available for use, it is the District's policy to use restricted resources first, and then unrestricted resources as necessary.

**Note 4 - Capital Assets:**

After the restatement described in Note 9, capital assets consist of the following at June 30:

	Balance at <u>June 30, 2018</u>	<u>Additions</u>	<u>Deletions</u>	Balance at <u>June 30, 2019</u>
<b>Capital Assets Not Being Depreciated:</b>				
Land	\$ 1,013,650	\$ -	\$ -	\$ 1,013,650
Construction in progress	156,319	1,917,488	(35,441)	2,038,366
Fallowed water credits	953,650	-	-	953,650
Water rights - ID No. 4	185,000	-	-	185,000
Total Capital Assets not Being Depreciated	\$ 2,308,619	\$ 1,917,488	\$ (35,441)	\$ 4,190,666

(Continued)



**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 4 - Capital Assets: (Continued)**

	Balance at June 30, 2018	Additions	Deletions	Balance at June 30, 2019
<b>Capital Assets Being Depreciated:</b>				
Flood control facilities	\$ 4,287,340	\$ -	\$ -	\$ 4,287,340
Sewer facilities	6,459,962	-	-	6,459,962
Water facilities	11,621,512	-	-	11,621,512
General facilities	1,006,881	-	-	1,006,881
Telemetry system	46,459	-	-	46,459
Equipment and furniture	539,063	11,790	-	550,853
Vehicles	594,050	138,535	(17,265)	715,320
Total Capital Assets Being Depreciated	24,555,267	150,325	(17,265)	24,688,327
Less: Accumulated depreciation	(11,905,760)	(643,648)	17,265	(12,532,143)
Net Capital Assets Being Depreciated	12,649,507	(493,323)	-	12,156,184
<b>Net Capital Assets</b>	<b>\$ 14,958,126</b>	<b>\$ 1,424,165</b>	<b>\$ (35,441)</b>	<b>\$ 16,346,850</b>

**Note 5 - Noncurrent Liabilities:**

Noncurrent liabilities consist of the following at June 30, 2019:

	Balance at June 30, 2018	Additions	Deletions	Balance at June 30, 2019	Current Portion
<b><u>Notes Payable:</u></b>					
Refunding Installment Purchase Agreement	\$ 2,180,000	\$ -	\$ (2,180,000)	\$ -	\$ -
2015 Compass Bank Note	844,506	-	(844,506)	-	-
Installment Purchase Agreement	-	5,586,000	(351,000)	5,235,000	305,000
Promissory Note 2018A	-	2,294,000	(198,000)	2,096,000	181,000
Promissory Note 2018B	-	863,535	(116,916)	746,619	111,744
Total Notes Payable	\$ 3,024,506	\$ 8,743,535	\$ (3,690,422)	\$ 8,077,619	\$ 597,744
<b><u>Other Noncurrent Liabilities:</u></b>					
Accrued Compensated Absences	\$ 115,712	\$ 130,693	\$ 115,712	\$ 130,693	\$ 78,416
Net Pension Liability	911,898	120,965	182,710	850,153	-
Total Other Long-Term Liabilities	\$ 1,027,610	\$ 251,658	\$ 298,422	\$ 980,846	\$ 78,416

**Refunding Installment Purchase**

In October, 2008, the District entered into an installment purchase agreement totaling \$2,775,000 while concurrently redeeming all of its 1997 Certificates of Participation and 1998 Certificates of Participation. The Borrego Water District Refunding Installment Purchase Agreement was payable in annual principal installments of \$25,000 to \$245,000 in October each year beginning 2013 through 2028. Interest was payable semi-annually in April and October at an interest rate of 4.5% per annum. The installment payments were a special obligation of the District payable solely from revenues of Improvement District No. 4. During the year ended June 30, 2019, the Refunding Installment Purchase Agreement was fully refunded with the proceeds of Promissory Note 2018A.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 5 - Noncurrent Liabilities: (Continued)**

**2015 Compass Bank Note**

In May 2015, the District entered into a 10-year promissory note agreement with Compass Bank in the amount of \$1,125,000. Quarterly payments of principal and interest at 4.95% totaled \$35,572 and were due from September 2015 through June 2025. The note was secured by a senior pledge of net water system revenues of the District. (Net of Improvement District No. 4 operations). The 2015 Compass Bank Note was further secured by a subordinate pledge of net system revenues of the District's Improvement District No. 4. During the year ended June 30, 2019, the Compass Bank Note was fully refunded with the proceeds of Promissory Note 2018B.

Although the refunding of both the Refunding Installment Purchase Agreement and the 2015 Compass Bank Note, resulted in a deferred amount on refunding of \$125,185, by refunding the Refunding Installment Purchase Agreement, the Corporation in effect reduced the aggregate debt service payments by approximately \$45,000 over the next ten years and obtained an economic gain (difference between the present value of the old debt and the new debt service payments) of \$37,944 and by refunding the 2015 Compass Bank Note, the Corporation, in effect, reduced the aggregate debt service payments by approximately \$19,127 over the next six years and obtained an economic gain (difference between the present value of the old debt and the new debt service payments) of \$7,298. The deferred amount on refunding is being amortized over the remaining life of the refunded debt. Amortization expense totaled \$19,565 for the year ended June 30, 2019 and is included in interest expense. The deferred amount on refunding was \$105,620 at June 30, 2019.

**Installment Purchase Agreement**

In July 2018, the District entered into an Installment Purchase Agreement with the Borrego Water District Public Facilities Corporation ("Corporation"). The Corporation provided \$5,586,000 for the purpose of financing costs of the District's project as defined in the Agreement. The Installment Purchase Agreement is payable in semi-annual installments of principal plus interest of 3.825% on or before April 1 and October 1 each year commencing October 1, 2018 through and including October 1, 2038. Payments under the Installment Purchase Agreement are secured by a lien on and pledge of net revenues. The District has covenanted to fix, prescribe, revise, and collect rates, fees, and charges for services and facilities sufficient to yield estimated net revenues equal to 125% of the aggregate amount of debt service on all parity obligations payable from net revenues coming due and payable during such fiscal year. The District had a debt service ratio of 2.41:1 for the year ended June 30, 2019. The Installment Purchase Agreement had an outstanding principal balance of \$5,235,000 and accrued interest payable of \$50,060 at June 30, 2019.

**Promissory Note 2018A**

In July 2018, the District entered into a promissory note with Compass Bank in the amount of \$2,294,000 for the purpose of defeasing and prepaying the Borrego Water District Refunding Installment Purchase Agreement. The promissory note is payable in semi-annual payments of principal and interest at 3.35% commencing October 1, 2018 through and including October 1, 2028. Payments under the promissory note are secured by a lien on and pledge of net revenues. The District has covenanted to fix, prescribe, revise, and collect rates, fees, and charges for services and facilities sufficient to yield estimated net revenues equal to 125% of the aggregate amount of debt service on all parity obligations payable from net revenues coming due and payable during such fiscal year. The District had a debt service ratio of 2.41:1 for the year ended June 30, 2019. The Promissory Note 2018A had an outstanding balance of \$2,096,000 and accrued interest payable of \$17,554 at June 30, 2019.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 5 - Noncurrent Liabilities: (Continued)**

**Promissory Note 2018B**

In July 2018, the District entered into a promissory note with Compass Bank in the amount of \$863,535 for the purpose of defeasing and prepaying the 2015 Compass Bank Note. The promissory note is payable in semi-annual payments of principal and interest at 4.20% commencing October 1, 2018 through and including October 1, 2024. Payments under the promissory note are secured by a lien on and pledge of net revenues. The District has covenanted to fix, prescribe, revise, and collect rates, fees, and charges for services and facilities sufficient to yield estimated net revenues equal to 125% of the aggregate amount of debt service on all parity obligations payable from net revenues coming due and payable during such fiscal year. The District had a debt service ratio of 2.41:1 for the year ended June 30, 2019. The Promissory Note 2018B had an outstanding balance of \$746,619 and accrued interest payable of \$7,839 at June 30, 2019.

Debt service requirements on notes payable are as follows:

<u>Years Ended June 30</u>	<u>Principal</u>	<u>Interest</u>
2020	\$ 597,744	\$ 290,601
2021	623,538	267,697
2022	496,537	246,739
2023	511,751	227,914
2024	537,189	208,329
2025-2029	2,365,860	771,277
2030-2034	1,332,000	439,684
2035-2039	1,613,000	159,024
Total	<u>\$ 8,077,619</u>	<u>\$ 2,611,265</u>

**Note 6 - Defined Benefit Pension Plan:**

**General Information About the Pension Plan**

**Plan Description** - All qualified permanent and probationary employees are eligible to participate in the Miscellaneous Plan of the Borrego Water District, (All Plans) a cost-sharing multiple employer defined benefit pension plan administered by the California Public Employees' Retirement System (CalPERS). Benefit provisions under the Plans are established by State statute and Local Government resolution. CalPERS issues publicly available reports that include a full description of the pension plan regarding benefit provisions, assumptions and membership information that can be found on the CalPERS website. The Plan consists of the miscellaneous plan and the PEPR Plan.

**Benefits Provided** - CalPERS provides service retirement and disability benefits, annual cost of living adjustments and death benefits to plan members, who must be public employees and beneficiaries. Benefits are based on years of credited service, equal to one year of full time employment. Miscellaneous plan members with 5 years of service are eligible to retire at age 50 with statutory reduced benefits. PEPR miscellaneous members with 5 years of service are eligible to retire at age 52 with statutory reduced benefits. All members are eligible for non-duty disability retirement benefits after 5 years of service. The death benefit is the basic death benefit. The cost of living adjustments for each plan are applied as specified by the Public Employees Retirement law per contract. The Plan's provisions and benefits in effect at June 30, 2019, are summarized as follows:

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 6 - Defined Benefit Pension Plan: (Continued)**

**General Information About the Pension Plan (Continued)**

**Benefits Provided - (Continued)**

	<u>Miscellaneous</u> Prior to <u>January 1, 2013</u>	<u>PEPRA</u> On or After <u>January 1, 2013</u>
Benefit formula	3.0% @ 60	2.090% @ 60
Benefit vesting schedule	5 years service	5 years service
Benefit payments	Monthly for life	Monthly for life
Retirement age	50	52 - 67
Monthly benefits, as a % of eligible compensation	2.0% to 2.5%	1.0% to 2.5%
Required employee contribution rates	7.776%	6.912%
Required employer contribution rates	12.759%	7.634%

In addition to the contribution rates above, the District was also required to make payments of \$87,501 toward its unfunded actuarial liability during the year ended June 30, 2019.

The miscellaneous plan is closed to new members that are not already CalPERS eligible participants.

**Contribution Description** – Section 20814(c) of the California Public Employees’ Retirement Law (PERL) requires that the employer contribution rates for all public employers be determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. The total plan contributions are determined through the CalPERS annual actuarial process. The Plans actuarially determined rate is based on the estimated amount necessary to pay the Plan’s allocated share of the risk pool’s costs of benefits earned by employees during the year and any unfunded accrued liability. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of employees.

The District’s contributions to the Plan for the year ended June 30, 2019 were as follows:

Contributions - Employer	\$ <u>142,789</u>
Contributions - Employee (Paid by Employer)	\$ <u>11,709</u>

**Allocation of Net Pension Liability and Pension Expense to Individual Employers**

The following table shows the District’s proportionate share of the net pension liability over the measurement period.

	<u>Total Pension</u> <u>Liability</u> <u>(a)</u>	<u>Increase (Decrease)</u> <u>Plan Fiduciary</u> <u>Net Pension</u> <u>(b)</u>	<u>Net Pension</u> <u>Liability</u> <u>(c) = (a) - (b)</u>
Balance at June 30, 2018	\$ 3,606,926	\$ 2,695,028	\$ 911,898
Balance at June 20, 2019	<u>3,751,525</u>	<u>2,901,372</u>	<u>850,153</u>
Net Changes During 2018 - 2019	<u>\$ 144,599</u>	<u>\$ 206,344</u>	<u>\$ (61,745)</u>

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 6 - Defined Benefit Pension Plan: (Continued)**

**Allocation of Net Pension Liability and Pension Expense to Individual Employers (Continued)**

The net pension liability of the plan is measured as of June 30, 2018, and the total pension liability for the plan used to calculate the net pension liabilities was determined by an actuarial valuation of June 30, 2017 rolled forward to June 30, 2018 using standard update procedures. The proportion of the net pension liability was based on a projection of the District's long-term share of contributions to the pension plans relative to the projected contributions of all participating employers, actuarially determined. The District's proportionate share of the net pension liability for the plan as of June 30, 2017 and 2018 was as follows:

	<u>Miscellaneous</u>
Proportion - June 30, 2017	0.023133%
Proportion - June 30, 2018	0.022210%
Change - Increase (Decrease)	(0.000923%)

For the year ended June 30, 2019, the District recognized a pension expense of \$120,965 for the Plan. As of June 30, 2019, the District reports deferred outflows of resources and deferred inflows of resources related to pensions as follows:

	2019	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Pension contributions subsequent to the measurement date	\$ 162,515	\$ -
Differences between actual contributions made and proportionate share of contributions	49,655	-
Differences between expected and actual experience	21,519	-
Changes of assumptions	73,167	-
Net difference between projected and actual earnings on pension plan investments	4,203	-
Adjustment due to difference in proportions	-	34,862
Total	\$ 311,059	\$ 34,862

The \$162,515 reported as deferred outflows of resources related to contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2020. Other amounts reported as deferred outflows and deferred inflows of resources in the previous chart will be recognized in future pension expense as follows:

Measurement Period Ended June 30	Deferred Outflows/(Inflows) of Resources
2020	\$ 90,704
2021	54,467
2022	(23,843)
2023	(7,646)
Total	\$ 113,682

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 6 - Defined Benefit Pension Plan: (Continued)**

**Actuarial Assumptions**

The total pension liability in the June 30, 2018 actuarial valuation was determined using the following actuarial assumptions:

Actuarial Cost Method	Entry Age Normal in accordance with the requirements of GASB Statement No. 68
Actuarial Assumptions:	
Discount Rate	7.15%
Inflation	2.50%
Salary Increases	Varies by Entry Age and Service
Investment Rate of Return	7.50 net of Pension Plan Investment and Administrative expenses, including inflation
Mortality Rate Table	Derived using CalPERS' membership data for all funds
Post Retirement Benefit Increase	Contract COLA up to 2.0% until Purchasing Power Protection Allowance Floor on Purchasing Power applies, 2.0% thereafter

**Discount Rate**

The discount rate used to measure the total pension liability was 7.15%. To determine whether the municipal bond rate should be used in the calculation of a discount rate for each plan, CalPERS stress tested plans that would most likely result in a discount rate that would be different from the actuarially assumed discount rate. Based on the testing of the plans, the test revealed that none of the tested employer rate plans run out of assets. Therefore, the current 7.15% discount rate is appropriate and the use of the municipal bond rate calculation is not deemed necessary. The stress test results are presented in a detailed report called "*GASB Statements 67 and 68 Crossover Testing Report*" for Measurement Date June 30, 2018 based on June 30, 2017 Valuations that can be obtained from the CalPERS' website.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class.

In determining the long-term expected rate of return, staff took into account both short-term and long-term market return expectations as well as the expected pension fund cash flows. Such cash flows were developed assuming that both members and employers will make their required contributions on time and as scheduled in all future years. Using historical returns on all the funds' asset classes, expected compound (geometric) returns were calculated over the short-term (first 11 years) and the long-term (60 years) using a building-block approach. Using the expected nominal returns for both short-term and long-term, the present value of benefits was calculated for the plan. The expected rate of return was set by calculating the single equivalent expected return that arrived at the same present value of benefits for cash flows as the one calculated using both short-term and long-term returns. The expected rate of return was then set equivalent to the single equivalent rate calculated above and rounded down to the nearest one quarter of one percent.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 6 - Defined Benefit Pension Plan: (Continued)**

**Discount Rate (Continued)**

The table below reflects the long-term expected real rate of return by asset class. The rate of return was calculated using the capital market assumption applied to determine the discount rate and asset allocation. These geometric rates of return are net of administrative expenses.

<u>Asset Class</u>	<u>Asset Allocation</u>	<u>Real Return Years 1 - 10</u>	<u>Real Return Years 11+</u>
Global Equity	50%	4.80%	5.98%
Fixed Income	28%	1.00%	2.62%
Private Equity	8%	6.30%	7.23%
Real Estate	13%	3.75%	4.93%
Liquidity	1%	0.00%	(0.92)%
	<u>100.00%</u>		

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

The following presents the District's proportionate share of the net pension liability of the risk pool as of the measurement date, calculated using the discount rate, as well as what the District's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1 percentage-point lower or 1 percentage-point higher than the current rate:

	<u>1% Decrease (6.15%)</u>	<u>Current Discount Rate (7.15%)</u>	<u>1% Increase (8.15%)</u>
Plan's Net Pension Liability	\$ <u>1,357,626</u>	\$ <u>850,153</u>	\$ <u>143,242</u>

**Note 7 - Commitments and Contingencies:**

**Contracts**

The Borrego Water District has entered into various contracts for the purchase of material and construction of capital assets. The amounts contracted are based on the contractor's estimated cost of construction. At June 30, 2019, the total unpaid amount on these contracts is approximately \$731,167.

**Litigation**

Legal claims and lawsuits arise from time to time in the normal course of business which, in the opinion of management, will have no material effect on Borrego Water District's financial position.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 7 - Commitments and Contingencies: (Continued)**

**Operating Leases**

The District has entered into an operating lease for office equipment with a lease term in excess of one year. This agreement contains a purchase option. The agreement is a non-cancelable lease. Rent expense totaled \$4,524 for the year ended June 30, 2019.

Future minimum lease payments are as follows:

Years Ended June 30	Lease Payments
2020	\$ 4,524
2021	377
Total	\$ 4,901

**Community Facilities District No. 2017-01 2017 Special Tax Bonds**

The Borrego Water District is the lead Agency of the Borrego Water District Community Facilities District No. 2007-1 (CFD 2007-1) and the Borrego Water District Community Facilities District CFD No. 2017-1 (CDF 2017-1). In April 2017, CFD 2017-1 was formed and an election held to authorize bonded indebtedness up to \$11,600,000 to refinance the outstanding balances of CFD 2007-1 special tax bonds. In May 2017, CFD 2017-1 issued Borrego Spring Water District Special Tax Refunding Bonds, Series 2017A (Series 2017A Bonds) and Borrego Water District Special Tax Refunding Bonds, Series 2017B (Series 2017B Bonds). The CFD 2007-1 special tax bonds are considered defeased.

These financings were accomplished through the authorization of special tax bonds issued pursuant to the Mello-Roos Community Facilities Act of 1982 adopted by the Board of Directors of the Borrego Water District acting as the legislative body of the Community Facilities Districts. The bonds are only payable from certain proceeds of an annual special tax to be levied and collected from property located within the Community Facilities Districts and from certain bond proceeds pledged in the issuances. If the special taxes are not paid when due, the only source of funds to repay the bonds are cash deposits or letters of credit provided by property owners, amounts held in the bond reserve funds, or proceeds, if any, from foreclosure sales of land within the Community Facilities Districts following a delinquency in a special tax payment. Neither the faith nor credit nor the taxing power of the Borrego Water District, the State of California, or any other political subdivision thereof is pledged to the payment of these bonds. Therefore, the Community Facilities Districts are considered separate reporting entities. At June 30, 2019 the following special tax bonds were outstanding:

Series 2017A	\$ 1,045,000
Series 2017B	\$ 10,300,000



**BORREGO WATER DISTRICT**  
**NOTES TO FINANCIAL STATEMENTS**  
**JUNE 30, 2019**

**Note 8 - New Governmental Accounting Standards:**

**GASB No. 83**

In November 2016, the Governmental Accounting Standards Board issued Statement No. 83 “Certain Asset Retirement Obligations”. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. Earlier Application is encouraged. This pronouncement did not have a material effect on the financial statements of the District in the year of implementation.

**GASB No. 84**

In January 2017, the Governmental Accounting Standards Board issued Statement No. 84 “Fiduciary Activities”. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. Earlier Application is encouraged. The District has not determined the effects of this pronouncement on the financial statements of the District in the year of implementation.

**GASB No. 86**

In May 2017, the Governmental Accounting Standards Board issued Statement No. 86 “Certain Debt Extinguishment Issues”. The requirements of this Statement are effective for reporting periods beginning after December 15, 2017. Earlier Application is encouraged. The effects of this pronouncement did not have a material effect on the financial statements of the District in the year of implementation.

**GASB No. 87**

In June 2017, the Governmental Accounting Standards Board issued Statement No. 87 “Leases”. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. The District has not determined the effects of this pronouncement on the financial statements of the District in the year of implementation.

**GASB No. 88**

In April 2018, the Governmental Accounting Standards Board issued Statement No. 88 “Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements”. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. Earlier application is encouraged. This pronouncement did not have a material effect on the financial statements of the District in the year of implementation.

**GASB No. 89**

In June 2018, the Governmental Accounting Standards Board issued Statement No. 89 “Accounting for Interest Cost Incurred before the End of a Construction Period”. The requirements of this Statement are effective for reporting periods beginning after December 14, 2019. Earlier application is encouraged. The District has not yet determined the effects of this pronouncement on the financial statements of the District in the year of implementation.

**BORREGO WATER DISTRICT  
NOTES TO FINANCIAL STATEMENTS  
JUNE 30, 2019**

**Note 8 - New Governmental Accounting Standards: (Continued)**

**GASB No. 90**

In August 2018, the Governmental Accounting Standards Board issued Statement No. 90 “Majority Equity Interests-an amendment of GASB Statements No. 14 and No. 61”. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. Earlier application is encouraged. The District has not yet determined the effects of this pronouncement on the financial statements of the District in the year of implementation.

**GASB No. 91**

In May 2019, the Governmental Accounting Standards Board issued Statement No. 91 “Conduit Debt Obligations”. The requirements of this Statement are effective for reporting periods beginning after December 15, 2020. The District has not determined the effects of this pronouncement on the financial statements of the District in the year of implementation.

**Note 9 - Prior Period Adjustment:**

Certain adjustments resulting in an increase in net position were made during the current year. The following is a detail of items directly affecting net position at June 30, 2018:

Net Position at Beginning of Year as Originally Stated	\$ 14,816,900
Reduction in accumulated depreciation	1,362,293
Recording of unbilled receivables	<u>125,443</u>
	<u>\$ 16,304,636</u>

**BORREGO WATER DISTRICT  
REQUIRED SUPPLEMENTARY INFORMATION  
FOR THE YEAR ENDED JUNE 30, 2019**

**SCHEDULE OF PLAN'S PROPORTIONATE SHARE OF THE NET PENSION LIABILITY  
LAST TEN YEARS \***

	<u>Measurement Date</u> June 30, 2018	<u>Measurement Date</u> June 30, 2017	<u>Measurement Date</u> June 30, 2016	<u>Measurement Date</u> June 30, 2015	<u>Measurement Date</u> June 30, 2014
Proportion of the collective net pension liability	0.022210%	0.023133 %	0.009466 %	0.01010 %	0.01123 %
Proportionate share of the collective net pension liability	\$ 850,153	\$ 911,898	\$ 819,059	\$ 693,352	\$ 699,055
Covered - Employee payroll	\$ 698,023	\$ 675,819	\$ 658,514	\$ 671,180	\$ 595,422
Proportionate share of the collective net pension liability as percentage of covered-employee payroll	121.79 %	134.93 %	124.38 %	103.30 %	117.41 %
Plan fiduciary net position as a percentage of the total pension liability	77.34 %	74.72 %	73.72 %	77.21 %	73.72 %

**Notes to Schedule:**

**Benefit Changes** - The figures above do not include any liability impact that may have resulted from plan changes which occurred after June 30, 2014 valuation date. This applies for voluntary benefit changes as well as any offers of Two Years Additional Service Credit (AKA Golden Handshakes).

\* Fiscal year 2015 was the first year of implementation, therefore only four years are shown.

**BORREGO WATER DISTRICT  
REQUIRED SUPPLEMENTARY INFORMATION  
FOR THE YEAR ENDED JUNE 30, 2019**

**SCHEDULES OF CONTRIBUCTIONS TO THE PENSION PLAN  
LAST TEN YEARS \***

	<u>Fiscal Year 2018 - 2019</u>	<u>Fiscal Year 2017 - 2018</u>	<u>Fiscal Year 2016 - 2017</u>	<u>Fiscal Year 2015 - 2016</u>	<u>Fiscal Year 2015</u>	
Actuarially determined contributions	\$ 162,515	\$ 142,789	\$ 137,737	\$ 138,613	\$ 129,138	
Contributions in relation to the actuarially determined contribution	<u>(162,515)</u>	<u>(142,789)</u>	<u>(137,737)</u>	<u>(138,613)</u>	<u>(129,138)</u>	
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	
Covered-Employee Payroll	\$ 740,131	\$ 698,023	\$ 723,125	\$ 671,180	\$ 595,422	
Contributions as a percentage of covered employee payroll	21.96 %	20.46 %	10.05 %	20.65 %	21.69 %	
Notes to Schedule:						
Valuation Date:	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013	
	<u>2018 - 2019</u>		<u>2016 - 2017</u>		<u>2015</u>	
Actuarial Cost Method	Entry Age		Entry Age		Entry Age	
Amortization Method	Level Percent of Payroll		Level Percent of Payroll		Level Percent of Payroll	
Asset Valuation Method	Market Value		Market Value		Market Value	
Discount Rate	7.15%		7.65%		7.5%	
Projected Salary Increase	3.30% to 14.20% depending on Age, Service, and type of employment		3.30% to 14.20% depending on Age, Service, and type of employment		3.30% to 14.20% depending on Age, Service, and type of employment	
Inflation	2.75%		2.75%		2.75%	
Payroll Growth	3.00%		3.00%		3.00%	
Individual Salary Growth	A merit scale varying by duration of employment coupled with an assumed annual production inflation growth of 0.25%		A merit scale varying by duration of employment coupled with an assumed annual production inflation growth of 0.25%		A merit scale varying by duration of employment coupled with an assumed annual production inflation growth of 0.25%	

\*Fiscal year 2015 was the first year of implementation, therefore only five years are shown.

**BORREGO WATER DISTRICT  
SCHEDULE OF ASSESSED VALUATION  
FOR THE YEAR ENDED JUNE 30, 2019**

The assessed valuation of the District at June 30, 2019, is as follows:

**Assessed Valuation:**

Secured property

\$ 352,961,472

Total Assessed Valuation

\$ 352,961,472

DRAFT

BORREGO WATER DISTRICT  
BOARD OF DIRECTORS MEETING  
DECEMBER 17, 2019  
AGENDA ITEM II.B

December 11, 2019

TO: Board of Directors  
FROM: Geoffrey Poole, General Manager  
SUBJECT: Overview of 30-Day Stipulated Agreement Public Review Period– G Poole

**RECOMMENDED ACTION:**

Receive Report and Direct Staff as Deemed Appropriate

**ITEM EXPLANATION:**

November 20<sup>th</sup> began the 30-day Public Review Period of the Stipulated Judgment. All materials were posted to the BWD website as well as printed copy placed at the BWD office front counter. Public meetings were held on December 3<sup>rd</sup> and 10<sup>th</sup> with one more planned for 6 PM on the evening of the Board Meeting on the 17<sup>th</sup>. BWD Board, Staff and Legal Counsel provided summaries of the documents and responded to Q and A at the first two meetings. Sharing comments received to date and assistance for anyone who wants help with their comment are the primary purposes of the meeting on the 17<sup>th</sup>. The Public Review Period closes at 4 PM on December 20<sup>th</sup>.

Three comment letters have been received to date (as of 12-12-19).

#1 – BSUSD – Requesting a non-reducible allocation of 22-acre feet per year for the Elementary School well.

#2 - Bob Manthei – Concerns over Impacts on Private Property Rights & Effects of BWD being Plaintiff; Litigation Expense Exposure from BS Property Owners. Future De Minimus Well Drilling Must be Allowed; Water Policy should be Determined by Feds/State not BWD/Pumpers

#3: Gary Haldeman – BWD should select the Community Representative on W/M Board from list of nominees

**NEXT STEPS**

Review all Comments received on or before December 20, 2019 and develop/publish responses, when appropriate. Consider approval of Stipulation (if/as amended following Public Comment period) at Special Meeting tentatively scheduled for January 7, 2020.

**ATTACHMENT**

1. None

BORREGO WATER DISTRICT  
BOARD OF DIRECTORS MEETING  
DECEMBER 17, 2019  
AGENDA ITEM II.C

December 11, 2019

TO: Board of Directors

FROM: Geoffrey Poole, General Manager

SUBJECT: Acceptance of Plans/Specifications/Bid Documents & Authorization to Bid De Anza Drive, Yaqui Road and Fairway Lane – G Poole

**RECOMMENDED ACTION:**

Accept Plans/Specifications/Bid Documents and Authorization to Bid De Anza Drive, Yaqui Road and Fairway Lane Waterline Projects

**ITEM EXPLANATION:**

Attached are aforementioned documents for the second of two planned waterline construction phases funded by the BWD Bond placement of July 2017. Replacement of all waterlines, hydrants and service lines are planned for the area. This location was selected due to the age of the infrastructure and complexity created by numerous existing underground utilities.

**NEXT STEPS**

Accept documents and begin the bidding process

**FISCAL IMPACT**

TBD based on bids received

**ATTACHMENT**

1. Plans/Specifications/Bid Documents

# BORREGO WATER DISTRICT

CONTRACT DOCUMENTS AND SPECIFICATIONS FOR  
DE ANZA DRIVE, YAQUI ROAD AND FAIRWAY LANE WATER  
IMPROVEMENTS PROJECT

(BWD Capital Improvements Projects Phase 2)

December 2019

Borrego Water District  
806 Palm Canyon Drive  
Borrego Springs, California 92004





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## 00 11 16 – NOTICE INVITING BIDS

NOTICE IS HEREBY GIVEN that the Borrego Water District (“DISTRICT”) invites and will receive sealed Bids up to but not later than **2:00 p.m. on Tuesday, January 28, 2020** at 806 Palm Canyon Drive, Borrego Springs, California 92004, for the furnishing to DISTRICT of all labor, equipment, materials, tools, services, transportation, permits, utilities, and all other items necessary for the **De Anza Drive, Yaqui Road and Fairway Lane Water Improvements Project** (the “Project”). At said time, Bids will be publicly opened and read aloud at the DISTRICT Office. Bids received after said time shall be returned unopened. Bids shall be valid for a period of 90 calendar days after the Bid opening date.

**The work shall include the procurement of materials and the installation of a new 6 inch diameter water main pipeline along De Anza Drive, Yaqui Road and Fairway Lane. The work also includes the tie-ins to the existing water distribution system. The work also includes the installation of new fire hydrants along Anza Road and Fairway Lane. Construction staking will be provided by the DISTRICT.**

Bids must be submitted on the DISTRICT’s Bid Forms. Bidders may obtain a copy of the Contract Documents from the DISTRICT at: 806 Palm Canyon Dr, Borrego Springs CA or Geoff@BorregoWD.org or 760-767-5806 for \$30 (Thirty Dollars)\*\*]. A non-refundable charge \$50 (Fifty) will be required of any bidder who requests that the Contract Documents be mailed within California (costs for out-of-state mailings will be higher). To the extent required by section 20103.7 of the Public Contract Code, upon request from a contractor plan room service, the DISTRICT shall provide an electronic copy of the Contract Documents at no charge to the

Bids must be submitted on the DISTRICT’s Bid Forms. Bidders may obtain a copy of the Contract Documents from the Borrego Water District Websire (BorregoWD.org) on the BULLETIN BOARD located on the Home Page. To the extent required by section 20103.7 of the Public Contract Code, upon request from a contractor plan room service, the DISTRICT shall provide an electronic copy of the Contract Documents at no charge to the contractor plan room.

It is the responsibility of each prospective bidder to download and print all Bid Documents for review and to verify the completeness of Bid Documents before submitting a bid. Any Addenda will be posted on BorregoWD.org. It is the responsibility of each prospective bidder to check BorregoWD.org on a daily basis through the close of bids for any applicable addenda or updates. The DISTRICT does not assume any liability or responsibility based on any defective or incomplete copying, excerpting, scanning, faxing, downloading or printing of the Bid Documents. Information on BorregoWD.org may change without notice to prospective bidders. The Contract Documents shall supersede any information posted or transmitted by BorregoWD.org

Each Bid shall be accompanied by cash, a certified or cashier’s check, or Bid Bond secured from a surety company satisfactory to the General Manager, the amount of which shall not be less than ten percent (10%) of the submitted Total Bid Price, made payable to Borrego Water District as bid security. The bid security shall be provided as a guarantee that within five (5) working days after the DISTRICT provides the successful bidder the Notice of Award, the successful Bidder will enter into a contract and provide the necessary bonds and certificates of insurance. The bid security will be declared forfeited if the successful Bidder fails to comply within said time. No interest will be paid on funds deposited with DISTRICT.

**A non-mandatory Pre-Bid Conference is scheduled for January 14<sup>th</sup>, 2020 at 1:30 PM** to review the Project's existing conditions at BWD Office (806 Palm Canyon Dr.). Representatives of the DISTRICT and consulting engineers, if any, will be present or participate via webinar. Questions asked by Bidders at the Pre-Bid Conference not specifically addressed within the Contract Documents shall be answered in writing, and shall be sent to all Bidders present at the Pre-Bid Conference. Bids will not be accepted from any bidder who did not attend the mandatory Pre-Bid Conference.

The successful Bidder will be required to furnish a Faithful Performance Bond and a Labor and Material Payment Bond each in an amount equal to one hundred percent (100%) of the Contract Price. Each bond shall be in the forms set forth herein, shall be secured from a surety company that meets all State of California bonding requirements, as defined in California Code of Civil Procedure Section 995.120, and that is a California admitted surety insurer.

Pursuant to Section 22300 of the Public Contract Code of the State of California, the successful Bidder may substitute certain securities for funds withheld by DISTRICT to ensure its performance under the contract.

Pursuant to Labor Code Section 1773, DISTRICT has obtained the prevailing rate of per diem wages and the prevailing wage rate for holiday and overtime work applicable in San Diego County from the Director of the Department of Industrial Relations for each craft, classification, or type of worker needed to execute this contract. A copy of these prevailing wage rates may be obtained via the internet at: [www.dir.ca.gov/dlsr/](http://www.dir.ca.gov/dlsr/)

In addition, a copy of the prevailing rate of per diem wages is available at the DISTRICT's office and shall be made available to interested parties upon request. The successful bidder shall post a copy of the prevailing wage rates at each job site. It shall be mandatory upon the Bidder to whom the Contract is awarded, and upon any subcontractors, to comply with all Labor Code provisions, which include but are not limited to the payment of not less than the said specified prevailing wage rates to all workers employed by them in the execution of the Contract, employment of apprentices, hours of labor and debarment of contractors and subcontractors.

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No Bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. In bidding on this Project, it shall be the Bidder's sole responsibility to evaluate and include the cost of complying with all labor compliance requirements under this contract and applicable law in its Bid.

Unless otherwise provided in the Instructions for Bidders, each Bidder shall be a licensed contractor pursuant to sections 7000 et seq. of the Business and Professions Code in the

following classification(s) throughout the time it submits its Bid and for the duration of the contract:

**Class A (General).**

Substitution requests shall be made within 35 calendar days after the award of the contract. Pursuant to Public Contract Code Section 3400(b), the DISTRICT may make findings designating that certain additional materials, methods or services by specific brand or trade name other than those listed in the Standard Specifications be used for the Project. Such findings, if any, as well as the materials, methods or services and their specific brand or trade names that must be used for the Project may be found in the Special Conditions.

DISTRICT shall award the contract for the Project to the responsible bidder offering the best value to the District as determined by the DISTRICT from the **BASE BID AND CONTRACT DOCUMENTS**. DISTRICT reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding process.

For further information, contact Geoff Poole, General Manager at Geoff@BorregoWD.Org or 760-767-5806.

**END OF NOTICE INVITING BIDS**

## 00 21 13 – INSTRUCTIONS TO BIDDERS

### ARTICLE 1. SECURING DOCUMENTS

Bids must be submitted to the DISTRICT on the Bid Forms which are a part of the Bid Package for the Project. Bid and Contract Documents may be obtained from the DISTRICT at the location(s) and at the time(s) indicated in the Notice Inviting Bids. Prospective bidders are encouraged to telephone in advance to determine the availability of Contract Documents. Any charge for the Contract Documents is stated in the Notice Inviting Bids.

The DISTRICT may also make the Contract Documents available for review at one or more plan rooms, as indicated in the Notice Inviting Bids. Please Note: Prospective Bidders who choose to review the Contract Documents at a plan room must contact the DISTRICT to obtain the required Contract Documents if they decide to submit a bid for the Project.

Addenda, if any, issued during the bid period will be sent only to those contractors who have obtained documents from the DISTRICT.” Failure to acknowledge addenda may make a bid nonresponsive and not eligible for award of the contract.

### ARTICLE 2. EXAMINATION OF SITE AND CONTRACT DOCUMENTS

At its own expense and prior to submitting its Bid, each Bidder shall visit the site of the proposed work and fully acquaint itself with the conditions relating to the construction and labor required so that the Bidder may fully understand the work, including but not limited to difficulties and restrictions attending the execution of the work under the contract. Each Bidder shall carefully examine the Drawings, and shall read the Specifications, Contract, and all other documents referenced herein. Each Bidder shall also determine the local conditions which may in any way affect the performance of the work, including local tax structure, contractors’ licensing requirements, availability of required insurance, the prevailing wages and other relevant cost factors, shall familiarize itself with all federal, state and local laws, ordinances, rules, regulations and codes affecting the performance of the work, including the cost of permits and licenses required for the work, and shall make such surveys and investigations, including investigations of subsurface or latent physical conditions at the site or where work is to be performed as may be required. Bidders are responsible for consulting the standards referenced in the Contract. The failure or omission of any Bidder to receive or examine any contract documents, forms, instruments, addenda, or other documents, or to visit the site and acquaint itself with conditions there existing shall in no way relieve any Bidder from any obligation with respect to its Bid or to the contract and no relief for error or omission will be given except as required under State law. The submission of a Bid shall be taken as conclusive evidence of compliance with this Article.

### ARTICLE 3. INTERPRETATION OF DRAWINGS AND DOCUMENTS

Prospective Bidders unclear as to the true meaning of any part of the Drawings, Specifications or other proposed contract documents may submit to the Engineer of the DISTRICT a written request for interpretation. The prospective Bidder submitting the request is responsible for prompt delivery. Interpretation of the Drawings, Specifications or other proposed contract documents will be made only by a written addendum duly issued and a copy of such addenda will be mailed or delivered to each prospective Bidder who has purchased a set of Drawings and Specifications. The DISTRICT will not be responsible for any other explanation or interpretations of the proposed documents. If a Prospective Bidders becomes aware of any errors or omissions in any part of the Contract Documents, it is the obligation of the Prospective



Bidder to promptly bring it to the attention of the DISTRICT.

#### **ARTICLE 4. PRE-BID CONFERENCE**

**A NON-MANDATORY Pre-Bid Conference is scheduled for January 14, 2020** at 1:30 PM at 806 Palm Canyon Dr, Borrego Springs CA to review the Project's existing conditions. Representatives of the DISTRICT and consulting engineers, if any, will be present. Questions asked by Bidders at the Pre-Bid Conference not specifically addressed within the Contract Documents shall be answered in writing, and shall be sent to all Bidders present at the Pre-Bid Conference. Bids will not be accepted from any bidder who did not attend the mandatory Pre-Bid Conference.

#### **ARTICLE 5. ADDENDA**

The DISTRICT reserves the right to revise the Contract Documents prior to the Bid opening date. Revisions, if any, shall be made by written Addenda. All Addenda issued by the DISTRICT shall be included in the Bid and made part of the Contract Documents. Pursuant to Public Contract Code Section 4104.5, if the DISTRICT issues an Addendum which includes material changes to the Project less than 72 hours prior to the deadline for submission of Bids, the DISTRICT will extend the deadline for submission of Bids. The DISTRICT may determine, in its sole discretion, whether an Addendum warrants postponement of the Bid submission date. Each prospective Bidder shall provide DISTRICT a name, address, email address, and facsimile number to which Addenda may be sent, as well as a telephone number by which the DISTRICT can contact the Bidder. Copies of Addenda will be furnished by email, facsimile, first class mail, express mail or other proper means of delivery without charge to all parties who have obtained a copy of the Contract Documents and provided such current information. Please Note: Bidders are responsible for ensuring that they have received any and all Addenda. To this end, each Bidder should contact Geoff Poole to verify that it has received all Addenda issued, if any, prior to the Bid opening. The Bidder shall indicate the Addenda received prior to bidding in the space provided in the Bid Form. Failure to indicate all Addenda may be sufficient cause for rejecting the Bid.

#### **ARTICLE 6. ALTERNATE BIDS**

If alternate bid items are called for in the Contract Documents, the time required for completion of the alternate bid items has already been factored into the Contract duration and no additional Contract time will be awarded for any of the alternate bid items. The DISTRICT may elect to include one or more of the alternate bid items, or to otherwise remove certain work from the Project scope of work. Accordingly, each bidder must ensure that each bid item contains a proportionate share of profit, overhead, and other costs or expenses which will be incurred by the bidder.

#### **ARTICLE 7. COMPLETION OF BID FORMS**

Bids shall only be prepared using copies of the Bid Forms which are included in the Contract Documents. The use of substitute Bid Forms other than clear and correct photocopies of those provided by the DISTRICT will not be permitted. Bids shall be executed by an authorized signatory as described in these Instructions to Bidders. In addition, Bidders shall fill in all blank spaces (including inserting "N/A" where applicable), and initial all interlineations, alterations, or erasures to the Bid Forms. Bidders shall neither delete, modify, nor supplement the printed matter on the Bid Forms nor make substitutions thereon. **USE OF BLACK OR BLUE INK,**

INDELIBLE PENCIL, OR A TYPEWRITER IS REQUIRED. Deviations in the Bid Forms may result in the Bid being deemed non-responsive.

#### **ARTICLE 8. MODIFICATIONS OF BIDS**

Each Bidder shall submit its Bid in strict conformity with the requirements of the Contract Documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provisions attached to a Bid may render it non-responsive and may cause its rejection. Bidders shall not delete, modify, or supplement the printed matter on the Bid Forms, or make substitutions thereon. Oral, telephonic and electronic modifications will not be considered.

#### **ARTICLE 9. SUBCONTRACTORS**

Bidder shall set forth the name, address of the place of business, and contractor license number of each subcontractor who will perform work, labor, furnish materials or render services to the bidder on said contract and each subcontractor licensed by the State of California who, under subcontract to bidder, specially fabricates and installs a portion of the Work described in the Drawings and Specifications in an amount in excess of one half of one percent (0.5%) of the total bid price, and shall indicate the portion of the work to be done by such subcontractor in accordance with Public Contract Code Section 4104.

#### **ARTICLE 10. LICENSING REQUIREMENTS**

Pursuant to Business and Professions Code Section 7028.15 and Public Contract Code Section 3300, all bidders must possess proper licenses for performance of this Contract. Subcontractors must possess the appropriate licenses for each specialty subcontracted. Pursuant to Business and Professions Code Section 7028.5, the DISTRICT shall consider any bid submitted by a contractor not currently licensed in accordance with state law and pursuant to the requirements found in the Contract Documents to be nonresponsive, and the DISTRICT shall reject the Bid. The DISTRICT shall have the right to request, and Bidders shall provide within ten (10) calendar days, evidence satisfactory to the DISTRICT of all valid license(s) currently held by that Bidder and each of the Bidder's subcontractors, before awarding the Contract.

Notwithstanding anything contained herein, if the Work involves federal funds, the Contractor shall be properly licensed by the time the Contract is awarded, pursuant to the provisions of Public Contract Code section 20103.5.

#### **ARTICLE 11. BID GUARANTEE (BOND)**

Each bid shall be accompanied by: (a) cash; (b) a certified or cashier's check made payable to Borrego Water District; or (c) a Bid Bond secured from a surety company satisfactory to the General Manager, the amount of which shall not be less than ten percent (10%) of the Total Bid Price, made payable to Borrego Water District as bid security. Personal sureties and unregistered surety companies are unacceptable. The surety insurer shall be California admitted surety insurer, as defined in Code of Civil Procedure Section 995.120. The bid security shall be provided as a guarantee that within ten (10) working days after the DISTRICT provides the successful bidder the Notice of Award, the successful bidder will enter into a contract and provide the necessary bonds and certificates of insurance. The bid security will be declared forfeited if the successful bidder fails to comply within said time, and DISTRICT may enter into a contract with the next lowest responsive responsible bidder, or may call for new

bids. No interest shall be paid on funds deposited with the DISTRICT. DISTRICT will return the security accompanying the bids of all unsuccessful bidders no later than 60 calendar days after award of the contract.

#### **ARTICLE 12. IRAN CONTRACTING ACT OF 2010**

In accordance with Public Contract Code Section 2200 *et seq.*, the DISTRICT requires that any person that submits a bid or proposal or otherwise proposes to enter into or renew a contract with the DISTRICT with respect to goods or services of one million dollars (\$1,000,000) or more, certify at the time the bid is submitted or the contract is renewed, that the person is not identified on a list created pursuant to subdivision (b) of Public Contract Code Section 2203 as a person engaging in investment activities in Iran described in subdivision (a) of Public Contract Code Section 2202.5, or as a person described in subdivision (b) of Public Contract Code Section 2202.5, as applicable.

The form of such Iran Contracting Certificate is included with the bid package and must be signed and dated under penalty of perjury.

#### **ARTICLE 13. NONCOLLUSION DECLARATION**

Bidders on all public works contracts are required to submit a declaration of noncollusion with their bid. This form is included with the bid package and must be signed and dated under penalty of perjury.

#### **ARTICLE 14. PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATION**

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. To this end, Bidder shall sign and submit with its Bid the Public Works Contractor Registration Certification on the form provided, attesting to the facts contained therein. Failure to submit this form may render the bid non-responsive. In addition, each Bidder shall provide the registration number for each listed subcontractor in the space provided in the Designation of Subcontractors form.

#### **ARTICLE 15. BIDDER INFORMATION AND EXPERIENCE FORM**

Each Bidder shall complete the questionnaire provided herein and shall submit the questionnaire along with its Bid. Failure to provide all information requested within the questionnaire along with the Bid may cause the bid to be rejected as non-responsive. The DISTRICT reserves the right to reject any Bid if an investigation of the information submitted does not satisfy the Engineer that the Bidder is qualified to properly carry out the terms of the contract.

#### **ARTICLE 16. WORKERS' COMPENSATION CERTIFICATION**

In accordance with the provisions of Labor Code Section 3700, Contractor shall secure the payment of compensation to its employees. Contractor shall sign and file with the DISTRICT

the following certificate prior to performing the work under this Contract:

I am aware of the provisions of Section 3700 of the Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

The form of such Workers' Compensation Certificate is included as part of this document.

#### **ARTICLE 17. SIGNING OF BIDS**

All Bids submitted shall be executed by the Bidder or its authorized representative. Bidders may be asked to provide evidence in the form of an authenticated resolution of its Board of Directors or a Power of Attorney evidencing the capacity of the person signing the Bid to bind the Bidder to each Bid and to any Contract arising therefrom.

If a Bidder is a joint venture or partnership, it may be asked to submit an authenticated Power of Attorney executed by each joint venturer or partner appointing and designating one of the joint venturers or partners as a management sponsor to execute the Bid on behalf of Bidder. Only that joint venturer or partner shall execute the Bid. The Power of Attorney shall also: (1) authorize that particular joint venturer or partner to act for and bind Bidder in all matters relating to the Bid; and (2) provide that each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of Bidder assumed under the Bid and under any Contract arising therefrom. The Bid shall be executed by the designated joint venturer or partner on behalf of the joint venture or partnership in its legal name.

#### **ARTICLE 18. SUBMISSION OF SEALED BIDS**

Once the Bid and supporting documents have been completed and signed as set forth herein, they shall be placed, along with the Bid Guarantee and other required materials, in a sealed envelope, addressed and delivered or mailed, postage prepaid, to the Engineering Department of the DISTRICT before the time and day set for the receipt of bids. The envelope shall bear the title of the work and the name of the bidder. No oral or telephonic bids will be considered. No forms transmitted via the internet, e-mail, facsimile, or any other electronic means will be considered unless specifically authorized by the DISTRICT as provided herein. Bids received after the time and day set for the receipt of bids shall be returned to the bidder unopened. The envelope shall also contain the following in the lower left-hand corner thereof:

**Bid of \_\_\_\_\_ (Bidder's Name)  
for the De Anza Drive, Yaqui Road and Fairway Lane Water Improvements Project**

Only where expressly permitted in the Notice Inviting Bids may bidders submit their bids via electronic transmission pursuant to Public Contract Code sections 1600 and 1601. Any acceptable method(s) of electronic transmission shall be stated in the Notice Inviting Bids. DISTRICT may reject any bid not strictly complying with DISTRICT's designated methods for delivery.

#### **ARTICLE 19. OPENING OF BIDS**

At the time and place set for the opening and reading of bids, or any time thereafter, each and every bid received prior to the time and day set for the receipt of bids will be publicly opened

and read. The DISTRICT will leave unopened any Bid received after the specified date and time, and any such unopened Bid will be returned to the bidder. It is the bidder's sole responsibility to ensure that its Bid is received as specified. Bids may be submitted earlier than the date(s) and time(s) indicated.

The public reading of each bid will include the following information:

- A. The name and business location of the bidder.
- B. The nature and amount of the bid security furnished by bidder.
- C. The bid amount.

Bidders or their representatives and other interested persons may be present at the opening of the bids. The DISTRICT may, in its sole discretion, elect to postpone the opening of the submitted Bids. The DISTRICT reserves the right to reject any or all Bids and to waive any informality or irregularity in any Bid.

#### **ARTICLE 20. WITHDRAWAL OF BID**

Any bid may be withdrawn either personally or by written request, incurring no penalty, at any time prior to the scheduled closing time for receipt of bids. Requests to withdraw bids shall be worded so as not to reveal the amount of the original bid. Withdrawn bids may be resubmitted until the time and day set for the receipt of bids, provided that resubmitted bids are in conformance with the instructions herein.

Bids may be withdrawn after bid opening only by providing written notice to DISTRICT within five (5) working days of the bid opening and in compliance with Public Contract Code Section 5100 *et seq.*, or as otherwise may be allowed with the consent of the DISTRICT.

#### **ARTICLE 21. BIDDERS INTERESTED IN MORE THAN ONE BID**

No Bidder shall be allowed to make, file or be interested in more than one bid for the same work unless alternate bids are specifically called for. A person, firm or corporation that has submitted a sub-proposal to a Bidder, or that has quoted prices of materials to a Bidder, is not thereby disqualified from submitting a sub-proposal or quoting prices to other bidders. No person, firm, corporation, or other entity may submit a sub-proposal to a Bidder, or quote prices of materials to a Bidder, when also submitting a prime Bid on the same Project.

#### **ARTICLE 22. SUBSTITUTION OF SECURITY**

The Contract Documents call for monthly progress payments based upon the percentage of the Work completed. The DISTRICT will retain a percentage of each progress payment as provided by the Contract Documents. At the request and expense of the successful Bidder, the DISTRICT will substitute securities for the amount so retained in accordance with Public Contract Code Section 22300.

#### **ARTICLE 23. PREVAILING WAGES**

The DISTRICT has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages in the locality in which this work is to be performed for

each craft or type of worker needed to execute the Contract. These rates are available at the DISTRICT or may be obtained online at <http://www.dir.ca.gov>. Bidders are advised that a copy of these rates must be posted by the successful Bidder at the job site(s).

#### **ARTICLE 24. DEBARMENT OF CONTRACTORS AND SUBCONTRACTORS**

In accordance with the provisions of the Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Labor Code Sections 1777.1 or 1777.7. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid to a debarred subcontractor by the Contractor for the Project shall be returned to the DISTRICT. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

#### **ARTICLE 25. INSURANCE REQUIREMENTS**

Prior to commencing work, the successful bidder shall purchase and maintain insurance as set forth in the General Conditions.

#### **ARTICLE 26. PERFORMANCE BOND AND PAYMENT BOND REQUIREMENTS**

The successful bidder will be required to furnish a Labor and Material Payment Bond and a Faithful Performance Bond each in an amount equal to one hundred percent (100%) of the contract price. Each bond shall be secured from a surety company that meets all State of California bonding requirements, as defined in California Code of Civil Procedure Section 995.120 and is admitted by the State of California. Each bond shall be accompanied, upon the request of DISTRICT, with all documents required by California Code of Civil Procedure Section 995.660 to the extent required by law. All bonding and insurance requirements shall be completed and submitted to DISTRICT within ten (10) working days from the date the DISTRICT provides the successful bidder with the Notice of Award.

#### **ARTICLE 27. SALES AND OTHER APPLICABLE TAXES, PERMITS, LICENSES AND FEES**

Contractor and its subcontractors performing work under this Contract will be required to pay California sales tax and other applicable taxes, and to pay for permits, licenses and fees required by the agencies with authority in the jurisdiction in which the Work will be located, unless otherwise expressly provided by the Contract Documents.

#### **ARTICLE 28. PERMIT ALLOWANCE**

Notwithstanding anything contained herein, the Bid Form contains an allowance for the Contractor's cost of acquiring a San Diego County Encroachment Permit. The allowance is included within the Bid Form to eliminate the need by bidders to research or estimate the costs of the San Diego County Encroachment Permit prior to submitting a bid. The allowance is specifically intended to account for the actual cost of the San Diego County Encroachment Permit only. No other costs payable by Contractor are included within the allowance. A change order, either additive or deductive, will be issued in accordance with Article 44 of the General Conditions for the actual cost of the San Diego County Encroachment Permit.

## **ARTICLE 29. FILING OF BID PROTESTS**

Bidders may file a “protest” of a Bid with the DISTRICT’s General Manager. In order for a Bidder’s protest to be considered valid, the protest must:

- A. Be filed in writing within five (5) calendar days after the bid opening date;
- B. Clearly identify the specific irregularity or accusation;
- C. Clearly identify the specific DISTRICT staff determination or recommendation being protested;
- D. Specify in detail the grounds for protest and the facts supporting the protest; and
- E. Include all relevant, supporting documentation with the protest at time of filing.

If the protest does not comply with each of these requirements, the DISTRICT may reject the protest without further review.

If the protest is timely and complies with the above requirements, the DISTRICT’s General Manager, or other designated DISTRICT staff member, shall review the protest, any response from the challenged Bidder(s), and all other relevant information. The General Manager will provide a written decision to the protestor.

The procedure and time limits set forth in this Article are mandatory and are the sole and exclusive remedy in the event of a Bid protest. Failure to comply with these procedures shall constitute a failure to exhaust administrative remedies and a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings.

## **ARTICLE 30. BASIS OF AWARD; BALANCED BID**

The DISTRICT shall award the Contract to the lowest responsible Bidder submitting a responsive Bid. The lowest Bid will be determined on the basis of the Total Bid Price. **AWARD WILL BE ON THE BASIS OF THE TOTAL BASE BID ALONE, NOT INCLUDING ALTERNATIVE BID ITEMS.**

The DISTRICT may reject any Bid which, in its opinion when compared to other Bids received or to the DISTRICT’s internal estimates, does not accurately reflect the cost to perform the Work. The DISTRICT may reject as non-responsive any Bid which unevenly weights or allocates costs, including but not limited to overhead and profit to one or more particular bid items.

## **ARTICLE 31. AWARD PROCESS**

Once all Bids are opened and reviewed to determine the lowest responsive and responsible Bidder, the DISTRICT may award the contract. The apparent successful Bidder should begin to prepare the following documents: (1) the Performance Bond; (2) the Payment Bond; and (3) the required insurance certificates and endorsements. Once the DISTRICT notifies the Bidder of the award, the Bidder will have ten (10) working days from the date of this notification to execute the Contract and supply the DISTRICT with all of the required documents and certifications. Once the DISTRICT receives all of the properly drafted and executed documents and

certifications from the Bidder, the DISTRICT shall issue a Notice to Proceed to that Bidder. The Contractor shall begin work within ten (10) days after receiving the Notice to Proceed.

### **ARTICLE 32. EXECUTION OF CONTRACT**

As required herein the Bidder to whom an award is made shall execute the Contract in the amount determined by the Contract Documents. The DISTRICT may require appropriate evidence that the persons executing the Contract are duly empowered to do so. The Contract and bond forms to be executed by the successful Bidder are included within these Specifications and shall not be detached.

### **ARTICLE 33. QUESTIONS**

Questions regarding this Notice Inviting Bids may be directed to the General Manager at 760-767-5806 or email at Geoff@BorregoWD.Org. No other members of the DISTRICT's staff or Board of Directors should be contacted about this procurement during the bidding process. Any and all inquiries and comments regarding this Bid must be communicated in writing, unless otherwise instructed by the DISTRICT. The DISTRICT may, in its sole discretion, disqualify any Bidder who engages in any prohibited communications.



**00 41 43 – BID FORMS**

1.1 Bid.

Bids will be received at the Office of the Borrego Water District, located at 806 Palm Canyon Drive, Borrego Springs, California 92004 until **2:00 p.m. on Tuesday, January 28, 2020.**

**NAME OF BIDDER:** \_\_\_\_\_

To the General Manager  
of the Borrego Water District  
806 Palm Canyon Drive  
Borrego Springs, California 92004

The undersigned hereby declare that we have carefully examined the location of the proposed Work, and have read and examined the Contract Documents, including all plans, specifications, and all addenda, if any for the following Project:

**De Anza Drive, Yaqui Road and Fairway Lane Water Improvements Project**

We hereby propose to furnish all labor, materials, equipment, tools, transportation, and services, and to discharge all duties and obligations necessary and required to perform and complete the Project, as described and in strict conformity with the Drawings, and these Specifications for TOTAL BID PRICE indicated herein.

The undersigned acknowledges receipt, understanding, and full consideration of the following addenda to the Contract Documents:

Addenda No. \_\_\_\_\_

1. Attached is the required Bid Guarantee in the amount of not less than 10% of the Total Bid Price.
2. Attached is the completed Designation of Subcontractors form.
3. Attached is the fully executed Noncollusion Declaration form.
4. Attached is the completed Iran Contracting Act Certification form.
5. Attached is the completed Public Works Contractor Registration Certification form.
6. Attached is the completed Contractor's Certificate Regarding Workers' Compensation form.
7. Attached is the completed Bidder Information and Experience form.

**A. BID SCHEDULE**

ITEM	QUANTITY	UNIT	ITEM	UNIT COST	AMOUNT
1	1	LS	Mobilization of equipment and material, Performance Bond, Payment Bond, General Liability Insurance, Workman's Compensation Insurance, Construction water, freight, project signs, Air pollution control district requirements and fees, Restroom Facilities, Vehicle Insurance, Taxes, Permits, Business license, and Similar expenses and other costs not specifically addressed within this bid item list.	\$	\$
2	1	LS	Preparation of Traffic Control Plan, Implementation of Traffic Control and Construction Area Signs	\$	\$
3	1	LS	Potholing of the Existing Underground Utilities and Pipelines as indicated on Improvement Plans.	\$	\$
4	2,450	LF	Furnish and Install New 6-inch Dia. AWWA C-900 DR 18 - Pressure Class 150 PVC Water Pipeline, Including Native Material Backfill and Compaction.	\$	\$
5	3	EA	Install Utility Crossing per Detail "1" on Sheet 14. Include Pipe Bends and Appurtenances	\$	\$
6	10	EA	Furnish and Install New 6-Dia. Ductile Iron Resilient Wedge Gate Valve with Valve Cover and Riser.	\$	\$
7	5	EA	Furnish and Install New 6-Inch Dia. Epoxy-Coated Ductile Iron Tee	\$	\$
8	1	EA	Furnish and Install New 6-Inch Dia. Epoxy-Coated Ductile Iron Cross	\$	\$
9	5	EA	Furnish and Install New Fire Hydrant Assembly Including gate Valve and Valve Can	\$	\$
10	5	EA	Furnish and Install New 6-Inch Dia. Epoxy-Coated Ductile Iron Transition Coupling Adapter with Stainless Steel Hardware	\$	\$

11	1	LS	Contractor to Complete Hydrostatic Pressure Testing per Specifications.	\$	\$
12	1	LS	Contractor to Complete Disinfection of the New Pipeline per Specifications	\$	\$
13	5,200	LF	Sawcut Existing AC Pavement	\$	\$
14	7,800	SF	Remove and Dispose AC Pavement and Underlying Base Material	\$	\$
15	205	Tons	Install 4 Inches of AC Pavement 3/4" Type III Class B3 (Per San Diego County Standards and Specifications)	\$	\$
16	230	CYS	Install 9 Inches of Class II Base	\$	\$
17	1	LS	Preparation and Implementation of Dust Control Plan Per San Diego County Air Pollution Control District	\$	\$
18	36	EA	Install 1 inch Water Lateral including Connection to 6" Water Main, 1 Inch Copper Pipe to Property Line and 1 inch Bronze Angle Meter Stop with Lockwing. (Do not include Water Meter, Meter box and Shut Off Valve). Price Shall Include Existing Pavement Removal, Paving Resurfacing of New 4 Inches of AC Pavement 3/4" Type III Class B3 Over 9 inches of Class II Base (Per San Diego County Standards, Specifications and Details G-24A and G-24B)	\$	\$
19	1	LS	San Diego County Encroachment Permit Fee Allowance. Contractor to obtain encroachment permit. If permit fees exceed or are less than the allowance fee, a change order or deductive change order based on the actual cost of the permit fees only will be processed to cover the difference.	\$ 5,000.00	\$ 5,000.00

The costs for any Work shown or required in the Contract Documents, but not specifically identified as a line item are to be included in the related line items and no additional compensation shall be due to Contractor for the performance of the Work.

In case of discrepancy between the Unit Price and the Item Cost set forth for a unit basis item, the unit price shall prevail and shall be utilized as the basis for determining the lowest responsive, responsible Bidder. However, if the amount set forth as a unit price is ambiguous,

unintelligible or uncertain for any cause, or is omitted, or is the same amount as the entry in the "Item Cost" column, then the amount set forth in the "Item Cost" column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the Unit Price.

For purposes of evaluating Bids, the DISTRICT will correct any apparent errors in the extension of unit prices and any apparent errors in the addition of lump sum and extended prices.

The estimated quantities for Unit Price items are for purposes of comparing Bids only and the DISTRICT makes no representation that the actual quantities of work performed will not vary from the estimates. Final payment shall be determined by the Engineer from measured quantities of work performed based upon the Unit Price.

**B. TOTAL BID PRICE FOR BID SCHEDULE:**

<p>TOTAL BID PRICE BASED ON BID SCHEDULE (BID ITEMS 1 – 19) TOTAL OF UNIT PRICES FOR: <b>De Anza Drive, Yaqui Road and Fairway Lane Water Improvements Project</b></p> <p>\$ _____ Total Bid Price</p> <p>In case of discrepancy between the written price and the numerical price, the written price shall prevail.</p>
--

The undersigned agrees that this Bid Form constitutes a firm offer to the DISTRICT which cannot be withdrawn for the number of calendar days indicated in the Notice Inviting Bids from and after the Bid opening, or until a Contract for the Work is fully executed by the DISTRICT and a third party, whichever is earlier.

The DISTRICT can choose to include any, all, or none of the Alternate Bid items in the Work. If the DISTRICT selects any of the Alternate Bid items, the corresponding Alternate Bid prices shall be added to Base Bid Price for the Work. The DISTRICT can award/select Alternate Bid items at any time(s).

The successful bidder hereby agrees to sign the contract and furnish the necessary bonds and certificates of insurance within ten (10) working days after the DISTRICT provides the successful bidder with the Notice of Award.

Upon receipt of the signed contract and other required documents, the contract will be executed by the DISTRICT, after which the DISTRICT will prepare a letter giving Contractor Notice to Proceed. The official starting date shall be the date of the Notice to Proceed, unless otherwise specified. The undersigned agrees to begin the Work within ten (10) working days of the date of the Notice to Proceed, unless otherwise specified.

The undersigned has examined the location of the proposed work and is familiar with the Drawings and Specifications and the local conditions at the place where work is to be done.

If awarded the contract, the undersigned agrees that there shall be paid by the undersigned and by all subcontractors to all laborers, workers and mechanics employed in the execution of such contract no less than the prevailing wage rate within San Diego County for each craft, classification, or type of worker needed to complete the Work contemplated by this contract as established by the Director of the Department of Industrial Relations. A copy of the prevailing rate of per diem wages are on file at the DISTRICT's Administration Office and shall be made available to interested parties upon request.

Enclosed find cash, bidder's bond, or cashier's or certified check No. \_\_\_\_\_ from the \_\_\_\_\_ Bank in the amount of \_\_\_\_\_, which is not less than ten percent (10%) of this bid, payable to Borrego Water District as bid security and which is given as a guarantee that the undersigned will enter into a contract and provide the necessary bonds and certificates of insurance if awarded the Work.

The bidder furthermore agrees that in case of bidder's default in executing said contract and furnishing required bonds and certificates of insurance, the cash, bidder's bond, or cashier's or certified check accompanying this proposal and the money payable thereon shall become and shall remain the property of the Borrego Water District.

Bidder is an individual \_\_\_\_\_, or corporation \_\_\_\_\_, or partnership \_\_\_\_\_, organized under the laws of the State of \_\_\_\_\_.

Bidder confirms license(s) required by California State Contractor's License Law for the performance of the subject project are in full effect and proper order. The following are the Bidder's applicable license number(s), with their expiration date(s) and class of license(s):

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If the Bidder is a joint venture, each member of the joint venture must include the required licensing information.

Sureties that will furnish the Faithful Performance Bond and the Labor and Material Payment Bond, in the form specified herein, in an amount equal to one hundred percent (100%) of the contract price within ten (10) working days from the date the DISTRICT provides the successful bidder the Notice of Award. Sureties must meet all of the State of California bonding requirements, as defined in California Code of Civil Procedure Section 995.120 and must be authorized by the State of California.

The insurance company or companies to provide the insurance required in the contract documents must have a Financial Strength Rating of not less than "A-" and a Financial Size Category of not less than "Class VII" according to the latest Best Key Rating Guide. At the sole discretion of the DISTRICT, the DISTRICT may waive the Financial Strength Rating and the Financial Size Category classifications for Workers' Compensation insurance.

(signatures continued on next page)

I hereby certify under penalty of perjury under the laws of the State of California that all of the information submitted in connection with this Bid and all of the representations made herein are true and correct.

Executed at \_\_\_\_\_, on this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Bidders Name – Print or Type)

\_\_\_\_\_  
(Name and Title)

(Corporate Seal)

\_\_\_\_\_  
(Signature)

Names of individual members of firm or names and titles of all officers of corporation and their addresses are listed below:

Name \_\_\_\_\_ Title \_\_\_\_\_

Complete Address \_\_\_\_\_

Phone \_\_\_\_\_ FAX \_\_\_\_\_

Name \_\_\_\_\_ Title \_\_\_\_\_

Complete Address \_\_\_\_\_

Phone \_\_\_\_\_ FAX \_\_\_\_\_

Name \_\_\_\_\_ Title \_\_\_\_\_

Complete Address \_\_\_\_\_

Phone \_\_\_\_\_ FAX \_\_\_\_\_

Name \_\_\_\_\_ Title \_\_\_\_\_

Complete Address \_\_\_\_\_

Phone \_\_\_\_\_ FAX \_\_\_\_\_

1.2 Bid Bond

**[Note: Not required when other form of Bidder's Security, e.g. cash, certified check or cashier's check, accompanies bid.]**

The makers of this bond are, \_\_\_\_\_, as Principal, and \_\_\_\_\_, as Surety and are held and firmly bound unto the Borrego Water District, hereinafter called the DISTRICT, in the penal sum of TEN PERCENT (10%) OF THE TOTAL BID PRICE of the Principal submitted to DISTRICT for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted the accompanying bid dated \_\_\_\_\_, 20 \_\_\_\_, for De Anza Dr., Yaqui Rd and Fairway Lane Water Improvements Project

If the Principal does not withdraw its Bid within the time specified in the Contract Documents; and if the Principal is awarded the Contract and provides all documents to the DISTRICT as required by the Contract Documents; then this obligation shall be null and void. Otherwise, this bond will remain in full force and effect.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents shall affect its obligation under this bond, and Surety does hereby waive notice of any such changes.

In the event a lawsuit is brought upon this bond by the DISTRICT and judgment is recovered, the Surety shall pay all litigation expenses incurred by the DISTRICT in such suit, including reasonable attorneys' fees, court costs, expert witness fees and expenses.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seal of each corporation.

(Corporate Seal)

\_\_\_\_\_  
Contractor/ Principal

By \_\_\_\_\_

Title \_\_\_\_\_

(Corporate Seal)

\_\_\_\_\_  
Surety

By \_\_\_\_\_  
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title \_\_\_\_\_



# Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA  
 COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

Name(s) of Signer(s)

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public \_\_\_\_\_

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

Title(s)

- Partner(s)                       Limited
- General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:  
 Name Of Person(s) Or Entity(ies)

#### DESCRIPTION OF ATTACHED DOCUMENT

Title or Type of Document

Number of Pages

Date of Document

Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

# Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA  
 COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public \_\_\_\_\_

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

\_\_\_\_\_ Title(s)

- Partner(s)                       Limited
- General

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:  
 Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
 \_\_\_\_\_

#### DESCRIPTION OF ATTACHED DOCUMENT

\_\_\_\_\_ Title or Type of Document

\_\_\_\_\_ Number of Pages

\_\_\_\_\_ Date of Document

\_\_\_\_\_ Signer(s) Other Than Named Above

**NOTE:** This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of-Attorney to local representatives of the bonding company must also be attached.

**END OF BID BOND**

1.3 List of Subcontractors

In compliance with the Subletting and Subcontracting Fair Practices Act Chapter 4 (commencing at Section 4100), Part 1, Division 2 of the Public Contract Code of the State of California and any amendments thereof, Bidder shall set forth below: (a) the name and the location of the place of business, (b) the California contractor license number, (c) the DIR public works contractor registration number unless exempt pursuant to Labor Code Sections 1725.5 and 1771.1, and (d) the portion of the work which will be done by each subcontractor who will perform work or labor or render service to the Bidder in or about the construction of the work or improvement to be performed under this Contract in an amount in excess of one-half of one percent (0.5%) of the Bidder's Total Bid Price. Notwithstanding the foregoing, if the work involves the construction of streets and highways, then the Bidder shall list each subcontractor who will perform work or labor or render service to the Bidder in or about the work in an amount in excess of one-half of one percent (0.5%) of the Bidder's Total Bid Price or \$10,000, whichever is greater. No additional time shall be granted to provide the below requested information.

If a Bidder fails to specify a subcontractor or if a contractor specifies more than one subcontractor for the same portion of work, then the Bidder shall be deemed to have agreed that it is fully qualified to perform that portion of work and that it shall perform that portion itself.

<b>Work to be done by Subcontractor</b>	<b>Name of Subcontractor</b>	<b>Location of Business</b>	<b>CSLB Contractor License No.</b>	<b>DIR Registration Number</b>	<b>% of Work</b>

Work to be done by Subcontractor	Name of Subcontractor	Location of Business	CSLB Contractor License No.	DIR Registration Number	% of Work

(Attach additional sheets if necessary)

Name of Bidder \_\_\_\_\_

Signature \_\_\_\_\_

Name and Title \_\_\_\_\_

Dated \_\_\_\_\_

1.4 Bidder Information and Experience Form

**ARTICLE 1. INFORMATION ABOUT BIDDER**

(Indicate not applicable (“N/A”) where appropriate.)

**NOTE:** Where Bidder is a joint venture, pages shall be duplicated and information provided for all parties to the joint venture.

1.0 Name of Bidder: \_\_\_\_\_

2.0 Type, if Entity: \_\_\_\_\_

3.0 Bidder Address: \_\_\_\_\_

\_\_\_\_\_

Facsimile Number

Telephone Number

\_\_\_\_\_

Email Address

4.0 How many years has Bidder’s organization been in business as a Contractor?

\_\_\_\_\_

5.0 How many years has Bidder’s organization been in business under its present name? \_\_\_\_\_

5.1 Under what other or former names has Bidder’s organization operated? \_\_\_\_\_

6.0 If Bidder’s organization is a corporation, answer the following:

6.1 Date of Incorporation: \_\_\_\_\_

6.2 State of Incorporation: \_\_\_\_\_

6.3 President’s Name: \_\_\_\_\_

6.4 Vice-President’s Name(s): \_\_\_\_\_

\_\_\_\_\_

6.5 Secretary’s Name: \_\_\_\_\_

6.6 Treasurer’s Name: \_\_\_\_\_

7.0 If an individual or a partnership, answer the following:

7.1 Date of Organization: \_\_\_\_\_

7.2 Name and address of all partners (state whether general or limited partnership):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8.0 If other than a corporation or partnership, describe organization and name principals:

\_\_\_\_\_  
\_\_\_\_\_

9.0 List other states in which Bidder's organization is legally qualified to do business.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10.0 What type of work does the Bidder normally perform with its own forces?

\_\_\_\_\_  
\_\_\_\_\_

11.0 Has Bidder ever failed to complete any work awarded to it? If so, note when, where, and why:

\_\_\_\_\_  
\_\_\_\_\_

12.0 Within the last five years, has any officer or partner of Bidder's organization ever been an officer or partner of another organization when it failed to complete a contract? If so, attach a separate sheet of explanation:

\_\_\_\_\_  
\_\_\_\_\_

13.0 List Trade References:

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**[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]**







**ARTICLE 4. EXPERIENCE AND TECHNICAL QUALIFICATIONS QUESTIONNAIRE**

***Personnel:***

The Bidder shall identify the key personnel to be assigned to this project in a management, construction supervision or engineering capacity.

1. List each person's job title, name and percent of time to be allocated to this project:

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2. Summarize each person's specialized education:

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3. List each person's years of construction experience relevant to the project:

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4. Summarize such experience:

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Bidder agrees that personnel named in this Bid will remain on this Project until completion of all relevant Work, unless substituted by personnel of equivalent experience and qualifications approved in advance by the DISTRICT.

***Additional Bidder's Statements:***

If the Bidder feels that there is additional information which has not been included in the questionnaire above, and which would contribute to the qualification review, it may add that information in a statement here or on an attached sheet, appropriately marked:

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**ARTICLE 5. VERIFICATION AND EXECUTION**

These Bid Forms shall be executed only by a duly authorized official of the Bidder:

I declare under penalty of perjury under the laws of the State of California that the foregoing information is true and correct:

Name of Bidder\_\_\_\_\_

Signature\_\_\_\_\_

Name\_\_\_\_\_

Title\_\_\_\_\_

Date\_\_\_\_\_

1.5 Non-Collusion Declaration

The undersigned declares:

I am the \_\_\_\_\_ of \_\_\_\_\_, the party making the foregoing Bid.

The Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The Bid is genuine and not collusive or sham. The Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham bid. The Bidder has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham bid, or to refrain from bidding. The Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Bid Price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the Bid Price, or of that of any other Bidder. All statements contained in the Bid are true. The Bidder has not, directly or indirectly, submitted his or her Bid Price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a Bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the Bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on \_\_\_\_\_ [date], at \_\_\_\_\_ [city], \_\_\_\_\_ [state].

Name of Bidder \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

1.6 Iran Contracting Act Certification.  
(Public Contract Code section 2200 et seq.)

As required by California Public Contract Code Section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 *et seq.*) is true and correct:

The Contractor is not:

(1) identified on the current list of person and entities engaged in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or

(2) a financial instruction that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.

The DISTRICT has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, the DISTRICT will be unable to obtain the goods and/or services to be provided pursuant to the Contract.

The amount of the Contract payable to the Contractor for the Project does not exceed \$1,000,000.

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Firm Name: \_\_\_\_\_

Date: \_\_\_\_\_

Note: In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the Contract amount, termination of the Contract and/or ineligibility to bid on contracts for three years.

1.7 Public Works Contractor Registration Certification

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. See <http://www.dir.ca.gov/Public-Works/PublicWorks.html> for additional information.

No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work.

Bidder hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.<sup>1</sup>

Name of Bidder: \_\_\_\_\_

DIR Registration Number: \_\_\_\_\_

DIR Registration Expiration: \_\_\_\_\_

Small Project Exemption: \_\_\_\_\_ Yes or \_\_\_\_\_ No

Unless Bidder is exempt pursuant to the small project exemption, Bidder further acknowledges:

1. Bidder shall maintain a current DIR registration for the duration of the project.
2. Bidder shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
3. Failure to submit this form or comply with any of the above requirements may result in a finding that the bid is non-responsive.

Name of Bidder \_\_\_\_\_

Signature \_\_\_\_\_

Name and Title \_\_\_\_\_

Dated \_\_\_\_\_

<sup>1</sup> If the Project is exempt from the contractor registration requirements pursuant to the small project exemption under Labor Code Sections 1725.5 and 1771.1, please mark "Yes" in response to "Small Project Exemption."

1.8 Contractor's Certificate Regarding Workers' Compensation.

I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract.

Name of Bidder \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Dated \_\_\_\_\_

**00 52 13 – CONTRACT**

This CONTRACT, No. \_\_\_\_\_ is made and entered into this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by and between Borrego Water District, sometimes hereinafter called "DISTRICT," and \_\_\_\_\_, sometimes hereinafter called "Contractor."

WITNESSETH: That the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree with each other as follows:

a. **SCOPE OF WORK.** The Contractor shall perform all Work within the time stipulated in the Contract, and shall provide all labor, materials, equipment, tools, utility services, and transportation to complete all of the Work required in strict compliance with the Contract Documents as specified in Article 5, below, for the following Project:

**De Anza Drive, Yaqui Road and Fairway Lane Water Improvements Project**

The Contractor and its surety shall be liable to the DISTRICT for any damages arising as a result of the Contractor's failure to comply with this obligation.

b. **TIME FOR COMPLETION.** Time is of the essence in the performance of the Work. The Work shall be commenced on the date stated in the DISTRICT's Notice to Proceed. The Contractor shall complete all Work required by the Contract Documents within **SIXTY (60) CALENDAR DAYS** from the commencement date stated in the Notice to Proceed. By its signature hereunder, Contractor agrees the time for completion set forth above is adequate and reasonable to complete the Work.

c. **CONTRACT PRICE.** The DISTRICT shall pay to the Contractor as full compensation for the performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs, the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_). Payment shall be made as set forth in the General Conditions.

d. **LIQUIDATED DAMAGES.** In accordance with Government Code section 53069.85, it is agreed that the Contractor will pay the DISTRICT the sum set forth in Section 00 73 13, Article 1.11 for each and every calendar day of delay beyond the time prescribed in the Contract Documents for finishing the Work, as Liquidated Damages and not as a penalty or forfeiture. In the event this is not paid, the Contractor agrees the DISTRICT may deduct that amount from any money due or that may become due the Contractor under the Contract. This Article does not exclude recovery of other damages specified in the Contract Documents.

e. **COMPONENT PARTS OF THE CONTRACT.** The "Contract Documents" include the following:

- Notice Inviting Bids
- Instructions to Bidders
- Bid Form
- Bid Bond
- Designation of Subcontractors



Information Required of Bidders  
Non-Collusion Declaration Form  
Iran Contracting Act Certification  
Public Works Contractor Registration Certification  
Performance Bond  
Payment (Labor and Materials) Bond  
General Conditions  
Special Conditions  
General Requirements  
Technical Specifications  
Addenda  
Plans and Drawings  
Standard Specifications for Public Works Construction "Greenbook", latest edition,  
Except Sections 1-9  
Applicable Local Agency Standards and Specifications, as last revised  
Approved and fully executed change orders  
Any other documents contained in or incorporated into the Contract

The Contractor shall complete the Work in strict accordance with all of the Contract Documents.

All of the Contract Documents are intended to be complementary. Work required by one of the Contract Documents and not by others shall be done as if required by all. This Contract shall supersede any prior agreement of the parties.

f. **PROVISIONS REQUIRED BY LAW AND CONTRACTOR COMPLIANCE.** Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of applicable federal, state and local laws, rules and regulations, including, but not limited to, the provisions of the California Labor Code and California Public Contract Code which are applicable to this Work.

g. **INDEMNIFICATION.** Contractor shall provide indemnification and defense as set forth in the General Conditions.

h. **PREVAILING WAGES.** Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at the DISTRICT's Administrative Office or may be obtained online at <http://www.dir.ca.gov> and which must be posted at the job site.

**[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]**

IN WITNESS WHEREOF, this Contract has been duly executed by the above-named parties, on the day and year above written.

\_\_\_\_\_  
Name of Contractor

**BORREGO WATER DISTRICT**

By \_\_\_\_\_

By \_\_\_\_\_

General Manager

Name and Title: \_\_\_\_\_

Date: \_\_\_\_\_

License No. \_\_\_\_\_

Date: \_\_\_\_\_

**(CONTRACTOR'S SIGNATURE MUST BE  
NOTARIZED AND CORPORATE  
SEAL AFFIXED, IF APPLICABLE)**

Approved as to form this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
Attorney for Borrego Water District

**END OF CONTRACT**

# Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA  
 COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public \_\_\_\_\_

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

\_\_\_\_\_ Title(s)

- Partner(s)                       Limited
- General

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:  
 Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
 \_\_\_\_\_

#### DESCRIPTION OF ATTACHED DOCUMENT

\_\_\_\_\_ Title or Type of Document

\_\_\_\_\_ Number of Pages

\_\_\_\_\_ Date of Document

\_\_\_\_\_ Signer(s) Other Than Named Above

00 61 13 – BOND FORMS

1.1 Performance Bond.

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the Borrego Water District, (hereinafter referred to as "DISTRICT") has awarded to \_\_\_\_\_, (hereinafter referred to as the "Contractor") an agreement for **Contract No.** \_\_\_\_\_, (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated \_\_\_\_\_, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by said Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of said Contract Documents.

NOW, THEREFORE, we, \_\_\_\_\_, the undersigned Contractor and \_\_\_\_\_ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the DISTRICT in the sum of \_\_\_\_\_ DOLLARS, (\$\_\_\_\_\_), said sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one (1) year guarantee of all materials and workmanship; and shall indemnify and save harmless the DISTRICT, its officials, officers, employees, and authorized volunteers, as stipulated in said Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by DISTRICT in enforcing such obligation.

As a condition precedent to the satisfactory completion of the Contract Documents, unless otherwise provided for in the Contract Documents, the above obligation shall hold good for a period of one (1) year after the acceptance of the work by DISTRICT, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the DISTRICT from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the DISTRICT's rights or the

Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure Section 337.15.

Whenever Contractor shall be, and is declared by the DISTRICT to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the DISTRICT's option:

- i. Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or
- ii. Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the DISTRICT, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the DISTRICT under the Contract and any modification thereto, less any amount previously paid by the DISTRICT to the Contractor and any other set offs pursuant to the Contract Documents.
- iii. Permit the DISTRICT to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the DISTRICT under the Contract and any modification thereto, less any amount previously paid by the DISTRICT to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the DISTRICT may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the DISTRICT, when declaring the Contractor in default, notifies Surety of the DISTRICT's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project to be performed thereunder shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, we have hereunto set our hands and seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

(Corporate Seal)

\_\_\_\_\_  
Contractor/ Principal

By \_\_\_\_\_

Title \_\_\_\_\_

(Corporate Seal)

\_\_\_\_\_  
Surety

By \_\_\_\_\_  
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title \_\_\_\_\_

The rate of premium on this bond is \_\_\_\_\_ per thousand. The total amount of premium charges is \$\_\_\_\_\_.  
(The above must be filled in by corporate attorney.)

**THIS IS A REQUIRED FORM**

Any claims under this bond may be addressed to:

(Name and Address of Surety)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Name and Address of Agent or Representative for service of process in California, if different from above)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Telephone number of Surety and Agent or Representative for service of process in California)

\_\_\_\_\_

# Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA  
 COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public \_\_\_\_\_

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

\_\_\_\_\_ Title(s)

- Partner(s)                       Limited
- General

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:  
 Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
 \_\_\_\_\_

#### DESCRIPTION OF ATTACHED DOCUMENT

\_\_\_\_\_ Title or Type of Document

\_\_\_\_\_ Number of Pages

\_\_\_\_\_ Date of Document

\_\_\_\_\_ Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

# Notary Acknowledgment

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STATE OF CALIFORNIA  
 COUNTY OF \_\_\_\_\_

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evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public \_\_\_\_\_

### OPTIONAL

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#### CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

\_\_\_\_\_ Title(s)

- Partner(s)                       Limited
- General

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:  
 Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
 \_\_\_\_\_

#### DESCRIPTION OF ATTACHED DOCUMENT

\_\_\_\_\_ Title or Type of Document

\_\_\_\_\_ Number of Pages

\_\_\_\_\_ Date of Document

\_\_\_\_\_ Signer(s) Other Than Named Above

**NOTE:** This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of Attorney to local representatives of the bonding company must also be attached.

**END OF PERFORMANCE BOND**



1.2 Payment Bond (Labor and Materials).

KNOW ALL MEN BY THESE PRESENTS That

WHEREAS, the Borrego Water District (hereinafter designated as the "DISTRICT"), by action taken or a resolution passed \_\_\_\_\_, 20\_\_\_\_, has awarded to \_\_\_\_\_ hereinafter designated as the "Principal," a contract for the work described as follows: **Contract No.** \_\_\_\_\_ (the "Project"); and

WHEREAS, said Principal is required to furnish a bond in connection with said contract; providing that if said Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of said Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and \_\_\_\_\_ as Surety, are held and firmly bound unto the DISTRICT in the penal sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Civil Code Section 9100, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Revenue and Taxation Code Section 18663, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the DISTRICT in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 9100 so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of

recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the owner or DISTRICT and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Civil Code Section 9100, and has not been paid the full amount of his claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned, including but not limited to the provisions of sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

(Corporate Seal)

\_\_\_\_\_  
Contractor/ Principal

By \_\_\_\_\_

Title \_\_\_\_\_

(Corporate Seal)

\_\_\_\_\_  
Surety

By \_\_\_\_\_  
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title \_\_\_\_\_

# Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA  
 COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary Public \_\_\_\_\_

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

\_\_\_\_\_ Title(s)

- Partner(s)                       Limited
- General

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:  
 Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
 \_\_\_\_\_

#### DESCRIPTION OF ATTACHED DOCUMENT

\_\_\_\_\_ Title or Type of Document

\_\_\_\_\_ Number of Pages

\_\_\_\_\_ Date of Document

\_\_\_\_\_ Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.



## 00 72 13 – GENERAL CONDITIONS

### ARTICLE 1. DEFINED TERMS

Whenever used in the Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined below, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

- A. Act of God – An earthquake of magnitude of 3.5 or higher on the Richter scale or a tidal wave.
- B. Addenda -- Written or graphic instruments issued prior to the submission of Bids which clarify, correct, or change the Contract Documents.
- C. Additional Work -- New or unforeseen work will be classified as “Additional Work” when the DISTRICT’s Representative determines that it is not covered by the Contract.
- D. Applicable Laws -- The laws, statutes, ordinances, rules, codes, regulations, permits, and licenses of any kind, issued by local, state or federal governmental authorities or private authorities with jurisdiction (including utilities), to the extent they apply to the Work.
- E. Bid -- The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices and other terms for the Work to be performed.
- F. Bidder -- The individual or entity who submits a Bid directly to the DISTRICT.
- G. Board; Board of Directors – Borrego Water District Board of Directors.
- H. Change Order (“CO”) -- A document that authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Contract, in accordance with the Contract Documents and in the form contained in the Contract Documents.
- I. Change Order Request (“COR”) -- A request made by the Contractor for an adjustment in the Contract Price and/or Contract Times as the result of a Contractor-claimed change to the Work. This term may also be referred to as a Change Order Proposal (“COP”), or Request for Change (“RFC”).
- J. Claim -- A demand or assertion by the DISTRICT or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
- K. Contract -- The entire integrated written agreement between the DISTRICT and Contractor concerning the Work. “Contract” may be used interchangeably with “Agreement” in the Contract Documents. The Contract supersedes prior

negotiations, representations, or agreements, whether written or oral, and includes all Contract Documents.

- L. Contract Documents -- The documents listed in Section 00 52 13, Article 5. Some documents provided by the DISTRICT to the Bidders and Contractor, including but not limited to reports and drawings of subsurface and physical conditions are not Contract Documents.
- M. Contract Price -- Amount to be paid by the DISTRICT to the Contractor as full compensation for the performance of the Contract and completion of the Work, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs.
- N. Contract Times -- The number of days or the dates stated in the Contract Documents to: achieve defined Milestones, if any; and to complete the Work so that it is ready for final payment.
- O. Contractor -- The individual or entity with which the DISTRICT has contracted for performance of the Work.
- P. Contractor's Designated On-Site Representative -- The Contractor's Designated On-Site Representative will be as identified in Section 00 72 13, Article 3 and shall not be changed without prior written consent of the DISTRICT.
- Q. Daily Rate -- The Daily Rate stipulated in the Contract Documents as full compensation to the Contractor due to the DISTRICT's unreasonable delay to the Project that was not contemplated by the parties.
- R. Day -- A calendar day of 24 hours measured from midnight to the next midnight.
- S. Defective Work -- Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referenced in the Contract Documents.
- T. Demobilization -- The complete dismantling and removal by the Contractor of all of the Contractor's temporary facilities, equipment, and personnel at the Site.
- U. District -- Borrego Water District.
- V. District's Representative -- The individual or entity as identified in the Special Conditions to act as the DISTRICT's Representative.
- W. Drawings -- That part of the Contract Documents prepared by of the Engineer of Record which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

- X. Effective Date of the Contract -- The date indicated in the Contract on which it becomes effective, but if no such date is indicated, it means the date on which the Contract is signed and delivered by the last of the two parties to sign and deliver.
- Y. Engineer, whenever not qualified, shall mean the General Manger of the DISTRICT, acting either directly or through properly authorized agents, such agents acting severally within the scope of the particular duties entrusted to them. On all questions concerning the acceptance of materials, machinery, the classifications of material, the execution of work, conflicting interest of the contractors performing related work and the determination of costs, the decision of the Engineer, duly authorized by the Board of Directors, shall be binding and final upon both parties.
- Z. Engineer of Record -- The individual, partnership, corporation, joint venture, or other legal entity named as such in Section 00 73 13, Article 1.1. or any succeeding entity designated by the DISTRICT.
- AA. General Manager – Borrego Water District’s General Manager/Engineer, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.
- BB. Green Book -- The current edition of the Standard Specifications for Public Works Construction promulgated by the Joint Cooperative Committee of the Southern California Chapter American Public Works Association and the Southern California Districts of the Associated General Contractors of California.
- CC. Hazardous Waste -- The term “Hazardous Waste” shall have the meaning provided in Section 104 of the Solid Waste Disposal Act (42 U.S.C. § 6903) as amended from time to time or, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a class I, class II, or class III disposal site in accordance with provisions of existing law, whichever is more restrictive.
- DD. Holiday – The Holidays occur on:
  - New Year’s Day - January 1
  - President’s Day – Third Monday in February
  - Memorial Day - Last Monday in May
  - Independence Day - July 4
  - Labor Day - First Monday in September
  - Veteran’s Day - November 11
  - Thanksgiving Day - Fourth Thursday in November
  - Friday after Thanksgiving
  - Christmas Eve – December 24
  - Christmas Day - December 25
  - Day After Christmas – December 26
  - New Year’s Eve – December 31

If any Holiday listed above falls on a Saturday, Saturday and the preceding Friday are both Holidays. If the Holiday should fall on a Sunday, Sunday and the following Monday are both Holidays.

- EE. Notice of Award -- The written notice by the DISTRICT to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, the DISTRICT will sign and deliver the Contract.
- FF. Notice of Completion -- The form which may be executed by the DISTRICT and recorded by the county where the Project is located constituting final acceptance of the Project.
- GG. Notice to Proceed -- A written notice given by the DISTRICT to Contractor fixing the date on which the Contractor may proceed with the Work and when Contract Times will commence to run.
- HH. Project -- The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
- II. Recyclable Waste Materials -- Materials removed from the Site which are required to be diverted to a recycling center rather than an area landfill. Recyclable Waste Materials include asphalt, concrete, brick, concrete block, and rock.
- JJ. Schedule of Submittals -- A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to facilitate scheduled performance of related construction activities.
- KK. Shop Drawings -- All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
- LL. Specifications -- That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
- MM. Stop Payment Notice -- A written notice as defined in Civil Code section 8044.
- NN. Subcontractor -- An individual or entity other than a Contractor having a contract with any other entity than the DISTRICT for performance of any portion of the Work at the Site.
- OO. Submittal -- Written and graphic information and physical samples prepared and supplied by the Contractor demonstrating various portions of the Work.
- PP. Successful Bidder -- The Bidder submitting a responsive Bid to whom the DISTRICT makes an award.
- QQ. Supplier -- A manufacturer, fabricator, supplier, distributor, material man, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment used in the performance of the Work or to be incorporated in the Work.



RR. Underground Facilities -- All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

SS. Unit Price Work -- Work to be paid for on the basis of unit prices as provided by the Contractor in its bid or as adjusted in accordance with the Contract Documents.

TT. Warranty -- A written guarantee provided to the DISTRICT by the Contractor that the Work will remain free of defects and suitable for its intended use for the period required by the Contract Documents or the longest period permitted by the law of this State, whichever is longer.

UU. Work -- The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

## ARTICLE 2. CONTRACT DOCUMENTS

A. **Contract Documents.** The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all.

B. **Interpretations.** The Contract Documents are intended to be fully cooperative and complementary. If the Contractor observes that any documents are in conflict, the Contractor shall promptly notify the Engineer in writing. In case of conflicts between the Contract Documents, the order of precedence shall be as follows:

1. Change Orders
2. Addenda
3. Special Conditions
4. Technical Specifications
5. General Requirements
6. Plans (Contract Drawings)
7. Contract
8. General Conditions
9. Instructions to Bidders
10. Notice Inviting Bids
11. Contractor's Bid Forms
12. Standard Specifications for Public Works Construction (Sections 1-9 Excluded), Latest Edition.
13. Applicable Local Agency Standards and Specifications
14. Standard Drawings
15. Reference Documents

With reference to the Drawings, the order of precedence shall be as follows:

1. Figures govern over scaled dimensions
  2. Detail drawings govern over general drawings
  3. Addenda or Change Order drawings govern over Contract Drawings
  4. Contract Drawings govern over Standard Drawings
  5. Contract Drawings govern over Shop Drawings
- C. **Conflicts in Contract Documents.** Notwithstanding the orders of precedence established above, in the event of conflicts, the higher standard, higher quality, and most expensive shall always apply.
- D. **Organization of Contract Documents.** Organization of the Contract Documents into divisions, sections, and articles, and arrangement of drawings shall not control the Contractor in dividing Project Work among subcontractors or in establishing the extent of Work to be performed by any trade.

### **ARTICLE 3. PRECONSTRUCTION AND CONSTRUCTION COMMUNICATION**

Before any Work at the site is started, a conference attended by the DISTRICT, Contractor, DISTRICT's Representative, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to herein, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

At this conference the DISTRICT and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

At the discretion of the Engineer, periodic meetings involving project personnel (the Contractor, utility and others) will be held for the purpose of coordinating project activities.

### **ARTICLE 4. CONTRACT DOCUMENTS: COPIES & MAINTENANCE**

Contractor will be furnished, free of charge, **five (5)** copies of the Contract Documents. Additional copies may be obtained at cost of reproduction.

Contractor shall maintain a clean, undamaged set of Contract Documents, including submittals, at the Project site.

### **ARTICLE 5. EXAMINATION OF DRAWINGS, SPECIFICATIONS AND SITE OF WORK**

- A. **Examination of Contract Documents.** Before commencing any portion of the Work, Contractor shall again carefully examine all applicable Contract Documents, the Project site, and other information given to Contractor as to materials and methods of construction and other Project requirements. Contractor shall immediately notify the Engineer of any potential error, inconsistency, ambiguity, conflict, or lack of detail or explanation. If Contractor performs, permits, or causes the performance of any Work which is in error, inconsistent or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all resulting costs,

including, without limitation, the cost of correction. In no case shall the Contractor or any subcontractor proceed with Work if uncertain as to the applicable requirements.

- B. **Additional Instructions.** After notification of any error, inconsistency, ambiguity, conflict, or lack of detail or explanation, the Engineer will provide any required additional instructions, by means of drawings or other written direction, necessary for proper execution of Work.
- C. **Quality of Parts, Construction and Finish.** All parts of the Work shall be of the best quality of their respective kinds and the Contractor must use all diligence to inform itself fully as to the required construction and finish.
- D. **Contractor's Variation from Contract Document Requirements.** If it is found that the Contractor has varied from the requirements of the Contract Documents including the requirement to comply with all applicable laws, ordinances, rules and regulations, the Engineer may at any time, before or after completion of the Work, order the improper Work removed, remade or replaced by the Contractor at the Contractor's expense.

## **ARTICLE 6. MOBILIZATION**

- A. When a bid item is included in the Bid Form for mobilization, the costs of Work in advance of construction operations and not directly attributable to any specific bid item will be included in the progress estimate ("Initial Mobilization"). When no bid item is provided for "Initial Mobilization," payment for such costs will be deemed to be included in the other items of the Work.
- B. Payment for Initial Mobilization based on the lump sum provided in the Bid Form, which shall constitute full compensation for all such Work. No payment for Initial Mobilization will be made until all of the listed items have been completed to the satisfaction of the Engineer. The scope of the Work included under Initial Mobilization shall include, but shall not be limited to, the following principal items:
  - 1. Obtaining and paying for all bonds, insurance, and permits.
  - 2. Moving on to the Project site of all Contractor's plant and equipment required for the first month's operations.
  - 3. Installing temporary construction power, wiring, and lighting facilities, as applicable.
  - 4. Establishing fire protection system, as applicable.
  - 5. Developing and installing a construction water supply, if applicable.
  - 6. Providing and maintaining the field office trailers for the Contractor, if necessary, and the Engineer (if specified), complete, with all specified furnishings and utility services.

7. Providing on-site sanitary facilities and potable water facilities as specified per Cal-OSHA and these Contract Documents.
8. Furnishing, installing, and maintaining all storage buildings or sheds required for temporary storage of products, equipment, or materials that have not yet been installed in the Work. All such storage shall meet manufacturer's specified storage requirements, and the specific provisions of the specifications, including temperature and humidity control, if recommended by the manufacturer, and for all security.
9. Arranging for and erection of Contractor's work and storage yard.
10. Posting all OSHA required notices and establishment of safety programs per Cal-OSHA.
11. Full-time presence of Contractor's superintendent at the job site as required herein.
12. Providing on-site Contractor's sanitary facilities.
13. Install project sign, if required.
14. Submittal of Schedule of Values.
15. Submittal of Construction Schedule as required by the Contract Documents.

**ARTICLE 7. EXISTENCE OF UTILITIES AT THE WORK SITE**

- A. The DISTRICT has endeavored to determine the existence of utilities at the Project site from the records of the owners of known utilities in the vicinity of the Project. The positions of these utilities as derived from such records are shown on the Plans.
- B. Unless indicated otherwise on the Plans and Specifications, no excavations were made to verify the locations shown for underground utilities. The service connections to these utilities are not shown on the Plans. Water service connections may be shown on the Plans showing general locations of such connections. It shall be the responsibility of the Contractor to determine the exact location of all service connections. The Contractor shall make its own investigations, including exploratory excavations, to determine the locations and type of service connections, prior to commencing Work which could result in damage to such utilities. The Contractor shall immediately notify the DISTRICT in writing of any utility discovered in a different position than shown on the Plans or which is not shown on the Plans.
- C. If applicable, all water meters, water valves, fire hydrants, electrical utility vaults, telephone vaults, gas utility valves, and other subsurface structures shall be relocated or adjusted to final grade by the Contractor. Locations of existing utilities shown on the Plans are approximate and may not be complete. The Contractor shall be responsible for coordinating its Work with all utility companies during the construction of the Work.

- D. Notwithstanding the above, pursuant to section 4215 of the Government Code, the DISTRICT has the responsibility to identify, with reasonable accuracy, main or trunkline facilities on the plans and specifications. In the event that main or trunkline utility facilities are not identified with reasonable accuracy in the plans and specifications made a part of the invitation for Bids, the DISTRICT shall assume the responsibility for their timely removal, relocation, or protection.
- E. Contractor, except in an emergency, shall contact the appropriate regional notification center, **Southern California Underground Service Alert** at 811 or 1-800-227-2600 or on-line at [www.digalert.org](http://www.digalert.org) at least two working days prior to commencing any excavation if the excavation will be performed in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the DISTRICT, and obtain an inquiry identification number from that notification center. No excavation shall be commenced or carried out by the Contractor unless such an inquiry identification number has been assigned to the Contractor or any subcontractor of the Contractor and the DISTRICT has been given the identification number by the Contractor.

## **ARTICLE 8. SOILS INVESTIGATIONS**

- A. Reports and Drawings. The Special Conditions identify:
  - 1. those reports known to the DISTRICT of explorations and tests of subsurface conditions at or contiguous to the site; and
  - 2. those drawings known to the DISTRICT of physical conditions relating to existing surface or subsurface structures at the site (except Underground Facilities).
- B. Limited Reliance by Contractor on Technical Data Authorized. Contractor may rely upon the accuracy of the “technical data” contained in such reports and drawings, which were expressly not created or obtained to evaluate or assist in the evaluation of constructability, and are not Contract Documents. Contractor shall make its own interpretation of the “technical data” and shall be solely responsible for any such interpretations. Except for reliance on the accuracy of such “technical data,” Contractor may not rely upon or make any claim against the DISTRICT, DISTRICT’s Representative, or Engineer of Record, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
  - 1. the completeness of such reports and drawings for Contractor’s purposes, including without limitation any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
  - 2. other data, interpretations, opinions, conclusions and information contained in such reports or shown or indicated in such drawings; or
  - 3. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions, or information.

## **ARTICLE 9. CONTRACTOR'S SUPERVISION**

Contractor shall continuously keep at the Project site, a competent and experienced full-time Project superintendent acceptable to the DISTRICT. Superintendent must be able to proficiently speak, read and write in English and shall have the authority to make decisions on behalf of the Contractor. Contractor shall continuously provide efficient supervision of the Project.

## **ARTICLE 10. WORKERS**

- A. Contractor shall at all times enforce strict discipline and good order among its employees. Contractor shall not employ on the Project any unfit person or any one not skilled in the Work assigned to him or her.
- B. Any person in the employ of the Contractor whom the DISTRICT may deem incompetent or unfit shall be dismissed from the Work and shall not be employed on this Project.

## **ARTICLE 11. INDEPENDENT CONTRACTORS**

Contractor shall be an independent contractor for the DISTRICT and not an employee. Contractor understands and agrees that it and all of its employees shall not be considered officers, employees, or agents of DISTRICT and are not entitled to benefits of any kind normally provided employees of DISTRICT, including but not limited to, state unemployment compensation or workers' compensation. Contractor assumes full responsibility for the acts and omissions of its employees or agents related to the Work.

## **ARTICLE 12. SUBCONTRACTS**

- A. Contractor agrees to bind every subcontractor to the terms of the Contract Documents as far as such terms are applicable to subcontractor's portion of the Work. Contractor shall be as fully responsible to the DISTRICT for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by its subcontractors, as Contractor is for acts and omissions of persons directly employed by Contractor. Nothing contained in these Contract Documents shall create any contractual relationship between any subcontractor and the DISTRICT.
- B. The DISTRICT reserves the right to accept all subcontractors. The DISTRICT's acceptance of any subcontractor under this Contract shall not in any way relieve Contractor of its obligations in the Contract Documents.
- C. Prior to substituting any subcontractor listed in the Bid Forms, Contractor must comply with the requirements of the Subletting and Subcontracting Fair Practices Act pursuant to California Public Contract Code section 4100 et seq.

## **ARTICLE 13. VERIFICATION OF EMPLOYMENT ELIGIBILITY**

By executing this Contract, Contractor verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be

amended from time to time, and shall require all subcontractors, sub-subcontractors and consultants to comply with the same. Each person executing this Contract on behalf of Contractor verifies that he or she is a duly authorized officer of Contractor and that any of the following shall be grounds for the DISTRICT to terminate the Contract for cause: (1) failure of the Contractor or its subcontractors, sub-subcontractors or consultants to meet any of the requirements provided for in this Article; (2) any misrepresentation or material omission concerning compliance with such requirements; or (3) failure to immediately remove from the Work any person found not to be in compliance with such requirements.

#### **ARTICLE 14. REQUESTS FOR SUBSTITUTION**

- A. For the purposes of this provision, the term “substitution” shall mean the substitution of any material, method or service substantially equal to or better in every respect to that indicated in the Standard Specifications or otherwise referenced herein.
- B. Pursuant to Public Contract Code section 3400(b), the DISTRICT may make a finding that is described in the Notice Inviting Bids that designates certain products, things, or services by specific brand or trade name.
- C. Unless specifically designated in the Special Conditions, whenever any material, process, or article is indicated or specified by grade, patent, or proprietary name or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating the description of the material, process, or article desired and shall be deemed to be followed by the words “or equal.” Contractor may, unless otherwise stated, offer for substitution any material, process, or article which may be substantially equal to or better in every respect to that so indicated or specified in the Contract Documents. However, the DISTRICT has adopted uniform standards for certain materials, processes, and articles.
- D. The Contractor shall submit substitution requests, together with substantiating data, for substitution of any “or equal” material, process, or article no later than thirty-five (35) calendar days after award of Contract. Provisions regarding submission of substitution requests shall not in any way authorize an extension of time for the performance of this Contract. If a substitution request is rejected by the DISTRICT, the Contractor shall provide the material, method or service specified herein. The DISTRICT shall not be responsible for any costs incurred by the Contractor associated with substitution requests. The burden of proof as to the equality of any material, process, or article shall rest with the Contractor. The Engineer has the complete and sole discretion to determine if a material, process, or article is substantially equal to or better than that specified and to approve or reject all substitution requests.
- E. Substantiating data as described above shall include, at a minimum, the following information:
  - 1. A signed affidavit from the Contractor stating that the material, process, or article proposed as a substitution is substantially equal to or better than that specified in every way except as may be listed on the affidavit.

2. Illustrations, specifications, catalog cut sheets, and any other relevant data required to prove that the material, process, or article is substantially equal to or better than that specified.
  3. A statement of the cost implications of the substitution being requested, indicating whether and why the proposed substitution will reduce or increase the amount of the contract.
  4. Information detailing the durability and lifecycle costs of the proposed substitution.
- F. Failure to submit all the required substantiating data detailed above in a timely manner so that the substitution request can be adequately reviewed may result in rejection of the substitution request. The Engineer is not obligated to review multiple submittals related the same substitution request resulting from the Contractor's failure to initially submit a complete package.
- G. Time limitations within this Article shall be strictly complied with and in no case will an extension of time for completion of the contract be granted because of Contractor's failure to provide substitution requests at the time and in the manner described herein.
- H. The Contractor shall bear the costs of all DISTRICT work associated with the review of substitution requests.
- I. If substitution requests approved by the Engineer require that Contractor furnish materials, methods or services more expensive than that specified, the increased costs shall be borne by Contractor.

## **ARTICLE 15. SHOP DRAWINGS**

- A. Contractor shall check and verify all field measurements and shall submit with such promptness as to provide adequate time for review and cause no delay in its own Work or in that of any other contractor, subcontractor, or worker on the Project, six (6) copies of all shop drawings, calculations, schedules, and materials list, and all other provisions required by the Contract Documents. Contractor shall sign all submittals affirming that submittals have been reviewed and approved by Contractor prior to submission to Engineer. Each signed submittal shall affirm that the submittal meets all the requirements of the Contract Documents except as specifically and clearly noted and listed on the transmittal letter of the submittal.
- B. Contractor shall make any corrections required by the Engineer, and file with the Engineer six (6) corrected copies each, and furnish such other copies as may be needed for completion of the Work. Engineer's acceptance of shop drawings shall not relieve Contractor from responsibility for deviations from the Contract Documents unless Contractor has, in writing, called Engineer's attention to such deviations at time of submission and has secured the Engineer's written acceptance. Engineer's acceptance of shop drawings shall not relieve Contractor from responsibility for errors in shop drawings.



## **ARTICLE 16. SUBMITTALS**

- A. Contractor shall furnish to the Engineer for approval, prior to purchasing or commencing any Work, a log of all samples, material lists and certifications, mix designs, schedules, and other submittals, as required in the Contract Documents. The log shall indicate whether samples will be provided in accordance with other provisions of this Contract.
- B. Contractor will provide samples and submittals, together with catalogs and supporting data required by the Engineer, to the Engineer within a reasonable time period to provide for adequate review and avoid delays in the Work.
- C. These requirements shall not authorize any extension of time for performance of this Contract. Engineer will check and approve such samples, but only for conformance with design concept of work and for compliance with information given in the Contract Documents. Work shall be in accordance with approved samples and submittals.

## **ARTICLE 17. MATERIALS**

- A. Except as otherwise specifically stated in the Contract Documents, Contractor shall provide and pay for all materials, labor, tools, equipment, lights, power, transportation, superintendence, temporary constructions of every nature, and all other services and facilities of every nature whatsoever necessary to execute and complete this Contract within specified time.
- B. Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted and/or specified, and workmanship shall be of good quality.
- C. Materials shall be furnished in ample quantities and at such times as to ensure uninterrupted progress of the Work and shall be stored properly and protected as required by the Contract Documents. Contractor shall be entirely responsible for damage or loss by weather or other causes to materials or Work.
- D. No materials, supplies, or equipment for Work under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in the Work and agrees upon completion of all work to deliver the Project, to the DISTRICT free from any claims, liens, or charges.
- E. Materials shall be stored on the Project site in such manner so as not to interfere with any operations of the DISTRICT or any independent contractor.
- F. Contractor shall verify all measurements, dimensions, elevations, and quantities before ordering any materials or performing any Work, and the DISTRICT shall not be liable for Contractor's failure to so. No additional compensation, over and above payment for the actual quantities at the prices set out in the Bid Form, will be allowed because of differences between actual measurements, dimension, elevations and

quantities and those indicated on the Plans and in the Specifications. Any difference therein shall be submitted to the Engineer for consideration before proceeding with the Work.

## ARTICLE 18. PERMITS AND LICENSES

- A. DISTRICT will apply and pay for the review of necessary encroachment permits for Work within the public rights-of-way. Contractor shall obtain all other necessary permits and licenses for the construction of the Project, including encroachment permits, and shall pay all fees required by law and shall comply with all laws, ordinances, rules and regulations relating to the Work and to the preservation of public health and safety. Before acceptance of the Project, the Contractor shall submit all licenses, permits, certificates of inspection and required approvals to the DISTRICT.
- B. Notwithstanding the foregoing, Contractor shall obtain an encroachment permit with San Diego County ("County Permit") prior to the start of construction. The Bid Form contains an allowance for the Contractor's cost of acquiring the County Permit. The allowance is included within the Bid Form to eliminate the need by bidders to research or estimate the costs of the County Permit prior to submitting a Bid. The allowance is specifically intended to account for the actual cost of the County Permit only. No other costs payable by Contractor are included within the allowance. A change order, either additive or deductive, will be issued in accordance with Article 44 of the General Conditions for the actual cost of the County Permit.

## ARTICLE 19. TRENCHES

- A. **Trenches Five Feet or More in Depth.** Contractor shall submit to the Engineer at the preconstruction meeting, a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from hazards of caving ground during the excavation of any trench or trenches five feet or more in depth. If such plan varies from shoring system standards established by the Construction Safety Orders of the California Code of Regulations, Department of Industrial Relations, the plan shall be prepared by a California registered civil or structural engineer. The plan shall not be less effective than the shoring, bracing, sloping, or other provisions of the Construction Safety Orders, as defined in the California Code of Regulations. The Contractor shall designate in writing the "competent person" as defined in Title 8, California Code of Regulations, who shall be present at the Work Site each day that trenching/excavation is in progress. The "competent person" shall prepare and provide daily trenching/excavation inspection reports to the Engineer. Contractor shall also submit a copy of its annual California Occupational Safety and Health Administration (Cal/OSHA) trench/excavation permit.
- B. **Excavations Deeper than Four Feet.** If the Work involves excavating trenches or other excavations that extend deeper than four feet below the surface, Contractor shall promptly, and before the excavation is further disturbed, notify the DISTRICT in writing of any of the following conditions:
  - 1. Material that the Contractor believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code, that is required to be

removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

2. Subsurface or latent physical conditions at the site differing from those indicated.
3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract

The DISTRICT shall promptly investigate the conditions, and if it finds that the conditions do so materially differ, or do involve hazardous waste, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the Work, shall issue a change order under the procedures described in the Contract Documents.

In the event that a dispute arises between the DISTRICT and the Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the parties.

## **ARTICLE 20. TRAFFIC CONTROL**

- A. Traffic control plan(s) for the Work may be required by the Agency(s) of Jurisdiction. Traffic control plans, if required, shall be prepared at Contractor's expense, and traffic control shall be performed at Contractor's expense in accordance with the requirements of the Agency(s) of Jurisdiction. The Permit and Inspection Allowance included within the Bid Form includes the cost of required traffic control permit(s) and construction inspection by the Agency(s) of Jurisdiction only. The Permit and Inspection Allowance does not include costs for preparation of any required traffic control plans, implementation of any traffic control requirements or for any traffic signal services that may be required. Costs for traffic control plans, implementation of traffic control, or traffic signal services required by the Agency(s) of Jurisdiction shall be included in the Contractor's Bid.
- B. All warning signs and safety devices used by the Contractor to perform the Work shall conform to the requirements contained in the State of California, Department of Transportation's current edition of "Manual of Traffic Controls for Construction and Maintenance Work Zones" or to the requirements of the local agency. The Contractor shall also be responsible for all traffic control required by the agency having jurisdiction over the project on the intersecting streets. Contractor shall submit two (2) traffic control plans to the agency having jurisdiction over the project and the General Manager a minimum of forty-eight (48) hours prior to starting work for approval.
- C. The Contractor's representative on the site responsible for traffic control shall produce evidence that he/she has completed training acceptable to the California

Department of Transportation for safety through construction zones. All of the streets in which the Work will occur shall remain open to traffic and one lane of traffic maintained at all times unless otherwise directed by the agency of jurisdiction. Businesses and residences adjacent to the Work shall be notified forty-eight (48) hours in advance of closing of driveways. The Contractor shall make every effort to minimize the amount of public parking temporarily eliminated due to construction in areas fronting businesses. No stockpiles of pipe or other material will be allowed in traveled right-of-ways after working hours unless otherwise approved by the Engineer.

#### **ARTICLE 21. DIVERSION OF RECYCLABLE WASTE MATERIALS**

In compliance with the applicable DISTRICT's waste reduction and recycling efforts, Contractor shall divert all Recyclable Waste Materials to appropriate recycling centers as required for compliance with the local jurisdiction's waste diversion ordinances. Contractor will be required to submit weight tickets and written proof of diversion with its monthly progress payment requests. Contractor shall complete and execute any certification forms required by DISTRICT or other applicable agencies to document Contractor's compliance with these diversion requirements. All costs incurred for these waste diversion efforts shall be the responsibility of the Contractor.

#### **ARTICLE 22. REMOVAL OF HAZARDOUS MATERIALS**

Should Contractor encounter material reasonably believed to be polychlorinated biphenyl (PCB) or other toxic wastes and hazardous materials which have not been rendered harmless at the Project site, the Contractor shall immediately stop work at the affected Project site and shall report the condition to the DISTRICT in writing. The DISTRICT shall contract for any services required to directly remove and/or abate PCBs and other toxic wastes and hazardous materials, if required by the Project site(s), and shall not require the Contractor to subcontract for such services. The Work in the affected area shall not thereafter be resumed except by written agreement of the DISTRICT and Contractor.

#### **ARTICLE 23. SANITARY FACILITIES**

Contractor shall provide sanitary temporary toilet buildings and hand washing facilities for the use of all workers. All toilets and hand washing facilities shall comply with local codes and ordinances. Toilets shall be kept supplied with toilet paper and shall have workable door fasteners. Toilets and hand washing facilities shall be serviced no less than once weekly and shall be present in a quantity of not less than 1 per 20 workers as required by Cal/OSHA regulations. The toilets and hand washing facilities shall be maintained in a sanitary condition at all times. Use of toilet and hand washing facilities in the Work under construction shall not be permitted. Any other Sanitary Facilities required by Cal/OSHA shall be the responsibility of the Contractor.

#### **ARTICLE 24. AIR POLLUTION CONTROL**

Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes, including, but not limited to, those required by the South Coast Air Quality Management District. All containers of paint, thinner, curing compound, solvent or liquid asphalt shall be labeled to indicate that the contents fully comply with the applicable material requirements.

## **ARTICLE 25. LAYOUT AND FIELD ENGINEERING**

All field engineering required for laying out the Work and establishing grades for earthwork operations shall be furnished by the Contractor at its expense.

## **ARTICLE 26. TESTS AND INSPECTIONS**

- A. If the Contract Documents, the Engineer, or any instructions, laws, ordinances, or public authority requires any part of the Work to be tested or Approved, Contractor shall provide the Engineer at least two (2) working days' notice of its readiness for observation or inspection. If inspection is by a public authority other than the DISTRICT, Contractor shall promptly inform the DISTRICT of the date fixed for such inspection. Required certificates of inspection (or similar) shall be secured by Contractor. Costs for DISTRICT testing and DISTRICT inspection shall be paid by the DISTRICT. Costs of tests for Work found not to be in compliance shall be paid by the Contractor.
- B. If any Work is done or covered up without the required testing or approval, the Contractor shall uncover or deconstruct the Work, and the Work shall be redone after completion of the testing at the Contractor's cost in compliance with the Contract Documents.
- C. Where inspection and testing are to be conducted by an independent laboratory or agency, materials or samples of materials to be inspected or tested shall be selected by such laboratory or agency, or by the DISTRICT, and not by Contractor. All tests or inspections of materials shall be made in accordance with the commonly recognized standards of national organizations.
- D. In advance of manufacture of materials to be supplied by Contractor which must be tested or inspected, Contractor shall notify the DISTRICT so that the DISTRICT may arrange for testing at the source of supply. Any materials which have not satisfactorily passed such testing and inspection shall not be incorporated into the Work.
- E. If the manufacture of materials to be inspected or tested will occur in a plant or location greater than sixty (60) miles from the DISTRICT, the Contractor shall pay for any excessive or unusual costs associated with such testing or inspection, including but not limited to excessive travel time, standby time and required lodging.
- F. Reexamination of Work may be ordered by the DISTRICT. If so ordered, Work must be uncovered or deconstructed by Contractor. If Work is found to be in accordance with the Contract Documents, the DISTRICT shall pay the costs of reexamination and reconstruction. If such work is found not to be in accordance with the Contract Documents, Contractor shall pay all costs.

## **ARTICLE 27. PROTECTION OF WORK AND PROPERTY**

- A. The Contractor shall be responsible for all damages to persons or property that occurs as a result of the Work. Contractor shall be responsible for the proper care and protection of all materials delivered and Work performed until completion and

final Acceptance by the DISTRICT. All Work shall be solely at the Contractor's risk. Contractor shall adequately protect adjacent property from settlement or loss of lateral support as necessary. Contractor shall comply with all applicable safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the Project site where Work is being performed. Contractor shall erect and properly maintain at all times, as required by field conditions and progress of work, all necessary safeguards, signs, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created in the course of construction.

- B. In an emergency affecting safety of life or of work or of adjoining property, Contractor, without special instruction or authorization from the Engineer, is hereby permitted to act to prevent such threatened loss or injury; and Contractor shall so act, without appeal, if so authorized or instructed by the Engineer or the DISTRICT. Any compensation claimed by Contractor on account of emergency work shall be determined by and agreed upon by the DISTRICT and the Contractor.

#### **ARTICLE 28. CONTRACTOR'S MEANS AND METHODS**

Contractor is solely responsible for the means and methods utilized to perform the Work. In no case shall the Contractor's means and methods deviate from commonly used industry standards.

#### **ARTICLE 29. AUTHORIZED REPRESENTATIVES**

The DISTRICT shall designate representatives, who shall have the right to be present at the Project site at all times. The DISTRICT may designate an inspector who shall have the right to observe all of the Contractor's Work. The inspector shall not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. Contractor shall provide safe and proper facilities for such access.

#### **ARTICLE 30. HOURS OF WORK**

- A. As provided in Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code, Contractor stipulates that eight (8) hours of labor shall constitute a legal day's work. The time of service of any worker employed at any time by the Contractor or by any subcontractor on any subcontract under this Contract upon the Work or upon any part of the Work contemplated by this Contract is limited and restricted to eight (8) hours during any one calendar day and 40 hours during any one calendar week, except as hereinafter provided. Notwithstanding the provisions herein above set forth, work performed by employees of Contractor in excess of eight (8) hours per day, and 40 hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay.
- B. The Contractor and every subcontractor shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed in connection with the Work or any part of the Work contemplated by this Contract. The record shall be kept open at all reasonable

hours to the inspection of the DISTRICT and to the Division of Labor Law Enforcement, Department of Industrial Relations of the State of California.

- C. The Contractor shall pay to the DISTRICT a penalty of twenty-five dollars (\$25.00) for each worker employed in the execution of this Contract by the Contractor or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and 40 hours in any one calendar week in violation of the provisions of Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.
- D. Any work necessary to be performed after regular working hours, or on Saturdays and Sundays or other holidays, shall be performed without additional expense to the DISTRICT.
- E. DISTRICT will provide inspection during normal working hours from 7:00 a.m. to 3:30 p.m. Monday through Friday. Inspection before or after this time will be charged to the Contractor as reimbursable inspection time. Inspections on weekends requires two days' notice for review and approval. Upon written request and approval the 8.5 hour working day may be changed to other limits subject to city/county ordinance.
- F. It shall be unlawful for any person to operate, permit, use, or cause to operate any of the following at the Project site, other than between the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, with no Work allowed on the DISTRICT-observed holidays, unless otherwise approved by the DISTRICT:
  - 1. Powered Vehicles
  - 2. Construction Equipment
  - 3. Loading and Unloading Vehicles
  - 4. Domestic Power Tools

### **ARTICLE 31. PAYROLL RECORDS; LABOR COMPLIANCE**

- A. Pursuant to Labor Code section 1776, Contractor and all subcontractors shall maintain weekly certified payroll records, showing the names, addresses, Social Security numbers, work classifications, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by them in connection with the Work under this Contract. Contractor shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. Contractor shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury.
- B. In accordance with Labor Code section 1771.4, the Contractor and each subcontractor shall furnish the certified payroll records directly to the Department of Industrial Relations ("DIR") on the specified interval and format prescribed by the DIR, which may include electronic submission. Contractor shall comply with all requirements and regulations from the DIR relating to labor compliance monitoring

and enforcement. The requirement to submit certified payroll records directly to the Labor Commissioner under Labor Code section 1771.4 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Section 1771.4.

- C. Any stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor that affect Contractor's performance of Work, including any delay, shall be Contractor's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Contractor caused delay subject to any applicable liquidated damages and shall not be compensable by the DISTRICT. Contractor shall defend, indemnify and hold the DISTRICT, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the Department of Industrial Relations against Contractor or any subcontractor.
- D. The payroll records described herein shall be certified and submitted by the Contractor at a time designated by the DISTRICT. The Contractor shall also provide the following:
  - 1. A certified copy of the employee's payroll records shall be made available for inspection or furnished to such employee or his or her authorized representative on request.
  - 2. A certified copy of all payroll records described herein shall be made available for inspection or furnished upon request of the DIR.
- E. Unless submitted electronically, the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement ("DLSE") of the DIR or shall contain the same information as the forms provided by the DLSE.
- F. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency, the DISTRICT, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or performing the contract shall not be marked or obliterated.
- G. In the event of noncompliance with the requirements of this Article, the Contractor shall have ten (10) calendar days in which to comply subsequent to receipt of written notice specifying in what respects the Contractor must comply with this Article. Should noncompliance still be evident after such 10-day period, the Contractor shall pay a penalty of one hundred dollars (\$100.00) to the DISTRICT for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payment then due.
- H. The responsibility for compliance with this Article shall rest upon the Contractor.



## **ARTICLE 32. PREVAILING RATES OF WAGES**

- A. The Contractor is aware of the requirements of Labor Code sections 1720 *et seq.* and 1770 *et seq.*, as well as California Code of Regulations, Title 8, Section 16000 *et seq.* (“Prevailing Wage Laws”), which require the payment of prevailing wage rates and the performance of other requirements on certain “public works” and “maintenance” projects. Since this Project involves an applicable “public works” or “maintenance” project, as defined by the Prevailing Wage Laws, and since the total compensation is \$1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. The Contractor shall obtain a copy of the prevailing rates of per diem wages at the commencement of this Contract from the website of the Division of Labor Statistics and Research of the Department of Industrial Relations located at [www.dir.ca.gov](http://www.dir.ca.gov). In the alternative, the Contractor may view a copy of the prevailing rate of per diem wages which are on file at the DISTRICT’s Administration Office and shall be made available to interested parties upon request. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification, or type of worker needed to perform work on the Project available to interested parties upon request, and shall post copies at the Contractor’s principal place of business and at the Project site. Contractor shall defend, indemnify and hold the DISTRICT, its officials, officers, employees and authorized volunteers free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or allege failure to comply with the Prevailing Wage Laws.
- B. The Contractor shall forfeit as a penalty to the DISTRICT not more than Two Hundred Dollars (\$200.00), pursuant to Labor Code section 1775, for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate as determined by the Director of the Department of Industrial Relations for such work or craft in which such worker is employed for any public work done under the Contract by it or by any subcontractor under it. The difference between such prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof, for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by the Contractor.
- C. Contractor shall post, at appropriate conspicuous points on the Project site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.

## **ARTICLE 33. PUBLIC WORKS CONTRACTOR REGISTRATION**

Pursuant to Labor Code sections 1725.5 and 1771.1, the Contractor and its subcontractors must be registered with the Department of Industrial Relations prior to the execution of a contract to perform public works. By entering into this Contract, Contractor represents that it is aware of the registration requirement and is currently registered with the DIR. Contractor shall maintain a current registration for the duration of the Project. Contractor shall further include the requirements of Labor Code sections 1725.5 and 1771.1 in any subcontract and ensure that all subcontractors are registered at the time this Contract is entered into and maintain registration for the duration of the Project. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

## **ARTICLE 34. EMPLOYMENT OF APPRENTICES**

- A. Contractor and all subcontractors shall comply with the requirements of Labor Code sections 1777.5 and 1777.6 in the employment of apprentices.
- B. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.
- C. Knowing violations of Labor Code section 1777.5 will result in forfeiture not to exceed one hundred dollars (\$100.00) for each calendar day of non-compliance pursuant to Labor Code section 1777.7.
- D. The responsibility for compliance with this Article shall rest upon the Contractor.

## **ARTICLE 35. NONDISCRIMINATION/EQUAL EMPLOYMENT OPPORTUNITY**

Pursuant to Labor Code section 1735 and other applicable provisions of law, the Contractor and its subcontractors shall not discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law on this Project. The Contractor will take affirmative action to insure that employees are treated during employment or training without regard to their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law.

Employment Eligibility; Contractor. By executing this Contract, Contractor verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time. Such requirements and restrictions include, but are not limited to, examination and retention of documentation confirming the identity and immigration status of each employee of the Contractor. Contractor also verifies that it has not committed a violation of any such law within the five (5) years immediately preceding the date of execution of this Contract, and shall not violate any such law at any time during the term of the Contract. Contractor shall avoid any violation of any such law during the term of this Contract by participating in an electronic verification of work authorization program operated by the United States Department of Homeland Security, by participating in an equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, or by some other legally acceptable method. Contractor shall maintain records of each such verification, and shall make them available to the DISTRICT or its representatives for inspection and copy at any time during normal business hours. The DISTRICT shall not be responsible for any costs or expenses related to Contractor's compliance with the requirements provided for or referred to herein.

Employment Eligibility; Subcontractors, Sub-subcontractors and Consultants. To the same extent and under the same conditions as Contractor, Contractor shall require all of its subcontractors, sub-subcontractors and consultants performing any part of the Work or of this

Contract to make the same verifications and comply with all requirements and restrictions provided for herein.

Employment Eligibility; Failure to Comply. Each person executing this Contract on behalf of Contractor verifies that he or she is a duly authorized officer of Contractor, and understands that any of the following shall be grounds for the DISTRICT to terminate the Contract for cause: (1) failure of Contractor or its subcontractors, sub-subcontractors or consultants to meet any of the requirements provided for herein; (2) any misrepresentation or material omission concerning compliance with such requirements; or (3) failure to immediately remove from the Work any person found not to be in compliance with such requirements.

#### **ARTICLE 36. DEBARMENT OF CONTRACTORS AND SUBCONTRACTORS**

Contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Labor Code section 1777.1 or 1777.7. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid, or may have been paid to a debarred subcontractor by a contractor on the project shall be returned to the DISTRICT. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the project.

#### **ARTICLE 37. LABOR/EMPLOYMENT SAFETY**

The Contractor shall comply with all applicable laws and regulations of the federal, state, and local government, including Cal/OSHA requirements and requirements for verification of employees' legal right to work in the United States.

The Contractor shall maintain emergency first aid treatment for his employees which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 *et seq.*), and California Code of Regulations, Title 8, Industrial Relations Division 1, Department of Industrial Relations, Chapter 4. The Contractor shall ensure the availability of emergency medical services for its employees in accordance with California Code of Regulations, Title 8, Section 1512.

The Contractor shall submit the Illness and Injury Prevention Program and a Project site specific safety program to the DISTRICT prior to beginning Work at the Project site. Contractor shall maintain a confined space program that meets or exceeds the DISTRICT Standards. Contractor shall adhere to the DISTRICT's lock out tag out program.

#### **ARTICLE 38. INSURANCE**

The Contractor shall obtain, and at all times during performance of the Contract, maintain, and for five (5) years thereafter, insurance described in this Article against claims for injuries or death to persons or damages to property, which may arise from or in connection with the performance of the Work hereunder by the Contractor, his agents, representatives, employees, or subcontractors. Contractor shall not commence Work under this Contract until it has provided evidence satisfactory to the DISTRICT that it has secured all insurance required hereunder. Contractor shall not allow any subcontractor to commence work on any subcontract

until it has provided evidence satisfactory to the DISTRICT that the subcontractor has secured all insurance required under this Article. Failure to provide and maintain all required insurance shall be grounds for the DISTRICT to terminate this Contract for cause. Contractor shall furnish DISTRICT with original certificates of insurance and endorsements effective coverage required by this Contract on forms satisfactory to the DISTRICT. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms acceptable to the DISTRICT. All certificates and endorsements must be received and approved by the DISTRICT before Work commences.

- A. **Additional Insureds; Waiver of Subrogation.** The DISTRICT, its officials, officers, employees, agents and authorized volunteers shall be named as Additional Insureds on Contractor's All Risk policy and on Contractor's and its subcontractors' policies of Commercial General Liability and Automobile Liability insurance using, for Contractor's policy/ies of Commercial General Liability insurance, ISO CG form 20 10 11 85 or if not available, through the addition of **both** CG 20 10 10 01 and 20 37 10 01 (or endorsements providing the exact same coverage, including completed operations), and, for subcontractors' policies of Commercial General Liability insurance, ISO CG form 20 38 (or endorsements providing the exact same coverage). Notwithstanding the minimum limits set forth in this Contract for any type of insurance coverage, all available insurance proceeds in excess of the specified minimum limits of coverage shall be available to the parties required to be named as Additional Insureds hereunder. Contractor and its insurance carriers shall provide a Waiver of Subrogation in favor of those parties.
- B. **Workers' Compensation Insurance.** The Contractor shall provide workers' compensation insurance for all of the employees engaged in Work under this Contract, on or at the Site, and, in case of any sublet Work, the Contractor shall require the subcontractor similarly to provide workers' compensation insurance for all the latter's employees as prescribed by the state of California, with Statutory Limits. Any class of employee or employees not covered by a subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in work under this Contract, on or at the Site, is not protected under the Workers' Compensation Statutes, the Contractor shall provide or shall cause a subcontractor to provide, adequate insurance coverage for the protection of such employees not otherwise protected. The Contractor is required to secure payment of compensation to his employees in accordance with the provisions of section 3700 of the Labor Code. The Contractor shall file with the DISTRICT certificates of his insurance protecting workers. Company or companies providing insurance coverage shall be acceptable to the DISTRICT, if in the form and coverage as set forth in the Contract Documents.
- C. **Employer's Liability Insurance.** Contractor shall provide Employer's Liability Insurance, including Occupational Disease, in the amount of at least one million dollars (\$1,000,000.00) per person per accident. Contractor shall provide DISTRICT with a certificate of Employer's Liability Insurance. Such insurance shall comply with the provisions of the Contract Documents. The Contractor hereby agrees to waive rights of subrogation to obtain endorsement necessary to affect this waiver of subrogation in favor of the DISTRICT, its directors, officers, employees, and authorized volunteers, for losses paid under the terms of this coverage which arise from Work performed by the Named Insured for the DISTRICT; this provision applies

regardless of whether or not the DISTRICT has received a waiver of subrogation from the insurer.

**D. Commercial General Liability Insurance.** Contractor shall provide “occurrence” form Commercial General Liability insurance coverage at least as broad as the most current ISO CGL Form 00 01, including but not limited to, premises liability, contractual liability, products/completed operations, personal and advertising injury which may arise from or out of Contractor’s operations, use, and management of the Site, or the performance of its obligations hereunder. The policy shall not contain any exclusion contrary to this Contract including but not limited to endorsements or provisions limiting coverage for (1) contractual liability (including but not limited to ISO CG 24 26 or 21 39); or (2) cross-liability for claims or suits against one insured against another. Policy limits shall not be less than \$5,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. Defense costs shall be paid in addition to the limits.

1. Such policy shall comply with all the requirements of this Article. The limits set forth herein shall apply separately to each insured against whom claims are made or suits are brought, except with respect to the limits of liability. Further the limits set forth herein shall not be construed to relieve the Contractor from liability in excess of such coverage, nor shall it limit Contractor’s indemnification obligations to the DISTRICT, and shall not preclude the DISTRICT from taking such other actions available to the DISTRICT under other provisions of the Contract Documents or law.
2. All general liability policies provided pursuant to the provisions of this Article shall comply with the provisions of the Contract Documents.
3. All general liability policies shall be written to apply to all bodily injury, including death, property damage, personal injury, owned and non-owned equipment, blanket contractual liability, completed operations liability, explosion, collapse, under-ground excavation, removal of lateral support, and other covered loss, however occasioned, occurring during the policy term, and shall specifically insure the performance by Contractor of that part of the indemnification contained in these General Conditions relating to liability for injury to or death of persons and damage to property.
4. If the coverage contains one or more aggregate limits, a minimum of 50% of any such aggregate limit must remain available at all times; if over 50% of any aggregate limit has been paid or reserved, the DISTRICT may require additional coverage to be purchased by Contractor to restore the required limits. Contractor may combine primary, umbrella, and as broad as possible excess liability coverage to achieve the total limits indicated above. Any umbrella or excess liability policy shall include the additional insured endorsement described in the Contract Documents.

5. All policies of general liability insurance shall permit and Contractor does hereby waive any right of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss.

**E. Automobile Liability Insurance.** Contractor shall provide “occurrence” form Automobile Liability Insurance at least as broad as ISO CA 00 01 (Any Auto) in the amount of, at least, one million dollars (\$1,000,000) per accident for bodily injury and property damage. Such insurance shall provide coverage with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by Contractor or for which Contractor is responsible, in a form and with insurance companies acceptable to the DISTRICT. All policies of automobile insurance shall permit and Contractor does hereby waive any right of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss.

**F. Builder’s Risk [“All Risk”]**

1. It is the Contractor’s responsibility to maintain or cause to be maintained Builder’s Risk [“All Risk”] or an installation floater (for materials and equipment) extended coverage insurance on all work, material, equipment, appliances, tools, and structures that are or will become part of the Work and subject to loss or damage by fire, vandalism and malicious mischief, and collapse, in an amount to cover 100% of the replacement cost. The DISTRICT accepts no responsibility for the Work until the Work is formally accepted by the DISTRICT. The Contractor shall provide a certificate evidencing this coverage before commencing performance of the Work.
2. The Policy shall be endorsed with DISTRICT, its directors, officers, employees, and authorized volunteers named as loss payee, as their interest may appear.
3. Policy shall be provided for replacement value on an “all risk” basis. There shall be no coinsurance penalty provision in any such policy. Policy must include: (1) coverage for any ensuing loss from faulty workmanship, nonconforming work, omission or deficiency in design or specifications; (2) coverage against machinery accidents and operational testing; (3) coverage for removal of debris, and insuring the buildings, structures, machinery, equipment, materials, facilities, fixtures and all other properties constituting a part of the Project; (4) transit coverage, including ocean marine coverage (unless insured by the supplier), with sub-limits sufficient to insure the full replacement value of any key equipment item; and (5) coverage with sub-limits sufficient to insure the full replacement value of any property or equipment stored either on or off the Site. Such insurance shall be on a form acceptable to DISTRICT to ensure adequacy and sublimit.
4. In addition, the policy shall meet the following requirements:
  - a. Insurance policies shall be so conditioned as to cover the performance of any extra work performed under the Contract.
  - b. Coverage shall include all materials stored on site and in transit.

- c. Coverage shall include Contractor's tools and equipment.
  - d. Insurance shall include boiler, machinery and material hoist coverage.
- G. Contractor shall require all tiers of sub-contractors working under this Contract to provide the insurance required under this Article unless otherwise agreed to in writing by DISTRICT. Contractor shall make certain that any and all subcontractors hired by Contractor are insured in accordance with this Contract. If any subcontractor's coverage does not comply with the foregoing provisions, Contractor shall indemnify and hold the DISTRICT harmless from any damage, loss, cost, or expense, including attorneys' fees, incurred by the DISTRICT as a result thereof.

**ARTICLE 39. FORM AND PROOF OF CARRIAGE OF INSURANCE**

- A. Any insurance carrier providing insurance coverage required by the Contract Documents shall be admitted to and authorized to do business in the State of California unless waived, in writing, by the DISTRICT's Risk Manager. Carrier(s) shall have an A.M. Best rating of not less than an A:VII. Insurance deductibles or self-insured retentions must be declared by the Contractor. At the election of the DISTRICT the Contractor shall either 1) reduce or eliminate such deductibles or self-insured retentions, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses. If umbrella or excess liability coverage is used to meet any required limit(s) specified herein, the Contractor shall provide a "follow form" endorsement satisfactory to the DISTRICT indicating that such coverage is subject to the same terms and conditions as the underlying liability policy.
- B. Each insurance policy required by this Contract shall be endorsed to state that: (1) coverage shall not be suspended, voided, reduced or cancelled except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the DISTRICT; and (2) any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to the DISTRICT, its officials, officers, agents, employees, and volunteers.
- C. The Certificates(s) and policies of insurance shall contain or shall be endorsed to contain the covenant of the insurance carrier(s) that it shall provide no less than thirty (30) days written notice be given to the DISTRICT prior to any material modification or cancellation of such insurance. In the event of a material modification or cancellation of coverage, the DISTRICT may terminate the Contract or stop the Work in accordance with the Contract Documents, unless the DISTRICT receives, at least ten (10) days prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. Contractor shall not take possession, or use the Site, or commence operations under this Contract until the DISTRICT has been furnished original Certificate(s) of Insurance and certified original copies of endorsements or policies of insurance including all endorsements and any and all other attachments as required in this Article. The original endorsements for each policy and the Certificate of Insurance

shall be signed by an individual authorized by the insurance carrier to do so on its behalf.

- D. For any claims related to this Project, the Contractor's insurance coverage shall be primary at least as broad as ISO CG 20 01 04 13 as respects to the DISTRICT, its directors, officers, employees, and authorized volunteers. Any insurance or self-insurance maintained by the DISTRICT, its directors, officers, employees, and authorized volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
- E. DISTRICT reserves the right to adjust the monetary limits of insurance coverages during the term of this Contract including any extension thereof if, in the DISTRICT's reasonable judgment, the amount or type of insurance carried by the Contractor becomes inadequate.
- F. Contractor shall report to the DISTRICT, in addition to the Contractor's insurer, any and all insurance claims submitted by the Contractor in connection with the Work under this Contract.

#### **ARTICLE 40. TIME FOR COMPLETION AND LIQUIDATED DAMAGES**

- A. **Time for Completion/Liquidated Damages.** Time is of the essence in the completion of the Work. Work shall be commenced within ten (10) Days of the date stated in the DISTRICT's Notice to Proceed and shall be completed by Contractor in the time specified in the Contract Documents. The DISTRICT is under no obligation to consider early completion of the Project; and the Contract completion date shall not be amended by the DISTRICT's receipt or acceptance of the Contractor's proposed earlier completion date. Furthermore, Contractor shall not, under any circumstances, receive additional compensation from the DISTRICT (including but not limited to indirect, general, administrative or other forms of overhead costs) for the period between the time of earlier completion proposed by the Contractor and the Contract completion date. If the Work is not completed as stated in the Contract Documents, it is understood that the DISTRICT will suffer damage. In accordance with Government Code section 53069.85, being impractical and infeasible to determine the amount of actual damage, it is agreed that Contractor shall pay to the DISTRICT as fixed and liquidated damages, and not as a penalty, the sum stipulated in the Contract for each calendar day of delay until the Work is fully completed. Contractor and its surety shall be liable for any liquidated damages. Any money due or to become due the Contractor may be retained to cover liquidated damages.
- B. **Inclement Weather.** Contractor shall abide by the Engineer's determination of what constitutes inclement weather. Time extensions for inclement weather shall only be granted when the Work stopped during inclement weather is on the critical path of the Project schedule.
- C. **Extension of Time.** Contractor shall not be charged liquidated damages because of any delays in completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of Contractor (or its subcontractors or suppliers). Contractor shall within five (5) Days of identifying any such delay notify the DISTRICT in writing of causes of delay. The DISTRICT shall ascertain the facts



and extent of delay and grant extension of time for completing the Work when, in its judgment, the facts justify such an extension. Time extensions to the Project shall be requested by the Contractor as they occur and without delay. No delay claims shall be permitted unless the event or occurrence delays the completion of the Project beyond the Contract completion date.

- D. **No Damages for Reasonable Delay.** The DISTRICT's liability to Contractor for delays for which the DISTRICT is responsible shall be limited to only an extension of time unless such delays were unreasonable under the circumstances. In no case shall the DISTRICT be liable for any costs which are borne by the Contractor in the regular course of business, including, but not limited to, home office overhead and other ongoing costs. Damages caused by unreasonable DISTRICT delay, including delays caused by items that are the responsibility of the DISTRICT pursuant to Government Code section 4215, shall be based on actual costs only, no proportions or formulas shall be used to calculate any delay damages.

#### **ARTICLE 41. COST BREAKDOWN AND PERIODIC ESTIMATES**

Contractor shall furnish on forms Approved by the DISTRICT:

- A. Within ten (10) Days of Notice to Proceed with the Contract, a detailed estimate giving a complete breakdown of the Contract price, if the Contract amount is a lump sum.
- B. A monthly itemized estimate of Work done for the purpose of making progress payments. In order for the DISTRICT to consider and evaluate each progress payment application, the Contractor shall submit a detailed measurement of Work performed and a progress estimate of the value thereof before the tenth (10th) Day of the following month.
- C. Contractor shall submit, with each of its payment requests, an adjusted list of actual quantities, verified by the Engineer, for unit price items listed, if any, in the Bid Form.
- D. Following the DISTRICT's Acceptance of the Work, the Contractor shall submit to the DISTRICT a written statement of the final quantities of unit price items for inclusion in the final payment request.
- E. The DISTRICT shall have the right to adjust any estimate of quantity and to subsequently correct any error made in any estimate for payment.

Contractor shall certify under penalty of perjury, that all cost breakdowns and periodic estimates accurately reflect the Work on the Project.

#### **ARTICLE 42. PROGRESS ESTIMATES AND PAYMENT**

- A. By the tenth (10th) Day of the following calendar month, Contractor shall submit to Engineer a payment request which shall set forth in detail the value of the Work done for the period beginning with the date work was first commenced and ending on the end of the calendar month for which the payment request is prepared. Contractor shall include any amount earned for authorized extra work. From the total thus

computed, a deduction shall be made in the amount of five percent (5%) for retention, except where the DISTRICT has adopted a finding that the Work done under the Contract is substantially complex, and then the amount withheld as retention shall be the percentage specified in the Notice Inviting Bids. From the remainder a further deduction may be made in accordance with Section B below. The amount computed, less the amount withheld for retention and any amounts withheld as set forth below, shall be the amount of the Contractor's payment request.

- B. The DISTRICT may withhold a sufficient amount or amounts of any payment or payments otherwise due to Contractor, as in his judgment may be necessary to cover:
1. Payments which may be past due and payable for just claims against Contractor or any subcontractors for labor or materials furnished in and about the performance of work on the Project under this Contract.
  2. Defective work not remedied.
  3. Failure of Contractor to make proper payments to his subcontractor or for material or labor.
  4. Completion of the Contract if there is a reasonable doubt that the Work can be completed for balance then unpaid.
  5. Damage to another contractor or a third party.
  6. Amounts which may be due the DISTRICT for claims against Contractor.
  7. Failure of Contractor to keep the record ("as-built") drawings up to date.
  8. Failure to provide update on construction schedule as required herein.
  9. Site cleanup.
  10. Failure to comply with Contract Documents.
  11. Liquidated damages.
  12. Legally permitted penalties.
- C. The DISTRICT may apply such withheld amount or amounts to payment of such claims or obligations at its discretion with the exception of subsections (B)(1), (3), and (5) of this Article, which must be retained or applied in accordance with applicable law. In so doing, the DISTRICT shall be deemed the agent of Contractor and any payment so made by the DISTRICT shall be considered as a payment made under contract by the DISTRICT to Contractor and the DISTRICT shall not be liable to Contractor for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligations. The DISTRICT will render Contractor a proper accounting of such funds disbursed on behalf of Contractor.

- D. Upon receipt, the Engineer shall review the payment request to determine whether it is undisputed and suitable for payment. If the payment request is determined to be unsuitable for payment, it shall be returned to Contractor as soon as practicable but not later than seven (7) Days after receipt, accompanied by a document setting forth in writing the reasons why the payment request is not proper. The DISTRICT shall make the progress payment within 30 calendar days after the receipt of an undisputed and properly submitted payment request from Contractor, provided that a release of liens and claims has been received from the Contractor pursuant to Civil Code section 8132. The number of days available to the DISTRICT to make a payment without incurring interest pursuant to this paragraph shall be reduced by the number of days by which the Engineer exceeds the seven (7) Day requirement.
- E. A payment request shall be considered properly executed if funds are available for payment of the payment request and payment is not delayed due to an audit inquiry by the financial officer of the DISTRICT.

#### **ARTICLE 43. SECURITIES FOR MONEY WITHHELD**

Pursuant to section 22300 of the Public Contract Code of the State of California, Contractor may request the DISTRICT to make retention payments directly to an escrow agent or may substitute securities for any money withheld by the DISTRICT to ensure performance under the contract. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with the DISTRICT or with a state or federally chartered bank as the escrow agent who shall return such securities to Contractor upon satisfactory completion of the contract. Deposit of securities with an escrow agent shall be subject to a written agreement substantially in the form provided in section 22300 of the Public Contract Code.

#### **ARTICLE 44. CHANGES AND EXTRA WORK.**

##### **A. Contract Change Orders.**

1. The DISTRICT, without invalidating the Contract, may order changes in the Work consisting of additions, deletions or other revisions, and the Contract Price and Contract Time shall be adjusted accordingly. Except as otherwise provided herein, all such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents. A Change Order signed by the Contractor indicates the Contractor's agreement therewith, including any adjustment in the Contract Price or the Contract Time, and the full and final settlement of all costs (direct, indirect and overhead) related to the Work authorized by the Change Order.
2. Contractor shall promptly execute changes in the Work as directed in writing by the DISTRICT even when the parties have not reached agreement on whether the change increases the scope of Work or affects the Contract Price or Contract Time. All claims for additional compensation to the Contractor shall be presented in writing. No claim will be considered after the Work in question has been done unless a written Change Order has been issued or a timely written notice of claim has been made by Contractor.

3. Whenever any change is made as provided for herein, such change shall be considered and treated as though originally included in the Contract, and shall be subject to all terms, conditions, and provisions of the original Contract.
4. Contractor shall not be entitled to claim or bring suit for damages, whether for loss of profits or otherwise, on account of any decrease or omission of any item or portion of Work to be done.
5. No dispute, disagreement, or failure of the parties to reach agreement on the terms of the Change Order shall relieve the Contractor from the obligation to proceed with performance of the work, including Additional Work, promptly and expeditiously.
6. Contractor shall make available to the DISTRICT any of the Contractor's documents related to the Project immediately upon request of the DISTRICT, as set forth in Article 52.
7. Any alterations, extensions of time, Additional Work, or any other changes may be made without securing consent of the Contractor's surety or sureties.

**B. Contract Price Change.**

1. Process for Determining Adjustments in Contract Price.
  - a. Owner Initiated Change. The Contractor must submit a complete cost proposal, including any change in the Contract Price or Contract Time, within seven (7) Days after receipt of a scope of a proposed change order initiated by the DISTRICT, unless the DISTRICT requests that proposals be submitted in less than seven (7) Days.
  - b. Contractor Initiated Change. The Contractor must give written notice of a proposed change order required for compliance with the Contract Documents within seven (7) Days of discovery of the facts giving rise to the proposed change order.
  - c. Whenever possible, any changes to the Contract amount shall be in a lump sum mutually agreed to by the Contractor and the DISTRICT.
  - d. Price quotations from the Contractor shall be accompanied by sufficiently detailed supporting documentation to permit verification by the DISTRICT, including but not limited to estimates and quotations from subcontractors or material suppliers, as the DISTRICT may reasonably request. Contractor shall certify the accuracy of all Change Order Requests under penalty of perjury.
  - e. If the Contractor fails to submit a complete cost proposal within the seven (7) Day period (or as requested), the DISTRICT has the right to order the Contractor in writing to commence the Work immediately on a time and materials basis and/or issue a lump sum change to the Contract Price and/or Contract Time in accordance with the DISTRICT's estimate. If the change is

issued based on the DISTRICT's estimate, the Contractor will waive its right to dispute the action unless within fifteen (15) Days following completion of the added/deleted work, the Contractor presents written proof that the DISTRICT's estimate was in error.

2. Unit Price Change Orders.

- a. When the actual quantity of a Unit Price item varies from the Bid Form, compensation for the change in quantity will be calculated by multiplying the actual quantity by the Unit Price. This calculation may result in either an additive or deductive Final Change Order pursuant to the Contract Documents.
- b. No Mark up for Overhead and Profit. Because the Contract Unit Prices provided in the Bid Form include Overhead and Profit as determined by Contractor at the time of Bid submission, no mark up or deduction for Overhead and Profit will be included in Unit Price Change Orders.
- c. Bid items included on the Bid Form may be deducted from the Work in their entirety without any negotiated extra costs.
- d. Contractor acknowledges that unit quantities are estimates and agrees that the estimated unit quantities listed on the Bid Form will be adjusted to reflect the actual unit quantities which may result in an adjustment to the Contract Unit Prices. Such an adjustment will be made by execution of a final additive or deductive Change Order following Contractor's completion of the Work. Upon notification, Contractor's failure to respond within seven (7) Days will result in DISTRICT's issuance of a unit quantity adjustment to the Contract Unit Prices and/or Contract Time in accordance with the Contract Documents.
- e. The DISTRICT or Contractor may make a Claim for an adjustment in the Unit Price in accordance with the Contract Documents if:
  - i. the quantity of any item of Unit Price Work performed by Contractor differs by twenty-five percent (25%) or more from the estimated quantity of such item indicated in the Contract; and
  - ii. there is no corresponding adjustment with respect to any other item of Work; and
  - iii. Contractor believes that Contractor is entitled to an increase in Unit Price as a result of having incurred additional expense or the DISTRICT believes that the DISTRICT is entitled to a decrease in Unit Price and the parties are unable to agree as to the amount of any such increase or decrease..

3. Lump Sum Change Orders. Contractor shall incorporate the provisions of this Section into all agreements with Subcontractors. Compensation for Lump Sum

Change Orders shall be limited to expenditures necessitated specifically by the Additional Work, and shall be according to the following:

- a. Overview. The Contractor will submit a properly itemized Lump Sum Change Order Proposal covering the Additional Work and/or the work to be deleted. This proposal will be itemized for the various components of the Additional Work and segregated by labor, material, and equipment in a detailed format satisfactory to the DISTRICT. The DISTRICT will require itemized change orders on all change order proposals from the Contractor, subcontractors, and sub-subcontractors regardless of tier. Details to be submitted will include detailed line item estimates showing detailed materials quantity take-offs, material prices by item and related labor hour pricing information and extensions (by line item or by drawing as applicable).
- b. Labor. The costs of labor will be the actual cost for wages prevailing locally for each craft or type of worker at the time the Additional Work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State or local laws, as well as assessment or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the Additional Work cost will not be permitted unless the Contractor establishes the necessity for such new classifications. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

Estimated labor hours must only include hours for those workmen and working foremen directly involved in performing the change order work. Supervision above the level of working foremen (such as general foremen, superintendent, project manager, etc.) is considered to be included in the markup percentages as outlined below. Note that no separate allowances for warranty expense will be allowed as a direct cost of a change order. Costs attributed to warranty expenses will be considered to be covered by the markup.

- c. Labor Burden. Labor burden allowable in change orders shall be defined as employer's net actual cost of payroll taxes (FICA, Medicare, SUTA, FUTA), net actual cost for employer's cost of union benefits (or other usual and customary fringe benefits if the employees are not union employees), and net actual cost to employer for worker's compensation insurance taking into consideration adjustments for experience modifiers, premium discounts, dividends, rebates, expense constants, assigned risk pool costs, net cost reductions due to policies with deductibles for self-insured losses, assigned risk rebates, etc. Contractor shall reduce their standard payroll tax percentages to properly reflect the effective cost reduction due to the estimated impact of the annual maximum wages subject to payroll taxes. An estimated percentage for labor burden may be used for pricing change orders. However, the percentage used for labor burden to price change orders will be examined at the conclusion of the Project and an adjustment to the approved change orders will be processed if it is determined that the

actual labor burden percentage should have been more or less than the estimated percentage used.

- d. Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available in the quantities involved, plus sales tax, freight, and delivery. Materials costs shall be based upon supplier or manufacturer's invoice. If invoices or other satisfactory evidence of cost are not furnished within fifteen (15) Days of delivery, then the DISTRICT shall determine the materials cost, at its sole discretion. Estimated material change order costs shall reflect the Contractor's reasonably anticipated net actual cost for the purchase of the material needed for the change order work. Estimated material costs shall reflect cost reductions available to the Contractor due to "non-cash" discounts, trade discounts, free material credits, and/or volume rebates. "Cash" discounts (i.e., prompt payment discounts of 2% or less) available on material purchased for change order work shall be credited to the DISTRICT if the Contractor is provided the DISTRICT funds in time for Contractor to take advantage of any such "cash" discounts. The portion of any "cash" discounts greater than 2% will not be considered "non-cash" discount for purposes of this provision. Price quotations from material suppliers must be itemized with unit prices for each specific item to be purchased. "Lot pricing" quotations will not be considered sufficient substantiating detail.
- e. Tool and Equipment Use. Costs for the use of small tools, which are tools that have a replacement value of \$1,000 or less, shall be considered included in the Overhead and Profit mark-ups established below. Allowable change order estimated costs may include appropriate amounts for rental of major equipment specifically needed to perform the change order work (defined as tools and equipment with an individual purchase cost of more than \$750). For Contractor owned equipment, the "bare" equipment rental rates allowed to be used for pricing change order proposals shall be 75% of the monthly rate listed in the most current publication of The AED Green Book divided by 176 to arrive at a maximum hourly rate to be applied to the hours the equipment is used performing the change order work. Further, for Contractor owned equipment, the aggregate equipment rent charges for any single piece of equipment used in all change order work shall be limited to 50% of the fair market value of the piece of equipment when the first change order is priced involving usage of the piece of equipment. Fuel necessary to operate the equipment will be considered as a separate direct cost associated with the change order work.
- f. Maximum Markup Percentage Allowable on Self-Performed Work. With respect to pricing change orders, the maximum markup percentage to be paid to any Contractor or subcontractor (regardless of tier) on self-performed work shall be a single markup percentage not-to-exceed fifteen percent (15%) of the net direct cost of (1) direct labor and allowable labor burden costs applicable to the change in the Work; (2) the net cost of material and installed equipment incorporated into the change in the Work, and (3) net rental cost of major equipment and related fuel costs necessary to complete the change in the Work. The markup computed using the above formula shall

be considered to be allocated 2/3 to cover applicable overhead costs directly attributable to the field overhead costs related to processing, supervising and performing, the change order work, and the remaining 1/3 to cover home office overhead costs and profit

- g. Maximum Markup Percentages Allowable on Work Performed by Lower Tier Subcontractors. With respect to pricing the portion of change order proposals involving Work performed by lower tier contractors, the maximum markup percentage allowable to the Contractor or subcontractor supervising the lower tier subcontractor's work shall not exceed five percent (5%) of the net of all approved change order work performed by all subcontractors combined for any particular change order proposal. The markup computed using the above formula shall be considered to be allocated 2/3 to cover applicable overhead costs directly attributable to the field overhead costs related to processing, supervising and performing the change order work, and the remaining 1/3 to cover home office overhead costs and profit.
- h. No Markup on Bonds and Liability Insurance Costs. Change order cost adjustments due to increases or decreases in bond or insurance costs (if applicable) shall not be subject to any markup.
- i. Direct and Indirect Costs Covered by Markup Percentages. As a further clarification, the agreed upon markup percentage set forth above is intended to cover the Contractor's profit and all indirect costs associated with the change order work. Items intended to be covered by the markup percentage include, but are not limited to: home office expenses, branch office and field office overhead expense of any kind, project management, superintendents, general foremen, estimating, engineering, coordinating, expediting, purchasing, detailing, legal, accounting, data processing or other administrative expenses, shop drawings, permits, auto insurance and umbrella insurance, pick-up truck costs, and warranty expense costs. The cost for the use of small tools is also to be considered covered by the markup percentage established above. Small tools shall be defined as tools and equipment (power or non-power) with an individual purchase cost of less than \$750.
- j. Deduct Change Orders and Net Deduct Changes. The application of the markup percentages referenced above will apply to both additive and deductive change orders. In the case of a deductive change order, the credit will be computed by applying the sliding scale percentages as outlined above so that a deductive change order would be computed in the same manner as an additive change order. In those instances where a change involves both additive and deductive work, the additions and deductions will be netted and the markup percentage adjustments will be applied to the net amount.
- k. Contingency. In no event will any lump sum or percentage amounts for "contingency" be allowed to be added as a separate line item in change order estimates. Unknowns attributable to labor hours will be accounted for when estimating labor hours anticipated performing the work. Unknowns



attributable to material scrap and waste will be estimated as part of material costs.

- I. Insurance and Bonds. In the event the Contractor has been required to furnish insurance and/or bonds as part of the base contract price, a final contract change order will be processed to account for the Contractor's net increase or decrease in insurance costs and/or bond premium costs associated with change orders to Contractor's base Contract Price

4. Time and Materials Change Orders.

- a. General. The term Time and Materials means the sum of all costs reasonably and necessarily incurred and paid by Contractor for labor, materials, and equipment in the proper performance of Additional Work. Except as otherwise may be agreed to in writing by the DISTRICT, such costs shall be in amounts no higher than those prevailing in the locality of the Project, and shall include only the following items.

- b. Timely and Final Documentation.

- i. T&M Daily Sheets. Contractor must submit timesheets, materials invoices, records of equipment hours, and records of rental equipment hours to the DISTRICT's Representative for an approval signature **each day** Additional Work is performed. Failure to get the DISTRICT's Representative's approval signature each Day shall result in a waiver of Contractor's right to claim these costs. The DISTRICT's Representative's signature on time sheets only serves as verification that the Work was performed and is not indicative of DISTRICT's agreement to Contractor's entitlement to the cost.
- ii. T&M Daily Summary Sheets. All documentation of incurred costs ("T&M Daily Summary Sheets") shall be submitted by Contractor within **three (3) Days** of incurring the cost for labor, material, equipment, and special services as Additional Work is performed. Contractor's actual costs shall be presented in a summary table in an electronic spreadsheet file by labor, material, equipment, and special services. Each T&M Daily Summary Sheet shall include Contractor's actual costs incurred for the Additional Work performed that day and a cumulative total of Contractor's actual costs incurred for the Additional Work. Contractor's failure to provide a T&M Daily Summary Sheet showing a total cost summary within three (3) Days but within five (5) Days of performance of the Work will result in the Contractor's otherwise allowable overhead and profit being reduced by 50% for that portion of Additional Work which was not documented in a timely manner. Contractor's failure to submit the T&M Daily Summary Sheet within five (5) Days of performance of the Work will result in a total waiver of Contractor's right to claim these costs.
- iii. T&M Total Cost Summary Sheet. Contractor shall submit a T&M Total Cost Summary Sheet, which shall include total actual costs, within **seven (7) Days** following completion of DISTRICT approved Additional Work.

Contractor's total actual cost shall be presented in a summary table in an electronic spreadsheet file by labor, material, equipment, and special services. Contractor's failure to submit the T&M Total Cost Summary Sheet within seven (7) Days of completion of the Additional Work will result in Contractor's waiver for any reimbursement of any costs associated with the T&M Summary Sheets or the performance of the Additional Work.

- c. Labor. The Contractor will be paid the cost of labor for the workers used in the actual and direct performance of the Work. The cost of labor will be the sum of the actual wages paid (which shall include any employer payments to or on behalf of the workers for health and welfare, pension, vacation, and similar purposes) substantiated by timesheets and certified payroll for wages prevailing for each craft or type of workers performing the Additional Work at the time the Additional Work is done, and the labor surcharge set forth in the Department of Transportation publication entitled *Labor Surcharge and Equipment Rental Rates*, which is in effect on the date upon which the Work is accomplished and which is a part of the Contract. The labor surcharge shall constitute full compensation for all payments imposed by Federal, State, or local laws and for all other payments made to, or on behalf of, the workers, other than actual wages.
  - i. Equipment Operator Exception. Labor costs for equipment operators and helpers shall be paid only when such costs are not included in the invoice for equipment rental.
  - ii. Foreman Exception. The labor costs for foremen shall be proportioned to all of their assigned work and only that applicable to the Additional Work shall be paid. Indirect labor costs, including, without limitation, the superintendent, project manager, and other labor identified in the Contract Documents will be considered Overhead.
- d. Materials. The cost of materials reported shall be itemized at invoice or lowest current price at which materials are locally available and delivered to the Project site in the quantities involved, plus the cost of sales tax, freight, delivery, and storage.
  - i. Trade discounts available to the purchaser shall be credited to the DISTRICT notwithstanding the fact that such discounts may not have been taken by Contractor.
  - ii. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the DISTRICT's Representative.
  - iii. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on Additional Work items or the current wholesale price for such materials delivered to the Project site, whichever price is lower.

- iv. If, in the opinion of the DISTRICT's Representative, the cost of materials is excessive, or Contractor does not furnish satisfactory evidence of the cost of such materials, then the cost shall be deemed to be the lowest current wholesale price for the total quantity concerned delivered to the Project site less trade discounts.
  - v. The DISTRICT reserves the right to furnish materials for the Additional Work and no Claim shall be allowed by Contractor for costs of such materials or Indirect Costs or profit on DISTRICT furnished materials.
- e. Equipment.
- i. Rental Time. The rental time to be paid for equipment on the Project site shall be the time the equipment is in productive operation on the Additional Work being performed and, in addition, shall include the time required to move the equipment to the location of the Additional Work and return it to the original location or to another location requiring no more time than that required to return it to its original location; except that moving time will not be paid if the equipment is used on other than the Additional Work, even though located at the site of the Additional Work.
    - (a) Rental Time Not Allowed. Rental time will not be allowed while equipment is inoperative due to breakdowns.
    - (b) Computation Method. The following shall be used in computing the rental time of equipment on the Project site.
      - (i) When hourly rates are paid, any part of an hour less than 30 minutes of operation shall be considered to be 1/2-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation.
      - (ii) When daily rates are paid, any part of a day less than 4 hours operation shall be considered to be 1/2-day of operation, and any part of an hour in excess of 4 hours will be considered one day of operation.
  - ii. Rental Rates. Contractor will be paid for the use of equipment at the lesser of (i) the actual rental rate, or (ii) the rental rate listed for that equipment in the California Department of Transportation publication entitled *Labor Surcharge and Equipment Rental Rates*, which is in effect on the date upon which the Contract was executed. Such rental rates will be used to compute payments for equipment whether the equipment is under Contractor's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment shall be the rate (i.e., daily, monthly) resulting in the least total cost to the DISTRICT for the total period of use. If it is deemed necessary by Contractor to use equipment not listed in the publication, an equitable rental rate for the equipment will be established by the DISTRICT's Representative. Contractor may furnish cost data

which might assist the DISTRICT's Representative in the establishment of the rental rate.

iii. Contractor-Owned Equipment.

(a) For Contractor-owned equipment, the allowed equipment rental rate will be limited to the monthly equipment rental rate using a utilization rate of 173 hours per month.

(b) For Contractor-owned equipment, the rental time to be paid for equipment on the Site shall be the time the equipment is in productive operation, unless, in the instance of standby time, the equipment could be actively used by Contractor on another project, then DISTRICT shall pay for the entirety of the time the equipment is on Site. It shall be Contractor's burden to demonstrate to the DISTRICT that the equipment could be actively used on another project.

iv. All equipment shall, in the opinion of the DISTRICT's Representative, be in good working condition and suitable for the purpose for which the equipment is to be used.

v. Before construction equipment is used on the Additional Work, Contractor shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the DISTRICT's Representative, in duplicate, a description of the equipment and its identifying number and the scheduled Additional Work activities planned.

vi. Unless otherwise specified, manufacturer's rating and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

f. Special Services. Special work or services are defined as that Additional Work characterized by extraordinary complexity, sophistication, or innovation or a combination of the foregoing attributes which are unique to the construction industry.

i. Invoices for Special Services. When the DISTRICT's Representative and Contractor determine that a special service is required which cannot be performed by the forces of Contractor or those of any of its Subcontractors, the special service may be performed by an entity especially skilled in the Additional Work. Invoices for special services based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs, after validation of market values by the DISTRICT's Representative.

ii. Discount and Allowance. All invoices for special services will be adjusted by deducting all trade discounts offered or available, whether the

discounts were taken or not. In lieu of Overhead and Profit specified herein, a total allowance not to exceed fifteen percent (15%) for Overhead and Profit will be added to invoices for Special Services.

- iii. When the DISTRICT determines, in its sole discretion, that competitive bidding is necessary for certain special services, Contractor shall solicit competitive bids for those special services.
- g. Excluded Costs. The term Time and Material shall not include any of the following costs or any other home or field office overhead costs, all of which are to be considered administrative costs covered by Contractor's allowance for Overhead and Profit.
  - i. Overhead Cost. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, timekeepers, clerks, and other personnel employed by Contractor whether at the Site or in Contractor's principal office or any branch office, material yard, or shop for general administration of the Additional Work;
  - ii. Office Expenses. Expenses of Contractor's principal and branch offices;
  - iii. Capital Expenses. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Additional Work and charges against Contractor for delinquent payments;
  - iv. Negligence. Costs due to the negligence of Contractor or any Subcontractor or Supplier, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including without limitation the correction of Defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property;
  - v. Other. Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in the Contract Documents;
  - vi. Small Tools. Cost of small tools valued at less than \$1,000 and that remain the property of Contractor;
  - vii. Administrative Costs. Costs associated with the preparation of Change Orders (whether or not ultimately authorized), cost estimates, or the preparation or filing of Claims;
  - viii. Anticipated Lost Profits. Expenses of Contractor associated with anticipated lost profits or lost revenues, lost income or earnings, lost interest on earnings, or unpaid retention;

- ix. Home Office Overhead. Costs derived from the computation of a “home office overhead” rate by application of the *Eichleay, Allegheny*, burden fluctuation, or other similar methods;
  - x. Special Consultants and Attorneys. Costs of special consultants or attorneys, whether or not in the direct employ of Contractor, employed for services specifically related to the resolution of a Claim, dispute, or other matter arising out of or relating to the performance of the Additional Work.
- h. Overhead, Profit and Other Charges. The mark-up for overhead (including supervision) and profit on work added to the Contract shall be according to the following:
- i. “Net Cost” is defined as consisting of costs of labor, materials, and tools and equipment only excluding overhead and profit. The costs of applicable insurance and bond premium will be reimbursed to the Contractor and subcontractors at cost only, without mark-up. Contractor shall provide DISTRICT with documentation of the costs, including, but not limited to, payroll records, invoices, and such other information as DISTRICT may reasonably request.
  - ii. For Work performed by the Contractor’s forces, the added cost for overhead and profit shall not exceed fifteen percent (15%) of the Net Cost of the Work.
  - iii. For Work performed by a subcontractor, the added cost for overhead and profit shall not exceed fifteen percent (15%) of the subcontractor’s Net Cost of the Work to which the Contractor may add five percent (5%) of the subcontractor’s Net Cost.
  - iv. For Work performed by a sub-subcontractor, the added cost for overhead and profit shall not exceed fifteen percent (15%) of the sub-subcontractor’s Net Cost for Work to which the subcontractor and general contractor may each add an additional five percent (5%) of the Net Cost of the lower tier subcontractor.
  - v. No additional mark-up will be allowed for lower tier subcontractors, and in no case shall the added cost for overhead and profit payable by DISTRICT exceed twenty-five percent (25%) of the Net Cost as defined herein, of the party that performs the Work.
5. All of the following costs are included in the markups for overhead and profit described above, and Contractor shall not receive any additional compensation for: Submittals, drawings, field drawings, Shop Drawings, including submissions of drawings; field inspection; General Superintendence; General administration and preparation of cost proposals, schedule analysis, Change Orders, and other supporting documentation; computer services; reproduction services; Salaries of project engineer, superintendent, timekeeper, storekeeper, and secretaries; Janitorial services; Small tools, incidentals and consumables; Temporary On-Site facilities (Offices, Telephones, High Speed Internet Access, Plumbing, Electrical

Power, Lighting; Platforms, Fencing, Water), Jobsite and Home office overhead or other expenses; vehicles and fuel used for work otherwise included in the Contract Documents; Surveying; Estimating; Protection of Work; Handling and disposal fees; Final Cleanup; Other Incidental Work; Related Warranties; insurance and bond premiums.

6. For added or deducted Work by subcontractors, the Contractor shall furnish to the DISTRICT the subcontractor's signed detailed record of the cost of labor, material and equipment, including the subcontractor markup for overhead and profit. The same requirement shall apply to sub-subcontractors
7. For added or deducted work furnished by a vendor or supplier, the Contractor shall furnish to the DISTRICT a detailed record of the cost to the Contractor, signed by such vendor or supplier.
8. Any change in the Work involving both additions and deletions shall indicate a net total cost, including subcontracts and materials. Allowance for overhead and profit, as specified herein, shall be applied if the net total cost is an increase in the Contract Price; overhead and profit allowances shall not be applied if the net total cost is a deduction to the Contract Price. The estimated cost of deductions shall be based on labor and material prices on the date the Contract was executed.
9. Contractor shall not reserve a right to assert impact costs, extended job site costs, extended overhead, constructive acceleration and/or actual acceleration beyond what is stated in the Change Order for Work. No claims shall be allowed for impact, extended overhead costs, constructive acceleration and/or actual acceleration due to a multiplicity of changes and/or clarifications. The Contractor may not change or modify the DISTRICT's change order form in an attempt to reserve additional rights.
10. If the DISTRICT disagrees with the proposal submitted by Contractor, it will notify the Contractor and the DISTRICT will provide its opinion of the appropriate price and/or time extension. If the Contractor agrees with the DISTRICT, a Change Order will be issued by the DISTRICT. If no agreement can be reached, the DISTRICT shall have the right to issue a unilateral Change Order setting forth its determination of the reasonable additions or savings in costs and time attributable to the extra or deleted work. Such determination shall become final and binding if the Contractor fails to submit a claim in writing to the DISTRICT within fifteen (15) Days of the issuance of the unilateral Change Order, disputing the terms of the unilateral Change Order, and providing such supporting documentation for its position as the DISTRICT may require.

### **C. Change of Contract Times.**

1. The Contract Times may only be changed by a Change Order.
2. All changes in the Contract Price and/or adjustments to the Contract Times related to each change shall be included in Contractor's COR pursuant to this Article. No cost or time will be allowed for cumulative effects of multiple changes.

All Change Orders must state that the Contract Time is not changed or is either increased or decreased by a specific number of days. Failure to include a change to time shall waive any change to the time unless the parties mutually agree in writing to postpone a determination of the change to time resulting from the Change Order.

3. Notice of the amount of the request for adjustment in the Contract Times with supporting data shall be delivered within seven (7) Days after such start of occurrence, unless DISTRICT's Representative allows an additional period of time to ascertain more accurate data in support of the request. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed.
4. DISTRICT may elect, at DISTRICT's sole discretion, to grant an extension in Contract Times, without Contractor's request, because of delays or other factors.
5. Use of Float and Critical Path.
  - a. Float is for the benefit of the Project. Float shall not be considered for the exclusive use or benefit of either the DISTRICT or the Contractor.
  - b. Contractor shall not be entitled to compensation, and DISTRICT will not compensate Contractor, for delays which impact early completion. Any difference in time between the Contractor's early completion and the Contract Time shall be considered a part of the Project float.
6. Contractor's entitlement to an extension of the Contract Times is limited to a DISTRICT-caused extension of the critical path, reduced by the Contractor's concurrent delays, and established by a proper time impact analysis. No time extension shall be allowed unless, and then only to the extent that, the DISTRICT-caused delay extends the critical path beyond the previously approved Contract Time. If approved, the increase in time required to complete the Work shall be added to the Contract Time.
  - a. Contractor shall not be entitled to an adjustment in the Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.
  - b. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions (as determined by the DISTRICT), Acts of God, acts or failures to act of utility owners not under the control of DISTRICT, or other causes not the fault of and beyond control of DISTRICT and Contractor, then Contractor shall be entitled to an time extension when the Work stopped is on the critical path. Such a non-compensable adjustment shall be Contractor's sole and exclusive remedy for such delays. Contractor must submit a timely request in accordance with the requirements of this Article.
  - c. Utility-Related Delays.



- i. Contractor shall immediately notify in writing the utility owner and DISTRICT's Representative of its construction schedule and any subsequent changes in the construction schedule which will affect the time available for protection, removal, or relocation of utilities. Requests for extensions of time arising out of utility relocation or repair delays shall be filed in accordance with this Article.
    - ii. Contractor shall not be entitled to damages or additional payment for delays attributable to utility relocations or alterations if correctly located, as noted in the Contract Documents or by the Underground Service Alert survey.
7. Content for Requests for Contract Extension. Contractor's justification for entitlement shall be clear and complete citing specific Contract Document references and reasons on which Contractor's entitlement is based. At a minimum, each request for a time extension must include:
- a. Each request for an extension of Contract Time must identify the impacting event, in narrative form, providing a description of the delay event and sufficient justification as to why the Contractor is entitled to a time extension. Contractor must demonstrate that the delay arises from unforeseeable causes beyond the control and without the fault or negligence of both Contractor and any Subcontractors or Suppliers, or any other persons or organizations employed by any of them or for whose acts any of them may be liable, and that such causes in fact lead to performance or completion of the Work, or specified part in question, beyond the corresponding Contract Times, despite Contractor's reasonable and diligent actions to guard against those effects.
  - b. Each request for an extension of Contract Time must include a time impact analysis in CPM format, using the Contemporaneous Impacted As-Planned Schedule Analysis to calculate the impact of the delay event.
8. No Damages for Reasonable Delay.
- a. DISTRICT's liability to Contractor for delays for which DISTRICT is responsible shall be limited to only an extension of time unless such delays were unreasonable under the circumstances. In no case shall DISTRICT be liable for any costs which are borne by the Contractor in the regular course of business, including, but not limited to, home office overhead and other ongoing costs.
  - b. Damages caused by unreasonable DISTRICT delay that impact the critical path, including delays caused by items that are the responsibility of the DISTRICT pursuant to Government Code section 4215, shall be compensated at the Daily Rate established in the Special Conditions. No other calculations, proportions or formulas shall be used to calculate any delay damages.

- c. DISTRICT and DISTRICT's Representative, and the officers, members, partners, employees, agents, consultants, or subcontractors of each of them, shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
9. Contractor's failure, neglect, or refusal to comply with the requirements of the Contract Documents, or any portion thereof, shall bar Contractor's request for extensions of the Contract Times. Such failure, neglect, or refusal prejudices DISTRICT's and DISTRICT's Representative's ability to recognize and mitigate delay, and such failure, neglect, or refusal prevent the timely analysis of requests for extensions of Contract Times, and whether such extensions may be warranted. Contractor hereby waives all rights to extensions of Contract Times due to delays or accelerations that result from or occur during periods of time for which Contractor fails, neglects, or refuses to fully comply with the requirements of this Article.

#### **ARTICLE 45. FINAL ACCEPTANCE AND PAYMENT**

- A. The acceptance of the Work on behalf of the DISTRICT will be made by the Engineer. Such acceptance by the DISTRICT shall not constitute a waiver of defects. When the Work has been accepted there shall be paid to Contractor a sum equal to the contract price less any amounts previously paid Contractor and less any amounts withheld by the DISTRICT from Contractor under the terms of the contract. The final five percent (5%), or the percentage specified in the notice inviting bids where the DISTRICT has adopted a finding of substantially complete, shall not become due and payable until five (5) calendar days shall have elapsed after the expiration of the period within which all claims may be filed under the provisions of Civil Code section 9356. If the Contractor has placed securities with the DISTRICT as described herein, the Contractor shall be paid a sum equal to one hundred percent (100%) of the contract price less any amounts due the DISTRICT under the terms of the Contract.
- B. Unless Contractor advises the DISTRICT in writing prior to acceptance of the final five percent (5%) or the percentage specified in the notice inviting bids where the DISTRICT has adopted a finding of substantially complete, or the return of securities held as described herein, said acceptance shall operate as a release to the DISTRICT of all claims and all liability to Contractor for all things done or furnished in connection with this work and for every act of negligence of the DISTRICT and for all other claims relating to or arising out of this work. If Contractor advises the DISTRICT in writing prior to acceptance of final payment or return of the securities that there is a dispute regarding the amount due the Contractor, the DISTRICT may pay the undisputed amount contingent upon the Contractor furnishing a release of all undisputed claims against the DISTRICT with the disputed claims in stated amounts being specifically excluded by Contractor from the operation of the release. No payments, however, final or otherwise, shall operate to release Contractor or its sureties from the Faithful Performance Bond, Labor and Material Payment Bond, or from any other obligation under this contract.

- C. In case of suspension of the contract any unpaid balance shall be and become the sole and absolute property of the DISTRICT to the extent necessary to repay the DISTRICT any excess in the cost of the Work above the contract price.
- D. Final payment shall be made no later than 60 days after the date of acceptance of the Work by the DISTRICT or the date of occupation, beneficial use and enjoyment of the Work by the DISTRICT including any operation only for testing, start-up or commissioning accompanied by cessation of labor on the Work, provided that a release of liens and claims has been received from the Contractor pursuant to Civil Code section 8136. In the event of a dispute between the DISTRICT and the Contractor, the DISTRICT may withhold from the final payment an amount not to exceed 150% of the disputed amount.
- E. Within ten (10) calendar days from the time that all or any portion of the retention proceeds are received by Contractor, Contractor shall pay each of its subcontractors from whom retention has been withheld each subcontractor's share of the retention received. However, if a retention payment received by Contractor is specifically designated for a particular subcontractor, payment of the retention shall be made to the designated subcontractor if the payment is consistent with the terms of the subcontract.

#### **ARTICLE 46. OCCUPANCY**

The DISTRICT reserves the right to occupy or utilize any portion of the Work at any time before completion, and such occupancy or use shall not constitute acceptance of any part of Work covered by this Contract. This use shall not relieve the Contractor of its responsibilities under the Contract.

#### **ARTICLE 47. INDEMNIFICATION**

To the fullest extent permitted by law, Contractor shall immediately defend (with counsel of the DISTRICT's choosing), indemnify and hold harmless the DISTRICT, officials, officers, agents, employees, and representatives, and each of them from and against:

- A. Any and all claims, demands, causes of action, costs, expenses, injuries, losses or liabilities, in law or in equity, of every kind or nature whatsoever, but not limited to, injury to or death, including wrongful death, of any person, and damages to or destruction of property of any person, arising out of, related to, or in any manner directly or indirectly connected with the Work or this Contract, including claims made by subcontractors for nonpayment, including without limitation the payment of all consequential damages and attorney's fees and other related costs and expenses, however caused, regardless of whether the allegations are false, fraudulent, or groundless, and regardless of any negligence of the DISTRICT or its officers, employees, or authorized volunteers (including passive negligence), except the sole negligence or willful misconduct or active negligence of the DISTRICT or its officials, officers, employees, or authorized volunteers.
- B. Contractor's defense and indemnity obligation herein includes, but is not limited to damages, fines, penalties, attorney's fees and costs arising from claims under the Americans with Disabilities Act (ADA) or other federal or state disability access or

discrimination laws arising from Contractor's Work during the course of construction of the improvements or after the Work is complete, as the result of defects or negligence in Contractor's construction of the improvements.

- C. Any and all actions, proceedings, damages, costs, expenses, fines, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of Contractor;
- D. Any and all losses, expenses, damages (including damages to the Work itself), attorney's fees, and other costs, including all costs of defense which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the Work and all of Contractor's obligations under the agreement. Such costs, expenses, and damages shall include all costs, including attorney's fees, incurred by the indemnified parties in any lawsuit to which they are a party.

Contractor shall immediately defend, at Contractor's own cost, expense and risk, with the DISTRICT Council's choosing, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against the DISTRICT, its officials, officers, agents, employees and representatives. Contractor shall pay and satisfy any judgment, award or decree that may be rendered against the DISTRICT, its officials, officers, employees, agents, employees and representatives, in any such suit, action or other legal proceeding. Contractor shall reimburse the DISTRICT, its officials, officers, agents, employees and representatives for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. The only limitations on this provision shall be those imposed by Civil Code section 2782.

#### **ARTICLE 48. PROCEDURE FOR RESOLVING DISPUTES**

Contractor shall timely comply with all notices and requests for changes to the Contract Time or Contract Price, including but not limited to all requirements of Article 44, Changes and Extra Work, as a prerequisite to filing any claim governed by this Article. The failure to timely submit a notice of delay or notice of change, or to timely request a change to the Contract Price or Contract Time, or to timely provide any other notice or request required herein shall constitute a waiver of the right to further pursue the claim under the Contract or at law.

- A. **Intent.** Effective January 1, 1991, Section 20104 et seq., of the California Public Contract Code prescribes a process utilizing informal conferences, non-binding judicial supervised mediation, and judicial arbitration to resolve disputes on construction claims of \$375,000 or less. Effective January 1, 2017, Section 9204 of the Public Contract Code prescribes a process for negotiation and mediation to resolve disputes on construction claims. The intent of this Article is to implement Sections 20104 et seq. and Section 9204 of the California Public Contract Code. This Article shall be construed to be consistent with said statutes.
- B. **Claims.** For purposes of this Article, "Claim" means a separate demand by the Contractor, after a change order duly requested in accordance with Article 44 "Changes and Extra Work" has been denied by the DISTRICT, for (A) a time extension, (B) payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the Contract, or (C) an amount the payment of

which is disputed by the DISTRICT. Claims governed by this Article may not be filed unless and until the Contractor completes all procedures for giving notice of delay or change and for the requesting of a time extension or change order, including but not necessarily limited to the procedures contained in Article 44, Changes and Extra Work, and Contractor's request for a change has been denied in whole or in part. Claims governed by this Article must be filed no later than the date of final payment. The claim shall be submitted in writing to the DISTRICT and shall include on its first page the following in 16 point capital font: "THIS IS A CLAIM." Furthermore, the claim shall include the documents necessary to substantiate the claim. Nothing herein is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims, including all requirements pertaining to compensation or payment for extra Work, disputed Work, and/or changed conditions. Failure to follow such contractual requirements shall bar any claims or subsequent lawsuits for compensation or payment thereon.

**C. Supporting Documentation.** The Contractor shall submit all claims in the following format:

1. Summary of claim merit and price, reference Contract Document provisions pursuant to which the claim is made
2. List of documents relating to claim:
  - a. Specifications
  - b. Drawings
  - c. Clarifications (Requests for Information)
  - d. Schedules
  - e. Other
3. Chronology of events and correspondence
4. Analysis of claim merit
5. Analysis of claim cost
6. Time impact analysis in CPM format

**D. DISTRICT's Response.** Upon receipt of a claim pursuant to this Article, DISTRICT shall conduct a reasonable review of the claim and, within a period not to exceed 45 Days, shall provide the Contractor a written statement identifying what portion of the claim is disputed and what portion is undisputed. Any payment due on an undisputed portion of the claim will be processed and made within 60 Days after the DISTRICT issues its written statement.

1. If the DISTRICT needs approval from its governing body to provide the Contractor a written statement identifying the disputed portion and the

undisputed portion of the claim, and the DISTRICT's governing body does not meet within the 45 Days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the DISTRICT shall have up to three Days following the next duly publicly noticed meeting of the DISTRICT's governing body after the 45-Day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.

2. Within 30 Days of receipt of a claim, the DISTRICT may request in writing additional documentation supporting the claim or relating to defenses or claims the DISTRICT may have against the Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of DISTRICT and the Contractor. The DISTRICT's written response to the claim, as further documented, shall be submitted to the Contractor within 30 Days (if the claim is less than \$15,000, within 15 Days) after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation, whichever is greater.

**E. Meet and Confer.** If the Contractor disputes the DISTRICT's written response, or the DISTRICT fails to respond within the time prescribed, the Contractor may so notify the DISTRICT, in writing, either within 15 Days of receipt of the DISTRICT's response or within 15 Days of the DISTRICT's failure to respond within the time prescribed, respectively, and demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand, the DISTRICT shall schedule a meet and confer conference within 30 Days for settlement of the dispute.

**F. Mediation.** Within 10 business Days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 Days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the Contractor sharing the associated costs equally. The public entity and Contractor shall mutually agree to a mediator within 10 business Days after the disputed portion of the claim has been identified in writing, unless the parties agree to select a mediator at a later time.

1. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.
2. For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution

through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

3. Unless otherwise agreed to by the public entity and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
4. The mediation shall be held no earlier than the date the Contractor completes the Work or the date that the Contractor last performs Work, whichever is earlier. All unresolved claims shall be considered jointly in a single mediation, unless a new unrelated claim arises after mediation is completed.

**G. Procedures After Mediation.** If following the mediation, the claim or any portion remains in dispute, the Contractor must file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code prior to initiating litigation. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the Contractor submits his or her written claim pursuant to subdivision (a) until the time the claim is denied, including any period of time utilized by the meet and confer conference.

**H. Civil Actions.** The following procedures are established for all civil actions filed to resolve claims of \$375,000 or less:

1. Within 60 Days, but no earlier than 30 Days, following the filing or responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties or unless mediation was held prior to commencement of the action in accordance with Public Contract Code section 9204 and the terms of this Agreement. The mediation process shall provide for the selection within 15 Days by both parties of a disinterested third person as mediator, shall be commenced within 30 Days of the submittal, and shall be concluded within 15 Days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.
2. If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1114.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration. In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, (A) arbitrators shall, when possible, be experienced in construction law, and (B) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party.

**I. Government Code Claims.** In addition to any and all contract requirements pertaining to notices of and requests for compensation or payment for extra Work, disputed Work, construction claims and/or changed conditions, the Contractor must

comply with the claim procedures set forth in Government Code Sections 900, et seq. prior to filing any lawsuit against the DISTRICT. Such Government Code claims and any subsequent lawsuit based upon the Government Code claims shall be limited to those matters that remain unresolved after all procedures pertaining to extra Work, disputed Work, construction claims, and/or changed conditions have been followed by Contractor. If no such Government Code claim is submitted, or if the prerequisite contractual requirements are not satisfied, no action against the DISTRICT may be filed. **A Government Code claim must be filed no earlier than the date the Work is completed or the date the Contractor last performs Work on the Project, whichever occurs first. A Government Code claim shall be inclusive of all unresolved claims unless a new unrelated claim arises after the Government Code claim is submitted.**

- J. **Non-Waiver.** The DISTRICT's failure to respond to a claim from the Contractor within the time periods described in this Article or to otherwise meet the time requirements of this Article shall result in the claim being deemed rejected in its entirety.

#### **ARTICLE 49. DISTRICT'S RIGHT TO TERMINATE CONTRACT**

##### **A. Termination for Cause by the DISTRICT:**

1. In the sole estimation of the DISTRICT, if the Contractor refuses or fails to prosecute the Work or any separable part thereof with such diligence as will insure its completion within the time specified by the Contract Documents, or any extension thereof, or fails to complete such Work within such time, or if the Contractor should be adjudged a bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or the Contractor or any of its subcontractors should violate any of the provisions of this Contract, the DISTRICT may serve written notice upon the Contractor and its Surety of the DISTRICT's intention to terminate this Contract. This notice of intent to terminate shall contain the reasons for such intention to terminate this Contract, and a statement to the effect that the Contractor's right to perform this Contract shall cease and terminate upon the expiration of ten (10) calendar days unless such violations have ceased and arrangements satisfactory to the DISTRICT have been made for correction of said violations.
2. In the event that the DISTRICT serves such written notice of termination upon the Contractor and the Surety, the Surety shall have the right to take over and perform the Contract. If the Surety does not: (1) give the DISTRICT written notice of Surety's intention to take over and commence performance of the Contract within 15 calendar days of the DISTRICT's service of said notice of intent to terminate upon Surety; and (2) actually commence performance of the Contract within 30 calendar days of the DISTRICT's service of said notice upon Surety; then the DISTRICT may take over the Work and prosecute the same to completion by separate contract or by any other method it may deem advisable for the account and at the expense of the Contractor.



3. In the event that the DISTRICT elects to obtain an alternative performance of the Contract as specified above: (1) the DISTRICT may, without liability for so doing, take possession of and utilize in completion of the Work such materials, appliances, plants and other property belonging to the Contractor that are on the site and reasonably necessary for such completion (A special lien to secure the claims of the DISTRICT in the event of such suspension is hereby created against any property of Contractor taken into the possession of the DISTRICT under the terms hereof and such lien may be enforced by sale of such property under the direction of the Board without notice to Contractor. The proceeds of the sale after deducting all expenses thereof and connected therewith shall be credited to Contractor. If the net credits shall be in excess of the claims of the DISTRICT against Contractor, the balance will be paid to Contractor or Contractor's legal representatives.); and (2) Surety shall be liable to the DISTRICT for any cost or other damage to the DISTRICT necessitated by the DISTRICT securing an alternate performance pursuant to this Article.

**B. Termination for Convenience by the DISTRICT:**

1. The DISTRICT may terminate performance of the Work called for by the Contract Documents in whole or, from time to time, in part, if the DISTRICT determines that a termination is in the DISTRICT's interest.
2. The Contractor shall terminate all or any part of the Work upon delivery to the Contractor of a Notice of Termination specifying that the termination is for the convenience of the DISTRICT, the extent of termination, and the Effective Date of such termination.
3. After receipt of Notice of Termination, and except as directed by the DISTRICT's Representative, the Contractor shall, regardless of any delay in determining or adjusting any amounts due under this Termination for Convenience clause, immediately proceed with the following obligations:
  - a. Stop Work as specified in the Notice.
  - b. Complete any Work specified in the Notice of Termination in a least cost/shortest time manner while still maintaining the quality called for under the Contract Documents.
  - c. Leave the property upon which the Contractor was working and upon which the facility (or facilities) forming the basis of the Contract Document is situated in a safe and sanitary manner such that it does not pose any threat to the public health or safety.
  - d. Terminate all subcontracts to the extent that they relate to the portions of the Work terminated.
  - e. Place no further subcontracts or orders, except as necessary to complete the continued portion of the Contract.

- f. Submit to the DISTRICT's Representative, within ten (10) calendar days from the Effective Date of the Notice of Termination, all of the usual documentation called for by the Contract Documents to substantiate all costs incurred by the Contractor for labor, materials and equipment through the Effective Date of the Notice of Termination. Any documentation substantiating costs incurred by the Contractor solely as a result of the DISTRICT's exercise of its right to terminate this Contract pursuant to this clause, which costs the contractor is authorized under the Contract documents to incur, shall: (1) be submitted to and received by the Engineer no later than 30 calendar days after the Effective Date of the Notice of Termination; (2) describe the costs incurred with particularity; and (3) be conspicuously identified as "Termination Costs occasioned by the DISTRICT's Termination for Convenience."
4. Termination of the Contract shall not relieve Surety of its obligation for any just claims arising out of or relating to the Work performed.
5. In the event that the DISTRICT exercises its right to terminate this Contract pursuant to this clause, the DISTRICT shall pay the Contractor, upon the Contractor's submission of the documentation required by this clause and other applicable provisions of the Contract Documents, the following amounts:
  - a. All actual reimbursable costs incurred according to the provisions of this Contract.
  - b. A reasonable allowance for profit on the cost of the Work performed, provided Contractor establishes to the satisfaction of the DISTRICT's Representative that it is reasonably probable that Contractor would have made a profit had the Contract been completed and provided further, that the profit allowed shall in no event exceed fifteen (15%) percent of the costs.
  - c. A reasonable allowance for Contractor's administrative costs in determining the amount payable due to termination of the Contract under this Article.
- C. Notwithstanding any other provision of this Article, when immediate action is necessary to protect life and safety or to reduce significant exposure or liability, the DISTRICT may immediately order Contractor to cease Work on the Project until such safety or liability issues are addressed to the satisfaction of the DISTRICT or the Contract is terminated.

## **ARTICLE 50. WARRANTY AND GUARANTEE OF WORK**

- A. Contractor hereby warrants that materials and Work shall be completed in conformance with the Contract Documents and that the materials and Work provided will fulfill the requirements of this Warranty. Contractor hereby agrees to repair or replace, at the discretion of the DISTRICT, any or all Work that may prove to be defective in its workmanship, materials furnished, methods of installation or fail to conform to the Contract Document requirements together with any other Work which may be damaged or displaced by such defect(s) within a period of one (1) year from the date of the Notice of Completion of the Project without any expense whatever to the DISTRICT, ordinary wear and tear and unusual abuse and neglect excepted. The

DISTRICT will perform an inspection before the warrant period expires. Contractor shall be required to promptly repair or replace defective equipment or materials, at Contractor's option. All costs associated with such corrective actions and testing, including the removal, replacement, and reinstatement of equipment and materials necessary to gain access, shall be the sole responsibility of the Contractor.

- B. For any Work so corrected, Contractor's obligation hereunder to correct defective Work shall be reinstated for an additional one (1) year period, commencing with the date of acceptance of such corrected Work. The reinstatement of the one (1) year warranty shall apply only to that portion of work that was corrected. Contractor shall perform such tests as DISTRICT may require to verify that any corrective actions, including, without limitation, redesign, repairs, and replacements comply with the requirements of the Contract. In the event of Contractor's failure to comply with the above-mentioned conditions within ten (10) calendar days after being notified in writing of required repairs, to the reasonable satisfaction of the DISTRICT, the DISTRICT shall have the right to correct and replace any defective or non-conforming Work and any work damaged by such work or the replacement or correction thereof at Contractor's sole expense. Contractor shall be obligated to fully reimburse the DISTRICT for any expenses incurred hereunder immediately upon demand.
- C. In addition to the warranty set forth in this Article, Contractor shall obtain for DISTRICT all warranties that would be given in normal commercial practice and assign to DISTRICT any and all manufacturer's or installer's warranties for equipment or materials not manufactured by Contractor and provided as part of the Work, to the extent that such third-party warranties are assignable and extend beyond the warranty period set forth in this Article. Contractor shall furnish the DISTRICT with all warranty and guarantee documents prior to final Acceptance of the Project by the DISTRICT as required.
- D. When specifically indicated in the Contract Documents or when directed by the Engineer, the DISTRICT may furnish materials or products to the Contractor for installation. In the event any act or failure to act by Contractor shall cause a warranty applicable to any materials or products purchased by the DISTRICT for installation by the Contractor to be voided or reduced, Contractor shall indemnify DISTRICT from and against any cost, expense, or other liability arising therefrom, and shall be responsible to the DISTRICT for the cost of any repairs, replacement or other costs that would have been covered by the warranty but for such act or failure to act by Contractor.
- E. The Contractor shall remedy at its expense any damage to DISTRICT-owned or controlled real or personal property.
- F. The DISTRICT shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage. The Contractor shall within ten (10) calendar days after being notified commence and perform with due diligence all necessary Work. If the Contractor fails to promptly remedy any defect, or damage; the DISTRICT shall have the right to replace, repair or otherwise remedy the defect, or damage at the Contractor's expense.

G. In the event of any emergency constituting an immediate hazard to health, safety, property, or licensees, when caused by Work of the Contractor not in accordance with the Contract requirements, the DISTRICT may undertake at Contractor's expense, and without prior notice, all Work necessary to correct such condition.

H. Acceptance of Defective Work.

1. If, instead of requiring correction or removal and replacement of Defective Work, the DISTRICT prefers to accept it, DISTRICT may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to DISTRICT's evaluation of and determination to accept such Defective Work and for the diminished value of the Work.
2. If any acceptance of defective work occurs prior to release of the Project Retention, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and DISTRICT shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work and all costs incurred by DISTRICT.
3. If the Project Retention is held in an escrow account as permitted by the Contract Documents, Contractor will promptly alert the escrow holder, in writing, of the amount of Retention to be paid to DISTRICT.
4. If the acceptance of Defective Work occurs after release of the Project Retention, an appropriate amount will be paid by Contractor to DISTRICT.

I. DISTRICT May Correct Defective Work.

1. If Contractor fails within a reasonable time after written notice from DISTRICT's Representative to correct Defective Work, or to remove and replace rejected Work as required by DISTRICT, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, DISTRICT may, after seven (7) Days' written notice to Contractor, correct, or remedy any such deficiency.
2. In connection with such corrective or remedial action, DISTRICT may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which DISTRICT has paid Contractor but which are stored elsewhere. Contractor shall allow DISTRICT and DISTRICT's Representative, and the agents, employees, other contractors, and consultants of each of them, access to the Site to enable DISTRICT to exercise the rights and remedies to correct the Defective Work.
3. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court

or arbitration or other dispute resolution costs) incurred or sustained by DISTRICT correcting the Defective Work will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions into the Contract Documents with respect to the Work; and DISTRICT shall be entitled to an appropriate decrease in the Contract Price.

4. Such claims, costs, losses and damages will include, but not be limited to, all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Defective Work.
  5. If the Change Order is executed after all payments under the Contract have been paid by DISTRICT and the Project Retention is held in an escrow account as permitted by the Contract Documents, Contractor will promptly alert the escrow holder, in writing, of the amount of Retention to be paid to DISTRICT.
  6. If the Change Order is executed after release of the Project Retention, an appropriate amount will be paid by Contractor to DISTRICT.
  7. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to DISTRICT correcting Defective work.
- J. Nothing in the Warranty or in the Contract Documents shall be construed to limit the rights and remedies available to DISTRICT at law or in equity, including, but not limited to, Code of Civil Procedure section 337.15.

#### **ARTICLE 51. DOCUMENT RETENTION & EXAMINATION**

- A. In accordance with Government Code section 8546.7, records of both the DISTRICT and the Contractor shall be subject to examination and audit by the State Auditor General for a period of three (3) years after final payment.
- B. Contractor shall make available to the DISTRICT any of the Contractor's other documents related to the Project immediately upon request of the DISTRICT.
- C. In addition to the State Auditor rights above, the DISTRICT shall have the right to examine and audit all books, estimates, records, contracts, documents, bid documents, subcontracts, and other data of the Contractor (including computations and projections) related to negotiating, pricing, or performing the modification in order to evaluate the accuracy and completeness of the cost or pricing data at no additional cost to the DISTRICT, for a period of four (4) years after final payment.

#### **ARTICLE 52. SEPARATE CONTRACTS**

- A. The DISTRICT reserves the right to let other contracts in connection with this Work or on the Project site. Contractor shall permit other contractors reasonable access and storage of their materials and execution of their work and shall properly connect and coordinate its Work with theirs.

- B. To ensure proper execution of its subsequent Work, Contractor shall immediately inspect work already in place and shall at once report to the Engineer any problems with the Work in place or discrepancies with the Contract Documents.
- C. Contractor shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by the DISTRICT in prosecution of the Project to the end that Contractor may perform this Contract in the light of such other contracts, if any. Nothing herein contained shall be interpreted as granting to Contractor exclusive occupancy at site of the Project. Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the Project. If simultaneous execution of any contract for the Project is likely to cause interference with performance of some other contract or contracts, the Engineer shall decide which Contractor shall cease Work temporarily and which contractor shall continue or whether work can be coordinated so that contractors may proceed simultaneously. The DISTRICT shall not be responsible for any damages suffered or for extra costs incurred by Contractor resulting directly or indirectly from award, performance, or attempted performance of any other contract or contracts on the Project site.

#### **ARTICLE 53. NOTICE AND SERVICE THEREOF**

All notices shall be in writing and either served by personal delivery or mailed to the other party as designated in the Bid Forms. Written notice to the Contractor shall be addressed to Contractor's principal place of business unless Contractor designates another address in writing for service of notice. Notice to DISTRICT shall be addressed to the DISTRICT as designated in the Notice Inviting Bids unless DISTRICT designates another address in writing for service of notice. Notice shall be effective upon receipt or five (5) calendar days after being sent by first class mail, whichever is earlier. Notice given by facsimile shall not be effective unless acknowledged in writing by the receiving party.

#### **ARTICLE 54. NOTICE OF THIRD PARTY CLAIMS**

Pursuant to Public Contract Code section 9201, the DISTRICT shall provide the Contractor with timely notification of the receipt of any third-party claims relating to the Contract. The DISTRICT is entitled to recover reasonable costs incurred in providing such notification.

#### **ARTICLE 55. STATE LICENSE BOARD NOTICE**

Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four (4) years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within ten (10) years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

## **ARTICLE 56. INTEGRATION**

- A. **Oral Modifications Ineffective.** No oral order, objection, direction, claim or notice by any party or person shall affect or modify any of the terms or obligations contained in the Contract Documents.
- B. **Contract Documents Represent Entire Contract.** The Contract Documents represent the entire agreement of the DISTRICT and Contractor.

## **ARTICLE 57. ASSIGNMENT OF CONTRACT**

Contractor shall not assign, transfer, convey, sublet or otherwise dispose of the rights or title of interest of any or all of this contract without the prior written consent of the DISTRICT. Any assignment or change of Contractor's name of legal entity without the written consent of the DISTRICT shall be void. Any assignment of money due or to become due under this Contract shall be subject to a prior lien for services rendered or Material supplied for performance of Work called for under the Contract Documents in favor of all persons, firms, or corporations rendering such services or supplying such Materials to the extent that claims are filed pursuant to the Civil Code, the Code of Civil Procedure or the Government Code.

## **ARTICLE 58. CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY**

Should a change be contemplated in the name or nature of the Contractor's legal entity, the Contractor shall first notify the DISTRICT in order that proper steps may be taken to have the change reflected on the Contract and all related documents. No change of Contractor's name or nature will affect DISTRICT's rights under the Contract, including but not limited to the bonds.

## **ARTICLE 59. ASSIGNMENT OF ANTITRUST ACTIONS**

Pursuant to Public Contract Code section 7103.5, in entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, Contractor or subcontractor offers and agrees to assign to the DISTRICT all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 USC, Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from the purchase of goods, services, or materials pursuant to this contract or any subcontract. This assignment shall be made and become effective at the time the DISTRICT tenders final payment to the Contractor, without further acknowledgment by the parties.

## **ARTICLE 60. PROHIBITED INTERESTS**

No DISTRICT official or representative who is authorized in such capacity and on behalf of the DISTRICT to negotiate, supervise, make, accept, or approve, or to take part in negotiating, supervising, making, accepting or approving any engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the project, shall be or become directly or indirectly interested financially in the Contract.

## **ARTICLE 61. CONTROLLING LAW**

Notwithstanding any subcontract or other contract with any subcontractor, supplier, or other person or organization performing any part of the Work, this Contract shall be governed by the law of the State of California excluding any choice of law provisions.

## **ARTICLE 62. JURISDICTION; VENUE**

Contractor and any subcontractor, supplier, or other person or organization performing any part of the Work agrees that any action or suits at law or in equity arising out of or related to the bidding, award, or performance of the Work shall be maintained in the Superior Court of San Diego County, California, and expressly consent to the jurisdiction of said court, regardless of residence or domicile, and agree that said court shall be a proper venue for any such action.

## **ARTICLE 63. LAWS AND REGULATIONS**

- A. Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on conduct of work as indicated and specified. If Contractor observes that drawings and specifications are at variance therewith, it shall promptly notify the Engineer in writing and any necessary changes shall be adjusted as provided for in this Contract for changes in work. If Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Engineer, it shall bear all costs arising therefrom.
- B. Contractor shall be responsible for familiarity with the Americans with Disabilities Act ("ADA") (42 U.S.C. § 12101 et seq.). The Work will be performed in compliance with ADA regulations.

## **ARTICLE 64. PATENTS**

Contractor shall hold and save the DISTRICT, officials, officers, employees, and authorized volunteers harmless from liability of any nature or kind of claim therefrom including costs and expenses for or on account of any patented or unpatented invention, article or appliance manufactured, furnished or used by Contractor in the performance of this contract.

## **ARTICLE 65. OWNERSHIP OF CONTRACT DOCUMENTS**

All Contract Documents furnished by the DISTRICT are DISTRICT property. They are not to be used by Contractor or any subcontractor on other work nor shall Contractor claim any right to such documents. With exception of one complete set of Contract Documents, all documents shall be returned to the DISTRICT on request at completion of the Work.

## **ARTICLE 66. NOTICE OF TAXABLE POSSESSORY INTEREST**

In accordance with Revenue and Taxation Code section 107.6, the Contract Documents may create a possessory interest subject to personal property taxation for which Contractor will be responsible.



## **ARTICLE 67. SURVIVAL OF OBLIGATIONS**

All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

## 00 73 13 – SPECIAL CONDITIONS

### 1.1 Engineer of Record.

- A. For purposes of this Project, the Engineer of Record or Engineer shall be: Carlos Beltran, Dynamic Engineering

### 1.2 Location of the Project.

- A. **The Project is located along De Anza Drive, Yaqui Road and Fairway Lane.**

### 1.3 Construction Area Signs.

- A. The Contractor shall furnish, install, maintain and remove all construction area signs in conformance with the plans and Sections 12-3.06 of the State of California Department of Transportation (Caltrans) Standard Specifications, latest edition.

### 1.4 Dust Control

- A. Dust control shall be performed in accordance with Subsection 7-8.1, "Clean up and Dust Control," of the Standard Specifications, San Diego County Air Pollution Control District (APCD) Rules, the General Conditions and the following provision.

Dust resulting from the Contractor's performance of the work, either inside or outside, the right-of-way shall be controlled by the Contractor. Dust control includes the action necessary to prevent, reduce or control dust within the work area as required to complete the work. The Contractor shall carry out proper and efficient measures to prevent his operations from producing dust in amounts damaging to property or causing a nuisance or harm to persons living nearby or occupying buildings in the vicinity of the work. The Contractor shall control dust twenty-four (24) hours a day, seven (7) days a week. The methods to be used for controlling dust in the construction area and along haul roads shall be approved by the Engineer prior to starting any work.

Dust or dirt accumulations generated by the Contractor's operations shall be cleaned and removed by the Contractor from all areas as designated by the Engineer. The cost for cleaning and removal of dust or dirt shall be at the Contractor's expense and no additional compensation will be made therefore.

Water for use in dust control shall, at the option of the Contractor, be potable or non-potable. Non-potable water shall consist of reclaimed waste water or non-potable water developed from other sources.

If the Contractor uses reclaimed waste water in the work, the sources and discharge of reclaimed waste water shall meet the California Department of Health Services Water Reclamation Criteria and the Regional Water Quality Control Board requirements. The Contractor shall obtain either a waste water discharge permit or a

waiver from the Regional Water Quality Control Board. Copies of permits or waivers from the Regional Water Quality Control Board shall be delivered to the engineer before using reclaimed waste water in the work.

Water shall be applied in the amounts, at the locations, and for the purposes designated in the Special Provision and these Specifications, and as order by the Engineer.

Water for compacting embankment material, sub-base, base and surfacing material and for laying dust, shall be applied by means of pressure-type distributors or pipe lines equipped with a spray system or hoses with nozzles that will ensure a uniform application of water.

All equipment used for the application of water shall be equipped with a positive means of shut-off.

Unless otherwise permitted by the Engineer or unless all the water is applied by means of pipe lines, at least one mobile unit with a minimum capacity of 3700 L (1,000 gallons) shall be available for applying water on the project at all times.

Chemical additives or binder may be used in water for compaction or dust palliative. If such additives are used, furnishing and applying the additives shall be at the Contractor's expense.

The right is reserved by the Engineer to prohibit the use of a particular type of additive, to designate the locations where a particular type of additive may not be used, or to limit the amount of a particular type of additive to be used at certain locations, all if the Engineer has reasonable ground for believing that such use will in any way be detrimental.

The additive or binder shall be either miscible in water or be some form of material that is directly applied to the surface without mixing with water.

Additives or binders that are miscible in water shall be either a resin emulsion, an SS1 type asphaltic emulsion, materials composed essentially of lignin sulfonate or any other binder that is miscible in water in the proportions provided herein is non-corrosive, and is effective as a dust palliative.

Resin emulsion shall be composed of from fifty-seven percent (57%) to sixty-three percent (63%) of semi-liquid petroleum resin and the remainder water to which a suitable emulsifying agent has been added. The resin emulsion shall be readily miscible with water and when diluted with any hard water in the proportions of one (1) part of emulsion to ten (10) parts water shall show no signs of breakdown or separation of the petroleum resin base. Resin emulsion, which has been stored in closed containers at temperatures above freezing for a period up to three (3) months

shall show no signs of separation. Any resin emulsion which has been stored for more than three (3) months shall not be used until tested and approved.

SS1 type asphaltic emulsion shall conform to the provisions in Subsection 203-3, "Emulsified Asphalt."

Additives or binders that are miscible in water shall be mixed with additional water at the rate of from four (4) to nineteen (19) parts of water to one (1) part of binder, the exact rate to be determined by the Engineer. Mixing shall be accomplished by placing the binder and water in the spreading equipment simultaneously or by some other mixing method that will produce equivalent results.

The resulting mixture shall be applied with pressure type water distributor trucks equipped with a spray system or pressure type asphalt distributors at an approximate rate of from 0.9- to 3.6 L/m<sup>2</sup>. (0.2 to 0.8 gallon on per square yard)

Additives or binders that are directly applied to the surface without mixing with water shall be applied with equipment approved by the Engineer. The binder shall be applied at a rate of from 0.4- to 1.1L/m<sup>2</sup>. (0.10 to 0.25 gallons per square yard)

The exact rate and number of applications of binders will be determined by the Engineer.

Dust control ordered by the Engineer to be applied on Saturdays, Sundays or holidays will be included in the Contract price for dust control and no additional compensation will be allowed therefore.

No adjustment of compensation will be made for any increase or decrease in the quantity of dust control required, regardless of the reason for such increase or decrease.

The full compensation for all direct and indirect costs incurred for work performed or materials used to control dust resulting from the Contractor's performance of the work and caused by public traffic, either inside or outside the right-of-way shall be considered as included in the Contract prices paid for the various items of work involved and no additional compensation will be allowed therefore.

## 1.5 Cooperation and Collateral Work

- A. The Contractor shall be responsible for ascertaining the nature and extent of any simultaneous, collateral and essential work by others and coordinating with the work by others. The DISTRICT, other contractors and utilities shall have the right to operate within or adjacent to the work site during the performance of such work.

Should construction be under way by other forces or by other contractors within or adjacent to the limits of the work specified or should work of any other nature be

under way by other forces within or adjacent to those limits, the Contractor shall cooperate with all the other contractors or other forces to the end that any delay or hindrance to their work will be avoided. The right is reserved to perform other or additional work at or near the site (including material sources) at any time, by the use of other forces.

Each contractor shall be responsible to the other for all damage to work, to persons or property caused to the other by their operations, and for loss caused the other due to unnecessary delays or failure to finish the work within the time specified for completion.

**The Contractor shall include in its proposal all costs involved as a result of coordinating its work with others. The Contractor will not be entitled to additional compensation from the DISTRICT for damages resulting from such simultaneous, collateral and essential work. If necessary to avoid or minimize such damage or delay, the Contractor shall re-deploy its work force to other parts of the work.**

Should the Contractor be delayed by the DISTRICT, and such delay could not have been reasonably foreseen or prevented by the Contractor, the Engineer will determine the extent of the delay, the effect on the project and any extension of time. Should any agency or utility company's work result in delays to the Contractor's work schedule, the Contractor shall be entitled only to an equivalent extension of time for the completion of the contract, and shall not be entitled to damages due to downtime and idled equipment or additional payments over and above the agreed upon unit prices.

Compensation for compliance with all collateral work shall be considered as being included in the various Contract items in the proposal schedule and no additional compensation will be allowed therefore.

#### 1.6 Existing Improvement

- A. The Contractor shall make every effort to protect all existing improvements and facilities from damage during the progress of his/her/its work. No trees, planters, walks, shrubs, signs, fences or other such facilities shall be removed except as shown or called for on the plans or unless specifically authorized in writing by the Engineer. The Contractor shall be held responsible for the care and preservation of the present premises and of adjacent premises and coterminous property. Any parts of them which are injured, damaged or disturbed because of his work shall be repaired, replaced or cleaned by him at his expense.

#### 1.7 Existing Utilities

- A. The Contractor will be required to work around public utilities and other improvements that are to remain in place within the construction area. The Contractor will be held liable for any damage to existing improvements or interference with service resulting from his operations. The Contractor shall pothole

and ascertain the exact location of all underground facilities and improvements within the construction area before using equipment that may damage such facilities.

1.8 Resident Access to Their Properties During Construction

- A. The Contractor shall provide access to local residents at all times. The contractor shall notify the residents of the construction schedule and when construction activities will take place in front of their properties. The Contractor shall install steel plates over open trench (for the width of a standard residential driveway) to provide vehicular access in and out of local residences. The compensation for providing steel plates for resident vehicular access shall be included (factored) in the unit price (LF) of the 6 inch diameter PVC pipe installation. No additional cost shall be incurred.

1.9 Status of the Project Area and Rights-of-Way.

- A. DISTRICT, at its expense, will provide all rights-of-way or permits, or both, covering the crossing of private property and public and private rights-of-way necessary for the permanent Work; provided, however, Contractor shall, at its expense, obtain any bonds or insurance policies or pay any fees and enter into any agreements required by a controlling authority, e.g., Caltrans or Southern Pacific Railroad Company, before Contractor enters upon any property or right-of-way under the jurisdiction of any such controlling authority for the purpose of performing Work.
- B. DISTRICT has acquired or is negotiating to acquire any rights-of-way, or both, necessary for the permanent Work.
- C. If such permits are required, all operations of Contractor shall conform to the restrictions, regulations, and requirements set forth in said permits, copies of which will be included in the Contract Documents.
- D. Contractor may be required, as a condition for receiving final payment, to obtain, and provide DISTRICT's Representative with copies of, executed damage releases from the owners of public and private property whose property has been damaged by the Work. The damage releases will be on a form provided by DISTRICT.
- E. Contractor shall, also, as a condition for receiving final payment, obtain, and provide DISTRICT's Representative with copies of, executed damage releases from the owners of certain public and private property or areas which have been crossed by the Work or otherwise affected by the Work. The damage releases will be on a form provided by DISTRICT.

1.10 Site Data.

NOT USED.

1.11 Pre-Purchased or Pre-Negotiated Material.

NOT USED.

1.12 Designation of DISTRICT's Representative.

- A. Unless otherwise modified by DISTRICT, DISTRICT's Representative shall be its General Manager.

1.13 Project Retention

In accordance with Public Contract Code § 7201, DISTRICT will withhold 5% of each progress payment as retention on the Project.

1.14 Liquidated Damages Due to Contractor Delay.

- A. Time is of the essence. Should Contractor fail to complete all or any part of the Work within the time specified in the Contract Documents, DISTRICT will suffer damage, the amount of which is difficult, if not impossible, to ascertain and, pursuant to the authority of Government Code section 53069.85, DISTRICT shall therefore be entitled to **\$1,000.00 per Day** as liquidated damages for each Day or part thereof that actual completion extends beyond the time specified.
- B. Liquidated damages may be deducted from progress payments due Contractor, Project retention or may be collected directly from Contractor, or from Contractor's surety. These provisions for liquidated damages shall not prevent DISTRICT, in case of Contractor's default, from terminating the Contractor.

1.15 Utility Outages – Notices to Residents.

- A. Should Contractor's operations require interruption of any utility service, Contractor shall notify DISTRICT at least ten (10) Days prior to the scheduled outage. Contractor will notify all impacted residents on a form provided by DISTRICT at least seven (7) Days prior to the scheduled outage.
- B. Contractor shall be responsible for providing, at its cost, any temporary utility or facilities necessitated by the utility outage.

1.16 Schedule Constraints.

NOT USED.

1.17 Noise Restrictions

- A. Contractor shall use only such equipment on the Work and in such state of repair so that the emission of sound therefrom is within the noise tolerance level of that equipment as established by Cal/OSHA.

1.18 Safety Programs.

- A. DISTRICT has considered these Safety Programs when determining the Contract Times and no additional time or compensation will be added to the Contract due to these Programs.]

**END OF SPECIAL CONDITIONS**



## 01 00 00 – GENERAL REQUIREMENTS

### PART 1 -- GENERAL

#### 1.1 DESCRIPTION

- A. The work shall include the procurement of materials and the installation of a new 6 inch diameter water main pipeline along De Anza Drive, Yaqui Road and Fairway Lane. The work also includes the tie-ins to the existing 6 inch water lines. The work also includes the installation of new fire hydrants along De Anza Drive and Fairway Lane.

#### 1.2 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

### PART 2 -- PRODUCTS (NOT USED)

### PART 3 -- EXECUTION

#### 3.1 LAYOUT OF WORK AND QUANTITY SURVEYS

- A. General. Construction staking will be provided by the DISTRICT.
- B. Quantity surveys. The Contractor shall perform such surveys and computations as are necessary to determine quantities of Work performed or placed during each progress payment period, and shall perform all surveys necessary for the DISTRICT Representative to determine final quantities of Work in place. The DISTRICT Representative will determine final quantities based upon the survey data provided by the Contractor, and the design lines and grades. If requested by the DISTRICT Representative, the Contractor shall provide an electronic copy of data used for quantity computations.

All surveys performed for measurement of final quantities of Work and material shall be subject to approval of DISTRICT's Representative. Unless waived by DISTRICT's Representative in each specific case, quantity surveys made by the Contractor shall be made in the presence of DISTRICT's Representative.

- C. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required for quantity surveys shall be included in the Schedule of Pay Items for items of work requiring the surveys. No additional compensation shall be made to the Contractor for this Work.

#### 3.2 SCHEDULE

- A. Estimated Schedule. Within ten (10) Days after the issuance of the Notice to Proceed, Contractor shall prepare a Project schedule and shall submit this to the Engineer for Approval. The receipt or Approval of any schedules by the Engineer or the DISTRICT shall not in any way relieve the Contractor of its obligations under the

Contract Documents. The Contractor is fully responsible to determine and provide for any and all staffing and resources at levels which allow for good quality and timely completion of the Project. Contractor's failure to incorporate all elements of Work required for the performance of the Contract or any inaccuracy in the schedule shall not excuse the Contractor from performing all Work required for a completed Project within the specified Contract time period. If the required schedule is not received by the time the first payment under the Contract is due, Contractor shall not be paid until the schedule is received, reviewed and accepted by the Engineer.

- B. Schedule Contents. The schedule shall indicate the beginning and completion dates of all phases of construction; critical path for all critical, sequential time related activities; and "float time" for all "slack" or "gaps" in the non-critical activities. The schedule shall clearly identify all staffing and other resources which in the Contractor's judgment are needed to complete the Project within the time specified for completion. The overall Project Schedule duration shall be within the Contract time.
- C. Schedule Updates. Contractor shall continuously update its construction schedule. Contractor shall submit an updated and accurate construction schedule to the Engineer monthly when requested to do so by Engineer. Contractor shall also submit schedules showing a three week detailed look-ahead at bi-weekly meetings conducted with the DISTRICT. The Engineer may withhold progress payments or other amounts due under the Contract Documents if Contractor fails to submit an updated and accurate construction schedule.

### 3.3 TEMPORARY FIELD OFFICE

NOT USED

### 3.4 PROTECTION OF WORK AND PROPERTY

- A. All traffic detector loops, fences, walls, culverts, property line monuments, or other obstructions (except property line monuments within five (5) feet of the centerline of the mains) which are removed, damaged, or destroyed in the course of the Work, shall be replaced or repaired to the original condition. If Contractor provides the DISTRICT with reasonable notice of the need for such repair or replacement, it shall be performed by the DISTRICT. If the Contractor fails to provide the DISTRICT with reasonable notice, the repair or replacement shall be performed by and at the expense of the Contractor to the satisfaction of the DISTRICT, whether or not those obstructions have been shown on the Plans, unless otherwise stated herein. It is then the Contractor's responsibility to employ at its expense a Licensed Land Surveyor to restore all property line monuments located more than five (5) feet from the centerline of the mains, which are destroyed or obliterated. Property line monuments located within five (5) feet of the centerline of the mains will be replaced by the DISTRICT at no expense to the Contractor, provided the DISTRICT is notified at least 48 hours before the property line monuments are damaged.
- B. Contractor shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions.

- C. Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavements, utilities, and other adjoining property and structures, and to avoid damage thereto, and Contractor shall repair any damage thereto caused by the Work operations. Contractor shall:
1. Enclose the working area with a substantial barricade, and arrange work to cause minimum amount of inconvenience and danger to the public.
  2. Provide substantial barricades around any shrubs or trees indicated to be preserved.
  3. Deliver materials to the Project site over a route designated by the Engineer.
  4. Provide any and all dust control required and follow the Applicable air quality regulations as appropriate. If the Contractor does not comply, the DISTRICT shall have the immediate authority to provide dust control and deduct the cost from payments to the Contractor.
  5. Confine Contractor's apparatus, the storage of materials, and the operations of its workers to limits required by law, ordinances, permits, or directions of the Engineer. Contractor shall not unreasonably encumber the Project site with its materials.
  6. Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by a civil engineer or land surveyor acceptable to the DISTRICT, at no cost to the DISTRICT.
  7. Ensure that existing facilities, fences and other structures are all adequately protected and that, upon completion of all Work, all facilities that may have been damaged are restored to a condition acceptable to the DISTRICT.
  8. Preserve and protect from injury all buildings, pole lines and all direction, warning and mileage signs that have been placed within the right-of-way.
  9. At the completion of work each day, leave the Project site in a clean, safe condition.
  10. Comply with any stage construction and traffic control plans. Access to residences and businesses shall be maintained at all times, unless otherwise permitted in writing by the DISTRICT.
- D. These precautionary measures will apply continuously and not be limited to normal working hours. Full compensation for the Work involved in the preservation of life, safety and property as above specified shall be considered as included in the prices paid for the various contract items of Work, and no additional allowance will be made therefore.
- E. Should damage to persons or property occur as a result of the Work, Contractor shall be responsible for proper investigation, documentation, including video or

photography, to adequately memorialize and make a record of what transpired. The DISTRICT shall be entitled to inspect and copy any such documentation, video, or photographs.

### 3.5 SITE CONDITIONS SURVEYS

#### A. Work Included.

Contractor shall conduct thorough pre-construction and post-construction site condition surveys of the entire project area. Site Conditions surveys shall include written documentation of the conditions found, as well as photographs and video recordings of the area within at least 80 feet of any construction area and staging area. The written notes, photographs, and video shall be suitable for forensic purposes to resolve any damage claims that may arise as a result of construction.

#### B. Submittals.

1. Written documentation of site condition survey at pre-construction and post-construction.
2. Photographs as described herein of pre-construction and post-construction conditions.
3. Video recordings as described herein of pre-construction and post-construction conditions.
4. Submittals shall be made within three days of the surveys. All post-construction data shall be submitted prior to the final project inspection.

#### C. Site Condition Written Documentation.

Written documentation shall include the time, date, and conditions under which the site survey was made. The documentation shall note the condition of structures, pavement, sidewalks, utilities, fences, and etc. within the work areas.

#### D. Photographs.

1. General – Contractor shall take enough photographs during each site survey to provide a record of conditions existing prior to construction and conditions after construction. Pre-construction photographs shall be taken prior to any construction or mobilization of equipment, but not more than one week prior to actual start of work. The pre-construction photographs may be staged at different times to match the progression of the Work.
2. The photographs shall document existing damage to public and private facilities, both prior to and after construction. Conditions to be documented include, but are not limited to: sidewalk cracks, broken curbs, separated property walls, improvements within public right-of-ways, access roads used, utility covers and markings, signs, pavement striping, pavement, unique or unusual conditions, adjacent driveways, landscaping, survey markers, and any feature directed by

the Engineer. Private property that is adjacent to the public right-of-way shall be documented to the extent visible from the public right-of-way.

3. Photographs shall include items to indicate scale, as needed. In particular, scales or other items shall be laid next to close ups of structural cracks and other damaged areas being recorded. Scaling shall also be used to document elevation differences, as needed.
4. One set of color prints shall be submitted. Additional sets shall be available for reviewing in settling any construction disputes. A set of photos shall also be furnished in electronic format. The resolution shall be at least equal to 7 megapixels. All photos shall be documented as to time and date taken, photographer, project number, location, and orientation. Documentation shall include a brief description of objects photographed.

E. Video Recording.

1. Video recordings shall document the conditions of the entire area affected by construction, as well as nearby structures and facilities. The general documentation requirements for videos are the same as for photographs. Video recorders shall accurately and continuously record the time and date.
2. Video recordings shall include an audio portion made simultaneously during the videoing. The audio recording shall describe the location, time, orientation, and objects being recorded. Special commentary shall be provided for unusual conditions or damage noted.
3. Video equipment shall be capable of producing high resolution images and shall have zoom capabilities.
4. Video recordings shall provide an overall picture of the sites and shall provide detailed images of damaged areas. Video shall extend to the maximum height of structures.
5. The Engineer shall have the right to reject any audio video recordings submitted with unintelligible audio, uncontrolled pan or zoom, or of poor quality. Video recordings shall be repeated when rejected.
6. Video recordings shall be submitted with labels indicating the project, date, recorder, and other pertinent information. Recordings shall be submitted on standard DVDs in a standard format.

F. Timing.

Contractor shall provide written notice of the time scheduled for the site conditions survey and the place it is to begin. Contractor shall obtain the Engineer's concurrence prior to beginning the condition survey. The Engineer reserves the right to cancel the survey due to weather conditions or other problems. Videoing shall be done during times of good visibility and no videoing or photography shall be done during periods of visible precipitation or when standing water obscures pavement.

Contractor shall provide the Engineer with an opportunity to have a representative present when taking the photos and provide guidance during photographing.

G. Site Surveyor.

The site condition surveyor(s) shall be experienced in construction and potential damage concerns. The site condition surveyor(s) shall be familiar with the photography and video equipment being used.

H. Field Quality Control.

Prior to submitting videos and photographs, the Contractor shall spot check the photos and videos in the field to insure they accurately reflect the actual conditions and to insure they are correctly labeled.

I. Soils Compaction Testing.

1. All soils compaction testing will be done by a licensed geotechnical engineer furnished by the Contractor.

### 3.6 SUBMITTAL REQUIREMENTS FOR MANUALS AND RECORD DRAWINGS

A. General. The Contractor shall furnish all materials and perform all Work required for furnishing submittals to DISTRICT in accordance with Contract Documents.

B. Technical Manuals.

1. The Contractor shall submit technical operation and maintenance information for each item of mechanical, electrical and instrumentation equipment in an organized manner in the Technical Manual. It shall be written so that it can be used and understood by DISTRICT's operation and maintenance staff.
2. The Technical Manual shall be subdivided first by specification section number; second, by equipment item; and last, by "Category." "Categories" shall conform to the following (as applicable):

(a) Category 1 - Equipment Summary:

- (1) Summary: A summary table shall indicate the equipment name, equipment number, and process area in which the equipment is installed.

(b) Category 2 - Operational Procedures:

- (1) Procedures: Manufacturer-recommended procedures on the following shall be included in Part 2:
  - a. Installation
  - b. Adjustment

- c. Startup
- d. Location of controls, special tools, equipment required, or related instrumentation needed for operation
- e. Operation procedures
- f. Load changes
- g. Calibration
- h. Shutdown
- i. Troubleshooting
- j. Disassembly
- k. Reassembly
- l. Realignment
- m. Testing to determine performance efficiency
- n. Tabulation of proper settings for all pressure relief valves, low and high pressure switches, and other protection devices
- o. List of all electrical relay settings including alarm and contact settings

(c) Category 3 - Preventive Maintenance Procedures:

- (1) Procedures: Preventive maintenance procedures shall include all manufacturer-recommended procedures to be performed on a periodic basis, both by removing and replacing the equipment or component, and by leaving the equipment in place.
- (2) Schedules: Recommended frequency of preventive maintenance procedures shall be included. Lubrication schedules, including lubricant SAE grade, type, and temperature ranges, shall be covered.

(d) Category 4 - Parts List:

- (1) Parts List: A complete parts list shall be furnished, including a generic description and manufacturer's identification number for each part. Addresses and telephone numbers of the nearest supplier and parts warehouse shall be included.
- (2) Drawings: Cross-sectional or exploded view drawings shall accompany the parts list.

(e) Category 5 - Wiring Diagrams:

- (1) Diagrams: Part 5 shall include complete internal and connection wiring diagrams for electrical equipment items.
  - (f) Category 6 - Shop Drawings:
    - (1) Drawings: This part shall include approved shop or fabrication drawings, complete with dimensions.
  - (g) Category 7 - Safety:
    - (1) Procedures: This part describes the safety precautions to be taken when operating and maintaining the equipment or working near it.
  - (h) Category 8 - Documentation:
    - (1) All equipment warranties, affidavits, and certifications required by the Technical Specifications shall be placed in this part.
3. The Contractor shall furnish to DISTRICT six (6) identical Technical Manuals. Each set shall consist of one or more volumes, each of which shall be bound in a standard binder.
- C. Spare Parts List - The Contractor shall furnish to DISTRICT six (6) identical sets of spare parts information for all mechanical, electrical, and instrumentation equipment. The spare parts list shall include the current list price of each spare part. The spare parts list shall include those spare parts which each manufacturer recommends be maintained by DISTRICT in inventory. Each manufacturer or supplier shall indicate the name, address, and telephone number of its nearest outlet of spare parts to assist DISTRICT in ordering. The Contractor shall cross-reference all spare parts lists to the equipment numbers designated in the Contract Documents. The spare parts lists shall be bound in standard size, 3-ring binder.
- D. Record Drawings
- 1. The Contractor shall maintain one record set of Drawings at the Site. On these, it shall mark all Project conditions, locations, configurations, and any other changes or deviations which may vary from the information represented in the original Contract Documents, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Drawings. Said record drawings shall be supplemented by any detailed sketches as necessary or directed to fully indicate the Work as actually constructed. These master record drawings of the as-built conditions, including all revisions made necessary by Addenda and Change Orders shall be maintained up-to-date during the progress of the Project. Red ink shall be used for alterations and notes. Notes shall identify relevant Change Orders by number and date.
  - 2. For all Projects involving the installation of any pipeline, Contractor shall survey and record the top of the pipe at a minimum of every 100 linear feet, and at each bend, recording both the horizontal and vertical locations.



3. Record drawings shall be accessible to DISTRICT's Representative at all times during the construction period. Failure on the Contractor's part to keep record drawings current could result in withholding partial payment.
  4. Upon Completion of the Project and as a condition of final acceptance, the Contractor shall finalize and deliver a complete set of Record Drawings to DISTRICT's Representative. The information submitted by the Contractor will be assumed to be correct, and the Contractor shall be responsible for, and liable to DISTRICT, for the accuracy of such information, and for any errors or omissions which may or may not appear on the Record Drawings.
- E. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete the Manuals and Record Drawings shall be included in Contractor's bid and distributed in the Schedule of Pay. No additional compensation shall be made to the Contractor for this Work.

### 3.7 MATERIALS

#### A. Materials to be Furnished by the Contractor

1. Inspection of Materials. Materials furnished by the Contractor which will become a part of the Project shall be subject to inspection at any one or more of the following locations, as determined by DISTRICT's Representative: at the place of production or manufacture, at the shipping point, or at the site of the Work. To allow sufficient time to provide for inspection, the Contractor shall submit to DISTRICT's Representative, at the time of issuance, copies of purchase orders or other written instrument confirming procurement of the materials, including drawings and other pertinent information, covering materials on which inspection will be made.
2. No later than fourteen (14) Days prior to manufacture of material, Contractor shall inform DISTRICT's Representative, in writing, the date the material is to be manufactured.
3. Contractors Obligations. The inspection of materials at any of the locations specified above or the waiving of the inspection thereof shall not impact whether the materials and equipment conform to the Contract Documents. Contractor will not be relieved from furnishing materials meeting the requirements of the Contract Documents due to DISTRICT's inspection or lack of inspection of the equipment or materials. Acceptance of any materials will be made only after materials are installed in the Project.
4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to accommodate DISTRICT's testing efforts, including any travel required by Contractor's forces, shall be included in Contractor's bid and distributed in the Schedule of Pay Items related to the materials requiring testing. No additional compensation shall be made to the Contractor for this Work.

### 3.8 LOCAL CONDITIONS AND REQUIREMENTS

#### A. Access to Work and Haul Routes

1. General. All work on the rights-of-way necessary for access to the Site shall be performed by the Contractor.
2. Access, Damage, Restoration. The Contractor shall make his own investigation of the condition of available public or private roads and of clearances, restrictions, bridge-load limits, permit or bond requirements, and other limitations that affect or may affect transportation and ingress or egress at the Site. Claims for changes in Contract Price or Contract Times arising out of the unavailability of transportation facilities or limitations thereon shall not be considered by DISTRICT.
3. The Contractor shall maintain and repair any damage arising out of Contractor's operations to all roads used during construction of the Project, and upon completion of all Work, but prior to final acceptance, the roads shall be restored to their original condition. Prior to using any road for access to the Site, the Contractor shall conduct a photograph and/or video survey of the roadway with a copy submitted to DISTRICT's Representative.
4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this Work, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

B. Power. Contractor shall provide at its own expense all necessary power required for operations under the contract. The Contractor shall provide and maintain in good order such modern equipment and installations as shall be adequate in the opinion of the Engineer to perform in a safe and satisfactory manner the Work required by the contract.

#### C. Construction Water.

1. Construction water shall not be used for purposes other than those required to satisfactorily complete the contract.
2. All connections to the DISTRICT's water system used for the purposes of obtaining construction water shall utilize a temporary construction meter and backflow prevention device supplied by the DISTRICT. The DISTRICT-furnished backflow prevention device shall be tested immediately after installation and the construction meter and backflow prevention device shall not be placed into service until the backflow prevention device passes such tests. Backflow prevention device testing shall be performed in accordance with the most recent edition of the Manual of Cross-Connection Control as published by the University of Southern California by a person selected from Borrego Water District's "DISTRICT-Approved Certified Backflow Assembly Testers" list, and test results shall be provided to the Engineer. If the temporary construction meter and backflow prevention device are moved to alternate location(s) during

construction, the backflow prevention device shall again be tested as described above immediately after re-installation.

3. For each temporary construction meter requested by the Contractor for the performance of work under this contract, an amount equivalent to the deposit requirement for temporary construction meters listed in the current approved version of the DISTRICT's Policies and Procedures Manual shall be withheld from the final contract payment until the temporary construction meters are returned.

#### D. Operation of Existing Water Facilities

1. The Contractor shall not operate any of the existing water systems, including pumps, motors, and hydrants, but shall contact the DISTRICT two (2) working days in advance with a list and location of the water system facilities that will require operating, opening, stopping, or closure by the DISTRICT.
2. At the option of the Engineer, the Contractor may be permitted to operate valves for the purpose of making connections to existing mains. The DISTRICT will perform all notification to existing customers regarding temporary loss of service.
3. Contractor shall submit a request on DISTRICT's standard form for any shut-down of existing water facilities.

#### E. Construction at Existing Utilities

1. General. Where the Work to be performed crosses or otherwise interferes with water, sewer, gas, or oil pipelines; buried cable; or other public or private utilities, the Contractor shall perform construction in such a manner so that no damage will result to either public or private utilities. It shall be the responsibility of the Contractor to determine the actual locations of, and make accommodations to maintain, all utilities.
2. Permission, Notice and Liability. Before any utility is taken out of service, permission shall be obtained by the Contractor from the owner. The owner, any impacted resident or business owner and the DISTRICT Representative will be advised of the nature and duration of the utility outage as well as the Contractor's plan for providing temporary utilities if required by the owner. The Contractor shall be liable for all damage which may result from its failure to maintain utilities during the progress of the Work, and the Contractor shall indemnify DISTRICT as required by the Contract Documents from all claims arising out of or connected with damage to utilities encountered during construction; damages resulting from disruption of service; and injury to persons or damage to property resulting from the negligent, accidental, or intentional breaching of utilities.
3. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this Work, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

F. Traffic Control

1. General. Contractor shall abide by traffic control plans approved by the appropriate jurisdiction.
2. Protections. Roads subject to interference by the Work shall be kept open or suitable temporary passages through the Work shall be provided and maintained by the Contractor. The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient flasher lights, flag persons, danger signals, and signs, and shall take all necessary precautions for the protection of the Work and the safety of the public. No construction work along public or private roads may proceed until the Contractor has proper barricades, flasher lights, flag persons, signals, and signs in place at the construction site.
3. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this Work, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

G. Cleaning Up

1. Contractor at all times shall keep premises free from debris such as waste, rubbish, and excess materials and equipment. Contractor shall not store debris under, in, or about the premises. Contractor shall also clean all asphalt and concrete areas to the degree necessary to remove oil, grease, fuel, or other stains caused by Contractor operations or equipment. The use of water, resulting in mud on streets, will not be permitted as substitute for sweeping or other methods. Dust control may require having a water truck onsite for the duration of the project, and/or use of temporary hoses and pipelines to convey water.
2. Contractor shall fully clean up the site at the completion of the Work. If the Contractor fails to immediately clean up at the completion of the Work, the DISTRICT may do so and the cost of such clean up shall be charged back to the Contractor.

3.9 ENVIRONMENTAL QUALITY PROTECTION

A. Environmental Conditions

NOT USED.

B. Landscape and Vegetation Preservation

1. General. The Contractor shall exercise care to preserve the natural landscape and vegetation, and shall conduct operations so as to prevent unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the Work.

2. Damage and Restoration. Movement of crews and equipment within the rights-of-way and over routes provided for access to the Work shall be performed in a manner to prevent damage to property. When no longer required, construction roads shall be restored to original contours.
3. Upon completion of the Work, and following removal of construction facilities and required cleanup, land used for construction purposes and not required for the completed installation shall be scarified and regraded, as required, so that all surfaces are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.
4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this Work, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

C. Protected Species

1. General. If, in the performance of the Work, evidence of the possible occurrence of any Federally listed threatened or endangered plant or animal is discovered, the Contractor shall notify the DISTRICT Representative immediately, giving the location and nature of the findings. Written confirmation of the evidence, location and nature of the findings shall be forwarded to DISTRICT within 2 Days.
2. Procedures. The Contractor shall immediately cease all construction activities in the immediate area of the discovery to the extent necessary to protect the endangered plant or animal.

If directed by the DISTRICT Representative, Contractor will refrain from working in the immediate area, suspend the Work in its entirety, or alter its performance to ensure full compliance with all applicable permits, laws and regulations. Any DISTRICT directed changes to the Work as a result of a siting will be pursuant to the Contract Documents.

3. False Siting. Any costs or delays incurred by DISTRICT or the Contractor due to unreasonable or false notification of an endangered plant or animal will be borne by the Contractor.
4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to comply with this paragraph, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

D. Preservation of Historical and Archeological Resources

1. General. If, in the performance of the Work, Contractor should unearth cultural resources (for example, human remains, animal bones, stone tools, artifacts and/or midden deposits) through excavation, grading, watering or other means, the Contractor notify the Construction/Archeological Monitor and/or the

DISTRICT Representative immediately, giving the location and nature of the findings. Written confirmation of the evidence, location and nature of the findings shall be forwarded to the Construction/Archeological Monitor and/or DISTRICT within 2 Days.

2. Procedures. The Contractor shall immediately cease all construction activities in the immediate area of the discovery to the extent necessary to protect the cultural resource.

If directed by the DISTRICT Representative, Contractor will refrain from working in the immediate area, suspend the Work in its entirety, or re-sequence and/or alter its performance to ensure full compliance with all applicable permits, laws and regulations. Should the presence of cultural resources be confirmed, the Contractor will assist the DISTRICT Representative and the Construction/Archeological Monitor in the preparation and implementation of a data recovery plan. The Contractor shall provide such cooperation and assistance as may be necessary to preserve the cultural resources for removal or other disposition. Any DISTRICT directed changes to the Work as a result of the cultural resource will be pursuant to the Contract Documents.

3. Contractor's Liability. Should Contractor, without permission, injure, destroy, excavate, appropriate, or remove any cultural resource on or adjacent to the Site, it will be subject to disciplinary action, arrest and penalty under applicable law. The Contractor shall be principally responsible for all costs of mitigation and/or restoration of cultural resources related to the unauthorized actions identified above. Contractor shall be required to pay for unauthorized damage and mitigation costs to cultural resources (historical and archeological resources) as a result of unauthorized activities that damage cultural resources and shall indemnify DISTRICT pursuant to the Contract Documents.
4. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to comply with this paragraph, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

#### E. Dust and Pollution Control

1. Contractor shall provide all necessary material, equipment and labor to prevent and control the emission of dust and any other potential pollutant on site.
2. Contractor shall not discharge into the atmosphere from any source smoke, dust or other air contaminants in violation of the law, rules, and regulations of the governing agency.
3. Cost. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to comply with this paragraph, shall be included in Contractor's bid and distributed in the Schedule of Pay Items. No additional compensation shall be made to the Contractor for this Work.

#### F. Fugitive Dust

NOT USED.

G. Management of Storm, Surface and Other Waters

1. Storm water, surface water, groundwater, and nuisance, or other waters may be encountered at various times during construction of the Project. Federal and State laws require the DISTRICT and its contractors to manage such waters pursuant to the requirements of California State Water Resources Control Board Order Number 2009-0009-DWQ, the Federal Clean Water Act, and the California Porter Cologne Water Quality Control Act. Contractor acknowledges that it has investigated the risk arising from such waters in conjunction with the Project, and assumes any and all risks and liabilities arising therefrom.
2. The Contractor shall perform all construction operations in such a manner as to comply, and ensure all subcontractors to comply, with all applicable Federal, State, and local laws, orders, and regulations concerning the control and abatement of water pollution; and all terms and conditions of any applicable permits issued for the Project. In the event there is a conflict between Federal, State, and local laws, regulations, and requirements, the most stringent shall apply.
3. Contractor violations. If noncompliance should occur, the Contractor shall report this to the DISTRICT Representative immediately, with the specific information submitted in writing within 2 Days. Consistent violations of applicable Federal, State, or local laws, orders, regulations, or Water Quality Standards may result in DISTRICT stopping all site activity until compliance is ensured. The Contractor shall not be entitled to any change in Contract Price or Contract Times, claim for damage, or additional compensation by reason of such a work stoppage. Corrective measures required to bring activities into compliance shall be at the Contractor's expense.
4. Compliance with Construction General Storm water Permit. Contractor shall be required to comply with all aspects of the State Water Resources Control Board (State Board) Water Quality Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity (Permit) for all projects that involve construction on or disturbance of one acre or more of land or which are part of a larger common area of development.
  - (a) Contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for the Project site based on the appropriate Risk Level requirements, and draft and coordinate submittal of all Permit related documents with DISTRICT's Legally Responsible Person and/or Authorized Signatory as those terms are defined in the Permit. The Contractor shall submit the SWPPP to the DISTRICT Representative for review not less than fifteen (15) Days prior to the start of on- site construction work. DISTRICT will file the Notice of Intent and pay the filing fee.
  - (b) The SWPPP shall be developed by a Qualified SWPPP Developer and implemented by a Qualified SWPPP Practitioner as those terms are defined in

the Permit and shall include industry standard requirements for water quality control including but not be limited to the following:

- (1) Sediment and erosion control measures to manage sediment and erosion including vegetative practices, structural control, silt fences, straw dikes, sediment controls or operator controls as appropriate. Storm water management measures shall be instituted as required, including velocity dissipaters, and solid waste controls shall address controls for building materials and offsite tracking of sediment.
- (2) Wastewater and storm water management controls to divert offsite surface flows around the Project site and to divert surface flows within the Project area away from areas of open earth or stockpiles of building and other materials. Wastewater from general construction activities, such as drain water collection, aggregate processing, concrete batching, drilling, grouting, or other construction operations, shall not enter flowing or dry watercourses without having met the authorized non-storm water discharge requirements listed in State Board Water Quality Order No. 2009-0009-DWQ, Section III.C., including proper notification to the Regional Water Board.
- (3) Pollution prevention measures including methods of dewatering, unwatering, excavating, or stockpiling earth and rock materials which include prevention measures to control silting and erosion, and which will intercept and settle any runoff of sediment-laden waters.
- (4) Turbidity prevention measures for prevention of excess turbidity including, but are not restricted to, intercepting ditches, settling ponds, gravel filter entrapment dikes, flocculating processes, recirculation, combinations thereof, or other approved methods that are not harmful to aquatic life. All such wastewaters discharged into surface waters, shall contain the least concentration of settleable material possible, and shall meet all conditions of section 402, the National Pollutant Discharge Elimination System (NPDES) permit.
- (5) Overall construction site management measures to address changes at the Project site as the Project moves through different phases and changes that account for rainy and dry season management practices.
- (6) Pollution control measures and construction activity methods that will prevent entrance, or accidental spillage, of solid matter, contaminants, debris, or other pollutants or wastes, into streams, flowing or dry watercourses, lakes, wetlands, reservoirs, or underground water sources. Such pollutants and wastes include, but are not restricted to: refuse, garbage, cement, sanitary waste, industrial waste, hazardous materials, radioactive substances, oil and other petroleum products, aggregate processing, tailings, mineral salts, and thermal pollution.
- (7) Control measures for stockpiled or deposited materials prohibiting the stockpile or deposit of excavated materials, or other construction materials, near or on stream banks, lake shorelines, or other



- watercourse perimeters where they can be washed away by high water or storm runoff, or can, in any way, encroach upon the watercourse.
- (8) Develop and implement a Rain Event Action Plan (REAP), if required, that must be designed and implemented to protect all exposed portions of the site 48 hours prior to any likely precipitation event.
  - (9) Monitoring, reporting and record keeping, as necessary to achieve compliance with applicable Permit requirements, including but not limited to annual reports and rain event reports.
- (c) Before any Permit related documents, including the SWPPP, rain event reports, or annual reports may be submitted to the State Board or implemented on the Project site, they must first be reviewed and approved by DISTRICT.
  - (d) DISTRICT retains the right to procure and maintain coverage under the Permit for the Project site if the Contractor fails to draft a SWPPP or other Permit related document, or fails to proceed in a manner that is satisfactory to DISTRICT. DISTRICT reserves the right to implement its own SWPPP at the Project site, and hire additional contractors to maintain compliance. Whether Contractor has adequately maintained compliance with the Permit shall be DISTRICT's sole determination. In the event that Contractor has failed or is unable to maintain compliance with the Permit, any costs or fines incurred by DISTRICT in implementing a SWPPP, or otherwise maintaining compliance with the Construction General Permit shall be paid by the Contractor.
  - (e) Failure to implement the SWPPP or otherwise comply with the Permit is a violation of federal and state law. Contractor hereby agrees to indemnify DISTRICT as required by the Contract Documents for any noncompliance or alleged noncompliance with the Permit arising out of or in connection with the Project, except for liability resulting from the sole established negligence, willful misconduct or active negligence of DISTRICT. DISTRICT may seek damages from Contractor for delay in completing the Contract in accordance with the Contract Documents, caused by Contractor's failure to comply with the Permit.
5. In addition to compliance with the Permit, Contractor shall comply with the lawful requirements of any applicable municipality, district, drainage district, flood control district, and other local agencies regarding discharges of storm water, surface water, groundwater or other nuisance waters off of the Project site.
  6. Oil storage tanks management.
    - (a) Storage tank placement. All oil or other petroleum product (hereinafter referred to collectively as oil) storage tanks shall be placed at least 20 feet from streams, flowing or dry watercourses, lakes, wetlands, reservoirs, and any other water source.
    - (b) Storage area dikes. Storage areas shall be diked at least 12 inches high or graded and sloped to permit safe containment of leaks and spills equal to the

capacity of all tanks and/or containers located within each area, plus a sufficient amount of freeboard to contain the 25-year rainstorm.

- (c) Diked area barriers. Diked areas shall have an impermeable barrier at least 10 mils thick. Areas used for refueling operations shall have an impermeable liner at least 10 mils thick buried under 2 to 4 inches of soil.
  - (d) Spill Prevention Control and Countermeasure Plan (SPCC). Where the location of a construction site is such that oil from an accidental spillage could reasonably be expected to enter into or upon the navigable waters of the United States or adjoining shorelines, and the aggregate storage of oil at the site is over 1,320 gallons or a single container has a capacity in excess of 660 gallons, the Contractor shall prepare an SPCC Plan. The Contractor shall submit the SPCC Plan to the Engineer at least 30 days prior to delivery or storage of oil at the site. The Plan must have been reviewed and certified by a registered professional engineer in accordance with 40 C.F.R., part 112
- 7. Underground tank prohibition. The Contractor shall not use underground storage tanks.
  - 8. Construction safety standards. The Contractor shall comply with the sanitation and potable water requirements of Section 7 of United States Bureau of Reclamation's publication "Reclamation Safety And Health Standards."
  - 9. Other Permits.
    - (a) Other permits applicable to the Project are listed in the Special Conditions. The Contractor shall obtain all other necessary licenses and permits.
    - (b) Monitoring. The Contractor is required to conduct monitoring in order to meet the requirements of the permits, which may include sampling, testing and inspections.
    - (c) Recordkeeping. The Contractor shall retain all records and data required by the permits for the time specified in the contract.
  - 10. Cost. Except as specified herein, the cost of complying with this section shall be included in the Schedule of Pay Items for work which necessitate the water pollution prevention measures required by this paragraph.

## **END OF GENERAL REQUIREMENTS**

## TECHNICAL SPECIFICATIONS

### 1.01 STANDARD SPECIFICATIONS:

Unless indicated otherwise, the work embraced herein shall be done in accordance with the appropriate provisions of construction details as shown in the specifications entitled "GREENBOOK Standard Specifications for Public Works Construction," the latest edition, insofar as the same may apply, which specifications are hereinafter referred to as the Standard Specifications and in accordance with the following provisions.

Water main pipeline construction work shall be completed per the water improvement plans, technical specifications, and latest AWWA C900 and AWWA C651 standards.

In case of conflict between the Standard Specifications and these Technical Specifications, the Technical Specifications shall take precedence over and be used in lieu of such conflicting portions.

### 1.02 SCOPE OF WORK:

The work is generally described as follows:\

The work shall include the procurement of materials and the installation of a new 6 inch diameter water main pipeline along De Anza Drive, Yaqui Road and Fairway Lane. The work also includes the tie-ins to the existing 6 inch water lines. The work also includes the installation of new fire hydrants along De Anza Drive and Fairway Lane. Construction staking will be provided by the DISTRICT.

**TECHNICAL SPECIFICATIONS SECTIONS:**

SECTION 01300 – CONTRACOR SUBMITTALS

SECTION 01505 - MOBILIZATION

SECTION 01520 - TEMPORARY FACILITIES

SECTION 01530 - PROTECTION OF EXISTING FACILITIES

SECTION 01550 - SITE ACCESS AND STORAGE

SECTION 01560 - PROJECT ENVIRONMENTAL CONTROLS

SECTION 01600 - MATERIALS AND EQUIPMENT PART 1 GENERAL

SECTION 02150 - SHEETING, SHORING AND BRACING

SECTION 02200 - EARTHWORK

SECTION 02221 - TRENCHING, BACKFILLING AND COMPACTING

SECTION 02640 - PVC PIPE

SECTION 02641 - PVC PRESSURE PIPE AWWA C900

SECTION 02650 - PIPE FITTINGS, TRANSITION COUPLINGS, MECHANICAL  
RESTRAINED JOINT FITTINGS, FLANGED COUPLING  
ADAPTERS AND HARDWARE

SECTION 02666 – PRESSURE PIPELINE WATER TESTING

SECTION 02670 - DISINFECTION OF POTABLE WATER PIPELINES

SECTION 15615 - RESILIENT GATE VALVES, BUTTERFLY VALVES,  
OS&Y VALVES AND SWING CHECK VALVES

SECTION 15830 - MISCELLANEOUS VALVES

## SECTION 01300 – CONTRACOR SUBMITTALS

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. All This Section 01300 shall superseded and replace Article 16 of the General Conditions.
- B. Within ten (10) days after the date of Notice to Proceed, the Contractor shall submit the following items to the Resident Engineer or District Representative.:
  - 3. 1. A Construction Schedule providing the starting and completion dates of the various stages of the Work. The Contractor shall be prepared to discuss its construction schedule at the pre-construction conference.

#### 1.02 SUBMITTAL REQUIREMENTS AND PROCESS

- A. Wherever called for in the Contract Documents or when requested by the Resident Engineer or District Representative the Contractor shall furnish to the Resident Project Representative for review, six (6) copies of each submittal.
- B. All submittals shall be accompanied by a submittal transmittal form. This form may be obtained from the Resident Engineer or District Representative. A separate transmittal form shall be used for each specific item for which a submittal is required. Each submittal should be referenced to the specification section requiring the submittal. All Contractor submittals shall be carefully reviewed by an authorized representative of the Contractor, prior to submission to the Resident Engineer or District Representative. Each submittal shall be dated, signed and certified by the Contractor as being correct and in strict conformance with the Contract Documents. In the case of shop drawings, each sheet shall be so dated, signed and certified. No consideration for review by the Engineer of any Contractor submittals will be made for any items which have not been so certified by the Contractor. All non-certified submittals will be returned to the Contractor without action taken by the Engineer and any delays caused thereby shall be the sole responsibility of the Contractor.

- C. Multiple-page submittals shall be collated into sets with each set stapled or bound.
- D. The Resident Engineer or District Representative will return copies of each submittal to the Contractor with review comments within fifteen (15) calendar days following their receipt by the Resident Project Representative. There will be three (3) copies of a submittal returned to the Contractor when marked either "NO EXCEPTIONS TAKEN" or "APPROVED AS NOTED", and no formal revision and re-submission of said submittal will be required. However, if one or more copies of the submittal are returned to the Contractor marked "REVISE AND RESUBMIT" or "REJECTED", the Contractor shall revise said submittal and shall resubmit the required number of copies of said revised submittal to the Engineer.
- E. Fabrication of an item shall commence only after the Engineer has reviewed the submittal and returned copies to the Contractor marked either "NO EXCEPTIONS TAKEN" or "APPROVED AS NOTED". Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis of claims for extra work.
- F. The Engineer's review of Contractor's submittals shall not relieve the Contractor of the entire responsibility for the correctness of details and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to any errors in the Contractor submittals. The Contractor shall be responsible for the dimensions and the design of adequate connections and details.

#### 1.03 CONTRACTOR'S SCHEDULE SUBMITTAL

- A. The Contractor shall submit to the Resident Engineer or District Representative a construction schedule for the Work showing a general plan for orderly progression of the Work including mobilization of equipment and timing of procurement of major materials and equipment.
- B. The Resident Engineer or District Representative may request that the Contractor provide a revised or updated Construction Schedule if, at any time, the Engineer considers the completion date to be in jeopardy because of any portion of the Work falling behind schedule or the sequence of operations becomes different from the previous schedule.

#### 1.04 PROPOSED SUBSTITUTES OR "OR EQUAL" ITEM SUBMITTAL

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance and quality required. Other items of material or equipment, or material or equipment of other Suppliers may be submitted to the Resident Engineer or District Representative for review under the circumstances described below
  - 1. The Contractor shall be responsible for resultant changes and all additional costs or credit to the Owner which the accepted substitution requires in the Contractor's work, the work of its subcontractors and of other contractors and shall effect such changes without cost to the Owner.
- B. The procedure for review by the Resident Engineer or District Representative will include the following:
  - 1. If proposed substitute material or equipment has been judged to be unacceptable by the Engineer, the Contractor shall provide the material or equipment named in the Contract Documents.

1.05 SAMPLES SUBMITTAL

- A. The Contractor shall submit not less than two (2) samples, unless noted otherwise in a material or equipment specification, to the District Engineer for acceptance at no additional cost to the Owner. Samples shall be submitted for acceptance a minimum of ten (10) days prior to ordering such material for delivery to the job site. If accepted by the District Engineer, one (1) set of samples will be returned to the Contractor and one (1) set of samples shall remain at the job site until completion of the Work.

1.06 N/A

1.07 AS-BUILT SUBMITTAL

- A. The Contractor shall maintain, during the progress of the Work, one (1) set of As-Built Drawings and shall neatly mark on them all project changes from the details shown on the original Contract Drawings. Special attention shall be given to recording on the drawings the horizontal and vertical location of all buried utilities that differ from the locations indicated or which were revealed during the construction.

- B. As-Built drawings shall be accessible to the Engineer at all times during the construction period and shall be delivered to the Engineer upon completion of the Work.
- C. Upon substantial completion of the Work and prior to final acceptance the Contractor shall deliver a complete set of As-Built drawings to the Engineer.

#### 1.08 SUPERINTENDENT SUBMITTAL

- A. A letter designating the Project Superintendent shall be forwarded to the Engineer for his review. The letter shall also include emergency contact information for the Project Superintendent and other Contractor Representative.

#### 1.09 MATERIAL AND EQUIPMENT SUBMITTAL LIST

- 1. General Requirements
  - 1.1 Construction Schedule
  - 1.2 Schedule of Values
  - 1.3 Letter Designation Project Superintendent
  - 1.4 Emergency Contact Number
  - 1.5 Operation and Maintenance Manuals
- 2. Sitework
  - 2.1 Sheeting, Shoring and Bracing PI
  - 2.2 Hot Mix Asphalt, ¾-inch Type A, PG 70-10
  - 2.3 Class 2 Base Gradation, Maximum Density and Sand Equivalent
  - 2.4 ¾" Crushed Rock Gradation
  - 2.5 Granular Sand Gradation, Maximum Density and Sand Equivalent
  - 2.6 PVC Pipe



- A. AWWA C-900, DR 18 PVC Pipe
- 2.7 Copper Pipe
- 2.8 Pipe Fittings
  - A. Ductile Iron
  - B. Stainless Steel
  - C. Copper
  - D. Bronze
  - E. SCH 80 PVC
- 2.9 Ductile Iron Fittings
- 2.10 Magnetic Detector Tape
- 2.11 Fire Hydrant Assembly
- 2.12 Valve Riser, Frame and Cover
- 3. Mechanical and Miscellaneous
  - 3.1 Pipe Expansion Joints
  - 3.2 Resilient Gate Valves, Butterfly Valves, OS&Y Valves, Check Valves, Flapper Valves, Air Release Valves and Backflow Preventers
  - 3.3 Stainless Steel Pipe Fittings and Valves

END OF SECTION 01300

## SECTION 01505 - MOBILIZATION

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. This Section 01505 shall supersede and replace Article 6 of the General Conditions.
- B. Mobilization shall include obtaining all permits; moving plant equipment on-site; furnishing and erecting plants, temporary buildings and other construction facilities; all as required for the proper performance and completion of the Work. Mobilization shall include, but not be limited to, the following principal items:
  - 1. Moving on to the site of all Contractors' plant, equipment and materials required for first month operations.
  - 2. Installing temporary construction power, wiring and lighting facilities.
  - 3. Establishing fire protection equipment and instructing designated personnel in the operation of such apparatus.
  - 4. Providing field office trailer for the Contractor complete with furnishings and utility services when applicable. Contractor will furnish the temporary power, water, telephone, copier, facsimile machine and other items for the Contractor's field offices. Contractor to furnish and install necessary piping, wiring and disconnects.
  - 5. Providing all on-site Contractor communication facilities.
  - 6. Providing on-site Contractor's sanitary facilities.
  - 7. Arranging and setting up the Contractor's work and storage yard.
  - 8. Obtaining all required permits.

9. Posting all OSHA required notices and establishment of safety programs.
10. Have Contractor's superintendent at the jobsite full time.
11. Submittal of Construction Schedule.
12. Install project sign, if required.
13. Submittal of Schedule of Values.
14. Costs of Insurance, Payment Bond, Performance Bond, Taxes, Permits, Freight and similar expenses.

#### 1.02 PAYMENT FOR MOBILIZATION

- A. A Mobilization Item is included in the Proposal forms. The Mobilization payment shall not be released to the Contractor unless all items in Paragraph "A" above have been satisfied.

END OF SECTION 01505

## SECTION 01520 - TEMPORARY FACILITIES

### PART 1 – GENERAL

#### 1.01 DESCRIPTION

Except as otherwise provided, the Owner shall bear no costs of temporary facilities or their removal. It shall be the Contractor's responsibility to provide equipment that is adequate for the performance of the Work under this contract within the time specified. All equipment shall be kept in satisfactory operating condition, shall be capable of safely and efficiently performing the required Work and shall be subject to inspection and approval by the Owner's representative at any time within the duration of the Contract. All work hereunder shall conform to the applicable requirements of the OSHA Standards for Construction.

#### 1.02 TEMPORARY POWER AND LIGHTING SERVICES

The Contractor shall provide all necessary temporary power connection, disconnects and distribution lines required for its operations under the Contract and shall provide and maintain all temporary power systems required to perform the Work in a safe and satisfactory manner. The Contractor shall make the arrangements with the SDG&E and pay all fees, and shall bear all costs for these temporary services and shall furnish and install all necessary transformers; metering facilities and distribution centers from branch circuits as may be required.

All temporary connections for electricity shall be subject to approval of the Engineer and shall be completely removed at the Contractor's expense prior to final acceptance of the Work. All wiring for temporary electric light and power shall be properly installed and maintained and shall be securely fastened in place. All electrical facilities shall conform to the requirements of the OSHA Safety and Health Standards for Construction and the governing agency and electrical purveyor.

The Contractor shall provide lighting and outlets in temporary structures throughout the project as may be required for safety, proper performance and inspection of the Work. If operations are performed during hours of darkness, or if natural lighting is deemed insufficient by Engineer, the Contractor shall provide adequate floodlights, clusters and spot illumination. The use of permanently installed lighting fixtures, lamps and tubes for work shall not be permitted except by special permission of Engineer. The Contractor shall make arrangements with Subcontractors for electrical services and lighting as may be necessary in the performance of their work.

## 1.03 TEMPORARY WATER SERVICES

A. G  
eneral: Unless specifically specified for a specific scope of work or construction activity, the Owner shall furnish water for all testing and construction purposes. Utility water may be used for hydraulic structures and pipeline testing as approved by the Engineer and DISTRICT.

Temporary water service lines, if required, shall be installed and removed by the Contractor, who shall pay all charges for making the connections, running the temporary lines, removing the temporary lines at the completion of the Work and disconnecting the services. All relocations required to clear the work of others shall be performed by the Contractor when requested by the Owner.

B. P  
otable Water: All drinking water on the site during construction shall be furnished by the Contractor and shall be bottled water or water furnished in approved dispensers. Notices shall be posted conspicuously throughout the site warning the Contractor's personnel that piped water for construction purposes may be contaminated and is not for human consumption.

C. Wat  
er Connections: The Contractor shall not make connection to, or draw water from, any fire hydrant or pipeline without first obtaining permission of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the water system. For each such connection made the Contractor shall first attach to the fire hydrant or pipeline a valve, backflow preventer and a meter, if required by the said authority, of a size and type acceptable to said authority and agency.

D. Removal of Water Connections: Before final acceptance of the Work all temporary water connections and piping installed by the Contractor shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the Engineer and to the agency owning the affected utility.

E. Fir  
e Protection: The Contractor shall provide fire extinguishers and other fire protection equipment to adequately protect new and existing facilities and temporary facilities against damage by fire. Hose connections and hose, water casks, chemical equipment or other sufficient means shall be provided

for fighting fires in the new, existing and temporary structures and other portions of the Work and responsible persons shall be designed and instructed in the operation of such fire apparatus so as to prevent or minimize the hazard of fire. The Contractor's fire protection program shall conform to the requirements of the OSHA Standards for Construction. The Contractor shall employ every reasonable means to prevent the hazard of fire.

#### 1.04 TEMPORARY STRUCTURES

Prior to starting work, the Contractor shall, as directed by Engineer, provide and maintain suitable temporary office facilities for the duration of the Project as required for the Contractor's project administration; and all necessary sheds and facilities for the proper storage of tools, materials and equipment employed in the performance of the Work.

#### 1.05 CONTRACTOR'S WORK AND STAGING AREA

The Owner shall designate and arrange for the Contractor's use, a portion of the property adjacent to the Work for its exclusive use during the term of the Contract as an office, storage and shop area for its construction operations relative to this Contract. Contractor shall be solely responsible for the security of its tools, supplies and equipment at the site.

#### 1.06 SANITATION

A. Res  
troom Facilities: The Contractor shall provide and maintain a portable men's restroom facility and a separate portable women's restroom facility. The restroom facilities shall be placed at the job site prior to the start of construction within ten (10) days from the issuance of the Notice to Proceed and shall remain in service until the job has been completed. The Contractor shall position the restroom facilities, as required to maintain the facilities, near the location of daily work activity-and-near-the-Construction Office—Trailer. The restroom facilities shall be cleaned on a regular basis.

B. San  
itary and Other Organic Wastes: The Contractor shall establish adequate and regular collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the Contractor or organic material wastes from any other source related to the Contractor's operations shall be disposed of in a manner satisfactory to the Engineer and in accordance with all laws and regulations pertaining thereto. Contractor may install temporary piping for toilet

facilities to discharge into an incoming sewer.

#### 1.07 COMMUNICATIONS

- A. Telephone Services: The Contractor shall provide its own phone lines. The Owner's telephone system shall not be used by the Contractor's work force.
- B. Facsimile Services: The Contractor shall provide its own facsimile unit(s). The costs relative to the facsimile unit(s) shall be borne by the Contractor.

#### 1.08 FENCE AND BARRICADES

The Contractor shall provide such protective fences and barricades as he/she may deem necessary for public safety and to protect his/her storage areas and the Work in place. The location and appearance of all fences shall be subject to approval of the Engineer.

#### 1.09 CONTRACTOR PARKING

The Contractor shall not park his/her equipment, nor allow his/her personnel to park, in any area except those specifically designated by the Engineer.

#### 1.10 TEMPORARY LIVING QUARTERS

Temporary living quarters shall not be allowed on the job site or on publicly-owned properties. In addition, all local zoning codes for the area in question shall be strictly adhered to.

#### 1.11 REMOVAL OF TEMPORARY CONSTRUCTION

The Contractor shall remove temporary office facilities, toilets, storage sheds and other temporary construction from the site as soon as, in Engineer's opinion, the progress of work permits. Contractor shall recondition and restore those portions of the site occupied by the same to a condition equal to or better than it was prior to construction.

END OF SECTION 01520

## SECTION 01530 - PROTECTION OF EXISTING FACILITIES

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. The Contractor shall protect all existing utilities, piping and improvements not designated for removal and shall restore damaged or temporarily relocated utilities, piping and improvements to a condition equal to or better than they were prior to such damage or temporary relocation.
- B. The Contractor shall verify the exact locations and depths of all underground piping and utilities shown and not shown and shall make exploratory excavations of all piping and utilities that may interfere with the Work. It shall be the Contractor's responsibility to ascertain the actual location of all existing utilities, piping and other improvements that will be encountered during construction operations and verify that such utilities or other improvements are adequately protected from damage due to such operations.
- C. Maintaining in Service: All pipelines, electrical, power, telephone communication cables, gas and water mains shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the Engineer are made with the Owner. Where the proper completion of the Work requires the temporary or permanent removal and/or relocation of an existing utility or other improvement the Contractor, after necessary scheduling and approval, shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the Engineer and the Owner of the facility. In all cases of such temporary removal or relocation, the Work shall be accomplished by the Contractor in a manner that will restore or replace the utility or improvement to a new condition meeting the specification requirements.
- D. All repairs to a damaged utility or improvement are subject to inspection and approval by a Resident Project Representative before being concealed by backfill or other work.

#### 1.02 RIGHTS-OF-WAY

- A. The Contractor shall refrain from commencing work or entering upon the rights-of-way of any oil, gas, sewer or water pipeline; any telephone or electric transmission line; any fence; or any other structure, until notified by the Engineer that the Owner has secured authority to do so. After



authority has been obtained, the Contractor shall give the governing utility proper advanced notice of its intention to begin work.

### 1.03 RESTORATION OF PAVEMENT AND SIDEWALKS

- A. All paved areas and sidewalks not designated for replacement, cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas unless otherwise noted. All sidewalks, curbs and gutters and pavements which are subject to partial removal shall be neatly saw-cut in straight lines. The sidewalk, curb and gutter and pavement shall be constructed in accordance with the Standard Details and Plans of the governing agency.

### 1.04 UNDERGROUND UTILITIES NOT SHOWN OR INDICATED

- A. If the Contractor damages existing utilities, piping or improvements that are not illustrated or the location of which was not made known to the Contractor prior to excavation and the damage was not due to failure of the Contractor to exercise reasonable care the Contractor shall immediately notify the Engineer.

### 1.05 NOTIFICATION BY THE CONTRACTOR

- A. Prior to any excavation in the vicinity of any existing underground facilities, including water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications or telecommunication cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way, the Contractor shall notify the respective utility purveyors or agencies or owners responsible for such facilities not less than three (3) working days prior to excavation so that a representative is afforded the opportunity to be present during the excavation work.

END OF SECTION 01530

## SECTION 01550 - SITE ACCESS AND STORAGE

### PART 1 – GENERAL

#### 1.01 HIGHWAY AND STREET LIMITATIONS

- A. The Contractor shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits and other limitations affecting transportation and ingress and egress to the site of the Work. It shall be the Contractor's responsibility to construct and maintain any haul roads required for its construction operations or define any alternate routes to the project site due to roadway or bridge restrictions.
  
- B. Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street, utility right-of-way or the site of the Work during the performance of the Work hereunder. The Contractor shall conduct its operations so as not to interfere unnecessarily with the authorized work of utility companies, other agencies, or the Owner's plant personnel. No street or access shall be closed without first obtaining permission of the Engineer or proper governmental authority. Where excavation is being performed in primary streets or highways one (1) lane in each direction shall be kept open to traffic at all times unless otherwise provided or shown by the Contract Documents. Fire hydrants on or adjacent to the Work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to assure the use of sidewalks, access routes and the proper functioning of all gutters, sewer inlets and other drainage facilities.
  
- C. Traffic Control: For the protection of traffic in public streets and plant operating personnel at the site of the Work, the Contractor shall provide, place and maintain all necessary barricades, traffic cones, warning signs, lights and other approved safety devices. All barricades, traffic cones, warning signs, lights and other approved safety devices shall be placed according to the agency requirements maintaining jurisdiction, as applicable. The Contractor shall take all necessary precautions for the protection of the Work and the safety of the Owner's personnel and the public. All barricades and obstructions shall be illuminated at night.

END OF SECTION 01550

## SECTION 01560 - PROJECT ENVIRONMENTAL CONTROLS

### PART 1 - GENERAL

#### EXPLOSIVES AND BLASTING

The use or storage of explosives on the Work or site shall not be permitted. As construction activities only include the replacement of an existing tank with no additional system capacity, an Environmental Assessment (EA) or Environmental Review is not deemed necessary for this project.

#### 1.02 DUST ABATEMENT AND RUBBISH CONTROL

The Contractor shall provide under the Contract all necessary measures to prevent its operation from producing dust or air contaminants in amounts damaging to property or causing a nuisance to Owner's plant personnel and operations or to persons living in or occupying buildings in the vicinity. The Contractor shall be responsible for damage resulting from any dust and/or air contaminants originating from its operations. The dust and/or air contaminants abatement measures shall be continued throughout the length of the Contract.

During the progress of the Work the Contractor shall keep the site of the Work and other areas used by it in a neat and clean condition and free from any accumulation of rubbish. The Contractor shall dispose of all rubbish and waste materials of any nature occurring at the Work site, and shall establish regular intervals of collection and disposal of such materials- and waste.- The Contractor shall also keep its haul roads free from dirt, rubbish and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the site of construction in accordance with local codes and ordinances governing locations and methods of disposal and in conformance with all applicable Safety Laws and Health Standards for Construction. The Owner's dumpster shall not be used by the Contractor.

#### 1.02 CHEMICALS

- 3) All chemicals used during project construction or furnished for project operation, whether soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval for use by either the U.S. Environmental Protection Agency, the U.S. Department of Agriculture or the local jurisdictional agency. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

END OF SECTION 01560

## SECTION 01600 - MATERIALS AND EQUIPMENT PART 1 GENERAL

### 1.01 QUALITY ASSURANCE

- A. To the greatest extent possible for each unit of work, the Contractor shall provide products, materials or equipment from a single source.
- 4) Where more than one choice is available as options for Contractor's selection of a product, material or equipment, the Contractor shall select an option which is compatible with other products, materials or equipment already selected.

### 1.02 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. The Contractor shall transport, deliver, handle and store products in accordance with supplier's written recommendations and by methods and means which will prevent damage, deterioration and loss including theft. Delivery schedules shall be coordinated to minimize long-term storage of products at the Work site and overcrowding of construction spaces. The Contractor shall provide installation coordination to ensure minimum storage times for products recognized to be flammable, hazardous or easily damaged.
- B. Products shall be delivered in a dry, undamaged condition in the supplier's unopened packaging. The Engineer and Owner reserve the right to reject all damaged products, materials and equipment. Rejected products shall be immediately removed from the site of the Work.
- C. Products, materials and equipment shall be stored in accordance with the manufacturer's written instructions, with seals and labels intact and legible. Motors, electrical gear, mechanical equipment with open bearings or moving parts or any product sensitive to the environment shall be stored in weather-tight enclosures with necessary temperature and humidity ranges maintained within the manufacturer's instructions.
- D. Fabricated structural components shall be stored on supports above ground and in a manner to prevent accumulation of water and warping. Products subject to deterioration from atmospheric conditions shall be covered in a manner that will provide adequate ventilation to avoid condensation.
- E. Products, materials and equipment not stored in a manner that will insure the maintaining of a new condition will be rejected by the Engineer. Such rejected products, materials and equipment shall be immediately removed from the Work site.

### 1.03 SOAKING PERIOD AND TESTING FOR VOLATILE ORGANIC COMPOUNDS IN POTABLE WATER RESERVOIRS

- A. General: The Contractor shall provide the following services to ensure that the interior reservoir coatings or linings do not convey volatile organic compounds to the potable water.
- B. Selection of Coating or Lining Material: The Contractor shall provide a coating or lining system that has a successful record in meeting the national, regional, and local regulations and policies pertaining to leaching of volatile organic compounds into potable water.
- C. Before the coating or lining materials are used, the Contractor shall by letter notify the regulatory agency having jurisdiction. The letter shall describe the proposed materials, including brand names, catalog numbers, catalog technical data, application and curing instructions, and material safety data sheets.
- D. The Contractor shall provide curing time, temperature and ventilations as specified by the manufacturer or this Section, whichever is the highest requirement. In some cases, the Contractor may find it necessary to extend the curing time or ventilation time beyond the requirements in order to comply with the regulatory agency requirements or to reduce the leached organic compounds to the required levels. All costs in connection with any extended curing times shall be borne by the Contractor.
- E. Following the curing or ventilation period, the Contractor shall clean, disinfect and fill the reservoir to the overflow level.
- F. A seven (7) day soaking period shall follow the initial filling to determine the presence of any leached organics. If Bacteriological test is negative, then VOC testing time may be completed in conjunction. Before the tank is placed into service, samples of the water in the tank shall be taken by the Contractor, under the direct supervision of the Owner, and analyzed by a laboratory approved by the State or the EPA. Analyses shall be for volatile organic compounds by EPA Method 524.2 or equivalent (this test includes TCE, PCE, xylenes, toluene, ketones, carbon tetrachloride, similar compounds, or other organic chemicals from MSDS sheets). The costs of testing shall be borne by the Contractor.
- G. If the tests results are above the CDPH's Maximum Contaminant Level Limits, the Contractor shall drain the water from the tank and flush, refill, and retest at no additional cost to the Owner. The Contractor shall provide

as many curing, soaking, and flushing cycles as necessary to reduce the leached volatile organic compounds to levels below the requirements.

- H. The Owner will evaluate and determine acceptability as a condition of final acceptance of the work. Acceptance criteria will be in conformance with state and federal regulations.

#### 1.04 TESTING FOR VOLATILE ORGANICS

- A. After successful completion of the Disinfection and Bacteriological Testing, the Contractor shall complete Volatile Organic Compound Testing per section 3.11 of the Technical Specification Section 09800 - PROTECTIVE COATINGS.

#### 1.05 DISPOSAL OF TEST WATER

- A. Water used for testing and disinfection procedures shall be disposed of as required by the Contractor. The Contractor shall identify the point at which the water is to be disposed and provide all pumps, suction hoses, discharge hoses, fuel and labor to dispose of the test water.

#### 1.06 PLACING TANK IN SERVICE

- A. The tank shall be placed in service after successful disinfection and volatile organic compound testing has been completed and after the Engineer determines that all rehabilitation and coating work has been satisfactorily completed.

END OF SECTION 01600

## SECTION 02150 - SHEETING, SHORING AND BRACING

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

This section provides requirements for sheeting, shoring, bracing, wales, posts, piling, anchorages and fastenings or other excavation supports, both temporary or permanent, for accomplishment and protection of Work.

#### 1.02 QUALITY ASSURANCE

##### A. Design Requirements:

In accordance with Section 6500 of the California Labor Code, the Contractor is required to obtain a permit, for the excavation of trench which is five feet (5') or more in depth and into which a person is required to descend, from the Division of Industrial Safety.

The Contractor shall furnish all labor, equipment and materials required to design, construct and remove all sheeting, shoring and bracing or other equivalent method of support for the walls of open excavations required for the construction of this project.

Excavation of any trench, pad area, foundation area, or structure five feet (5') or more in depth shall not commence until the Contractor has received approval from the Engineer of the Contractor's detailed plan for worker protection from the hazards of trench or soil wall collapse/failure.

Such plan shall be submitted at least five (5) days before the Contractor intends to begin excavation and shall show the details of the design of shoring, bracing, sloping or other provisions to be made for worker protection during such excavation. No such plan shall allow the use of shoring, sloping or a protective system less effective than that required by the Construction Safety Orders of the Division of Industrial Safety. The plan shall be prepared and signed by an engineer who is registered as a Civil or Structural Engineer in the State of California.

Prior to the beginning of excavations requiring shoring, the Contractor shall designate in writing to the Engineer, the person responsible to supervise the project safety measures and the person responsible to supervise the installation and removal of sheeting, shoring and bracing.

In addition to shoring the excavations in accordance with minimum

requirements of the Industrial Safety Orders, it shall be the Contractor's responsibility to provide any and all additional shoring required to support the sides of the excavation against the effects of loads which may exceed those derived by using the criteria set forth in the Industrial Safety Orders. The Contractor shall be solely responsible for any damages which may result from his failure to provide adequate shoring to support the excavation under any or all of the conditions of grading which may exist, or which may arise during the construction of the project.

B. Material Standards:

Furnish lumber for shores, wales, and sheeting of grading required by the American Lumber Standards for the particular application.

### 1.03 SUBMITTALS

Contractor shall submit complete calculations of the sheeting system including sizing of sheeting wales, rakers, anchor system, struts, earth anchors, anchor piles, tie rods or any other components pertinent to the design prior to the start of any Work involving sheeting and bracing. All designs submitted shall be stamped and signed by an Engineer with a Civil or Structural designation with an active registration in the State of California.

### 1.04 JOB CONDITIONS

Buried debris may be found at some locations. Federal and local agency requirements for safety of job personnel and public will apply to work under the Section.

### 1.05 ALTERNATIVES

The use of application of alternative methods and materials, and the employment of proprietary systems under lease or franchise in lieu of that specified herein, may be allowed. Demonstration of suitability and compliance with these Specifications will be required. The application of alternative methods will be approved by the Engineer.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

A. Lumber:

1. Temporary Shores, Wales and Sheeting: Furnish structural grade planks, beams and posts as defined and specified for stress-grade lumber in the American



Lumber Standards. Lumber may be rough, untreated, in random lengths, and shall be of standard dimensions.

2. Permanent Sheeting: When permanent sheeting is called for on the Drawings, provide and install planks, beams, posts and timbers of unseasoned, rough, new southern yellow pine or Douglas Fir meeting the requirements of ASTM Standard D25, Class "C". In lieu of the above, lumber dressed to standard dimensions, dried and treated in accordance with Standard T-3 of the American Wood Preservers' Association may be utilized.

B. Fastenings:

Provide fastenings for permanent sheeting as recommended in the National Design Specification for stress-grade lumber and its fastening.

### PART 3 - EXECUTION

#### 3.01 INSTALLATION

Install sheeting and bracing for trench and structure excavation progressively as the removal of excavated material requires. Butt planks to exclude groundwater and fines, preventing the erosion of voids outside sheeting. In soft, wet ground drive sheeting to a lower level as excavation progresses to that sheeting is embedded in undisturbed earth. Bracing of sheet piling may be permitted to penetrate the structural concrete only as directed by the Owner. Install wales and struts at close intervals so as to prevent displacement of the surrounding earth and to maintain safe conditions in the Work area. Any damage proven to result from improper installations shall be the responsibility of the Contractor. Temporary sheeting for trench and structure excavation may be removed and reused. Withdraw individual planks alternately as the backfill is raised, maintaining sufficient sheeting and bracing to protect the Work and workmen. Remove bracing completely. Where unstable conditions occur in the underlying strata from any cause, and withdrawal of sheeting will endanger the Work, a portion of the sheeting, including bracing, may be left in place with the approval of the Owner. Remove all wood within a zone extending four feet (4') below finished grade. Leaving such material in place shall not be cause for an increase in the contract price. The use of horizontal strutting below the barrel of a pipe or the use of a pipe as support will not be permitted. Sheet piling and timbers in trench excavations shall be withdrawn in a manner so as to prevent subsequent settlement of the pipe or additional backfill loadings which might overload the pipe. Trench sheeting below the top of the pipe shall be left in place.

END OF SECTION 02150

## SECTION 02200 - EARTHWORK

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. The Work of this Section includes all earthwork required for construction of the Work. Earthwork shall include, but not be limited to the loosening, removing, loading, transporting, depositing and compacting in its final location of all materials wet and dry, as required for the purposes of completing the work specified in the Contract Documents which shall include, but not be limited to: the sawcutting, grinding and removal of A.C. pavement, removal of P.C.C. concrete and underlying material to a subbase design grade indicated on the Plans, the installation of subbase material to a subbase grade beneath A.C. pavement and concrete infrastructure, the excavation of pipeline trenches, the installation of backfill material within pipeline trenches, excavations for above-grade and below-grade structures, backfill requirements for material to be placed beneath above-grade and below-grade structures, backfill requirements for the areas surrounding above-grade and below-grade structures, backfilling of other infrastructures, construction of earth swales, backfilling of depressed areas resultant from demolition, the disposal of excess excavated materials, barrow of materials to make up deficiencies for fills; and all other incidental earthwork, all in accordance with the requirements of the Contract Documents.

Principal work items included in this Section are:

1. Site preparation, clearing and grubbing;
2. Preparation of fill areas;
3. Excavation and controlled fill construction;
4. Structural excavation and backfills;
5. Disposal of surplus and/or unsuitable materials;
6. Dust control and drainage control;
7. Grading; and
8. Clean-up.

## 1.02 REFERENCE STANDARDS

ASTM C 131 Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

ASTM D 75 Practice for Sampling Aggregates

ASTM D 422 Method for Particle-Size Analysis of Soils

ASTM D 698 Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb (2.49-kg) Rammer and 12-in (304.8-mm) Drop

ASTM D 1556 Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D 1557 Test Method for Moisture-Density Relations of Soils Using Remmer and Drop

ASTM D 1682 Test method for Breaking Load and Elongation of Textile Fabrics

ASTM D 2419 Test method for Sand Equivalent Values of Soil and Fine Aggregate

ASTM D 2487 Classification of Soils for Engineering Purposes

ASTM D 2922 Test Method for Density of Soil in Places by Nuclear Methods (Shallow Depth)

ASTM D 3017 Test method for Water Content of Soil and Rock in Place by Nuclear Methods

ASTM D 3776 Test Method for Mass Per Unit Area (Weight) of Woven Fabric

ASTM D 4253 Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Plate

ASTM D 4254 Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density

ASTM D 4751 Test Method for Determining the Apparent Opening Size of a

## Geotextile

### CAL-OSHA Title 8 General Industry Safety Orders

#### 1.03 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02150 - Sheeting, Shoring and Bracing
- B. Section 02221 - Trenching, Backfilling and Compacting
- C. Section 02641 - PVC Pressure Pipe AWWA C900

#### 1.04 DEFINITIONS

- A. Site: The site is located within the County of San Diego Right-of-Way. Refer to the Project Descriptions as included on Title Sheet of the Improvement Plans.
- B. Controlled Fill: Compacted suitable fill material in all areas of the site requiring filling to grade as shown on the Plans.
- C. Structural Fill: Compacted suitable fill material which will support a structure or some part of a structure. This includes support material for P.C.C. structures and pads
- D. Structural Backfill: Compacted suitable material placed between the wall of a structure and construction excavation slope up to finished grade.
- E. Suitable Material: As specified herein shall be any material imported or excavated from the cut areas that is, in the opinion of the Engineer, suitable for use in constructing fills.
- F. Waste Excavation: Also Surplus Material. Material from project excavations which is not suitable for use in backfill or compacted fills or is in excess of that required to be used for backfill or to construct fills.
- G. Pipe Zone Backfill: Material suitable for placement below or surrounding the pipe to a given vertical distance above the pipe as required by the pipe section.
- H. Pipe Trench Backfill: Material suitable for placement from the pipe zone to finish grade or to pavement subbase material.

1.05 SITE INVESTIGATION

- A. Soil Investigation Report: A Geotechnical Report has not been prepared for this project.
  
- B. Contractor's Responsibility: The Contractor shall carefully examine the site and make all inspections necessary in order to determine the full extent of the work required to make the completed Work conform to the Plans and Specifications. The Contractor shall satisfy himself/herself as to the nature and location of the Work, conditions, the conditions of the existing ground surface, and the character of equipment and facilities needed prior to and during prosecution of the Work. The Contractor shall satisfy himself/herself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered. The Contractor shall review water table conditions. Any inaccuracies or discrepancies between the actual field conditions and the Plans, or between the Plans and Specifications must be brought to the Engineer's attention in order to clarify the exact nature of the Work to be performed.
  
- C. Existing Elevations: All existing elevations illustrated on the Plans are approximate. The Contractor shall recognize and acknowledge the condition that the bid lump sum price shall include all earthwork activities irrespective of the possible localized difference in contour elevations and actual ground; and that there will be no additional compensation from the Owner for earthwork changes, engineering, or field staking in this regard.

1.06 SAFETY

The Contractor shall familiarize himself/herself with, and shall at all times conform to, the regulations of the "OSHA General Industry Occupational Safety and Health Standards", and "OSHA Safety and Health Regulations for Construction Safety Orders" and "Trench Construction Safety Orders" of the State of California, Department of Industrial Relations, Division of Occupational Health and Safety. A copy of these documents shall be kept on the job site.

## 1.07 ENVIRONMENTAL SAFEGUARDS AND REGULATIONS

The Contractor shall comply with regulations in force at all times to prevent pollution of air and water. The Contractor shall be responsible for the construction of the Erosion Control BMP facilities.

## 1.08 GEOTECHNICAL TESTING

The contractor shall provide the services of a qualified Geotechnical Consultant to perform the required earthwork geotechnical testing specified within the contents of the Plans and Specifications except for the testing and inspections required for submittal phase. A copy of all tests shall be forwarded to the Engineer within four (4) days after the testing is complete. Geotechnical Earthwork Testing shall include in-situ native soil compaction testing, moisture-density soils testing, compaction testing, gradation testing, sand equivalent testing and similar testing. The Contractor shall bear the cost of retest and re-inspection of re-worked material due to faulty work.

## 1.09 STANDARDS FOR SOIL CLASSIFICATION, PROPERTIES AND TESTS

### A. Earthwork and Embankment:

1. Classification - ASTM D 2487.
2. Physical Properties - ASTM D 854, D 2216.
3. Compaction - Modified Proctor ASTM D 1557-91.

### B. Backfill for Trench:

1. Classification - ASTM D 2487.
2. Compaction - Modified Proctor ASTM D 1557-91.
3. Field Density Test - ASTM 1556-82; D 2937-83, D 2922-81 (as approved by Engineer).

### C. Structural Fill and Backfill:

1. Classification - ASTM D 2487.
2. Attenberg Limits - PlastiOwner Index and Liquid Limit ASTM D 4318.

3. Compaction - Modified Proctor ASTM D 1557-91.
4. Physical Properties - ASTM D 854, D 2216.
5. Field Density Test - ASTM D 1556-82, D 2937-83, D 2922-81 (as approved by Engineer).

D. Controlled Fills:

1. Classification - ASTM D 2487.
2. Physical Properties - ASTM D 854, D 2216.
3. Compaction - Modified Proctor ASTM D 1557-91.
4. CBR - ASTM D 1883 (R-Value - ASTM 2844).
5. Field Density Test - ASTM D 1556-82, D 2937-83, D 2922-81 (as approved by Engineer).

E. Earth Embankments and Berms:

1. Classification - ASTM D 2487.
2. Physical Properties - ASTM D 854, D 2216.
3. Compaction - Modified Proctor ASTM D 1557-91
4. CBR - ASTM D 1883.
5. Field Density Test - ASTM D 1556-82, D 2937-83, D 2922-81 (as approved by Engineer).

F. Borrow:

1. Classification - ASTM D 2487.
2. Other properties - as determined by requirements at point of use.

G. Pipe Trenches:

1. Classification - ASTM D 2487.
2. Physical Properties - ASTM D 854, D 2216.

3. Compaction - Modified Proctor ASTM D 1557-91.
4. CBR - ASTM D 1883.
5. Field Density Test - ASTM D 1556-82, D 2937-83, D 2922-81 (as approved by Engineer).

#### 1.10 COMPACTION

The maximum dry density, optimum moisture content and field density of each soil type used in the controlled compacted fill shall be determined as stated in Section 1.09 above.

#### 1.11 INSPECTION

Observation and compaction tests shall be obtained by the Geotechnical Consultant engaged during the filling and compacting operations.

The Geotechnical Consultant shall be required to be present at the site as needed for several work activities and conduct intermittent testing for other work activities. The following chart indicates the earthwork items which will require full time or intermittent geotechnical testing.

<u>ITEM NO.</u>	<u>ITEM</u>	<u>GEOTECHNICAL TESTING</u>
1.	Installation of Granular Sand for Water Pipelines.	Intermittent Testing
2.	Installation of Backfill Native Material for Water Pipelines.	Intermittent Testing

#### 1.12 GUARANTEE

Work required by this Section shall be subject to the guarantee requirements stated in the Conditions of the Contract and included in the Performance/Maintenance Bond.



## PART 2 - PRODUCTS

### 2.01 MATERIALS

- A. Controlled Fill Material: Materials for controlled fill shall consist of any material imported or excavated from the *cut areas* that, in the opinion of the Engineer, is appropriate for use in constructing fills. The material shall contain no rocks or hard lumps greater than 12 inches in size and shall contain at least 40 percent of material smaller than ¾-inch in size. Materials greater than 6 inches in size shall be placed by the Contractor in windrows on a clean, overexcavated or unyielding compacted fill or firm natural ground surface. Select native or imported granular soil (sand equivalent greater than 30) shall be placed and thoroughly flooded over and around all windrowed rock, such that voids are filled. Windrows of oversize material should be staggered so that successive strata of oversized material are not in the same vertical plane. No nesting or rocks shall be permitted. No material of a perishable, spongy, or otherwise of an improper nature shall be used in filling.

Material placed within 24 inches of rough grade shall be select material that contains no rocks or hard lumps greater than 6 inches in size and that swells less than 3 percent when compacted as hereinafter specified for compacted fill and when subjected to an axial pressure of 160 PSF, if not specified in the Geotechnical report.

Representative samples of material to be used for fill shall be tested in the laboratory by the Geotechnical Engineer in order to determine the maximum density, optimum moisture content, sand equivalent and classification of the soil. In addition, the Geotechnical Engineer shall determine the approximate bearing value of a recompacted saturated sample by direct shear tests or other tests applicable to the particular soil.

- B. Structural Fill Material: Materials shall consist of crushed rocks, Class 2 Base, granular sand, decomposed granite (crusher fines) or fine gravel either imported or manufactured from excavated onsite rocky material.

The crushed aggregate, granular sand, decomposed granite (crusher fines) or fine gravel shall be uniformly graded. The following gradations shall apply:

1. Granular Sand:

Clean granular sand free of clay, shale and deleterious material. Sand shall be compacted to 95 percent of maximum density at optimum water content per ASTM D 1557 unless otherwise noted on the Plans. The material shall conform to a sand equivalent of 30 or greater. The maximum amount of material passing the Number 200 sieve shall be 5 percent. The sand shall conform to the following gradation percentages:

<u>SIEVE SIZE</u>	<u>GRANULAR SAND</u> <u>% PASSING</u>
3/8"	100
No. 4	98-90
No. 8	90-75
No. 10	75-60
No. 16	60-50
No. 30	50-38
No. 40	38-29
No. 50	29-19
No. 100	19-7
No. 200	5-0

The Contractor shall supply a 5-gallon sample of sand material to the material testing laboratory within five (5) days after the Notice to Proceed is issued. The gradation, sand equivalent and maximum density of the sand material shall be determined. The test results shall be forwarded to the Engineer. The cost of testing shall be incurred by the Contractor. The gradation of the granular sand shall be determined and the test results forwarded to the Engineer prior to the delivery of the granular sand material to the Site. Prior to the placement of sand the native subbase grade shall be checked and approved by the Engineer.

Crusher fines shall be allowed to be utilized in lieu of sand if approved by the Engineer.

2. Crusher Fines:

Crusher fines shall consist of decomposed granite indigenous to the Imperial Valley. Crusher fines utilized for this project shall conform to the following gradation requirements:

<u>SIEVE SIZE</u>	<u>PERCENT PASSING</u>
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5/8"	100
No. 4	80-100
No. 8	50-85
No. 30	30-50
No. 200	4-15

The sand equivalent shall be 20 or greater.

The Contractor shall supply a five-gallon sample of crusher fines material to the material testing laboratory within five (5) days after the Notice to Proceed is issued. The Gradation and Maximum Density of the crusher fines material shall be determined. The test results shall be forwarded to the Engineer for approval prior to the delivery of the material to the Site. The cost of the testing shall be incurred by the Contractor.

3. Fine Gravel:

Clean fine gravel free of clay, shale and deleterious material. Fine gravel shall be compacted with a plate compactor with one pass in maximum 1 foot lifts. Additional lifts shall not be added until previous lifts shall have been passed over by the plate compactor. The maximum amount of material passing the ¼" Sieve shall be 2 percent. The fine gravel shall conform to the following gradation percentages:

<u>SIEVE SIZE</u>	<u>PERCENT PASSING</u>
3/8"	100
1/4"	0-2

The Contractor shall supply a five-gallon sample of fine gravel material to the material testing laboratory within five (5) days after the Notice to Proceed is issued. The Gradation and Maximum Density of the fine gravel material shall be determined. The test results shall be forwarded to the Engineer for approval prior to the delivery of the material to the Site. The cost of the testing shall be incurred by the Contractor.

4. Class 2 Base:

The Class 2 Base material shall conform to Caltrans Section 26, Latest Edition, for ¾-inch maximum base material. The gradation requirements are as follows:

SIEVE SIZE

CLASS 2 BASE  
% PASSING

1"	100
3/4"	87-100
No. 4	30-65
No. 30	5-35
No. 200	0-12

The sand equivalent shall be 25 or greater. An angular aggregate is to be used. Class 2 Base material shall be compacted to 95 percent of maximum density according to ASTM D 1557, unless otherwise noted on the Plans or Details. The tolerance for the Class 2 Base between design subgrade elevation and actual subgrade elevation as constructed in the field shall be plus or minus 0.02 feet as referenced from the design subgrade. Prior to the placement of Class 2 Base, the native subbase grade shall be checked and approved by the Engineer. The native subbase grade shall be within plus or minus 0.05 feet of native subbase design grade prior to the placement of Class 2 Base.

The Contractor shall supply a 5-gallon sample of the Class 2 Base to the material testing laboratory within four (4) days of the Notice to Proceed. The material shall be delivered to the testing laboratory to determine the maximum density, gradation, R-value, sand equivalent and durability index of the Class 2 Base. A copy of the test results shall be forwarded to the Engineer by the Geotechnical Consultant for review. The gradation of the Class 2 Base shall be determined and the test results forwarded to the Engineer for approval prior to the delivery of the Class 2 Base material to the Site.

- C. Structural Backfill Material: Structural Backfill Material shall consist of the same material listed with the Structural Fill Material item above.
- D. Special Crushed Rock Bedding and Structure Foundation: When groundwater is encountered in the excavation and/or where indicated on the Plans, the material in the bottom of the trench or excavation shall be removed to a depth directed by the Geotechnical Engineer and replaced with 3/4-inch maximum crushed rock bedding or 1" round rock bedding. The rock beddings shall be installed per these Specifications. The 3/4-inch maximum crushed rock and 1" round rock materials shall be approved by the Engineer before use.

The bottom and sidewalls of the trench shall be covered with a geotextile. The geotextile fabric shall extend to the top of the pipe zone material on both sides of the trench excavation, and cover the top of the crushed rock and or 1-inch round rock.

1. 3/4-Inch Maximum Crushed Rock

Crushed rock shall be the product of crushing rock or gravel. Fifty percent (50%) of the particles by weight retained on a 3/8-inch sieve shall have their entire surface area composed of faces resulting from fracture due to mechanical crushing. Not over 5% shall be particles that show no faces resulting from crushing. Less than 10% of the particles that pass the 3/8-inch sieve and are retained on the No. 4 sieve shall be waterworn particles. Gravel shall not be added to the crushed rock. Crushed rock (3/4") shall have the following gradation:

<u>SIEVE SIZES</u>	<u>3/4-INCH MAX. CRUSHED ROCK % PASSING</u>
1"	100
3/4"	90-100
1/2"	30-60
3/8"	0-20
No. 4	0-5
No. 8	-

The 3/4-inch maximum crushed rock shall be compacted with a plate compactor in one pass in maximum 1 foot lifts. Additional lifts shall not be added until previous lifts shall have been passed over by the plate compactor.

The Contractor shall supply a five-gallon sample of the 3/4-inch maximum crushed rock material to the material testing laboratory within four (4) days of the Notice to Proceed. The Gradation and Sand equivalent of the crushed rock shall be determined. The tests results shall be forwarded to the Engineer for approval prior to the delivery of the material to the Site. The cost of the testing shall be incurred by the Contractor.

2. 1" Round Rock

The 1-inch round rock material shall conform to the following gradation requirements:

<u>SIEVE SIZES</u>	<u>1-INCH ROUND ROCK % PASSING</u>
1-1/2"	100
1"	96
3/4"	79
1/2"	25
3/8"	1

The 1-inch round rock shall be compacted with a plate compactor in one pass in maximum 1 foot lifts. Additional lifts shall not be added until previous lifts shall have been passed over by the plate compactor.

The Contractor shall supply a five-gallon sample of the 1-inch round rock material to the material testing laboratory within four (4) days of the Notice to Proceed. The Gradation of the round rock shall be determined. The tests results shall be forwarded to the Engineer for approval prior to the delivery of the material to the Site. The cost of the testing shall be incurred by the Contractor.

- E. 3 Sack Slurry Cement Backfill: Slurry cement backfill must be a fluid workable mixture of aggregate, cement, and water. Cement must comply with Section 90-1.02B(2) of the 2010 Caltrans Standard Specifications except testing is not required. Water must be free from oil, salts, and other impurities that adversely affect the backfill. Aggregate must be one of the following:

1. Commercial-quality concrete sand
2. Excavated or imported material in any combination, free of organic material and other deleterious substances and complying with the grading requirements shown in the following table:

<u>SIEVE SIZES</u>	<u>% PASSING</u>
1-1/2"	100
1"	80-100
3/4"	60-100

3/8"	50-100
No. 4	40-80
No. 100	10-40

Proportion slurry cement backfill by weight or volume. Use at least 282 pounds of cement per cubic yard. Use sufficient water to produce a fluid workable mix that flows and can be pumped without segregation during placement.

Mix materials thoroughly by machine. Use a pugmill, rotary drum, or other authorized mixer. Mix until cement and water are thoroughly dispersed.

You may use slurry cement backfill as structure backfill for pipe culverts.

### PART 3 - EXECUTION

#### 3.01 GENERAL

The Work performed under this Specification shall be constructed to the lines, grades, elevations, slopes and cross-sections indicated on the Plans, specified herein, and/or directed by the Owner. Slopes, graded surfaces, and drainage features shall present a neat uniform appearance upon completion of the Work.

It shall be the Contractor's responsibility (1) to maintain adequate safety measures and working conditions; and (2) to take all measures necessary during the performance of the Work to protect the entire project area and adjacent properties which would be affected by this Work from storm damage, flood hazard, caving of trenches and embankments, and sloughing of material, until final acceptance by the Owner. It shall be the Contractor's responsibility to maintain completed areas until the entire project area is in satisfactory compliance with the job specification.

Utility lines and structures indicated on the Plans which are to remain in service shall be protected by the Contractor from any damage as a result of his/her operation. Where utility lines or structures not shown on the Plans are encountered, the Contractor shall report them to the Owner before proceeding with the Work. The Contractor shall bear the cost of repair or replacement of any utility lines or structures which are broken or damaged by his/her operations.

### 3.02 REMOVALS, CLEARING AND GRUBBING

- A. Clearing: Clearing consists of the complete removal of objectionable materials and obstructions above and below the ground surface including tree stumps, brush, grass, vegetative matter and other objectionable materials within the project limits. All brush and organic material shall be removed before placing any earth fills. It shall be the Contractor's responsibility to save and protect all trees that lie outside the construction area.
- B. Grubbing: Grubbing consists of the complete removal of stumps, including tap roots or lateral roots 1-1/2 inches or more in diameter, and the removal of brush, grass or weeds to depths below the natural ground as specified herein. Stumps shall be grubbed to a depth of 3 feet and grass or weeds shall be grubbed to a depth of 6 inches below the natural ground surface, or to the depths as determined in the field by the Engineer at the time of construction.
- C. Protection: Existing items not designated to be demolished or removed shall be protected from damage. Any such item damaged by the Contractor shall be restored or replaced immediately at the Contractor's expense.
- D. Debris and Waste Material: All debris and waste material resulting from demolition, clearing and grubbing shall be removed from the site and disposed of by the Contractor.

### 3.03 DUST CONTROL

The Contractor shall take all steps possible to prevent and reduce dust arising from the construction activity. Contractor shall prepare a dust control plan per San Diego County Air Pollution Control District requirements.

### 3.04 CARE OF DRAINAGE WATER

Contractor shall take care of drainage water from the construction operations, and of stormwater and/or wastewater reaching the construction area from any source, so that damage is not incurred to the excavation, pipe or structures. The Contractor shall be responsible for any damages to persons or property on or off the Site due to such drainage water or to the interruption or diversion of such stormwater or wastewater on account of his/her operation.



Such grading shall be done as may be necessary to prevent surface water from flowing into excavations, and any water accumulating therein shall be removed by pumping or by other reviewed methods.

Protection of the site during construction shall be the responsibility of the Contractor. Completion of a portion of the project shall not preclude that portion or adjacent areas from the requirements for site protection until such time as the entire project is complete.

### 3.05 EXCAVATION

- A. General: The Contractor shall perform all excavation necessary or required as illustrated on the Plans. The excavation shall include the removal and disposal of all earth materials of whatever nature encountered, which shall include both rock excavation and common excavation when both are present, and shall include the furnishing, placing and maintaining of shoring and bracing necessary to safely support the sides of the excavations. The Work shall also include all pumping, ditching and other required methods for the removal or exclusion of water. See Technical Specifications Section 02150 Sheeting, Shoring and Bracing, respectively.

### 3.06 CONTROLLED FILL

- A. General: Controlled fill shall consist of native material, granular sand, Class 2 Base, crusher fines or other material as indicated on the Plans. The subbase grade shall be excavated to within plus or minus 0.05 feet of design grade prior to the placement of controlled fill. The design subbase grade shall be field verified and approved by the Engineer prior to the placement of the controlled fill material. The Engineer shall determine the number and location of points to check for the subbase grade elevation compliance.

If the controlled fill consists of native material it shall be placed in maximum 1-foot lifts and compacted to 90 percent of maximum density at optimum water content per ASTM D 1557. Additional native soil lifts shall not be placed until previous lifts have attained the specified compaction requirement and are approved by both the on-site geotechnical representative and the Engineer.

Granular sand, Class 2 Base and crusher fine controlled fill material shall be placed in maximum 8-inch lifts and compacted to 95 percent of maximum density at optimum water content per ASTM D 1557. Additional

granular sand, Class 2 Base or crusher fine lifts shall not be placed until previous lifts have attained the specified compaction requirement and are approved by both the on-site geotechnical representative and the Engineer.

- B. Preparing Areas To Be Filled: All vegetation and objectionable material shall be removed by the Contractor from the surface upon which the fill is to be placed and any loose and porous soils shall be removed or compacted to a depth specified by the Geotechnical Engineer. The surface shall then be plowed or scarified to a minimum depth of 6 inches until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

When placing fill in horizontal lifts adjacent to areas sloping steeper than 5:1 (horizontal:vertical), horizontal keys and vertical benches shall be excavated into the adjacent slope area. Keying and benching shall be sufficient to provide at least 6-foot wide benches and a minimum of 4 feet vertical bench height within the firm natural ground, firm bedrock or engineered compacted fill. No compacted fill shall be placed in an area subsequent to keying and benching until the area has been reviewed by the Geotechnical Engineer. Material generated by the benching operation shall be moved sufficiently away from the bench area to allow for the review of the horizontal bench prior to placement of fill.

After the foundation for the fill has been cleared, plowed or scarified, it shall be disced or bladed by the Contractor until it is uniform and free from large clods, brought to the proper moisture content and compacted as specified.

- C. Placing, Spreading and Compacting Fill Material: The fill material shall be placed by the Contractor in thin layers that when compacted shall not exceed 8 inches for granular sand, Class 2 Base and crusher fines and 12 inches deep for native material. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to obtain uniformity of material in each layer.

When the moisture content of the fill material is below that required by the Geotechnical Engineer, water shall be added by the Contractor until the moisture content is as required for the specified compaction.

When the moisture content of the fill material is above that required by the Geotechnical Engineer, the fill material shall be aerated by the Contractor by blading, mixing, or other satisfactory methods until the moisture content is as required for the specified compaction.

After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted by the Contractor to the specified density. Compaction shall be accomplished by sheepsfoot rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers or other types of acceptable compacting equipment. Equipment shall be of such design that it shall be able to compact the fill to the specified density. Compaction shall be continuous over the entire area and the equipment shall make sufficient passes over the material to ensure that the desired density has been obtained.

Compacted fill slopes shall be overbuilt and cut back to grade, exposing the firm, compacted inner core. The slopes shall be overbuilt a minimum of five feet (5'). If the desired compaction is not achieved, the existing slope shall be overexcavated and reconstructed. The amount of overbuilding shall be increased until the desired compaction is achieved on the slope. The Contractor shall provide thorough mechanical compaction to the outer edge of the overbuilt slope surface. There shall be no excessive loose soil on the slopes.

The Contractor shall provide and maintain adequate erosion control facilities during the construction of the fill areas. The erosion control facilities shall be maintained in optimum condition until the permanent drainage system and vegetation is complete. The facilities shall be inspected following significant rainfall, repairs made and excess sediment removed. It shall be the Contractor's responsibility to prevent the discharge of sediment off-site or to adjacent watercourses.

### 3.07. STRUCTURE FILL AND STRUCTURE BACKFILL MATERIAL

Not Applicable.

### 3.08 SUITABLE MATERIAL AND WASTE EXCAVATION

- A. General: Suitable material or waste excavation consists of native material. The subbase grade shall be excavated to within plus or minus 0.05 feet of design grade prior to the placement of suitable material or waste excavation material. The design subbase grade shall be field verified and approved by the Engineer prior to the placement of the suitable material or waste excavation material. The Engineer shall determine the number and location of points to check for the subbase grade elevation compliance.

The suitable material or waste excavation material shall be placed in maximum 1-foot lifts and compacted to 90 percent of maximum density at optimum water content per ASTM D 1557. Additional suitable material or waste excavation material lifts shall not be placed until previous lifts have attained the specified compaction requirement and are approved by both the on-site geotechnical representative and the Engineer.

- B. Placing, Spreading and Compacting Suitable Material and Waste Excavation Material: The suitable material and waste excavation material shall be placed by the Contractor in 1-foot lifts. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to obtain uniformity of material in each layer.

When the moisture content of the fill material is below that required by the Geotechnical Engineer, water shall be added by the Contractor until the moisture content is as required for the specified compaction.

When the moisture content of the fill material is above that required by the Geotechnical Engineer, the fill material shall be aerated by the Contractor by blading, mixing, or other satisfactory methods until the moisture content is as required for the specified compaction.

After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted by the Contractor to the specified density. Compaction shall be accomplished by sheepfoot rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers or other types of acceptable compacting equipment. Equipment shall be of such design that it shall be able to compact the fill to the specified density. Compaction shall be continuous over the entire area and the equipment shall make sufficient passes over the material to ensure that the desired density has been obtained.

Compacted fill slopes shall be overbuilt and cut back to grade, exposing the firm, compacted inner core. The slopes shall be overbuilt a minimum of five feet (5'). If the desired compaction is not achieved, the existing slope shall be overexcavated and reconstructed. The amount of overbuilding shall be increased until the desired compaction is achieved on the slope. The Contractor shall provide thorough mechanical compaction to the outer edge of the overbuilt slope surface. There shall be no excessive loose soil on the slopes.

The Contractor shall provide and maintain adequate erosion control facilities during the construction of the fill areas. The erosion control

facilities shall be maintained in optimum condition until the permanent drainage system and vegetation is complete. The facilities shall be inspected following significant rainfall, repairs made and excess sediment removed. It shall be the Contractor's responsibility to prevent the discharge of sediment off-site or to adjacent watercourses.

### 3.09 ESTABLISHMENT OF SUBBASE GRADE, SUBGRADE OR FINISH GRADE

Finish Grade is defined as the finish surface grade. For instance, the top of an A.C. or P.C.C. paved surface is referred to as finish grade.

Subgrade is defined as the grade of the material beneath the finish surface. For instance, the top of Class 2 Base grade beneath an A.C. or P.C.C. paved surface is referred to as subgrade.

Subbase is defined as the grade of the material beneath the base material. For instance, the top of native material beneath the Class 2 Base subgrade material of an A.C. or P.C.C. paved roadway is the subbase grade.

Finish grade surfaces are to be graded to within plus or minus 0.02 feet from design grade as illustrated on the Plans. The Engineer shall obtain elevations across finish grade surfaces at locations determined by the Engineer prior to accepting and approving the finish grade surfaces. The Contractor shall rework areas not conforming to the finish surface grade tolerance as required. Work items to occur after the establishment of finish grade shall not occur until the Engineer has approved the finish grade.

Subgrade surfaces are to be graded to within plus or minus 0.02 feet from design grade as illustrated on the Plans. The Engineer shall obtain elevations across the subgrade surfaces at locations determined by the Engineer prior to accepting and approving the subgrade surfaces. The Contractor shall rework areas not conforming to the subgrade tolerance as required. Work items to occur after the establishment of subgrade shall not occur until the Engineer has approved the finish grade.

Subbase surfaces are to be graded to within plus or minus 0.05 feet of subbase design grade as illustrated on the Plans. The Engineer shall obtain elevations across the subbase surfaces at locations determined by the Engineer prior to accepting and approving the subbase surfaces. The Contractor shall rework areas not conforming to the subbase design grade tolerance as required. Work items to occur after the establishment of subbase grade shall not occur until the Engineer has approved the subbase grade.

### 3.10 COMPACTION TEST SCHEDULE

The following **compaction test(s)** shall apply to this project:

<u>NO.</u>	<u>ITEM</u>	<u>FREQUENCY</u>
1	Granular sand installed within the pipe zone	One (1) test at 95 % every 150 l.f. of each 12" lift
2	Native material installed within the pipe zone	One (1) test at 90 % (as specified on the Plans) every 150 l.f. of each 12" lift
3	Class 2 Base beneath Asphalt Pavement installation area	One (1) test at 95 % for every 2,500 s.f. of each 8" lift

### 3.11. CLEAN-UP

Upon completion of Work in this Section, all rubbish and debris shall be removed from the site. All construction equipment and implements of service shall be removed and the entire area involved shall be left in a clean, neat and acceptable condition.

END OF SECTION 02200

## SECTION 02221 - TRENCHING, BACKFILLING AND COMPACTING

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

4. Requirements specified in the Technical and Special Conditions form a part of this Section. The Work of this Section includes all labor, machinery, construction equipment and appliances to perform in a professional manner all trench excavation and backfill work illustrated on the Plans and herein specified.

A. Principal items included:

1. Trench excavation, backfill and compaction.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 02150 – Sheeting, Shoring and Bracing

B. Piping & Conduit Work specified in other Sections

#### 1.03 SAFETY

The Contractor shall be familiarized with, and shall at all times conform to all applicable regulations of “Excavations, Trenching, and Shoring” of CALOSHA Safety and Health Regulations for Construction, “General Construction Safety Orders” and “Trench Construction Safety Orders” of the State of California, Department of Industrial Relations, Division of Occupational Health and Safety.

#### 1.04 GEOTECHNICAL TESTING

The Contractor shall provide testing by a Geotechnical Engineer. In this regard, a Geotechnical Engineer shall perform inspections of the removal and replacement of unsuitable materials, all excavations, and the placement and compaction of all fills and backfills within the limits of earthwork on this Project. Costs for all such inspections and tests will be paid by the Contractor, and Contractor shall bear the cost of retest and re-inspection of reworked fills and backfills due to compaction test failure.

#### 1.05 REQUIREMENTS

A. General:

1. The Work performed under this Specification shall be constructed to the lines, grades, elevations, slopes and cross-sections indicated on the Plans, specified herein, and/or directed by the Engineer in writing. Slopes, graded surfaces, and drainage features shall present a neat, uniform appearance upon completion of the Work.
2. It shall be the Contractor's responsibility (1) to maintain adequate safety measures and working conditions; and (2) to take all measures necessary during the performance of the Work to protect the entire project area and adjacent properties which would be affected by this Work from storm damage, flood hazard, caving of trenches, caving of excavations, and embankments, and sloughing of material, until final acceptance by the Owner. It shall be the Contractor's responsibility to maintain completed areas in good condition until the entire project area is in satisfactory compliance with the Project Specifications.
3. Contractor shall be responsible for the excavation and disposition of unsuitable or surplus material by approved means of conveyance away from the working area.

B. Protection of Existing Utilities:

1. Utilities: Unless otherwise illustrated on the Plans or stated in the Specifications, all utilities, both underground or overhead, shall be maintained in continuous service throughout the entire contract period. The Contractor shall be responsible and liable for any damages to or interruption of service caused by the construction.

If the Contractor desires to simplify his/her operation by temporarily or permanently relocating or shutting down any utility or appurtenance, he/she shall make the necessary arrangements, agreements and approvals with the utility purveyor, Owner and Engineer and shall be completely responsible for all costs concerned with the relocation or shutdown and reconstruction. All property shall be reconstructed in its original or new location as soon as possible and to a condition at least as good as its previous condition. This cycle of relocation or shutdown and reconstruction shall be subject to inspection and approval by the Engineer, Owner and the utility purveyor.

The Contractor shall be entirely responsible for safeguarding and maintaining all conflicting utilities that are illustrated on the Plans.



This includes overhead wires and cables and their supporting poles whether they are inside or outside of the open trench. If, in the course of work, a conflicting utility line that was not illustrated on the Plans is discovered, it shall be brought to the immediate attention of the Engineer for a determination regarding alternatives to the conflict.

2. Building, Foundations and Structures: Where trenches are located adjacent to buildings, foundations and structures, the Contractor shall take all necessary precaution against damage to them. The Contractor shall be liable for any damage caused by the construction except where authorized in the Special Conditions or in writing by the Engineer. Water settling of backfill material in trenches adjacent to structures will not be permitted.
3. Electronic, Telephonic, Telegraphic, Electrical, Oil and Gas Lines: These underground facilities shall be adequately supported by the Contractor. Support for plastic pipe shall be continuous along the bottom of the pipe. Support for metal pipe and electrical conduit may be continuous or nylon webbing may be used for suspension at no greater than ten foot (10') intervals. The Contractor shall avoid damaging the plastic pipe, pipe ways or conduits during trench backfilling and during foundation and bedding placement.

## PART 2 - PRODUCTS

### 2.01 MATERIALS

- A. Granular Sand Material: Granular sand material shall consist of imported granular sand complying with Section 02200, of the specifications.
- B. Crusher Fines: Crusher fines material shall consist of imported decomposed granite complying with Section 02200, of the specifications.
- C. Class 2 Base Material: Class 2 Base material shall comply with Section 02200, of the Specifications.
- D. Crushed Rock Bedding: Crushed rock bedding shall consist of imported rock complying with Section 02200, of the Specifications.
- E. 1-inch Round Rock: 1-inch Round Rock material shall consist of import rock material complying with Section 02200, of the Specifications.
- F. 3 Sack Cement Slurry: 3 Sack Cement Slurry shall comply with Section

02200, of the Specifications

- H. Pipelines: Use materials shown on the Plans and as specified in other pertinent Sections of the Specifications.

### PART 3 - EXECUTION

#### 3.01 TRENCH EXCAVATION

- A. Excavation for Trenches: Shall include the removal of all material of any nature for the installation of the pipe or facility and shall include the construction of trench shoring and stabilization measures, timbering and all necessary installations for dewatering.
- B. Minimum Width of Trench: The minimum width of pipe trenches, measured at the crown of the pipe, shall not be less than 12 inches greater than the exterior diameter of the pipe, exclusive of bells and the minimum base width of such trench shall be not less than 12 inches greater than the exterior diameter of the pipe, exclusive of special structures or connections, and such minimum width shall be exclusive of all trench supports.
- C. Maximum Width of Trench: The maximum allowable width of trench for all pipelines measured at the top of the pipe shall be the outside diameter of the pipe (exclusive of bells or collars) plus 16 inches, and such maximum shall be inclusive of all timbers. A trench wider than the outside diameter plus 16 inches may be used without special bedding if the Contractor, at his/her expense, furnishes pipe of the required strength to carry the additional trench load. Such modifications shall be submitted for the Engineer's review. Whenever such maximum allowable width of trench is exceeded for any reason, except as provided for on the Plans or in the Specifications, or by the written direction of the Engineer, the Engineer may, at its discretion, require that the Contractor, at his/her own expense for all labor and materials, cradle the pipe in 5,000 PSI compressive strength concrete, or other approved pipe bedding.
- D. Maximum Length of Open Trench: Except by special permission by the Engineer only that amount of open trench shall be permitted, which shall allow for that amount of pipeline construction, including excavation, construction of pipeline, and backfill in any one location, which can be completed in one day; however, maximum length of open trench shall never exceed 300 feet. This length includes open excavation, pipe laying and appurtenant construction and backfill which has not been temporarily

resurfaced.

E. Trench Side Slopes:

1. Temporary trench excavations shall at all times conform to the safety requirements hereinbefore specified in Section entitled "Safety".
2. Loose cobbles or boulders shall be removed from the sides of the trenches before allowing workmen into the excavation, or the trench slopes must be protected with screening or other methods. Trench side slopes shall be kept moist during construction to prevent local sloughing and raveling. Surcharge loads due to construction equipment shall not be permitted within 10 feet of the top of any excavated slope.
3. If the Contractor elects to shore or otherwise stabilize the trench sides, he shall file with the Engineer copies of drawings for same prepared, signed and stamped by a Civil Engineer duly registered in the State of California before commencing excavation.

F. Excess Trench Excavation: If any trench, through the neglect of the Contractor, is excavated below the bottom grade required, it shall be refilled to the bottom grade, at the Contractor's expense for all labor and material, with granular sand material compacted to a firm stable foundation.

3.02 BRACING TRENCHES

The sides of the trenches shall be supported with plank sheeting and bracing in such a manner as to prevent caving of the sides of the trench. Space left by withdrawal of sheeting or shoring shall be filled completely with dry granular material blown or rammed in place. Trench shoring shall be completed per the recommendations of the OSHA Standards.

3.03 PIPING BEDDING

The Contractor shall excavate to four inches (4") below the bells or couplings for the full width of the trench and shall place four inches (4") of granular material upon which the pipe is to be laid, unless indicated otherwise on the Plans. Construct pipe bedding as indicated on the Plans.

At pipe subgrade, if foundation soil in trench is soft, wet, spongy, unstable or does not afford solid foundation for pipe, the Contractor shall excavate as

directed by the Engineer and provide stable base by excavating any unsuitable material 18" minimum below the subgrade base or as the Engineer determines is necessary for placement of pipe bedding. A filter fabric shall be placed in the trench bottom and along the trench sidewalls in the pipe zone to the top of the pipe zone material. A crushed rock material shall be placed at the bottom of the trench and sidewalls of the pipe to a point 1 foot above the pipe. The crushed rock material shall be hand tamped in 16-inch lifts along the sidewalls. The crushed rock shall be compacted with a plate compactor in minimum 6 inch lifts beneath the pipe and over the top of the pipe.

Where rock is encountered in the trench, the Contractor shall excavate to a minimum 18 inch depth below subgrade or as the Engineer determines is necessary, and shall construct a base by placing crushed rock bedding upon which a subgrade can be prepared.

Before any pipe is lowered in place, the trench bottom shall be prepared so that each pipe shall be supported for the full length of the barrel with full bearing on the bottom segment of the pipe equal to a minimum of one-half (1/2) of the pipe OD, and a width equal to the trench width. All adjustments in line and grade shall be made by scraping away or filling and tamping in under the barrel of the pipe. Wedging or blocking is not permitted.

The pipe bedding shall be compacted to a minimum of 90 or 95 percent relative compaction as hereinafter specified or as required by the Plans.

### 3.04 BACKFILLING PIPE TRENCHES

A. Backfilling Pipe Zone: Backfill material for the pipe zone shall consist of imported granular material or three sack cement/sand slurry as required by the Plans. Place material in the trench simultaneously on each side of the pipe for the full width of the trench and the depth of the pipe zone in layers 6 inches in depth. Each layer shall be thoroughly compacted by tamping. In all cases, backfilling of the pipe zone must be accomplished by hand. Particular attention shall be given to underside of the pipe and fittings to provide a firm support along the full length of the pipe. The pipe zone shall be considered to extend 12 inches above the top of the pipe unless otherwise illustrated on the Plans, and shall be compacted in the trench to a relative compaction of not less than 90 or 95 percent of maximum density per ASTM D 1557 as illustrated on the Plans. Care shall be taken not to damage pipe and fittings or special coatings on the pipe and fittings.

1. Use of material other than those specified shall be reviewed by the Engineer prior to use. The Contractor shall bear all cost of removal

of rejected material, its hauling to an authorized disposal site, and cost of providing required material to complete the bedding and backfilling.

- B. Backfilling Pipe Trench: After the pipe has been laid in the trench and has been inspected and approved, and backfilling in the pipe zone is complete and compacted, the remainder of the trench may be backfilled. The backfill material shall be granular sand or Class 2 Base or 3 sack cement slurry as specified in Paragraph 2.01 or native material and illustrated on the Plans. Care shall be taken to ensure that no voids remain under, around or near the pipe.
1. The Contractor shall incur the expense to remove and dispose of the excess trench excavation material displaced by the trench import material and include the costs in the bid.
- C. Compaction: The maximum dry density and optimum moisture content of each soil type used in the controlled compacted fill shall be determined by ASTM D 1557-91. Field density tests shall be determined in accordance with ASTM D 1556-82, ASTM D 2937-83 and ASTM D 2922-81.
- D. Placement and Compaction of Trench Backfill: The placement and compaction of all trench backfill shall be as follows:
1. Mechanically Compacted Backfill: With approval of the Engineer, backfill shall be mechanically compacted by means of tamping rollers, sheepfoot rollers, pneumatic tire rollers, vibrating rollers, or other mechanical tampers to 85 or 90 or 95 percent relative compaction as illustrated by the Plans. Impact-type pavement breakers (stompers or hydro-hammers) shall not be permitted over any pipe. Permission to use specific compaction equipment shall not be construed as guaranteeing or implying that the use of such equipment will not result in damage to adjacent ground, existing improvements or improvements installed under the Contract. The Contractor shall make his/her own determination in this regard. Backfill shall be placed in horizontal layers not exceeding eight inches (8"). Each layer shall be evenly spread, the moisture content brought to near optimum condition and then tamped or rolled until the specific relative compaction has been attained. Additional backfill lifts shall not be placed until previous lifts have been satisfactorily compacted and tested and approved by the Engineer.

### 3.05 WATER PIPELINE INSTALLATION REQUIREMENTS

- A. Depth of Pipe: Unless otherwise illustrated on the Plans, all pipelines shall have coverage of at least 36 inches between the top of the pipe and the finished surface. All new water pipeline elevations and locations illustrated on the Plans are intended to be exact and any change in alignment and grade shall be reviewed in accordance with the Contract Documents to the satisfaction of the Engineer. All force and gravity mains shall have 1 foot vertical clearance between themselves and all other utilities. At all water main, sewer and stormwater crossings, both gravity and force mains shall have 20 linear feet of concrete encasement centered at the crossing as required by the State of California Department of Health.
- B. Changes in Line and Grade: In the event obstructions not shown on the Plans, are encountered during the progress of the Work, which will require alterations to the Plans, the Engineer shall issue the necessary revisions to the Plans and order the necessary deviation from the line or grade. The Contractor shall not make any deviation from the specified line and grade without prior review and approval by the Engineer. Should any deviations in line and grade be permitted by the Engineer in order to reduce the amount of rock excavation or for other similar convenience to the Contractor, any additional costs for thrust blocks, valves, air and vacuum valve assemblies, blow-off assemblies, extra pipe footage, concrete, sewer structures, or other additional costs shall be borne by the Contractor.
1. Contractor shall include in his/her Bid provisions to cover any deviation from the invert grade shown on the Plans to facilitate the extra depth required to avoid possible conflicts between existing gravity pipelines and other utilities with new water, stormwater or sewer forcemains.

C. Pipe Installation:

All pipe and fittings, and accessories furnished by the Contractor shall be new material free from rust or corrosion. All piping and fittings shall be cleaned on the inside when installed and the Contractor shall take all necessary precautions to insure that the lines are kept free of any foreign matter and dirt until the work is completed. All pipes shall be carefully placed and supported at the proper lines and grades as shown on the Plans. Piping runs shown on the Plans shall be followed as closely as possible, except for minor adjustments as approved by the Engineer to avoid other piping or structural features. Bedding material shall first be placed so that the pipe is supported for the full length of the barrel with full

bearing on the bottom segment of the pipe. Hunching of the pipe shall not be allowed. Pipe will be carefully inspected in the field before and after laying. If any cause for rejection is discovered in a pipe after it has been laid, it shall be subject to rejection by the Engineer. Any corrective work shall be approved by the Engineer. Pipe shall be laid true to line and grade with uniform bearing under the full length of the barrel of the pipe. Suitable excavation shall be made to receive the bell or collar which shall not bear upon the subgrade or bedding. Any pipe which is not in true alignment or shows any undue settlement after laying shall be taken up and relaid at the Contractor's expense. Pipe shall be laid upgrade with the socket ends of the pipe upgrade unless otherwise authorized by the Engineer. Pipe sections shall be laid and joined in such a manner that the offset of the inside of the pipe at any joint will be held to a minimum at the invert. The vertical grade shall be  $\pm 0.04$  feet of the design elevations. In joining socket pipe, the spigot of each pipe shall be so seated in the socket of the adjacent pipe as to give a uniform annular space all around the pipe in the socket.

The following pipe installation items shall be required:

1. No pipe shall be laid which is damaged, cracked, checked or spalled or has any other defect deemed by the Engineer to make it unacceptable, and all such sections shall be permanently removed from the Work.
2. At all times when the Work of installing pipe is not in progress, all openings into the ends of the pipelines shall be kept tightly closed with suitable plywood or sheet metal bulkheads to prevent the entrance of animals and foreign materials and to prevent water from entering the pipe.
3. Keep the pipe trench free from water at all times and take all necessary precautions to prevent the pipe from floating due to water entering the trench from any sources. Any damage is the Contractor's full responsibility. Restore and replace the pipe to its specified conditions and grade if it is displaced due to floating.
4. All pipelines adjoining concrete structures (including manholes) shall have a flexible joint, such as sleeve transition couplings, within 36 inches from the face of such concrete structures. Flexible joints shall be installed on all pipe 4" and larger whether or not a flexible joint is illustrated on the Plans. Where the flexible joint is illustrated on the Plans, install the joint at the location indicated.

### 3.06 COMPACTION OF PIPE BEDDING AND BACKFILL

Unless specified in the Plans or Earthwork Specification (Section 02200), the following compaction test for piping shall be required.

- A. One (1) compaction test for the granular sand fill pipe bedding along each 150 lineal foot of water, sewer or stormwater pipe placed for each 1 foot lift of material installed.
- B. One (1) compaction test shall be obtained for each 1 foot lift of Class 2 Base material along each 150 foot section of water, sewer or stormwater pipeline installed.
- C. One (1) compaction test shall be required for each 1 foot of vertical sand fill material placed along each 150 feet of water, sewer or stormwater pipeline installed.
- D. One (1) compaction test shall be obtained for each 1 foot lift of native material along each 150 foot section of water, sewer or stormwater pipeline installed.

### 3.07 CLEAN-UP

Immediately upon completion of Work for this Section, all rubbish and debris shall be removed from the Site. All pipe trench areas shall be finish graded with a "blade" or "motor patrol". All construction equipment and implements of service shall be removed and the entire area involved shall be left in a neat, clean and acceptable condition.

END OF SECTION 02221



## SECTION 02640 - PVC PIPE

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

This section includes materials and installation of polyvinyl chloride (PVC) pipe and fittings with iron pipe size outside diameters for miscellaneous applications. Size range is 1/2- to 6- inch nominal size.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02200 - Earthwork
- B. Section 02221 - Trenching, Backfilling and Compacting
- C. Section 02666 – Pressure Pipeline Water Testing

#### 1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

##### A. Commercial Standards:

ASTM D 1784 and ASTM D 1785	Specifications for Polyvinyl Chloride (PVC) Plastic Pressure Pipe
ASTM D 3034	Specifications for Polyvinyl Chloride (PVC) Plastic Gravity Sewer Pipe
AWWA C900 and AWWA C 905	Specifications for Polyvinyl Chloride (PVC) Plastic Water Pressure Pipe
ASTM D 2321	Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe
NSF / ASNI 61	Drinking Water System Components – Health Effects

#### 1.04 CONTRACTOR SUBMITTALS

- A. Contractor shall submit copies of the manufacturer's product specifications according to the requirements of Section 01300 - Contractor Submittals.

## PART 2 - PRODUCTS

### 2.01 PVC (POLYVINYL CHLORIDE) PIPE

- A. PVC pipe shall be Schedule 40 or 80, Type I, Grade I (Class 12454-B), conforming to ASTM D 1784 and D 1785. Provide PVC pipe with the schedule as shown on the Drawings

### 2.02 NIPPLES

- 5. Short nipples shall be the same as the PVC pipe.

### 2.03 FITTINGS

Provide fittings that have the same schedule as the PVC pipe.

- A. Fittings shall be Schedule 40 conforming to ASTM D 2466 for socket-type.
- B. Fittings shall be Schedule 80 conforming to ASTM D 2464 for threaded type and ASTM D 2467 for socket type.

### 2.04 JOINTS

- A. Pipe and fitting joints shall be solvent welded except where threaded joints are required.
- B. Solvent cement for socket joints shall comply with ASTM D 2564 and F 656.

## 5) PART 3 - EXECUTION

### 3.01 INSTALLATION OF PIPE

- A. All pipe, fittings, etc., shall be carefully handling and protected against damage, impact shocks and free fall. All pipe handling equipment shall be acceptable to the Engineer. Pipe shall not be placed directly on rough ground, but shall be supported in a manner which will protect the pipe against injury whenever stored at the Site. All pipe damaged prior to Substantial Completion shall be repaired or replaced by the Contractor.
- B. The Contractor shall inspect each pipe and fitting prior to installation to ensure that there are no damaged portions of the pipe. Damaged pipe shall be replaced with new undamaged sections of pipe.
- C. Before placement of the pipe in the trench, each pipe or fitting shall be thoroughly cleaned of any foreign substance which may have collected

thereon and shall be kept clean at all times thereafter. For this purpose, the openings of all pipes and fittings in the trench shall be closed during any interruption to the Work. As pipe laying progresses, the Contractor shall keep the pipe interior free of all debris. The Contractor shall completely clean the interior of the pipe of all sand, dirt, rocks and any other debris following completion of pipe laying prior to testing, disinfecting and placing the completed pipeline in service.

- D. Pipe shall be laid directly on the imported bedding material. No blocking will be permitted and the bedding shall be such that it forms a continuous, solid bearing for the full length of the pipe. Bell holes shall be formed at the ends of the pipe to prevent joint loading at the bells or couplings.
- E. Where necessary to raise or lower the pipe grade due to unforeseen obstructions or other causes, the Engineer may change the alignment and/or the grades. Such change shall be made by the deflection of joints or by the use of additional fittings. However, in no case shall the deflection in the joint exceed the maximum deflection recommended by the pipe manufacturer.
- F. No pipe shall be installed upon a foundation into which frost has penetrated or any time that there is a danger of the formation of ice or penetration of frost at the bottom of the excavation. No pipe shall be laid unless it can be established that the trench will be backfilled before the formation of ice and frost occurs.
- G. Immediately before jointing bell and spigot pipe, both the bell and spigot end of the pipe shall be thoroughly cleaned and lubricated with an approved vegetable-based lubricant. The spigot end of the pipe section shall then be inserted into the bell of the previously laid joint and telescoped into its proper alignment. Tilting of the pipe to insert the spigot into the bell will not be permitted.
- H. Solvent-welded and heat-fused joints shall be carefully and thoroughly cleaned immediately before jointing the pipe. Particular care shall be taken in making solvent-welded joints to ensure a uniform, homogeneous and complete bond.
- I. Pipe installation shall conform with Technical Specification Section 02221 - Trenching, Backfilling and Compacting. If this installation of pipe section and Section 02221 conflict, the most stringent specification shall apply.

END OF SECTION 02640

## SECTION 02641 - PVC PRESSURE PIPE AWWA C900

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

This section includes materials, installation, and testing of PVC pressure pipe conforming to AWWA C900. Size range is 4- to 12-inch nominal pipe size.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02200 - Earthwork
- B. Section 02221 - Trenching, Backfilling and Compacting
- C. Section 02666 – Pressure Pipeline Water Testing
- D. Section 02670 – Disinfection of Potable Water Pipelines

#### 1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

##### A. Commercial Standards:

ASTM D 1784 and ASTM D 1785	Specifications for Polyvinyl Chloride (PVC) Plastic Pressure Pipe
ASTM D 3034	Specifications for Polyvinyl Chloride (PVC) Plastic Gravity Sewer Pipe
AWWA C900 and AWWA C 905	Specifications for Polyvinyl Chloride (PVC) Plastic Water Pressure Pipe
ASTM D 2321	Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe
NSF / ASNI 61	Drinking Water System Components – Health Effects

#### 1.04 CONTRACTOR SUBMITTALS

- A. Contractor shall submit copies of the manufacturer's product specifications

according to the requirements of Section 01300 - Contractor Submittals.

- B. Provide affidavit of compliance with AWWA C900.
- C. Submit manufacturer's literature on ductile iron fittings including dimensions, thickness, weight, coating, lining, and a statement of inspection and compliance with the acceptance tests of AWWA C110 or C153. Submit copy of report of pressure tests for qualifying the designs of all sizes and types of AWWA C153 fittings that are being used in the project. The pressure test shall demonstrate a minimum safety factor of three times the rated working pressure as described in AWWA C153, Section 5.5.
- D. Submit manufacturer's catalog data and descriptive literature for high deflection couplings, repair couplings, service saddles, restrained joints, tracer wire, marking tape, and miscellaneous piping materials.
- E. Submit restrained joint system installation instructions. Include bolt torque limitations and assembly tolerances.

#### 1.05 INSPECTIONS AND FIELD VERIFICATION

- A. The District Engineer or his authorized representative may inspect materials, productions, and testing at manufacturer's plant.
- B. Where new pipelines are to be connected to existing waterlines of the District, the Contractor shall verify in the field the location, elevation, pipe material, pipe outside diameter, and any other characteristics of the existing waterline before proceeding with the pipe installation. This field verification shall be performed in the presence of the District Engineer of the District's Representative. Adjust and align the new piping as necessary to meet the field conditions and provide all required material, labor, and equipment to make the connection

### PART 2 - PRODUCTS

#### 2.01 PVC (POLYVINYL CHLORIDE) PIPE

- A. Provide PVC pipe conforming to AWWA C900 with material cell classification 12454-B per ASTM D 1784. Provide standard pipe having integral bell and spigot with elastomeric gasket and cast iron equivalent outside diameter. Provide pipe in standard 20-foot laying lengths. Straight pipe sections with plain ends for use with high deflection couplings are not available. Random lengths will not be permitted. Provide either Class 150 or 200 pressure rating

as shown on the Drawings. Where PVC pipe is to be installed with restrained joints, provide Class 200 pipe.

## 2.02 HIGH DEFLECTION COUPLINGS

Provide PVC couplings with twin elastomeric gaskets which allows 2 degrees of deflection at each gasket for a total of 4 degrees per coupling. Provide couplings for cast iron equivalent outside diameter with 200 psi working pressure rating. Provide CertainTeed High Deflection (HD) Stop Couplings, or District approved equal.

## 2.03 CLOSURE/REPAIR COUPLINGS

Provide PVC couplings with twin elastomeric gaskets which are designed to connect plain ends of straight pipe. Provide couplings for cast iron equivalent outside diameter with 200 psi working pressure rating. Do not deflect pipe in these couplings. Provide CertainTeed Closure/Repair Couplings, or District approved equal.

## 2.04 FITTINGS

- A. Provide ductile iron fittings conforming to AWWA C110 with a minimum rated working pressure of 350 psi. Provide fittings with bells and gaskets specifically designed for cast iron equivalent outside diameter PVC pipe. Use mechanical joint fittings or fittings with bells and gasket ends.
- B. In lieu of paragraph 2.04, A., provide ductile iron fittings conforming to AWWA C153 with a minimum rated working pressure of 350 psi. Provide fittings constructed of Grade 70-50-05 ductile iron having a minimum weight equal to the weight tabulated in AWWA C153. Provide fittings with bells and gaskets specifically designed for cast iron equivalent outside diameter PVC pipe. Use mechanical joint fittings or fittings with bells and gasket ends conforming to the dimensional values of AWWA C111. Mechanical joint glands shall be Grade 70-50-05 ductile iron and cast in one continuous ring. Fittings with repaired defects are not acceptable and will be rejected.
- C. For mechanical joint fittings with glands, use tee-head or non-hex head bolts and hex head nuts for joint makeup and gasket seating. Bolts and nuts shall be carbon steel and coated with a corrosion inhibiting fluoropolymer composite material. Provide Tripac 200 Blue Coating System, or District

approved equal.

## 2.05 LINING AND COATING FOR FITTINGS

- A. Line interior of fittings for water pipelines with cement mortar per AWWA C104. Line interior of bells. Provide double thickness lining and use cement conforming to ASTM C150 Type II. Coating on interior bells shall be holiday free.
- B. Coat exterior of fittings for water pipelines with an asphalt material per AWWA C151.
- C. As an alternative to paragraph 2.05, A and B, line and coat fittings and bells with fusion-bonded epoxy. Coating shall be holiday free on the interior surfaces of the fittings, including the bells.

## 2.06 FLANGES

Flanges on ductile iron fittings shall conform to AWWA C110 or ASME B16.42 Class 150 with a minimum rated working pressure of 250 psi

## 2.07 RESTRAINED JOINTS

When the working pressure is less than 150 psi, provide restrained joints where indicated on the Drawings. Restrained joints shall be provided by restraining systems that incorporate a series of machined serrations on the inside diameter of a restraint ring to provide positive restraint. Restraining systems shall meet or exceed the requirements of UNI-B-13-94 or ASTM F 1674 and the following:

- A. Restraint devices for PVC bell-and-spigot joints shall consist of a split restraint ring installed on the spigot, connected to a solid backup ring seated behind the bell.
- B. Restraint devices for connection to ductile iron mechanical joints shall consist of a split restraint ring installed on the PVC pipe behind the ductile iron fitting follower gland and gasket and shall retain the full deflection capability of the joint.
- C. The split restraint ring shall be machined to match the cast iron equivalent outside diameter of the pipe, provide full 360-degree support around the barrel of the pipe, and shall incorporate a series of machined serrations for gripping the outside surface of the pipe. The serrations shall be uniform and extend the full circumference of the clamp. The ring shall also

incorporate a positive means of avoiding applying excessive clamping force to the pipe.

- D. Materials used in the restraint device shall be ductile iron conforming to ASTM A 536, Grade 65-45-12.
- E. T-bolts, studs, and connecting hardware shall be high strength, low alloy material in accordance with AWWA C111.

## PART 3 - EXECUTION

### 3.01 DELIVERY AND TEMPORARY STORAGE OF PIPE

- A. Ship, store, and place pipe at the storage yard or installation site, supporting the pipe uniformly. Avoid scratching the pipe surface. Do not stack higher than 4 feet nor stack with weight on bells. Cover to protect from sunlight.
- B. Do not install pipe that is gouged or scratched forming a clear depression.
- C. Do not install pipe contaminated with a petroleum product (inside or outside).
- D. Do not install any pipe that shows evidence of exposure to sunlight, age, surface deterioration, or other physical damage. The decision of the District Engineer's Representative shall be final as to the acceptability of the pipe to be installed.

### 3.02 HANDLING OF PIPE

Lift pipes with mechanical equipment using wide belt slings or a continuous fiber rope which avoids scratching the pipe. Do not use cable slings or chains. Pipes up to 12 inches in diameter may be lowered by rolling on two ropes controlled by snubbing. Pipes up to 6 inches in diameter can be lifted by hand

### 3.03 SANITATION OF PIPE INTERIOR

- A. During laying operations, do not place tools, food, clothing, trash, or other materials in the pipe. Keep the interior of the pipe clean as the pipeline construction progresses. The purpose of maintaining a clean interior is to aid in the passage of the bacteriologic quality after disinfection.
- B. When pipe laying is not in progress, including the noon hour, close the



ends of the installed pipe with a plug to deter entry of vermin, children, dirt, storm water, or foreign material.

### 3.04 PIPE LAYOUT FOR STRAIGHT AND CURVED ALIGNMENTS

- A. Use integral bell end pipe for straight alignments and for radii greater than 1,150 feet.
- B. Use the following various combinations of plain end pipe lengths with high deflection couplings and integral bell end pipe for curved alignments in both horizontal and vertical directions. Do not bend pipe between couplings. Saw cut integral bell end of standard pipe and bevel end for use with deflection couplings. Pipe lengths shorter than 9 feet will not be used unless specifically authorized by the District Engineer.
  - 1. Use 9.5-foot plain end pipe lengths with deflection couplings for all radii between 140 feet to 270 feet.
  - 2. Use 19-foot plain end pipe lengths with deflection couplings for all radii between 270 feet to 560 feet.
  - 3. Use an integral bell end pipe length joined together with a 19-foot plain end pipe length to form a chord. Use deflection couplings on each end of the chord and continue this combination through the curved alignment for all radii between 560 feet to 1,150 feet

### 3.05 INSTALLATION OF PIPE

- A. All pipe, fittings, etc., shall be carefully handling and protected against damage, impact shocks and free fall. All pipe handling equipment shall be acceptable to the Engineer. Pipe shall not be placed directly on rough ground, but shall be supported in a manner which will protect the pipe against injury whenever stored at the Site. All pipe damaged prior to Substantial Completion shall be repaired or replaced by the Contractor. Handle pipe in a manner to avoid any damage to the pipe. Do not drag pipe over the ground, drop it onto the ground, or drop objects on it. Do not drop or allow pipe to fall into trenches.
- B. The Contractor shall inspect each pipe and fitting prior to installation to ensure that there are no damaged portions of the pipe. Damaged pipe shall be replaced with new undamaged sections of pipe.
- C. Before placement of the pipe in the trench, each pipe or fitting shall be thoroughly cleaned of any foreign substance which may have collected thereon and shall be kept clean at all times thereafter. For this purpose,

the openings of all pipes and fittings in the trench shall be closed during any interruption to the Work. As pipe laying progresses, the Contractor shall keep the pipe interior free of all debris. The Contractor shall completely clean the interior of the pipe of all sand, dirt, rocks and any other debris following completion of pipe laying prior to testing, disinfecting and placing the completed pipeline in service.

- D. Pipe shall be laid directly on the imported bedding material. No blocking will be permitted and the bedding shall be such that it forms a continuous, solid bearing for the full length of the pipe. Bell holes shall be formed at the ends of the pipe to prevent joint loading at the bells or couplings.
- E. Where necessary to raise or lower the pipe grade due to unforeseen obstructions or other causes, the Engineer may change the alignment and/or the grades. Such change shall be made by the deflection of joints or by the use of additional fittings. However, in no case shall the deflection in the joint exceed the maximum deflection recommended by the pipe manufacturer.
- F. No pipe shall be installed upon a foundation into which frost has penetrated or any time that there is a danger of the formation of ice or penetration of frost at the bottom of the excavation. No pipe shall be laid unless it can be established that the trench will be backfilled before the formation of ice and frost occurs.
- G. Immediately before jointing bell and spigot pipe, both the bell and spigot end of the pipe shall be thoroughly cleaned and lubricated with an approved vegetable-based lubricant. The spigot end of the pipe section shall then be inserted into the bell of the previously laid joint and telescoped into its proper alignment. Tilting of the pipe to insert the spigot into the bell will not be permitted.
- H. Solvent-welded and heat-fused joints shall be carefully and thoroughly cleaned immediately before jointing the pipe. Particular care shall be taken in making solvent-welded joints to ensure a uniform, homogeneous and complete bond.
- I. Pipe installation shall conform with Technical Specification Section 02221 - Trenching, Backfilling and Compacting. If this installation of pipe section and Section 02221 conflict, the most stringent specification shall apply.

### 3.06 ASSEMBLING PIPE JOINTS

- A. The spigot and integral bell or coupling shall be dirt free and slide together without displacing the rubber ring gasket. Lay the pipe section with the integral bell facing the direction of laying.
- B. Clean the groove of the bell or coupling of all foreign materials. If the gasket groove is dirty or contains debris, carefully remove the gasket and clean the groove. Insert the gasket back into the groove of the bell or coupling prior to installation. Observe the correct direction of the shaped gasket. Feel that the gasket is completely and evenly seated in the groove.
- C. Mark the full insertion depth on the spigot end of the pipe. This mark indicates when the pipe is fully inserted into the bell or coupling. Lubricate the exposed gasket surface and the beveled spigot up to the full insertion mark with the lubricant supplied by the pipe manufacturer. For repair couplings, lubricate pipe for the entire distance the coupling will travel on the pipe. If the lubricated pipe end touches dirt, clean the pipe end and reapply lubricant.
- D. Insert the spigot into the bell or coupling and force it slowly into position.
- E. Check that the rubber ring gasket has not left the groove during assembly by passing a feeler gage around the completed joint.

### 3.07 INSTALLING BURRIED FITTINGS

- A. The District's Representative will inspect all fittings prior to installation for damage to the interior protective coatings. Coating shall be holiday free on interior surfaces. Patch damaged areas in the field with material similar to the original.
- B. For mechanical joint fittings, clean the bell socket and the plain end of the pipe of all foreign material and dirt. Place the gland on the pipe spigot with the lip extension toward the plain end. Lubricate the pipe spigot and gasket. Use the same lubricant as supplied by the pipe manufacturer. Install the gasket on the pipe spigot with the narrow edge of the gasket toward the plain end. Insert the pipe into the bell socket and press the gasket firmly into the gasket recess. Keep the joint straight during assembly. Push the gland towards the socket and center it around the pipe with the gland lip against the gasket. Insert bolts and hand tighten nuts. Make joint deflection after assembly but before tightening nuts. Uniformly tighten bolts and nuts in a progressive diametrically opposite sequence, and torque nuts to 75- to 90-foot-pounds with a calibrated

torque wrench. Coat exposed surfaces of tee-head bolts and nuts after tightening with primer for wax tape coating.

- C. For push-on joint fittings, clean the bell ends of the fitting of all foreign material and dirt. Insert the gasket in the groove of the bell and make sure the gasket faces the correct direction. Feel that the gasket is completely and evenly seated in the groove. When pipe is cut in the field, bevel the plain end prior to installation. Lubricate the exposed gasket surface and the beveled pipe spigot with the same lubricant supplied by the pipe manufacturer. Insert the spigot into the bell and force it slowly into position. Keep the joint straight while pushing. Make joint deflection after the joint is assembled.
- D. When necessary to deflect pipe from a straight line in either the horizontal or vertical plane, do not exceed the following joint deflection angles for buried fittings. The angles shown are for each joint and are maximum deflections.

Nominal Pipe Size (inches)	Mechanical Joint (degrees)	Push-on Joint (degrees)
4	6-1/2	4
6	5-1/2	4
8	4	4
10	4	4
12	4	4

3.08 INSTALLING SERVICE SADDLES

- A. Place the service saddle on the pipe and hand tighten the nuts while positioning the saddle in its final location. Uniformly tighten the nuts in a progressive diametrically opposite sequence and torque with a calibrated torque wrench to the saddle manufacturer’s recommended values.
- B. Connect a corporation stop to the saddle. Apply Teflon joint compound or tape to the male threads before installing the corporation stop. Make joints watertight.
- C. Mount a tapping machine on the corporation stop to cut a hole in the pipe with a shell type cutter made specifically for PVC pipe. Do not use other devices or hand equipment to bore through the pipe wall.

### 3.09 INSTALLING RESTRAINED JOINTS

- A. Follow the manufacturer's installation instructions for the restrained joint system. Tighten the clamping bolts on the restraint rings to the recommended torque. Do not over-tighten the retaining nuts behind the restrainer ears.
- B. Wrap restrained joint including bolts and nuts with wax tape coating.

END OF SECTION 02641

SECTION 02650 - PIPE FITTINGS, TRANSITION COUPLINGS, MECHANICAL RESTRAINED JOINT FITTINGS, FLANGED COUPLING ADAPTERS AND HARDWARE

PART 1 - GENERAL

1.01 DESCRIPTION

The Contractor shall provide and install pipe fittings, transition couplings, restrained joint fittings, flanged coupling adapters and hardware for the connection of PVC, ductile iron and other pipeline material. Other connecting items may also be required. This section includes the specifications and requirements for the prior listed pipe connection items. The hardware for this specification section shall include the hardware for pipe or any other fittings or items located along a pipeline. Material shall be new and free from defects.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02640 - PVC Pipe
- B. Section 02641 - PVC Pipe AWWA C900

1.03 REFERENCE DOCUMENTS

- A. Comply with the applicable reference specifications as specified in the General Requirements.
- B. Unless otherwise indicated, the current editions of the following reference standards and specifications apply to the Work described herein, and are considered part of this Specification.

C 104/A 21.4-03	American National Standard for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water
C 105/A 21.5-99	American National Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems
C 110/A 21.10-03	American National Standard for Ductile-Iron and Gray-Iron Fittings, 3-In. through 48-In. (76 mm through 1,219 mm), for Water
C 111/A 21.11-00	American National Standard for Rubber-

	Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
C 115/A 21.15-99	American National Standard for Flanged Ductile Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges
C 116/A 21.16-03	American National Standard for Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service
C 153/A 21.53-00	American National Standard for Ductile-Iron Compact Fittings, 3-In. (76 mm) through 64-In. (1,600 mm), for Water Service
ASTM A 536	American Standards for Testing and Materials - High Strength Ductile Iron for Sleeve and Flanges of Transition Coupling and Flanged Coupling Adapter
NSF / ANSI 61	Drinking Water System Components – Health Effects
ASTM A 536-80, Grade 65-45-12	American Standard Testing and Material - Ductile Iron Mechanical Joint Restraint Fitting
UNI-B-13-92	As listed Underwriters Laboratories - Restraining Glands for Mechanical Restrained Joint Fittings
ASTM B 117	American Standard Testing Materials - Salt Spray Testing for Bolts

#### 1.04 CONTRACTOR SUBMITTALS

- A. The Contractor shall furnish a certified affidavit of compliance for all pipe and other products or materials furnished under this Section of the Specifications and as specified in the referenced standards. Certification shall include physical and chemical properties of pipe materials and hydrostatic test reports.

- B. All expenses incurred in sampling and testing for certifications shall be borne by the Contractor.

#### 1.05 QUALITY ASSURANCE

- A. Ductile iron fittings shall be manufactured with the material, have the dimensions, be within the tolerances and meet the testing requirements set forth in ANSI A 21.53-00 and ANSI A 21.10-03.
- B. All fittings shall be subject to inspection at the place of manufacture in accordance with the provisions of the referenced standards, as supplemented by the requirements herein.
- C. In addition to those tests specifically required, the Engineer may request additional samples of any material including lining and coating samples for testing by the Owner. The additional samples shall be furnished at no additional cost to the Owner.

### PART 2 - PRODUCTS

The Technical Requirements for Ductile Iron Fittings, Transition Couplings, Mechanical Restrained Joint Fittings, Flanged Coupling Adapters and Hardware follow:

#### 2.01 DUCTILE IRON FITTINGS

Fittings and reducers for the water mains shall be composed of ductile iron. The ductile iron fittings shall conform to ASTM A 536. Mechanical joint fittings shall conform with AWWA C 153 C 350 PSI. Flanged fittings shall conform with AWWA C 110 C 250 PSI. Flange fittings shall have standard wall thickness not compact thickness. The fittings shall be cement-mortar lined in accordance with ANSI/AWWA C 104/A 21.4, Standard for Cement-Mortar Lining for Ductile Iron and Gray Iron Pipe Fittings for Water, latest revision. Asphaltic seal coating shall be applied to the interior and exterior of the below-grade fittings in accordance with ANSI/AWWA C 104/A 21.4, asphaltic seal coating shall be applied to the interior of the above-grade fittings. The exterior surfaces of above-grade ductile iron fittings shall be thoroughly cleaned and then given a shop coat of rust inhibitive primer. This exposed piping shall not be coated with the bituminous coating by the manufacturer prior to delivery.



## 2.02 FLANGED COUPLING ADAPTERS

Flanged coupling adapters shall be used to join plain end pipe with flanged ductile iron fittings and valves. Adapters shall conform to AWWA Specification C 153. Bodies shall be composed of ductile iron and conform with ASTM A 536. The flanged coupling adapter shall be cement lined in accordance with AWWA C 104 (ANSI A 21.4). The flanged coupling adapter shall withstand a working pressure of 350 PSI.

## 2.03 TRANSITION COUPLING

The transition couplings shall be installed as required. The center rings shall be constructed of ductile iron conforming to ASTM A 536-80, Grade 65-45-12. The end rings shall be constructed of ductile iron conforming to ASTM A 536, Grade 65-45-12. Gaskets shall be composed of virgin styrene butadiene rubber (SBR) compounded for water and sewer service in accordance with ASTM D 2000 MBA 810. The coating for the ductile iron transition coupling shall be fusion bonded epoxy. The transition coupling shall be capable of sustaining a working pressure of 250 PSI.

## 2.04 RESTRAINED JOINT FITTINGS

Mechanical joint restraint shall be incorporated into the design for the follower gland. The gripping or restraining mechanism shall transmit uniform restraining pressure around the circumference of the pipe, thus avoiding point loading or pipe distortion. This restraining process shall be kept separate from the mechanical joint sealing process and **not** a part of the sealing function. All components shall be manufactured of ductile iron conforming to ASTM A 536-80, Grade 65-45-12.

The restrained twist-off nut bolt system shall have a torque limiting feature designed to break off at 75 to 90 FT-LBS of torque to insure proper actuating of restraining devices. Both the twist-off nut and the removal nut shall be the same size as tee-bolt nut. Hardware shall be composed of 316 stainless steel.

The gland shall be such that it can replace the standardized mechanical joint gland and can be used with the standardized mechanical joint bell conforming to ANSI/AWWA C 111/A 21.11, C 110/A 21.10 and C 153/A 21.53 of the latest revision.

The device shall restrain all classes of ductile iron, C 900 PVC, C 905 PVC and high density polyethylene (HDPE) with the use of a standard mechanical joint gasket. The same device without any field modification shall additionally restrain IPS PVC, IPS steel and IPS HDPE with the use of a transition gasket.

The restraining glands shall have a pressure rating equal to twice (2:1) that of the pipe on which it is used. The restraining glands shall have been tested to UNI-B-13-92, be listed by Underwriters Laboratories and be approved by factory mutual. The mechanical joint restraint device shall be UNI-Bell, EBBA Series 2000, Sigma One-Lock or equal.

Restrained joint fittings shall be placed at termination points, tees, bends, angle points and connection points, or existing connection points as illustrated in the Plans. Pipeline-to-pipeline connections shall not be required to have restraint harness assemblies unless noted in the Plans.”

## 2.05 HARDWARE

Hardware for ductile iron fittings shall conform with ANSI/AWWA C 111/A 21.11-07, Appendix “C”, Section C.1 entitled “Bolts and Nuts”. The size, length and number of bolts are illustrated in Tables 2 and 3 of ANSI/AWWA C 115/A 21.15.

Hardware for transition couplings and mechanical restrained joint fittings shall comply with the manufacturer’s recommendation for steel or ductile iron bolts and nuts.

All steel or ductile iron nuts and bolts shall be coated with a flouropolymer using Xylan/014 as a primary coating. The coating shall be electrostatically applied to the hardware after all surfaces are chemically cleaned, abrasive blasted and primed with a nickel phosphate primer. Multiple coats of the Xylan/014 shall be applied to the steel or ductile iron hardware and baked at 425°F for one (1) hour. Hardware protected with this coating system shall exhibit no signs of corrosion after salt spray testing up to 3,000 hours. The coating system shall be a Tripac 2000 Blue or an approved equal.

316 stainless steel hardware shall be used if specified for a given pipe, valve, fitting or other component on the Plans or within the contents of this document.

## 2.06 POLYETHYLENE ENCASEMENT

All ductile iron or gray iron fittings, transition couplings, mechanical restrained joint fittings and coupling adapters shall be polyethylene encased at the time of installation. Polyethylene encasement and installation shall be in accordance with ANSI/AWWA C 105.

## 2.07 NSF / ANSI STANDARD 61

Piping, fittings, and appurtenances in contact with potable water or water that will be treated to become potable shall be listed in NSF / ANSI Standard 61 as being suitable for contact with potable water.

## PART 3 - EXECUTION

### 3.01 INSTALLATION OF FITTINGS, TRANSITION COUPLINGS, MECHANICAL RESTRAINED JOINT FITTINGS, FLANGED COUPLING ADAPTERS AND HARDWARE

- A. All fittings, etc. shall be carefully handled and protected against damage, impact shocks and free fall. All fittings, etc. handling equipment shall be acceptable to the Engineer. Fittings, etc. shall not be placed directly on rough ground, but shall be supported in a manner which will protect the fittings, etc. against damage whenever stored at the trench site. All fittings, etc. damaged prior to Substantial Completion shall be repaired or replaced by the Contractor.
- B. If during the course of fastening and securing the hardware (nuts and bolts) for the fittings, etc., the flouropolymer coated is scratched, chipped or otherwise removed from the hardware surface, then a coating system supplied by the manufacturer shall be applied to the damaged hardware surface. The repair coating system shall be applied prior to the backfilling or covering of the fittings, etc. hardware.

END OF SECTION 02650

## SECTION 02666 – PRESSURE PIPELINE WATER TESTING

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. The Contractor shall perform flushing and testing of all pipelines and appurtenant piping complete, including conveyance of test water from Engineer-designated source to point of use and disposal thereof after testing, in accordance with the requirements of the Contract Documents. The disposal method of the water shall be reviewed and approved by the Engineer prior to the commencement of the test.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02221 - Trenching, Backfilling and Compaction
- B. Section 02640 - PVC Pipe
- C. Section 02641 - PVC Pipe AWWA C900

### PART 2 – PRODUCTS

#### 2.01 MATERIAL REQUIREMENTS

- A. All test equipment, fuel, electrical connections, temporary valves, bulkheads, compressors, water pumps, water gauges and other water control equipment support systems and required materials for hydrostatic or pneumatic air testing shall be furnished by the Contractor subject to the Engineer's review.

### PART 3 – EXECUTION

#### 3.01 GENERAL

- A. The Contractor shall notify the Engineer at least four (4) days in advance of any planned testing and shall review the testing procedures with the Engineer. The source of testing water and disposal of the testing water shall be reviewed.
- B. Unless otherwise provided herein, water for testing pipelines shall be furnished by the Contractor; and, the Contractor shall make all necessary

provisions for conveying the water from the water source to the points of use. The Contractor shall provide inlet hoses, fittings, pressure gauges pumping equipment, meters, backflow preventers and other required items.

- C. The Contractor shall provide a double bronze service saddle, brass corporation stop, inlet pipeline and outlet pipeline at the beginning and end of the pipeline section to be tested to allow water to be directed into the pipeline and air to be purged from the pipeline while the pipeline is filling with water. The fittings and pipe shall be used during the chlorination and disinfection of the pipeline. After the hydrostatic pipe testing and disinfection of the pipeline are satisfactorily completed remove the corporation stop from the brass service saddle. Place a brass plug in the service saddle inlet.
- D. All pipelines shall be tested. All testing operations shall be performed in the presence of the Engineer or the District's Representative.
- E. The disposal or release of test water from pipelines, after testing, shall be acceptable to the Engineer. The conveyance items to dispose of the testing water and the disposal location shall be provided by the Contractor.

### 3.02 HYDROSTATIC TESTING OF PIPELINES

- A. Prior to hydrostatic testing, all pipelines shall be thoroughly flushed of all sand, dirt and material to the satisfaction of the Engineer. The Contractor shall test all pipelines either in sections or as a unit. The Contractor shall be responsible to insure all test bulkheads are suitably restrained to resist the thrust of the test pressure without damage to, or movement of, adjacent pipe or structures. Care shall be exercised to insure that all air vents are open during filling.
- B. The pipeline shall be filled at a rate which will not result in surges or exceed the rate at which the air can be released through the air valves at a reasonable velocity and all the air within the pipeline shall be properly purged. After the pipeline or section thereof has been filled it shall be allowed to stand under a slight pressure for at least 24 hours to allow the concrete or mortar lining, if applicable, to absorb water and allow the escape of air from the pipeline. During this period, bulkheads, valves and connections shall be examined for leaks. If leaks are found, corrective measures shall be initiated and completed to the satisfaction of the Engineer.

- C. The hydrostatic test shall consist of holding the test pressure within the pipeline for a period of 4 hours for pipes 18 inches in diameter or less and 8 hours for pipes 20 inches in diameter or greater. The test pressure for pipelines shall be 150 PSI or 1.5 times the rated pipe pressure class which ever is greater. All leaks shall be repaired. The hydrostatic pressure shall be relieved from the pipeline prior to initiating leak repair.
- D. Pipe leaks, as evidenced by water loss from the basin from which water is pumped into the pipeline, shall not be allowed after the test begins. Test pressures shall be held for at least two (2) hours after the test commences without additional pumping and observed for not less than four (4) hours. Approved gauges shall be provided by the Contractor. Gauge range shall not exceed 50 PSI above test pressure. In the event leaks occur after the hydrostatic test commences, the Contractor shall determine the cause of the leakage and take corrective measures necessary to repair the leaks. After the leaks are satisfactorily repaired the pipeline shall be re-tested.

### 3.03 LENGTH OF TEST SECTION

Test the pipeline in sections. In any one test, do not exceed more than 2,500 feet, the distance between closed valves, or as directed by the District's Representative.

### 3.04 TESTING NEW PIPE WHICH CONNECTS TO EXISTING PIPE

Prior to hydrostatic pressure testing new pipelines which are to be connected to existing pipelines, isolate the new pipeline from the existing pipeline by means of test bulkheads, spectacle flanges, or blind flanges. After the new pipeline has been successfully pressure tested, see Standard Specification Section 2760 for instructions to continue with the disinfection and connection work.

### 3.05 AIR TESTING OF WATER PIPELINE

N/A

END OF SECTION 02666

## SECTION 02670 - DISINFECTION OF POTABLE WATER PIPELINES

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

Potable pipelines within the water distribution system and other areas are to be disinfected prior to being connected to other existing active pipelines and placed in service. The new pipelines are to be isolated from the existing active pipelines (usually by means of a closed valve) until the pipeline has been satisfactorily hydrostatically tested, leak tested (if required) and disinfected. The pipelines shall be hydrostatically and leak tested as a separate procedure from the pipeline disinfection.

#### 1.02 PURPOSE

The purpose of this standard is to define the minimum requirements for the disinfection of water mains, including the preparation of water mains, application of chlorine, and sampling and testing for the presence of coliform bacteria.

#### 1.03 REFERENCE SECTIONS

Reference sections pertaining to the disinfection testing are as follows:

Section 02640	PVC Pipe
Section 02641	PVC Pipe AWWA C900
Section 02666	Pressure Pipeline Water Testing
ANSI/AWWA C 651-05	American National Standards Institute/ American Water Works Association
ANSI/AWWA B 300	Hypochlorites
ANSI/AWWA B 301	Liquid Chlorine
AWWA Manual M 12	<i>Simplified Procedures for Water Examination</i> , AWWA: Denver, Colorado

## SECTION 2 - PRODUCTS

### 2.01 GENERAL

#### A. Construction of Pipeline, Associated Fittings, Valves and Components:

The Contractor shall train pipe crews to be aware of the need to maintain clean pipes, fittings, etc and avoid contamination. While bacteriological testing is used to verify the absence of coliform organisms and is generally accepted as verification that disinfection of the pipeline has been accomplished, following sanitary practices for handling and installation of pipe, valves, fittings, and accessories, coupled with adequate flushing of the line before disinfection, is necessary to ensure that the disinfected pipeline will be ready for connection to the water system. Failure to pass the bacteriological test shall require that the flushing or disinfection process be repeated. The final water quality test is not the primary means for certifying the sanitary condition of a main. The sanitary handling of materials, the practices during construction, and the continual inspection of the work are the primary means for ensuring the sanitary condition of the water main.

#### B. Methods of Disinfecting Newly Constructed Water Pipelines and the Acceptable Method of Disinfecting Pipelines:

The three methods of disinfecting newly constructed water mains are the tablet method, the continuous-feed method and the slug method. Factors considered when selecting a method include the length and diameter of the main, type of joints present, availability of materials, equipment required for disinfection, training of the personnel who will perform the disinfection, and safety concerns. This Project shall allow chlorination of pipelines by the continuous feed method. The tablet method and slug method shall not be allowed.

The tablet method shall not be used unless the main can be kept clean and dry. It shall not be used in large-diameter mains if it is necessary for a worker to enter the main to grout joints or perform inspection, because the tablets may release toxic fumes after exposure to moist air. When using the tablet method, the chlorine concentration is not uniform throughout the main, because the hypochlorite solution is dense and tends to concentrate at the bottom of the pipe. The use of the tablet method precludes preliminary flushing. The tablet method is convenient to use in mains having diameters up to 24 inches, and it requires no special equipment.

The continuous-feed method is suitable for general application.



Preliminary flushing removes light particulates from the main but not from the pipe-joint spaces. The chlorine concentration is uniform throughout the main.

The slug method is suitable for use in large-diameter mains where the volume of water makes the continuous-feed method impractical and difficult to achieve for short attachments. The slug method results in appreciable savings of chemicals used to disinfect long, large-diameter mains. Also, this method reduces the volume of heavily chlorinated water to be flushed to waste.

C. Forms of Chlorine for Disinfection:

The forms of chlorine that may be used in the disinfection operations are liquid chlorine, sodium hypochlorite solution, and calcium hypochlorite granules or tablets. For this Project, liquid chlorine shall be used unless otherwise approved by the Engineer.

1. **LIQUID CHLORINE:** Liquid chlorine conforming to ANSI/AWWA B301 contains 100 percent available chlorine and is packaged in steel containers usually of 100-lb., 150-lb., or 1-ton net chlorine weight. Liquid chlorine shall be used only (1) in combination with appropriate gas-flow chlorinators and ejectors to provide a controlled high-concentration solution feed to the water to be chlorinated; (2) under the direct supervision of personnel familiar with the biological, chemical and physical properties of liquid chlorine and who are trained and equipped to handle any emergency that may arise; and (3) when appropriate safety practices are observed to protect working personnel and the public.
2. **SODIUM HYPOCHLORITE:** Sodium hypochlorite conforming to ANSI/AWWA B300 is available in liquid form in glass, rubber-lined, or plastic containers typically ranging in size from 1 quart to 5 gallons. Containers of 30 gallons or larger may be available in some areas. Sodium hypochlorite contains approximately 5 percent to 15 percent available chlorine, and the storage conditions and time must be controlled to minimize its deterioration. (Available chlorine is expressed as a percent of weight when the concentration is 5 percent or less, and usually as a percent of volume for higher concentrations. Percent x 10 = grams of available chlorine per liter of hypochlorite.)
3. **CALCIUM HYPOCHLORITE:** Calcium hypochlorite conforming to

ANSI/AWWA B300 is available in granular form or in 5-g tablets, and must contain approximately 65 percent available chlorine by weight. The material should be stored in a cool, dry, and dark environment to minimize its deterioration.

**CAUTION:** Tablets dissolve in approximately 7 hours and must be given adequate contact time. Do not use calcium hypochlorite intended for swimming pool disinfection, as this material has been sequestered and is extremely difficult to eliminate from the pipe after the desired contact time has been achieved.

D. Preventative and Corrective Measures to be Implemented during the Construction of Pipelines:

Heavy particulates (dirt, soil, rocks, etc.) generally contain bacteria and prevent even very high chlorine concentrations from contacting and killing organisms. Therefore, the procedures of this Section shall be stringently implemented by the Contractor and enforced by the Engineer to ensure that water pipelines, fittings, etc., have been thoroughly cleaned before flushing the pipeline for the final disinfection by chlorination. Also, any connection of a new water main to the active distribution system prior to the receipt of satisfactory bacteriological samples constitute a cross-connection in violation of the California Health Department requirements. The new main shall be isolated until bacteriological tests described later in this Section are satisfactorily completed. The Contractor shall complete the following tasks or observe the following precautionary measures during the installation of the water pipeline:

1. The interiors of pipes, fittings and valves shall be protected from contamination by dirt, debris, rocks, concrete residue, water and similar items.
2. Openings in the pipeline shall be closed with watertight plugs when pipe laying is stopped at the close of the day's work or for other reasons, such as rest breaks or meal periods. Rodent-proof plugs may be used when watertight plugs are not practicable and when thorough cleaning will be performed by flushing or other means.
3. Delay in placement of delivered pipe invites contamination. Pipe delivered to the site shall be covered with tarps. The tarps shall be placed over the pipes and end of the pipes to minimize the entrance of dirt, dust and construction debris.

4. Sealing Materials: No contaminated material or any material capable of supporting growth of microorganisms shall be used for sealing joints. Sealing material or gaskets shall be handled in a manner that avoids contamination. The lubricant used in the installation of sealing gaskets shall be suitable for use in potable water and shall not contribute odors. It shall be delivered to the job in closed containers and shall be kept clean and applied with dedicated, clean applicator brushes.
5. If dirt or other contaminants enter a pipeline, fitting, transition coupling, valve or any other pipeline, it shall be swept from the interior of the pipeline, fitting, etc. The contaminated area shall be wiped clean with an ammonia solution disinfectant. After each pipe section is installed the end of the pipe shall be inspected for the entrance of dirt and other contaminants. If dirt or contaminants are identified the dirt and contaminants shall be removed prior to the installation of the next pipe length. Correspondingly, the pipe end to be “stabbed” into the previously installed pipe segment shall be checked for dirt contamination and cleaned and disinfected accordingly.
6. Flooding by Storm or Accident during Construction: If the pipeline is flooded during construction, it shall be cleared of the floodwater by draining and flushing with potable water until the main is clean. The section exposed to the floodwater shall then be filled with a chlorinated potable water that, at the end of a 24 hour holding period, shall have a free chlorine residual of not less than 25 mg/L. The chlorinated water shall then be drained or flushed from the main. After construction is completed, the main shall be disinfected for a second time using the continuous-feed method.

## PART 3 - EXECUTION

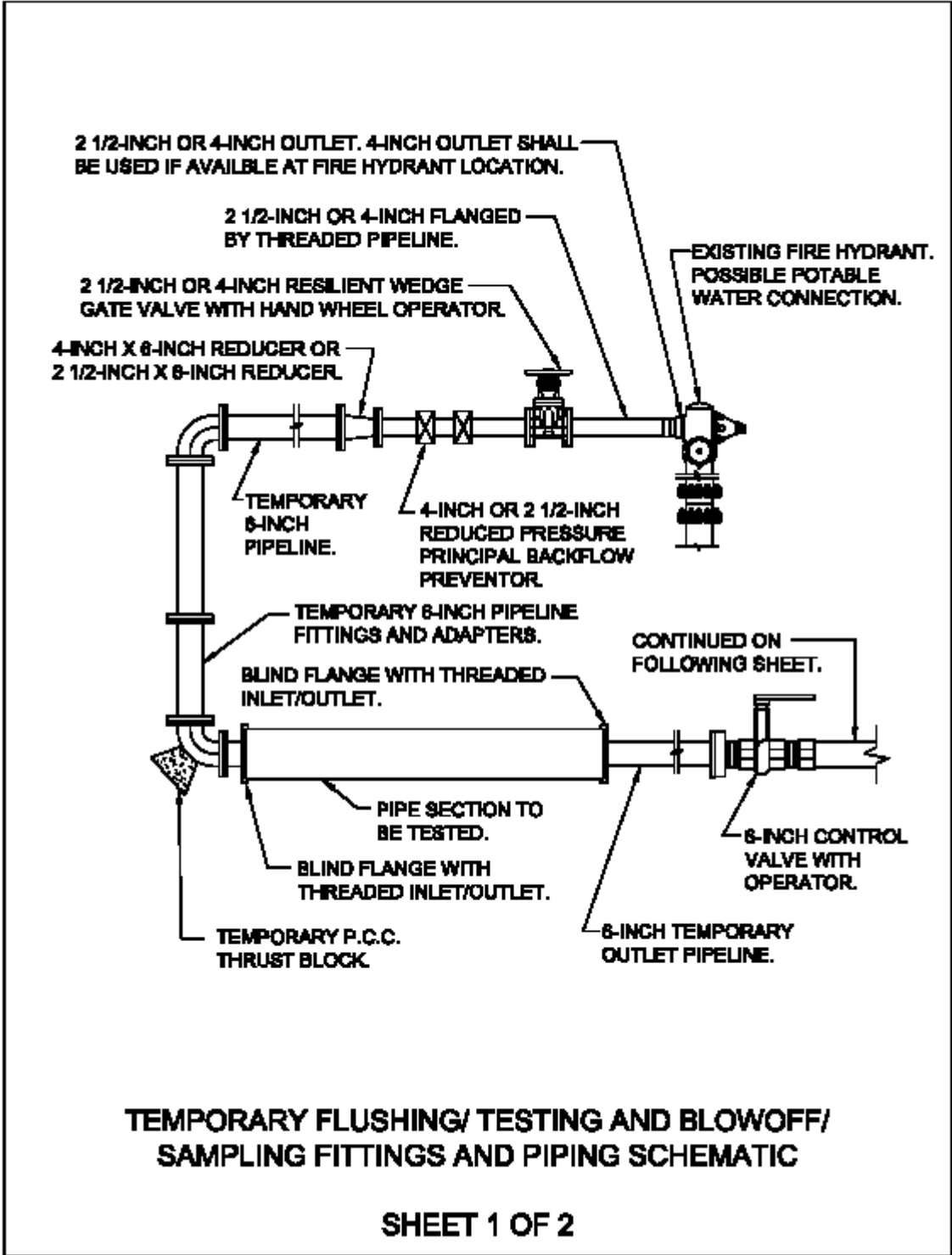
### 3.01 GENERAL

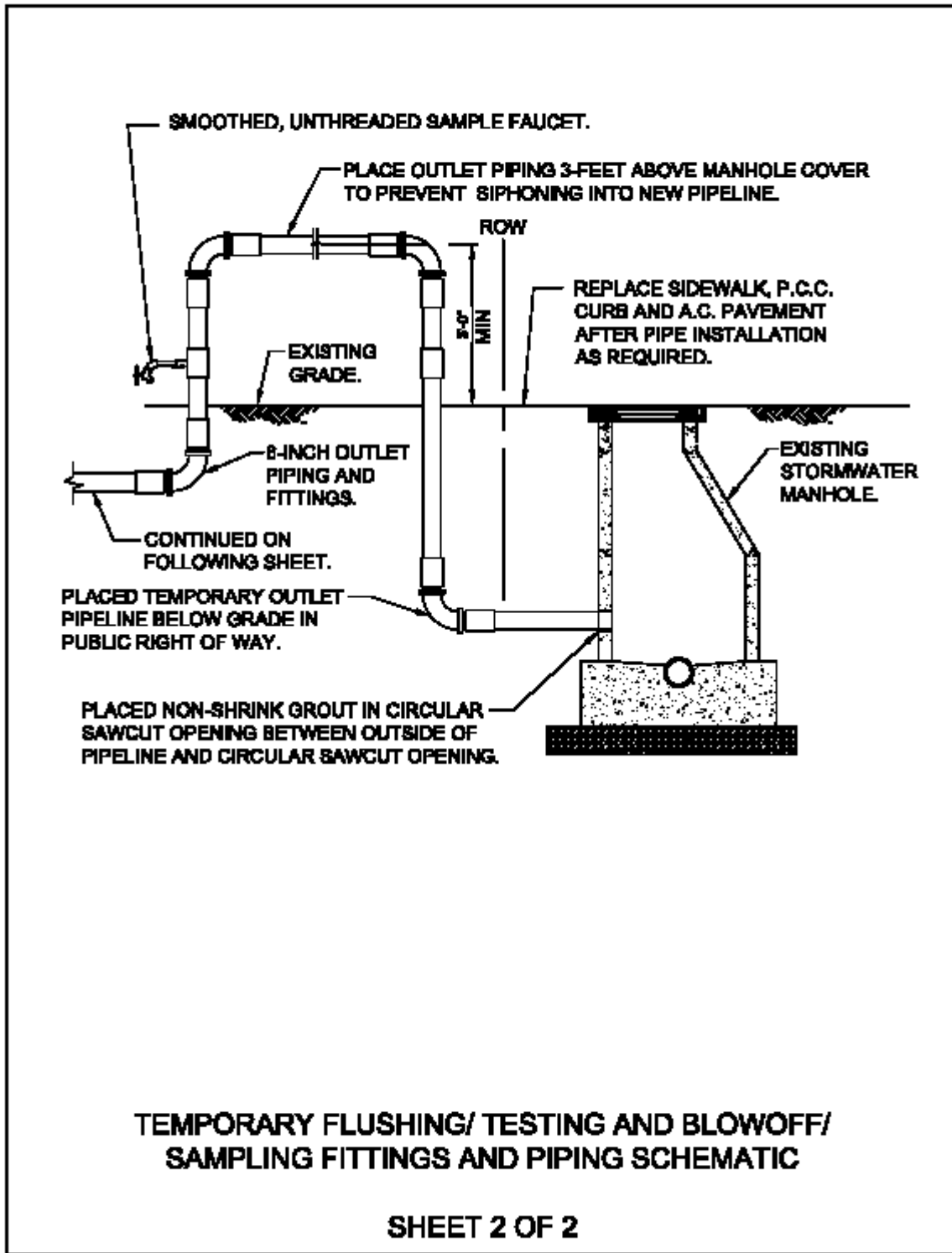
The water pipeline shall be thoroughly flushed with potable water prior to the chlorination of the pipeline. Prior to the flushing of the water pipeline it may be necessary to construct temporary flushing and testing connections at the upstream and downstream ends of the pipelines to be tested. If new pipelines are to be connected to existing in-service pipelines with new valves installed at the connection fittings between the new and existing pipelines which reliably isolate the new pipeline from the existing in-service pipeline, then blowoffs and properly positioned fire hydrants allow for the adequate flushing of the pipeline and allow for the dispersion of chlorine by the continuous-feed method. This method is particularly applicable to new commercial or residential developments which occur within an existing pipe distribution system.

If new pipelines are to be connected to existing in-service pipelines, concrete structures and reservoirs with no reliable valve at the connection point of the new pipeline to isolate the new pipeline from the existing in-service pipelines, concrete structures and reservoirs, then temporary caps or plugs (blind flanges), supply hoses, control valves, backflow devices, discharge/flushing lines and sampling faucets shall be constructed. This pipeline condition often occurs within water treatment plants. The pipelines within water treatment plants in the condition described within this paragraph shall be flushed, chlorinated and tested while physically separated from existing in-service pipelines, reservoirs and concrete structures. The physically separated pipeline section shall be hydrostatically tested prior to the flushing, chlorination and testing of the pipeline section. Potable water from an outside source shall be required to be conveyed to the new pipeline for flushing and disinfecting via a temporary connection supplied and installed by the Contractor. The temporary connection shall be disconnected (physically separated) from the new pipeline during the hydrostatic pressure test. The temporary connection shall include a reducer fitting from the fire hydrant, 4 inch control valve, 4 inch backflow preventer based upon a reduced pressure principal, 4 inch supply hose or pipeline, temporary testing block, blind flange with 4 inch threaded outlet, 4 inch discharge piping, 4 inch discharge control valve and smooth, unthreaded sampling faucet. It shall be necessary for the Contractor to provide all other necessary fittings, adapters, hardware and other components. The discharge pipeline shall extend to a discharge point acceptable to the Engineer. If the discharge pipeline extends through on-site roadways or into the public right of way then the Contractor shall place the temporary discharge pipeline below grade. The Contractor shall perform all cutting, demolition and replacement of A.C. pavement and P.C.C. infrastructure as required by Division 1 of the Technical Specifications. The Contractor shall core the side of manholes, install the discharge pipeline to the

interior wall face of the manhole and grout the annular space between the exterior circular core and the exterior of the pipeline for the full thickness of the manhole shaft with a non-shrink grout. At the conclusion of the pipeline disinfection all upstream and downstream pipelines, supply hoses, valves, check valves, fittings, blind flanges and components shall be removed from the Project Site. The interior of any discharge pipeline extending into manholes shall be plugged for the full width of the manhole shaft wall width with a non-shrink grout.

A schematic of the temporary flushing/testing connection and schematic of the discharge blowoff/sampling tap pipeline follows. The schematic drawings are intended to illustrate the concept and major components required for the disinfection of the pipeline. The schematics do not illustrate each fitting, adapter and component required for the flushing/testing connection pipeline or the discharge blowoff/sampling tap pipeline nor do the schematics illustrate the lengths of pipelines required, number of fittings, number of valves, etc. The schematics do not illustrate where the source of water is to be obtained or the discharge point the blowoff pipeline is to extend to. It is the responsibility of the Contractor to determine the source of the potable water, length of the connection pipeline, exact number and type of fittings, valves and adapters, length of the blowoff pipeline, exact number and type of fittings, valves and adapters, paving and concrete demolition and replacement requirements and similar logistical placement, pipe mechanic and civil infrastructure issues. Following are the Temporary Flushing/Testing Connection Schematic and Blowoff Sampling Point Discharge Pipeline Schematic Drawings:





### 3.02 CHLORINATION PROCEDURE

- A. Pipeline shall be thoroughly flushed prior to the commencement of the introduction of chlorine disinfectant.

Pipelines within a distribution system or a network of pipelines shall be flushed at each hydrant, blowoff, or service pipeline. It shall be necessary to install sampling/blowoff assemblies at the termination ends of pipe segments to allow the extremities of the pipeline to be flushed and for chlorinated water to be dispersed throughout the new water pipeline section in the event blowoffs or fire hydrants are not placed at the extremities of the pipeline to be tested. At least one (1) blowoff/sampling point assembly shall be placed at the extremities of the pipe section to be tested for sampling purposes. Sampling shall not be allowed through fire hydrants or water fittings with threaded ends. The Contractor shall install at least one (1) blowoff/sampling assembly at the end of each pipeline section to be tested; even if the blowoff/sampling assembly is not illustrated on the Plans. The Contractor shall be required to install the blowoff/sampling assembly as a requirement of this pipeline disinfection specification section. The Contractor shall not be compensated for the costs of the blowoff/sampling assembly. The cost of the installation of the blowoff/sampling assembly shall be incidental to the costs of disinfecting the pipeline.

Pipelines physically separated from existing in-service pipelines, reservoirs and concrete structures (as is often the case at Water Treatment Plants), shall be flushed with temporary pipeline connections upstream and downstream of the pipeline section to be disinfected as described in Section 3.01 of this specification.

Flushing of pipelines within a distribution system shall occur through fire hydrants, blowoffs, water services and blowoff/sampling points for a minimum of 10 minutes with the potable water source placed at maximum flow and maximum pressure. Flushing shall continue until no evidence of dirt is evident from the discharge water. Flushing shall be accomplished through fire hydrants or blowoffs if possible. Flushing of the water pipeline shall occur through a blowoff/sampling point assembly as a last resort. The pipeline contractor shall take necessary precautions to avoid damage to existing structures and utilities.

Flushing of physically separated pipelines shall be accomplished for a



minimum of 10 minutes with the potable water source placed at maximum flow and maximum pressure. Flushing of the pipeline shall continue until no evidence of dirt is visible from the discharge water entering the downstream deposition point. The pipeline contractor shall take necessary precautions to avoid damage to existing structures and utilities.

- B. After flushing of the water pipelines is satisfactorily accomplished and approved by the Engineer, chlorinated water shall be introduced to the pipeline. The pipelines shall be chlorinated in accordance with AWWA C 651.

The continuous-feed method of chlorine application shall be employed. The use of chlorine tablets or granules shall not be allowed.

Direct-feed chlorinators, which operate solely from gas pressure in the chlorine cylinder, shall not be used for the application of liquid chlorine. (The danger of using direct-feed chlorinators is that water pressure in the main can exceed gas pressure in the chlorine cylinder. This allows a backflow of water into the cylinder, resulting in severe cylinder corrosion and the escape of chlorine gas.) The preferred equipment for applying liquid chlorine is a solution-feed, vacuum-operated chlorinator and a booster pump. The vacuum-operated chlorinator mixes the chlorine gas in solution water; the booster pump injects the chlorine-gas solution into the main to be disinfected. Hypochlorite solutions may be applied to the water main with a fuel or electrically powered chemical-feed pump designed for feeding chlorine solutions. Feed lines shall be made of material capable of withstanding the corrosion caused by the concentrated chlorine solutions and the maximum pressures that may be created by the pumps. All connections shall be checked for tightness before the solution is applied to the pipeline.

Chlorine shall be dispersed through the pipeline at 100 ppm. Chlorine shall be flushed through all fire hydrants, blowoffs, water services and blowoff/sampling assemblies. Chlorine shall continue to be flushed through the above listed items until the chlorine concentration is measured at 100 ppm or greater.

The chlorinated water shall remain in the pipeline for a minimum 24-hour period and not longer than 48 hours. The chlorine residual shall be a minimum of 50 ppm after the 24 hour period; or prior to flushing the heavily chlorinated water from the pipeline. The heavily chlorinated water shall not remain in the pipeline over 48 hours as prolonged exposure to the heavily chlorinated water may damage (corrode) pipelines, fittings, valves and other piping components. The heavily chlorinated water shall

be flushed from the pipeline, pipeline fittings, water services, fire hydrants, blowoffs, blowoff/sampling assemblies and all other pipe connections. The heavily chlorinated water shall be flushed until chlorine samples of the flushed water confirm that the chlorine concentration is no higher than the water in the in-service distribution system or the water source used for the disinfection process.

The environment to which the heavily chlorinated water is to be discharged shall be inspected. In the opinion of the Engineer, if there is a possibility that the chlorinated water will result in damage to the environment, then the Engineer shall require a neutralizing chemical be applied to the water to be wasted (prior to discharge) by means of a neutralizing chemical. Neutralizing chemicals may be sulfur dioxide, sodium bisulfite, sodium sulfite, sodium thiosulfate or ascorbic acid. Appendix "C" of ANSI/AWWA C 651-05 lists the neutralizing chemicals and the suggested neutralizing chemical concentrations per 100,000 gallons of water.

The Contractor shall be responsible for the discharging of the heavily chlorinated water. The Contractor shall provide all piping, fittings, etc. to convey the heavily chlorinated water from the disinfected pipeline per Item 3.01 of this Specification.

- C. After final flushing and before the disinfected water pipeline is connected to the distribution system or in-service pipeline system, two (2) consecutive sets of acceptable samples, obtained a minimum of 24 hours apart, shall be collected from the disinfected pipeline.

One (1) set of samples shall be collected from every 1,200 feet of new water pipeline and one (1) set shall be obtained from the end point(s) of the disinfected water pipeline(s). If disinfected water pipelines terminate (dead-end) at cul-de-sacs, a sample shall be obtained from the termination point of the pipelines. As was noted by the previous sections, The Contractor shall install blowoff/sampling point assemblies at pipeline termination points as required.

Samples shall be tested for bacteriological (chemical and physical) quality in accordance with *Standard Methods for the Examination of Water and Wastewater* and shall show the absence of coliform organisms; and chlorine residual. Turbidity, pH, and a standard heterotrophic plate count (HPC) test shall be required. New pipeline does not typically contain coliforms but does typically contain HPC bacteria.

Samples for bacteriological analysis shall be collected in sterile bottles

treated with sodium thiosulfate, as required by *Standard Methods for the Examination of Water and Wastewater*. No hose, fire hydrant or threaded fitting outlet shall be used in the collection of samples. There should be no water in the trench up to the connection for sampling. The sampling pipe must be dedicated and clean and disinfected and flushed prior to sampling.

If sample results from the lab indicate a measured HPC greater than 500 colony-forming units (cfu) per ml, flushing should be resumed and another coliform and HPC set of samples shall be obtained until no coliforms are present and the HPC is less than 500 cfu/ml.

The record of disinfection compliance shall be the bacteriological test results certifying that the water sampled from the disinfected water main is free of coliform bacteria contamination and is equal to or better than the bacteriologic water quality in the distribution system.

If the initial disinfection fails to produce satisfactory bacteriological results or if other water quality is affected, the disinfected pipeline may be reflashed and shall be resampled. If succeeding samples also fail to produce acceptable results, the disinfected pipeline shall be rechlorinated by the continuous-feed method until satisfactory results are obtained, satisfactory results being derived from two (2) consecutive sets of acceptable samples taken 24 hours apart.

The Contractor shall be responsible for all expenses relative to the chlorination and disinfection of the pipelines. The costs of re-testing shall also be borne by the Contractor. The District shall coordinate obtaining the tests and select the testing laboratory to perform the tests. The Contractor shall be responsible for all expenses relative to the laboratory testing.

The disinfected pipeline shall not be placed in service until evidence that the bacteriological tests have proved negative and successfully met the testing requirements and are presented to the Engineer. The Engineer shall allow the disinfected pipeline(s) to be connected to the in-service pipeline after the evidence is presented to him/her by the Contractor. The evidence shall consist of the original laboratory report document certifying the laboratory test results comply with the disinfection requirements of this document.

### 3.03 FINAL CONNECTION PIPE SEGMENT DISINFECTION REQUIREMENTS

If approved by the Engineer, final connection pipe segments (measuring

18.5 feet or less) located between the existing in-service pipeline and the valve or temporary termination point of a successfully disinfected pipe section may be spray disinfected or swabbed with a minimum 1-5 percent solution of chlorine prior to final installation. The installation of the final connection pipe segment shall be witnessed by the Engineer. If dirt, debris or any contaminating substances enter the pipe section between the disinfection process and installation process the pipe section shall be removed and re-disinfected. The Contractor shall immediately remove the pipe section from the pipe trench and re-disinfect the pipe section if required by the Engineer. The disinfection of the pipeline shall require that all dirt, construction residue, dust and contaminants be thoroughly pressure washed from the interior of the pipeline, valve, fitting, transition coupling and other pipe component interior surfaces. The interior surfaces shall be dried clean with a cloth or paper towels. The interior surfaces shall then be disinfected with the minimum 1-5 percent solution of chlorine. The pipe section shall not be allowed to be set in place for connection to the existing in-service pipeline until the Engineer approves the witnessed disinfection of the pipeline section.

END OF SECTION 02670

SECTION 15615 - RESILIENT GATE VALVES, BUTTERFLY VALVES,  
OS&Y VALVES AND SWING CHECK VALVES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Contractor shall provide all tools, supplies, materials, equipment, and labor necessary for furnishing, epoxy coating, installing, adjusting, and testing of all valves, check valves, combination air and vacuum release valves and appurtenant work, complete and operable, in accordance with the requirements of the Contract Documents. Where buried valves are illustrated on the Plans, the Contractor shall furnish and install valve boxes to grade, with covers, extensions, and position indicators.
- B. The provisions of this Section shall apply to all valves and valve operators specified in the various Sections of Divisions 2 and 15 of these Specifications except where otherwise specified in the Contract Documents. Valves and operators in particular locations may require a combination of units, sensors, limit switches, and controls specified in other sections of these Specifications.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Divisions 2 and 15, applicable sections, Pipe, Fittings, and Valves

1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Comply with the reference specifications of the General Requirements.
- B. Comply with the current provisions of the following Codes and Standards.

ANSI B 16.1	Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800
ANSI B 16.5	Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and Other Special Alloys
ANSI/ASME B 1.20.1	General Purpose Pipe Threads (inch)
ANSI/ASME B 31.1	Power Piping
ASTM A 36	Specification for Structural Steel

ASTM A 48	Specification for Gray Iron Castings
ASTM A 126	Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings
ASTM A 536	Specification for Ductile Iron Castings
ASTM B 61	Specification for Steam or Valve Bronze Castings
ASTM B 62	Specification for Composition Bronze or Ounce Metal Castings
ASTM B 148	Specification for Aluminum-Bronze Castings
ASTM B 584	Specification for Copper Alloy Sand Castings or General Applications
ANSI/AWWA C 500	Gate Valves for Water and Sewage Systems
ANSI/AWWA C 502	Dry-Barrel Fire Hydrants
ANSI/AWWA C 503	Wet-Barrel Fire Hydrants
ANSI/AWWA C 504	Rubber-Seated Butterfly Valves
ANSI/AWWA C 506	Backflow Prevention Devices - Reduced Pressure Principle and Double Check Valves Types
ANSI/AWWA C 507	Ball Valves 6 inches through 48 inches
AWWA C 508	Swing-Check Valves for Waterworks Service, 2 inches Through 24 inches NPS
ANSI/AWWA C 509	Resilient-Seated Gate Valves for Water and Sewage Systems
AWWA C 550	Protective Interior Coatings for Valves and Hydrants
SSPC-SP-5	White Metal Blast Cleaning
NSF / ANSI 61	Drinking Water System Components – Health

## Effects

MSS-SP-70

Manufacturers Standardization Society of the Valve and Fitting Industry; Cast Iron Gate Valves. Flanged and Threaded Ends

### 1.04 CONTRACTOR SUBMITTALS

- A. Submittals shall be made in accordance with General Requirements. In addition to product information, the Contractor shall submit for approval lay-out drawings showing valve locations within the piping system, supports, and identification numbers.
- B. The following submittals and specific information shall be provided.
1. Shop Drawings: Shop drawings of all valves and operators including associated wiring diagrams and electrical data, shall be furnished as specified in General Requirements. Submit for approval the following:
    - a. Manufacturer's literature, illustrations, paint certifications, specifications, detailed drawings, data and descriptive literature on all valves and appurtenances.
    - b. Deviations from Contract Documents
    - c. Engineering data including dimensions, materials, size and weight.
    - d. Fabrication, assembly and installation drawings.
    - e. CV values, head loss curves, and as required, calculations.
    - f. Special tools list.
  2. Valve Labeling: The Contractor shall submit a schedule of valves to be labeled indicating in each case the valve location and the proposed wording for the label. Complete nameplate data of valves and actuators is required.
  3. Operation and Maintenance Manuals:
    - a. Submit complete installation, operation and maintenance manuals including test reports, maintenance data and schedules, description of operation, and spare parts information.

- b. Furnish Operation and Maintenance Manuals in conformance with the requirements of the General Requirements.
- 4. Shop Tests: Hydrostatic tests shall be performed, when required by the valve specifications included herein.
- 5. Certificates: Where specified or otherwise required by Engineer, submit Test Certificates and Certificates of Compliance with AWWA standards and other specifications, especially where it concerns the suitability of the materials of construction for the particular application.

#### 1.05 QUALITY ASSURANCE

- A. Valve Testing: Valves shall be shop tested per manufacturer's recommendations and applicable AWWA/ANSI specifications prior to shipment. Manufacturer's certification that valves have been shop tested shall be submitted for approval 30 days prior to scheduled shipment.
- B. Bronze Parts: Where specified, all interior bronze parts of valves shall conform to the requirements of ASTM B 62, or, where not subject to dezincification, to ASTM B 584.
- C. Shop Inspection: Shop inspection of valve construction, testing and coating shall be witnessed and approved by the ENGINEER. All valves will be shop inspected unless otherwise waived in writing by the Engineer.
- D. The Contractor shall demonstrate that each valve installed as a part of a piping system will operate under field conditions in a manner consistent with the design of the system. All testing of valves shall be witnessed and approved by the Engineer.
- E. For all pneumatic, hydraulic, and electric motor operators and controls, it shall be the responsibility of the Contractor to provide a qualified representative of the valve manufacturer to perform all field adjustments to set operator limit switches for the required functions. The cost of providing a qualified representative of the valve manufacturer for field adjustments shall be included in the Contractor's bid. All wiring of motor operators shall be identified with a unique number unlike any other wiring identification.
- F. All adjustments, calibration, and/or testing shall be done in the presence of the Engineer.



## 1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the site to ensure uninterrupted progress of the Work. Deliver anchorage devices, which are to be embedded in cast-in-place concrete, in ample time to not delay the Work.
- B. All boxes, crates and packages shall be inspected by Contractor upon delivery to the site. Contractor shall notify Engineer if any loss or damage exists to equipment or components. Replace loss and repair damage to new condition, in accordance with manufacturer's instructions.
- C. Store materials to permit easy access for inspection and identification. Keep all material off the ground, using pallets, platforms or other supports. Protect steel members and packaged materials from corrosion and deterioration.
- D. Provide full-face protectors of waterproof material fastened to each side of the valve body to protect joints and the valve interior.

## PART 2 - PRODUCTS

### 2.01 GENERAL VALVE REQUIREMENTS

- A. General: The Contractor shall furnish all valves, operators, actuators, valve-operating units, stem extensions, and other accessories as shown or specified. All valves shall have the name of the manufacturer and the site of the valve cast on the body or bonnet or shown on a permanently attached plate in raised letters. All valves shall be new and of current manufacture. All valves, 6 inch and larger, shall have operators with position indicators. Where buried, these valves shall be provided with valve boxes and covers containing position indicators, and valve extensions.
- B. Valve Flanges: The flanges of valves shall be in accordance with Divisions 2 and 15.
- C. Valve Stems: Except where otherwise specified, valves with motorized operators shall have stems conforming to ASTM A 276 Type 316 stainless steel with minimum tensile strength of 95,000 psi, and a minimum yield point of 75,000 PSI, and elongation of 25% in 2 inches. Manually operated valves shall have silicon-bronze stems conforming to ASTM B

584-875, having minimum tensile strength of 60,000 PSI, a minimum yield point of 24,000 PSI, and elongation of 16% in 2 inches. Where subject to dezincification, manually operated valve stems shall be of bronze conforming to ASTM B 62, containing no more than 5% zinc, nor more than 2% aluminum.

D. Protective Coating: Except where otherwise specified, ferrous surfaces, exclusive of stainless steel surfaces, in the water passages of all valves 4 inch and larger, as well as the exterior surfaces of all submerged, buried or aboveground valves and operators, shall be fusion bonded epoxy. Flange faces of valves shall not be coated. The valve manufacturer shall certify in writing that such coating has been applied and tested in the manufacturing plant prior to shipment, in accordance with these Specifications.

E. Valve Operators:

1. Where shown, certain valves shall be furnished with electric operators, provided by the valve manufacturer. All operators of a given type shall be furnished by the same manufacturer. Where these operators are supplied by different manufacturers, the Contractor shall coordinate their selection to provide uniformity of each type of electric operator. All valve operators, regardless of type, shall be installed, adjusted, and tested by the valve manufacturer at the manufacturing plant. Unless otherwise specified, all electric, pneumatic, and hydraulic valve operators shall be in accordance with Sections of Division 17: "Instrumentation and Controls."

2. All manual operators shall have levers or handwheels, unless otherwise shown. Where buried, the valves shall have extensions with square nuts or floor stands.

G. Nuts and Bolts: All nuts and bolts on valve flanges and supports shall be coated with a flouropolymer as manufactured by Tripac (Tripac 2000 Blue), or an approved equal. All bolts on valve bonnets and exterior valve hardware shall be Type 316 stainless steel.

## 2.02 RESILIENT SEATED GATE VALVES

Resilient seated gate valves shall conform to AWWA C 509, latest edition. The wedge shall be fully encapsulated in the elastomer, including the guides. The brass stem nut shall be rigidly enclosed in the wedge to maintain alignment. The valve body shall be composed of ductile iron.

The stem shall have two (2) O-rings and a wiper above the collar and one (1) O-ring below the collar. Stem seals must be replaceable with the valve under pressure.

The stem material shall be standard bronze. Stainless steel (ANSI-420) shall also be acceptable for use as an alternative.

The waterway shall be full size to allow for tapping use; no cavities or depressions shall be permitted in the seat area.

Valve body and bonnet shall be electrostatically applied, fusion bonded, epoxy coated both inside and out by the valve manufacturer. The coating shall meet the requirements of AWWA C 550, latest edition. Coating shall be applied only at the valve manufacturer's facilities. Exterior hardware shall be composed of Type 316 stainless steel.

The bonnet bolts shall not be exposed to the environment.

O-ring style seals shall be used as gaskets on the bonnet and on the stuffing box. The below grade valves shall be supplied with a standard 2 inch operating nut. All valves shall be wrapped with a polyethylene material.

The valves shall be an AFC, CLOW, AVK, Waterous, M&H Valve Company, or Mueller resilient wedge gate valve or an approved equal. All valves shall be resilient wedge gate valves.

## 2.03 BUTTERFLY VALVES

### A. General:

All butterfly valves shall be of the rubber-seated tight-closing type. They shall meet or exceed AWWA Standard C 504. All valves shall be CLOW 4500, American AVK, Henry Pratt, Mueller Butterfly Valves or an approved equal.

Both valve ends shall be mechanical-joint (or other, as available) per AWWA Standard C 111. Accessories (bolts, glands and gaskets) shall be supplied by the valve manufacturer.

All valves must use full AWWA C 504 Class 150B valve shaft diameter, and full Class 150B underground-service-operator torque rating throughout entire travel, to provide capability for operation in emergency service. All valves shall be NSF approved.

B. Valve:

Valve body shall be composed of ductile iron with 18-8 Type 304 stainless steel body seat. Valve vane shall be ductile iron, having rubber seat mechanically secured with an integral 18-8 stainless steel clamp ring and 18-8 stainless steel self-locked screws.

Rubber seat shall be a full-circle 360 degree seat not penetrated by the valve shaft. For valves 4" - 12", the valve shaft shall be one piece, extending full size through the entire valve. Valve shaft shall be 304 stainless steel. Packing shall be O-ring cartridge designed for permanent duty in underground service. For 14 inches and larger valve shaft shall be 18-8 stainless steel stub shaft design keyed to the vane with stainless steel taper pins.

Body Type: All butterfly valves shall be of the rubber-seated tight-closing type. They shall meet or exceed AWWA Standard C 504. All valves shall be CLOW butterfly valves, or approved equal.

Valve ends shall be: (select desired).

Wafer type body suitable for installation between 125# or 150# ASA flanges (available 4 inch through 20 inch).

Flanged: Short body valves per Table 2 of AWWA Spec C 504. Flanges shall be 125# ANSI (available all sizes). Also flanged by MJ in 6 inch, 8 inch and 16 inch sizes.

Mechanical Joint: Both ends of valve shall be "MJ" per AWWA C 111. "MJ" accessories (bolts, glands, gaskets) must be supplied by valve manufacturer (available all sizes - also flanged by MJ in 6 inch, 8 inch, 12 inch and 16 inch sizes). Both ends of valve shall be "MJ" per AWWA C111. "MJ" accessories (bolts, glands, gaskets) shall be supplied by valve manufacturer (available all sizes - also flanged by MJ in 6 inch, 8 inch, 12 inch and 16 inch sizes).

C. Operator:

Valve operator shall be of the traveling-nut type, sealed, gasketed, and lubricated for underground service. It shall be capable of withstanding an overload input torque of 450 ft. lbs at full-open or full-closed position without damage to the valve or valve operator. It shall be designed for submergence in water to 25 feet head pressure for up to 72 hours.

Valve shall be capable of easy closure by one man using standard valve key, even under emergency line-break conditions as severe as those that would cause a valve maximum opening torque requirement of as much as two times AWWA Class 150B.

All valves shall open left (clockwise to close), and be equipped with 2 inch AWWA operating nut.

Crank, Handwheel or Chainwheel: All manual operators for service other than underground shall have position indicator and shall be totally enclosed and permanently lubricated. In any event, a maximum pull of 80 pounds on the crank or wheel shall produce full Table 1 output torque throughout entire travel. Operators shall full-closed positions without damage to valve or operator. Operators shall be of the “traveling-nut” type. All valves shall open left (clockwise to close).

Cylinder: Cylinder operator shall be of the base mounted configuration. Cylinder barrel shall be of molybdenum-disulfide lined glass fiber reinforced epoxy tubing, to provide a corrosion-free, self-lubricated high strength barrel. Rod seal shall be of urethane, molybdenum-disulfide filled, to provide a self-lubricated, long life seal.

Piston rod shall be of hard chromium plated 18-8 stainless steel, and shall be top and bottom guided in a heavy cast iron mechanism housing for positive alignment. Guiding shall be accomplished by bronze bearings at ends of housing straddling all side loads improved in operation. Entire operator including piston rod shall be fully enclosed. Operator shall produce full AWWA Standard C 504 Table 1 output torque throughout entire travel for Class (25A) (25B) (75B) (150B) with a minimum supply pressure of PSI (water) (air) (oil).

D. Coating:

Standard coating shall be universal primer. Coating shall be applied to entire valve body and vane before final assembly.

Valve body shall be electrostatically applied, fusion bonded, epoxy coated to all surfaces of valve body and vane to an average minimum film thickness of 5 mils, conforming to AWWA C 550 Standard. Coating shall be applied only at the valve manufacturer’s facilities. Exterior valve hardware shall be composed of Type 316 stainless steel hardware for butterfly valve flanges shall consist of flouropolymer coated hardware as manufactured by Tripac (Tripac 2000 Blue) or an approved equal.

E. Tests:

All valves shall be tested bottle-tight at rated working pressure by the manufacturer as follows:

4" through 12"	200 PSI
14" Up	150 PSI

In addition, a hydrostatic test with vane partially open shall be given to the assembled valve as follows:

4"	400 PSI
14" Up	300 PSI

2.04 OS&Y GATE VALVES

Resilient seated gate valves shall conform to AWWA C 509, latest edition. The wedge gate valve shall be of the outside screw and yoke (OS&Y) type. The wedge shall be fully encapsulated in the elastomer, including the guides. The brass stem shall be rigidly attached to the wedge to maintain alignment. The elastomer shall be bonded to the wedge. The valve body shall be composed of ductile iron.

The stem shall have two (2) O-rings and a wiper above the collar and one (1) O-ring below the collar. Stem seals must be replaceable with the valve under pressure.

The stem material shall be bronze per Item 2.1.C. Stainless steel (ANSI-420) shall also be acceptable for use as an alternative.

The waterway shall be full size to allow for tapping use; no cavities or depressions shall be permitted in the seat area.

Valve body, bonnet and yoke shall be electrostatically applied, fusion bonded, epoxy coated both inside and out by the valve manufacturer. The coating shall meet the requirements of AWWA C 550, latest edition. Coating shall be applied only at the valve manufacturer's facilities. Exterior valve body, bonnet, etc. hardware shall be composed of Type 316 stainless steel.

O-ring style seals shall be used as gaskets on the bonnet and on the stuffing box.

2.05 VALVE RISER AND VALVE COVER

A 6 inch diameter cast iron valve riser and ductile iron cover shall be placed over each below grade valve. The 6 inch diameter cast iron valve riser and cover shall be manufactured by Star Pipe Products, or an approved equivalent of equal substance and function.

Place an 8 inch deep, 8 inch wide PCC collar concentric with the exterior of the valve extension riser. Place the top of the riser 0.10-feet above the finish grade.

Two (2) 6-foot valve keys for operating of gate valves shall be furnished by the Contractor to the Owner prior to completion of the project.

## 2.06 SWING CHECK VALVES

The check valves shall be manufactured of gray cast iron in conformance with ASTM A 126 Grade B. The swing check valves shall comply with AWWA C 508, latest revision. The check valve shall be provided with flanges in accordance with ANSI B 16.1, Class 125.

The valve design shall be full flow equal to nominal pipe diameter at all points through the valve. The valve shall be capable of passing 3 inch diameter sphere. The seating surface shall be on a 45 degree angle to minimize disc travel. A threaded port with pipe plug shall be provided on the bottom of the valve to allow for field installation of a backflow actuator, without special tools or removing the valve from the line.

The top access port shall be full size, allowing removal of the disc without removing the valve from the line. The access cover shall be domed in shape to provide flushing action over the disc for operating in lines containing high solids content. A threaded port with plug shall be provided in the access cover to allow for field installation of a mechanical, disc position indicator.

The disc shall be of one-piece construction, precision molded with an integral O-ring type sealing surface, and contain alloy steel and nylon reinforcement in the flexible hinge area. The flex portion of the disc shall be warranted for 25 years. Non-slam closing characteristics shall be provided through a short 35 degree disc stroke and a memory disc return action.

The valve body and cover shall be constructed of ductile iron per ASTM A 536 Grade 65-45-12.

The disc shall be precision molded Buna N (NBR), ASTM D 2000-BG.

The exterior and interior of the valve shall be coated with an ANSI/NSF 61

approved fusion bonded epoxy coating.

## 2.07 NSF / ANSI STANDARD 61

Piping, fittings, and appurtenances in contact with potable water or water that will be treated to become potable shall be listed in NSF / ANSI Standard 61 as being suitable for contact with potable water.

## PART 3 - EXECUTION

### 3.01 VALVE INSTALLATION

- A. General: All valves, operating units, controls, stem extensions, valve boxes, and accessories shall be handled in a manner to prevent any injury to any part of the valve. Valves shall be installed in accordance with the manufacturer's written instructions and as shown and specified. All valves shall be adequately braced to prevent warpage and bending under the intended use. Valves shall be firmly supported to avoid undue stresses on the pipe. All valves shall be installed so that the valve stems are plumb.
- B. Access: All valves shall be installed to provide easy access for operation, removal, and maintenance and to avoid conflicts between valve operators and structural members or handrails.
- C. Valve Accessories:
1. Where combinations of valves, sensors, switches, and controls are specified, it shall be the responsibility of the Contractor to properly assemble and install these various items so that all systems are compatible and operating properly. The relationship between interrelated items shall be clearly noted on Shop drawing submittals.
  2. Valve operators and controls are to be installed where specified and designated on the Plans. The Contractor is responsible for installation of the correct valve operator and control as specified to provide a complete piping system as specified.
- D. All valves shall be field tested following installation to demonstrate that the valve operates under field conditions in a manner consistent with the design of the system.
- E. All testing of valves shall be witnessed and approved by the Engineer.



- F. The Contractor shall demonstrate that each valve operator and control installed as a part of a piping system will operate under field conditions as designed and in the manner for which the operator was specified.

END OF SECTION 15615

## SECTION 15830 - MISCELLANEOUS VALVES

### PART 1 - GENERAL

#### 1.01 DESCRIPTION

- A. The Contractor shall furnish and install miscellaneous valves as shown and as specified herein, complete and operable including accessories and, where designated, operators, in accordance with the requirements of the Contract Documents.

#### 1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Division 2 - Sitework.
- B. Division 15 - Mechanical.

#### 1.03 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

- A. Comply with the reference specifications of the General Requirements.
- B. NSF / ANSI STANDARD 61: Piping, fittings, and appurtenances in contact with potable water or water that will be treated to become potable shall be listed in NSF / ANSI Standard 61 as being suitable for contact with potable water.

#### 1.04 CONTRACTOR SUBMITTALS

- A. Submittals shall be made in accordance with Section 01300 - Contractor Submittals.

#### 1.05 QUALITY ASSURANCE

- A. QUALITY ASSURANCE shall comply with the quality requirements specified in RELATED WORK SPECIFIED ELSEWHERE above.
- B. All valves shall be tested in accordance with manufacturer's recommendation and applicable AWWA/ANSI specifications

### PART 2 - PRODUCTS

#### 2.01 COMBINATION AIR-VACUUM VALVES

- A. Combination Air and Vacuum Valves: Combination air valves shall combine the characteristics of air and vacuum valves and air release valves by exhausting accumulated air in systems under pressure and releasing or re-admitting large quantities of air while a system is being filled or drained, respectively. They shall be of the size shown, with flanged or screwed ends to match piping. Bodies, the float, seat, and all moving parts shall be constructed of Type 316 stainless steel. Seat washers and gaskets shall be of a material insuring water tightness with a minimum of maintenance. Valves shall be designed for minimum 150 PSI water-working pressure, unless otherwise shown.

## 2.02 BACKFLOW PREVENTER VALVES

- A. General: Backflow preventers shall work on the reduced pressure principle. They shall consist of two (2) spring-loaded check valves, automatic differential pressure relief valve, drain valves, and shut-off valves. The body material shall be bronze or cast iron for a working pressure of not less than 150 PSI, with bronze or stainless steel trim. Drain lines with air gaps shall be provided.

B. Manufacturers, or Equal:

1. Model: 4000B  
AMES Fire & Waterworks  
1427 North Market Boulevard, Suite #9  
Sacramento, CA 95854  
916-928-0123  
916-928-9333: FAX
2. Model: 850V  
FEBCO  
4381 North Brawley, Suite 102  
Fresno, CA 93722  
559-441-5300  
559-441-5301: FAX
3. Or Equal.

## 2.03 SMALL PRESSURE REDUCING VALVES (Air, Chemical and Water Systems)

- A. General: Small air and water pressure reducing valves shall be of the spring-loaded diaphragm type with a minimum pressure rating of 250 PSI, with bronze body, nickel alloy or stainless steel seat, and threaded ends. Each valve shall be furnished with built-in or separate strainer and union

ends.

- B. Small chemical (i.e. ammonium hydroxide, sodium bisulfite, and sodium hypochlorite) pressure reducing valves shall be of the spring-loaded diaphragm type with Teflon body, hastelloy or Teflon trim material, and Teflon seat material. Value body shall be flanged.

2.04 LARGE WATER PRESSURE REDUCING VALVES

- A. General: Large water pressure reducing valves shall be of the piston-type or diaphragm-actuated globe type, with cast iron body and stainless steel trim. Unless otherwise shown or specified, the valves shall have a pressure rating of not less than 150 PSI, shall have 125 lb flanges, and shall have an adjustable downstream pressure range with a downstream setting as required.

2.05 PRESSURE RELIEF VALVES

- A. Pressure Relief Valves for chemical piping systems shall be in-line pattern with three ports. Excess pressure shall be relieved through the port in the bottom of the valve. The valve materials shall be as described in Table 2.1. For the diaphragm material, Teflon or other suitable material may be substituted for EPDM.

TABLE 2-1 RELIEF VALVE MATERIALS FOR CHEMICAL SYSTEMS

ITEM	Systems					
	Ammonium Hydroxide	Scale Inhibitor	Sodium Bisulfite	Polymer	Sodium Hypochlorite	Sulfuric Acid
Relief Valves (Body) (Diaphragm)	PVC or Teflon EPDM	PVC EPDM	PVC or Teflon EPDM	PVC or Teflon Teflon	PVC or Teflon Teflon	PVDF or Teflon Teflon

2.06 CORPORATION STOPS

- A. Unless otherwise shown, corporation stops shall be made of solid brass for key operation, with screwed ends with corporation thread or iron pipe thread, as required.

B. Manufacturer, or Equal:

1. James Jones.
2. Mueller.
3. Or equal.

2.07 SOLENOID VALVES

- A. Solenoid valves shall be of the size, type, and class shown and shall be designed for not less than 150 PSI water-working pressure. Valves for water, air, or gas service shall have brass or bronze body with screwed ends, stainless steel trim and spring, Teflon or other resilient seals with material best suited for the temperature and fluid handled. Solenoid valves in corrosive environment shall have stainless steel bodies. For chemicals and all corrosive fluids, solenoid valves with Teflon bodies and springs or other suitable materials shall be used. General purpose enclosures for indoors shall be NEMA type 2. For explosion proof, corrosive, special purpose, or outdoor locations NEMA type 4, 7, 8, 9, 9E, 9F, or 9G enclosures shall be used, as applicable. All coil ratings shall be for continuous duty. For electrical characteristics see electrical drawings or specifications.

2.08 NSF / ANSI STANDARD 61

Piping, fittings, and appurtenances in contact with potable water or water that will be treated to become potable shall be listed in NSF / ANSI Standard 61 as being suitable for contact with potable water.

2.09 Stainless Steel Valves

A. General:

1. All valves shall be furnished and installed as illustrated on the Plans.
2. Valves with pneumatic, hydraulic, and electric motor operators and controls shall be in accordance with Division 17.

- B. Fasteners: All bolts, nuts, and washers shall be made of Type 316 stainless steel.

C. Ball Valves:

1. Sizes 1/2" - 2 1/2":
  - a. Class: 900 PSI, Screwed.
  - b. Type: Full port.
  - c. Body: 316 Stainless Steel ASTM A 351.
  - d. Ball: 316 Stainless Steel.
  - e. Seat: Reinforced PTFE Fire Safe.
  - f. Stem: 316 Stainless Steel.
  - g. Operator: Manual, Lever.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Backflow preventers shall be installed in all potable water lines and as illustrated in the Plans.
- B. All valves shall be installed in accordance with the Manufacturer's printed recommendations.
- C. Field testing of valves shall be performed in accordance with manufacturer's recommendations.
- D. All field testing shall be witnessed and approved by the Engineer.

END OF SECTION 15830

**PROJECT PLANS - ATTACHED**

De Anza Dr., Yaqui Rd and Fairway Lane Water  
Improvements Project

247

project plans - ATTACHED

# PROJECT VICINITY MAP

Borrego Springs, California





**EXHIBIT "A"  
CHANGE ORDER FORM**

**Borrego Water District**

*806 Palm Canyon Drive  
Borrego Springs, CA 92204*

**Contract Change Order #**

<b>Project:</b>	<b>Change Order No.:</b>		
<b>Contract No.:</b>	<b>Orig. Contract Amt.:</b> \$		Days
<b>Contractor:</b>	<b>Prev. Appvd. Changes:</b> \$		Days
<b>Owner:</b> Borrego Water District	<b>This Change:</b> \$		Days
	<b>Revised Contract Amt.:</b> \$		Days

This Change Order covers changes to the subject contract as described herein. The Contractor shall construct, furnish equipment and materials, and perform all work as necessary or required to complete the Change Order items for a lump sum price agreed upon between the Contractor and Borrego Water District, otherwise referred to as Owner.

Item No.	Description of Changes	Increase/ (Decrease) in Contract Amount	Contract Time Extension, Days
1			
2			
	<b>Totals</b>	<b>\$</b>	

This Contract Change Order consists of **2 pages** and any exhibits attached to this Contract Change Order shall not be part of the Contract Change Order unless specifically initialed by or on behalf of both the Contractor and the Borrego Water District.

Contract Change Order # \_\_\_\_\_ Page 1 of 2

The amount of the contract will be increased by the sum of \$\_\_\_\_\_ and the contract time shall be extended by working days. The undersigned Contractor approves the foregoing Change Order # as to the changes, if any, in the contract price specified for each item including any and all supervision costs and other miscellaneous costs relating to the change in work, and as to the extension of time allowed, if any, for completion of the entire work on account of said Change Order #. The Contractor agrees to furnish all labor and materials and perform all other necessary work, inclusive of the directly or indirectly related to the approved time extension, required to complete the Change order items. This document will become a supplement of the contract and all provisions will apply hereto. It is understood that the Change Order shall be effective when approved by the Owner.

Contractor accepts the terms and conditions stated above as full and final settlement of any and all claims arising out of or related to the subject of this Change Order and acknowledges that the compensation (time and cost) set forth herein comprises the total compensation due for the work or change defined in the Change Order, including all impact on any unchanged work. By signing this Change Order, the Contractor acknowledges and agrees that the stipulated compensation includes payment for all Work contained in the Change Order, plus all payment for any acceleration or interruption of schedules, extended overhead costs, delay, and all impact or cumulative impact on all Work under this Contract. The signing of this Change Order acknowledges full mutual accord and satisfaction for the change and that the stated time and/or cost constitute the total equitable adjustment owed the Contractor as a result of the change. The Contractor hereby releases and agrees to waive all rights, without exception or reservation of any kind whatsoever, to file any further claim or request for equitable adjustment of any type, for any reasonably foreseeable cause that shall arise out of, or as a result of, this Change Order and/or its impact on the remainder of the Work under the Contract.

Accepted:

\_\_\_\_\_  
(Signature) Contractor's Authorized Representative

\_\_\_\_\_  
Date

Recommended:

\_\_\_\_\_  
(Signature) Carlos Beltran, District Engineer

\_\_\_\_\_  
Date

Approved:

\_\_\_\_\_  
(Signature) Geoff Poole, Borrego Water District

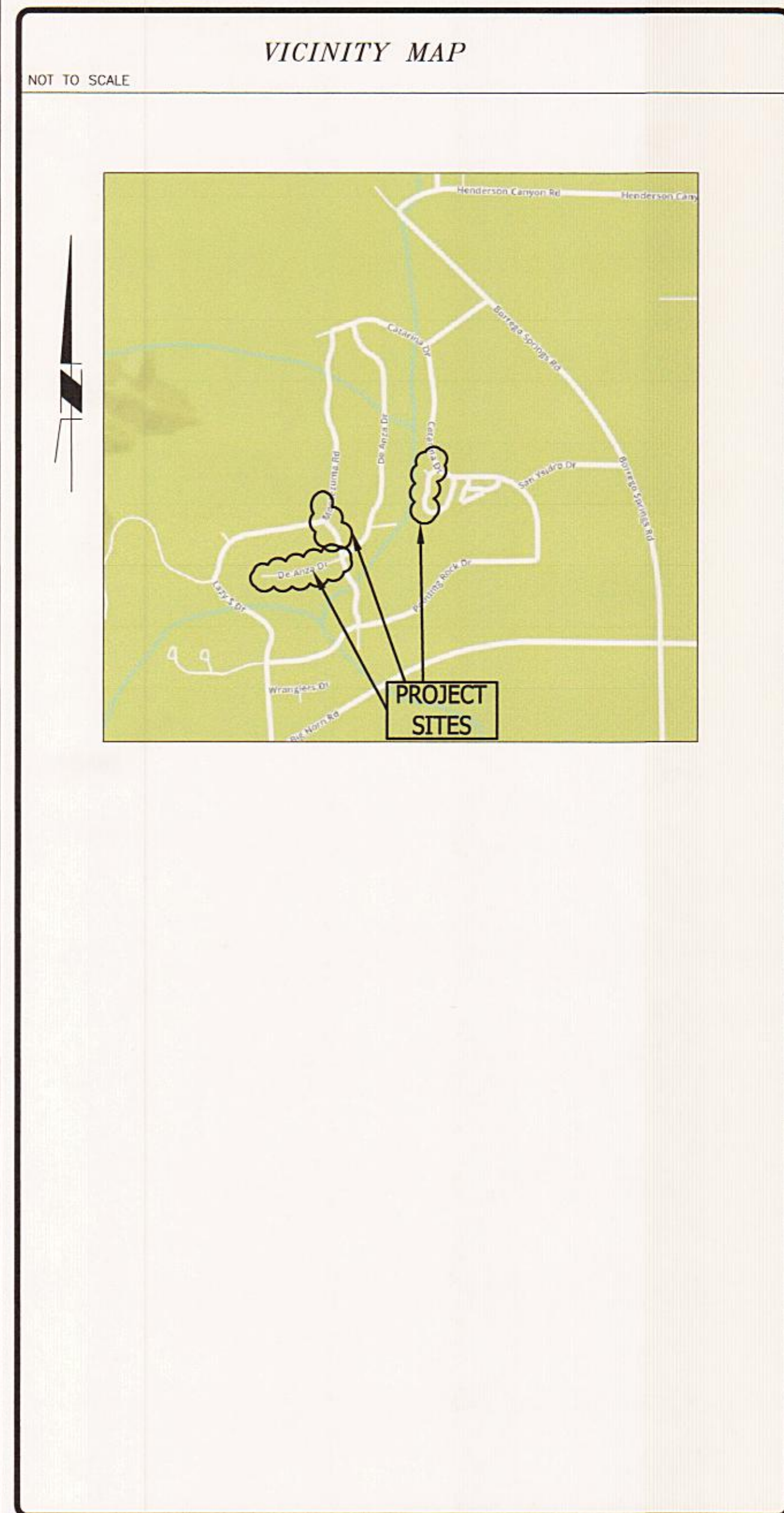
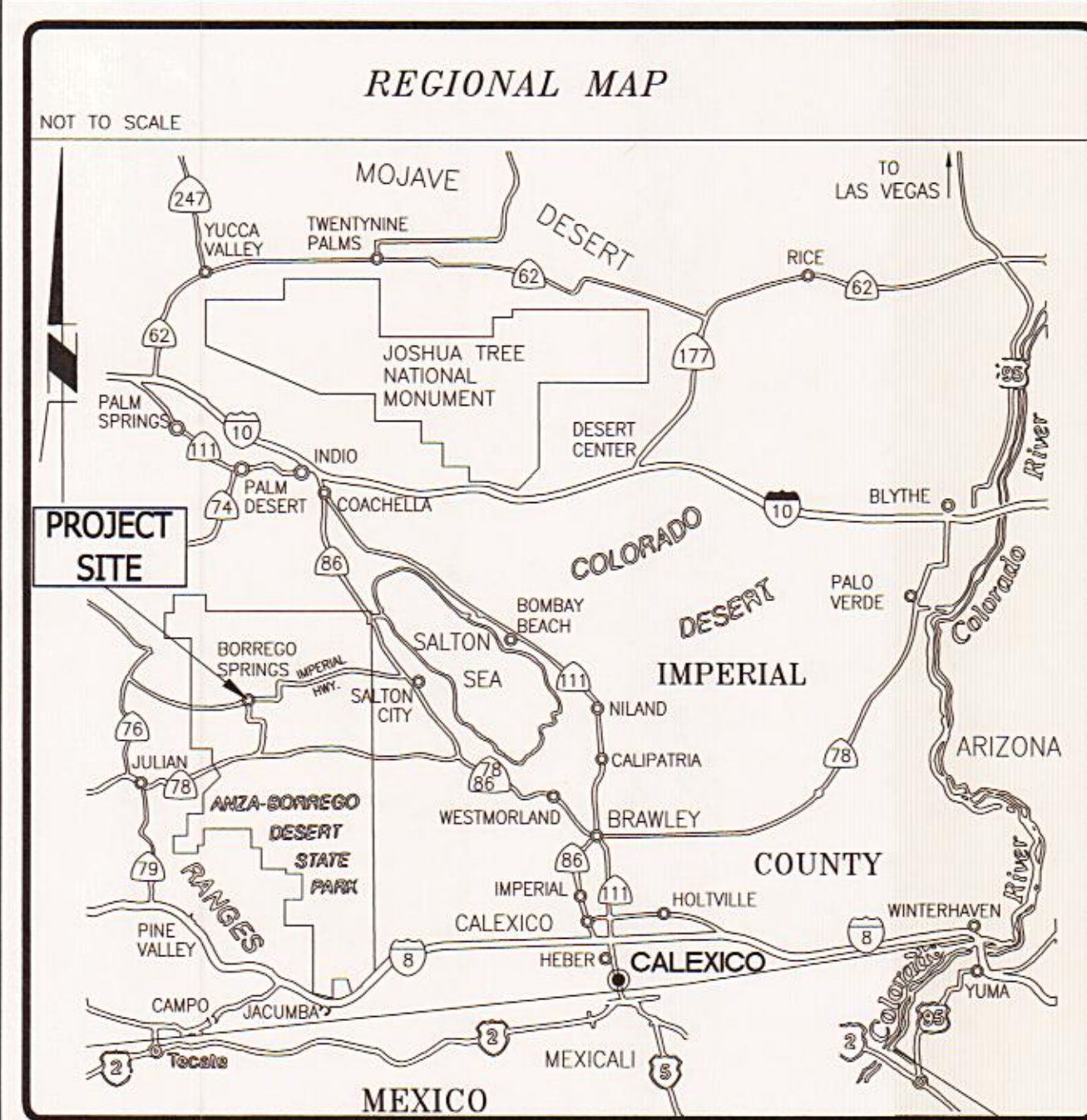
\_\_\_\_\_  
Date

Item No.	Justification for Change(s)
1	
2	

This Contract Change Order consists of **2 pages** and any exhibits attached to this Contract Change Order shall not be part of the Contract Change Order unless specifically initialed by or on behalf of both the Contractor and the Borrego Water District.

Contract Change Order #

Page 2 of 2



# DEN ANZA DRIVE, YAQUI ROAD AND FAIRWAY LANE WATER IMPROVEMENTS PROJECTS

## BORREGO WATER DISTRICT, BORREGO SPRINGS, CALIFORNIA

### DECEMBER 2019

BWD CIP PROJECT PIPELINE NO. 7, 8 AND 9

#### PROJECT INFORMATION

##### OWNER

BORREGO WATER DISTRICT  
806 PALM CANYON DRIVE  
BORREGO SPRINGS, CA 92004  
TEL. 760-767-5806

##### ENGINEER

DYNAMIC CONSULTING ENGINEERS, INC.  
2415 IMPERIAL BUSINESS PARK DR, SUITE B,  
IMPERIAL, CA 92251  
TEL. (760) 545-0162  
FAX. (760) 545-0163

#### AGENCY CONTACTS

##### FIRE PROTECTION DISTRICT

2324 STIRRUP RD  
BORREGO SPRINGS, CA 92004  
PHONE: 760-767-5436

##### SAN DIEGO COUNTY SHERIFF

BORREGO SPRINGS OFFICE  
571 PALM CANYON DRIVE  
BORREGO SPRINGS, CA. 92004  
PHONE: 760-767-5656

##### TELEPHONE

AT&T  
PHONE: 858-422-4133

STATE WATER RESOURCES  
CONTROL BOARD DIVISION OF  
DRINKING WATER FIELD  
OPERATIONS BRANCH, SAN DIEGO

BILL DIBIASE  
1350 FRONT STREET, SUITE 2050  
SAN DIEGO, CA 92101  
PHONE: 619-525-4383  
EMAIL: William.Dibiase@waterboards.ca.gov

##### SDG&E

PHONE: 800-655-4555

#### SHEET INDEX

1. TITLE SHEET, VICINITY MAP AND GENERAL NOTES
2. SHEET INDEX
3. WATER IMPROVEMENT PLANS - DE ANZA DR. STA 1+00 TO 8+00
4. WATER IMPROVEMENT PLANS - DE ANZA DR. STA 8+80 TO 12+75
5. WATER IMPROVEMENT PLANS - FAIRWAY LANE STA 1+00 TO 6+00
6. WATER IMPROVEMENT PLANS - YAQUI RD. STA 1+00 TO 6+00
7. DETAILS
8. DETAILS

#### PROJECT DESCRIPTION

THE WORK SHALL INCLUDE THE PROCUREMENT OF MATERIALS AND THE INSTALLATION OF A NEW 6 INCH DIAMETER WATER MAIN PIPELINES ALONG DE ANZA DR. AND FAIRWAY LANE. THE WORK ALSO INCLUDES PIPELINE TIE-INS TO EXISTING 6 INCH WATER LINES. THE WORK ALSO INCLUDES THE INSTALLATION OF NEW FIRE HYDRANTS AND WATER METER SERVICES.

#### BORREGO WATER DISTRICT GENERAL NOTES:

1. WATER WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS AND MATERIALS AS SPECIFIED IN THE MOST CURRENT EDITION OF THE STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION. CONTRACTOR SHALL HAVE A CURRENT COPY OF THE STANDARD SPECIFICATIONS ON THE JOB SITE AT ALL TIMES.
2. THE SUBMISSION AND REVIEW OF ALL SUBMITTALS AS REQUIRED BY THE STANDARD SPECIFICATIONS ARE TO BE ACCOMPLISHED PRIOR TO THE PRECONSTRUCTION MEETING WITH THE DISTRICT INSPECTOR.
3. CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT WITH SAN DIEGO COUNTY.
4. NO WORK MAY BEGIN OR PROCEED WITHOUT DIRECTION OF THE DISTRICT INSPECTOR. INSPECTOR'S SCHEDULING MUST BE 24-48 HOURS IN ADVANCE OF WORK.
5. WHERE ELEVATIONS AND GRADES ARE NOT SHOWN ON THE WATER MAIN PROFILE, TOP OF PIPE PROFILE IS 36-INCHES MINIMUM BELOW CENTERLINE OF FINISH GRADE OF STREET.
6. CONTRACTOR SHALL REVIEW ALL PROPOSED TRENCH WORK WITH CAL/OSHA. A COPY OF EXEMPTION LETTER OR TRENCHING PERMIT, IF REQUIRED SHALL BE SUBMITTED TO THE DISTRICT PRIOR TO CONSTRUCTION.
7. ALL EXISTING FACILITIES, WHICH MAY AFFECT FINAL DESIGN, I.E., LINE CROSSINGS, LINE PARALLELING, OR PROPOSED CONNECTIONS SHALL BE FIELD VERIFIED. ALL EXISTING OR PROPOSED UTILITY CROSSINGS, OR UTILITIES WITHIN 10-FOOT OF PROPOSED WATER MAINS, SHALL BE SHOWN ON IMPROVEMENT PLANS.
8. THE WATER SYSTEM SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE PROCEDURES IN THE STANDARD SPECIFICATIONS. THE CLASS OF PIPE SHALL BE USED AS THE DESIGNATED WORKING PRESSURE FOR TESTING ALL PIPES, VALVES (CLOSED) AND APPURTENANCES.
9. ALL DEFLECTIONS (HORIZONTAL AND VERTICAL) SHALL BE MADE BY USE OF JOINT COUPLINGS WITH 4-INCH MAXIMUM DEFLECTION PER COUPLING (2-INCH PER JOINT). NO BENDING (CURVING) OF PIPE SHALL BE PERMITTED.
10. STANDARDS - STANDARD TO BE USED SHALL MEAN THOSE STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION LATEST REVISION. SAID STANDARDS ARE AVAILABLE FROM THE BOOKSTORE OF SAID ASSOCIATION, 6666 W. QUINCY AVE. DENVER, CO. 80235, (800) 926-7337.
11. MATERIALS OF CONSTRUCTION - ALL WATER PIPE, FITTINGS AND APPURTENANCES CALLED FOR IN THESE CONTRACT DOCUMENTS SHALL CONFORM TO THE FOLLOWING STANDARDS, THOSE OTHER STANDARDS THEREIN REFERENCED AND THESE SPECIAL PROVISIONS.
12. PIPE: AWWA C-900 AND C-905. PIPE SHALL BE 235 PSI, DR18. ALL PIPES SHALL HAVE BELL AND SPIGOT, ELASTOMERIC GASKETED JOINTS. PIPE SHALL BE SUPPLIED WITH AN AFFIDAVIT OF COMPLIANCE.
13. FITTINGS: AWWA C-153 AND C-104. FITTINGS SHALL BE CEMENT-MORTAR LINED. UNLESS OTHERWISE SHOWN OR INDICATED BY THE CONTRACT DRAWINGS, BENDS SHALL BE FURNISHED WITH MECHANICAL JOINT ENDS; TEES AND CROSSES SHALL BE FURNISHED WITH FLANGED JOINT ENDS. FLANGE TO MECHANICAL JOINT ADAPTERS SHALL BE FURNISHED TO CONNECT PIPE TO TEES AND CROSSES WHERE VALVES DO NOT OCCUR. GLANDS SHALL BE OF THE SAME MANUFACTURER AS FITTINGS.
14. PIPELINE CONSTRUCTION - ALL WATER PIPE, FITTINGS AND APPURTENANCES CALLED FOR SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE FOLLOWING REFERENCED STANDARDS, THOSE OTHER STANDARDS THEREIN REFERENCED, THE WRITTEN RECOMMENDATIONS OF THE MANUFACTURER AND THESE SPECIAL PROVISIONS.
  - A. INSTALLATION: AWWA C-600 AND C-605. EXCESS EARTH FROM EXCAVATION SHALL BE REMOVED FROM THE ROADWAY SECTION AND DISPOSED OF. A TRACING WIRE AND APPROPRIATE UTILITY WARNING IDENTIFICATION TAPE SHALL BE PLACED IMMEDIATELY ABOVE THE PIPE ZONE BACKFILL. THE TEST PRESSURE FOR THE PIPE STRENGTH AND LEAKAGE SHALL BE NO LESS THAN 150 PSI. IN ALL EASEMENTS, FLEXIBLE HIGH VISIBILITY IDENTIFICATION MARKERS ARE ADDITIONALLY REQUIRED.

#### BOARD OF DIRECTORS

KATHY DICE	BOARD MEMBER
LYLE BRECHT	BOARD MEMBER
DAVE DUNCAN	BOARD MEMBER
HARRY EHRlich	BOARD MEMBER
RAY DELAHAY	BOARD MEMBER

#### PARTICIPATING CITY STAFF

GEOFF POOLE	GENERAL MANAGER
GREG HOLLOWAY	OPERATIONS MANAGER
ALAN ASCHE	OPERATIONS

#### NOTE TO CONTRACTOR

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

#### ENGINEER'S NOTE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS.

NOTE:  
ANY REFERENCES TO SPECIFIC MANUFACTURERS OR MODELS ARE FOR DESCRIPTIVE PURPOSES ONLY. CONTRACTORS ARE ALLOWED TO PROVIDE APPROVED EQUAL MATERIALS OR PRODUCTS SUBJECT TO ENGINEER'S APPROVAL.

CONTRACTOR TO POSSESS A VALID CLASS A (GENERAL ENGINEERING) CONTRACTOR'S LICENSE IN THE STATE OF CALIFORNIA FOR ALL WORK SHOWN ON THESE PLANS.

#### DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THE PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE DISTRICT IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR THE PROJECT DESIGN.

CARLOS BELTRAN, P.E.  
DYNAMIC CONSULTING ENGINEERS, INC  
2415 IMPERIAL BUSINESS PARK DR. SUITE B  
IMPERIAL, CA 92251  
(760) 545-0162



CARLOS BELTRAN, P.E.  
RCE# 69121

12/12/19  
DATE

NO.	REVISIONS:	APPROVED	DATE

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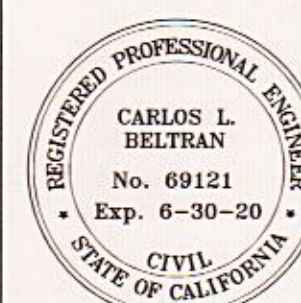
CIVIL ENGINEERING - LAND SURVEYING - CONSTRUCTION MANAGEMENT  
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www.dynamicconsultingengineers.com

APPROVED FOR CONSTRUCTION BY:

\_\_\_\_\_  
DATE

R.C.E. NO.

REG. EXP.



PREPARED UNDER THE DIRECT SUPERVISION OF:

\_\_\_\_\_  
DATE

69,121  
R.C.E. NO.

06/30/20  
REG. EXP.

PROJECT TITLE: BORREGO WATER DISTRICT  
CAPITAL IMPROVEMENTS PROJECTS - CIP PHASE 2  
DE ANZA DR., YAQUI RD. AND FAIRWAY LANE  
WATER IMPROVEMENTS PROJECT

SHEET CONTENT:  
TITLE SHEET, VICINITY MAP AND GENERAL NOTES

SCALE: NTS

DRAWN BY: DB, CB  
REVISED BY: CB

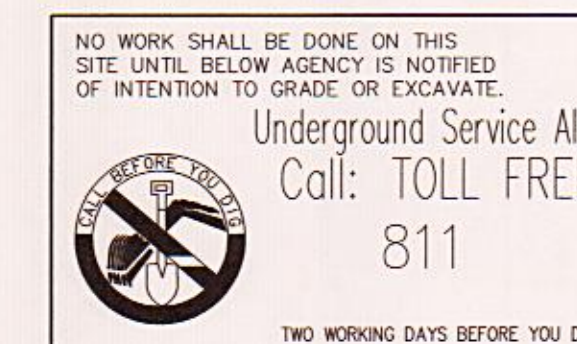
DATE: DECEMBER 12, 2019

SHEET

1

OF 8 SHEET

JOB NO.  
DCE 221419





**NOTE:**

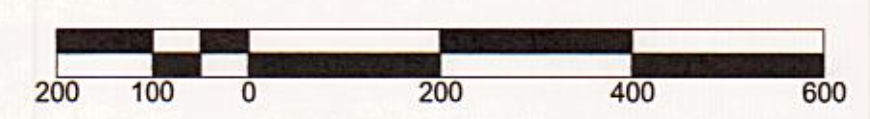
1. ALL EXISTING DRY AND WET UTILITIES ILLUSTRATED ARE APPROXIMATE. ALL UTILITIES CROSSING THE PROPOSED WATER LINE SHALL BE REQUIRED TO BE POT-HOLED. SEE NOTE 2.
2. IT WILL BE REQUIRED TO POT-HOLE THE EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION WITHIN FIVE (5) DAYS FROM THE ISSUANCE OF THE NOTICE TO PROCEED. IT WILL BE REQUIRED TO COORDINATE THE POT-HOLING ACTIVITIES WITH THE UTILITY COMPANIES AND ENGINEER. IT WILL BE VERIFIED THAT THE EXISTING UTILITIES ARE LOCATED BELOW OR ABOVE THE PROPOSED NEW 24-INCH OR 12-INCH WATER PIPELINE. THE SUBBASE DESIGN ELEVATION OF THE NEW IMPROVEMENTS, RELOCATION OF THE UTILITIES WILL BE COORDINATED WITH THE UTILITY COMPANY. THERE ARE EXISTING UNDERGROUND TELEPHONE CABLE, WATER, GAS, ELECTRICAL, COMMUNICATION, IRRIGATION, STORM DRAIN, AND SEWER UTILITIES. IT WILL BE REQUIRED TO POT-HOLE AND EXPOSE THE UTILITIES PRIOR TO THE EXCAVATION OF THE NEW 24-INCH OR 12-INCH WATER PIPELINE. THE CONSTRUCTION MANAGER/INSPECTOR WILL OBSERVE THE UTILITIES DURING THE POT-HOLE EXCAVATION WORK. THE CONSTRUCTION MANAGER/INSPECTOR SHALL OBTAIN THE ELEVATION OF THE EXPOSED UTILITY AND VERIFY THAT THE UTILITY DOES NOT CONFLICT WITH THE WATER PIPELINE GRADE AS ILLUSTRATED ON THE PROFILE DRAWING.
3. THE CONSTRUCTION MANAGER/INSPECTOR SHALL AS-BUILT ALL UTILITIES ENCOUNTERED DURING THE CONSTRUCTION ACTIVITIES. THE AS-BUILT DRAWING SHALL INCLUDE THE HORIZONTAL STATION, TOP OF UTILITY ELEVATION, UTILITY MATERIAL COMPOSITION, UTILITY DIMENSIONS OR DIAMETER AND THE TYPE OF UTILITY.

### LEGEND

- EXIST. ELECTRICAL BOX
- STREET LIGHT
- EXIST./NEW DOWN GUY
- EXIST. POWER POLE
- EXIST. FIRE HYDRANT (F.H.)
- EXIST. TRAFFIC SIGN
- EXIST. WATER LINE
- EXIST. GAS LINE
- EXIST. STORM DRAIN LINE
- EXIST. SANITARY SEWER LINE
- EXIST. VALVE
- EXIST. SANITARY /STORM MANHOLE
- EXIST. TREE, PALM OR SHRUB
- FOUND SURVEY MONUMENT
- PROJECT BENCHMARK/TEMPORARY BENCHMARK
- EXIST. CONC.
- EXIST. RIGHT-OF-WAY LINE - RW
- FENCE

**BENCHMARK TABLE**

BM/TBM#	ELEVATION	DESCRIPTION
BM	1004.915'	"ELEVATIONS SHOWN HEREON ARE IN TERMS OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) BASED LOCALLY UPON THE FOLLOWING BENCHMARK PER CALTRANS-DISTRICT 11 CONTROL MONUMENT DATA"
TBM#1	1001.87'	CHISELED "C" TOP OF CURB AT ECR AT THE NORTHWEST CORNER OF THE INTERSECTION OF 5TH STREET AND EMERSON AVE.
TBM#2	1001.19'	CHISELED "C" TOP OF CURB AT ECR AT THE NORTHWEST CORNER OF THE INTERSECTION OF 5TH STREET AND CESAR CHAVEZ BLVD.
TBM#3	997.31'	CHISELED "C" TOP OF CURB AT BCR AT THE NORTHEAST CORNER OF THE INTERSECTION OF 5TH STREET AND PIERCE AVE.
TBM#4	1002.15'	CHISELED "C" TOP OF CURB AT THE DEFLECTION ANGLE AT THE EAST SIDE OF PIERCE AVE AND 380 FEET NORTH OF THE INTERSECTION OF 5TH STREET AND PIERCE AVE.
TBM#5	1003.96'	CHISELED "C" TOP OF CURB AT BCR AT THE SOUTHWEST CORNER OF THE INTERSECTION OF GRANT STREET AND EMERSON AVE.
TBM#6	1003.85'	CHISELED "C" TOP OF CURB AT BCR AT THE NORTHWEST CORNER OF THE INTERSECTION OF GRANT STREET AND HAROLD AVE.



SCALE: 1" = 200'

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

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NO.	REVISIONS:	APPROVED	DATE

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APPROVED FOR CONSTRUCTION BY:

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DATE \_\_\_\_\_ REG. EXP. \_\_\_\_\_



PREPARED UNDER THE DIRECT SUPERVISION OF:

CARLOS L. BELTRAN, P.E.  
DATE: 12/12/17

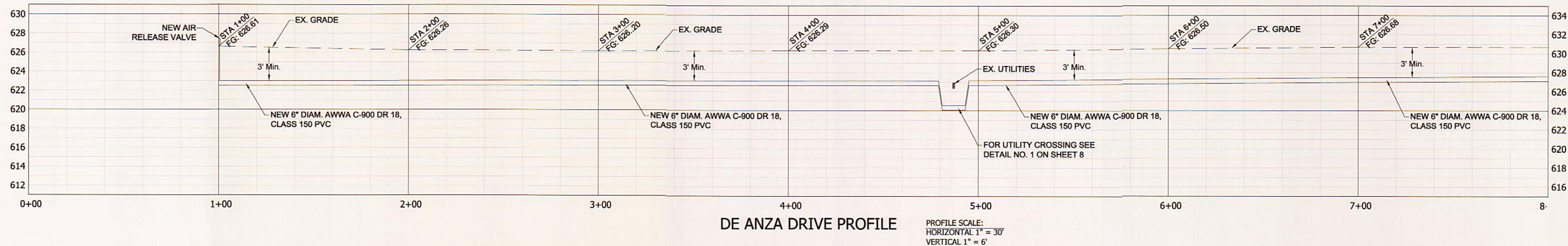
PROJECT TITLE: BORREGO WATER DISTRICT  
CAPITAL IMPROVEMENTS PROJECTS - CIP PHASE 2  
DE ANZA DR., YAQUI RD. AND FAIRWAY LANE  
WATER IMPROVEMENTS PROJECT

SHEET CONTENT: KEY MAP

SCALE: \_\_\_\_\_ SHEET 2 OF 8 SHEETS

DRAWN BY: DB, CB  
REVISED BY: CB  
JOB NO. DCE 221419

DATE: DECEMBER 12, 2019



DE ANZA DRIVE  
PLAN VIEW SCALE:  
HORIZONTAL 1" = 30'

**CONSTRUCTION KEYNOTES:**

1. INSTALL NEW 6-INCH DIAMETER AWWA C-900 DR 18 - PRESSURE CLASS 150 PVC WATER PIPELINE IN PAVED AREAS PER TRENCH DETAIL "G-24A AND G-24B" ON SHEET 7 AND WARNING/IDENTIFICATION TAPE AND TRACER WIRE DETAIL "WP-01" ON SHEET 7.
2. INSTALL NEW 6-INCH X 6-INCH X 6-INCH DIAMETER MJ X MJ X MJ EPOXY COATED DUCTILE IRON TEE WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.
3. INSTALL NEW 6-INCH FIRE HYDRANT ASSEMBLY PER DETAIL "WF-01" ON SHEET 7.
4. INSTALL NEW 6-INCH DIAMETER MJ X MJ DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH RESTRAINED JOINT FITTINGS AND VALVE COVER AND RISER. SEE DETAIL "WV-02" ON SHEET 8.
5. N/A
6. N/A
7. INSTALL NEW 6-INCH DIAMETER EPOXY COATED DUCTILE IRON TRANSITION COUPLING ADAPTER WITH STAINLESS STEEL HARDWARE.
8. INSTALL NEW 4-INCHES OF A.C. PAVEMENT OVER 9-INCHES OF CLASS 2 BASE MATERIAL COMPACT THE CLASS 2 BASE MATERIAL TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557.
9. INSTALL NEW 6-INCH X 6-INCH X 6-INCH X 6-INCH DIAMETER MJ X MJ X MJ X MJ EPOXY COATED DUCTILE IRON CROSS WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.

**CONSTRUCTION KEYNOTES:**

10. SEE UTILITY CROSSING DETAIL 1 FOR THE INSTALLATION OF THE NEW WATER PIPELINE ON SHEET 8.
11. INSTALL P.C.C. CONCRETE FOR THE EXISTING DRIVEWAY ENTRANCE.
12. INSTALL 1-INCH WATER LATERAL INCLUDING CONNECTION TO 6-INCH WATER MAIN, 1-INCH COPPER PIPE TO PROPERTY LINE AND 1-INCH BRONZE ANGLE METER STOP WITH LOCKWING. (WATER METER, METER BOX, AND SHUT OFF VALVE TO BE PROVIDED AND INSTALLED BY THE DISTRICT). LOCATION TO BE DETERMINED BY THE DISTRICT.
13. INSTALL NEW 6-INCH DIA. MJ X MJ DUCTILE IRON EPOXY-COATED 45 DEGREE ELBOW, RESTRAINED JOINT FITTING, AND P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.
14. INSTALL NEW 6-INCH DIA. MJ X MJ DUCTILE IRON EPOXY-COATED 11.25 DEGREE ELBOW, RESTRAINED JOINT FITTING, AND P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.

**NOTE:**

1. ALL EXISTING DRY AND WET UTILITIES ILLUSTRATED ARE APPROXIMATE. ALL UTILITIES CROSSING THE PROPOSED WATER LINE SHALL BE REQUIRED TO BE POT-HOLED. SEE NOTE 2.
2. IT WILL BE REQUIRED TO POT-HOLE THE EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION WITHIN FIVE (5) DAYS FROM THE ISSUANCE OF THE NOTICE TO PROCEED. IT WILL BE REQUIRED TO COORDINATE THE POT-HOLING ACTIVITIES WITH THE UTILITY COMPANIES AND ENGINEER. IT WILL BE VERIFIED THAT THE EXISTING UTILITIES ARE LOCATED BELOW OR ABOVE THE PROPOSED NEW 6-INCH WATER PIPELINE. RELOCATION OF THE UTILITIES WILL BE COORDINATED WITH THE UTILITY COMPANY. THERE ARE EXISTING UNDERGROUND TELEPHONE CABLE, WATER, GAS, ELECTRICAL, COMMUNICATION, AND IRRIGATION UTILITIES. IT WILL BE REQUIRED TO POT-HOLE AND EXPOSE THE UTILITIES PRIOR TO THE EXCAVATION OF THE NEW 6-INCH WATER PIPELINE. THE CONSTRUCTION MANAGER/INSPECTOR WILL OBSERVE THE UTILITIES DURING THE POT-HOLE EXCAVATION WORK. THE CONSTRUCTION MANAGER/INSPECTOR SHALL OBTAIN THE ELEVATION OF THE EXPOSED UTILITY AND VERIFY THAT THE UTILITY DOES NOT CONFLICT WITH THE WATER PIPELINE GRADE AS ILLUSTRATED ON THE PROFILE DRAWING.
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4. THERE IS AN EXISTING EARTHEN BERM WHERE THE NEW PIPELINE WILL BE INSTALLED AT MULTIPLE LOCATIONS. CONTRACTOR TO RECONSTRUCT EARTHEN BERM AFTER THE INSTALLATION OF THE WATER MAIN PIPELINE.

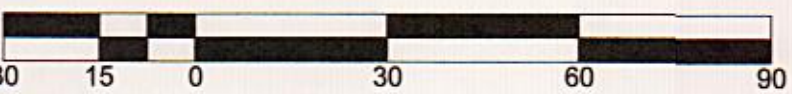
**EXISTING FACILITY KEYNOTES:**

1. EXISTING TREE TO REMAIN.
2. EXISTING A.C. PAVEMENT TO REMAIN.
3. EXISTING SIGN TO REMAIN.
4. EXISTING DRIVEWAY TO REMAIN.
5. EXISTING FENCE TO REMAIN.
6. EXISTING FIRE HYDRANT TO REMAIN (PROTECT IN PLACE).
7. EXISTING WATER METER TO REMAIN.
8. EXISTING WATER VALVE TO REMAIN.
9. EXISTING WATER LINE TO REMAIN.
10. EXISTING AT&T UNDERGROUND PIPELINE TO REMAIN.
11. EXISTING UTILITY BOX TO REMAIN.
12. EXISTING EDGE OF PAVEMENT TO REMAIN.

**DEMOLITION KEYNOTES:**

1. SAWCUT THE EXISTING A.C. PAVEMENT FOR THE FULL DEPTH OF THE A.C. PAVEMENT. REMOVE AND DISPOSE OF THE EXISTING A.C. PAVEMENT AND UNDERLYING MATERIAL TO SUBBASE DESIGN GRADE.
2. SAWCUT THE EXISTING P.C.C. CONCRETE DRIVEWAY FOR THE FULL DEPTH OF THE P.C.C. CONCRETE. REMOVE AND DISPOSE OF THE EXISTING P.C.C. CONCRETE AND UNDERLYING MATERIAL TO SUBBASE DESIGN GRADE.
3. REMOVE AND DELIVER EXISTING TEE TO THE BORREGO WATER DISTRICT YARD.

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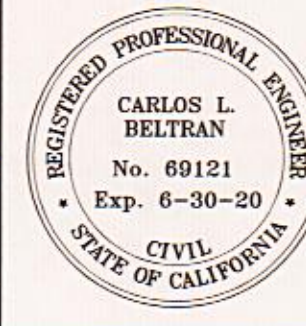
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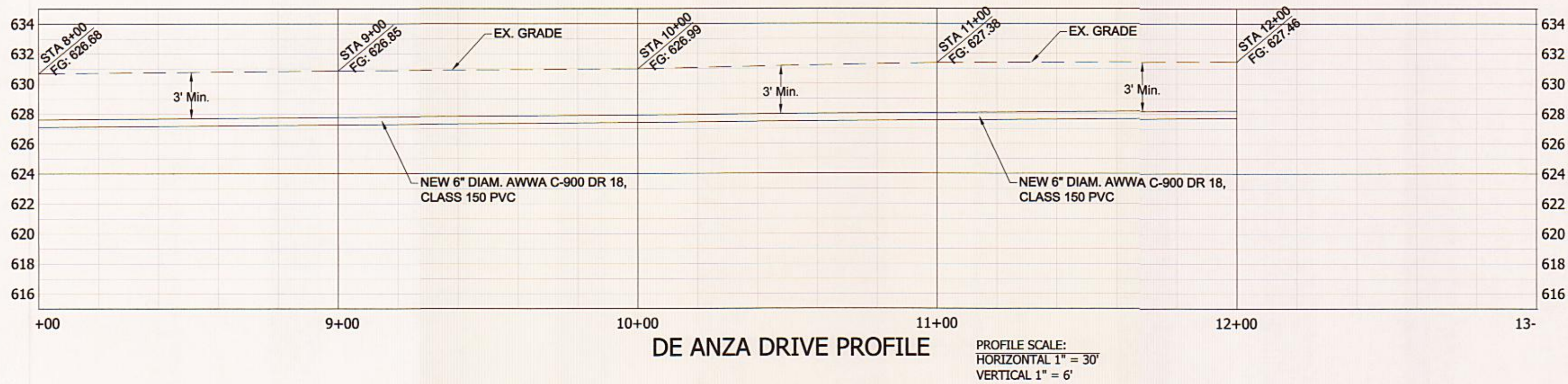
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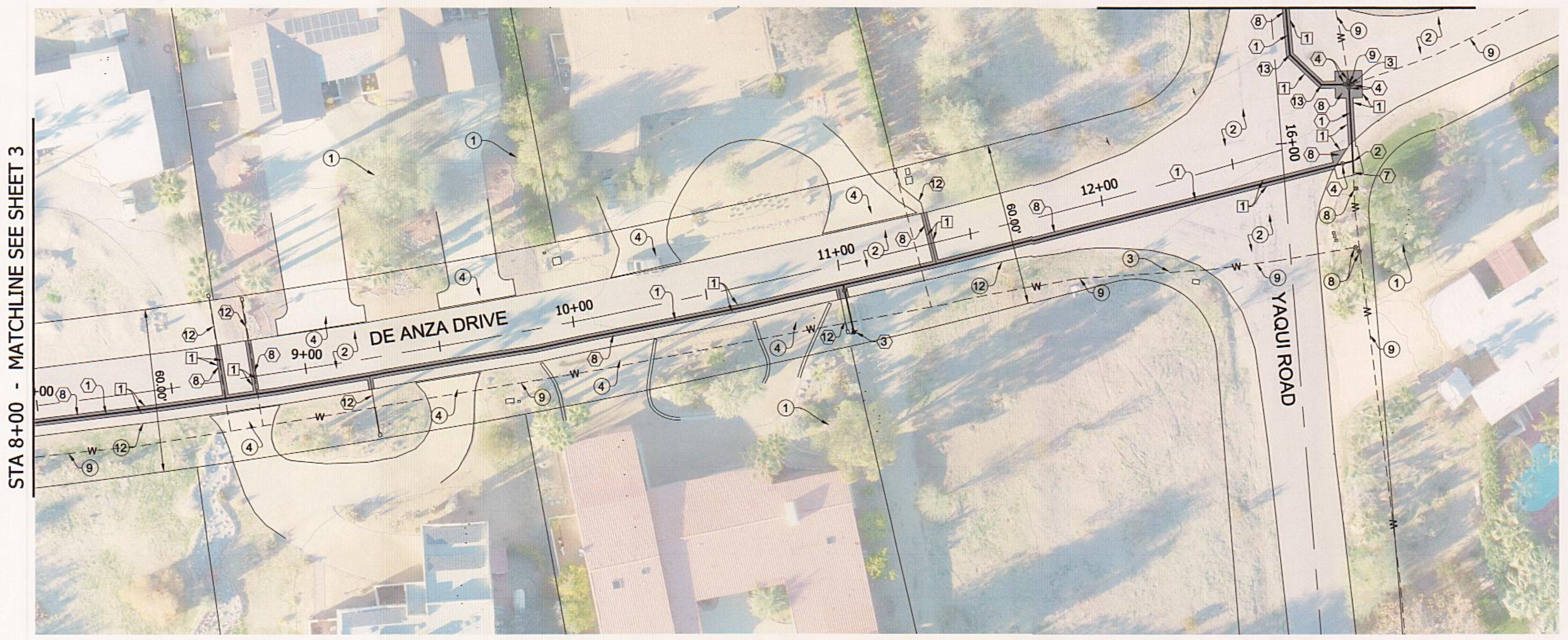


PREPARED UNDER THE DIRECT SUPERVISION OF:  
  
DATE

PROJECT TITLE: BORREGO WATER DISTRICT CAPITAL IMPROVEMENTS PROJECTS - CIP PHASE 2 DE ANZA DR., YAQUI RD. AND FAIRWAY LANE WATER IMPROVEMENTS PROJECT  
SHEET CONTENT: WATER IMPROVEMENT PLANS DE ANZA DR. STA 1+00 TO STA 8+00  
SCALE: 1" = 30'  
DRAWN BY: DB, CB  
REVISED BY: CB  
SHEET 3 OF 8 SHEET  
JOB NO. DCE 221419  
DATE: DECEMBER 12, 2019



STA 15+50 - YAQUI ROAD  
MATCHLINE SEE SHEET 6



DE ANZA DRIVE  
PLAN VIEW SCALE:  
HORIZONTAL 1" = 30'

- CONSTRUCTION KEYNOTES:**
- INSTALL NEW 6-INCH DIAMETER AWWA C-900 DR 18 - PRESSURE CLASS 150 PVC WATER PIPELINE IN PAVED AREAS PER TRENCH DETAIL "G-24A AND G-24B" ON SHEET 7 AND WARNING/IDENTIFICATION TAPE AND TRACER WIRE DETAIL "WP-01" ON SHEET 7.
  - INSTALL NEW 6-INCH X 6-INCH X 6-INCH DIAMETER MJ X MJ X MJ EPOXY COATED DUCTILE IRON TEE WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.
  - INSTALL NEW 6-INCH FIRE HYDRANT ASSEMBLY PER DETAIL "WF-01" ON SHEET 7.
  - INSTALL NEW 6-INCH DIAMETER MJ X MJ DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH RESTRAINED JOINT FITTINGS AND VALVE COVER AND RISER. SEE DETAIL "WV-02" ON SHEET 8.
  - N/A
  - N/A
  - INSTALL NEW 6-INCH DIAMETER EPOXY COATED DUCTILE IRON TRANSITION COUPLING ADAPTER WITH STAINLESS STEEL HARDWARE.
  - INSTALL NEW 4-INCHES OF A.C. PAVEMENT OVER 9-INCHES OF CLASS 2 BASE MATERIAL COMPACT THE CLASS 2 BASE MATERIAL TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557.
  - INSTALL NEW 6-INCH X 6-INCH X 6-INCH X 6-INCH DIAMETER MJ X MJ X MJ X MJ EPOXY COATED DUCTILE IRON CROSS WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.

- CONSTRUCTION KEYNOTES:**
- SEE UTILITY CROSSING DETAIL 1 FOR THE INSTALLATION OF THE NEW WATER PIPELINE ON SHEET 8.
  - INSTALL P.C.C. CONCRETE FOR THE EXISTING DRIVEWAY ENTRANCE.
  - INSTALL 1-INCH WATER LATERAL INCLUDING CONNECTION TO 6-INCH WATER MAIN 1-INCH COPPER PIPE TO PROPERTY LINE AND 1-INCH BRONZE ANGLE METER STOP WITH LOCKWING. (WATER METER, METER BOX, AND SHUT OFF VALVE TO BE PROVIDED AND INSTALLED BY THE DISTRICT). LOCATION TO BE DETERMINED BY THE DISTRICT.
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- EXISTING FACILITY KEYNOTES**
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  - EXISTING EDGE OF PAVEMENT TO REMAIN.

- DEMOLITION KEYNOTES:**
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APPROVED FOR CONSTRUCTION BY:

\_\_\_\_\_  
R.C.E. NO. \_\_\_\_\_  
DATE \_\_\_\_\_ REG. EXP. \_\_\_\_\_

REGISTERED PROFESSIONAL ENGINEER  
CARLOS L. BELTRAN  
No. 69121  
Exp. 6-30-20  
CIVIL  
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECT SUPERVISION OF:

\_\_\_\_\_  
CARLOS L. BELTRAN, P.E.  
DATE 12/12/19

PROJECT TITLE: BORREGO WATER DISTRICT  
CAPITAL IMPROVEMENTS PROJECTS - CIP PHASE 2  
DE ANZA DR., YAQUI RD. AND FAIRWAY LANE  
WATER IMPROVEMENTS PROJECT

SHEET CONTENT:  
WATER IMPROVEMENT PLANS  
DE ANZA DR. STA 8+00 TO STA 12+75

SCALE: 1" = 30'

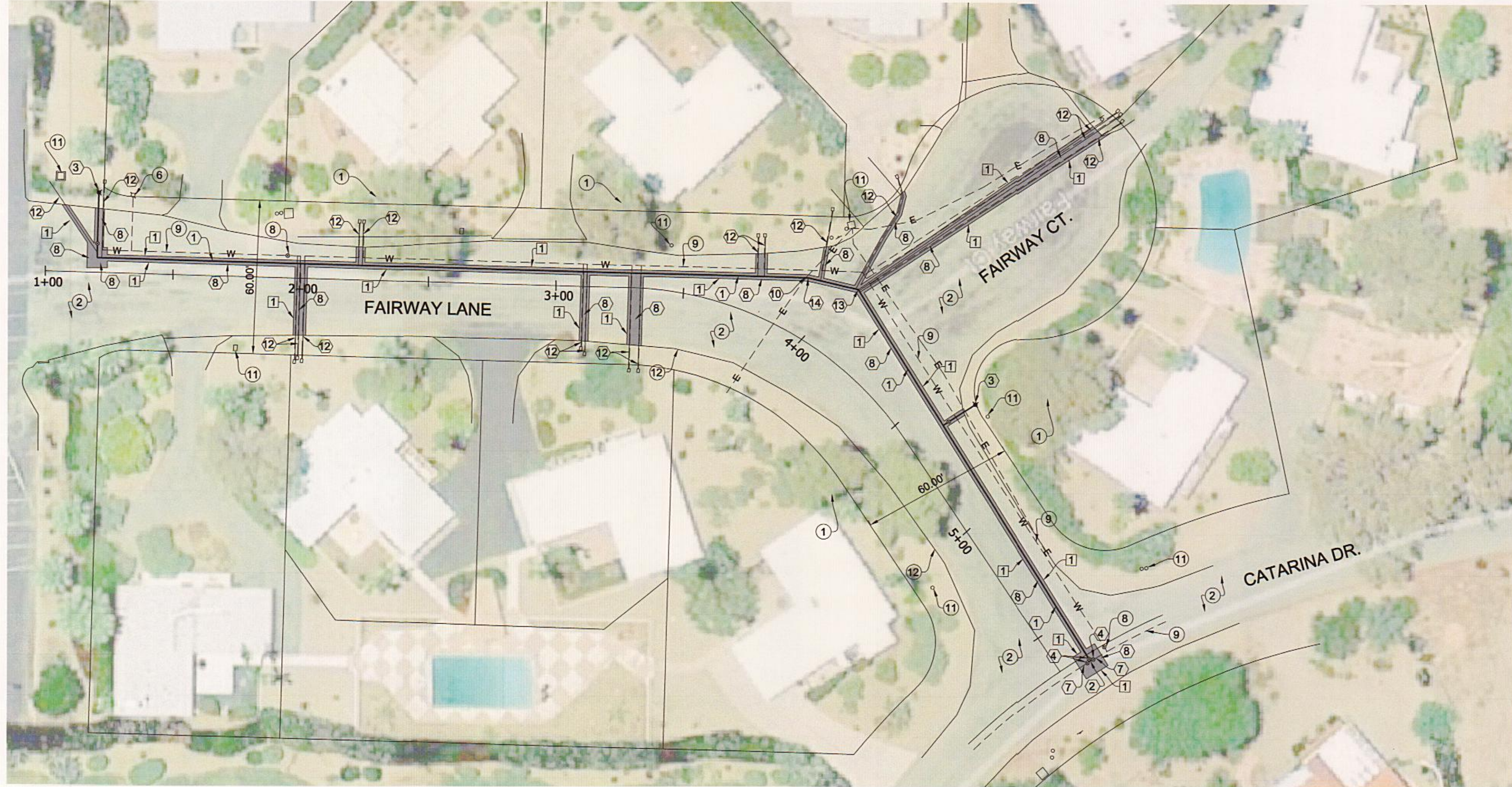
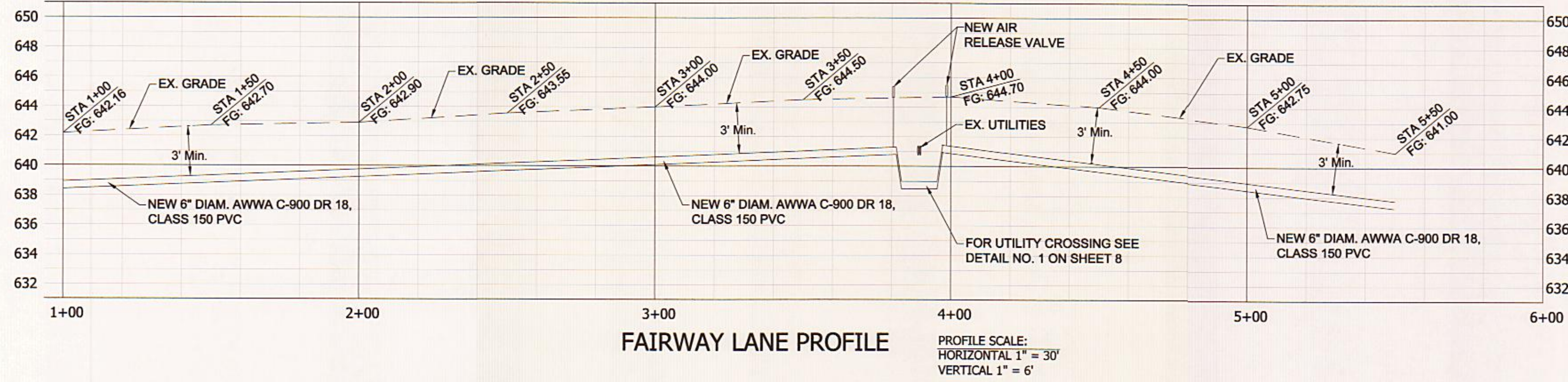
DRAWN BY: DB, CB

REVISED BY: CB

DATE: DECEMBER 12, 2019

SHEET 4 OF 8 SHEET

JOB NO. DCE 221419



**CONSTRUCTION KEYNOTES:**

- ① INSTALL NEW 6-INCH DIAMETER AWWA C-900 DR 18 - PRESSURE CLASS 150 PVC WATER PIPELINE IN PAVED AREAS PER TRENCH DETAIL "G-24A AND G-24B" ON SHEET 7 AND WARNING/IDENTIFICATION TAPE AND TRACER WIRE DETAIL "WP-01" ON SHEET 7.
- ② INSTALL NEW 6-INCH X 6-INCH X 6-INCH DIAMETER MJ X MJ X MJ EPOXY COATED DUCTILE IRON TEE WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.
- ③ INSTALL NEW 6-INCH FIRE HYDRANT ASSEMBLY PER DETAIL "WF-01" ON SHEET 7.
- ④ INSTALL NEW 6-INCH DIAMETER MJ X MJ DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH RESTRAINED JOINT FITTINGS AND VALVE COVER AND RISER. SEE DETAIL "VV-02" ON SHEET 8.
- ⑤ N/A
- ⑥ N/A
- ⑦ INSTALL NEW 6-INCH DIAMETER EPOXY COATED DUCTILE IRON TRANSITION COUPLING ADAPTER WITH STAINLESS STEEL HARDWARE.
- ⑧ INSTALL NEW 4-INCHES OF A.C. PAVEMENT OVER 9-INCHES OF CLASS 2 BASE MATERIAL. COMPACT THE CLASS 2 BASE MATERIAL TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557.
- ⑨ INSTALL NEW 6-INCH X 6-INCH X 6-INCH X 6-INCH DIAMETER MJ X MJ X MJ EPOXY COATED DUCTILE IRON CROSS WITH P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.

**CONSTRUCTION KEYNOTES:**

- ⑩ SEE UTILITY CROSSING DETAIL 1 FOR THE INSTALLATION OF THE NEW WATER PIPELINE ON SHEET 8.
- ⑪ INSTALL P.C.C. CONCRETE FOR THE EXISTING DRIVEWAY ENTRANCE.
- ⑫ INSTALL 1-INCH WATER LATERAL INCLUDING CONNECTION TO 6-INCH WATER MAIN, 1-INCH COPPER PIPE TO PROPERTY LINE AND 1-INCH BRONZE ANGLE METER STOP WITH LOCKWING (WATER METER, METER BOX, AND SHUT OFF VALVE TO BE PROVIDED AND INSTALLED BY THE DISTRICT). LOCATION TO BE DETERMINED BY THE DISTRICT.
- ⑬ INSTALL NEW 6-INCH DIA. MJ X MJ DUCTILE IRON EPOXY-COATED 45 DEGREE ELBOW, RESTRAINED JOINT FITTING, AND P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.
- ⑭ INSTALL NEW 6-INCH DIA. MJ X MJ DUCTILE IRON EPOXY-COATED 11.25 DEGREE ELBOW, RESTRAINED JOINT FITTING, AND P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.

**NOTE:**

1. ALL EXISTING DRY AND WET UTILITIES ILLUSTRATED ARE APPROXIMATE. ALL UTILITIES CROSSING THE PROPOSED WATER LINE SHALL BE REQUIRED TO BE POT-HOLED. SEE NOTE 2.
2. IT WILL BE REQUIRED TO POT-HOLE THE EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION WITHIN FIVE (5) DAYS FROM THE ISSUANCE OF THE NOTICE TO PROCEED. IT WILL BE REQUIRED TO COORDINATE THE POT-HOLING ACTIVITIES WITH THE UTILITY COMPANIES AND ENGINEER. IT WILL BE VERIFIED THAT THE EXISTING UTILITIES ARE LOCATED BELOW OR ABOVE THE PROPOSED NEW 6-INCH WATER PIPELINE. RELOCATION OF THE UTILITIES WILL BE COORDINATED WITH THE UTILITY COMPANY. THERE ARE EXISTING UNDERGROUND TELEPHONE CABLE, WATER, GAS, ELECTRICAL, COMMUNICATION AND IRRIGATION UTILITIES. IT WILL BE REQUIRED TO POT-HOLE AND EXPOSE THE UTILITIES PRIOR TO THE EXCAVATION OF THE NEW 6-INCH WATER PIPELINE. THE CONSTRUCTION MANAGER/INSPECTOR WILL OBSERVE THE UTILITIES DURING THE POT-HOLE EXCAVATION WORK. THE CONSTRUCTION MANAGER/INSPECTOR SHALL OBTAIN THE ELEVATION OF THE EXPOSED UTILITY AND VERIFY THAT THE UTILITY DOES NOT CONFLICT WITH THE WATER PIPELINE GRADE AS ILLUSTRATED ON THE PROFILE DRAWING.
3. THE CONSTRUCTION MANAGER/INSPECTOR SHALL AS-BUILT ALL UTILITIES ENCOUNTERED DURING THE CONSTRUCTION ACTIVITIES. THE AS-BUILT DRAWING SHALL INCLUDE THE HORIZONTAL STATION, TOP OF UTILITY ELEVATION, UTILITY MATERIAL COMPOSITION, UTILITY DIMENSIONS OR DIAMETER AND THE TYPE OF UTILITY.
4. THERE IS AN EXISTING EARTHEN BERM WHERE THE NEW PIPELINE WILL BE INSTALLED AT MULTIPLE LOCATIONS. CONTRACTOR TO RECONSTRUCT EARTHEN BERM AFTER THE INSTALLATION OF THE WATER MAIN PIPELINE.

**EXISTING FACILITY KEYNOTES:**

- ① EXISTING TREE TO REMAIN.
- ② EXISTING A.C. PAVEMENT TO REMAIN.
- ③ EXISTING SIGN TO REMAIN.
- ④ EXISTING DRIVEWAY TO REMAIN.
- ⑤ EXISTING FENCE TO REMAIN.
- ⑥ EXISTING FIRE HYDRANT TO REMAIN (PROTECT IN PLACE).
- ⑦ EXISTING WATER METER TO REMAIN.
- ⑧ EXISTING WATER VALVE TO REMAIN.
- ⑨ EXISTING WATER LINE TO REMAIN.
- ⑩ EXISTING AT&T UNDERGROUND PIPELINE TO REMAIN.
- ⑪ EXISTING UTILITY BOX TO REMAIN.
- ⑫ EXISTING EDGE OF PAVEMENT TO REMAIN.

**DEMOLITION KEYNOTES:**

- ① SAWCUT THE EXISTING A.C. PAVEMENT FOR THE FULL DEPTH OF THE A.C. PAVEMENT. REMOVE AND DISPOSE OF THE EXISTING A.C. PAVEMENT AND UNDERLYING MATERIAL TO SUBBASE DESIGN GRADE.
- ② SAWCUT THE EXISTING P.C.C. CONCRETE DRIVEWAY FOR THE FULL DEPTH OF THE P.C.C. CONCRETE. REMOVE AND DISPOSE OF THE EXISTING P.C.C. CONCRETE AND UNDERLYING MATERIAL TO SUBBASE DESIGN GRADE.
- ③ REMOVE AND DELIVER EXISTING TEE TO THE BORREGO WATER DISTRICT YARD.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

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NO.	REVISIONS:	APPROVED	DATE

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**Dynamic CONSULTING ENGINEERS**

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2415 IMPERIAL BUSINESS PARK DRIVE, SUITE B.,  
IMPERIAL, CA. 92251  
TEL. (760) 545-0162 FAX (760) 545-0163  
www.dynamicconsultingengineers.com

APPROVED FOR CONSTRUCTION BY:

\_\_\_\_\_  
R.C.E. NO. \_\_\_\_\_  
DATE \_\_\_\_\_  
REG. EXP. \_\_\_\_\_

CARLOS L. BELTRAN  
No. 69121  
Exp. 6-30-20  
CIVIL ENGINEER  
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECT SUPERVISION OF:

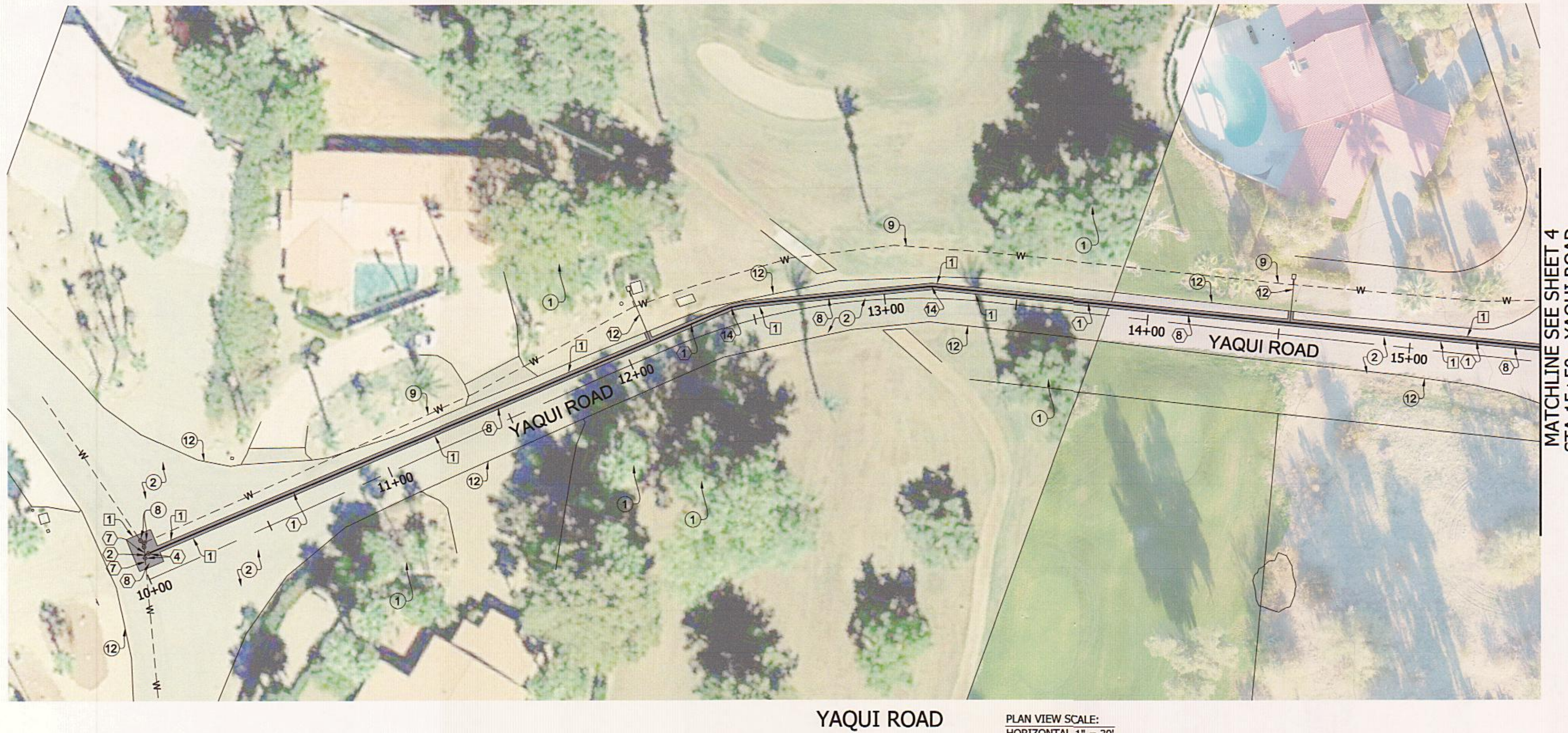
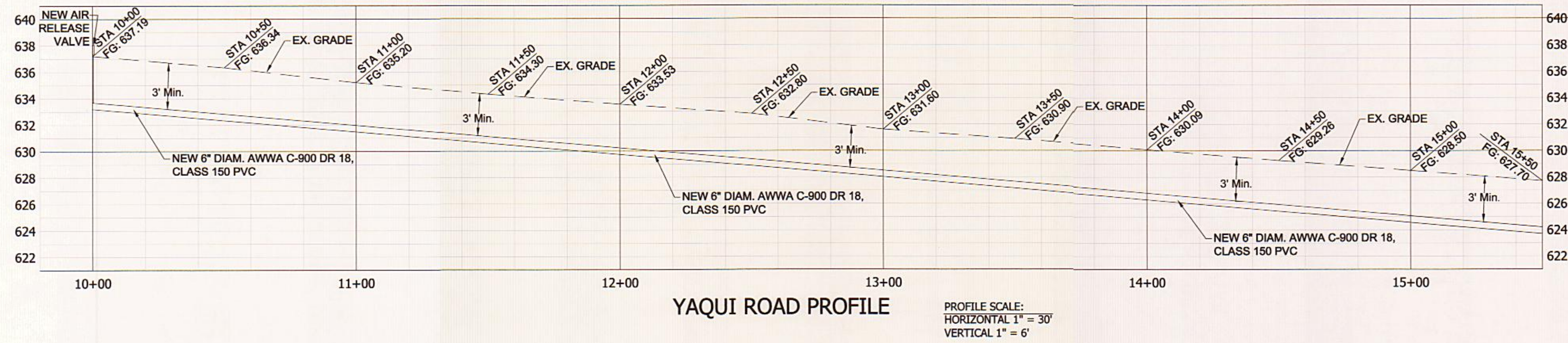
\_\_\_\_\_  
CARLOS L. BELTRAN, P.E.  
69,121  
R.C.E. NO. \_\_\_\_\_  
06/30/20  
REG. EXP. \_\_\_\_\_  
DATE \_\_\_\_\_

**PROJECT TITLE:** BORREGO WATER DISTRICT CAPITAL IMPROVEMENTS PROJECTS - CIP PHASE 2 DE ANZA DR., YAQUI RD. AND FAIRWAY LANE WATER IMPROVEMENTS PROJECT

**SHEET CONTENT:** WATER IMPROVEMENT PLANS FAIRWAY LANE. STA 1+00 TO STA 6+00

SCALE: 1" = 30'  
DRAWN BY: DB, CB  
REVISED BY: CB  
DATE: DECEMBER 12, 2019

SHEET 5 OF 8 SHEETS  
JOB NO. DCE 221419



YAQUI ROAD  
PLAN VIEW SCALE:  
HORIZONTAL 1" = 30'

**CONSTRUCTION KEYNOTES:**

1. INSTALL NEW 6-INCH DIAMETER AWWA C-900 DR 18 - PRESSURE CLASS 150 PVC WATER PIPELINE IN PAVED AREAS PER TRENCH DETAIL "G-24A AND G-24B" ON SHEET 7 AND WARNING/IDENTIFICATION TAPE AND TRACER WIRE DETAIL "WP-01" ON SHEET 7.
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3. INSTALL NEW 6-INCH FIRE HYDRANT ASSEMBLY PER DETAIL "WF-01" ON SHEET 7.
4. INSTALL NEW 6-INCH DIAMETER MJ X MJ DUCTILE IRON RESILIENT WEDGE GATE VALVE WITH RESTRAINED JOINT FITTINGS AND VALVE COVER AND RISER. SEE DETAIL "WV-02" ON SHEET 8.
5. N/A
6. N/A
7. INSTALL NEW 6-INCH DIAMETER EPOXY COATED DUCTILE IRON TRANSITION COUPLING ADAPTER WITH STAINLESS STEEL HARDWARE.
8. INSTALL NEW 4-INCHES OF A.C. PAVEMENT OVER 9-INCHES OF CLASS 2 BASE MATERIAL COMPACT THE CLASS 2 BASE MATERIAL TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557.
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**CONSTRUCTION KEYNOTES:**

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11. INSTALL P.C.C. CONCRETE FOR THE EXISTING DRIVEWAY ENTRANCE.
12. INSTALL 1-INCH WATER LATERAL INCLUDING CONNECTION TO 6-INCH WATER MAIN, 1-INCH COPPER PIPE TO PROPERTY LINE AND 1-INCH BRONZE ANGLE METER STOP WITH LOCKWING. (WATER METER, METER BOX, AND SHUT OFF VALVE TO BE PROVIDED AND INSTALLED BY THE DISTRICT). LOCATION TO BE DETERMINED BY THE DISTRICT.
13. INSTALL NEW 6-INCH DIA. MJ X MJ DUCTILE IRON EPOXY-COATED 45 DEGREE ELBOW, RESTRAINED JOINT FITTING, AND P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.
14. INSTALL NEW 6-INCH DIA. MJ X MJ DUCTILE IRON EPOXY-COATED 11.25 DEGREE ELBOW, RESTRAINED JOINT FITTING, AND P.C.C. THRUST BLOCK. SEE CONCRETE THRUST AND ANCHOR BLOCK INSTALLATION DETAIL "WT-01" ON SHEET 8.

**NOTE:**

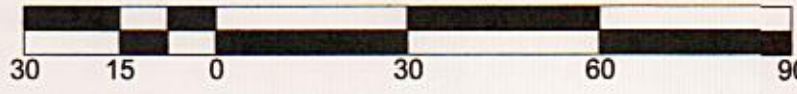
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12. EXISTING EDGE OF PAVEMENT TO REMAIN.

**DEMOLITION KEYNOTES:**

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2. SAWCUT THE EXISTING P.C.C. CONCRETE DRIVEWAY FOR THE FULL DEPTH OF THE P.C.C. CONCRETE. REMOVE AND DISPOSE OF THE EXISTING P.C.C. CONCRETE AND UNDERLYING MATERIAL TO SUBBASE DESIGN GRADE.
3. REMOVE AND DELIVER EXISTING TEE TO THE BORREGO WATER DISTRICT YARD.



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NO.	REVISIONS:	APPROVED	DATE

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IMPERIAL CA. 92251  
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www.dynamicconsultingengineers.com

APPROVED FOR CONSTRUCTION BY:

\_\_\_\_\_  
R.C.E. NO. \_\_\_\_\_  
DATE \_\_\_\_\_ REG. EXP. \_\_\_\_\_

REGISTERED PROFESSIONAL ENGINEER  
CARLOS L. BELTRAN  
No. 69121  
Exp. 6-30-20  
CIVIL  
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECT SUPERVISION OF:

\_\_\_\_\_  
CARLOS L. BELTRAN, P.E.  
69,121  
R.C.E. NO. \_\_\_\_\_  
06/30/20  
REG. EXP. \_\_\_\_\_  
DATE 12/12/19

PROJECT TITLE: BORREGO WATER DISTRICT  
CAPITAL IMPROVEMENTS PROJECTS - CIP PHASE 2  
DE ANZA DR., YAQUI RD. AND FAIRWAY LANE  
WATER IMPROVEMENTS PROJECT

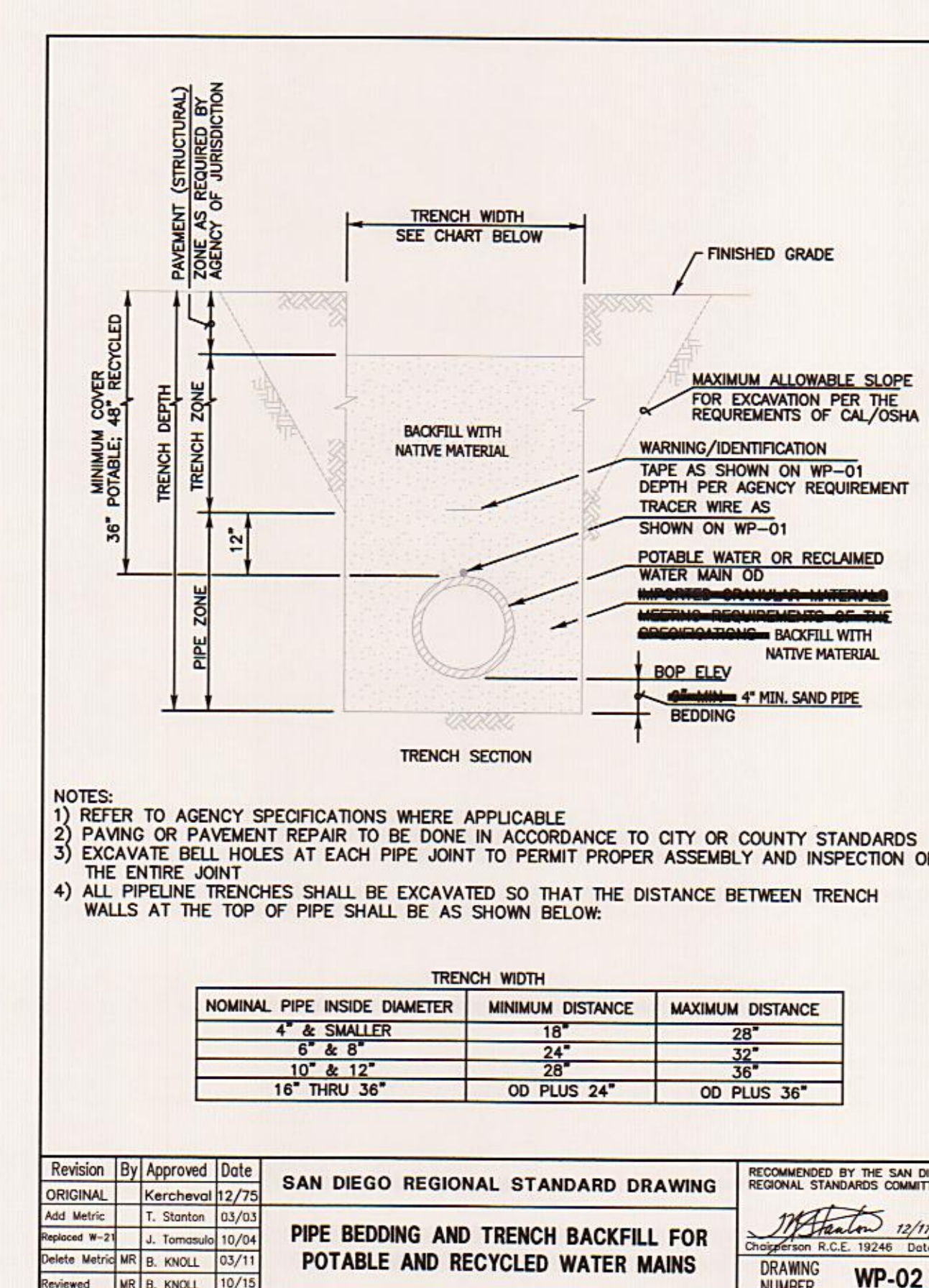
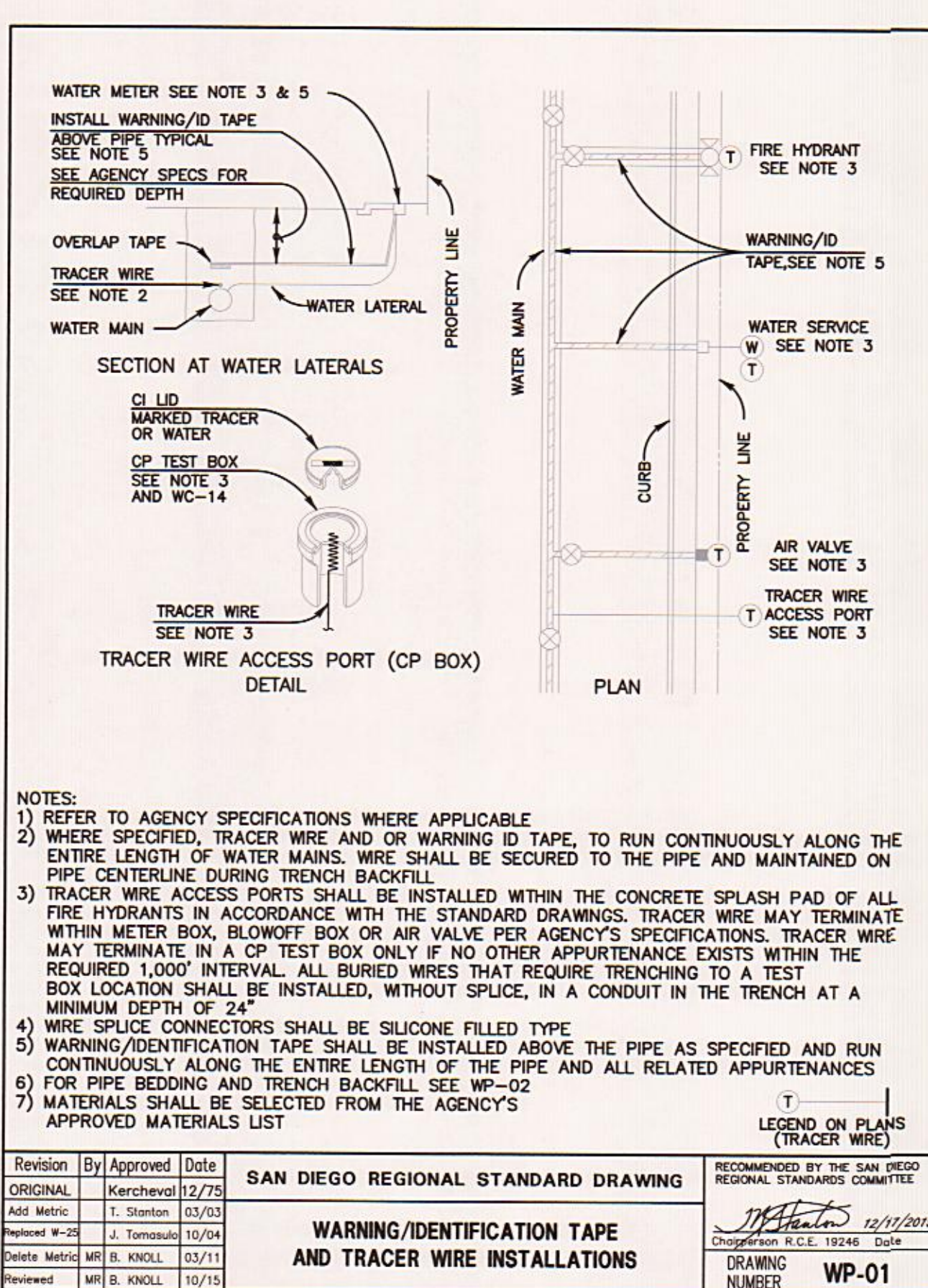
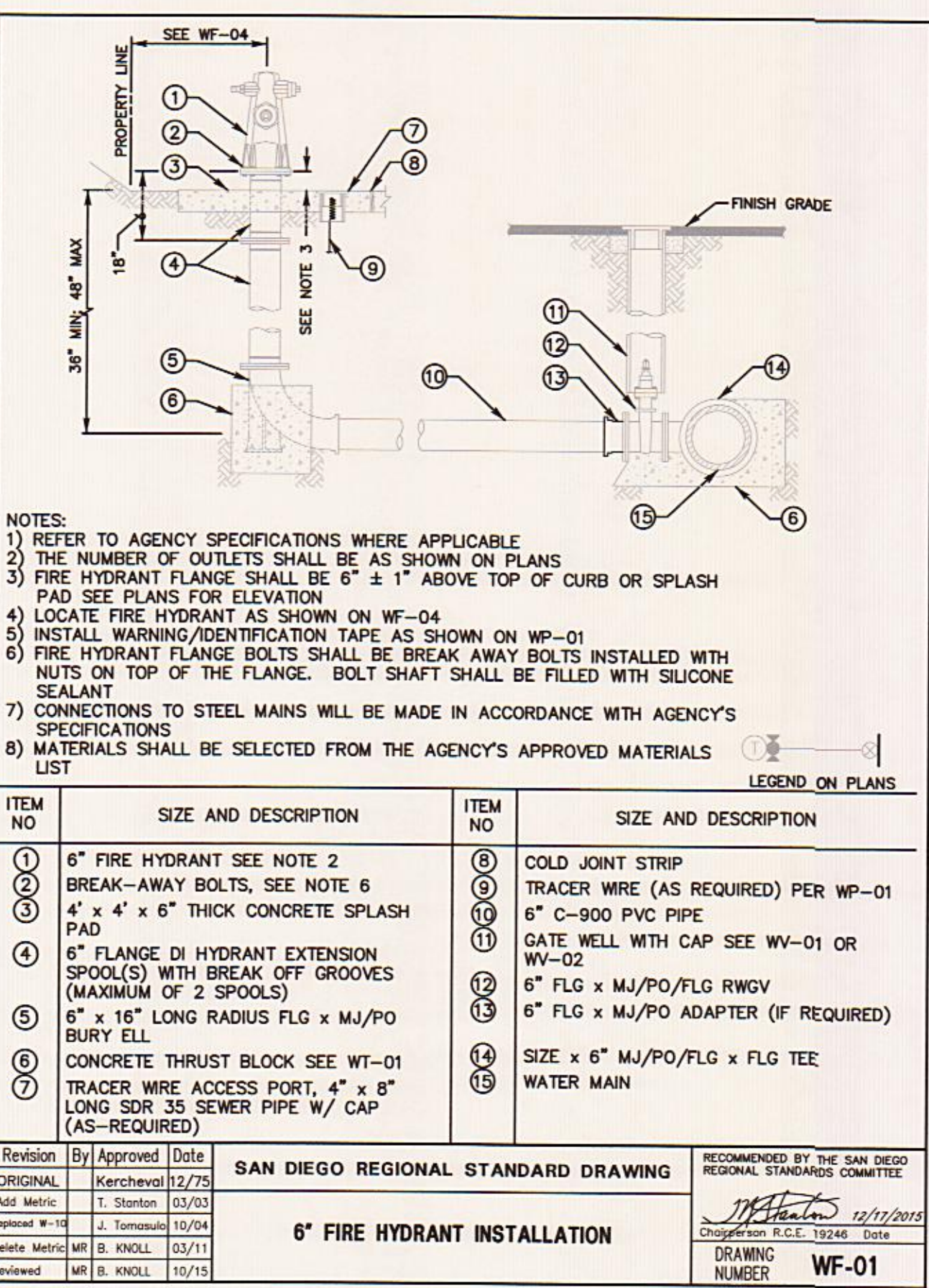
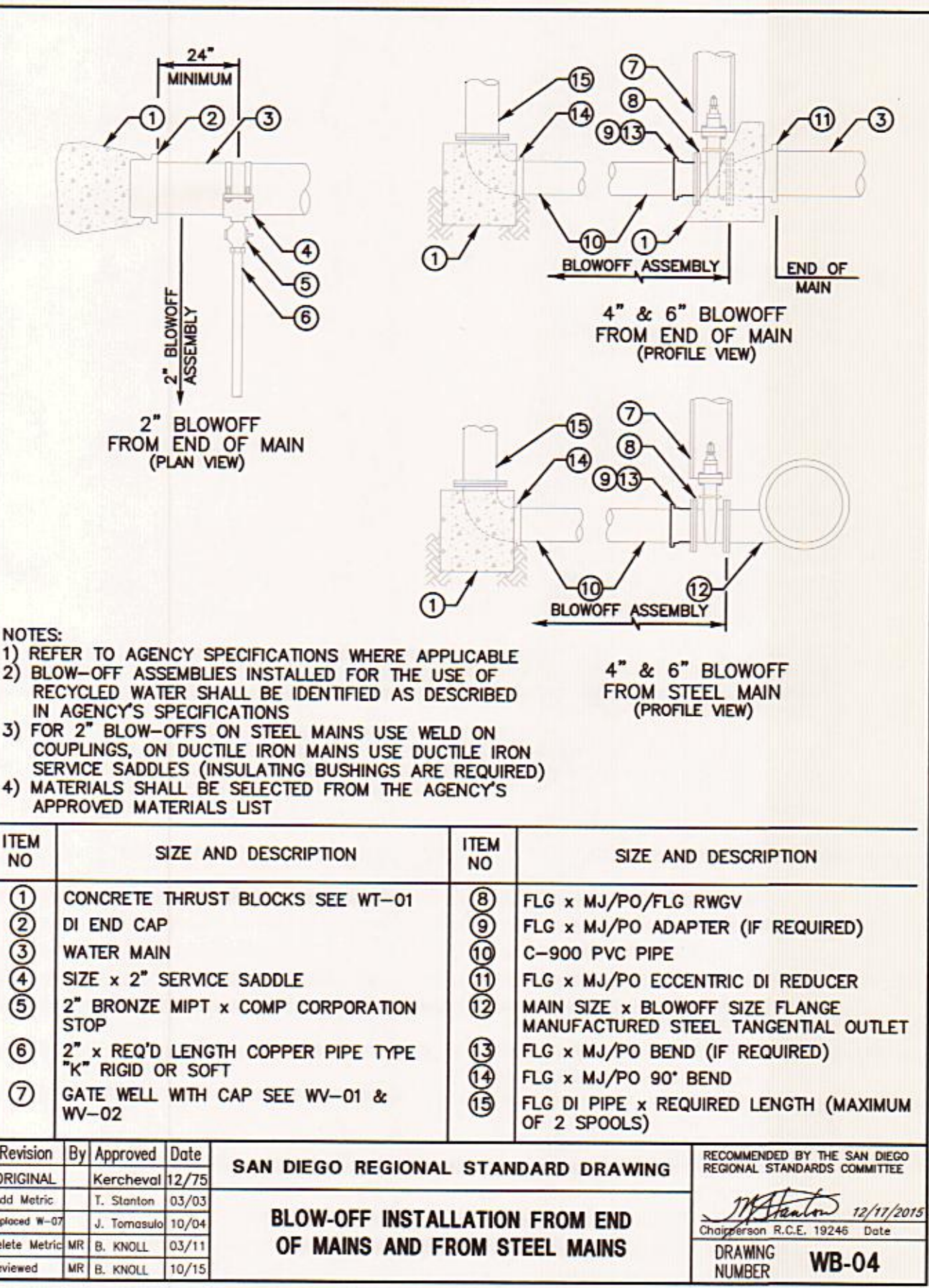
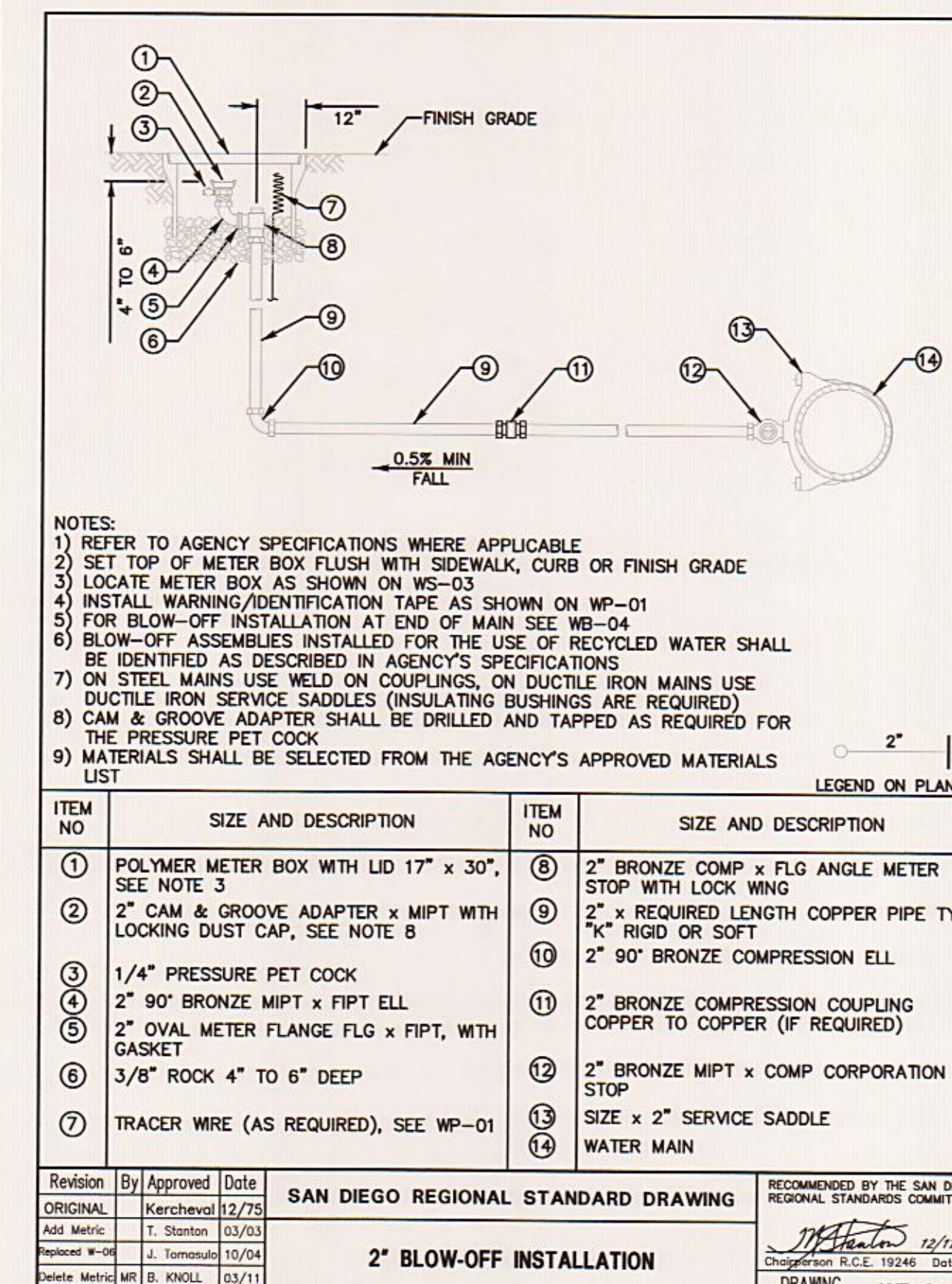
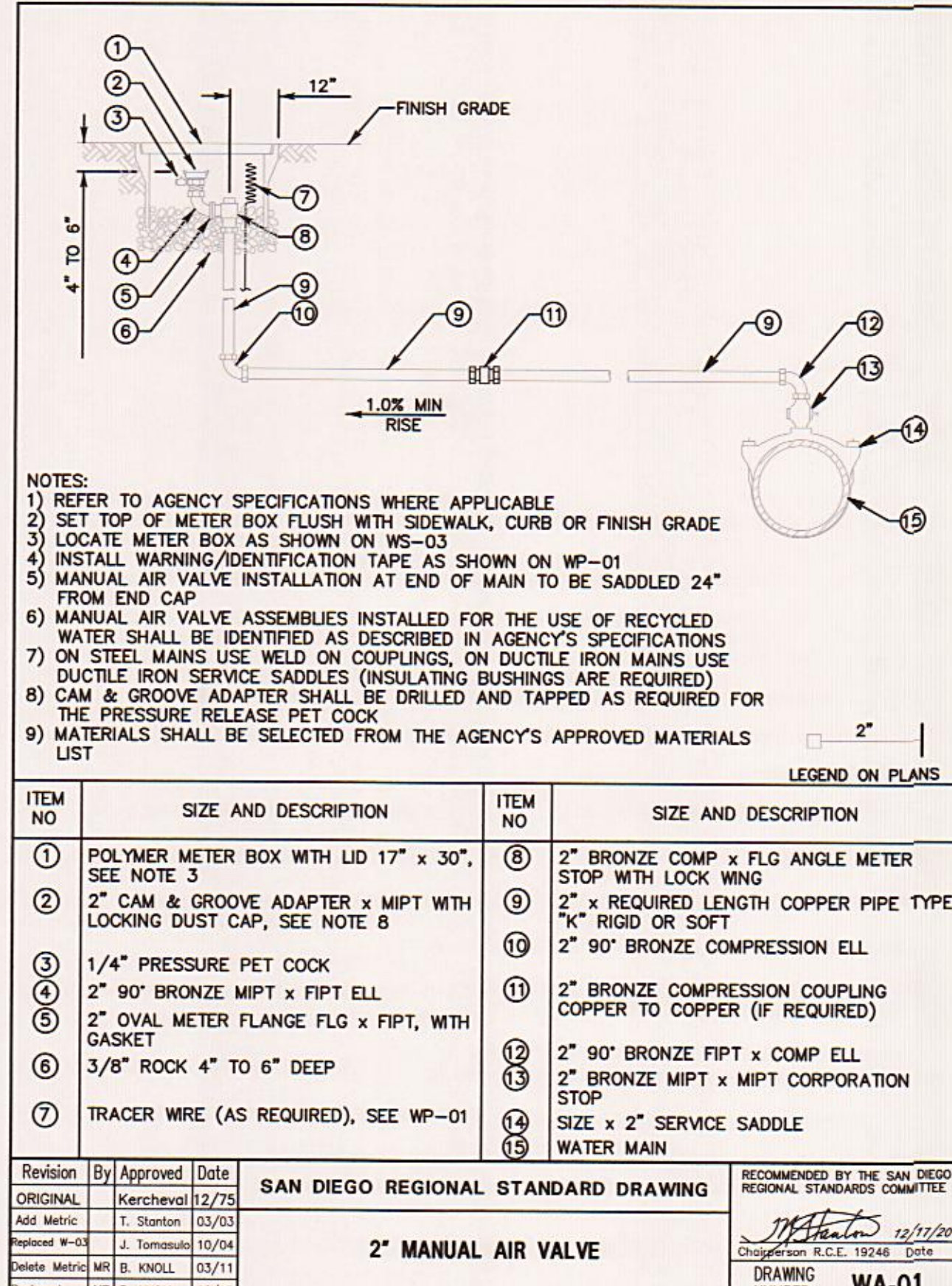
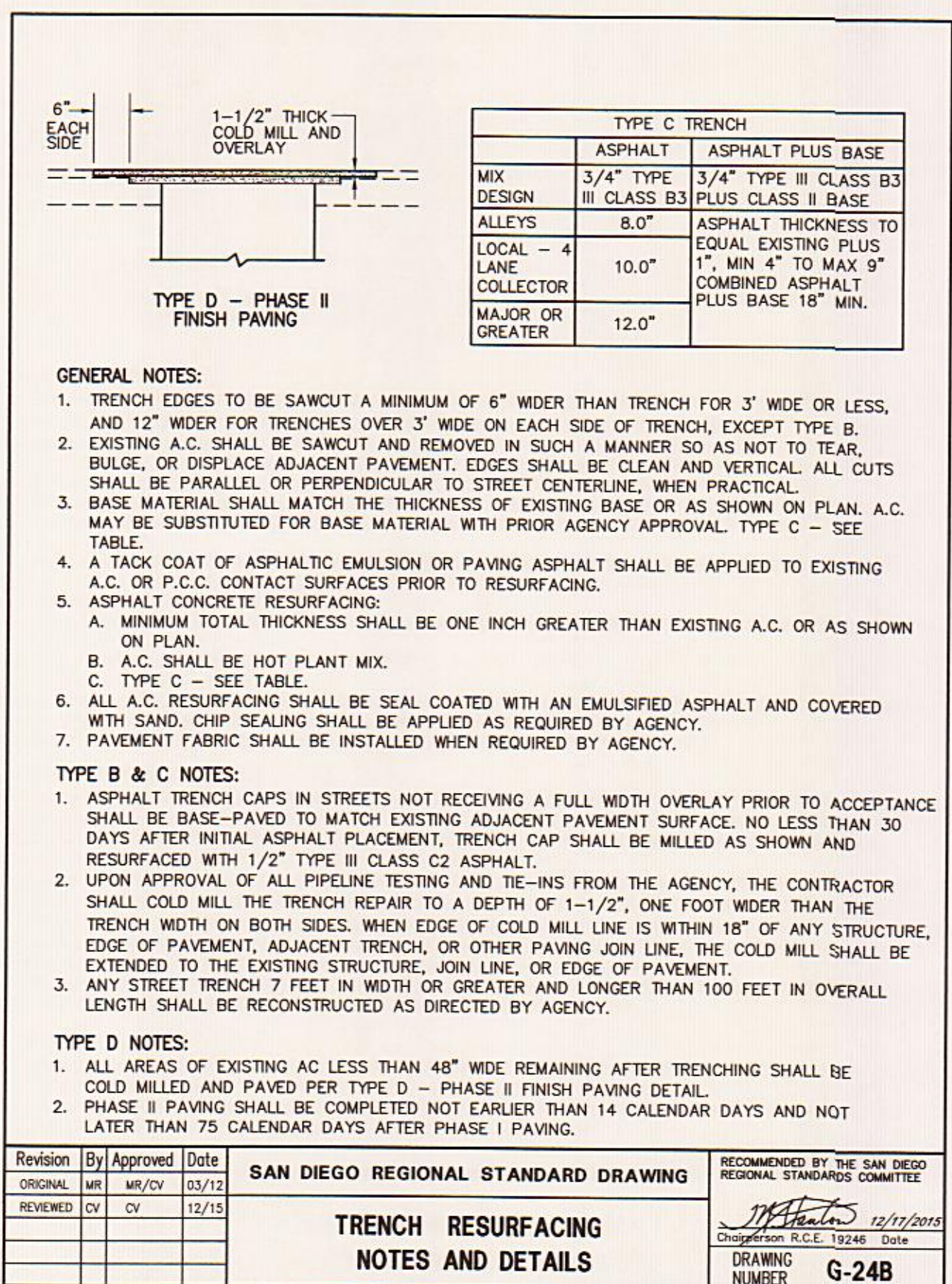
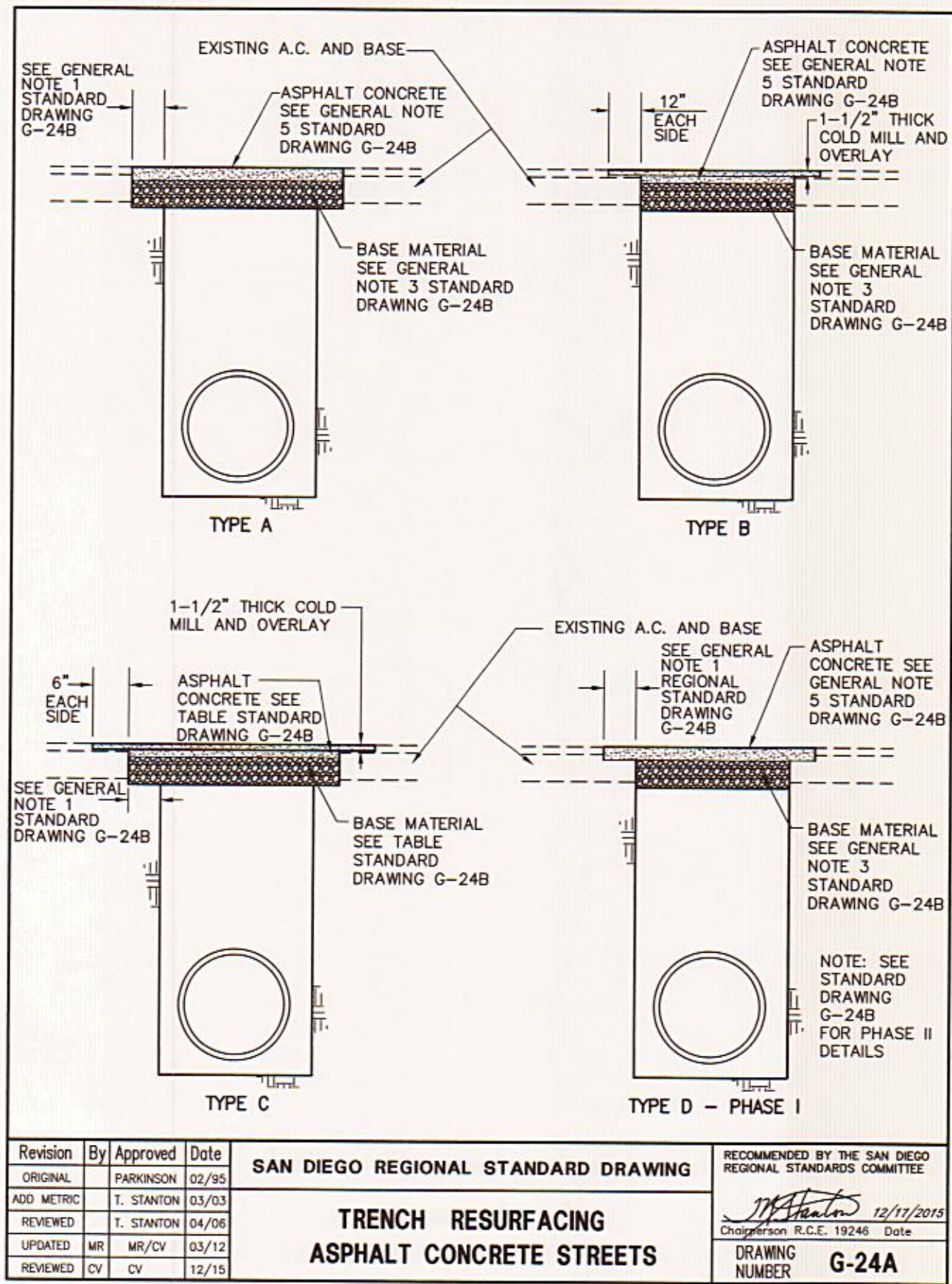
SHEET CONTENT:  
WATER IMPROVEMENT PLANS  
YAQUI ROAD STA 1+00 TO STA 6+00

SCALE: 1" = 30'

DRAWN BY: DB, CB  
REVISED BY: CB

SHEET 6 OF 8 SHEET  
JOB NO. DCE 221419  
DATE: DECEMBER 12, 2019





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PREPARED UNDER THE DIRECT SUPERVISION OF:

69,121  
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06/30/20  
REG. EXP. \_\_\_\_\_

CARLOS L. BELTRAN, P.E.

PROJECT TITLE: BORREGO WATER DISTRICT  
CAPITAL IMPROVEMENTS PROJECTS - CIP PHASE 2  
DE ANZA DR., YAQUI RD. AND FAIRWAY LANE  
WATER IMPROVEMENTS PROJECT

SHEET CONTENT: DETAILS

SCALE: NTS

DRAWN BY: DB, CB

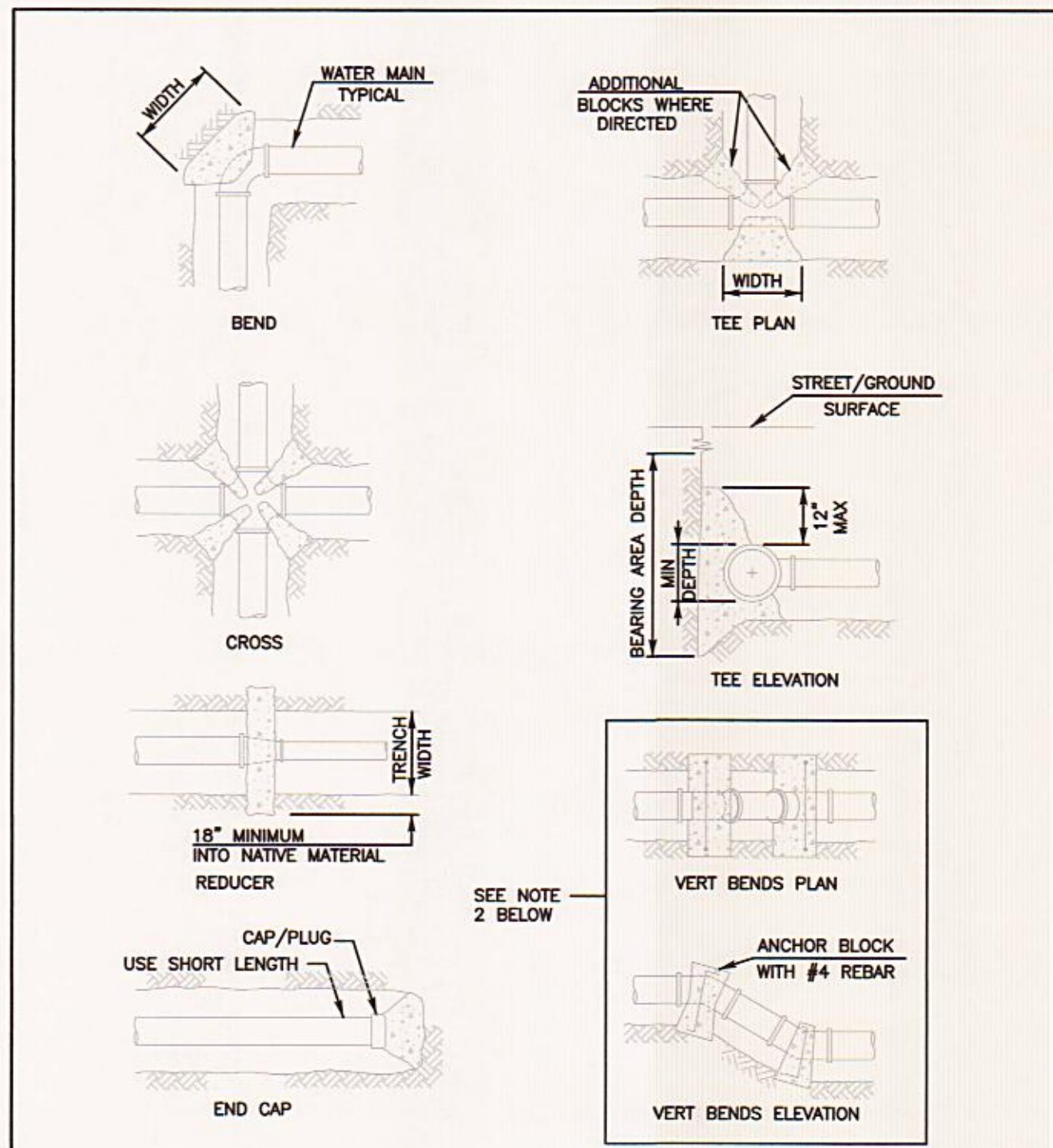
REVISED BY: CB

SHEET 7 OF 8 SHEET

JOB NO. DCE 221419

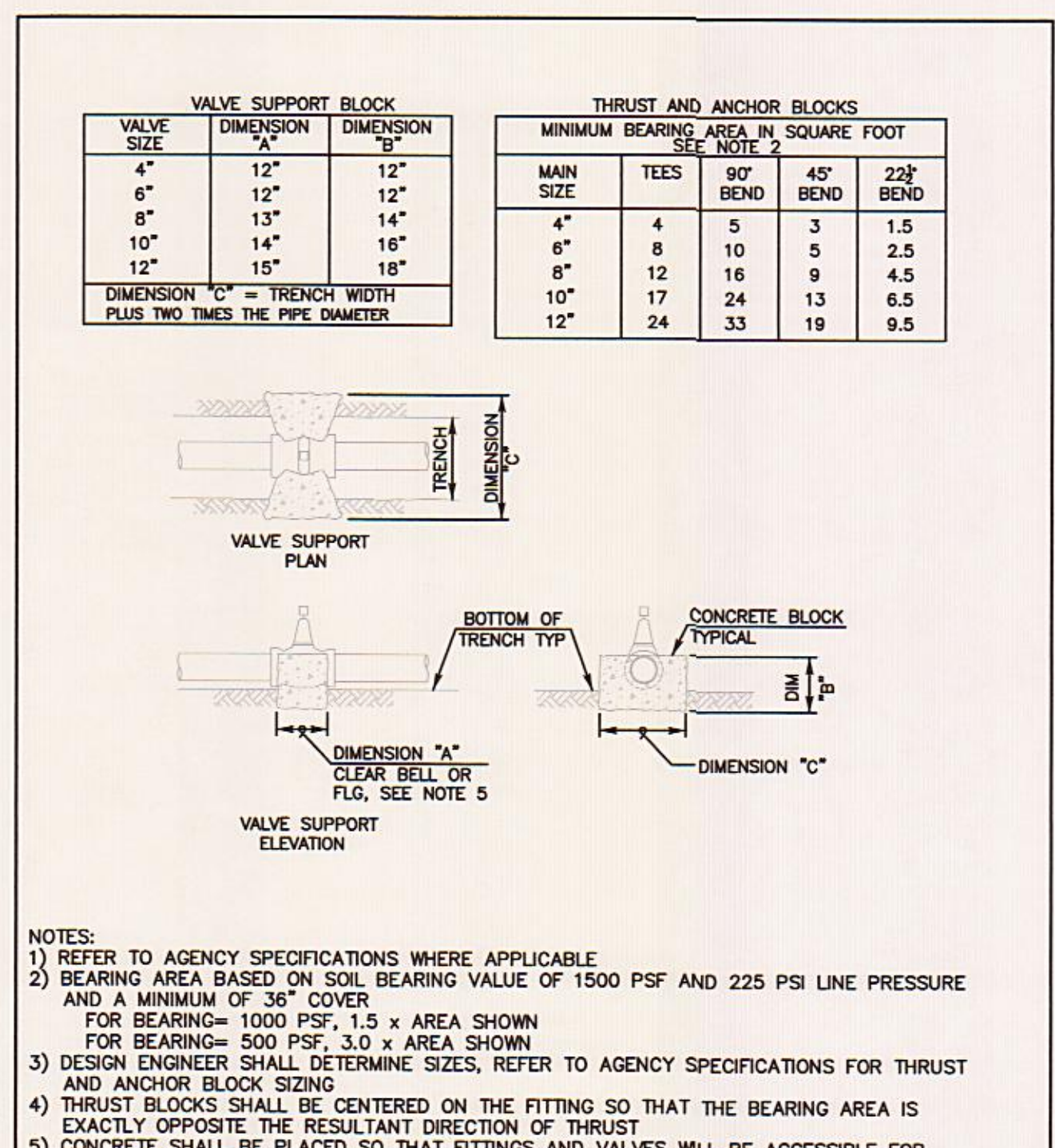
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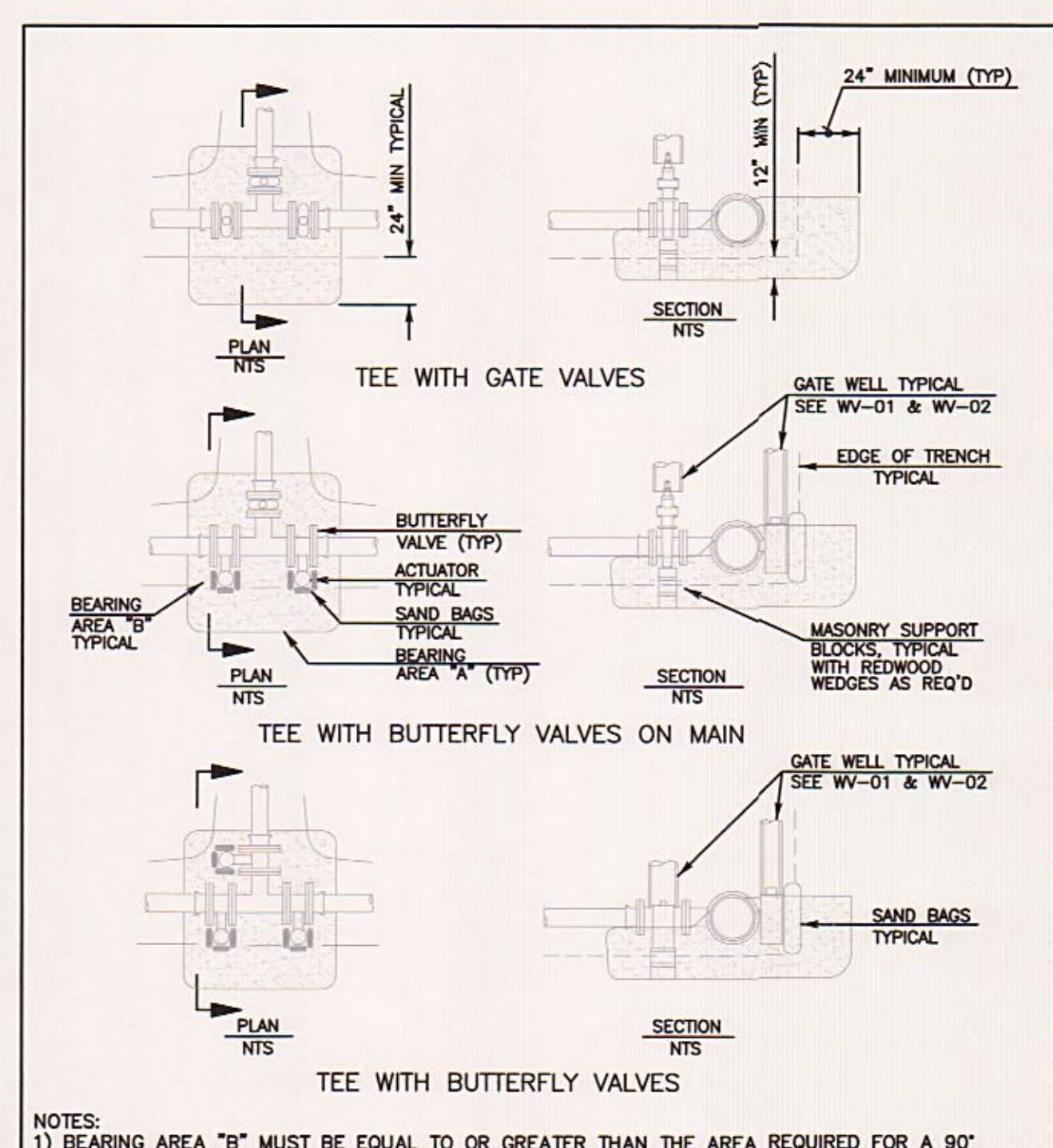
NOTES:  
 1) FOR ADDITIONAL THRUST BLOCKS, ANCHOR BLOCKS AND NOTES SEE WT-01 (2 OF 3) & (3 OF 3)  
 2) THE ANCHOR BLOCKS ON VERTICAL BENDS REQUIRE AGENCY APPROVAL

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL	Kercheval	12/75			
Add Metric	T. Stanton	03/03		CONCRETE THRUST AND ANCHOR BLOCK INSTALLATIONS	DRAWING NUMBER WT-01 (1 OF 3)
Repl. W-17	J. Tomaszak	10/04			
Repl. W-12	J. Tomaszak	10/04			
Delete Metric	MR B. KNOLL	03/11			
Reviewed	MR B. KNOLL	10/15			



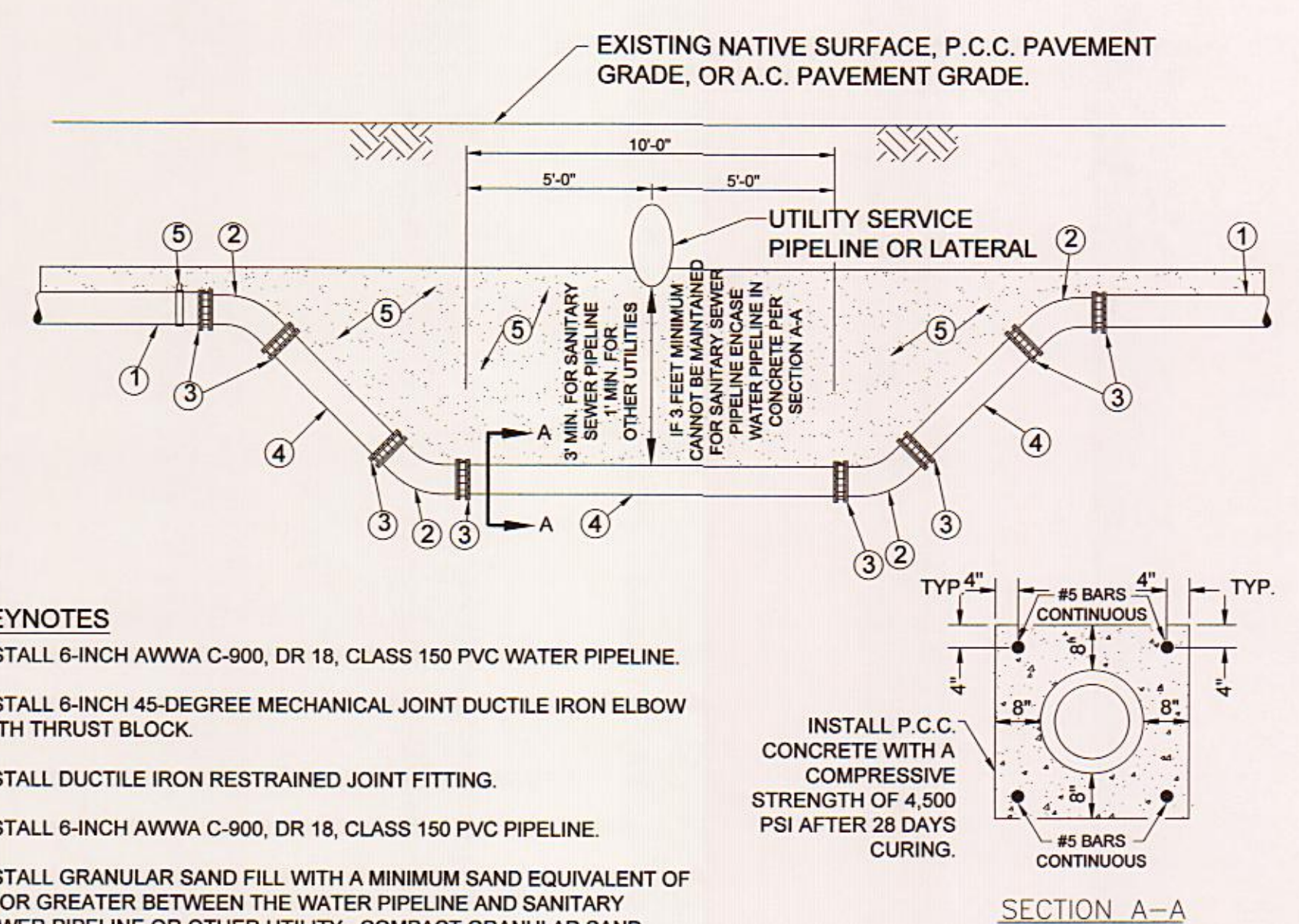
NOTES:  
 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE  
 2) BEARING AREA BASED ON SOIL BEARING VALUE OF 1500 PSF AND 225 PSI LINE PRESSURE AND A MINIMUM OF 36" COVER FOR BEARING= 1000 PSF, 1.5 x AREA SHOWN FOR BEARING= 500 PSF, 3.0 x AREA SHOWN  
 3) DESIGN ENGINEER SHALL DETERMINE SIZES, REFER TO AGENCY SPECIFICATIONS FOR THRUST AND ANCHOR BLOCK SIZING  
 4) THRUST BLOCKS SHALL BE CENTERED ON THE FITTING SO THAT THE BEARING AREA IS EXACTLY OPPOSITE THE RESULTANT DIRECTION OF THRUST  
 5) CONCRETE SHALL BE PLACED SO THAT FITTINGS AND VALVES WILL BE ACCESSIBLE FOR REPAIR OR REPLACEMENT  
 6) ALL THRUST AND ANCHOR BLOCKS SHALL BE POURED AGAINST WETTED UNDISTURBED SOIL  
 7) FOR MINIMUM CONCRETE CURING TIME REFER TO AGENCY SPECIFICATIONS  
 8) FOR ADDITIONAL THRUST BLOCKS SEE WT-01 (1 OF 3) & (3 OF 3)

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL	Kercheval	12/75			
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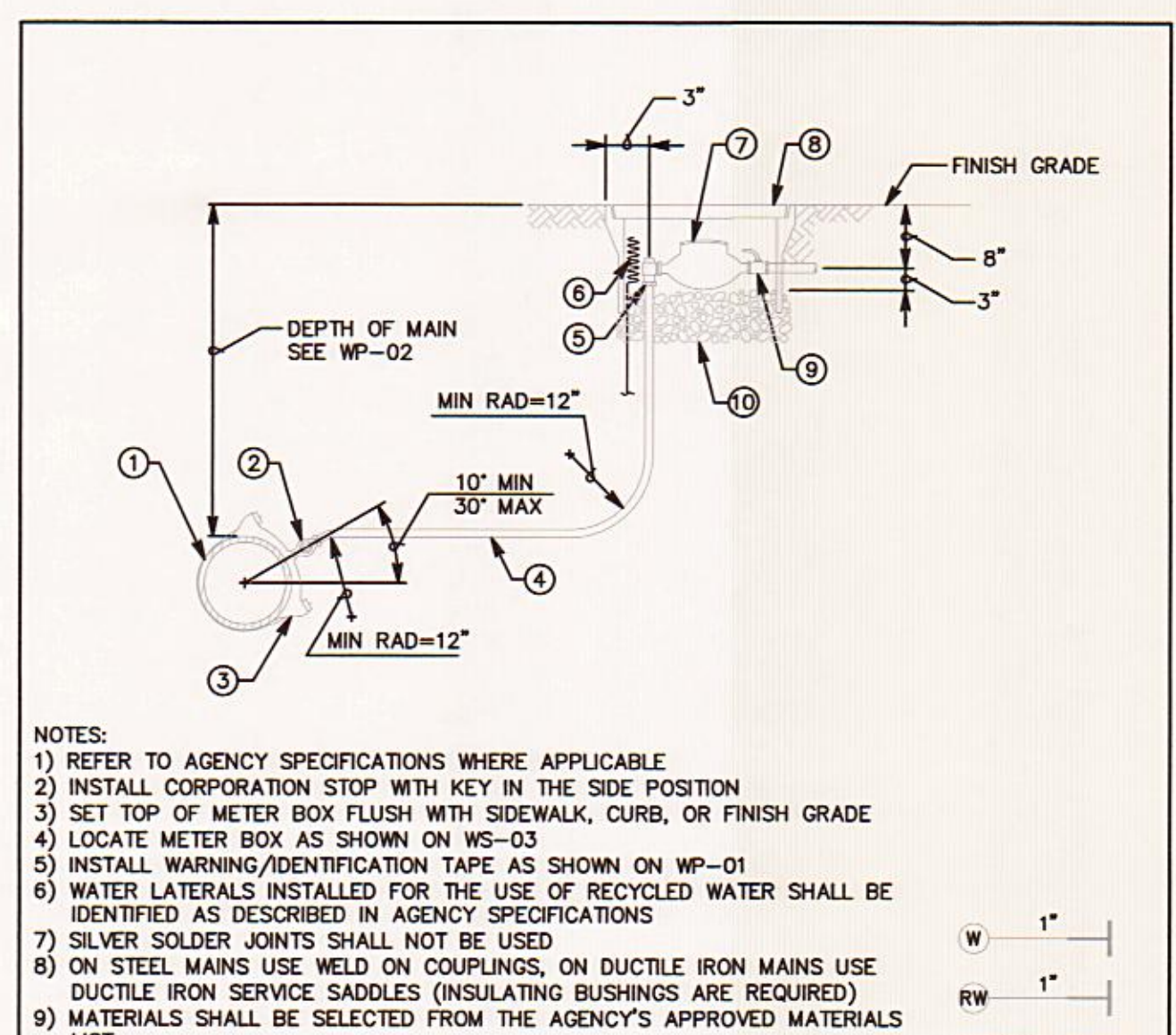


NOTES:  
 1) BEARING AREA "B" MUST BE EQUAL TO OR GREATER THAN THE AREA REQUIRED FOR A 90° ELBOW INSTALLATION  
 2) INSTALL SAND BAGS AROUND BUTTERFLY VALVE ACTUATOR TO ISOLATE IT FROM CONCRETE  
 3) BFV'S INSTALLED AT CROSSES OR TEES REQUIRE A FLANGED DUCTILE IRON SPOOL TO BE INSTALLED BETWEEN THE FITTING AND VALVE IN ACCORDANCE WITH THE AGENCY SPECIFICATIONS

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL	Kercheval	12/75			
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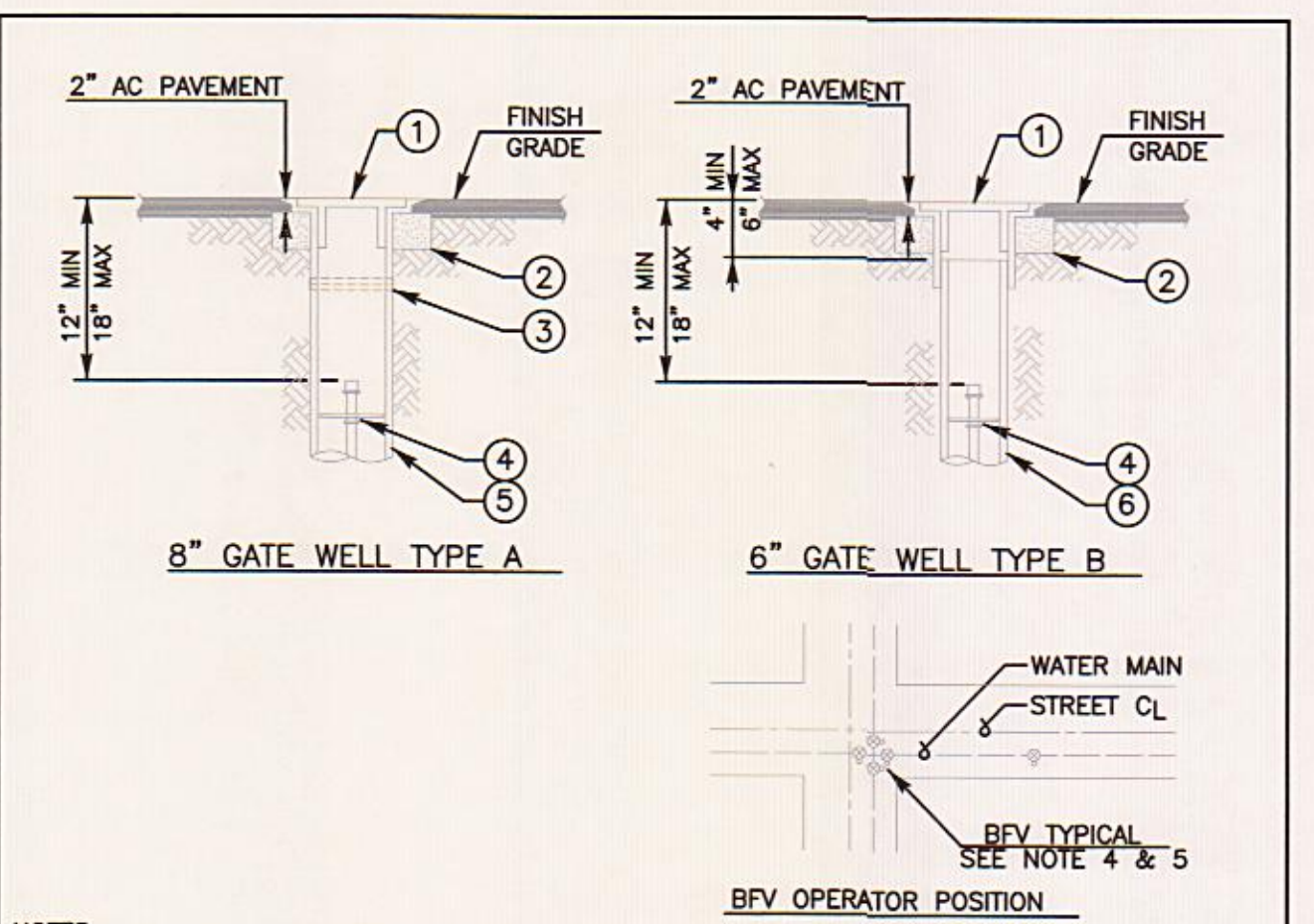


- KEYNOTES**
- INSTALL 6-INCH AWWA C-900, DR 18, CLASS 150 PVC WATER PIPELINE.
  - INSTALL 6-INCH 45-DEGREE MECHANICAL JOINT DUCTILE IRON ELBOW WITH THRUST BLOCK.
  - INSTALL DUCTILE IRON RESTRAINED JOINT FITTING.
  - INSTALL 6-INCH AWWA C-900, DR 18, CLASS 150 PVC PIPELINE.
  - INSTALL GRANULAR SAND FILL WITH A MINIMUM SAND EQUIVALENT OF 30 OR GREATER BETWEEN THE WATER PIPELINE AND SANITARY SEWER PIPELINE OR OTHER UTILITY. COMPACT GRANULAR SAND BACKFILL TO 95 PERCENT OF MAXIMUM DENSITY PER ASTM D-1557.
- NOTES:**
- IF THE DISTANCE FROM THE TOP OF THE WATER PIPELINE TO THE EXISTING NATIVE SURFACE OR A.C. PAVEMENT IS LESS THAN 3 FEET, ENCASE THE WATER PIPELINE IN P.C.C. FOR A DISTANCE OF 5 FEET PERPENDICULAR TO EACH SIDE OF THE SANITARY SEWER PIPELINE OR UTILITY PER SECTION A-A TO THE RIGHT.
  - THIS DETAIL WILL BE REQUIRED IF UTILITY CONFLICTS ARE ENCOUNTERED DURING THE CONSTRUCTION OF THE NEW WATER PIPELINE.
  - WATER PIPELINE DIAMETER SIZE PER PLANS.
- UTILITY CROSSING DETAIL (UNDER)



NOTES:  
 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE  
 2) INSTALL CORPORATION STOP WITH KEY IN THE SIDE POSITION  
 3) SET TOP OF METER BOX FLUSH WITH SIDEWALK, CURB, OR FINISH GRADE  
 4) LOCATE METER BOX AS SHOWN ON WS-03  
 5) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON WP-01  
 6) WATER LATERALS INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN AGENCY SPECIFICATIONS  
 7) SILVER SOLDER JOINTS SHALL NOT BE USED  
 8) ON STEEL MAINS USE WELD ON COUPLINGS, ON DUCTILE IRON MAINS USE DUCTILE IRON SERVICE SADDLES (INSULATING BUSHINGS ARE REQUIRED)  
 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL	Kercheval	12/75			
Add Metric	T. Stanton	03/03		1" WATER SERVICE INSTALLATION	DRAWING NUMBER WS-01
Repl. W-17	J. Tomaszak	10/04			
Repl. W-12	J. Tomaszak	10/04			
Delete Metric	MR B. KNOLL	03/11			
Reviewed	MR B. KNOLL	10/15			



NOTES:  
 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE  
 2) VALVES DEEPER THAN 5' REQUIRE A VALVE STEM EXTENSION  
 3) EXTENSION STEMS SHALL NOT BE ATTACHED/BOLTED TO OPERATING NUT  
 4) GATE WELL AND CAP SHALL BE SET SO THAT NO MORE THAN TWO 1" ADJUSTMENT RINGS ARE USED  
 5) BFV OPERATORS TO BE LOCATED TO THE CURBLINE SIDE OF WATER MAIN  
 6) BFV'S INSTALLED AT CROSSES OR TEES REQUIRE A FLANGED DUCTILE IRON SPOOL TO BE INSTALLED BETWEEN THE FITTING AND VALVE IN ACCORDANCE WITH THE AGENCY'S SPECIFICATIONS  
 7) GATE WELLS AND CAPS SHALL BE IDENTIFIED AS DESCRIBED ON WV-03  
 8) FOR INLINE VALVE ANCHOR BLOCK INSTALLATION SEE WT-02  
 9) GATE WELL TYPE AS APPROVED BY AGENCY  
 10) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	By	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL	Kercheval	12/75			
Add Metric	T. Stanton	03/03		GATE WELL CAP & CAN INSTALLATION, FOR VALVES 4" AND LARGER	DRAWING NUMBER WV-02
Repl. W-17	J. Tomaszak	10/04			
Repl. W-12	J. Tomaszak	10/04			
Delete Metric	MR B. KNOLL	03/11			
Reviewed	MR B. KNOLL	10/15			

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert  
 Call: TOLL FREE 811  
 TWO WORKING DAYS BEFORE YOU DIG.

NO.	REVISIONS:	APPROVED	DATE

UNAUTHORIZED CHANGES & USES: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

**Dynamic CONSULTING ENGINEERS**

CIVIL ENGINEERING - LAND SURVEYING - CONSTRUCTION MANAGEMENT  
 2415 IMPERIAL BUSINESS PARK DRIVE, SUITE B., IMPERIAL, CA. 92251  
 TEL (760) 545-0162 FAX (760) 545-0163  
 www.dynamicconsultingengineers.com

APPROVED FOR CONSTRUCTION BY:

DATE

REGISTERED PROFESSIONAL ENGINEER  
 CARLOS L. BELTRAN  
 No. 69121  
 Exp. 6-30-20  
 CIVIL  
 STATE OF CALIFORNIA

PREPARED UNDER THE DIRECT SUPERVISION OF:

CARLOS L. BELTRAN, P.E.  
 DATE 12/12/17

PROJECT TITLE: BORREGO WATER DISTRICT CAPITAL IMPROVEMENTS PROJECTS - CIP PHASE 2 DE ANZA DR., YAQUI RD. AND FAIRWAY LANE WATER IMPROVEMENTS PROJECT

SCALE: NTS  
 DRAWN BY: DB, CB  
 REVISED BY: CB

SHEET CONTENT: DETAILS

SHEET 8 OF 8 SHEET  
 JOB NO. DCE 221419  
 DATE: DECEMBER 12, 2019

BORREGO WATER DISTRICT  
BOARD OF DIRECTORS MEETING  
DECEMBER 17, 2019  
AGENDA ITEM II.D

December 11, 2019

TO: Board of Directors  
FROM: Geoffrey Poole, General Manager  
SUBJECT: Policy for Periodic Cyber Security Assessments – L Brecht/G Poole

**RECOMMENDED ACTION:**

Receive verbal update on recent Cyber Tests and consider changes to Cyber Policy for continued periodic testing in the future

**ITEM EXPLANATION:**

BWD recently completed an independent 3<sup>rd</sup> party assessment of BWD cyber systems. For obvious security reasons, the specific findings and recommendations should remain confidential but in general BWD's firewall and related systems performed well. Two specific recommendations were made for ways to improve the system even more.

Experts in the field, including BWD's Computer Consultant feel continuing the Assessments on a quarterly schedule is appropriate. Specific language will be added to BWD's existing Cyber Policy as follows:

On a quarterly basis, 3<sup>rd</sup> party, independent Consultants shall be used to evaluate BWD's cyber security systems thru an External Vulnerability Scan, External Pen Test and Internal Vulnerability Scan.

**NEXT STEPS**

Amend Cyber Policy

**FISCAL IMPACT**

#13,000 per year

**ATTACHMENT**

1. None

BORREGO WATER DISTRICT  
BOARD OF DIRECTORS MEETING  
DECEMBER 17, 2019  
AGENDA ITEM ILE

December 11, 2019

TO: Board of Directors  
FROM: Geoffrey Poole, General Manager  
SUBJECT: Indirect Costs Policy – L Brecht/G Poole

**RECOMMENDED ACTION:**

Approve Indirect Cost Policy for use with University of California Consulting Projects

**ITEM EXPLANATION:**

BWD is in the process of entering into an Agreement with UCI to continue Air Quality Monitoring (see Item II F). One way to reduce the cost of UCI Projects is the adoption of an Indirect Costs Policy. The attached Policy was used by the Borrego Valley Endowment Fund for the same purpose. In the case of the following proposed UCI agreement, this Policy will reduce Project costs from \$67,940 down to \$45,000. This Policy does not apply to BWD's For Profit Consulting Contracts.

**NEXT STEPS**

Publish Policy on Website

**FISCAL IMPACT**

TBD

**ATTACHMENT**

1. Indirect Cost Policy

# Borrego Water District

## Indirect Cost Policy for Project Grants and Contracts for Applicant Organizations

### Definition

The Borrego Water District (BWD) indirect costs as:

- Overhead expenses or ongoing operational costs incurred by the applicant organization on behalf of the organization's activities and projects, but that are not easily identified with any specific project.
- Administrative or other expenses which are not directly allocable to a particular activity or project.
- Expenses related to general operations of an organization that are shared among projects and/or functions.
- Basic examples include executive oversight, existing facilities costs, accounting, grants management, legal expenses, utilities, and technology support.

### Other Funding

BWD is a government agency and is not committed to matching the indirect cost rates of the U.S. government or other entities. We recognize this means that: (a) some grantees may need to engage in cost-sharing between projects, tap into unrestricted funds, or conduct other fundraising to cover operations; or (b) some contractors may choose not to contract with BWD. However, we believe our policy is consistent with that of many private foundations/conservancies and certain government entities that have a flat or maximum rate that caps the amount an applicant institution can charge. BWD's policy helps ensure furtherance of our charitable purpose.

### Maximum Indirect Cost Rates

Indirect cost rates for grants and contracts are subject to the following limitations:

0% rate

Government agencies,  
Other private foundations

0% rate

U.S. universities,  
U.S. community  
colleges

Up to a 10% rate Non-

governmental organizations  
(NGOs), International  
organizations, Non-U.S.  
unive

- Indirect Costs Reimbursements = Rate % \* Total Project Costs (incl. personnel, sub-contracts, supplies, equipment, etc.)
- Rates and limitations apply to *both* the primary applicant organization and any sub-grantees and sub-contractors. Each respective organization may receive indirect costs up to the rate applicable to their organization type.
- The rates provided above are the *maximum* rates allowed under the Endowment Fund's policy. A grantee or contractor with an actual indirect cost rate lower than the maximum rate provided above should *not* increase the funding request to the maximum allowed.

Given the policy provides an 'UP TO' percentage amount for NGO's, International Organizations, and Non-US Universities, the indirect cost rate approved may be anywhere from 0% to 10% depending on the specific situation. For example:

- *Example 1:* A large grant may be awarded a lower indirect cost rate to reflect reduced overhead required to adequately manage a large grant's direct costs. Actual administrative and maintenance costs do not necessarily increase in direct proportion to grant funds.
- *Example 2:* If a primary grantee is receiving grant funds which are largely sub-granted to another organization, BWD may limit the indirect costs the primary grantee receives on the sub-granted funds. Therefore, to reflect this, the rate could be less than the maximum allowed rate for the primary grantee.

BORREGO WATER DISTRICT  
BOARD OF DIRECTORS MEETING  
DECEMBER 17, 2019  
AGENDA ITEM II.F

December 11, 2019

TO: Board of Directors  
FROM: Geoffrey Poole, General Manager  
SUBJECT: University of California, Irvine – Air Quality Monitoring - Brecht/G Poole

**RECOMMENDED ACTION:**

Approve Contract for Air Quality Monitoring

**ITEM EXPLANATION:**

BWD, BVEF, UCI and others began an air quality monitoring program 3 years ago to create a data base of air quality in Borrego Springs. The attached contract continues the services for another year. Funding is shared between BWD at \$22,500 and BVEF at \$22,500.

Attached is the BWD and UCI Contract for Consulting Services as well as the scope of work to continue Air Quality Monitoring. The Contract is under review by UCI. Staff is request approval of the Contract with the caveat that non-substantial components can be altered by the GM and Legal Counsel.

**NEXT STEPS**

Sign Contracts and provide funding so work can continue

**FISCAL IMPACT**

TBD

**ATTACHMENT**

1. Consulting Contract
2. UCI Scope of Work

**BORREGO WATER DISTRICT  
PROFESSIONAL SERVICES AGREEMENT**

**1. PARTIES AND DATE.**

This Agreement is made and entered into this 11<sup>th</sup> day of December, 2019 by and between the Borrego Water District, a California municipal water district, with its principal place of business at 806 Palm Canyon Drive, Borrego Springs, CA 92004 (“District”) and University of California with its principal place of business at 141 Innovation Drive - Suite 250 Irvine, CA 92697-7600 (“Consultant”). District and Consultant are sometimes individually referred to as “Party” and collectively as “Parties” in this Agreement.

**2. RECITALS.**

**2.1 Consultant.**

Consultant desires to perform and assume responsibility for the provision of certain professional services required by District on the terms and conditions set forth in this Agreement. Consultant represents that it is experienced in providing preparation of a Air Quality Monitoring studies.

**2.2 Project.**

District desires to engage Consultant to render such services as for the Project specified in the Attachment A (“Project”) and as set forth in this Agreement.

**3. TERMS.**

**3.1 Scope and Schedule of Services.**

3.1.1 General Scope of Services. Consultant promises and agrees to furnish to District all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply the professional consulting services necessary for the Project (“Services”). The Services are more particularly described in Exhibit “A” attached hereto and incorporated herein by reference. All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state and federal laws, rules, and regulations.

3.1.2 Term. The term of this Agreement shall be from December 31, 2019 to December 31, 2020 for the completion of the Project on the schedule described in Attachment A, unless earlier terminated as provided herein. Consultant shall complete the Services within the term of this Agreement, and shall meet any other established schedules and deadlines. The Parties may, by mutual, written consent, extend the term of this Agreement if necessary to complete the Services.

3.1.3 Schedule of Services. Consultant shall perform the Services expeditiously, within the term of this Agreement, and in accordance with a mutually agreeable Schedule of Services to be developed by both Parties. Consultant represents that it has the professional and technical personnel required to perform the Services in conformance with such



conditions. In order to facilitate Consultant's conformance with the Schedule, District shall respond to Consultant's submittals in a timely manner. Upon request of District, Consultant shall provide a more detailed schedule of anticipated performance to meet the Schedule of Services.

### **3.2 Fees and Payments.**

3.2.1 Compensation. Consultant shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in Exhibit "A" attached hereto and incorporated herein by reference. The total compensation shall not exceed the amount shown in costs without written approval by District. Extra Work may be authorized, as described below, and if authorized, will be compensated at the rates and manner set forth in this Agreement. BWD has approved an Indirect Costs Policy.

3.2.2 Payment. Consultant shall submit to District a monthly itemized statement which indicates work completed and hours of Services rendered by Consultant. The statement shall describe the Services and supplies provided since the initial commencement date, or since the start of the subsequent billing periods, as appropriate, through the date of the statement. District shall, within 45 days of receiving such statement, review the statement and pay all approved charges thereon. BWD will contribute \$22,500, the Borrego Valley Endowment Fund \$22,500.

3.2.3 Reimbursement for Expenses. Consultant shall not be reimbursed for any expenses unless authorized in writing by District.

3.2.4 Extra Work. At any time during the term of this Agreement, District may request that Consultant perform Extra Work. As used herein, "Extra Work" means any work which is determined by District to be necessary for the proper completion of the Project, but which the parties did not reasonably anticipate would be necessary at the execution of this Agreement. Consultant shall not perform, nor be compensated for, Extra Work without written authorization by District.

### **3.3 Responsibilities of Consultant.**

3.3.1 Control and Payment of Subordinates; Independent Contractor. The Services shall be performed by Consultant or under its supervision. Consultant will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. District retains Consultant on an independent contractor basis and not as an employee. Consultant retains the right to perform similar or different services for others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Consultant shall also not be employees of District and shall at all times be under Consultant's exclusive direction and control. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

3.3.2 Standard of Care; Performance of Employees. Consultant shall perform all Services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in

the State of California. Consultant represents and maintains that it is skilled in the professional calling necessary to perform the Services. Consultant warrants that all employees and subconsultants shall have sufficient skill and experience to perform the Services assigned to them. Finally, Consultant represents that it, its employees and subconsultants have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services, and that such licenses and approvals shall be maintained throughout the term of this Agreement. As provided for in the indemnification provisions of this Agreement, Consultant shall perform, at its own cost and expense and without reimbursement from District, any services necessary to correct errors or omissions which are caused by Consultant's failure to comply with the standard of care provided for herein. Any employee of Consultant or its subconsultants who is determined by District to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to District, shall be promptly removed from the Project by Consultant and shall not be re-employed to perform any of the Services or to work on the Project.

3.3.3 Conformance to Applicable Requirements. All work prepared by Consultant shall be subject to the approval of District.

3.3.4 Substitution of Key Personnel. Consultant has represented to District that certain key personnel will perform and coordinate the Services under this Agreement. Should one or more of such personnel become unavailable, Consultant may substitute other personnel of at least equal competence upon written approval of District. In the event that District and Consultant cannot agree as to the substitution of key personnel, District shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the Services in a manner acceptable to District, or who are determined by District to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property, shall be promptly removed from the Project by Consultant at the request of District. The key personnel for performance of this Agreement is Melanie Rocks – Rocks Biological Consulting.

3.3.5 Coordination of Services. Consultant agrees to work closely with District staff in the performance of Services and shall be available to District's staff, consultants and other staff at all reasonable times.

3.3.6 Laws and Regulations. Consultant shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Project or the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Consultant shall be liable for all violations of such laws and regulations in connection with Services. If Consultant performs any work knowing it to be contrary to such laws, rules and regulations, Consultant shall be solely responsible for all costs arising therefrom. Consultant shall defend, indemnify and hold District, its officials, directors, officers, employees, and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

3.3.7 Labor Code Provisions.

(a) Prevailing Wages. Consultant is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the

payment of prevailing wage rates and the performance of other requirements on “public works” and “maintenance” projects. If the Services are being performed as part of an applicable “public works” or “maintenance” project, as defined by the Prevailing Wage Laws, and if the total compensation is \$1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws. District shall provide Consultant with a copy of the prevailing rates of per diem wages in effect at the commencement of this Agreement. Consultant shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request and shall post copies at Consultant’s principal place of business and at the project site. Consultant shall defend, indemnify and hold District, its elected officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

(b) Registration and Labor Compliance. If the services are being performed as part of an applicable “public works” or “maintenance” project, then, in addition to the foregoing, pursuant to Labor Code sections 1725.5 and 1771.1, Consultant and all subconsultants must be registered with the Department of Industrial Relations (“DIR”). Consultant shall maintain registration for the duration of the project and require the same of any subconsultants. This project may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Consultant’s sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

(c) Labor Certification. By its signature hereunder, Consultant certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker’s Compensation or to undertake self-insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

3.3.8 Safety. Consultant shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, Consultant shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions as applicable shall include, but shall not be limited to: (A) adequate life protection and life-saving equipment and procedures; (B) instructions in accident prevention for all employees and subconsultants, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

3.3.9 Accounting Records. Consultant shall maintain complete and accurate records with respect to all costs and expenses incurred under this Agreement. All such records shall be clearly identifiable. Consultant shall allow a representative of District during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Consultant shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of four (4) years from the date of final payment under this Agreement.

3.3.10 Air Quality. To the extent applicable, Consultant must fully comply with all applicable laws, rules and regulations in furnishing or using equipment and/or providing

services, including, but not limited to, emissions limits and permitting requirements imposed by the South Coast Air Quality Management District (SCAQMD) and/or California Air Resources Board (CARB). Although the SCAQMD and CARB limits and requirements are more broad, Consultant shall specifically be aware of their application to "portable equipment", which definition is considered by SCAQMD and CARB to include any item of equipment with a fuel-powered engine. Consultant shall indemnify District against any fines or penalties imposed by SCAQMD, CARB, or any other governmental or regulatory agency for violations of applicable laws, rules and/or regulations by Consultant, its subconsultants, or others for whom Consultant is responsible under its indemnity obligations provided for in this Agreement.

### **3.4 Representatives of the Parties.**

3.4.1 District's Representative. District hereby designates its General Manager, or his or her designee, to act as its representative for the performance of this Agreement ("District's Representative"). Consultant shall not accept direction or orders from any person other than the District's Representative or his or her designee.

3.4.2 Consultant's Representative. Consultant hereby designates Dr. Charles Zender, or his or her designee, to act as its representative for the performance of this Agreement ("Consultant's Representative"). Consultant's Representative shall have full authority to represent and act on behalf of Consultant for all purposes under this Agreement. The Consultant's Representative shall supervise and direct the Services, using his best skill and attention, and shall be responsible for all means, methods, techniques, sequences, and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

### **3.5 Indemnification.**

To the fullest extent permitted by law, Consultant shall immediately indemnify and hold District, its directors, officials, officers, employees, volunteers and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions of Consultant, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of Consultant's Services, the Project or this Agreement, including without limitation the payment of all consequential damages, expert witness fees and attorneys' fees and other related costs and expenses. Notwithstanding the foregoing, to the extent Consultant's Services are subject to Civil Code Section 2782.8, the above indemnity shall be limited, to the extent required by Civil Code Section 2782.8, to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of Consultant.

Consultant shall immediately defend, with Counsel of District's choosing and at Consultant's own cost, expense and risk, any and all claims, suits, actions or other proceedings of every kind that may be brought or instituted against District or its directors, officials, officers, employees, volunteers and agents. Consultant shall pay and satisfy any judgment, award or decree that may be rendered against District or its directors, officials, officers, employees, volunteers and agents as part of any such claim, suit, action or other proceeding. Consultant shall also reimburse District for the cost of any settlement paid by District or its directors, officials, officers, employees, agents or volunteers as part of any such claim, suit, action or other proceeding. Such reimbursement shall include payment for District's attorneys' fees and costs, including expert witness fees. Consultant shall reimburse District and its directors, officials,

officers, employees, agents, and/or volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. Consultant's obligation to indemnify shall survive expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by District, its directors, officials, officers, employees, agents, or volunteers.

### **3.6 Insurance.**

3.6.1 Time for Compliance. Consultant shall not commence work under this Agreement until it has provided evidence satisfactory to District that it has secured all insurance required under this section, in a form and with insurance companies acceptable to District. In addition, Consultant shall not allow any subcontractor to commence work on any subcontract until it has secured all insurance required under this section.

3.6.2 Minimum Requirements. Consultant shall, at its expense, procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Agreement by Consultant, its agents, representatives, employees or subcontractors. Consultant shall also require all of its subcontractors to procure and maintain the same insurance for the duration of the Agreement. Such insurance shall meet at least the following minimum levels of coverage:

(A) Minimum Scope of Insurance. Coverage shall be at least as broad as the latest version of the following: (1) *General Liability*: Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001 or exact equivalent); (2) *Automobile Liability*: Insurance Services Office Business Auto Coverage (form CA 0001, code 1 (any auto) or exact equivalent); and (3) *Workers' Compensation and Employer's Liability*: Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.

(B) Minimum Limits of Insurance. Consultant shall maintain limits no less than: (1) *General Liability*: \$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with general aggregate limit is used, either the general aggregate limit shall apply separately to this Agreement/location or the general aggregate limit shall be twice the required occurrence limit; (2) *Automobile Liability*: \$1,000,000 per accident for bodily injury and property damage; and (3) *if Consultant has an employees, Workers' Compensation and Employer's Liability*: Workers' Compensation limits as required by the Labor Code of the State of California. Employer's Practices Liability limits of \$1,000,000 per accident.

3.6.3 Professional Liability. Consultant shall procure and maintain, and require its sub-consultants to procure and maintain, for a period of five (5) years following completion of the Project, errors and omissions liability insurance appropriate to their profession. Such insurance shall be in an amount not less than \$1,000,000 per claim. This insurance shall be endorsed to include contractual liability applicable to this Agreement and shall be written on a policy form coverage specifically designed to protect against acts, errors or omissions of Consultant. "Covered Professional Services" as designated in the policy must specifically include work performed under this Agreement. The policy must "pay on behalf of" the insured and must include a provision establishing the insurer's duty to defend.

3.6.4 Insurance Endorsements. The insurance policies shall contain the following provisions, or Consultant shall provide endorsements on forms approved by District to add the following provisions to the insurance policies:

(A) General Liability.

(i) Commercial General Liability Insurance must include coverage for (1) bodily Injury and property damage; (2) personal Injury/advertising Injury; (3) premises/operations liability; (4) products/completed operations liability; (5) aggregate limits that apply per Project; (6) explosion, collapse and underground (UCX) exclusion deleted; (7) contractual liability with respect to this Agreement; (8) broad form property damage; and (9) independent consultants coverage.

(ii) The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) contain any other exclusion contrary to this Agreement.

(iii) The policy shall give District, its directors, officials, officers, employees, and agents insured status using ISO endorsement forms 20 10 10 01 and 20 37 10 01, or endorsements providing the exact same coverage.

(iv) The additional insured coverage under the policy shall be "primary and non-contributory" and will not seek contribution from District's insurance or self-insurance and shall be at least as broad as CG 20 01 04 13, or endorsements providing the exact same coverage.

(B) Automobile Liability. The automobile liability policy shall be endorsed to state that: (1) District, its directors, officials, officers, employees and agents shall be covered as additional insureds with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by Consultant or for which Consultant is responsible; and (2) the insurance coverage shall be primary insurance as respects District, its directors, officials, officers, employees and agents, or if excess, shall stand in an unbroken chain of coverage excess of Consultant's scheduled underlying coverage. Any insurance or self-insurance maintained by District, its directors, officials, officers, employees and agents shall be excess of Consultant's insurance and shall not be called upon to contribute with it in any way.

(C) Workers' Compensation and Employers Liability Coverage.

(i) Consultant certifies that he/she is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and he/she will comply with such provisions before commencing work under this Agreement.

(ii) The insurer shall agree to waive all rights of subrogation against District, its directors, officials, officers, employees and agents for losses paid under the terms of the insurance policy which arise from work performed by Consultant.

(D) All Coverages.

(i) Defense costs shall be payable in addition to the limits set forth hereunder.

(ii) Requirements of specific coverage or limits contained in this section are not intended as a limitation on coverage, limits, or other requirement, or a waiver of any coverage normally provided by any insurance. It shall be a requirement under this Agreement that any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirements and/or limits set forth herein shall be available to District, its directors, officials, officers, employees and agents as additional insureds under said policies. Furthermore, the requirements for coverage and limits shall be (1) the minimum coverage and limits specified in this Agreement; or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insured; whichever is greater.

(iii) The limits of insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of District (if agreed to in a written contract or agreement) before District's own insurance or self-insurance shall be called upon to protect it as a named insured. The umbrella/excess policy shall be provided on a "following form" basis with coverage at least as broad as provided on the underlying policy(ies).

(iv) Consultant shall provide District at least thirty (30) days prior written notice of cancellation of any policy required by this Agreement, except that Consultant shall provide at least ten (10) days prior written notice of cancellation of any such policy due to non-payment of premium. If any of the required coverage is cancelled or expires during the term of this Agreement, Consultant shall deliver renewal certificate(s) including the General Liability Additional Insured Endorsement to District at least ten (10) days prior to the effective date of cancellation or expiration.

(v) The retroactive date (if any) of each policy is to be no later than the effective date of this Agreement. Consultant shall maintain such coverage continuously for a period of at least three years after the completion of the work under this Agreement. Consultant shall purchase a one (1) year extended reporting period A) if the retroactive date is advanced past the effective date of this Agreement; B) if the policy is cancelled or not renewed; or C) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement.

(vi) The foregoing requirements as to the types and limits of insurance coverage to be maintained by Consultant, and any approval of said insurance by District, is not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by Consultant pursuant to this Agreement, including but not limited to, the provisions concerning indemnification.

(vii) If at any time during the life of the Agreement, any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, District has the right but not the duty to obtain the insurance it deems necessary and any premium paid by District will be promptly reimbursed by Consultant or District will withhold amounts sufficient to pay premium from Consultant payments. In the alternative, District may cancel this Agreement. District may require Consultant to provide complete copies of all insurance policies in effect for the duration of the Project.

(viii) Neither District nor any of its directors, officials, officers, employees or agents shall be personally responsible for any liability arising under or by virtue of this Agreement.

3.6.5 Deductibles and Self-Insurance Retentions. Any deductibles or self-insured retentions must be declared to and approved by District. If District does not approve the deductibles or self-insured retentions as presented, Consultant shall guarantee that, at the option of District, either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects District, its directors, officials, officers, employees and agents; or, (2) Consultant shall procure a bond guaranteeing payment of losses and related investigation costs, claims and administrative and defense expenses.

3.6.6 Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating no less than A:VIII, licensed to do business in California, and satisfactory to District.

3.6.7 Verification of Coverage. Consultant shall furnish District with original certificates of insurance and endorsements effecting coverage required by this Agreement on forms satisfactory to District. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements must be received and approved by District before work commences. District reserves the right to require complete, certified copies of all required insurance policies, at any time.

3.6.8 Subconsultant Insurance Requirements. Consultant shall not allow any subcontractors or subconsultants to commence work on any subcontract until they have provided evidence satisfactory to District that they have secured all insurance required under this section. Policies of commercial general liability insurance provided by such subcontractors or subconsultants shall be endorsed to name District as an additional insured using ISO form CG 20 38 04 13 or an endorsement providing the exact same coverage. If requested by Consultant, District may approve different scopes or minimum limits of insurance for particular subcontractors or subconsultants.

### **3.7 Termination of Agreement.**

3.7.1 Grounds for Termination. District may, by written notice to Consultant, terminate the whole or any part of this Agreement at any time and without cause by giving written notice to Consultant of such termination, and specifying the effective date thereof, at least seven (7) days before the effective date of such termination. Upon termination, Consultant shall be compensated only for those services which have been adequately rendered to District, and Consultant shall be entitled to no further compensation. Consultant may not terminate this Agreement except for cause.

3.7.2 Effect of Termination. If this Agreement is terminated as provided herein, District may require Consultant to provide all finished or unfinished Documents and Data and other information of any kind prepared by Consultant in connection with the performance of Services under this Agreement. Consultant shall be required to provide such document and other information within fifteen (15) days of the request.



3.7.3 Additional Services. In the event this Agreement is terminated in whole or in part as provided herein, District may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

### **3.8 Ownership of Materials and Confidentiality.**

3.8.1 Documents & Data; Licensing of Intellectual Property. This Agreement creates a non-exclusive and perpetual license for District to copy, use, modify, reuse, or sublicense any and all copyrights, designs, and other intellectual property embodied in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, which are prepared or caused to be prepared by Consultant under this Agreement ("Documents & Data"). All Documents & Data shall be and remain the property of District, and shall not be used in whole or in substantial part by Consultant on other projects without District's express written permission. Within thirty (30) days following the completion, suspension, abandonment or termination of this Agreement, Consultant shall provide to District reproducible copies of all Documents & Data, in a form and amount required by District. District reserves the right to select the method of document reproduction and to establish where the reproduction will be accomplished. The reproduction expense shall be borne by District at the actual cost of duplication. In the event of a dispute regarding the amount of compensation to which Consultant is entitled under the termination provisions of this Agreement, Consultant shall provide all Documents & Data to District upon payment of the undisputed amount. Consultant shall have no right to retain or fail to provide to District any such documents pending resolution of the dispute. In addition, Consultant shall retain copies of all Documents & Data on file for a minimum of fifteen (15) years following completion of the Project, and shall make copies available to District upon the payment of actual reasonable duplication costs. Before destroying the Documents & Data following this retention period, Consultant shall make a reasonable effort to notify District and provide District with the opportunity to obtain the documents.

3.8.2 Subconsultants. Consultant shall require all subconsultants to agree in writing that District is granted a non-exclusive and perpetual license for any Documents & Data the subconsultant prepares under this Agreement. Consultant represents and warrants that Consultant has the legal right to license any and all Documents & Data. Consultant makes no such representation and warranty in regard to Documents & Data which were prepared by design professionals other than Consultant or its subconsultants, or those provided to Consultant by District.

3.8.3 Right to Use. District shall not be limited in any way in its use or reuse of the Documents and Data or any part of them at any time for purposes of this Project or another project, provided that any such use not within the purposes intended by this Agreement or on a project other than this Project without employing the services of Consultant shall be at District's sole risk. If District uses or reuses the Documents & Data on any project other than this Project, it shall remove Consultant's seal from the Documents & Data and indemnify and hold harmless Consultant and its officers, directors, agents and employees from claims arising out of the negligent use or re-use of the Documents & Data on such other project. Consultant shall be responsible and liable for its Documents & Data, pursuant to the terms of this Agreement, only with respect to the condition of the Documents & Data at the time they are provided to District upon completion, suspension, abandonment or termination. Consultant shall not be responsible or liable for any revisions to the Documents & Data made by any party other than Consultant, a party for whom Consultant is legally responsible or liable, or anyone approved by Consultant.

3.8.4 Indemnification. Consultant shall defend, indemnify and hold District, its directors, officials, officers, employees, volunteers and agents free and harmless, pursuant to the indemnification provisions of this Agreement, for any alleged infringement of any patent, copyright, trade secret, trade name, trademark, or any other proprietary right of any person or entity in consequence of the use on the Project by District of the Documents & Data, including any method, process, product, or concept specified or depicted.

3.8.5 Confidentiality. All Documents & Data, either created by or provided to Consultant in connection with the performance of this Agreement, shall be held confidential by Consultant. All Documents & Data shall not, without the prior written consent of District, be used or reproduced by Consultant for any purposes other than the performance of the Services. Consultant shall not disclose, cause or facilitate the disclosure of the Documents & Data to any person or entity not connected with the performance of the Services or the Project. Nothing furnished to Consultant that is otherwise known to Consultant or is generally known, or has become known, to the related industry shall be deemed confidential. Consultant shall not use District's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production or other similar medium without the prior written consent of District.

### **3.9 Subcontracting/Subconsulting.**

3.9.1 Prior Approval Required. Consultant shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of District. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement.

### **3.10 General Provisions.**

3.10.1 Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

**DISTRICT:**

Borrego Water District  
806 Palm Canyon Drive  
Borrego Springs, CA 92004  
Attn: Geoff Poole

**CONSULTANT:**

University of California, Irvine  
Office of Research  
141 Innovation Drive - Suite 250  
Irvine, CA 92697-7600  
Attn: Erika Blossom

Such notice shall be deemed made when personally deed or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.10.2 Equal Opportunity Employment. Consultant represents that it is an equal opportunity employer and it shall not discriminate against any subconsultant, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex or age. Such non-discrimination shall include, but not be limited to, all activities related to

initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination. Consultant shall also comply with all relevant provisions of District's Minority Business Enterprise program, Affirmative Action Plan or other related programs or guidelines currently in effect or hereinafter enacted.

3.10.3 Time of Essence. Time is of the essence for each and every provision of this Agreement.

3.10.4 District's Right to Employ Other Consultants. District reserves right to employ other consultants in connection with this Project.

3.10.5 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the parties.

3.10.6 Assignment or Transfer. Consultant shall not assign, hypothecate or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of District. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

3.10.7 Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not work days. All references to Consultant include all personnel, employees, agents, and subconsultants of Consultant, except as otherwise specified in this Agreement. All references to District include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content or intent of this Agreement.

3.10.8 Amendment; Modification. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

3.10.9 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel or otherwise.

3.10.10 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.10.11 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.10.12 Prohibited Interests. Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, District, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. Consultant further

agrees to file, or shall cause its employees or subconsultants to file, a Statement of Economic Interest with the District's Filing Officer as required under state law in the performance of the Services. For breach or violation of this warranty, District shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of District, during the term of his or her service with District, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

3.10.13 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

3.10.14 Governing Law. This Agreement shall be governed by the laws of the State of California. Venue shall be in San Diego County.

3.10.15 Government Code Claim Compliance. In addition to any and all contract requirements pertaining to notices of and requests for compensation or payment for extra work, disputed work, claims and/or changed conditions, Consultant must comply with the claim procedures set forth in Government Code sections 900 et seq. prior to filing any lawsuit against District. Such Government Code claims and any subsequent lawsuit based upon the Government Code claims shall be limited to those matters that remain unresolved after all procedures pertaining to extra work, disputed work, claims, and/or changed conditions have been followed by Consultant. If no such Government Code claim is submitted, or if any prerequisite contractual requirements are not otherwise satisfied as specified herein, Consultant shall be barred from bringing and maintaining a valid lawsuit against District.

3.10.16 Attorneys' Fees. If either party commences an action against the other party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorneys' fees and all other costs of such action.

3.10.17 Authority to Enter Agreement. Consultant has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.10.18 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

3.10.19 Entire Agreement. This Agreement contains the entire Agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be modified by a writing signed by both parties.

**SIGNATURE PAGE  
TO  
BORREGO WATER DISTRICT  
PROFESSIONAL SERVICES AGREEMENT**

**BORREGO WATER DISTRICT**

**UNIVERSITY OF CALIFORNIA, IRVINE**

By: \_\_\_\_\_

By: \_\_\_\_\_  
(Authorized Representative of Consultant)

Printed Name: Geoff Poole

Printed Name: \_\_\_\_\_

Title: General Manager

Title: \_\_\_\_\_

Dated: \_\_\_\_\_

Dated: \_\_\_\_\_

**ATTACHMENT A  
SCOPE OF SERVICES & LIST OF PROJECTS**

December 3, 2019

Geoff Poole  
General Manager  
Borrego Water District

RE: UCI Proposal Number 214578 KR Doc ID 2312293

On behalf of The Regents of the University of California, we are pleased to present the following proposal for Monitoring, Analysis, and Modeling Particulate Matter Air Quality in Borrego Springs

**Principal Investigator:** Dr. Charles Zender

**Department:** Earth System Science

**Title:** Monitoring, Analysis, and Modeling Particulate Matter Air Quality in Borrego Springs

**Support Requested:** \$67,940

**Period of Support:** 01/01/2020 – 12/31/2020

Please be advised that UCI is an educational institution that performs fundamental and unclassified research. Any data or information developed or provided by UCI, including but not limited to publications and reports, shall be unclassified fundamental research exempt from dissemination controls or review requirements.

If additional information is required, please do not hesitate to contact me at (949) 824-4781 or via email at Erika.Blossom@uci.edu. In the event that this proposal results in an award, we reserve the right to negotiate terms and conditions consistent with University policy.

Sincerely,

*Erika Blossom*

Erika Blossom, CRA  
Senior Contract & Grant Officer

# Evaluating, Modeling, and Attributing Particulate Matter Air Quality in Borrego Springs

Dr. Charles S. Zender (Principal Investigator), [zender@uci.edu](mailto:zender@uci.edu), (949) 891-2429  
Department of Earth System Science, University of California, Irvine

This describes the project that Dr. Charlie Zender and team at UCI propose to improve understanding of, and inform mitigation efforts related to, particulate matter air quality (PMAQ) in and around Borrego Springs, CA. The period of performance for the proposed work is 12 months from 20200101–20201231. This period follows UCI's four year study of PMAQ sponsored the Borrego Valley Endowment Fund (BVEF), and this proposal references select findings from that study which are summarized in the attached document "Borrego Springs, CA Particulate Matter Air Quality Summary", dated Sept. 10, 2019.

In 2020 UCI will continue our ongoing activities which are organized in three areas: 1) PMAQ Monitoring, 2) Dust forecasting, 3) Dust source attribution. The dust monitoring relies on satellite-based retrievals of surface dust, five UCI Automatic Weather Stations that have measured PMAQ in 10-minute intervals since about 2016, as well as one portable monitoring device.

Satellite-retrieved estimates of PMAQ (Figure 1 of attached report) show a steady degradation of air quality in Borrego since the early 1980s. Seasonal variations of PMAQ are well-correlated with windspeed, as expected for windblown dust, but the detrended interannual increase in PMAQ is not explained by wind which show no interannual trend. (*Identifying this trend and its implications are important results of UCI's previous study*). Factors besides wind that could explain the observed PMAQ trend include man-made sources of dust due to increased soil disturbance and/or dryness, or other new sources of primary aerosol. The station measurements show no PMAQ exceedances relative to EPA standards since 2016 (see Figure 2 of the attached report). (*Collecting, collating, and quantifying these statistics relative to relevant regulations are important results of UCI's previous study*). Continued monitoring of PMAQ in Borrego will extend these timeseries and ease identification of any gross changes due to altered land use practices upwind of the stations, including fallowing, construction, and off-road activities.

However, the measurements from the UCI stations in Borrego are often significantly less than concurrent measurements from numerous stations surrounding the Salton Sea. Satellite-retrieved estimates of PMAQ (Figure 1 of attached report) show little difference between Borrego and the Salton regions, so the likeliest explanation is that the UCI stations are poorly calibrated for the specific type of aerosol, mineral dust, that dominates PMAQ in Borrego. (*Identifying this discrepancy and its implications are important results of UCI's previous study*). In 2019 the BWD purchased the portable device to allow UCI to intercalibrate the fixed UCI network (which measure PMAQ using an optical technique) with other stations that measure PMAQ using a mass-based technique.

The intercalibration is incomplete and finishing it is a prime goal for 2020. Currently we know that the portable device estimates 2–4× as much dust as each UCI fixed station. The high end of this range would imply that Borrego has experienced air quality exceedances within the past three years. Plans to intercalibrate with the station operated by Comite



Civico del Valle (CCV) at Naval Base are uncertain due to difficulty obtaining permission from IID which controls the access. In the meantime, UCI has obtained approval to intercalibrate with with a South Coast Air Quality Management District (SCAQMD) station in Riverside (Van Buren Elementary School). (*Completing the intercalibration may provide objective evidence that supports anecdotal evidence of intermittent air quality exceedances*).

UCI will continue to improve its regional dust model that is based on the Weather Research and Forecast (WRF) modeling system. UCI-WRF forecasts winds that closely agree with those measured by the Borrego AWS. However, the model dust forecasts in Borrego are unrealistically high and variable compared to our PMAQ measurements. The likeliest causes are some combination of unrealistically high surface roughness in the models, and poor representation of the elements (pebbles, rocks, bushes) that shield the soil from the wind and thus inhibit dust emission. Our model results are similar to those forecast by colleagues at UC Riverside using their own modeling system. UCI and UCR have begun to collaborate to understand and address the these model biases.

Our preferred plan to attribute dust sources relies on UCI-WRF simulations. Once UCI-WRF can simulate background dust-loading and at least some intense PMAQ events, we will turn-on and turn-off dust source regions in the model to quantify the source-receptor relationships between each potential source region and each AWS station. Our backup plan for attribution relies instead on back-trajectory analysis of air during intense dust events. Back-trajectory analysis is a less robust attribution method because it provides only information about the dominant transport pathways leading to a measurement station but no information about *where* along the pathway the dust might have originated. (*Better simulations of background and dusty conditions are necessary to attribute PMAQ episodes to specific source regions and thus to identify mitigation strategies*).

The UCI team will include the PI Zender), a research specialist (Dr. Wenshan Wang), and a technician (Mr. Sicco Rood). PI Zender will supervise the overall project, guide the researcher improving the model, interpret the intercalibration results, and liase with the BWD and UCR. The researcher will process and interpret measurement data, and test improvement to the UCI-WRF modeling system. The technician is based at the UCI Steele-Burnand Anza Borrego Desert Research Center and helps with all local field activities, performs the intercalibration, and supervises instrument placement and maintenance. Our team practices community-engaged research and we would be pleased to visit Borrego to present our latest results to interested citizens in early 2021, should our project be renewed.

University of California Irvine  
**PI Charlie Zender**  
 Borrego Water District (BWD)

Project: Monitoring, Analysis, and Modeling Particulate Matter Air Quality in Borrego Springs

	<u>Year 1</u> 1/1/2020 #####	<u>Total</u> <u>Requested</u> <u>from Agency</u>
<b><u>SALARIES &amp; WAGES</u></b>		
PI Charlie Zender @ 1 week of summer salary	\$ 5,887	\$ 5,887
Associate Specialist (Wenshan Wang) FTE @25%	\$ 15,075	\$ 15,075
Research Associate, Sicco Rood	\$ 2,560	\$ 2,560
Subtotal Salaries & Wages	<u>\$ 23,522</u>	<u>\$ 23,522</u>
<b><u>EMPLOYEE FRINGE BENEFITS</u></b>		
Zender @ 9.8%	\$ 577	\$ 577
Wang @ 46.3%	\$ 6,980	\$ 6,980
Rood @ 46.3%	\$ 1,185	\$ 1,185
Subtotal Employee Benefits	<u>\$ 8,742</u>	<u>\$ 8,742</u>
TOTAL SALARIES, WAGES & BENEFITS	<u>\$ 32,264</u>	<u>\$ 32,264</u>
<b><u>TRAVEL - Domestic</u></b>		
One overnight R/T to Borrego for PI and Specialist	\$ 500	\$ 500
Mileage	\$ 290	\$ 290
TOTAL TRAVEL EXPENSES	<u>\$ 790</u>	<u>\$ 790</u>
<b><u>SUPPLIES</u></b>		
Battery replacement	\$ 837	\$ 837
Remote Particulate Monitors (2) Includes pm10 and pm2.5	\$ 5,600	\$ 5,600
TOTAL SUPPLIES	<u>\$ 6,437</u>	<u>\$ 6,437</u>
<b><u>OTHER DIRECT COSTS</u></b>		
Supplies and materials for poster	\$ 200	\$ 200
Instrument Calibration costs (\$500x7)	\$ 3,500	\$ 3,500
Green planet cluster computing fees	\$ 360	\$ 360
TOTAL OTHER COSTS	<u>\$ 4,060</u>	<u>\$ 4,060</u>
<b><u>TOTAL DIRECT COSTS:</u></b>	<b>\$ 43,551</b>	<b>\$ 43,551</b>
<b><u>INDIRECT COSTS: 56%</u></b>	<b>\$ 24,389</b>	<b>\$ 24,389</b>
<b><u>TOTAL COSTS REQUESTED FROM AGENCY:</u></b>	<b>\$ 67,940</b>	<b>\$ 67,940</b>
Base	\$ 43,551	

## **University of California Irvine Budget Justification**

### **SALARIES AND WAGES**

Salary is requested for PI Zender who will dedicate one summer week to the project each year. Dr. Zender will be responsible for oversight and coordination of all aspects of the proposed effort, the direct supervision of the Associate Specialist and the Research Associate working on this project.

An Associate Specialist (Dr. Wenshan Wang) working 12 calendar months at 25% time will process and interpret measurement data, and test improvement to the UCI-WRF modeling system.

Research Associate, Sicco Rood, will dedicate 8 hours during 10 weeks. Rood will be responsible for all local field activities, instrument intercalibration, placement, and maintenance.

The salaries and wages were estimated using UCI's academic and staff salary scales. A 2% cost of living increase was applied to each period of this proposal as well as a 5% merit increase, where applicable.

### **EMPLOYEE BENEFITS**

The composite benefit rate is 9.8% for PI Zender. The composite benefit rate for both Associate Specialist and Research Associate is 46.3%. Fringe benefits were estimated using the composite rates agreed upon and calculated per the University of California, Irvine policy.

### **TRAVEL**

One overnight round trip to Borrego for PI and Specialist \$500, Mileage \$290.

### **SUPPLIES**

Battery Replacement \$837. ES-642 Particulate Monitors (2) including PM10 and PM2.5 inlets at \$5,600. The particulate monitors are needed to replace their aging counterparts already in the field during routine maintenance and recalibration in 2020 to prevent measurements gaps as long as 3 months during factory refurbishment.

### **OTHER DIRECT COSTS**

Battery Replacement \$837. Supplies and materials for poster \$200. Instrument Calibration costs \$500 x7 = \$3,500. Green planet cluster computing fees \$360.

### **INDIRECT COSTS**

Facilities and Administrative costs were estimated in accordance with UCI's approved indirect cost rate agreement. 56% indirect cost rate was used based on the nature of the work proposed. UCI's indirect cost rate agreement was approved by DHHS, the Federal Cognizant Audit Agency for UCI on 5/29/19. Indirect costs are assessed on Total Direct Costs minus equipment and graduate student fees/tuition.

BORREGO WATER DISTRICT  
BOARD OF DIRECTORS MEETING  
DECEMBER 17, 2019  
AGENDA ITEM II.G

December 11, 2019

TO: Board of Directors  
FROM: Geoffrey Poole, General Manager  
SUBJECT: LACFO Special Districts Advisory Committee Election – G Poole

**RECOMMENDED ACTION:**

Accept Plans/Specifications/Bid Documents and Authorization to Bid De Anza Drive, Yaqui Road and Fairway Lane Waterline Projects

**ITEM EXPLANATION:**

Attached are aforementioned documents for the second of two planned waterline construction phases funded by the BWD Bond placement of July 2017. Replacement of all waterlines, hydrants and service lines are planned for the area. This location was selected due to the age of the infrastructure and complexity created by numerous existing underground utilities.

**NEXT STEPS**

Accept documents and begin the bidding process

**FISCAL IMPACT**

N/A

**ATTACHMENT**

1. Election Information from LAFCO



**San Diego County**  
**Local Agency Formation Commission**  
 Regional Service Planning | Subdivision of the State of California

**BALLOT FORM**

November 4, 2019

TO: Independent Special Districts in San Diego County  
 FROM: Tamaron Lockett, Executive Assistant  
 SUBJECT: **Ballot Form | Election to Special Districts Advisory Committee**

On August 12, 2019, the San Diego Local Agency Formation Commission (LAFCO) solicited nominations pursuant to Government Code Section 56332(1) to fill eight open seats on the 16-member Special Districts Advisory Committee. A total of eleven nominations were received following a 60-day filing period. All terms on the Advisory Committee are four-years.

San Diego LAFCO is now issuing ballots to all 58 independent special districts in San Diego County and inviting each district to cast a ballot selecting up to eight eligible nominees. Write-in candidates are permitted, and spaces have been provided for that purpose. **Only cast one vote for each nominee on the ballot and vote certification form; a ballot that is cast for more than indicated number of positions the vote will be disregarded.** The ballot and vote certification form along with nominee resumes provided by the candidates are attached.

State Law specifies a district’s vote is to be cast by its presiding officer, or an alternate member designated by the board and a valid signature is required on the ballot. **A ballot received without a signature will be voided.** A minimum of **30** ballots must be received to certify that a legal election was conducted. A candidate for a special districts advisory committee member must receive at least a majority of the votes cast to be elected. The ballots will be kept on file in this office and will be made available upon request.

Ballots may be submitted by mail, courier, hand delivered, FAX or via email to [tamaron.lockett@sdcounty.ca.gov](mailto:tamaron.lockett@sdcounty.ca.gov). The deadline for receipts of the ballots by LAFCO is **Monday, January 6, 2020**, any ballots received after the deadline will be voided. All election materials are available on the website: [www.sdlafco.org](http://www.sdlafco.org).

Should you have any questions, please contact me at (858) 614-7755.

**Attachments:**

- a) Ballot and Vote Certification Form
- b) Nominees resumes

<b>Administration</b> Keene Simonds, Executive Officer County Operations Center 9335 Hazard Way, Suite 200 San Diego, California 92123 T 858.614.7755 F 858.614.7766 <a href="http://www.sdlafco.org">www.sdlafco.org</a>	Jim Desmond County of San Diego	Mary Caillas Salas City of Chula Vista	Mark Kersey City of San Diego	Jo MacKenzie, Chair Vista Irrigation	Andy Vanderlaan General Public
	Dianne Jacob, Vice Chair County of San Diego	Bill Wells City of El Cajon	Chris Cate, Alternate City of San Diego	Barry Willis Alpine Fire Protection	Harry Mathis, Alternate General Public
	Greg Cox, Alternate County of San Diego	Paul McNamara, Alternate City of Escondido		Erin Lump, Alternate Rincon del Diablo MWD	

**ATTACHMENT A  
SPECIAL DISTRICTS ADVISORY COMMITTEE MEMBER  
ELECTION BALLOT and VOTE CERTIFICATION**

**VOTE FOR ONLY EIGHT NOMINEES**

- Richard S. Williamson (Yuima Municipal Water District) [ ]
- Michael (Mike) Sims (Bonita-Sunnyside Fire Protection District) [ ]
- \* Jack Bebee (Fallbrook Public Utility District) [ ]
- James E. Gordon (Deer Springs Fire Protection District) [ ]
- \* Robert Thomas (Pomerado Cemetery District) [ ]
- Albert C. Lau (Santa Fe Irrigation District) [ ]
- \* Thomas (Tom) Kennedy (Rainbow Municipal Water District) [ ]
- Courtney G. Provo (Mission Resources Conservation District) [ ]
- \* Kimberly A. Thorner (Olivenhain Municipal Water District) [ ]
- Brian Boggeln (Alpine Fire Protection District) [ ]
- \* Mark Robak (Otay Water District) [ ]

**Write-Ins**

\_\_\_\_\_ [ ]

\_\_\_\_\_ [ ]

I hereby certify that I cast the votes of the \_\_\_\_\_  
(Name of District)

for the Special Districts Advisory Committee Election as:

- [ ] the presiding officer, or
- [ ] the duly-appointed alternate board member.

\_\_\_\_\_  
 (Signature)

\_\_\_\_\_  
 (Print name)

\_\_\_\_\_  
 (Title)

\_\_\_\_\_  
 (Date)

NOTE: The Nominating Committee believes all candidates are equally qualified and recommends each special district proceed with voting as they see fit. Additionally, a candidate's forum is tentatively scheduled for November 21, 2019 as part of the quarterly meeting of the San Diego Chapter of the California Association of Special Districts.

Return Ballot and Vote Certification Form to:  
 San Diego LAFCO  
 Taron Lockett  
 9335 Hazard Way, Suite 200  
 San Diego, CA 92123  
 (858) 614-7755 (office) • (858) 614-7766 (FAX)  
 Email: taron.lockett@sdcounty.ca.gov

\* Incumbent member



**San Diego County**  
**Local Agency Formation Commission**  
 Regional Service Planning | Subdivision of the State of California

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**MEMORANDUM**

**TO:** Independent Special Districts

**FROM:** Tamaron Luckett, Executive Assistant

**SUBJECT:** **Special Districts Advisory Committee Election Ballot and Vote Certification Form Amendment**

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On November 4, 2019, San Diego LAFCO issued ballots to all independent special districts for the election of nominated candidates to serve on the Special Districts Advisory Committee. The ballot identified eleven nominated candidates. LAFCO has subsequently been informed one of the nominated candidates – Richard S. Williamson – is no longer eligible to serve on the Special Districts Advisory Committee as a result of ending employment with the sponsoring special district. Please adjust your voting accordingly.

Should you have any questions please call me at (858) 614-7755.

Tamaron Luckett

Administration  
 Keene Simonds, Executive Officer  
 County Operations Center  
 9335 Hazard Way, Suite 200  
 San Diego, California 92123  
 T 858.614.7755 F 858.614.7766  
 www.sdlafco.org

Jan DeSiano,  
 County of San Diego

Dianne Jacob, Vice Chair  
 County of San Diego

Greg Cox, Alternate  
 County of San Diego

Mary Castillo Salas  
 City of Chula Vista

Bill Wulfe  
 City of El Cajon

Paul McNamara, Alternate  
 City of Escondido

Mark Kelsey  
 City of San Diego

Chris Cato, Alternate  
 City of San Diego

Jo MacKenzie, Chair  
 Vista Irrigation

Barry Willis,  
 Alpine Fire Protection

Eric Ljung, Alternate  
 Rincon del Diablo MWD

Andy Vanderlaan  
 General Public

Harry Mathis, Alternate  
 General Public

# IVA FINANACIALS REPORT





	C	AC	AD	AE	AG	AH	AM
1							
2	<b>BWD</b>	6/11/2019					
3	<b>CASH FLOW</b>	<b>ADOPTED</b>	<b>Actual</b>	<b>Projected</b>	<b>Actual</b>	<b>Actual YTD</b>	<b>PROJECTED</b>
4	<b>2019-2020</b>	<b>BUDGET</b>	<b>October</b>	<b>October</b>	<b>YTD</b>	<b>and Projected</b>	<b>FY</b>
5		<b>2019-2020</b>	<b>2019</b>	<b>2019</b>	<b>2019-2020</b>	<b>2019-2020</b>	<b>2019-2020</b>
6							
7	<b>REVENUE</b>	<b>&gt;3%</b>					
8	<b>WATER REVENUE</b>						
9	Residential Water Sales	866,507	89,518	103,076	362,072	830,250	468,178
10	Commercial Water Sales	445,791	53,968	52,629	195,660	459,255	263,595
11	Irrigation Water Sales	203,358	21,480	18,971	93,284	207,224	113,940
12	GWM Surcharge	173,911	18,441	19,419	72,486	171,381	98,895
13	Water Sales Power Portion	465,462	50,616	39,350	199,143	472,264	273,121
14	<b>TOTAL WATER COMMODITY REVENUE:</b>	<b>2,155,031</b>	<b>234,023</b>	<b>233,445</b>	<b>922,644</b>	<b>2,140,373</b>	<b>1,217,729</b>
15		<b>&gt;5%</b>					
16	Readiness Water Charge	1,210,230	101,037	101,280	398,383	1,208,623	810,240
17	Meter Install/Connect/Reconnect Fees	1,725	-	340	340	1,385	1,045
18	Backflow Testing/installation	5,100	50	-	150	5,250	5,100
19	Bulk Water Sales	2,440	674	200	1,991	3,631	1,640
20	Penalty & Interest Water Collection	48,000	4,969	4,000	25,189	57,189	32,000
21	<b>TOTAL WATER REVENUE:</b>	<b>3,422,526</b>	<b>340,753</b>	<b>339,265</b>	<b>1,348,697</b>	<b>3,416,450</b>	<b>2,067,753</b>
22							
23	<b>PROPERTY ASSESSMENTS/AVAILABILITY CHARGES</b>						
24	641500 1% Property Assessments	62,300	844	3,544	2,210	62,300	60,090
25	641502 Property Assess wtr/swr/lld	106,212	-	2,058	376	106,212	105,836
26	641501 Water avail Standby	82,330	1,200	8,541	1,924	82,330	80,406
27	641504 ID 3 Water Standby (La Casa)	33,647	344	1,051	449	33,647	33,198
28	641503 Pest standby	17,865	154	662	254	17,865	17,611
29	<b>TOTAL PROPERTY ASSES/AVAIL CHARGES:</b>	<b>302,353</b>	<b>2,541</b>	<b>15,856</b>	<b>5,212</b>	<b>302,354</b>	<b>297,142</b>
30							
31	<b>SEWER SERVICE CHARGES</b>	<b>&gt;4%</b>					
32	Town Center Sewer Holder fees	246,640	20,275	20,275	80,320	242,519	162,198
33	Town Center Sewer User Fees	97,194	7,962	7,962	31,548	95,244	63,696
34	Sewer user Fees	288,288	25,499	24,024	98,717	290,909	192,192
35	Penalty Interest-Sewer	-	-	-	-	-	-
36	Sewer Capacity Fees	-	-	-	-	-	-
37	<b>TOTAL SEWER SERVICE CHARGES:</b>	<b>632,122</b>	<b>53,736</b>	<b>52,261</b>	<b>210,585</b>	<b>628,672</b>	<b>418,086</b>
38							
39	<b>OTHER INCOME</b>						
43	Interest Income	96,000	7,709	8,000	24,288	71,288	47,000
44	<b>TOTAL OTHER INCOME:</b>	<b>96,000</b>	<b>7,709</b>	<b>8,000</b>	<b>24,288</b>	<b>71,288</b>	<b>47,000</b>
45							
46	<b>TOTAL INCOME:</b>	<b>4,453,000</b>	<b>404,739</b>	<b>415,382</b>	<b>1,588,782</b>	<b>4,418,764</b>	<b>2,829,982</b>
47							
48	<b>CASH BASIS ADJUSTMENTS</b>						
49	Decrease (Increase) in Accounts Receivable		28,548		(8,976)	(8,976)	
50	Deposits-OW Solar Farm Deposit		28,800		28,800	28,800	
51	Other Cash Basis Adjustments				(43,788)	(43,788)	
52	<b>TOTAL CASH BASIS ADJUSTMENTS:</b>		<b>57,348</b>		<b>(23,964)</b>	<b>(23,964)</b>	
53							
54	<b>TOTAL OPERATING INCOME RECEIVED:</b>	<b>4,453,000</b>	<b>462,087</b>	<b>415,382</b>	<b>1,564,819</b>	<b>4,394,800</b>	<b>2,829,982</b>

	C	AC	AD	AE	AG	AH	AM
2	<b>BWD</b>	6/11/2019					
3	<b>CASH FLOW</b>	ADOPTED	Actual	Projected	Actual	Actual YTD	PROJECTED
4	<b>2019-2020</b>	BUDGET	October	October	YTD	and Projected	FY
5		2019-2020	2019	2019	2019-2020	2019-2020	2019-2020
56	<b>EXPENSES</b>						
57							
58	<b>MAINTENANCE EXPENSE</b>						
59	R & M Buildings & Equipment	180,000	28,742	15,000	66,028	180,000	113,972
60	R & M - WTF	180,000	8,155	17,364	21,927	180,000	158,073
61	Telemetry	10,000	-	-	1,377	10,000	8,623
62	Trash Removal	5,220	418	420	1,676	5,220	3,544
63	Vehicle Expense	18,000	3,031	1,600	6,820	18,000	11,180
64	Fuel & Oil	30,000	2,734	2,000	11,891	30,000	18,109
65	<b>TOTAL MAINTENANCE EXPENSE:</b>	<b>423,220</b>	<b>43,080</b>	<b>36,384</b>	<b>109,718</b>	<b>423,219</b>	<b>313,501</b>
66							
67	<b>PROFESSIONAL SERVICES EXPENSE</b>						
68	Tax Accounting (Tausig)	3,000	-	-	1,008	3,000	1,993
69	Administrative Services (ADP)	3,000	251	235	939	3,000	2,061
70	Audit Fees (Leaf & Cole)	17,000	4,650	1,500	17,000	17,000	-
71	Computer billing (Accela/Parker)/Cyber Security	31,000	-	1,000	9,021	31,000	21,979
72	Financial/Technical Consulting (Raffelis rate study \$52,000)	80,000	5,051	9,000	10,453	80,000	68,547
73	Engineering (Dynamic/Dudek)	24,000	5,899	1,600	16,699	24,000	7,301
74	District Legal Services (Downey Brand/BBK)	60,000	2,076	5,000	8,003	60,000	51,997
75	Grant Acquisitions (TRAC)	48,000	2,558	8,000	9,397	48,000	38,603
76	Testing/lab work (Babcock Lab/Water Quality Monitoring)	24,000	1,298	2,188	5,614	24,000	18,386
77	Regulatory Permit Fees (SWRB/DEH/Dig alerts/APCD)	28,000	892	9,158	3,420	28,000	24,580
78	<b>TOTAL PROFESSIONAL SERVICES EXPENSE:</b>	<b>318,000</b>	<b>22,674</b>	<b>37,681</b>	<b>81,552</b>	<b>318,000</b>	<b>236,448</b>
79							
80	<b>INSURANCE EXPENSE</b>						
81	ACWA/JPIA Program Insurance	60,000	25,768	25,768	62,248	62,248	-
82	ACWA/JPIA Workers Comp	18,000	-	-	4,301	18,000	13,699
83	<b>TOTAL INSURANCE EXPENSE:</b>	<b>78,000</b>	<b>25,768</b>	<b>25,768</b>	<b>66,549</b>	<b>80,248</b>	<b>13,699</b>
84							
85	<b>DEBT EXPENSE</b>						
86	Compass Bank Note 2018A	248,184	-	-	216,108	248,184	32,076
87	Compass Bank Note 2018B	140,755	-	-	127,423	140,755	13,332
88	Pacific Western Bank 2018 iPA	489,406	-	-	408,801	499,406	92,604
89	<b>TOTAL DEBT EXPENSE:</b>	<b>888,345</b>	<b>-</b>	<b>-</b>	<b>750,332</b>	<b>888,345</b>	<b>138,013</b>
90							
91	<b>PERSONNEL EXPENSE</b>						
92	Board Meeting Expense (board stipend/board secretary)	28,500	1,558	3,272	4,685	28,500	23,815
93	Salaries & Wages (gross)	930,000	86,004	79,220	312,032	930,000	617,968
94	Salaries & Wages offset account (board stipends/staff project salaries)	(80,000)	(9,540)	(6,700)	(46,937)	(80,000)	(33,083)
95	Consulting services/Contract Labor	10,000	1,125	800	4,625	10,000	5,375
96	Taxes on Payroll	23,700	1,461	951	4,871	23,700	18,829
97	Medical Insurance Benefits	212,700	16,933	17,363	83,135	212,700	129,565
98	Calpers Retirement Benefits	200,000	16,882	16,600	65,545	200,000	134,455
99	Conference/Conventions/Training/Seminars	18,000	1,186	2,000	3,716	18,000	14,284
100	<b>TOTAL PERSONNEL EXPENSE:</b>	<b>1,342,899</b>	<b>115,609</b>	<b>113,506</b>	<b>431,673</b>	<b>1,342,901</b>	<b>811,228</b>
101							
102	<b>OFFICE EXPENSE</b>						
103	Office Supplies	24,000	790	2,000	8,103	24,000	15,897
104	Office Equipment/ Rental/Maintenance Agreements	35,000	1,849	3,382	8,967	35,000	28,033
105	Postage & Freight	15,000	567	2,000	4,844	15,000	10,166
106	Taxes on Property	2,383	2,431	2,383	2,431	2,431	-
107	Telephone/Answering Service/Cell	20,000	1,046	1,650	5,959	20,000	14,041
108	Dues & Subscriptions (ACWA/CSDA)	23,000	81	76	1,452	23,000	21,548
109	Printing, Publications & Notices	2,500	-	100	56	2,500	2,444
110	Uniforms	6,500	570	460	2,848	6,500	3,652
111	OSHA Requirements/Emergency preparedness	4,000	264	189	2,585	4,000	1,415
112	<b>TOTAL OFFICE EXPENSE:</b>	<b>132,383</b>	<b>7,597</b>	<b>12,239</b>	<b>37,245</b>	<b>132,431</b>	<b>95,186</b>
113							
114	<b>UTILITIES EXPENSE</b>						
115	Pumping-Electricity	306,000	28,313	29,406	114,579	306,000	191,422
116	Office/Shop Utilities	1,500	373	125	3,436	4,436	1,000
118	<b>TOTAL UTILITIES EXPENSE:</b>	<b>307,500</b>	<b>28,686</b>	<b>29,531</b>	<b>118,015</b>	<b>310,436</b>	<b>192,422</b>
119							
120	<b>GROUNDWATER MANAGEMENT EXPENSE</b>						
121	Net SGMA GSP & Stipulation Costs	130,000	61,230	11,000	124,038	144,038	20,000
122	Community Support				10,000	10,000	
123	<b>TOTAL GWM EXPENSE:</b>	<b>130,000</b>	<b>61,230</b>	<b>11,000</b>	<b>134,038</b>	<b>154,038</b>	<b>20,000</b>
124							
125	<b>TOTAL EXPENSES:</b>	<b>3,620,347</b>	<b>304,645</b>	<b>266,109</b>	<b>1,729,122</b>	<b>3,649,617</b>	<b>1,920,495</b>
126	<b>CASH BASIS ADJUSTMENTS</b>						
127	Decrease (Increase) in Accounts Payable		26,176		(182,735)	(182,735)	
128	Increase (Decrease) in Inventory		111		453	453	
129							
130	<b>TOTAL CASH BASIS ADJUSTMENTS:</b>		<b>26,287</b>		<b>(182,282)</b>	<b>(182,282)</b>	
131							
132	<b>TOTAL OPERATING EXPENSES PAID:</b>	<b>3,620,347</b>	<b>330,933</b>	<b>266,109</b>	<b>1,546,840</b>	<b>3,467,335</b>	<b>1,920,495</b>
133							
134	<b>NET OPERATING INCOME:</b>	<b>832,654</b>	<b>131,154</b>	<b>149,273</b>	<b>17,978</b>	<b>927,484</b>	<b>346,909,466</b>

	C	AC	AD	AE	AG	AH	AM
2	<b>BWD</b>	6/11/2019					
3	<b>CASH FLOW</b>	<b>ADOPTED</b>	<b>Actual</b>	<b>Projected</b>	<b>Actual</b>	<b>Actual YTD</b>	<b>PROJECTED</b>
4	<b>2019-2020</b>	<b>BUDGET</b>	<b>October</b>	<b>October</b>	<b>YTD</b>	<b>and Projected</b>	<b>FY</b>
5		<b>2019-2020</b>	<b>2019</b>	<b>2019</b>	<b>2019-2020</b>	<b>2019-2020</b>	<b>2019-2020</b>
136	<b>CIP PROJECTS</b>						
137							
138	<b>WATER-Operating Cash Funded</b>						
140							
141	Emergency System Repairs	60,000	-	5,000	-	60,000	60,000
142	Emergency Generator Mobile trailer	25,000				25,000	25,000
143	Reservoir cleaning	15,000		15,000		15,000	15,000
146							
147	<b>TOTAL WATER CASH CIP EXPENSES:</b>	<b>100,000</b>	<b>-</b>	<b>20,000</b>	<b>-</b>	<b>100,000</b>	<b>100,000</b>
154							
155	<b>TOTAL CASH CIP EXPENSES:</b>	<b>100,000</b>	<b>-</b>	<b>20,000</b>	<b>-</b>	<b>100,000</b>	<b>100,000</b>
156							
157	<b>CASH RECAP</b>						
158	Cash beginning of period	5,312,216	5,040,921	4,850,328	5,154,097	5,154,097	5,172,075
159	Operating Income	832,654	131,154	149,273	17,978	927,464	909,486
160	Total Non O&M Cash Funded Expenses	(100,000)	-	(20,000)	-	(100,000)	(100,000)
161	<b>CASH RESERVES AT END OF PERIOD</b>	<b>6,044,870</b>	<b>5,172,075</b>	<b>4,979,600</b>	<b>5,172,075</b>	<b>5,981,561</b>	<b>5,981,561</b>
162	FY Reserves Target	5,610,000	5,610,000	5,610,000	5,610,000	5,610,000	5,610,000
163	Reserves Surplus/(Shortfall)	434,870	(437,926)	(630,400)	(437,926)	371,561	371,561
164							
165	<b>DEBT &amp; GRANT ACCOUNTING</b>						
166							
167	<b>WATER-Bond Funded CIP Expenses</b>						
168							
169	Phase 1 Pipeline Project - 17120	415,000	7,276		532,669	542,669	10,000
170	Production Well #1 ID4-Well #9-17110	1,200,000	1,070	250,000	1,122,611	1,200,000	77,389
171	Production Well #2-17130	550,000	5,000	5,000	40,297	550,000	509,703
172	Replace 5 well discharge manifolds and electric panel upgrades-17140	150,000	14,017	75,000	445,555	445,555	-
173	Replace 30 fire hydrants	168,750	-	-	23,204	168,750	145,546
174	Management Consulting water (Bond CIP)	30,000	4,360	2,500	85,500	93,500	8,000
176	<b>TOTAL WATER BOND FUNDED CIP:</b>	<b>2,513,750</b>	<b>31,723</b>	<b>332,500</b>	<b>2,249,834</b>	<b>3,000,472</b>	<b>750,838</b>
177							
178	<b>SEWER-Bond Funded CIP Expenses</b>						
179							
180	Clean & Video Sewer Lines-Club Circle, Foursome and Backnine	350,000	92,804	350,000	92,804	350,000	257,196
181	Sewer Forcemain Replacement & American Legion Lateral	150,000	-	-	-	150,000	150,000
182	Management Consulting Sewer (Bond CIP)	20,000		1,000		20,000	20,000
183	<b>TOTAL SEWER BOND FUNDED CIP:</b>	<b>520,000</b>	<b>92,804</b>	<b>351,000</b>	<b>92,804</b>	<b>520,000</b>	<b>427,196</b>
188							
189	<b>TOTAL DEBT FUNDED CIP EXPENSES:</b>	<b>3,033,750</b>	<b>124,527</b>	<b>683,500</b>	<b>2,342,638</b>	<b>3,520,472</b>	<b>1,177,834</b>
190							
191	<b>UNEXPENDED DEBT PROCEEDS:</b>	<b>1,718,109</b>	<b>3,215,546</b>	<b>2,377,105</b>	<b>5,433,657</b>	<b>5,433,657</b>	<b>3,091,019</b>
192	<b>TOTAL EXPENSES AND UNEXPENDED DEBT PROCEEDS</b>	<b>5,338,458</b>	<b>3,091,019</b>	<b>1,693,605</b>	<b>3,091,019</b>	<b>1,913,185</b>	<b>1,913,185</b>
193							
194	<b>GRANT PROCEEDS</b>						
195	Grant Sewer Proceeds	214,000	-	-	-	214,000	214,000
196	Prop 1 CIP Grant (SDAC reimbursement 2020)	278,000			222,065	234,212	12,147
197	<b>TOTAL GRANT PROCEEDS:</b>	<b>692,000</b>	<b>-</b>	<b>-</b>	<b>222,065</b>	<b>448,212</b>	<b>226,147</b>
201							
202	<b>GRANT EXPENSES</b>						
203	Plant-Grit removal at the headworks	214,000	-	-	-	214,000	214,000
204	Clarifier Rehab	200,000				200,000	200,000
205	<b>TOTAL GRANT FUNDED EXPENSES:</b>	<b>414,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>414,000</b>	<b>414,000</b>
206							
207	<b>TOTAL INCOME, GRANT &amp; DEBT PROCEEDS BALANCE</b>	<b>5,145,000</b>	<b>3,222,173</b>	<b>1,842,878</b>	<b>3,331,062</b>	<b>2,874,861</b>	<b>2,634,818</b>



## TREASURER'S REPORT October, 2019

	Bank Balance	Carrying Value	Fair Value	% of Portfolio			Maturity Source	Valuation
				Current Actual	Rate of Interest			
<b>Cash and Cash Equivalents:</b>								
<b>Demand Accounts at CVB/LAIF</b>								
General Account/Petty Cash	\$ 3,130,850	\$ 3,043,783	\$ 3,043,783	36.84%	0.00%	N/A	CVB	
Payroll Account	\$ 103,218	\$ 103,218	\$ 103,218	1.25%	0.00%	N/A	CVB	
MMA (Bond Funds)	\$ 2,508,713	\$ 2,508,713	\$ 2,508,713	30.36%	2.22%	N/A	CVB	
CIP Bond Funds Checking	\$ 673,593	\$ 582,305	\$ 582,305	7.05%	0.00%	N/A	CVB	
LAIF	\$ 2,025,074	\$ 2,025,074	\$ 2,025,074	24.51%	2.45%	N/A	LAIF	
<b>Total Cash and Cash Equivalents</b>	<b>\$ 8,441,448</b>	<b>\$ 8,263,093</b>	<b>\$ 8,263,093</b>	<b>100.00%</b>				
<b>Facilities District No. 2017-1A-B</b>								
Special Tax Bond- Rams Hill -US BANK	\$ 44,646	\$ 44,646	\$ 44,646					
<b>Total Cash, Cash Equivalents &amp; Investment</b>	<b>\$ 8,486,094</b>	<b>\$ 8,307,739</b>	<b>\$ 8,307,739</b>					

Cash and investments conform to the District's Investment Policy statement filed with the Board of Directors on June 24, 2019. Cash, investments and future cash flows are sufficient to meet the needs of the District for the next six months. Sources of valuations are Umpqua Bank, LAIF and US Trust Bank.

Kim Pitman, Administration Manager



To: BWD Board of Directors  
 From: Kim Pitman  
 Subject: Consideration of the Disbursements and Claims Paid  
 Month Ending October, 2019

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**Vendor disbursements paid during this period:** **\$ 325,291.56**

**Significant items:**

San Diego Gas & Electric	\$	28,686.33
Medical Health Benefits	\$	16,753.15
CalPERS (includes unfunded liability)	\$	12,137.35
ACWAJPIA-Auto & General Liability	\$	25,768.23
Burrtec Waste Group-Sludge removal WTF	\$	6,545.76

**Capital Projects/Fixed Asset Outlays:**

Pacific Pipeline Supply-Well upgrades-BOND	\$	13,109.96
Pacific Pipeline Supply-Well #10 water filling station (Ocotillo Solar Prc	\$	6,832.43
McCalls Meters-New Meters Pipeline #1 project-BOND	\$	11,636.47
Downstream-Club Circle Video/Clean-BOND	\$	92,804.00
Big J Fencing-Deposit (1/2) for Fencing around Well #5/Well #11	\$	8,800.00

**Total Professional Services for this Period:**

Best Best & Krieger	Legal-general	\$	2,075.50
	GWM	\$	14,074.06
	Stipulated	\$	31,073.46
	Bond	\$	-
Leaf & Cole, LLP	Auditor	\$	4,650.00
Raftelis-Cost of Service Study		\$	5,051.25
One Eleven Water Services	Misc. Consulting	\$	3,925.00
	Bond	\$	4,000.00
LeSar Development Consultants	Prop 1 grant	\$	918.75
Dudek WTF Study	Bond	\$	360.00
	Sewer	\$	5,898.75

**Payroll for this Period:**

Gross Payroll	\$	127,316.00
Employer Payroll Taxes and ADP Fee	\$	2,639.00
<b>Total</b>	<b>\$</b>	<b><u>129,955.00</u></b>

# BOARD REPORT

OCTOBER 2019



33494	1109	ABILITY ANSWERING/PAGING SER	10/21/2019	272.49
33495	3035	ACWA / JPIA Finance Dept.	10/21/2019	25,768.23
33496	1266	AFLAC	10/21/2019	1,423.60
33518	9524	AIR POLLUTION CONTROL DISTRICT, SAN DIEGO COUNTY	11/05/2019	732.00
33497	9338	AMERICAN BACKFLOW SPECIALTIES	10/21/2019	181.37
33519	1001	AMERICAN LINEN INC.	11/05/2019	569.92
33544	61	AT&T MOBILITY	11/18/2019	273.98
33520	9529	AT&T-CALNET 3	11/05/2019	340.23
33530	9255	BABCOCK LABORATORIES	11/12/2019	1,258.00
33508	10884	BEST BEST & KRIEGER ATTORNEYS AT LAW	10/28/2019	47,223.02
33531	9679	BIG J FENCING, INC.	11/12/2019	8,800.00
33532	10900	BORREGO AUTO PARTS & SUPPLY CO	11/12/2019	947.29
33533	1003	BORREGO SPRINGS BOTTLED WATER	11/12/2019	66.46
33498	1037	BORREGO SUN	10/21/2019	140.00
33534	1037	BORREGO SUN	11/12/2019	70.00
1070	11066	BRAX COMPANY, INC.	11/05/2019	166.04
33545	11075	BURRTEC WASTE GROUP, INC.	11/18/2019	6,545.76
33509	1196	CASH	10/28/2019	500.00
33499	9417	CORRPRO COMPANIES	10/21/2019	875.00
33521	11074	C-TAP INC, NORTH COUNTY REBUILDERS	11/05/2019	257.52
33504	1222	DEBBIE MORETTI	10/21/2019	122.00
33535	96	DISH	11/12/2019	80.73
1072	9474	DOWNSTREAM SERVICES, INC.	11/12/2019	92,804.00
1073	9640	DUDEK	11/18/2019	360.00
33546	9640	DUDEK	11/18/2019	5,898.75
33524	1136	HOME DEPOT CREDIT SERVICES	11/05/2019	536.93
33512	10863	HUGO RODARTE	10/28/2019	123.86
33501	9177	IN-SITU, INC.	10/21/2019	67.89
33523	1022	JAMES HORMUTH DE ANZA TRUE VALUE	11/05/2019	79.84
33536	65	JC LABS & MONITORING SERVICE	11/12/2019	750.00
1068	11041	JEFFREY M. SMITH	10/21/2019	1,000.00
33513	10852	JEROME C. ROLWING	10/28/2019	250.00
1069	10852	JEROME C. ROLWING	10/29/2019	3,750.00
1075	10852	JEROME C. ROLWING	11/18/2019	250.00
33552	10852	JEROME C. ROLWING	11/18/2019	3,675.00
33502	9385	JOHNSON CONTROLS SECURITY SOLUTIONS	10/21/2019	264.92
33500	72	JUAN GAYTAN	10/21/2019	1,475.00
33503	10873	KESSLINGS KITCHEN	10/21/2019	551.69
33510	11063	LEAF & COLE LLP	10/28/2019	4,650.00
33547	10889	LESAR DEVELOPMENT CONSULTANTS	11/18/2019	918.75
33528	10899	LOUIS ALEXANDER THE RICK ALEXANDER COMPANY	11/05/2019	1,638.75
1071	1066	MANUEL RODRIGUEZ DE ANZA READY MI	11/05/2019	1,450.90
33522	1066	MANUEL RODRIGUEZ DE ANZA READY MI	11/05/2019	1,427.08
33529	UB*00040	MARY WATKINS	11/05/2019	2.54
1066	1216	McCALLS METERS, INC	10/21/2019	11,636.47
33493	1000	MEDICAL ACWA-JPIA	10/21/2019	16,753.15
33515	93	MRC SMART TECHNOLOGY SOLUTIONS	10/29/2019	697.42
33516	10891	NEOFUNDS	10/29/2019	557.64
33537	1489	NORTH COUNTY LAWNMOWER	11/12/2019	798.96
1067	1208	PACIFIC PIPELINE SUPPLY INC	10/21/2019	577.94
33505	1208	PACIFIC PIPELINE SUPPLY INC	10/21/2019	4,176.24
1074	1208	PACIFIC PIPELINE SUPPLY INC	11/18/2019	12,532.02
33549	1208	PACIFIC PIPELINE SUPPLY INC	11/18/2019	6,832.43
33525	11028	POOL & ELECTRICAL PRODUCTS	11/05/2019	199.93
33550	9546	RAFTELIS FINANCIAL CONSULTANTS, INC.	11/18/2019	5,051.25
33527	9633	RAMONA DISPOSAL SERVICE	11/05/2019	3,604.51
33551	9633	RAMONA DISPOSAL SERVICE	11/18/2019	3,920.48
33506	3007	SAN DIEGO COUNTY TREASURER	10/21/2019	2,430.76
33517	1065	SAN DIEGO GAS & ELECTRIC	10/29/2019	28,686.33
33507	11067	SC FUELS	10/21/2019	1,892.58
33514	11067	SC FUELS	10/28/2019	772.99
33538	1059	STAPLES CREDIT PLAN	11/12/2019	492.69
33511	9046	STATE WATER RESOURCE CONTROL BOARD OPERATOR CERTIFICATION	10/28/2019	160.00
33539	3000	U.S.BANK CORPORATE PAYMENT SYS	11/12/2019	3,442.97
33540	1023	UNDERGROUND SERVICE ALERT	11/12/2019	8.25
33541	9439	USABLUEBOOK	11/12/2019	311.44
33542	1100	VERIZON WIRELESS	11/12/2019	159.38
33526	1623	WENDY QUINN	11/05/2019	387.50
33553	92	XEROX FINANCIAL SERVICES	11/18/2019	428.07
33543	11050	ZITO MEDIA	11/12/2019	240.62
Report Total (70 checks):				325,291.56



## ASSETS

	<b>BALANCE SHEET</b> <b>October 31, 2019</b> <i>(unaudited)</i>	<b>BALANCE SHEET</b> <b>September 30, 2019</b> <i>(unaudited)</i>	<b>MONTHLY</b> <b>CHANGE</b> <i>(unaudited)</i>
<b>CURRENT ASSETS</b>			
Cash and cash equivalents	\$ 5,172,074.92	\$ 5,040,921.35	\$ 131,153.57
Accounts receivable from water sales and sewer charges	\$ 632,550.16	\$ 611,084.98	\$ 21,465.18
Inventory	\$ 112,754.90	\$ 112,644.13	\$ 110.77
Prepaid expenses	\$ 39,386.47	\$ 39,386.47	\$ -
<b>TOTAL CURRENT ASSETS</b>	<b>\$ 5,956,766.45</b>	<b>\$ 5,804,036.93</b>	<b>\$ 152,729.52</b>
<b>RESTRICTED ASSETS</b>			
<b>Debt Service:</b>			
Deferred amount of COP Refunding	\$ 92,538.01	\$ 92,538.01	\$ -
Deferred Outflow of Resources-CalPERS	\$ 400,720.00	\$ 400,720.00	\$ -
<b>Total Debt service</b>	<b>\$ 493,258.01</b>	<b>\$ 493,258.01</b>	<b>\$ -</b>
<b>Trust/Bond funds:</b>			
Investments with fiscal agent -CFD 2017-1	\$ 44,645.79	\$ 44,583.25	\$ 62.54
2018 Certificates of Participation to fund CIP Projects	\$ 3,091,018.50	\$ 3,180,768.53	\$ (89,750.03)
<b>Total Trust/Bond funds</b>	<b>\$ 3,135,664.29</b>	<b>\$ 3,225,351.78</b>	<b>\$ (89,687.49)</b>
<b>TOTAL RESTRICTED ASSETS</b>	<b>\$ 3,628,922.30</b>	<b>\$ 3,718,609.79</b>	
<b>UTILITY PLANT IN SERVICE</b>			
Land	\$ 2,251,663.65	\$ 2,251,663.65	\$ -
Flood Control Facilities	\$ 4,287,340.00	\$ 4,287,340.00	\$ -
Capital Improvement Projects	\$ 376,127.14	\$ 373,569.64	\$ 2,557.50
Bond funded CIP Expenses	\$ 2,342,638.14	\$ 2,218,110.77	\$ 124,527.37
Sewer Facilities	\$ 6,175,596.99	\$ 6,175,596.99	\$ -
Water facilities	\$ 11,621,513.88	\$ 11,621,513.88	\$ -
General facilities	\$ 1,006,881.07	\$ 1,006,881.07	\$ -
Equipment and furniture	\$ 597,312.57	\$ 597,312.57	\$ -
Vehicles	\$ 715,321.23	\$ 715,321.23	\$ -
Accumulated depreciation	\$ (13,846,729.58)	\$ (13,846,729.58)	\$ -
<b>NET UTILITY PLANT IN SERVICE</b>	<b>\$ 15,527,665.09</b>	<b>\$ 15,400,580.22</b>	<b>\$ 127,084.87</b>
<b>OTHER ASSETS</b>			
Water rights -ID4	\$ 185,000.00	\$ 185,000.00	\$ -
<b>TOTAL OTHER ASSETS</b>	<b>\$ 185,000.00</b>	<b>\$ 185,000.00</b>	
<b>TOTAL ASSETS</b>	<b>\$ 25,298,353.84</b>	<b>\$ 25,108,226.94</b>	<b>\$ 190,126.90</b>



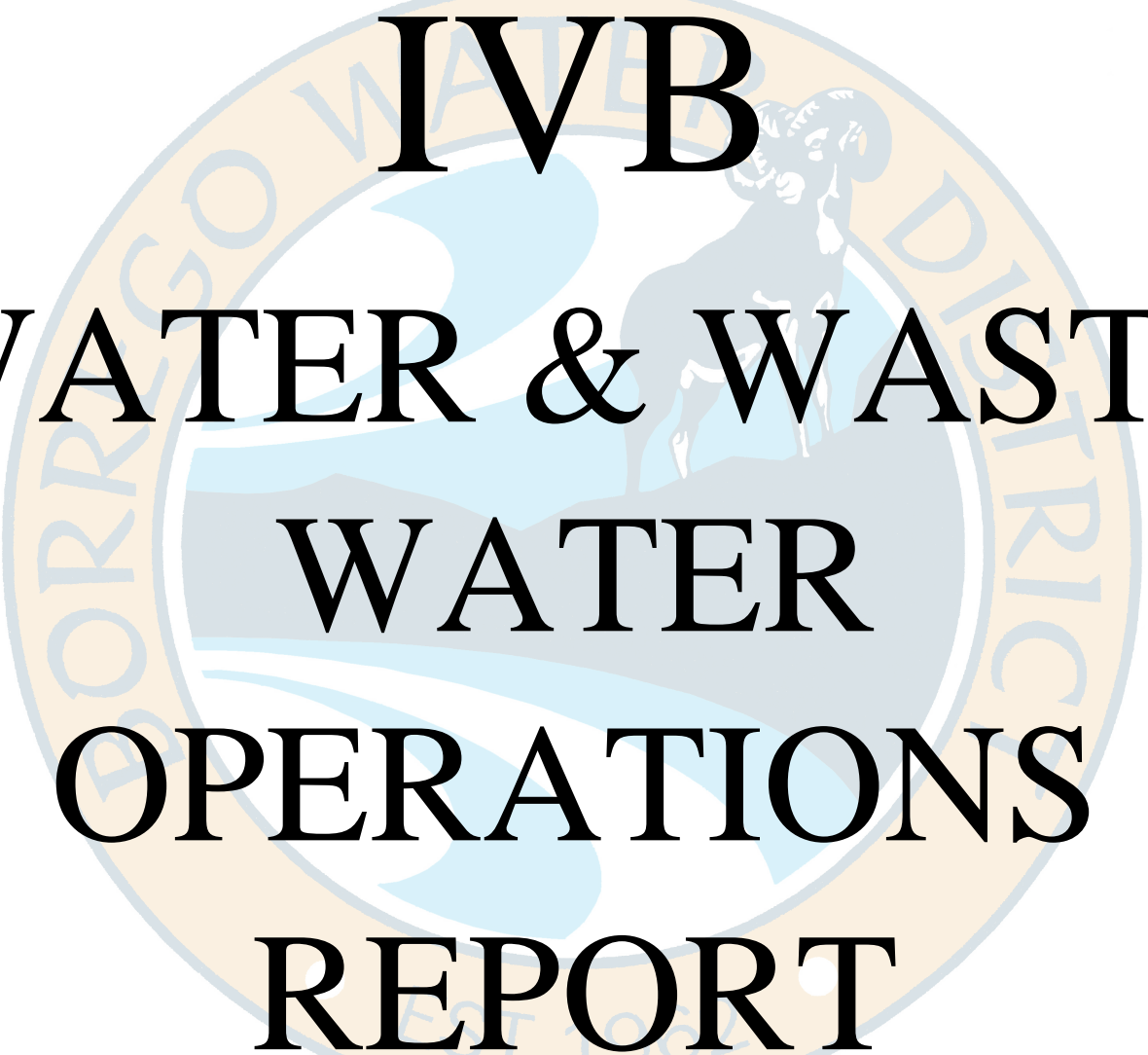
Balance sheet continued

	<b>BALANCE SHEET</b> October 31, 2019 (unaudited)	<b>BALANCE SHEET</b> September 30, 2019 (unaudited)	<b>MONTHLY</b> <b>CHANGE</b> (unaudited)
<b>LIABILITIES</b>			
<b>CURRENT LIABILITIES PAYABLE FROM CURRENT ASSETS</b>			
Accounts Payable	\$ 168,310.97	\$ 113,862.43	\$ 54,448.54
Accrued expenses	\$ 86,052.79	\$ 86,052.79	\$ -
Deposits	\$ 13,700.00	\$ 13,700.00	\$ -
<b>TOTAL CURRENT LIABILITIES PAYABLE FROM CURRENT ASSETS</b>	<b>\$ 268,063.76</b>	<b>\$ 213,615.22</b>	<b>\$ 54,448.54</b>
<b>CURRENT LIABILITIES PAYABLE FOM RESTRICTED ASSETS</b>			
Debt Service:			
Accounts Payable to CFD 2017-1	\$ 44,645.79	\$ 44,583.25	\$ 62.54
<b>TOTAL CURRENT LIABILITIES PAYABLE FROM RESTRICTED ASSETS</b>	<b>\$ 44,645.79</b>	<b>\$ 44,583.25</b>	<b>\$ 62.54</b>
<b>LONG TERM LIABILITIES</b>			
2018A & 2018B Refinance ID4/Viking Ranch	\$ 1,982,000.00	\$ 1,982,000.00	\$ -
2018 Certificates of Participation to fund CIP Projects	\$ 4,930,000.00	\$ 4,930,000.00	\$ -
BBVA Compass Bank Loan	\$ 727,590.17	\$ 727,590.17	\$ -
Net Pension Liability-CalPERS	\$ 911,898.00	\$ 911,898.00	\$ -
Deferred Inflow of Resources-CalPERS	\$ 104,328.00	\$ 104,328.00	\$ -
<b>TOTAL LONG TERM LIABILITIES</b>	<b>\$ 8,655,816.17</b>	<b>\$ 8,655,816.17</b>	<b>\$ -</b>
<b>TOTAL LIABILITIES</b>	<b>\$ 8,968,525.72</b>	<b>\$ 8,914,014.64</b>	<b>\$ 54,511.08</b>
<b>FUND EQUITY</b>			
Contributed equity	\$ 9,611,814.35	\$ 9,611,814.35	\$ -
Retained Earnings:			
Unrestricted Reserves/Retained Earnings	\$ 6,718,013.77	\$ 6,582,397.95	\$ 135,615.82
Total retained earnings	\$ 6,718,013.77	\$ 6,582,397.95	\$ 135,615.82
<b>TOTAL FUND EQUITY</b>	<b>\$ 16,329,828.12</b>	<b>\$ 16,194,212.30</b>	<b>\$ 135,615.82</b>
<b>TOTAL LIABILITIES AND FUND EQUITY</b>	<b>\$ 25,298,353.84</b>	<b>\$ 25,108,226.94</b>	<b>\$ 190,126.90</b>



	C	D	E	F	G	H	I	J	K	L	M
1											
2		BOND CIP FUNDS									
3		RECONCILIATION-FY 2019/2021									
4						Well 12-17100/ 4-5 Well upgrades	Prod Well #1 ID4-9	Pipeline Project Phase 1/2	Prod Well #2	Firehydrants	
5			Bond Proceeds	Interest paid	Cost of Issuance	10117140	10117110	10117120	10117130	10117160	
6											Totals
7											
8	07/10/18	Pacific Western Bank-Loan Proceeds	\$ 5,586,000.00								\$ 5,586,000.00
9	07/10/18	Cost of Issuance	\$ 68,707.13								\$ 68,707.13
10	07/17/18	US Bank Interest Fee			\$ 1,700.00						\$ (1,700.00)
11	07/17/18	Nixon Peabody-Cost of issuance			\$ 10,000.00						\$ (10,000.00)
12	07/17/18	Kutok Rock-Cost of Issuance			\$ 10,000.00						\$ (10,000.00)
13	07/20/18	MMA Interest paid	\$ 2,282.99								\$ 2,282.99
14	07/31/18	MMA Interest paid	\$ 693.25								\$ 693.25
15	08/01/18	Grant Thornton-Cost of Issuance			\$ 1,500.00						\$ (1,500.00)
16	08/01/18	Brandis Tallman-Cost of Issuance			\$ 17,500.00						\$ (17,500.00)
17	08/01/18	Fieldman, Rolapp & Assoc.-Cost of Issuance			\$ 50,231.67						\$ (50,231.67)
18	08/01/18	Best Best & Krieger-Cost of Issuance			\$ 55,000.00						\$ (55,000.00)
19	08/31/18	MMA Interest paid	\$ 4,683.02								\$ 4,683.02
20	09/31/18	MMA Interest paid	\$ 4,535.86								\$ 4,535.86
21	10/31/18	MMA Interest paid	\$ 4,690.98								\$ 4,690.98
22	11/30/18	MMA Interest paid	\$ 6,498.24								\$ 6,498.24
23	12/31/18	MMA Interest paid	\$ 8,125.10								\$ 8,125.10
24	12/31/18	Fed-x Bond issuance costs			\$ 62.02						\$ (62.02)
25	01/31/19	Dudek-Construction Mgmt Prod well #2							\$ 8,295.00		\$ (8,295.00)
26	01/31/19	BBK-Review Bid documents					\$ 855.50	\$ 3,635.00			\$ (4,490.50)
27	01/31/19	Hartland Check order-partial charge					\$ 70.12	\$ 70.13	\$ 70.13		\$ (210.38)
28	01/31/19	MMA Interest paid	\$ 9,878.83								\$ 9,878.83
29	02/28/19	BBK-Review final specs Pipeline #1						\$ 306.00			\$ (306.00)
30	02/28/19	BBK-Finalize Bid documents					\$ 2,657.00	\$ 1,976.50	\$ 1,453.50		\$ (6,087.00)
31	02/28/19	Dudek-Construction Mgmt Prod well #1					\$ 11,535.00		\$ 8,422.50		\$ (19,957.50)
32	02/28/19	MMA Interest paid	\$ 8,529.85								\$ 8,529.85
33	03/31/19	Dudek-Construction Mgmt					\$ 5,467.50		\$ 7,232.50		\$ (12,700.00)
34	03/31/19	Dudek-Construction Mgmt					\$ 7,683.43		\$ 2,587.50		\$ (10,270.93)
35	03/31/19	BBK-Review Bid documents					\$ 1,243.25		\$ 1,243.25		\$ (2,486.50)
36	03/31/19	MMA Interest paid	\$ 9,460.57								\$ 9,460.57
37		Reallocate interest to Admin 7122	\$ (59,378.69)								\$ (59,378.69)
38		Well 12 repairs from O&M to Bond funds-check #32867				\$ 13,537.82					\$ (13,537.82)
39		Well 12 repairs from O&M to Bond funds-check #32970				\$ 82,640.56					\$ (82,640.56)
40	04/04/19	Big J Fencing-Fencing for Well ID4 Well 9					\$ 16,975.00				\$ (16,975.00)
41	04/08/19	BBK				\$ 561.00	\$ 1,377.00	\$ 535.50			\$ (2,473.50)
42	04/08/19	Hidden Valley Pump-Well 12/Well 5/Well 16 Transfer switch				\$ 36,033.00					\$ (36,033.00)
43	04/08/19	Hidden Valley Pump-Well 12/Well 5/Well 16/11 Transfer switch				\$ 253,731.68					\$ (253,731.68)
44	04/23/19	Dudek-Construction Management					\$ 3,690.00		\$ 1,927.50		\$ (5,617.50)
45	04/23/19	Fed-x -Mailing of NOE to County New Well #1					\$ 30.53				\$ (30.53)
46	04/23/19	Pacific Pipe-well 12				\$ 1,337.83					\$ (1,337.83)
47	05/20/19	Well 12 repairs transferred from Admin				\$ 83,223.56					\$ (83,223.56)
48	05/29/19	Hidden Valley Pump-Electric panel well 12				\$ 2,503.88					\$ (2,503.88)
49	05/29/19	DeAnza Ready Mix-Road base well 12				\$ 1,547.09					\$ (1,547.09)
50	05/29/19	Dynamic Consulting-Phase 1 & 2 Pipeline						\$ 71,010.00			\$ (71,010.00)
51	05/29/19	Bobs Trailer-Office trailer Well 1 ID4-9 and well 2					\$ 4,500.00		\$ 4,500.00		\$ (9,000.00)
52	05/29/19	Pacific Pipe-well 12				\$ 12,635.88					\$ (12,635.88)
53	05/29/19	BBK-bid review					\$ 765.00				\$ (765.00)
54	05/29/19	Big J Fencing-Fencing for Well ID4 Well 9					\$ 16,975.00				\$ (16,975.00)
55	05/29/19	De Anza Ready Mix				\$ 700.38	\$ 40,057.36				\$ (40,757.74)
56	05/29/19	Dudek-investigation of second production well							\$ 2,672.50		\$ (2,672.50)
57	05/29/19	Hidden Valley Pump-ID1 well 8 repairs				\$ 3,086.18					\$ (3,086.18)
58	05/29/19	Pacific Pipe-construction supply line				\$ 498.23					\$ (498.23)
59	05/29/19	Southwest Pump-construction of well 4-9					\$ 104,500.00				\$ (104,500.00)
60	05/29/19	State of California-Fee for Bond cost			\$ 1,396.50						\$ (1,396.50)

	C	D	E	F	G	H	I	J	K	L	M
1											
2		BOND CIP FUNDS									
3		RECONCILIATION-FY 2019/2021									
4						Well 12-17100/ 4-5 Well upgrades	Prod Well #1 ID4-9	Pipeline Project Phase 1/2	Prod Well #2	Firehydrants	
5			Bond Proceeds	Interest paid	Cost of Issuance	10117140	10117110	10117120	10117130	10117160	
6											Totals
61	06/04/19	Pacific Pipe-Parts for well 4-9					\$ 38.45				\$ (38.45)
62	06/10/19	Deanza Ready Mix-Road base well 4-9					\$ 2,116.53				\$ (2,116.53)
63	06/10/19	Hidden Valley Pump-Step down transformer well 4-9					\$ 8,292.37				\$ (8,292.37)
64	06/10/19	US Bank-Remote office supplies well 4-9					\$ 1,701.07				\$ (1,701.07)
65	06/18/19	BBK-Correspondence to A&R						\$ 127.50			\$ (127.50)
66	06/18/19	Dudek-Construction management well 4-9					\$ 20,697.01				\$ (20,697.01)
67	06/18/19	One Eleven Services-Construction Mgmt well 4-9					\$ 4,500.00				\$ (4,500.00)
68	07/01/19	Southwest Pump-construction of well 4-9					\$ 543,866.73				\$ (543,866.73)
69	07/03/19	Hidden Valley Pump-Well 5 Manual Transfer Switch				\$ 399.00					\$ (399.00)
70	07/03/19	Pacific Pipe-Fire hydrant extensions								\$ 1,377.80	\$ (1,377.80)
71	07/08/19	De Anza Ready Mix-Concrete well 12				\$ 658.01					\$ (658.01)
72	07/08/19	De Anza Ready Mix-Concrete well 5				\$ 344.21					\$ (344.21)
73	07/08/19	Hidden Valley Pump-Well 5 pull pump replace bowls/video				\$ 141,472.45					\$ (141,472.45)
74	07/25/19	BBK-Review A&R contract						\$ 765.00			\$ (765.00)
75	07/25/19	Dudek-Construction Management Well 4-9					\$ 45,827.52				\$ (45,827.52)
76	07/25/19	Pacific Pipe-Fire hydrants								\$ 21,825.77	\$ (21,825.77)
77	07/25/19	One Eleven Services-Construction Mgmt well 4-9					\$ 2,165.00				\$ (2,165.00)
78	07/25/19	Southwest Pump-construction of well 4-9					\$ 67,022.50				\$ (67,022.50)
79	08/12/19	Hack-Chlorine well 4-9					\$ 849.62				\$ (849.62)
80	08/19/19	Dudek-Construction Management Well 4-9					\$ 22,521.09				\$ (22,521.09)
81	08/20/19	Insitu-Transducer rental well 4-9					\$ 454.72				\$ (454.72)
82	08/27/19	BBK-Review A&R Bond						\$ 535.50			\$ (535.50)
83	09/04/19	Insitu-Transducer rental well 4-9					\$ 429.93				\$ (429.93)
84	09/04/19	SDGE-Electrict well 4-9					\$ 1,060.00				\$ (1,060.00)
85	09/04/19	Southwest Pump-construction of well 4-9					\$ 55,029.85				\$ (55,029.85)
86	09/04/19	US Bank Charge card-chlorine well 4-9					\$ 125.93				\$ (125.93)
87	09/09/19	Pacific Pipe-Supplies Double O Pipeline project						\$ 26,476.36			\$ (26,476.36)
88	09/16/19	Terry Robertson-Double O Pipeline replacement						\$ 491,504.35			\$ (491,504.35)
89	09/23/19	Dudek-Construction Management well 4-9					\$ 31,886.86				\$ (31,886.86)
90	09/23/19	Insitu-Transducer rental well 4-9					\$ 74.35				\$ (74.35)
91	09/23/19	Pacific Pipe-Meter boxes lids-Double O project						\$ 4,582.64			\$ (4,582.64)
92	09/30/19	BBK-Review change order A&R						\$ 204.00			\$ (204.00)
93	09/30/19	Dudek-Construction Management Well 4-9					\$ 1,260.00				\$ (1,260.00)
94	10/08/19	Dudek-Construction Management Well 4-9					\$ 4,305.00				\$ (4,305.00)
95	10/08/19	Southwest Pump-construction of well 4-9					\$ 44,548.38				\$ (44,548.38)
96	10/16/19	Dudek-Construction Management Well 4-9					\$ 17,778.75				\$ (17,778.75)
97	10/16/19	Dudek-investigation of second production well						\$ 600.00			\$ (600.00)
98	10/16/19	Pacific Pipe-Well 5 upgrade				\$ 5,553.49					\$ (5,553.49)
99	10/21/19	McCalls Meters-Meters for Pipeline phase 1						\$ 11,636.47			\$ (11,636.47)
100	10/21/19	Pacific Pipeline Supply-Tools/supplies well 5 upgrade				\$ 577.94					\$ (577.94)
101	10/21/19	Jeffrey Smith-Appraisal well #2 site investigation						\$ 1,000.00			\$ (1,000.00)
102	10/29/19	Jery Rowling-Well #2 site investigation						\$ 3,750.00			\$ (3,750.00)
103											
104											
105		BOND FUND BALANCE	\$ 5,654,707.13	\$ -	\$ 147,390.19	\$ 641,042.19	\$ 1,094,933.35	\$ 618,714.95	\$ 38,404.38	\$ 23,203.57	\$ 3,091,018.50
106											
107								10/31/2019	MMA		\$ 2,508,713.44
108								10/31/2019	Checking		\$ 582,305.06
109								10/31/2019	Total Bond funds		\$ 3,091,018.50



**IVB**  
**WATER & WASTE**  
**WATER**  
**OPERATIONS**  
**REPORT**



# **BORREGO WATER DISTRICT**

**October 2019**

## **WATER OPERATIONS REPORT**

<b>WELL</b>	<b>TYPE</b>	<b>FLOW RATE</b>	<b>STATUS</b>	<b>COMMENT</b>
ID1-8	Production	350	In Use	
ID1-10	Production	300	In Use	
ID1-12	Production	900	In Use	
ID1-16	Production	750	In Use	
Wilcox	Production	80	In Use	Diesel backup well for ID-4
ID4-4	Production	400	In Use	
ID4-11	Production	900	In Use	Diesel engine drive exercised monthly
ID4-18	Production	150	In Use	
ID5-5	Production	850	In Use	

**System Problems:** All production wells are in service. All reservoirs are in operating condition.

## **WASTEWATER OPERATIONS REPORT**

**Rams Hill Wastewater Treatment Facility serving ID-1, ID-2 and ID-5 Total Cap. 0.25 MGD (million gallons per day):**

**Average flow:** 58,903 (gallons per day)

**Peak flow:** 90,100 gpd Sunday, October 11, 2019



# **BORREGO WATER DISTRICT**

**November 2019**

## **WATER OPERATIONS REPORT**

<b>WELL</b>	<b>TYPE</b>	<b>FLOW RATE</b>	<b>STATUS</b>	<b>COMMENT</b>
ID1-8	Production	350	In Use	
ID1-10	Production	300	In Use	
ID1-12	Production	900	In Use	
ID1-16	Production	750	In Use	
Wilcox	Production	80	In Use	Diesel backup well for ID-4
ID4-4	Production	400	In Use	
ID4-11	Production	900	In Use	Diesel engine drive exercised monthly
ID4-18	Production	150	In Use	
ID5-5	Production	850	In Use	

**System Problems:** All production wells are in service. All reservoirs are in operating condition.

## **WASTEWATER OPERATIONS REPORT**

**Rams Hill Wastewater Treatment Facility serving ID-1, ID-2 and ID-5 Total Cap. 0.25 MGD (million gallons per day):**

**Average flow:** 75,117 (gallons per day)

**Peak flow:** 101,200 gpd Sunday, November 10, 2019



**IVC  
WATER  
PRODUCTION/  
USE RECORDS**



# BORREGO WATER DISTRICT

## WATER PRODUCTION SUMMARY

### OCTOBER 2019

DATE	WATER USE	WATER PROD	WATER %NRW	ID4 USE	ID4 PROD	ID4 %NRW	TOTAL USE	TOTAL PROD
Oct-17	29.35	31.05	5.48	108.42	119.22	9.06	137.77	150.28
Nov-17	26.03	27.67	5.92	107.09	120.15	10.87	133.12	147.82
Dec-17	23.23	26.28	11.60	80.91	89.46	9.55	104.14	115.73
Jan-18	19.40	19.95	2.74	86.60	95.01	8.85	106.01	114.96
Feb-18	19.77	21.14	6.49	78.55	87.58	10.31	98.32	108.72
Mar-18	19.90	20.26	1.77	73.56	80.32	8.42	93.46	100.58
Apr-18	22.01	22.72	3.11	88.49	99.08	10.69	110.50	121.80
May-18	25.10	25.46	1.40	98.95	108.29	8.62	124.05	133.75
Jun-18	29.06	29.87	2.72	100.42	108.40	7.36	129.48	138.28
Jul-18	30.87	31.47	1.89	96.80	111.42	13.12	127.67	142.89
Aug-18	36.34	38.25	4.99	124.77	142.84	12.65	161.11	181.09
Sep-18	34.31	37.40	8.26	105.93	117.15	9.58	140.24	154.55
Oct-18	29.96	30.42	1.49	118.14	129.33	8.65	148.10	159.74
Nov-18	24.75	25.62	3.41	100.65	109.27	7.89	125.39	134.89
Dec-18	16.14	22.36	27.80	71.19	80.13	11.16	87.33	102.49
Jan-19	14.91	16.84	11.47	58.48	64.29	9.04	73.39	81.13
Feb-19	14.99	16.06	6.70	58.89	66.49	11.42	73.88	82.55
Mar-19	15.35	15.75	2.51	55.83	62.48	10.65	71.18	78.23
Apr-19	20.31	20.97	3.18	90.96	98.41	7.57	111.26	119.38
May-19	23.79	25.13	5.33	83.92	92.63	9.41	107.70	117.76
Jun-19	36.31	37.19	2.36	93.43	96.69	3.37	129.74	133.88
Jul-19	44.09	45.49	3.08	115.58	123.04	6.07	159.67	168.53
Aug-19	37.02	38.56	3.99	111.63	114.37	2.39	148.65	152.92
Sep-19	40.68	39.71	-2.45	109.34	120.76	9.45	150.03	160.47
Oct-19	34.33	35.76	3.99	118.92	123.91	4.03	153.25	159.66
<b>12 Mo. TOTAL</b>	<b>322.67</b>	<b>339.44</b>	<b>5.95</b>	<b>1068.80</b>	<b>1152.47</b>	<b>7.70</b>	<b>1391.47</b>	<b>1491.90</b>

Totals reflect Water (ID1 & ID3) and ID4 (ID4 & ID5) . Interties to SA3 are no longer needed to be separated. ID4 and SA5 are combined because all water production is pumped from ID4.

All figures are in Acre Feet of water pumped.

NOTE: ID1 Fire flow line break at La Casa not metered.

### NON-REVENUE WATER SUMMARY (%)

DATE	WATER	ID-4	ID-5	DISTRICT-WIDE AVERAGE
Oct-19	3.99	4.03	N/A	4.01
12 Mo. Average	5.95	7.70	N/A	6.83



# BORREGO WATER DISTRICT

## WATER PRODUCTION SUMMARY

### NOVEMBER 2019

DATE	WATER USE	WATER PROD	WATER %NRW	ID4 USE	ID4 PROD	ID4 %NRW	TOTAL USE	TOTAL PROD
Nov-17	26.03	27.67	5.92	107.09	120.15	10.87	133.12	147.82
Dec-17	23.23	26.28	11.60	80.91	89.46	9.55	104.14	115.73
Jan-18	19.40	19.95	2.74	86.60	95.01	8.85	106.01	114.96
Feb-18	19.77	21.14	6.49	78.55	87.58	10.31	98.32	108.72
Mar-18	19.90	20.26	1.77	73.56	80.32	8.42	93.46	100.58
Apr-18	22.01	22.72	3.11	88.49	99.08	10.69	110.50	121.80
May-18	25.10	25.46	1.40	98.95	108.29	8.62	124.05	133.75
Jun-18	29.06	29.87	2.72	100.42	108.40	7.36	129.48	138.28
Jul-18	30.87	31.47	1.89	96.80	111.42	13.12	127.67	142.89
Aug-18	36.34	38.25	4.99	124.77	142.84	12.65	161.11	181.09
Sep-18	34.31	37.40	8.26	105.93	117.15	9.58	140.24	154.55
Oct-18	29.96	30.42	1.49	118.14	129.33	8.65	148.10	159.74
Nov-18	24.75	25.62	3.41	100.65	109.27	7.89	125.39	134.89
Dec-18	16.14	22.36	27.80	71.19	80.13	11.16	87.33	102.49
Jan-19	14.91	16.84	11.47	58.48	64.29	9.04	73.39	81.13
Feb-19	14.99	16.06	6.70	58.89	66.49	11.42	73.88	82.55
Mar-19	15.35	15.75	2.51	55.83	62.48	10.65	71.18	78.23
Apr-19	20.31	20.97	3.18	90.96	98.41	7.57	111.26	119.38
May-19	23.79	25.13	5.33	83.92	92.63	9.41	107.70	117.76
Jun-19	36.31	37.19	2.36	93.43	96.69	3.37	129.74	133.88
Jul-19	44.09	45.49	3.08	115.58	123.04	6.07	159.67	168.53
Aug-19	37.02	38.56	3.99	111.63	114.37	2.39	148.65	152.92
Sep-19	40.68	39.71	-2.45	109.34	120.76	9.45	150.03	160.47
Oct-19	34.33	35.76	3.99	118.92	123.91	4.03	153.25	159.66
Nov-19	27.05	28.10	3.76	94.68	103.96	8.92	121.73	132.06
<b>12 Mo. TOTAL</b>	<b>324.97</b>	<b>341.92</b>	<b>5.98</b>	<b>1062.84</b>	<b>1147.16</b>	<b>7.79</b>	<b>1387.81</b>	<b>1489.07</b>

Totals reflect Water (ID1 & ID3) and ID4 (ID4 & ID5) . Interties to SA3 are no longer needed to be separated. ID4 and SA5 are combined because all water production is pumped from ID4.

All figures are in Acre Feet of water pumped.

NOTE: ID1 Fire flow line break at La Casa not metered.

### NON-REVENUE WATER SUMMARY (%)

DATE	WATER	ID-4	ID-5	DISTRICT-WIDE AVERAGE
Nov-19	3.76	8.92	N/A	6.34
12 Mo. Average	5.98	7.79	N/A	6.88





**IVD  
GENERAL  
MANAGER  
REPORT**

BORREGO WATER DISTRICT  
BOARD OF DIRECTORS MEETING  
DECEMBER 17, 2019  
INFORMATIONAL ITEMS – GM REPORT

December 11, 2019

TO: Board of Directors  
FROM: Geoffrey Poole, General Manager  
SUBJECT: General Managers Report

- A. BS Basin Ground Water Monitoring & Water Quality Monitoring Program (including well abandonment). BWD Fellow, Meet Panchal and Dudek are close to completing the revised/updated well list. BWD and County Staff, including Department of Environmental met to discuss well permitting and abandonment issues. In summary, BWD will now receive notification as soon as a permit is filed instead of after the well has been drilled. The County is open to do what is needed to be clear in its policies and forms on whatever the rules on new well drilling become if the Stipulation is approved. On the abandonment issue, the County will take the appropriate action on any wells that are improperly abandoned if they are made aware of the situation. A request was made for BWD to provide the County with any know violators and the appropriate follow up will occur. Dr Jay Jones continues to work on new monitoring well construction and repurposing as part of the current State Grant opportunity. All water sampling including semiannual testing of BWD wells continues.
  - B. RH agreement for Spare Capacity – BWD has delivered water to Rams Hill Golf Course and staff will have an updated quantity available at the meeting.
  - C. RH Flood Control Facilities – The inspection has taken place and the Report is under development. At the January 14<sup>th</sup> meeting, the Report and a recommendation on the future frequency of inspections will be presented to the Board.
  - D. CIP Schedule Update – Attached is an updated schedule of the Phase II Waterline Projects as well as Replacement Well #1 and #2.
  - E. Projected Bond Financed Project Expenditures Jan 2020 thru Jul 2022 – Projections for spending BWD Bond Proceeds before the required date of June 30, 2021 will be presented at the meeting.
1. **ATTACHMENTS:** 3 CIP Construction Schedules: Replacement Well #1, Well #2 and Pipeline Replacements Phase II/Well Piping/Sewerline near American Legion,



Borrego Water District New Well Drilling Projected Schedule - Well ID4-9

Phases

1	Bid Phase
2	Well Construction Phase
3	Well Development and Testing Phase
4	Permitting and Plumbing Phase

Completed Phase

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Phase	Phase No	Project Name	Yr 2019				Yr 2020				Yr 2020				Yr 2020				Yr 2020				Yr 2020				Yr 2021				Yr 2021																																																
			September				October				November				December				January				February				March				April				May				June				July				August				September				October				November				December				January				February								
			7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	6	13	20	27	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22
Bid Phase	1.1	Well Locating	[Green]												[Dark Red]																																																																
Bid Phase	1.1	Site Acquisitoin													[Green]				[Dark Red]																																																												
Bid Phase	2.1	Bid Package Available																	[Blue]																																																												
Bid Phase	2.2	Bid Review																	[Blue]																																																												
Bid Phase	2.3	Bid Granted and Notice to Proceed																	[Blue]																																																												
Well Construction Phase	3.1	Drill Rig Mobilization																	[Blue]																																																												
Well Construction Phase	3.2	Pilot Borehole																	[Blue]																																																												
Well Construction Phase	3.3	Well Design and Casing and Filter Pack Delivery																	[Blue]																																																												
Well Construction Phase	3.4	Borehole Reaming and Construction																	[Blue]																																																												
Well Development and Testing Phase	4.1	Well Development																	[Green]																																																												
Well Development and Testing Phase	4.2	Aquifer Test																	[Green]																																																												
Well Development and Testing Phase	4.3	Disinfection																	[Green]																																																												
Permitting and Plumbing Phase	5.1	Well Completion Report and DWSAP Permitting																	[Yellow]																																																												
Permitting and Plumbing Phase	5.2	Well Hookup with Water Supply System																	[Yellow]																																																												

