



RUNNING SPRINGS WATER DISTRICT
A MULTI-SERVICE INDEPENDENT SPECIAL DISTRICT

31242 Hilltop Boulevard • P.O. Box 2206
Running Springs, CA 92382

TO: BOARD OF DIRECTORS DATE POSTED: JULY 14, 2017
RE: REGULAR BOARD MEETING FROM: BOARD SECRETARY

The Regular Meeting of the Board of Directors of the Running Springs Water District will be held on Wednesday, July 19, 2017, at the hour of 9:00 A.M. at the District Office located at 31242 Hilltop Boulevard, Running Springs, California. This agenda was posted prior to 5:00pm on July 14, 2017 at the Running Springs Water District Office and Website.

The Board may take action on any item on the agenda, whether listed as an action item or as an information item.

Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, as required by Section 202 of the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Joan C. Eaton, Board Secretary at (909) 867-2766 at least 48 hours before the meeting, if possible.

Copies of documents provided to members of the Board for discussion in open session may be obtained from the District at the address indicated above.

AGENDA

1. Call Meeting to Order and Pledge of Allegiance
2. Recognize and Hear from Visitors / Public Comment - This portion of the agenda is reserved for the public to make comments on matters within the jurisdiction of the Running Springs Water District that are **not on the agenda**. The Board, except to refer the matter to staff and/or place it on a future agenda, may take no action. It is in the best interest of the person speaking to the Board to be concise and to the point. A time limit of five minutes per individual will be allowed. Any person wishing to comment on an item that is on the agenda is requested to complete a request to speak form prior to the item being called for consideration or to raise their hand and be recognized by the Board President.
3. Approval of Consent Items – The following consent items are expected to be routine and non-controversial and will be acted on at one time without discussion unless an item is withdrawn by a Board Member for questions or discussion. Any person wishing to speak on the consent agenda may do so by raising his/her hand and being recognized by the Board President.

A. Approve Meeting Minutes **Page 4**

B. Ratify Expenditures **Page 12**

- C. Receive and File the Fiscal Year 2016/2017 Annual Board and Employee Expense Report **Page 18**
 - D. Consider Adopting Resolution No. 19-17, Standards for Domestic Water and Sewer Facilities **Page 21**
 - E. Consider Adopting Resolution No. 20-17, Certifying Delinquent Charges to be Placed on the Tax Roll for Fiscal Year 2017/2018 **Page 198**
 - F. Consider Adopting Resolution No. 21-17, finding that certain properties located in the District constitute a public nuisance and ordering notification to property owners and setting a public hearing **Page 205**
4. Action Items – The following action items will be considered individually and each **require a motion** by the Board of Directors for action.
- A. Consider Reducing Fire Sprinkler Water Meter Monthly Base Charge **Page 210**
(Presenter: Ryan Gross, General Manager)
 - B. Consider Approving Ordinance No. 49, Adopting Rules and Regulations for Water and Wastewater Service **Page 214**
(Presenter: Ryan Gross, General Manager)
 - C. Consider Voting to Elect a Representative to the California Special Districts Association (CSDA) Board of Directors **Page 282**
(Presenter: Ryan Gross, General Manager)
 - D. Consider Awarding Contract for Downtown Sewer Repair **Page 297**
(Presenter: Isaiah Hall, Wastewater Collections Supervisor)
 - E. Consider Authorizing Expenditure for Wastewater Treatment Plant Membrane Bioreactor Improvements **Page 301**
(Presenter: Trevor Miller, Wastewater Treatment Supervisor)
 - F. Consider Authorizing Application to LAFCO for Exemption Determination
(Presenter: Ryan Gross, General Manager)
5. Information Items – The following information items do not require any action by the Board of Directors and are for informational purposes only.
- A. Quarterly Budget and Financial Report **Page 307**
 - B. Quarterly Investment Report **Page 317**
 - C. LA Times Article from July 9, 2017 **Refer to last page 11x17 Handout**
6. General Manager’s Report

July 19, 2017 Regular Board Meeting Agenda
Posted July 14, 2017

7. Report from Legal Counsel
8. Board Member Comments / Meetings
9. Meeting Adjournment

Upcoming Meetings: Regular Board Meeting, August 16, 2017 at 9:00 am

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017
TO: Board of Directors
FROM: Ryan Gross, General Manager
SUBJECT: CONSIDER APPROVING MEETING MINUTES

RECOMMENDATION

It is recommended that the Board of Directors review and approve the attached meeting minutes.

REASON FOR RECOMMENDATION

Approval of meeting minutes.

BACKGROUND INFORMATION

The attached draft meeting minutes are from the Regular Board Meeting held on June 21, 2017.

ATTACHMENTS

Attachment 1 – Draft Meeting Minutes

**MINUTES OF THE REGULAR MEETING OF THE
BOARD OF DIRECTORS RUNNING SPRINGS WATER DISTRICT
COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA
JUNE 21, 2017**

The Regular Meeting of the Board of Directors of the Running Springs Water District was held on Wednesday, June 21, 2017 at the hour of 9:00 A.M. at the District office located at 31242 Hilltop Boulevard, Running Springs, California.

The following Directors were present:

Ken Ayers, President
Pamella Bennett, Vice-President
Mike Terry, Director
Errol Mackzum, Director

Director Tony Grabow was absent

Also present were the following:

Ryan Gross, General Manager
Joan C. Eaton, Board Secretary/Treasurer/Administration Supervisor
George Corley, Fire Chief
Mike Vasquez, Fire Battalion Chief
Isaiah Hall, Wastewater Collection Division Supervisor
Trevor Miller, Wastewater Treatment Division Supervisor

Visitors Present:

Gerhard Hilgenfeldt, Running Springs Resident
Richard Luczyski, Running Springs Resident

MEETING MINUTES

AGENDA ITEMS

1. Call Meeting to Order and Pledge of Allegiance

The meeting was called to order at 9:04 A.M. by President Ayers who also led the assembly in the pledge of allegiance to the flag.

2. Recognize and Hear From Visitors/Public Comment

Gerhard Hilgenfeldt introduced himself for the record. Mr. Hilgenfeldt then expressed concerns with his high monthly water/sewer bill, water pressure and the taste of his water and District staff confirmed they will test his system and water quality.

3. Approval of Consent Items

A. Approve Meeting Minutes

Upon **motion** by Director Bennett, **second** by Director Terry and **carried by a 4 to 0 vote**, the minutes of May 17, 2017 were approved.

B. Ratify May 2017 Expenditures

Staff clarified expenses for the State Water Board permitting fees, Fire Department uniforms and Municipal Finance Corporation Ambulance payment.

C. Consider Adoption of Resolution No. 10-17, Establishing Appropriations Limits for Fiscal Year 2017/2018

D. Consider Adoption of Resolution Nos. 11-17 and 12-17 for the Reduction of Employer Paid Member Contributions (EPMC) to the California Public Employees' Retirement System (CalPERS) for Existing Classic CalPERS Members

E. Consider Declaring Certain Equipment as Surplus and Authorize Staff to Dispose of Property

Upon **motion** by President Ayers, **second** by Director Bennett and **carried by a 4 to 0 vote**, the remaining Consent Items B. through E. were approved. (Resolutions No. 10-17, 11-17 and 12-17 on file in the District office)

4. Action Items

A. Consider Approving Resolution No. 13-17, Adopting the Fiscal Year 2017/2018 District Budget

Manager Gross reported on the proposed 2017/2018 District Budget that has been reviewed by the Finance Committee and Board of Directors and he noted some minor changes. Manager Gross explained a revision in the depreciation expense saying the Treatment and Collections Divisions were combined in the past years and are now separated in the budget. The additional Wastewater Division depreciation expense of approximately \$156,000 was primarily due to completion of the lift stations and upgrades to the Treatment Plant. The new Tyler Accounting Software includes a Depreciation Module with schedules, life cycles and asset details for all Divisions.

Discussion continued regarding landscape and fire sprinkler meter rates and Manager Gross said the District will prepare a staff report for the July Board Meeting to consider adjusting the rate table for fire sprinkler meters.

Regarding the Fire Department Budget, Manager Gross said there was an increase in Property Tax revenue of 6.3% from 2014/2015 to 2015/2016 and the estimated increase for 2017/2018 is over 4%. The Fire Department has also received approximately \$100,000 in additional revenue this year from the new Ground Emergency Medical Transportation (GEMT) program and the Department is researching additional sources that include the Intergovernmental Transfer (IGT) program. President Ayers expressed concerns with the Fire Department expenses and Manager Gross said we may have to look at the possibility of future service reduction for the Fire Department.

Director Mackzum asked about the unpaid District Unfunded Liability and discussion continued regarding the debt. Manager Gross will provide Director Mackzum with a copy of the CalPERS Actuarial Reports and information regarding the Unfunded Liability.

Upon **motion** by Director Mackzum, **second** by Director Terry and **carried by a 4 to 0 vote**, Resolution No. 13-17, Adopting the Fiscal Year 2017/2018 District Budget was adopted. (Resolution No. 13-17 on file in the District office)

B. Consider Approving Contract for Financial Consulting Services

Supervisor Eaton asked the Board to consider approving a Professional Services Contract with Rogers, Anderson, Malody and Scott (RAMS) for Fiscal Year 2017/2018 Financial Consulting Services in an amount not to exceed \$50,000. The Financial Consultant assists staff through the year with general accounting, preparation of the District audit and recently with implementation of the new Tyler Accounting System. Administration staff will assume more accounting functions in Fiscal Year 2017/2018 to retain lower professional services expense. Manager Gross said the District will utilize the Financial Consultant for approximately thirty (30) hours per month both on site and remotely.

Upon **motion** by Director Mackzum, **second** by Director Bennett and **carried by a 4 to 0 vote**, the 2017/2018 Fiscal Year Financial Consulting Services Contract with Rogers, Anderson, Malody and Scott, not to exceed \$50,000 was approved.

C. Consider Approving Resolution No. 14-17, Adopting the District By-Laws and Board Policy Manual, was adopted.

Manager Gross opened by stating if approved, Resolution No. 14-17 will amend and restate the bylaws of the Board and incorporate the bylaws into the Board Policy Manual that was reviewed at the May meeting. There were some editorial changes made to the draft and discussion continued regarding the District Bylaws and Board Policy Manual. A section referencing the Conflict of Interest Code will also be incorporated into the policy manual.

Upon **motion** by Director Terry, **second** by President Ayers and **carried by a 4 to 0 vote**, Resolution No. 14-17, District By-Laws and Board Policy Manual, was adopted. (Resolution No. 14-17 on file in the District Office)

D. Consider Approving Resolution No. 15-17, Adopting the District Purchasing Policy

Manager Gross said there were minor editorial changes made to the draft Purchasing Policy after review in the May Board meeting. A section was also included regarding emergency purchases.

Upon **motion** by Director Bennett, **second** by Director Mackzum and **carried by a 4 to 0 vote**, Resolution No. 15-17, District Purchasing Policy, was adopted. (Resolution No. 15-17 on file in the District Office)

E. Consider Approving Resolution No. 16-17, Adopting the Fire Department Terms for Response Away from Official Duty

Resolution No. 16-17 identifies the terms for the Fire Department response away from their official duty station and assigned to an emergency incident. To continue the same terms of reimbursement as in the past, the Running Springs Fire Department will require either a Governing Board Resolution (GBR) or a Memorandum of Understanding (MOU) that addresses payment with the Department's employees. The GBR will ensure that the Fire Department is paid a full reimbursement rate that covers the true cost of emergency response and discussion continued regarding the reimbursed administration fee based on a percentage set by the state.

Upon **motion** by Director Terry, **second** by Director Mackzum and **carried by a 4 to 0 vote**, Resolution No. 16-17, Fire Department Terms for Response Away from Official Duty, was adopted. (Resolution No. 16-17 on file in the District office)

F. Consider Approving Resolution No. 17-17, For the Election of Directors to the Special District Risk Management Authority Board of Directors

Upon **motion** by Director Mackzum, **second** by Director Bennett and **carried by a 4 to 0 vote**, Resolution No. 17-17, For the Election of Directors to the Special District Risk Management Authority Board of Directors, was adopted. (Resolution No. 17-17 on file in the District office)

The Board recessed at 10:33 A.M. and reconvened at 10:38 A.M.

G. Consider Authorizing Participation in the Intergovernmental Transfer (IGT) Program Providing Access to Federal Matching Funds for Emergency Medical Transport Services

Chief Corley reported on the IGT program with the California Department of Health Care Services to increase reimbursements for emergency medical ambulance transport services provided to Molina Healthcare of California members. The IGT program will allow the Fire Department to access federal matching funds which will offset the loss in cost recovery under the Medi-Cal Managed Care Programs as a result of significantly reduced

regular reimbursement rates. Manager Gross confirmed that the state will return any unused portion of the contribution. The resulting net revenue to be received by the Fire Department will be approximately \$11,528.

Upon **motion** by Director Mackzum, **second** by Director Terry, and **carried by a 4 to 0 vote**, Authorizing Participation in the Intergovernmental Transfer (IGT) Program Providing Access to Federal Matching Funds for Emergency Medical Transport Services, was approved.

H. Consider Authorizing Purchase of Influent Flow Metering Equipment

Supervisor Miller asked for Board authorization to proceed with the Fiscal Year 2017/2018 budgeted expenditure for the purchase of Wastewater Treatment Plant Influent Flow Metering Equipment not to exceed \$19,000 that will be installed by August, 2017. Manager Gross said the existing flow metering equipment is providing inaccurate flow data information.

Upon **motion** by Director Mackzum, **second** by Director Bennett and **carried by a 4 to 0 vote**, Authorizing Purchase of Influent Flow Metering Equipment not to exceed \$19,000, was approved.

I. Consider Authorizing Purchase of Submersible Mixer

Supervisor Miller requested authorization to proceed with the Fiscal Year 2016/2017 budgeted expenditure for the purchase of the Wastewater Treatment Plant (WWTP) Submersible Mixer in the amount of \$17,226. The mixer will replace an existing aerator in the WWTP Equalization Basin compartment which is in need of extensive repairs. The cost to rebuild the existing aerator would have been significant so the purchase of the mixer versus rebuilding the aerator will be an additional \$2,738 with a percentage of the cost shared between the upstream users.

Upon **motion** by Director Bennett, **second** by Director Terry and **carried by a 4 to 0 vote**, Authorizing Purchase of Submersible Mixer not to exceed \$17,226, was approved.

J. Consider Approving Resolution No. 18-17, Debt Management Policy

Manager Gross reported on Resolution No. 18-17, Debt Management Policy saying this requirement came up as part of the application process with the State Water Board to finance the Automatic Meter Reading (AMR) Project. SB 1029 expands the reporting requirements that apply to state and local debt issuers, to access proceeds from debt issuances and make disposition of such proceeds more transparent. Attorney Simmons said a Debt Management Policy is highly recommended.

Upon **motion** by Director Mackzum, **second** by Director Terry and **carried by a 4 to 0 vote**, Resolution No. 18-17, Debt Management Policy, was adopted. (Resolution No. 18-17 on file in the District Office)

Visitor Richard Luczynski arrived at 11:09 A.M.

K. Consider Providing Direction on CSA 79 Reorganization

Manager Gross reported on a meeting that he and President Ayers attended at the Local Agency Formation Commission (LAFCO) office regarding a request from the San Bernardino County Supervisor's office and residents of Green Valley Lake for the Running Springs Water District (RSWD) to consider a potential reorganization involving RSWD and the CSA 79 Sewer Collection System. RSWD will not incur any costs associated with the study or reorganization and any related fees will be funded by the County Supervisor's office. Discussion continued regarding reorganization with CSA 79 and whether there is a benefit to RSWD and Manager Gross confirmed that reorganization with Green Valley Lake would allow their voters the opportunity to run for the RSWD Board of Directors. Manager Gross said the studies would take a few months to complete and the reorganization process takes approximately eight to nine months from submittal of the application with Director Mackzum expressing concerns with liability. Manager Gross said he was told that Supervisor Janice Rutherford will not support detachment of the County Fire Department in Green Valley Lake. Attorney Simmons continued discussion of LAFCO issues.

The Board consensus was to proceed by participating in the reorganization study process with CSA 79, request that RSWD staff time is reimbursed and to confirm that RSWD has no commitment if the study shows reorganization will be detrimental to the District.

No motion was made.

5. Information Items

A. Water Quality Consumer Confidence Report for 2016

Manager Gross reported on the annual 2016 Water Quality Consumer Confidence Reports (CCR) that are distributed to District customers and said additional information was provided regarding monitoring requirements that were inadvertently missed by the required date. Provisions have been put in place to prevent this issue again. Discussion continued regarding secondary notifications regarding the Water Quality Report and Manager Gross will follow up with the school district. Manager Gross will also contact the Crestline Lake Arrowhead Water Agency (CLAWA) regarding information they provided in the Water Quality Report that was inconsistent.

B. Draft Ordinance No. 49 Adopting Rules and Regulations for Water and Wastewater Service

The Board reviewed Ordinance No. 49 that combines rules and regulations for water and wastewater and revisions were discussed. Ordinance No. 49 will be returned to the Board on July 19, 2017 for adoption and may be amended in the future by resolution.

C. Draft Standards for Water and Sewer Facilities

The Board reviewed the draft Standards for Water and Sewer Facilities and the document will be returned to the Board for approval in July, 2017.

6. General Manager’s Report

Manager Gross reported on a LAFCO meeting he attended on June 15, 2017 with Mountain Top Water Districts regarding the Five Year Municipal Service Review for Water Service.

Manager Gross will be attending a California Special District Association (CSDA) conference on June 26 and 27, 2017.

7. Report from Legal Counsel

Attorney Simmons reported on a case study involving the Romona Municipal Water District, regarding a group of commercial property owners who challenged the District’s Wastewater Service fees on the basis of an Equivalent Dwelling Unit (EDU) calculation. Discussion continued regarding calculation of wastewater service fees and customer types in relation to upstream users.

8. Board Member Comments

None

9. Meeting Adjournment

The meeting was adjourned at 12:21 P.M.

Respectfully Submitted,

President, Board of Directors
Running Springs Water District

Secretary of the Board of Directors
Running Springs Water District

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017
TO: Board of Directors
FROM: Ryan Gross, General Manager
SUBJECT: RATIFY EXPENDITURES

RECOMMENDED BOARD ACTION

It is recommended that the Board of Directors review the attached accounts payable check register and ratify the District's June 2017 expenditures.

A copy of the District's Cash Summary as of June 30, 2017 is also included for review and information.

REASON FOR RECOMMENDATION

Each month staff presents the monthly check register and recommends that the Board of Directors ratify the District's expenditures.

BACKGROUND INFORMATION

Attached is a list of expenditures for June 2016 and the Cash Summary as of June 30, 2017.

FISCAL INFORMATION

Refer to attached accounts payable check register and cash summary.

ATTACHMENTS

Attachment 1 – Accounts Payable Check Register for June 2017
Attachment 2 – Cash Summary as of June 30, 2017

Running Springs Water District

Accounts Payable Checks

June 2017

Vendor Name	Description	Date	Invoice Amount	Check Number	Check Amount
Action Automotive Repair Inc	Coolant Leak and Transmission Leak	06/15/17	1,753.31	100681	1,998.55
	Transmission Cooler Repair	06/15/17	245.24	100681	
	Mount tires	06/29/17	50.00	100729	50.00
Airgas Inc.	Helium	06/22/17	43.41	100702	43.41
American Family Life Assurance Company of Colum	Additional Insurance Premiums	06/02/17	616.66	100630	616.66
Aquatic Inspections	Tank inspection and cleanings	06/08/17	3,250.00	100657	3,250.00
	Tank inspection and cleanings	06/22/17	3,250.00	100703	3,250.00
Arrow International Inc	Ambulance supplies	06/08/17	1,198.63	100658	1,198.63
Arrowhead Group Inc.	3 Tests	06/02/17	180.00	100631	180.00
Bear Valley Fire Protection	Fire Extinguisher testing	06/02/17	172.56	100632	172.56
Best, Best & Krieger LLP	Legal Services	06/15/17	650.12	100682	650.12
Big Bear Electric	SLS 5 ALARM REPAIR	06/02/17	460.00	100633	460.00
BURR Group Inc.	Trash and load service	06/08/17	212.96	100659	386.97
	Trash Service	06/08/17	174.01	100659	
California Computer Options Inc	Computer	06/15/17	1,780.05	100683	1,780.05
	Computer Issues	06/22/17	556.00	100704	556.00
	IT program maintenance	06/29/17	2,375.00	100730	2,375.00
California Water Environment Association	Coll Maint Grd 3 and Plant Maint Grd 1	06/15/17	176.00	100684	259.00
	Plant Main Tech Grd 1	06/15/17	83.00	100684	
	Membership Fee	06/29/17	172.00	100731	172.00
CalPERS	June Health Insurance Premiums	06/01/17	18,998.61	DFT0000459	18,998.61
	Retirement Contributions	06/09/17	23,242.96	DFT0000464	23,242.96
	Unfunded Liability	06/14/17	35,380.73	DFT0000465	35,380.73
	Retirement Contributions	06/22/17	21,491.56	DFT0000482	21,491.56
Canon	Monthly Usage Fee	06/22/17	840.38	100705	840.38
Charter Communitcations	Telephone and Internet	06/15/17	190.90	100685	854.75
	Telephone and Internet	06/15/17	663.85	100685	
	Telephone and Internet	06/22/17	104.97	100706	104.97
Citibank, N.A.	Miscellaneous Supplies	06/15/17	45.19	100686	282.11
	Shop Lights	06/15/17	236.92	100686	
	Office supplies	06/22/17	275.15	100707	718.72
	OFFICE SUPPLIES	06/22/17	230.28	100707	
	OFFICE SUPPLIES	06/22/17	213.29	100707	
Clinical Laboratory of San Bernardino	Water Samples	06/22/17	2,697.00	100708	5,841.00
	Wastewater Samples	06/22/17	3,144.00	100708	
County of San Bernardino	T1701574	06/15/17	66.00	100687	66.00
	Dump Fees	06/22/17	26.35	100709	26.35
Crestline-Lake Arrowhead Water Agency	Purchase water	06/02/17	730.54	100634	730.54
Cypress Ancillary Benefits	Dental Insurance Premiums	06/22/17	1,097.11	100727	1,097.11
Deborah A. Ellis-Harper	Smokey Poster sign	06/08/17	150.00	100660	150.00
Dixi Willemse	Reimbursement Claim	06/02/17	682.50	100635	682.50
	Reimbursement Claim	06/08/17	101.46	100661	101.46
	Reimbursement Claim	06/22/17	397.00	100710	397.00
Donald G. Rice	Towing of the Mack Truck	06/08/17	330.00	100662	330.00
Don's Auto Supply 2 Inc.	Miscellaneous parts & supplies	06/08/17	89.45	100663	89.45

Vendor Name	Description	Date	Invoice Amount	Check Number	Check Amount
Federal Express Corporation	Shipping Charges	06/22/17	25.51	100711	25.51
Fire Fighters Association	June 2017 Dues	06/22/17	410.00	100712	410.00
Frontier Communications	Telephone	06/02/17	70.54	100636	124.94
	Telephone	06/02/17	54.40	100636	
	Telephone	06/08/17	54.51	100664	353.61
	Telephone	06/08/17	54.42	100664	
	Telephone	06/08/17	54.41	100664	
	Telephone	06/08/17	139.33	100664	
	Telephone	06/08/17	50.94	100664	
	Telephone	06/22/17	51.01	100713	151.19
	Telephone	06/22/17	100.18	100713	
	Telephone	06/29/17	70.54	100732	249.99
	Telephone	06/29/17	54.46	100732	
	Telephone	06/29/17	70.54	100732	
	Telephone	06/29/17	54.45	100732	
George Corley	Reimbursement Claim	06/08/17	411.45	100665	411.45
Hailo Flooring	Material for Floor Repair At Station 50	06/09/17	1,709.58	100680	1,709.58
Haz Mat Trans, Inc.	Work Order # 82769	06/02/17	1,750.00	100637	2,450.00
	Work Order 83183	06/02/17	700.00	100637	
	Work Order 82771	06/08/17	1,750.00	100666	1,750.00
HD Supply Facilities Maintenance LTD	eye wash for Bioxide injection	06/02/17	137.44	100638	137.44
	Hac Hydrogen Sulfide Treated Papers	06/15/17	33.45	100688	33.45
Inland Desert Security & Communications	Answering Service	06/15/17	105.20	100689	105.20
Inland Water Works Supply Company	romac couplings	06/02/17	172.40	100639	172.40
	Miscellaneous supplies	06/08/17	324.33	100667	324.33
	Miscellaneous Supplies	06/22/17	618.49	100714	869.55
	Miscellaneous Supplies	06/22/17	183.18	100714	
	Miscellaneous Supplies	06/22/17	67.88	100714	
Joan Eaton	Reimbursement Claim	06/02/17	223.26	100640	288.26
	Reimbursement Claim	06/02/17	65.00	100640	
	Reimbursement Claim	06/08/17	95.00	100668	95.00
	Reimbursement Claim	06/22/17	94.57	100715	94.57
Kenneth Ayers	Mileage Reimbursement	06/22/17	146.06	100716	146.06
Kent Jenkins	Reimbursement Claim	06/22/17	3,403.38	100717	3,403.38
Kovatch Mobile Equipment Corp	Annual inspection and service	06/02/17	1,424.15	100641	1,424.15
Landia, INC	Mixer Rebuild	06/29/17	2,700.50	100733	18,650.50
	Replacement mixer	06/29/17	15,950.00	100733	
Liberty Composting Inc	Biosolids for May 2017	06/22/17	792.80	100718	792.80
Life-Assist, Inc	Ambulance Supplies	06/02/17	488.61	100642	1,003.37
	Ambulance Supplies	06/02/17	261.69	100642	
	Ambulance Supplies	06/02/17	253.07	100642	
	Ambulance Supplies	06/15/17	443.71	100690	503.41
	Ambulance Supplies	06/15/17	23.52	100690	
	Ambulance Supplies	06/15/17	36.18	100690	
	Ambulance Supplies	06/29/17	55.20	100734	55.20
Lincoln National Life Insurance Company	Life Insurance Premiums	06/02/17	1,158.06	100643	1,158.06
Linda Mayfield	Reimbursement Claim	06/02/17	135.00	100644	307.00
	Notary Expense Reimbursement	06/02/17	172.00	100644	
	Reimbursement Claim	06/22/17	480.00	100719	480.00
MCI	Long Distance	06/08/17	48.02	100669	48.02

Vendor Name	Description	Date	Invoice Amount	Check Number	Check Amount
Metropolitan Life Insurance Company	Vision Insurance Premiums	06/02/17	166.75	100645	166.75
Myers-Stevens & Toohey Co. Inc	May Premiums	06/02/17	206.00	100646	206.00
	Disability Premiums	06/29/17	206.00	100735	206.00
Neopost USA Inc	Lease Payment	06/29/17	385.58	100738	385.58
Nestle Waters North America	Drinking Water	06/08/17	46.33	100670	46.33
Nor Cal Pipeline Services	Hydrant Meter Refund	06/22/17	668.24	100720	668.24
One Stop Landscape Supply	One Stop Biosolids Disposal	06/08/17	2,200.20	100671	2,200.20
Patricia A. Monical	Office Supplies	06/22/17	2.14	100721	2.14
Peerless Maintenance Service Inc.	Janitorial Service June 2017	06/29/17	485.00	100736	485.00
Polydyne Inc.	Polymer solids dewatering	06/08/17	1,066.73	100672	1,066.73
	Polymer	06/29/17	1,066.73	100737	1,066.73
Ponton Industries	MAG 5000 Transmitter	06/08/17	1,500.90	100673	1,500.90
	MAG 1100 11In	06/15/17	3,244.96	100691	3,244.96
Premier Access Insurance Company	Dental Insurance Premium	06/02/17	1,125.08	100647	1,125.08
Rim Forest Lumber Company, Inc.	Miscellaneous Supplies	06/02/17	331.17	100648	331.17
Robert Aberg	Reimbursement Claim	06/29/17	489.72	100739	489.72
Roger E. Fox, M.D.	Dot Exams	06/15/17	70.00	100692	70.00
Rogers Anderson Malody & Scott LLP	Consultant Charges	06/29/17	2,900.06	100740	2,900.06
Sacramento Metropolitan Fire District	GEMT admin fee	06/08/17	599.77	100674	599.77
Safeguard Business Systems	Envelopes	06/29/17	269.50	100741	269.50
San Bernardino County Elections Office of the Regi	Measure B Services	06/02/17	2,712.00	100649	2,712.00
San Bernardino County Special Districts Departme	Special District's Meeting for July 2017.	06/29/17	28.00	100742	28.00
Southern California Edison Company	Electricity	06/02/17	476.06	100650	3,882.90
	Electricity	06/02/17	142.30	100650	
	Electricity	06/02/17	251.83	100650	
	Electricity	06/02/17	384.38	100650	
	Electricity	06/02/17	31.30	100650	
	Electricity	06/02/17	127.92	100650	
	Electricity	06/02/17	440.64	100650	
	Electricity	06/02/17	114.41	100650	
	Electricity	06/02/17	223.94	100650	
	Electricity	06/02/17	149.85	100650	
	Electricity	06/02/17	911.46	100650	
	Electricity	06/02/17	422.05	100650	
	Electricity	06/02/17	206.76	100650	
	Electricity	06/08/17	197.45	100675	8,159.82
	Electricity	06/08/17	119.96	100675	
	Electricity	06/08/17	414.96	100675	
	Electricity	06/08/17	76.64	100675	
	Electricity	06/08/17	91.43	100675	
	Electricity	06/08/17	6,218.74	100675	
	Electricity	06/08/17	127.30	100675	
	Electricity	06/08/17	283.35	100675	
	Electricity	06/08/17	441.10	100675	
	Electricity	06/08/17	10.69	100675	
	Electricity	06/08/17	178.20	100675	
	Electricity	06/15/17	117.67	100693	2,148.82
	Electricity	06/15/17	847.07	100693	
	Electricity	06/15/17	1,184.08	100693	
	Electricity	06/22/17	553.99	100722	553.99

Vendor Name	Description	Date	Invoice Amount	Check Number	Check Amount
Southern California Gas Company	Gas Billing Usage	06/15/17	76.94	100694	93.64
	Gas Billing Usage	06/15/17	16.70	100694	
	Gas Billing Usage	06/22/17	81.59	100723	221.08
	Gas billing	06/22/17	61.59	100723	
	Gas Usage Billing	06/22/17	77.90	100723	
Sport Pins International Inc	Name Badges	06/02/17	409.45	100651	409.45
State of California - State Water Resource Control	ID2 Exam testing fee	06/15/17	65.00	100695	145.00
	Distribution Cert Renewal	06/15/17	80.00	100695	
Superior Automotive Warehouse, Inc.	Miscellaneous parts and supplies	06/08/17	284.21	100676	415.67
	Miscellaneous Supplies	06/08/17	131.46	100676	
Terminix International Company LP	Pest Control	06/02/17	45.00	100652	45.00
Tom Dodson & Associates	Tom Dodson & Associates CEQA+ for AMR Project	06/29/17	7,737.50	100743	7,737.50
Trevor Miller	Reimbursement Claim	06/08/17	189.00	100677	189.00
	gym membership	06/15/17	250.00	100696	551.09
	Reimbursement Claim	06/15/17	110.00	100696	
	Trevor Miller Reimbursement	06/15/17	191.09	100696	
Underground Service Alert of Southern California	New Ticket Charges	06/15/17	18.00	100697	18.00
US Postal Service	Permit 14 Postage	06/22/17	3,000.00	100724	3,000.00
Verizon Wireless Services LLC	Cell phone	06/08/17	199.44	100678	199.44
Visa	Visa Purchases	06/02/17	625.00	100653	1,317.42
	Laser Checks	06/02/17	692.42	100653	
	Visa Purchase	06/08/17	94.78	100679	1,880.16
	Miscellaneous Purchases	06/08/17	18.00	100679	
	Visa purchases	06/08/17	2.69	100679	
	Visa Purchases	06/08/17	510.87	100679	
	paper, ink, cleaning supplies	06/08/17	532.44	100679	
	Fire Prevention gifts	06/08/17	181.98	100679	
	Unit 67 Parts	06/08/17	539.40	100679	
	Hotel Fees	06/15/17	585.36	100698	585.36
Vyanet Operating Group	Security/Monitoring Collections	06/15/17	140.12	100699	140.12
W.W. Grainger, Inc	grainger	06/02/17	188.95	100654	188.95
York Insurance Services Group Inc., -CA	Workers Comp	06/15/17	15.31	100700	15.31
	Workers Compensation	06/22/17	48.95	100725	48.95
York Risk Services Group, Inc	Workers Comp Admin Fee	06/15/17	112.00	100701	112.00
Zenner Performance Meter, Inc	Misc Supplies	06/22/17	405.31	100726	405.31

Totals

Payment Type	Payable Count	Payment Count	Payment
Regular Checks	176	111	119,674.55
Manual Checks	0	0	0.00
Voided Checks	0	26	-3,250.00
Bank Drafts	4	4	99,113.86
EFT's	0	0	0.00
Totals	180	141	215,538.41

Designated Reserve Fund Balances as of June 30, 2017	Fund Balance
Fire & Ambulance Department	
Breathing Apparatus Equipment Replacement	76,855
Future Equipment Replacement	12,178
Workers Comp PASIS Outstanding Claims	12,432
Subtotal Fire & Ambulance Department Designated Reserve Funds	101,465
Fire Department Operating Reserve	1,467,259
Ambulance Department Operating Reserve	31,985
Subtotal Fire & Ambulance Department Operating Reserve Funds	1,499,243
Recommended Reserve Fund Target (6 Months Operating Expenses)	1,022,579
Operating Reserve Surplus / (Shortfall)	476,665
Wastewater Division	
Wastewater Capital Improvement Project Reserve	202,068
Wastewater System Connection & Capacity Charges	119,603
Wastewater Infrastructure R&R Reserve (CWSRF Debt Reserve)	169,143
Subtotal Wastewater Designated Reserve Funds	490,813
Wastewater Operating Reserve Fund	124,164
Recommended Operating Reserve Fund Target (4 Months Operating Expenses)	499,285
Operating Reserve Surplus / (Shortfall)	(375,121)
Water Division	
Water Capital Improvement Project Reserve	140,952
Water System Connection & Capacity Charges	5,382
Water Infrastructure R&R Reserve (MFC Debt Reserve)	65,341
Subtotal Water Designated Reserve Funds	211,675
Water Operating Reserve	361,774
Recommended Operating Reserve Fund Target (4 Months Operating Expenses)	530,659
Operating Reserve Surplus / (Shortfall)	(168,886)
Assessment Districts	
Sewer Assessment District No. 7 O&M	25,053
Water Assessment District No. 9 Construction Funds	37,739
Water Assessment District No. 10 Construction Funds	26,421
Water Assessment District No. 10 O&M	207,170
Water Assessment District No. 10 Bond Reserve Fund	112,006
Subtotal Assessment Districts	408,389
Total District Designated & Operating Reserve Funds	2,789,134
Assessment District Funds	408,389
Combined Pooled Cash	3,197,523
Checking Account (General)	133,121
LAIF	2,928,139
York Insurance Deposit	17,358
BNY Mellon (AD #10 Bond Reserve)	117,906
Petty Cash	1,000
Combined Pooled Cash	3,197,523

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017

TO: Board of Directors

FROM: Ryan Gross, General Manager

SUBJECT: CONSIDER RECEIVING AND FILING THE FISCAL YEAR
ENDING 2017 ANNUAL BOARD AND EMPLOYEE EXPENSE
REPORT

RECOMMENDATION

Receive and file the Fiscal Year 2016/2017 Annual Board and Employee Expense Report.

REASON FOR RECOMMENDATION

Per Government Code Section 53065.5, the District is legally required to annually disclose any reimbursements paid in the preceding fiscal year that are at least one hundred dollars for each individual charge for services or product received.

BACKGROUND INFORMATION

Per Government Code Section 53065.5 each special district, as defined by subdivision (a) of Section 56036, shall, at least annually, disclose any reimbursement paid by the district within the immediately preceding fiscal year of at least one hundred dollars (\$100) for each individual charge for services or product received. "Individual charge" includes, but is not limited to, one meal, lodging for one day, transportation or a registration fee paid to any employee or member of the governing body of the district. The disclosure requirement shall be fulfilled by including the reimbursement information in a document published or printed at least annually by a date determined by that district and shall be made available for public inspection.

ATTACHMENTS

Attachment 1 - Fiscal Year Ending 2017 Annual Board and Employee Expense Report

Running Springs Water District
Employee Expenses Reimbursed by the District
Expenses Incurred on Behalf of the District
Fiscal Year: July 1, 2016 - June 30, 2017

ATTACHMENT 1

Employee	Date	Description	Employee		Registration		Meals	Mileage	Medical	Boots	Uniform	Total
			Development	Misc.	Fees	Lodging						
Aberg, Rob	7/12/2016	State/Local CRD			260.00							260.00
Aberg, Rob	7/27/2016	Uniform Reimbursement									236.78	236.78
Aberg, Rob	8/9/2016	Medical Reimbursement						138.20				138.20
Aberg, Rob	8/22/2016	Medical Reimbursement						195.00				195.00
Aberg, Rob	9/13/2016	Medical Reimbursement						235.00				235.00
Aberg, Rob	10/24/2016	Medical Reimbursement						220.00				220.00
Aberg, Rob	12/14/2016	Medical Reimbursement						260.00				260.00
Aberg, Rob	1/12/2017	Medical Reimbursement						145.00				145.00
Aberg, Rob	2/2/2017	Medical Reimbursement						301.99				301.99
Aberg, Rob	3/6/2017	Medical Reimbursement						165.00				165.00
Aberg, Rob	4/6/2017	Training/ Class Reimburse	330.00									330.00
Aberg, Rob	4/19/2017	Medical Reimbursement						356.40				356.40
Aberg, Rob	5/16/2017	Medical Reimbursement						2680.00				2680.00
Aberg, Rob	6/29/2017	Medical Reimbursement						489.72				489.72
Aldama, John	1/22/1900	Ambulance Recert	152.00									152.00
Bobroff, Randy	5/2/2017	Supplies Reimbursement		679.39								679.39
Borrie, Joe	11/16/2016	Uniform Reimbursement									166.18	166.18
Corley, George	7/7/2016	Medical Reimbursement						376.44				376.44
Corley, George	8/9/2016	Medical Reimbursement						370.60				370.60
Corley, George	9/6/2016	Medical Reimbursement						371.44				371.44
Corley, George	10/14/2016	Medical Reimbursement						401.44				401.44
Corley, George	11/30/2016	Medical Reimbursement						370.60				370.60
Corley, George	12/5/2016	Medical Reimbursement						356.44				356.44
Corley, George	2/27/2017	Medical Reimbursement						781.09				781.09
Corley, George	3/8/2017	Medical Reimbursement						386.91				386.91
Corley, George	4/14/2017	Medical Reimbursement						377.04				377.04
Corley, George	5/2/2017	Medical Reimbursement						397.04				397.04
Corley, George	6/8/2017	Medical Reimbursement						411.45				411.45
Davis, Matt	7/27/2016	Medical Reimbursement						405.00				405.00
Davis, Matt	6/30/2017	Medical Reimbursement						485.22				485.22
Eaton, Joan	8/3/2016	Medical Reimbursement						134.39				134.39
Eaton, Joan	8/25/2016	Medical Reimbursement						110.42				110.42
Eaton, Joan	8/31/2016	Medical Reimbursement						100.00				100.00
Eaton, Joan	9/19/2016	Medical Reimbursement						136.72				136.72
Eaton, Joan	9/21/2016	Medical Reimbursement						500.00				500.00
Eaton, Joan	10/5/2016	Medical Reimbursement						103.19				103.19
Eaton, Joan	10/17/2016	Medical Reimbursement						112.12				112.12
Eaton, Joan	11/2/2016	Medical Reimbursement						103.33				103.33
Eaton, Joan	11/22/2016	Medical Reimbursement						157.16				157.16
Eaton, Joan	12/8/2016	Medical Reimbursement						110.00				110.00
Eaton, Joan	12/21/2016	Medical Reimbursement						110.94				110.94
Eaton, Joan	1/12/2017	Medical Reimbursement						154.81				154.81
Eaton, Joan	3/6/2017	Medical Reimbursement						114.48				114.48
Eaton, Joan	3/27/2017	Medical Reimbursement						156.16				156.16
Eaton, Joan	5/2/2017	Medical Reimbursement						196.08				196.08
Eaton, Joan	6/2/2017	Medical Reimbursement						288.26				288.26
Eaton, Kevin	4/3/2017	Paramedic Cert Reimburse	495.00									495.00
Gross, Ryan	10/18/2016	Mileage Reimbursement						141.48				141.48
Gross, Ryan	12/14/2016	Mileage Reimbursement						186.84				186.84
Gross, Ryan	12/21/2016	Gym Membership		215.00								215.00
Gross, Ryan	4/19/2017	Mileage Reimbursement						163.60				163.60
Holzer, David	4/14/2017	Training/ Class Reimburse	375.00									375.00
Houser, Neil	10/13/2016	Uniform Reimbursement									484.42	484.42
Jenkins, Kent	7/12/2016	Medical Reimbursement						166.00				166.00
Jenkins, Kent	7/12/2016	Medical Reimbursement						1587.20				1587.20
Jenkins, Kent	10/4/2016	Medical Reimbursement						1335.94				1335.94
Jenkins, Kent	12/16/2016	Medical Reimbursement						1552.60				1552.60
Jenkins, Kent	2/16/2017	Medical Reimbursement						1372.86				1372.86
Jenkins, Kent	4/19/2017	Medical Reimbursement						1695.28				1695.28
Jenkins, Kent	6/22/2017	Medical Reimbursement						3403.38				3403.38
Leyva, Nicholas	10/26/2016	Uniform Reimbursement									453.11	453.11
Mayfield, Linda	7/20/2016	Medical Reimbursement						440.00				440.00
Mayfield, Linda	8/22/2016	Medical Reimbursement						445.00				445.00
Mayfield, Linda	8/31/2016	Medical Reimbursement						430.00				430.00
Mayfield, Linda	9/27/2016	Medical Reimbursement						440.00				440.00
Mayfield, Linda	9/29/2016	Medical Reimbursement						193.00				193.00
Mayfield, Linda	10/20/2016	Medical Reimbursement						672.00				672.00
Mayfield, Linda	11/7/2016	Medical Reimbursement						257.90				257.90
Mayfield, Linda	11/17/2016	Medical Reimbursement						552.94				552.94
Mayfield, Linda	12/14/2016	Medical Reimbursement						173.65				173.65
Mayfield, Linda	12/21/2016	Medical Reimbursement						440.00				440.00
Mayfield, Linda	1/25/2017	Medical Reimbursement						440.00				440.00
Mayfield, Linda	2/8/2017	Medical Reimbursement						926.10				926.10
Mayfield, Linda	2/16/2017	Medical Reimbursement						440.00				440.00
Mayfield, Linda	3/29/2017	Medical Reimbursement						452.63				452.63
Mayfield, Linda	4/21/2017	Medical Reimbursement						445.00				445.00

Running Springs Water District
Employee Expenses Reimbursed by the District
Expenses Incurred on Behalf of the District
Fiscal Year: July 1, 2016 - June 30, 2017

Employee	Date	Description	Registration										Total	
			Employee Development	Misc.	Fees	Lodging	Parking	Meals	Mileage	Medical	Boots	Uniform		
Mayfield, Linda	5/25/2017	Medical Reimbursement									480.00			480.00
Mayfield, Linda	6/2/2017	Notary/Medical Reimburse	172.00								135.00			307.00
Mayfield, Linda	6/22/2017	Medical Reimbursement									480.00			480.00
Miller, Trevor	7/15/2016	Medical Reimbursement									291.28			291.28
Miller, Trevor	7/15/2016	Medical Reimbursement									109.00			109.00
Miller, Trevor	11/22/2016	Medical Reimbursement									112.00			112.00
Miller, Trevor	12/14/2016	Medical Reimbursement									1581.87			1581.87
Miller, Trevor	1/30/2017	Gas/Fuel Reimbursement		288.00										288.00
Miller, Trevor	4/6/2017	Medical Reimbursement									1211.05			1211.05
Miller, Trevor	6/8/2017	Medical Reimbursement									189.00			189.00
Miller, Trevor	6/15/2017	Medical/Gym/Boot Reimb	250.00								110.00	191.09		
Morgan, Dave	1/12/2017	Driver Reimbursement		219.00										219.00
Nikas, Nick	1/25/2017	Medical Reimbursement									549.69			549.69
Nikas, Nick	2/27/2017	Medical Reimbursement									449.69			449.69
Nikas, Nick	3/29/2017	Medical Reimbursement									478.00			478.00
Papadakis, John	7/27/2016	Safety Boot Reimbursement										242.99		242.99
Papadakis, John	8/3/2016	Uniform/Drv Reimburse		43.00									244.18	287.18
Pitts, Sam	1/25/2017	Uniform Reimbursement											248.99	248.99
Scotti, Mike	8/22/2016	Class Reimbursement	250.00											250.00
Scotti, Mike	1/12/2017	Instructor Training Reim.	300.00											300.00
Shoopman, Tom	5/25/2017	Uniform Reimbursement											195.96	195.96
Strebel, Cindy	7/12/2016	Supplies Reimbursement		181.76										181.76
Strebel, Cindy	4/6/2017	Training/ Class Reimburse	1120.20											1120.20
Strebel, Cindy	4/14/2017	Training/ Class Reimburse	399.96											399.96
Viero, Richard	7/27/2016	Medical Reimbursement									110.00			110.00
Viero, Richard	8/22/2016	Medical Reimbursement									100.00			100.00
Viero, Richard	9/14/2016	Boot Reimbursement										182.01		182.01
Viero, Richard	9/14/2016	Medical Reimbursement									110.00			110.00
Viero, Richard	11/22/2016	Medical Reimbursement									300.00			300.00
Viero, Richard	12/21/2016	Medical Reimbursement									100.00			100.00
Viero, Richard	3/27/2017	Medical Reimbursement									120.00			120.00
Willemse, Dixi	9/27/2016	Medical Reimbursement									448.79			448.79
Willemse, Dixi	12/21/2016	Medical Reimbursement									375.00			375.00
Willemse, Dixi	3/20/2017	Medical Reimbursement									359.33			359.33
Willemse, Dixi	3/27/2017	Medical Reimbursement									405.00			405.00
Willemse, Dixi	5/18/2017	Medical Reimbursement									113.44			113.44
Willemse, Dixi	6/2/2017	Medical Reimbursement									682.50			682.50
Willemse, Dixi	6/8/2017	Medical Reimbursement									397.00			397.00
Willemse, Dixi	6/22/2017	Medical Reimbursement									101.46			101.46
Winter, Dave	1/12/2017	Boot Reimbursement										139.00		139.00
Grand Total			\$3,844.16	\$1,626.15	\$260.00	\$0.00	\$0.00	\$0.00	\$491.92	\$41,025.66	\$755.09	\$2,029.62		\$49,481.51

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017

TO: Board of Directors

FROM: Ryan Gross, General Manager

**SUBJECT: CONSIDER APPROVING RESOLUTION NO. 19-17, ADOPTING
STANDARDS FOR DOMESTIC WATER AND SEWER
FACILITIES**

RECOMMENDED BOARD ACTION

Consider approving Resolution No. 19-17, adopting Standards for Domestic Water and Sewer Facilities.

REASON FOR RECOMMENDATION

To formally adopt the standards.

BACKGROUND INFORMATION

All of the standards for domestic water and sewer facilities have been incorporated into the attached document.

ATTACHMENTS

Attachment 1 – Resolution No. 19-17

RESOLUTION NO. 19-17

**RESOLUTION OF THE BOARD OF DIRECTORS OF
RUNNING SPRINGS WATER DISTRICT ADOPTING
STANDARDS FOR DOMESTIC WATER AND SEWER
FACILITIES**

WHEREAS, the Board of Directors desires to adopt its Standards for Domestic Water and Sewer Facilities;

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of Running Springs Water District does hereby approve and adopt the attached Standards for Domestic Water and Sewer Facilities.

ADOPTED this 19th day of July, 2017.

Ayes:
Noes:
Abstentions:
Absent:

President of the Board of Directors
Running Springs Water District

ATTEST:

Secretary of the Board of Directors
Running Springs Water District

RUNNING SPRINGS WATER DISTRICT



STANDARDS FOR DOMESTIC WATER AND SEWER FACILITIES

**REVISED
July 19, 2017**

Resolution No. 19-17

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DEFINITIONS, TERMS AND ABBREVIATIONS

DEFINITIONS

This document is intended for Developers and Residents who wish to make improvements to existing water or sewer facilities or who wish to install new water or sewer facilities. Engineers that are working on Capital Improvement Projects for the District should use this document as the basis of their design but must also contact the District General Manager for a current boiler plate specification document for use in preparing project specifications.

Wherever used in this Standards, Specifications and Contract Documents, the following shall have the meanings indicated which shall be applicable to both the singular and plural thereof.

Acceptance, Final Acceptance - The formal action by the District's Board of Directors accepting the Work as being complete through a Board Action during a regular or special Board Meeting.

Accepted Bid - The bid (proposal) accepted by the District's Board of Directors through a Board Action during a regular or special Board Meeting.

Addenda - Written or graphic instruments issued prior to the opening of sealed bids which modify or interpret the Contract Documents and Drawings by additions, deletions, clarifications or corrections.

Agreement - The written agreement (contract) executed between the District and the Contractor covering the performance of the Work.

Approved Equal – Means the written approval by the District or the District Engineer that proposed substitutes for a declared standard or piece of equipment is acceptable for the intended use. “Equal” products must *meet or exceed* the standards of performance of the item(s) specified or detailed on the plans and in the specifications. All requests for substitutions shall be made in writing a minimum 15 working days before the intended Bid Opening or use. For items approved on Capital Projects after a contract has been awarded, cost reductions shall be credited to the District where cost increases will be absorbed by the Contractor. For Developer projects, approval for substitutions will be secured prior to the use and/or installation of the equipment. Substitute items that are installed prior to securing written approval will be subject to removal at the Developer's expense; failure to remove unapproved substitute items will result in non-approval of the work and the Developer will not be allowed to connect to District facilities.

“As-Built” or “Record Drawing” Plans – These are red lined modifications to the contract drawings, schematics or other graphical representation of the work completed by the Contractor. *All field changes* shall be marked on *both* the Contractor's and Inspector's field copies of the official contract plan set at the time field changes are made. At the end of the project, prior to final acceptance by the District, the Contractor's set of “Record Drawings” shall be submitted to the

District in both hard copy and digital format (digital format shall note the changes via a revision cloud on each sheet).

Bid - The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bidder - Any person, firm or corporation submitting a Bid for the Work.

Bonds - Bid, Performance, and Payment Bonds and other instruments of security, furnished by the Contractor and his surety in accordance with the Contract Documents.

Change Order - A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

Certificate of Insurance (or Insurance Certificate) and Endorsement - A document underwritten by an insurance company in the types and amounts listed in the Contract which name the District and Engineer (if applicable) as additional endorsees; Insurance must meet the issuing requirements as set forth in the Contract.

Contract - The written contract (agreement) executed between the District and the Contractor covering the performance of the Work.

Contract Documents - The Contract Documents for District sponsored Capital Improvement Projects include: Request for Bid, Information for Bidders, Bid, Bid Bond, Agreement, Payment Bond, Contract Performance Bond, Certificate of Insurance and Endorsement, Notice of Award, Notice to Proceed, Notice of Completion, Notice of Termination, Change Order, General Conditions, Supplemental General Conditions, Special Conditions, Detailed Technical Provisions, Cost Estimate, Drawings, and Addenda.

The Contract Documents for Developer sponsored Capital Improvement or Other Improvement Projects shall include: Detailed Plan and Profile Drawings, Detailed Technical Specifications, Cost Estimates, Project Schedule, Developer Fees, Inspection Fees, Certified Tests during construction, and submittal of digital and hard copy red lined record drawings at the conclusion of construction.

Contract Performance Bond - A written guarantee from a bonding or insurance company that will ensure the contract work is completed either by the Contractor, or by other forces hired by the District and paid by the Bonding/Insurance Company upon default by the successful Contractor to complete the work in the allotted time frame.

Contract Price - The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

Contract Time - The number and type of days stated in the Contract Documents for the completion of the Work; if the type of day is not specified, it shall mean working day (Monday through Friday, excluding District observed holidays).

Contractor - The person, firm or corporation with whom the District has executed the Agreement.

Detailed Technical Provisions - A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction system, standards and workmanship.

District - Running Springs Water District, its officials, employees, consultants and agents.

District's Representative - The person or engineering firm authorized by the District to represent it during the performance of the Work by the Contractor and until final acceptance. The District's Representative is referred to throughout the Contract Documents as if singular in number and masculine in gender. The District's Representative means the District's representative or his assistants.

Drawings - The part of the Contract Documents which show the characteristics and scope of the Work to be performed and which have been prepared or approved by the Engineer; see also **Plans**. All plans Drawings or Plans shall contain the following:

Title Sheet

Index Sheet: Index of Drawings, Vicinity Map, Location Map, General Notes

Plan and Profile Sheet(s)

Detailed Drawing Sheet(s)

Engineer - The person, firm or corporation named as such in the Contract Documents.

Field Order - A written order effecting a change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by the Engineer to the Contractor during construction.

Laboratory - The laboratory authorized by the District or the District's representative to test materials and work involved in the Project.

Manufacturer - A person, firm or corporation that fabricates, processes, or creates from raw materials or component parts, materials or equipment to be incorporated into the Project.

Notice of Award - The written notice of the acceptance of the Bid from the District to the successful Bidder.

Notice of Completion - The written notice of the acceptance of the completed project by the District's Board of Directors to the contractor.

Notice to Proceed - Written communication issued by the District to the Contractor authorizing him to proceed with the Work and establishing the date of commencement of the Work.

Notice of Termination - The written notice of the termination of the contract by the District to the contractor; this may be with or without cause or for the sole convenience of the District pursuant to the provisions of the Contract.

Payment Bond - A written guarantee from a bonding or insurance company that will ensure that products and services secured by the General Contractor are paid in the event the Contractor defaults or fails to honor its obligations under the contract to each supplier or subcontractor.

Plans - Contract drawings, schematics or other graphical representation of the work to be completed by the Contractor.

Plan Review by the District (Developer Plans) -The District will review plans submitted by Developers within 15 working days for the first review and ten (10) working days for each subsequent review. Plan reviews in excess of three (3) will require the Developer and the Developer's Engineer to meet with the District's General Manager, appropriate water, sewer or fire staff, and the District Engineer to formulate a way to resolve the outstanding issues. Plan review by the District and/or the District Engineer may be accelerated by payment of a fast-track fee established by District Resolution each Fiscal Year. Upon payment of the appropriate fees and submittal of five (5) bond sets of plans and accompanying specifications (if any) as well as a digital copy in PDF format, the review timer will start.

Project - The undertaking to be performed as provided in the Contract Documents.

Request for Bid - The District shall either formally or informally request sealed quotes, or "bids" for services to be provided by a Contractor. Formal Bid Requests shall be published in accordance with either the State Public Contracting Code or the Federal contracting Requirements and will be open to all eligible Contractors so licensed in accordance with the Notice Inviting Bids. Informal Bid Requests will be issued to those Contractors already on a Pre-Qualified List of Contractors; a Notice Inviting Bids will not be published and only those Contractors that are pre-qualified and that have been invited will be allowed to submit a quote or bid to the District for the work proposed.

Resident Project Representative - The authorized representative of the District who is assigned to the Project site or any part thereof.

Shop Drawings - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a Subcontractor, Manufacturer, Supplier or distributor, which illustrate how specific portions of the Work shall be fabricated or installed. Six (6) sets of each are required for review; digital copies are permissible but the Contractor/Developer will pay for printing costs incurred either by the District or the District Engineer necessary for providing the requisite originally stamped document that is to remain on-site during the progress of the project. Upon

approval by the District, two (2) copies will be returned to the Contractor/Developer for its use during construction; one (1) set bearing the original approval stamp shall remain on-site for the duration of the project.

Special Conditions - Modifications to Detailed Technical Provisions.

Specifications - The General Conditions, Supplemental General Conditions, Special Conditions, and Detailed Technical Provisions of these Contract Documents.

Standard Drawings - These Standard Drawings shall form the basis of all District project drawings; the design engineer shall incorporate the appropriate standard into the project design or shall modify the standard as needed to fit site conditions; modifications to the Standard Drawings shall be shown on the contract documents with the intended modifications and shall state such on the drawing that the standard has been modified – hand or digitally altered District Standards are not acceptable.

Subcontractor - An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site.

Substantial Completion - That date as certified by the District Engineer when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.

Supplemental General Conditions - Modifications to General Conditions that are specifically applicable to a specific project.

Supplier - Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

Utility - Public or private fixed works for the transportation of fluids, gases, power, signals or communications.

Work - All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.

Written Notice - Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the Work.

TERMS

Wherever used in the Contract Documents, the terms “directed”, “required”, “permitted”, “ordered”, “designated”, “prescribed”, or terms of like import are used, it shall be understood that the direction, requirements, permission, order, designation, or prescription of the District’s Representative is intended. Similarly, the terms “approved”, “acceptable”, “satisfactory”, “or equal”, or terms of like import shall mean approved by or acceptable to or satisfactory to the District’s Representative, unless otherwise expressly stated.

The word “provide” shall be understood to mean furnish and install.

ABBREVIATIONS

AC	asphalt cement
ANSI	American National Standards Institute
ASA	American Standards Association
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
Cal-OSHA	California Occupational Safety and Health Administration
CBC	California Building Code
CFC	California Fire Code
CI	cast iron
CMI&C STL	cement mortar lined and coated steel
DI	ductile iron
DPHS	Department of Public Health Services of State of California
ft	foot or feet
g	gram or grams
gpm	gallon(s) per minute
HDPE	high density polyethylene
in	inch or inches
ISO	International Organization for Standardization
MCC	motor control center
mg/L	milligrams per liter
NEC	National Electric Code
NFPA	National Fire Protection Association
NGS	National Geodetic Survey
OSHA	Occupational Safety and Health Administration

PLC	programmable logic controller
psi	pounds per square inches
PVC	polyvinyl chloride
rpm	revolution(s) per minute
RSWD	Running Springs Water District
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SCAQMD	South Coast Air Quality Management District
SSPC	Steel Structures Painting Council
TW	twin wire
U/L	Underwriters' Laboratories, Inc. or UL
UFC	Uniform Fire Code
VFD	variable frequency drive

NOTICE REGARDING MATERIALS THAT DO OR MAY CONTAIN ASBESTOS

The Contractor and Developer are hereby noticed that some existing District owned facilities were constructed prior to 1980 and do or may contain asbestos fibers. Materials in which asbestos may or will be found include asphalt cement or transit pipe, truss pipe, concrete blankets, insulation, etc.

The Contractor shall follow California Occupational Safety and Health Administration (Cal-OSHA) requirements and guidelines for the connection to asbestos containing material, including tapping and the removal of pipe sections; only qualified persons/firms certified by the State of California shall cut and remove pipe or other asbestos containing materials. Steps shall be taken by the Contractor to prevent friable asbestos or other asbestos particles regardless of size from entering the soil, the groundwater table, surrounding streams, or the air.

**PART 1.
DESIGN CRITERIA**

SECTION 1.1. DOMESTIC WATER DESIGN CRITERIA

A Feasibility Study shall be performed by the District Engineer to ensure District facilities have the capacity to supply both domestic and fire protection flow the newly developed areas. The Developer shall pay the fee to the District prior to the preparation of the Study. A full set of plans and information that includes the number of dwelling units, fixture units and flow calculations shall be provided prior to the commencement of the Study. Once the Study has been completed, the Developer will be directed to the most logical connection point for the facility, or if the Developer will be required to install a new water main line along with the required connection point.

The following requirements pertain to the design and preparation of Plans for construction of the various components to the domestic water system.

1.1.01. GENERAL

- a. Scope - All wells, transmission and distribution mains, storage reservoirs and booster stations to be owned, maintained and/or operated by the District shall be designed and plans prepared in accordance to the criteria set forth in this section, and shall be so designed to conform to all applicable State and local laws, ordinances and regulations.
- b. Design Competence - In general, all water facilities shall be designed by Professional Engineers licensed in the State of California according to accepted practice in the water field. All designs of booster stations and water reservoirs shall be approved by the District. The Developer shall provide the District with an estimate of the design cost and shall submit plans prepared by its engineer to the District for approval prior to beginning the work.
- c. Legal Access - Each lot to be served by water shall abut a public street or recorded easement containing a water line, or be provided with permanent legal access to such waterline. Permanent legal access or easement shall be a minimum of 25-feet in width and shall be granted to Running Springs Water District in perpetuity for the sole purpose of maintaining utilities within said easement.
- d. Deviations - Deviations from any of the criteria adopted herein may be permitted upon written request to and approval by the District.
- e. Rules and Regulations - Other controlling documents regarding water service include, but are not limited to, *Running Springs Water District Ordinance No. 8* and *Resolution No. 16-82*.

1.1.02. WATER DOMESTIC USE DEMAND

Water flow for domestic use shall be designed based on the following demand data:

Average Daily Use of one hundred and eighty (180) gallons per capita per day
Peak Daily Flow of two (2) times the average daily flow
Peak Hourly Flow of four (4) times the average annual daily flow

1.1.03. FIRE FLOW

a. Fire Flow - Fire flow demand on the system shall be as follows:

Single Family Residential (R-1)	1,000 gallons per minutes (gpm) for 3 hours
Single Family Residential (R-1) adjacent to forest service lands.....	
.....	2,000 gpm for 2 hours
Multiple-Family Residential (R-2 & R-3).....	1,500 gpm for 6 hours
Commercial.....	2,250 gpm for 6 hours
Institutional.....	2,250 gpm for 6 hours

The above flows shall be based on twenty (20) pounds per square inch (psi) minimum residual pressure at the point of fire flow.

Due to the nature of forest wild fires, Fire Pumps shall not be used to meet fire flow demand.

In addition to the flow requirements at the fire hydrant, the Developer will be required to provide a fire sprinkler system for each structure erected on each lot in accordance with the current Building Code. A fire meter will be installed at each lot per District Standard Drawing No. W-22 for the interior fire sprinkler system. This system shall be designed by a qualified licensed contractor or engineer.

- b. Fire Access - All roads in the District receiving fire protection service shall be paved with asphalt concrete or Portland cement concrete to a minimum width of twenty-six (26) feet. Dead-end roads shall terminate in a cul-de-sac with turning radius to accommodate fire trucks without the need to back up.
- c. Other Fire Requirements - Developers shall contact the District’s Fire Chief regarding additional rules and regulations of the District, the latest addition of the California Building Code (CBO), the Uniform Fire Code (UFC) and the International Organization for Standardization (ISO).

1.1.04. SUPPLY

- a. General - The supply system shall be designed as a multi-source system capable of handling daily peak demand with the largest source of supply not in operation.
- b. Wells - Wells shall be housed in a structure compatible with the surroundings. Provisions within this structure shall be made to facilitate removing of pumps, motors and other

equipment. Wells shall be located upon land to which legal access is provided and for which a permanent easement or title is recorded. Vertical turbine pumps shall meet the standards set forth in American Water Works Association (AWWA) Standard E-101.

1.1.05. STORAGE

Storage capacity shall consist of operational storage plus fire flow storage as related to each pressure zone. Operational storage shall consist of fifty percent (50%) of the peak daily flow for one (1) day. The inclusion of emergency storage shall be considered for pressure zones adjacent to forest service lands.

Design of welded steel water reservoirs shall conform to AWWA D-100, latest edition; the freeboard requirement for sloshing shall not apply. Appurtenances shall include two (2) wall access hatches, gauge board, drain pipe, roof hatch, galvanized ladder, remote water level monitoring equipment, four (4) one-and-one-quarter-inch (1-1/4") heavy half coupling nozzles with bronze bushings and any other appurtenances required by AWWA or California Occupational Safety and Health Administration (Cal-OSHA).

Glass-lined storage tanks will be reviewed on a case-by-case basis.

Storage facilities shall be located upon land to which legal access is provided and for which a permanent easement or title is recorded. Access road shall be paved and the site landscaped and protected by chain-link fence.

1.1.06. BOOSTER STATIONS

- a. General - Booster stations shall be located in areas accessible to both men and equipment and upon land to which legal access is provided and for which a permanent easement or title is recorded.
- b. Pumps - Booster stations shall be designed with a minimum of two (2) pumps. In systems where pumps shall meet instantaneous peak demands, without supplementary flows from storage, the pump capacity shall be based on peak hour demand with one (1) pump out of service. In systems with adequate available flows from storage to supplement pumping, pump capacity shall be based on peak day demand with one (1) pump out of service. Protection shall be provided to protect pumps from operating under no-flow conditions, over pumping and overloading by means of appropriate automatic controls. Vertical pump turbines shall meet or exceed the standards set forth in AWWA Standard E-101.
- c. Structure - Booster pumps shall be housed in a weather-tight structure compatible with the surroundings. Provisions within this structure shall be made to facilitate removing of pumps, motors and other equipment.

1.1.07. TRANSMISSION AND DISTRIBUTION MAINS

- a. Capacity - The capacity of water mains shall be determined by using the Williams & Hazen Formula with a “C” value = 140 for polyvinyl chloride (PVC) pipe. The velocity of the water in the pipe shall be limited to eight (8) feet per second maximum under fire flow conditions.
 - 1. The minimum pipe diameter shall be eight (8) inches unless a smaller diameter is approved by the District.
 - 2. Minimum pressure in mains shall not be less than forty (40) psi during peak operations without fire flows and shall not be less than twenty (20) psi during peak operations with fire flow.
- b. Depth of Cover - A three and one-half (3-1/2) foot (42”) minimum depth of cover from top of pipe to finish grade or top of pavement shall be maintained on all pipelines below grade.
- c. Location and Alignment - Wherever possible, water mains shall be located in public streets parallel to street centerlines. On a typical mountain road section the main shall be located five (5) feet from the center of paving on the “fill” side of the road.
- d. Clearance from Sewer Lines - Where possible, a minimum horizontal clear distance of ten (10) feet shall be provided between water line and sewer line laid parallel. Where such lines cross a minimum vertical clearance of one-foot (1-ft) shall be provided with the sewer under the water line.

If the above conditions cannot be met, special construction will be required according to the requirements set forth on Standard Drawing No. S-1.

- e. Mains Under Structures - No water mains shall be located beneath a structure except as approved in writing by the District.
- f. Looped Lines and Flush-Outs - Looped lines shall be provided where economically feasible. Where dead-ends are necessary, include provisions for flushing. No flushing device shall be connected directly to a sewer. Flush-out assembly and size shall conform to Standard Drawing No. W-8.

Fire Hydrants may be used for flush-out, where applicable and upon approval by the District.

- g. Valves - Provide sufficient valves to permit isolation without taking adjacent sections out of service for repair of leaks and breaks and in accordance with good water works practice. Except for transmission lines, in no case should a length of pipe greater than one thousand

three hundred twenty (1,320) feet be left without valve control. A valve box and cover shall conform to Standard Drawing No. W-11 in these Specifications, unless part of an assembly covered by another Standard Drawing.

- h. Fire Hydrants - Fire hydrants shall be spaced along distribution mains as follows:

- Single Family Residential (R-1).....600 feet maximum
 - Multiple-Family Residential, Commercial or Industrial.....300 feet maximum

Spacing of fire hydrants shall not exceed the above maximum distances but hydrants may be spaced at closer intervals in conformance with requirements of local fire control authorities. Hydrants shall be located at street corners or intersections whenever practical and in all cases on the “bank” side of the road section. Hydrants shall be six (6) inch with two, two and one-half (2 - 2-1/2) inch outlets and one, four and one-half (1 - 4-1/2) outlet streamer. Hydrant installation assembly shall conform to Standard Drawing No. W-2.

- i. Service Connection – Domestic Service connection assembly shall conform to Standard Drawings No. W-5A or W-5B. Residential fire service connection assembly shall conform to Standard Drawing No. W-22. Irrigation Service is to be considered on a case-by-case basis pursuant to current District Resolutions and Policies.

- j. Air and Vacuum Valves - Air release valves, air vacuum valves and air-vacuum combination valves shall be used in supply, transmission and distribution lines according to accepted practice in the water field. Air-vacuum combination valves shall be provided at all high points in distribution system mains.

Air and vacuum valve assemblies shall conform to Standard Drawing No. W-6.

- k. Blow-Offs - Blow-off assemblies will be required at all low points in distribution system mains except at dead-ends where a flush-out is provided. Blow-off assemblies shall conform to Standard Drawing No. W-7 in these Specifications.

- l. Thrust Blocks - Concrete thrust blocks shall be installed, as required, according to Standard Drawings No. W-3A and W-3B in these Specifications.

- m. The Contractor shall provide and install locator wire over all plastic pipe water mains. The wire shall be 12 gauge twin wire (TW) solid, soft drawn, insulated copper wire. The wire shall be wrapped around the pipe at ten (10) foot intervals and brought up inside each gate valve to within six (6) inches of the valve cover all in accordance with Standard Drawing No. W-14 in these Specifications.

1.1.08. ELECTRICAL EQUIPMENT

- a. All electrical starters, switches, lights, motors, fixtures, controllers and instruments shall be enclosed and constructed in accordance with the National Board of Fire underwriter's specifications to prevent the hazardous conditions anticipated. Arc-flash and shock hazard warning marking shall be located in accordance with NFPA 70 of National Electrical Code. The Health and Safety Code of the State of California shall also be complied with. Outside type convenience outlets shall have ground fault with separate circuit and breaker.
- b. All starters shall be of the magnetic type and shall be provided with hand-off automatic selector switches. Only copper wire conductors shall be permitted.
- c. The motor starter shall be operated automatically from a wet well liquid-level control. Controls of the air-purging type are required with programmable controller and modem capable of sending signals to a SCADA system located at the District office.
- d. All pump motors shall be of variable frequency drive (VFD) unless otherwise approved by the District.
- e. Programmable Logic Controllers (PLCs) shall be TESCO L2000 or approved equal. Autodialer shall be AD-2000, 4 Channel Auto Voice Dialer or approved equal.

1.1.09. AUTOMATIC CONTROLS

Wells, booster stations and storage facilities shall be electrically interconnected to give the system complete automatic control. Provisions shall be made for manual operation of all controls in the event of failure of automatic controls and all automatic controls shall be designed fail-safe. A sensor shall be installed the full depth of the well with a gauge in the control panel that reads in feet of water above the well pump. Arc-flash requirements shall be met with all electrical equipment to be installed in accordance with the latest National Electric Code (NEC) requirements.

1.1.10. MISCELLANEOUS REQUIREMENTS

- a. Pump Discharge Runs - A gate valve shall be placed on the discharge line of each pump. A check valve shall be placed on each discharge line between the gate valve and the pump.
- b. Sufficient valves shall be provided to isolate each pump from the system.
- c. Air release valve, properly vented to the outside of the pump house, shall be provided on each pump discharge line between the check valve and the pump.

- d. Discharge lines shall be protected by a valve to prevent pressure surges created by starting and stopping of the pumps. A pressure relief valve shall also be required in the discharge line.

1.1.11. PLAN PREPARATION

Plan prepared for additions to the District's water system and submitted to the District for approval shall be in substantial form and meet the requirements as herein set forth.

- a. The Drawings shall be on Mylar or vellum in the size of 36 inches by 24 inches (36" x 24" – D-size Format) or other sizes approved by the District. Digital copies in PDF, AutoCAD or other formats acceptable to the District recorded in appropriate media may be required.
- b. The General Notes shall appear once on the first plan and profile sheet. A key map showing all roads shall be shown on the second plan sheet. All required certifications and approvals shall also appear on the first sheet
- c. Each sheet shall have a title block in the lower right-hand corner with approval blanks for the District and District Engineer. The title block shall show the designation of "Running Springs Water District" and the name of the improvement.
- d. Each sheet shall have a "North" arrow, when applicable.
- e. Plan and profile are required for pipelines eight (8) inches in diameter and larger, or for all pipelines not in a paved street. The plan and profile shall have a scale of 1 inch = 40 feet horizontal and 1 inch = 4 feet vertical unless otherwise approved by the District.
- f. At least one (1) bench mark shall be shown and/or described on each plan and profile sheet. The indicated elevation shall be referenced to a National Geodetic Survey (NGS) datum.
- g. Profiles shall show pipe size; existing ground elevation; appurtenances; the depth, size, location and nature of all other utilities which cross over or under the water lines at the location and nature of special construction such as concrete blankets or encasements; flow line elevation at grade changes; and any other information pertinent and necessary to the proper construction and recordation of the water lines.
- h. The Plans shall show the tract and lot numbers of all properties adjacent to the water lines to be constructed.
- i. The Plans shall show limits and types of street pavements, curb, gutter and sidewalk.
- j. The Plans shall show all right-of-way lines, the distance from the centerline of all roads, rights-of-way and easements to the center of the water main to be constructed and other distances necessary to easements.

- k. The Plans shall show location of proposed service connections; tie to street stationing.
- l. The Plans shall show exact location of all structures within twenty (20) feet of the water centerline.
- m. Water line and sewer line plans and profiles may be combined provided that the plan and profile preparation requirements for sewers are satisfied.

1.1.12. TECHNICAL SPECIFICATIONS

The District’s Technical Specifications shall be utilized in the design of water facilities. Technical Specifications are in Part 4 in these Specifications.

1.1.13. STANDARD DRAWINGS

The District’s Standard Drawings shall be utilized in the design of water facilities. Standard Drawings are in Part 5 in these Specifications.

1.1.14. PRE-DESIGN CONFERENCE

A Pre-Design Conference shall be held with engineers and District staff prior to development of Plans in order that any special considerations may be discussed.

1.1.15. DISTRICT ENGINEER CERTIFICATION

The following certificate shall be placed on the front page of the improvement Plans:

I CERTIFY THAT THE DESIGN OF THE WATER SYSTEM HEREON IS
UBSTANTIALLY IN ACCORDANCE WITH THE REQUIREMENTS OF THE
RUNNING SPRINGS WATER DISTRICT.

Approved by: _____ Date: _____
RSWD Engineer

1.1.16. IMPROVEMENT PLAN QUALIFICATION

Approved Construction Plans shall be valid for a period of one (1) year from the date of the District’s approval. If construction has not started within the above period of time, the Construction Plans will be resubmitted by the Developer for additional review and subsequent approval by the District. The new approval will be contingent upon revising the Drawings to reflect changes in District Standards, current Building, Plumbing and Health and Safety codes, and changes in actual files conditions.

SECTION 1.2. SEWER DESIGN CRITERIA

A Feasibility Study shall be performed by the District Engineer to ensure District facilities have the capacity to accept and handle proposed flow from the newly developed areas. The Developer shall pay the fee to the District prior to the preparation of the Study. A full set of plans and information that includes the number of dwelling units, fixture units and flow calculations shall be provided prior to the commencement of the Study. Once the Study has been completed, the Developer will be directed to the most logical connection point for the facility, or if the Developer will be required to install a new sewer main line along with the required connection point.

The following requirements pertain to the design and preparation of Plans for construction of the various components to the sewer system.

1.2.01. GENERAL

- a. Scope – All sewers, sewage lift stations, treatment facilities and appurtenances to be owned, maintained and/or operated by the District shall be designed according to the criteria set forth in this section. The same criteria shall hold for system served but not owned, maintained and/or operated by the District insofar as said criteria may affect the efficiency of the District’s system. All additions to the District’s system shall be plan-checked and inspected by the District.
- b. Design Competence – All District facilities shall be designed by Professional Engineers licensed in the State of California according to accepted practice in the sewerage field. All designs of sewage lift stations and wastewater treatment facilities shall be approved by the District. The Developer shall provide the District with an estimate of the design cost and shall submit plans prepared by its engineer to the District for approval prior to beginning the work.
- c. Sewage Lift Stations and Inverted Siphons – Every effort should be made, within economic reason, to avoid sewage lift stations. Inverted siphons and exposed piping will be allowed only upon written approval from the District, and then only under the most severe circumstances.
- d. Legal Access – Each lot to be served by sewer shall abut a public street or recorded easement containing a sewer, or be provided with permanent legal access to such a sewer. The location of the street, easement or legal access shall permit gravity flow from the lower portion of the lot to the sewer main. Deviations from any of the criteria adopted herein may be permitted upon written request to an approval by the District. Permanent Legal

Access or Easement shall be a minimum of 25-feet in width and shall be granted to Running Springs Water District in perpetuity for the sole purpose of maintaining utilities within said easement.

- e. Rules and Regulations – Other controlling documents regarding sewer service include, but not limited to, *Running Springs Water District Ordinance No. 23*.
- f. Roughness Coefficient – The roughness coefficient used in design shall be $n = 0.013$ for all sewers. If any Manufacturer claims that the “n” factor of his pipe should be less, he must submit documented evidence to substantiate his claim. The reliability of such evidence shall be determined by the District.
- g. Size - All gravity sewer pipes up to and including twelve (12) inch diameter shall be sized to carry the peak flow when fifty percent (50%) full (i.e., $q/Q \leq 0.50$). All larger sewer pipe, except those designed as laterals shall be sized to carry the peak flow when seventy five percent (75%) full (i.e., $q/Q \leq 0.75$). This requirement shall apply regardless of the cross section of the sewer. No sewer main with an internal diameter less than eight (8) inches shall be installed without prior written approval of the District.
- h. Sewer Slopes and Velocities – The minimum allowable slope is that which will give a velocity of not less than two (2) feet per second at peak flow. The purpose of this requirement is to prevent sewage sedimentation and subsequent generation of corrosive gases. The velocity shall be determined by means of the “Manning Formula”, i.e.:

$$V = \frac{1.49}{An} r^{\frac{2}{3}} s^{\frac{1}{2}}$$

In sewers of uniform size passing through manholes without a major change in direction of slope, there shall be no arbitrary drop between inlet and outlet. In sewers which change slope but do not change directions or size, the slopes of the incoming sewers shall be carried through to the outlet of the manhole. Where diameters change, and in junctions involving major direction or slope changes, the various elevators shall be chosen to match water surfaces under average flow conditions at ultimate development of the tributary area (not under maximum flow conditions).

- i. Minimum Slopes – Minimum slopes to be used with various pipe sizes are listed below:

Diameter (inches)	Slope (foot/foot)	Slope (inches/1000 feet)
6	0.0060	72
8	0.0040	48

Diameter (inches)	Slope (foot/foot)	Slope (inches/1000 feet)
10	0.0029	34.8
12	0.0022	26.4
15	0.0016	19.2
18	0.0012	14.4
21	0.0010	12
24	0.0008	9.6

Minimum slopes shall only be used to prevent lengthy runs of deep mains or other critical factors. Under most conditions a minimum slope of one percent ($\pm 1\%$) shall be used.

- j. Exceptions to Minimum Slopes – Where topography limits or prevents the use of minimum slopes as described herein, the District may require an engineer’s report. This report shall describe the alternatives and their economies. The report shall also include an evaluation of prospective maintenance and sewer gas problems. Greater minimum slope than those specified in Section 1.2.01.i hereof may be required where the presence of hydrogen sulfide may be detrimental to and affect the life of the sewer pipe being used.
- k. Slope in Force Main – In force mains, a continuous uphill slope shall be provided from the source to the outlet. The intention is to avoid formation of air pockets.
- l. Curved Sewers – Curvilinear vertical and horizontal alignments will be permitted under the following conditions:
 - 2. No more than one (1) horizontal circular curve and one (1) vertical curve shall be permitted between any two (2) manholes. The curve may be a combination horizontal and vertical, but in no instance may there be more than one (1) vertical and one (1) horizontal curve between two (2) manholes
 - 3. At least one (1) end of the curve shall terminate in a manhole.
 - 4. No sewer on a curvilinear alignment shall be less than eight (8) inch diameter.
 - 5. Curved sewers are necessary to significantly reduce the number of manholes needed or needed to help maintain separation requirements between water main and sewer main.
 - 6. The deflection of joints shall not exceed that recommended by the pipe Manufacturer.

- m. Sewer Under Structure – No sewer main or lateral shall be located beneath a structure except as approved in writing by the District.
- n. Structural Integrity – Provisions shall be made in all cases to preserve the structural integrity of the pipes, conduits, or structures affected.
- o. Depth of Sewer – Permission from the District must be obtained if the following minimum depths cannot be met. In general, the load on the pipe must be considered and adequate precautions should be taken to protect it either by means of encasement support or added strength.

Minimum cover of pipe for various locations:

In public streets in pavement (service to properties permitting).....	5 ft
Lateral sewer (at curb or edge of pavement).....	4 ft
In recorded easement not subject to vehicular traffic.....	3 ft
In recorded easement subject to vehicular traffic.....	5 ft
Stream crossing (below scour line of drainage course, concrete blanket may be required)	3 ft

- p. Sewer Laterals - A sewer lateral serving a single family dwelling or equivalent shall be at least four (4) inch inside diameter. Sewer laterals shall conform to Standard Drawings No S-7 and S-8 and Section 4.19 of these Specifications. Sewer laterals in waterways, easements and deep cuts shall have the end of the lateral brought to minimum depth of five (5) feet from top of ground.
- q. Special Sewer Design Conditions – When it is necessary to construct sewers and appurtenances in areas where a potential erosion hazard exists, individual design considerations shall be given to provide additional protection to the sewer facilities in order to prevent damage. Special design considerations are applicable to stream and canyon crossings, parallel construction to stream beds, construction on steep slopes requiring special anchorage, and shallow sewer construction in roadways. Concrete encasements, cut-off walls, special backfill material (soil cement) and special erosion control facilities may be required.
- r. Clearance from Other Utilities – Special care shall be exercised in locating sewer lines near other utilities, especially water lines. Sewer lines shall, wherever possible, be located one-foot (1-ft) below water lines; where parallel installations occur, a ten-foot (10-ft) horizontal separation shall be maintained. If the above conditions cannot be met, special construction will be required according to the requirements set forth on Standard Drawing No. S-1.

- s. The Contractor shall provide and install locator wire over all plastic pipe sewer mains. The wire shall be 12 gauge twin wire (TW) solid, soft drawn, insulated copper wire. The wire shall be wrapped around the pipe at ten (10) foot intervals and shall terminate at the outside edge of the manhole frame in accordance with Standard Drawing No. S-2 in these Specifications. Install 4" to 6" wide green tape marked "SEWER" or "SANITARY SEWER" at least 4" but no more than 10" above the top of the sewer main; each segment shall be a minimum of 2-feet long spaced at least 10-feet but no more than 14-feet from end to the next end for the length of construction – marker tape shall be centered on the pipe.

1.2.02. OVERSIZING REQUIRED BY DISTRICT

The District may find that the capacity of certain new sewer and sewage lift stations within an area under development should be increased to accommodate future additional development. In such a case, the quantity of additional flow shall be determined by the District's Engineer. The flow resulting from the addition of the developer's and the District Engineer's "computed peak flow" shall be used as the basis of design. The District may pay for any resulting increase in size or depth according to the District's Rules and Regulations.

1.2.03. MANHOLES AND CLEANOUTS

- a. Manhole Location and Spacing – Manholes shall be located at all junctions, all changes in direction (except curved sewers), and all changes in pipe size. Where the distance between manholes required for the foregoing reasons exceeds three hundred (300) feet, good judgment should be used in placing intermediate manholes at points of probable sewer intersections, at beginning or end of curves, or lacking other reasons, at approximately equal intervals. In general, the maximum of three hundred (300) feet should be observed. Good judgment should be used in the locations of manholes along water courses. Manholes and cleanouts shall conform to Standard Drawings No. S-4A, S-4B, S-5 and S-6.
- b. Shallow Manholes – Manholes three (3) feet or less in depth above the shelf shall be of special design; these shall not occur within a public street or other access road that will carry vehicular traffic.
- c. Cleanouts – Dead-end sewer not over one hundred and seventy five (175) feet in length shall terminate in standard cleanouts. Dead-ends over one hundred and seventy five (175) feet shall terminate in standard manholes unless future extension of said dead-end will include a manhole within three hundred (300) feet, in which case a temporary cleanout is permitted; future extension must occur within two (2) years otherwise the more permanent manhole will be required. Sewer mains shall be installed the full width of a parcel where there could be a possibility of the sewer main being extended. Cleanouts shall conform to Standard Drawing No. S-6 and Sections 4.20 of these Specifications.

- d. Drop Manholes – Drop manhole will not be permitted without the written approval of the District.
- e. Frame and Cover – All manholes and cleanouts shall have cast iron frames and covers. Frames and covers shall conform to Standard Drawings No. S-4A, S-4B, S-5 and S-6 and Section 4.20 of these Specifications.

1.2.04. SEWAGE LIFT STATIONS

- a. General – Sewage lift stations shall only be utilized where it is impossible to provide gravity flow to interceptor sewers, trunk sewers, or other portions of the collection system. The use of submersible pumps in a wet well with a separate valve vault is required. Sewage lift stations shall be located in areas accessible to both men and equipment and upon land to which legal access is provided and for which a permanent easement or title is recorded. Where structures above ground are required, the structure shall be compatible with the surroundings. A bypass shall be provided for wet-well maintenance.
- b. Capacity – Capacity of the pumps shall be sufficient to handle ultimate peak flow (i.e. 1.93* x average daily flow) from the tributary area with one pump out of service. If areas outside the proposed development may best be sewerred to a sewage lift station, the District reserves the right to order oversizing of such facilities and provide reimbursement to the developer for the cost increment of the additional construction. The wet well storage capacity shall be sized to be compatible with pump capacity and to eliminate frequent pump cycling.
- c. Stand-by Power – An emergency generator shall be provided for all lift stations ; the Developer is required to coordinate with the South Coast Air Quality Management District (SCAQMD) for the required permit(s) and shall select the appropriate generator fuel source (natural gas, diesel, propane, etc.). Each Generator shall be capable of running two (2) pumps for a period of not less than 12 hours.
- d. Flow Meter – A digital electromagnetic flow recorder with meter mounted transformer shall be provided in the valve vault or a separate vault. The electromagnetic meter shall be as manufactured by ABB_[c3] or approved equal.
- e. Pumps and Motors – At least two (2) pumps shall be provided at each lift station. Pump discharge pipe shall be no less than four (4) inches in diameter. The pump shall be installed so that it will maintain a positive head at the suction inlet under normal operating conditions. The speed of the pumps and motors shall be no greater than seventeen hundred and sixty

* Subject to adjustment based on sewer model simulation.

(1,760) revolutions per minute (rpm), and the pump shaft shall not be supported by the motor shaft. Submersible pumps shall be capable of passing a 3-inch (minimum) sphere.

f. Structure – The wet well or manhole shall be completely separated from the main sewage lift station structure. The sewage lift station structure shall house the motor control center (MCC) and the emergency generator and shall be designed by qualified engineers. Comply with all requirements of the State Division of Industrial Safety during construction of the lift station, including provisions for access, and for the protection of persons and property from mechanical or electrical equipment within the wet well and the supporting building.

g. Electrical Equipment – All electrical starters, switches, lights, motors, fixtures, controllers and instruments shall be enclosed and constructed in accordance with the National Board of Fire underwriter’s specifications to prevent the hazardous conditions anticipated. Arc-flash and shock hazard warning markings shall be located in accordance with NFPA 70 of National Electrical Code; comply with the Health and Safety Code of the State of California at all times. Outside type convenience outlets and those outlets near water sources shall have ground fault with separate circuit and breaker.

2. All starters shall be of the magnetic type and shall be provided with hand-off, automatic selector switches.

3. The motor starter shall be operated automatically from a wet well liquid-level control. Controls of the air-purging type are required with programmable controller and modem capable of sending signals to a Supervisory Control and Data Acquisition (SCADA) system located at the District office.

4. Stand-by equipment shall be started automatically upon power failure.

5. Control panel components shall be mounted in the front cover and shall include, but not be limited to, the following for each pump.

- Running Time Meter
- Running Light
- Auto-Off-Manual Test Switch
- Breaker Switch
- Frequency Counter
- Digital Display and Logging

6. Only copper wire conductors will be permitted.

7. All pump motors shall be of variable frequency drive (VFD) unless otherwise approved by the District.
 8. Programmable Logic Controllers (PLCs) shall be TESCO L2000 or approved equal. Autodialer shall be AD-2000, 4 Channel Auto Voice Dialer or approved equal.
- h. Miscellaneous Requirements
1. Adequate ventilation shall be provided for all lift stations. The ventilation equipment should have a minimum capacity of six (6) turnovers per hour under continuous operation. With intermittent operation, a two (2) minute turnover should be provided. Equipment shall start automatically with door opening.
 2. Gate valve and lever and weight operated swing-check valve shall be located within a separate valve vault.
 3. Chemicals or air injecting into the force main may be required by the District, depending upon an analysis of possible sulfide conditions.
 4. Steel fabricated factory units, if permitted, shall be provided with cathodic protection.
 5. High level alarm circuits shall be wired to a common terminal to transmit signals to the District office via the District's SCADA system.
 6. An electric thermostatically controlled heater shall be provided in the generator building.
 7. Generator building for lift station equipment shall be provided with water service with back-flow prevention device, wash up sink, heater and 115 volt outlets.

1.2.05. PLAN PREPARATION

Plan prepared for additions to the District's sewerage system and submitted to the District for approval shall be in substantial form and meet the requirements as herein set forth.

- a. The Drawings shall be on Mylar or vellum in the size of 36 inches by 24 inches (36" x 24" – D-size Format) or other sizes approved by the District. Digital copies in PDF, AutoCAD or other formats acceptable to the District recorded in appropriate media may be required.
- b. The General Notes shall appear once on the second plan sheet which shall also contain a vicinity map and a location map of the work area. A key map showing all roads shall be

- shown on the second plan sheet. All required certifications and approvals shall appear on the first sheet.
- c. Each sheet shall have a title block in the lower right-hand corner with approval blanks for the District and District Engineer. The title block shall show the designation of “Running Springs Water District” and the name of the improvement.
 - d. Each sheet shall have a “North” arrow.
 - e. The plan and profile shall have a scale of 1 inch = 40 feet horizontal and 1 inch = 4 feet vertical unless otherwise approved by the District.
 - f. At least one (1) bench mark shall be shown and/or described on each plan and profile sheet. The indicated elevation shall be referenced to a National Geodetic Survey (NGS) datum.
 - g. The profile shall show the size of pipe; the pipe class; manhole center location by station; invert; elevation of sewer pipe at manhole center; the existing ground elevation; the grade of pipes in percent; the depth, size, nature and location of all other utilities which cross over or under the sewer; location and nature of special construction such as the encasement or bored casings; and any other information pertinent and necessary to the proper construction and recordation of the sewers, unless otherwise approved by the District.
 - h. The Plans shall show the tract and lot numbers of all properties adjacent to the sewer to be constructed.
 - i. The Plans shall show limits and types of street pavements, curb, gutter and sidewalk.
 - j. The Plans shall show all right-of-way lines, the distance from the centerline of all roads, rights-of-way and easements to the center of the sewer to be constructed.
 - k. The Plans shall show location of proposed sewer service connections; tie to street stationing.
 - l. The Plans shall show exact location of all structures within fifty (50) feet of the centerline of the sewer to be constructed. Show all water wells within three hundred (300) feet of the centerline of the sewer to be constructed.
 - m. Sewer line and water line plans and profiles may be combined provided that the plan and profile preparation requirements for water lines are satisfied.

1.2.06. TECHNICAL SPECIFICATIONS

The District’s Technical Specifications shall be utilized in the design of sewer facilities. Technical Specifications are in Part 4 in these Specifications.

1.2.07. STANDARD DRAWINGS

The District's Standard Drawings shall be utilized in the design of sewer facilities. Standard Drawings are in Part 5 in these Specifications.

1.2.08. PRE-DESIGN CONFERENCE

A Pre-Design Conference shall be held with the Developer's engineers and District staff prior to development of Plans in order that any special considerations may be discussed.

1.2.09. DISTRICT ENGINEER CERTIFICATION

The following certificate shall be placed on the front page of the improvement Plans:

I CERTIFY THAT THE DESIGN OF THE SANITARY SEWER SYSTEM HEREON IS SUBSTANTIALLY IN ACCODRNCE WITH THE REQUIREMENTS OF THE RUNNING SPRING'S WATER DISTRICT.

Approved by: _____ Date: _____
RSWD Engineer

1.2.10. IMPROVEMENT PLAN QUALIFICATION

Approved Construction Plans shall be valid for a period of one (1) year from the date of the District's approval. If construction has not started within the above period of time, the Construction Plans will be resubmitted by the Developer for additional review and subsequent approval by the District. The new approval will be contingent upon revising the Drawings to reflect changes in District Standards, current Building, Plumbing and Health and Safety codes, and changes in actual files conditions.

**PART 2.
PROCEDURAL DOCUMENTS**

SECTION 2.1. PROJECT SPECIFICATIONS

As needed, the District may secure Capital Improvement Project Design Services from and individual or engineering firm other than the District Engineer. In such cases, Capital Improvement Project Specifications shall utilize the latest District Boilerplate (available from either the District Office or the District Engineer's Office). The Project Specifications shall follow the current State of California Public Contract Code in its entirety and shall include the following sections:

NOTICE INVITING BID/NOTICE TO BIDDERS

1. Scope of Work
2. Coordination of Work
3. Location and Size of Work
4. Flow and Acceptance of Water and SWPPP Requirements
5. Removal of Water
6. Standard Specifications
7. Wage Rates, Certified Payroll and Labor Code Requirements
8. Insurance Requirements
9. Additional Insurance Requirements
10. Licensing Requirements
11. Award, Execution and Termination
12. Ineligibility of Contractor
13. Bid Security
14. Required Bonds
15. Financial Solvency/Bankruptcy
16. Job Foreman Qualifications/Supervision by Contractor
17. Time for Completion and Liquidated Damages
18. Saturday, Sunday, Holiday and Night Work
19. Sanitary Arrangements
20. Noise/Air Mitigation Measures

21. Water to be Furnished by District
22. Protection of People and Property, and Restoration of Existing Improvements
23. Record Drawings (“As-Built” Drawings)
24. Submittals
25. Measurement and Payment
26. Surveys, Permits and Regulations
27. Separate Contracts
28. Subcontracting
29. Engineer’s Authority
30. Land and Rights-of-Way
31. Warranty/Guaranty
32. Arbitration
33. Taxes
34. Conflict
35. Legal Relations and Responsibility

BID, BID PROPOSAL

36. Bid Form
37. Bid Proposal
38. Anti-Trust Claim
39. Labor Code Certification
40. Non-Collusion Declaration
41. Public Contract Code Statement
42. Certificate of Non-Discrimination
43. Contractor Licensing Statement
44. Site Visit Certification
45. Past disqualification Statement
46. Technical Ability and Experience Statement
47. Bid Bond Form
48. Agreement Form

- 49. Payment Bond Form
- 50. Performance Bond Form

Developer sponsored Capital Improvement Projects or other Projects that are intended to be turned over to the District upon completion of construction, which are paid for solely with private funding sources, may follow any agreement that is commonly accepted practice in the construction industry, otherwise the projects will need to follow the provisions of projects that are designed and constructed by the District. Prior to ceding improvements to the District, the Developer shall provide written proof that the improvements are free of liens, claims, demands, conditions or restrictions and that all material and labor costs have been paid by the Developer.

SECTION 2.2. PROJECT DRAWINGS

Project Drawings shall include the following information:

GENERAL INFORMATION

- Each sheet shall be Standard D-size Format at 24"x36"
- Each sheet will have the outside border fall $\frac{3}{4}$ " from the edges of the sheet
- All Border widths shall be $\frac{1}{16}$ "

TITLE SHEET

- RUNNING SPRINGS WATER DISTRICT shall appear at the top of the sheet
- Project Description shall be centered on the sheet
- Date of Project shall be located below project description
- The lower third of the sheet shall include the Board of Directors on the left side of the sheet and the General Manager and Secretary to the Board on the right side of the sheet
- Include the Engineer's name, address and phone number along the bottom of the sheet
- Include the Developer's information along the bottom of the sheet as applicable
- Include a signature line and a date line in the lower right portion of the sheet next to the Page or Sheet Number
- Include the Page Number on the lower right corner of the sheet
- Engineer-of-Record Stamp and Signature in lower right of the sheet

INDEX SHEET

- Index of Drawings
- Bench Mark and Basis of Bearing Information
- Vicinity Map
- Location Map
- Legend of All Graphical Symbols to be used for the Project
- General Notes
- Construction Notes and Quantities

- The bottom 1.75” of the sheet shall be the information border and shall contain:
 - USA Dig Alert Information
 - Private Engineer’s Note to Contractor
 - Revision Block
 - Engineer-of-Record Stamp
 - Engineer-of-Record Signature and Date block
 - Engineering Firm Information
 - Scale
 - Project Sheet Description block with RUNNING SPRINGS WATER DISTRICT above the Sheet Title and separated by a line for the full width of the Description Block
 - Page Number and the Total Number of Pages shall be located on the lower right hand side of the Border Block

PLAN AND PROFILE SHEET

- The upper half of the sheet shall be delineated with a profile section
- The lower half of the sheet shall be for the plan view of the project
- Include Construction Notes – per sheet quantities are optional (only include those to be used on each sheet)
- Include a North Arrow with the appropriate orientation
- Legend of Graphical Symbols (only include those to be used on each sheet)
- Plan View Scale shall be 10 times (10x) greater than the Vertical Scale, i.e., 1” = 20’ horizontal (plan view) and 1” = 2’ vertical
- The bottom 1.75” of the sheet shall be the information border and shall contain:
 - USA Dig Alert Information
 - Private Engineer’s Note to Contractor
 - Revision Block
 - Engineer-of-Record Stamp
 - Engineer-of-Record Signature and Date block
 - Engineering Firm Information
 - Scale

- Project Sheet Description block with RUNNING SPRINGS WATER DISTRICT above the Sheet Title and separated by a line for the full width of the Description Block
- Page Number and the Total Number of Pages shall be located on the lower right hand side of the Border Block

DETAILED DRAWING SHEET

- The sheet may be divided into sections with solid lines at the option of the Engineer; divider lines shall be 1/32” wide
- Plan View and Sectional Information shall contain a title and a scale
- Include Construction Notes – per sheet quantities are optional (only include those to be used on each sheet)
- Legend of Graphical Symbols (only include those to be used on each sheet)
- Include a North Arrow with the appropriate orientation for each Plan View Detail
- The bottom 1.75” of the sheet shall be the information border and shall contain:
 - USA Dig Alert Information
 - Private Engineer’s Note to Contractor
 - Revision Block
 - Engineer-of-Record Stamp
 - Engineer-of-Record Signature and Date block
 - Engineering Firm Information
 - Scale
 - Project Sheet Description block with RUNNING SPRINGS WATER DISTRICT above the Sheet Title and separated by a line for the full width of the Description Block
 - Page Number and the Total Number of Pages shall be located on the lower right hand side of the Border Block

**PART 3.
GENERAL CONDITIONS**

SECTION 3.1. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

3.1.01.

The Developer's Contractor/Engineer may be furnished additional instructions and detail drawings by the District Engineer or General Manager, as necessary to carry out the Work required by the Contract Documents.

3.1.02.

The additional drawings and instruction thus supplied will become a part of the Contract Documents. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.

SECTION 3.2. SCHEDULES, REPORTS AND RECORDS

3.2.01.

A preconstruction conference will be held prior to commencement of the Work. Attendees shall be the Contractor, his Subcontractors, if applicable, the District, the Engineer, representatives of Federal, State or local regulatory or enforcement agencies, and any other parties deemed appropriate by the District.

3.2.02.

The Contractor shall submit to the District progress schedules, testing and compaction reports, record drawings and other data where applicable as are required by the Contract Documents for the Work to be performed.

3.2.03.

Prior to the start of construction, the Contractor shall submit a construction progress schedule to the Engineer for approval. Said schedule shall include, but is not limited to, the following information: Contractor's name, address and telephone number; Project/Contract number; date prepared; Engineer-of-Record's name; District's name; date of Notice to Proceed; Contract completion date; and, list of all important activities, including construction and material delivery, with starting and ending dates for each activity.

The schedule shall be prepared so that it can be updated by the Contractor when significant changes in an activity time and/or completion time occur, as the Engineer may direct. After the schedule is approved by the Engineer, six (6) paper copies and one (1) digital PDF copy shall be furnished to the Engineer for distribution; this will be required for subsequent schedule updates as well.

The General Manager/Engineer reserves the right to alter said schedule to prevent excessive public nuisance or to provide for timely facilities testing and connection to other installations dependent upon each project.

SECTION 3.3. SHOP DRAWINGS

3.3.01.

The Developer's Contractor/Engineer shall provide Shop Drawings as may be necessary for the prosecution of the Work as required by the Contract Documents. The Engineer's approval of any Shop Drawings shall not release the Contractor from responsibility for deviations from the Contract Documents.

3.3.02.

When submitted for the Engineer's review, Shop Drawings shall bear the Contractor's certification that he has reviewed, checked and approved the Shop Drawings and that they are in conformance with the requirements of the Contract Documents. The following Contractor's certification shall appear on all submittals:

"It is hereby certified that the (equipment, material) shown and marked in this submittal is that proposed to be incorporated into this Project, is in compliance with the Contract Documents, can be installed in the allocated spaces, and is submitted for approval.

Certified By: _____

Date: _____

3.3.03.

Portions of the Work requiring a Shop Drawing or sample submission shall not begin until the Shop Drawing or submission has been approved by the Engineer. A copy of each approved Shop Drawing and each approved sample shall be kept in good order by the Contractor at the site and shall be available to the Engineer.

3.3.04.

The following procedures will apply to shop drawing submittals:

The Contractor shall submit to the Engineer for approval, six (6) copies of all Shop Drawings. These Drawings shall be complete, certified by the Contractor, and shall contain all required information in detail. The Contractor shall make any corrections to Shop Drawings required by the Engineer. Digital copies will only be accepted upon payment of \$0.25 per sheet (8 1/2 x 11 or 14), \$0.30 per sheet (11 x 17), and \$3.50 per plan sheet (up to 24 x 36 – add \$1.10 for larger sheets) for each set to be printed, including two (2) for the Engineer's Office and two (2) original stamped and approved sets for the Contractor's use during construction. One (1) original stamped and

approved submittal shall remain on the job site for each submittal item. Submittals that require a resubmit will require additional fee payment; payment must be made prior to review commencement.

When approved by the Engineer, each copy of the Drawings will be stamped approved, signed, and dated by the Engineer. One (1) original stamped and approved submittal shall remain on the job site for each submittal item; photocopies or other copies of the approved submittal will not be accepted by the Inspector assigned to the project.

Two (2) sets of said approved Drawings will be returned to the Contractor.

The approval of the Drawings shall not be construed as a complete check, but will indicate only that the general method of construction and detailing is satisfactory.

Upon the Contractor's receipt of approved shop drawings, he shall furnish to the Engineer instruction and maintenance manuals and parts lists of all major equipment furnished. Data in these manuals shall cover completely all items as specified and as supplied.

Time allowed for Shop Drawing review shall be thirty calendar (30) days after received by the Engineer; fast-track reviews will be back charged to the Contractor at the current Engineer's Standard Hourly Billing Rate on file with the District.

SECTION 3.4. MATERIALS, SERVICES AND FACILITIES

3.4.01.

It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all surveying, materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the Work within the specified time.

3.4.02.

Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection. The Contractor shall be entirely responsible for damage or loss to material and equipment until the Work has been completed by the Contractor and accepted by the District.

3.4.03.

Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the Manufacturer.

3.4.04.

Materials, supplies and equipment shall be in accordance with samples submitted by the Contractor and approved by the Engineer.

3.4.05.

Materials, supplies or equipment to be incorporated into the Work shall not be purchased by the Contractor or the Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

3.4.06.

Whenever it is provided that the Contractor shall furnish materials or manufactured articles, or shall do work for which no detailed specifications are set forth, the materials or manufactured articles shall be of the best grade in quality and workmanship obtainable in the market from firms of established good reputation, or, if not ordinarily carried in stock, shall conform to the usual standards for first class materials or articles of the kind required, with due consideration of the use to which they are to be put. In general, the Work performed shall be in full conformity and

harmony with the intent to secure the best standard of construction and equipment of the Work as a whole or in part.

3.4.07.

All equipment, materials, and supplies to be incorporated in the work shall be new, unless otherwise specified.

SECTION 3.5. INSPECTION AND TESTING

3.5.01.

All materials and equipment used in the construction of the Project shall be subject to adequate inspection and testing by the District and other Agencies which have jurisdiction in accordance with generally accepted standards, policies and practices.

3.5.02.

The District shall provide all inspection for work which will connect to the District Facilities – all testing and inspection required by the District shall be paid for by the Developer.

3.5.03.

If local laws, ordinances, rules, regulations or orders of any public authority having jurisdiction within the project area require any Work to specifically be inspected, tested, or approved by someone other than the District, the Developer's Contractor will give the District Engineer timely notice of readiness; usually 48 hours' notice. The Contractor will furnish the Engineer the required certificates of inspection, testing or approval. All inspection fees imposed by public agencies other than the District shall be paid for by the Developer's Contractor.

3.5.04.

Inspections, tests, or approvals by the Engineer or others shall not relieve the Contractor from his obligations to perform the Work in accordance with the requirements of the Contract Documents.

3.5.05.

The Engineer and his representatives will at all times have access to the Work. In addition, authorized representatives and agents of any participating Federal, State, County or Local Agency shall be permitted to inspect all work, materials, and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the Work and also for any inspection, or testing thereof.

3.5.06.

If any Work is covered contrary to the written instructions of the Engineer or work done for which the Contractor has not requested and received inspection, it must, if requested by the Engineer, be uncovered for his observation and replaced at the Contractor's expense.

3.5.07.

If the Engineer considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at the Engineer's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction.

3.5.08.

Upon request of the Engineer, the Contractor shall furnish certification of compliance that fabricated or manufactured products conform to the standards of the industry as specified in the Contract Documents and that said fabricated or manufactured products were fabricated or manufactured under the quality control standards of the stated specifications of the Contract Documents.

SECTION 3.6. SUBSTITUTIONS

3.6.01.

Whenever a material, article or piece of equipment is identified in the Contract Documents or these Standards by reference to brand name or catalog number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the Contract Documents by reference to brand name or catalog number, and if, in the opinion of the Engineer, such material, article, or piece of equipment is of equal substance and function to that specified, the Engineer may approve its substitution and use by the Contractor. The Contractor warrants that if substitutes are approved, no major changes in the function or general design of the Project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time.

3.6.02.

“Equal” products must meet or exceed the standards of performance of the item(s) specified or detailed on the plans and in the specifications. All requests for substitutions shall be made in writing a minimum 15 working days before the intended Bid Opening or use. For items approved on Capital Projects after a contract has been awarded, cost reductions shall be credited to the District where cost increases will be absorbed by the Contractor. For Developer projects, approval for substitutions will be secured prior to the use and/or installation of the equipment. Substitute items that are installed prior to securing written approval will be subject to removal at the Developer’s expense; failure to remove unapproved substitute items will result in non-approval of the work and the Developer will not be allowed to connect to District facilities.

SECTION 3.7. PATENTS

3.7.01.

The Contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the District harmless from loss on account thereof, including attorney's fees, except that the District shall be responsible for any such loss when a particular process, design, or the product of a particular Manufacturer or Manufacturers is specified. However, if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Engineer.

SECTION 3.8. CORRECTION OF WORK

3.8.01.

The Contractor shall promptly remove from the premises all Work rejected by the Engineer for failure to comply with the Contract Documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the Work in accordance with the Contract Documents and without expense to the District and shall bear the expense of making good all Work of other Contractors destroyed or damaged by such removal or replacement.

3.8.02.

All removal and replacement Work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected Work within ten (10) days after receipt of Written Notice, the District may remove such Work and store the materials at the expense of the Contractor.

**SECTION 3.9.
REMOVAL, RELOCATION OR PROTECTION OF EXISTING
UTILITIES**

3.9.01.

Nothing herein shall be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such Utilities on the site of the Project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the construction; provided, however, nothing herein shall relieve the District from identifying main or trunk lines in the Drawings and Specifications.

3.9.02.

If the Contractor while performing the Work discovers Utility facilities not identified by the District in the Drawings or Specifications, the Contractor shall immediately notify the District and the Utility in writing.

**PART 4.
DETAILED TECHNICAL PROVISIONS**

SECTION 4.1. EARTHWORK

4.1.01. GENERAL

The Contractor shall furnish all labor, equipment, appliances and materials as required or necessary to clear, grub, excavate, trench, fill, backfill and grade for the construction of all structures, pipelines, service laterals, ditches, embankments and graded areas as shown and specified.

Due to the sensitive creek-bed areas in and around Running Springs, the Contractor shall take additional care to ensure no water from the construction site leaves the site; it is the Contractor's responsibility to protect Deep Creek and City Creek at all costs as environmental fines can be extreme.

4.1.02. OBSTRUCTIONS

When the proper completion of the Work requires their temporary or permanent removal of improvements, landscaping, etc., the Contractor shall, at his own expense, remove, and without unreasonable delay, temporarily or permanently replace or relocate to the satisfaction of the District and of any other person or agency having jurisdiction, all water pipes, gas pipes, drainage lines, irrigation lines, sewer lines, pipelines, conduits, culverts, roads, driveways, fences, bridges, railroad tracks, wires, poles, towers, retaining walls, buildings, curbs, gutters, concrete walks, trees, shrubs, lawns, and all other improvements of whatsoever character not required by law to be removed by the District thereof; and all such improvements temporarily removed shall be maintained until permanently replaced, all at the Contractors expense.

Where the Work is to be constructed in or adjacent to areas which have been improve by lawns, trees, shrubs, or gardens, the Contractor shall remove such trees or plants as may be necessary for the prosecution of the Work and give them proper care and attention until the Work has been satisfactorily completed, after which the Contractor shall replace them in as nearly the original condition and location as is reasonably possible. Where it is necessary to deposit the excavated materials on lawns during the process of construction, the Contractor shall first lay burlap or canvas on the lawn to prevent contact between the excavated material and the lawn.

Unless otherwise indicated on the Drawings, General or Special Conditions, or unless otherwise cared for by the District of a public Utility or franchise, all water, gas, oil, or irrigation lines, lighting, power, or telephone conduits or wires, or sewer lines, or TV cables, structures, house connections in place, and all other surface or subsurface structures or lines shall be maintained by the Contractor and shall not be disturbed, disconnected, damaged by him during the progress of the Work; provided that should the Contractor in the performance of the Work disturb, disconnect, or damage

any of the above, all expenses, of whatever nature, arising from such disturbance, or in the replacement of repair thereof, shall be borne by the Contractor.

All shrubs and brush, including stumps and roots, fences, rock, stones, debris, and all obstructions of whatsoever kind or character, whether natural or artificial, encountered in the construction of the Work shall be removed unless otherwise specified on the construction Plans.

In the installation of pipelines outside of public rights-of-way or in easements, trees shall not be removed unless otherwise authorized in writing by the Engineer, and all fences, structures and landscaping which are removed or damaged by the Contractor shall be restored to their original condition and/or repaired to the satisfaction of the Engineer as soon as that portion of the Work is installed, at the Contractor's expense without any compensation therefore. Any damage done to private property by reason of Work on easements shall be the responsibility of the Contractor.

Tunneling under trees will be required unless otherwise authorized in writing by the Engineer. All trees along the Work which are not to be removed, shall be protected from injury. The trunks of trees shall be covered with burlap or stakes shall be driven around them for complete protection.

The Contractor shall restore all areas and objects that were damaged or disrupted due to construction activities to a condition as good as existing prior to construction. Said restoration shall be completed by the Contractor as a continuing follow-up of any portion of pipeline installation.

Material that is removed as hereinabove specified, and is not to be incorporated in the improvement being constructed, shall be disposed of away from the construction site at the Contractor's expense. If burning is anticipated, the Contractor shall obtain all necessary permits and shall give ample and proper notice to the local fire warden.

The Contractor's attention is directed to the possible existence of pipe and other underground improvements which may or may not be shown on the Plans. All reasonable precautions shall be taken to preserve and protect any such improvements whether shown on the Plans or not. Pursuant to Section 4215 of the California Government Code, the District will be responsible for the timely removal, relocation or protection of existing main or trunk line Utility facilities located on the site of the Project, if such utilities are not identified by the District in the Drawing and Specifications.

A diligent search of known Utility records has been made in the endeavor to indicate on the Drawings the nature and location of all Utilities which exist within the limits of the Work. However, the accuracy or completeness of the Utilities indicated on the Drawings is not guaranteed. Utility structures and/or service connections to adjacent property may or may not be shown on the Drawings. The Contractor shall contact "Underground Service Alert" (U.S.A., telephone number

811) and inform them of the proposed Project and work schedule. Provide them with information required for notification at known Utilities in the area.

The Contractor shall cooperate with the Utility companies' representative in the field in order to ascertain the location of the Utility lines ahead of trenching operations. The Contractor shall excavate and expose the Utility, at least five hundred (500) feet, ahead of trenching operations in order that the inspector representing the Engineer may adjust the alignment of the pipeline to provide the least amount of interference with the Utility as determined by the inspector.

The Contractor acknowledges his responsibility as set forth herein and specifically waives the provisions of California Government Code Section 4215 which designates such responsibility to certain public agencies.

4.1.03. EARTHWORK IN COUNTY AND STATE RIGHTS-OF-WAY

Earthwork within the rights-of-way of the State of California, Department of Transportation, the County Road Department, or other governmental agencies having jurisdiction, shall be done in accordance with the requirements and the provisions of the permits issued by those agencies for the construction within their respective rights-of-way. Such requirements and provisions, where applicable, shall take precedence and supersede the provisions of these Specifications. The requirements of these Detailed Technical Provisions shall be the minimum requirement.

4.1.04. SAFETY PRECAUTIONS

All excavations shall be performed, protected and supported as required for safety and in the manner set forth in the operating rules, orders and regulations prescribed by the Division of Industrial Safety of the Departments of Industrial Relations of the State of California. Barriers shall be placed at each end of all excavations and at such places as may be necessary along excavations to prevent accidents. Lights shall also be placed along excavations from sunset each day to sunrise of the next day until such excavation is entirely refilled.

The Contractor shall furnish such watchmen, guards, fences, warning signs, walks, and lights as shall be necessary and shall take all other necessary precautions to prevent damage or injury to persons and property.

4.1.05. EXCAVATED MATERIAL

Arrangement for disposing of excess excavated material shall be made by the Contractor. Excavated material suitable for backfill shall be stored temporarily in such a manner as will facilitate Work under the Contract. Backfill material stored at or near the site shall be contained such that none of it leaves the storage area either by wind, rain or other means; a SWPPP shall be submitted and approved prior to storing material.

4.1.06. SHORING, SHEETING AND BRACING

Where sheet piling, shoring, sheeting, bracing, or other supports are necessary, they shall be furnished, placed, maintained and removed by the Contractor. Sheet piling and other supports shall be withdrawn in such a manner as to prevent additional backfill on pipelines which might cause overloading. At all times the rules of the Division of Industrial Safety of the Department of Industrial Relations of the State of California with respect to excavation and construction shall be strictly observed.

In advance of any excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall submit for acceptance of the District, or by a registered civil or structural engineer employed by the District to whom the authority to accept has been delegated, a detailed plan showing the design or shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer. Nothing herein contained shall be deemed to allow the use of shoring, sloping, or protective system less effective than that required by the Construction Safety Orders of the State Division of Industrial Safety. Shoring shall be in compliance with Section 6707 of Chapter 9, Part 1, and Division 5 of the Labor Code of the State of California.

Nothing contained in these Specifications shall be construed to impose tort liability on the District, Engineer, or any of their employees.

Section 6424 of the California Labor Code requires a permit for trenches five (5) feet or more in depth. The District will not issue a permit for trenching operations. The Contractor, prior to beginning construction, shall obtain from the State Division of Industrial Safety a permit authorizing said construction.

4.1.07. CLEARING AND GRUBBING

Areas where construction is to be performed shall be cleared of all trees, shrubs, brush, rubbish, and other objectionable material of any kind which, if left in place, would interfere with the proper performance or completion of the contemplated Work, impair its subsequent use, or form obstruction therein. Trees and other natural growths outside the actual lines of construction operation shall not be destroyed and such measures as are necessary shall be taken by the Contractor for the protection thereof.

Organic material from clearing and grubbing operations will not be permitted for use as excavation backfill.

It shall be the Contractor's responsibility to remove and dispose of all excess material resulting from clearing and grubbing operations at his own expense. The Contractor shall make his own arrangements for disposal sites at his own expense, at which said material may be wasted.

4.1.08. CONTROL OF WATER

The Contractor shall provide and maintain at all times during construction ample means and devices with which to promptly remove and dispose of all water entering the excavations or other parts of the Work. No concrete footings or floors shall be laid in water nor shall water be allowed to rise over them until the concrete or mortar has set as least eight (8) hours. Water shall not be allowed to rise unequally against walls for a period of twenty-eight (28) days. Ground water shall not be allowed to rise around pipe installations until jointing compound in the joints has set.

The Contractor shall dispose of the water from the Work in a suitable manner without damage to adjacent property. No water shall be drained into Work built or under construction. Water shall be disposed of in such a manner as not to be a menace to the public health.

Dewatering for structures and pipelines shall commence when ground water is first encountered, and shall be continuous until such times as water may be allowed to rise in accordance with the provisions of this section.

The cost of complying with the provisions of this section of Detailed Technical Provisions shall be considered included as Bid item and no additional compensation will be allowed.

4.1.09. PIPELINE EXCAVATION

- a. Excavation - Excavation for pipelines, fittings, valves and appurtenances shall be open trench to the depth and in the direction necessary for the proper installation of the same as shown on the Plans or as otherwise directed by the Engineer, except where another method is specifically called for on the Plans or in these Detailed Technical Provisions.
- b. Limit of Excavation - Except with specific approval of the Engineer, no more than four hundred (400) feet of open trench shall be excavated in advance of laying of pipe. All operations shall be carried out in an orderly fashion. Backfilling and cleanup work shall be accomplished as sections of the pipe installation are approved. Public travel through the work shall be impeded or obstructed as little as possible. At the end of each working day, there shall be no more than ten (10) feet of open trench, excluding manhole excavations, for each operation. The remainder of the trench excavated that day shall be backfilled, compacted and the roadway opened to the public.

At the end of each week, all trenches, including manhole excavations, shall be backfilled, compacted and the roadway opened to the public on Saturday, Sunday, and holidays.

The Contractor shall make the necessary arrangements for, and shall remove and dispose of, all excess of waste material from the site of the Work as portions of the pipeline and appurtenances are installed.

- c. Tunneling - Tunneling will be permitted only when the Contractor has applied and obtained a permit from the regulatory agency, State of California Department of Mines.
- d. Trench Width - Banks of cut trenches shall be kept as nearly vertical as possible. Where necessary in order to maintain the banks nearly vertical, the trench shall be properly sheeted and braced. The overall trench width shall not be more than sixteen (16) inches or less than twelve (12) inches wider than the largest outside diameter of the pipe to be laid therein, measured at a point twelve (12) inches above the top of the pipe exclusive of branches. Excavation and trenching shall be true to line so that a clear space of not more than eight (8) inches or less than six (6) inches in width is provided on each side of the largest outside diameter of the pipe in place. For the purpose of this article, the largest outside diameter shall be the outside diameter of the coupling.
- e. Correction of Faulty Grades - Should the excavation for the pipeline be carried below grade without instruction from the Engineer, it shall be refilled to proper grade with pipe zone material compacted to ninety percent (90%) or crushed rock, at the expense of the Contractor. If the compaction tests are required, they shall be at the expense of the Contractor.

4.1.10. PIPE FOUNDATION AND/OR PIPE BEDDING

In areas where the pipe trench is in granular material suitable for bedding, the bottom shall be excavated and trimmed so that the pipe will be uniformly bedded on the required grade. In all other materials, the pipe trench shall be over-excavated below the established grade line of the outside bottom of the pipe.

In areas where the pipe trench is in clay or similar non-granular material, the depth of over-excavation shall be three (3) inches.

In areas where the pipe trench excavation is in rock, hardpan, shale or other similar hard and unyielding materials, the trench shall be excavated to a depth of at least four (4) inches below the established grade line of the outside bottom of the pipe.

The over-excavation shall be filled with loose granular bedding material. The Contractor shall prepare a firm but unyielding subgrade which will provide uniform support of the pipe along the full length of each section. In the event the bottom of the excavation is soft, spongy, or unstable, the Contractor shall over-excavate to undisturbed and/or firm ground, to refill to approximately three (3) inches below grade with tamped crushed rock, refill to grade with sand and shape the bottom of the trench to the required section. The Contractor will be reimbursed for all the expenses that are incurred for the over-excavation and backfill that exceed two (2) feet. Crushed rock for backfill of over-excavation shall consist of clean, hard, durable gravel or crushed rock of such a size that one

hundred percent (100%) will pass a sieve having two-inch square openings. The backfill shall be compacted to ninety percent (90%) relative compaction. Instability due to inadequate dewatering shall be corrected at the Contractor's own expense.

For the purpose of this paragraph, granular bedding material is defined as a non-cohesive granular material containing no rocks or other hard materials detrimental to good bedding of the pipe. It shall be free from appreciable amounts of clay or silt and shall be free from stones larger than one inch in diameter. Not more than fifteen percent (15%) shall pass a No. 100 mesh screen and it shall be reasonable uniform graded.

4.1.11. TRENCH BACKFILL

- a. General - All trenches for main line and service laterals shall be backfilled after pipe fittings, service lateral, valves and appurtenances have been installed.

All wood and waste material shall be removed from excavation preparatory to backfilling. Backfill material shall be approved in all cases by the Engineer and shall be free of trash, wood, large rock, or other objectionable debris. Backfilling shall include the refilling and compacting of the fill in trenches or excavations up to the subgrade of the street or to the existing ground surface.

- b. Procedure in Pipe Zone - The pipe zone shall be from pipe invert to twelve (12) inches above top of pipe. Backfill material for pipe zone shall be granular material, clean washed sand or crusher run rock or gravel and shall be placed in the trench simultaneously on each side of the pipe for the full width of the trench in layers of about six (6) inches in depth. No stone, gravel or crush rock larger than one (1) inch in diameter or largest dimension shall be allowed in pipe zone. Granular backfill with a minimum sand equivalent of thirty (30), when tested in accordance with the California Department of Transportation, Test Method No. California 217 shall be required in the pipe zone when the water densification method is used to densify the material in the pipe zone. When the excavated material is not granular as mentioned above, the Contractor shall import, at his own expense, and place a suitable backfill material. Particular attention is to be given to the underside of the pipe and fittings to provide a firm bedding support along the full length of the pipe. Care shall be exercised in backfilling to avoid damage to the pipe. Care shall be taken so that the pipe is not floated or displaced. Trench backfill above the pipe zone shall not be place until conformance with specified compaction requirements has been confirmed for the pipe zone.

Pipe zone material shall be compacted to not less than ninety percent (90%) of maximum density in accordance with American Society for Testing and Materials Standard D1557 (ASTM D1557).

When the crusher run rock or gravel is used for pipe zone backfill, the following method of placing the bedding and pipe zone backfill may be used:

The trench shall be over-excavated a depth of two (2) inches and backfilled to grade with crusher run rock. The pipe shall be bedded on this base. The pipe shall then be backfilled to a depth of three (3) inches over the top of the pipe with the crusher run rock. No further compaction will then be required. The crusher run rock shall be unwashed crushed rock conforming to the following gradation:

Sieve	Percent Passing
1/2 - inch	100
3/8 - inch	85-100
No. 15	15-40
No. 8	0-10
No. 16	0-5

- c. Procedure above Pipe Zone - From the top of the pipe zone backfill to ground surface, the material for backfill may contain stones ranging in size up to three (3) inches in diameter, in quantity not exceeding forty percent (40%) of the volume when said coarse materials are well distributed throughout the finer materials and the specified compaction may be attained. If the native materials contain large rocks and boulders, it shall be Contractor’s responsibility to remove and dispose all rocks larger than six (6) inches in diameter off project area prior to trench backfill operation.
- d. Compaction Above Pipe Zone - The Contractor shall not permit hauling or rolling equipment to operate above the pipe zone until sufficient backfill is in place to prohibit damage to the pipe. Unless otherwise required by these Contract Documents or by permit requirements of any agencies having jurisdiction, compaction shall conform to the following requirements.
 - 1. Under areas which will be subject to vehicular traffic or support for surfacing or structures, the backfill shall be compacted to a not less than ninety percent (90%) of maximum density in accordance with ASTM D1557.
 - 2. In easements and open terrain where the degree of compaction is less important, the backfill, if sufficiently granular in nature (sand equivalent of twenty (20) or greater), may be consolidated by a water densification method. If the backfill is not sufficiently granular in nature, the backfill shall be consolidated by a method approved by the Engineer. Backfill in easements and open terrain shall be

consolidated to such an extent so as to preclude potential damages due to erosion, settling, or other lack of structural stability in the opinion of the Engineer.

Although lesser degrees of consolidation may be allowed by the Engineer, a relative compaction of eighty five percent (85%) in accordance with ASTM D1557 is to be deemed satisfactory in these areas.

- e. **Mechanically Compacted Backfill** - Mechanically compacted backfill shall be placed in horizontal layers of such depths compatible to the material being placed and the type of equipment being used. All such equipment shall be of a size and type approved by the Engineer. Each layer shall be evenly spread, moistened (or dried, if necessary), and then tamped or rolled until the specified relative compaction has been attained. Permission to use specific compaction equipment shall not be construed as guarantying 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 own determination in this regard. Any damage which results shall be the responsibility of the Contractor and repaired or replaced at the Contractor's expense. Each layer shall be limited to 8-inches maximum before compaction.
- f. **Water Densified Backfill (Jetting)** - As used in these Detailed Technical Provisions, flooding shall mean the inundation of backfill with water, puddles with poles or bars to insure saturation of the backfill material for its full depth. Jetting shall be accomplished by the use of a jet pipe to which a hose is attached carrying a continuous supply of water under pressure.
- g. **Requirements for Densification by Jetting** - Densification by jetting shall be subject to all of the following requirements:
 - 1. **Application of Water** - The Contractor shall apply water in a quantity and at a rate sufficient to thoroughly saturate the entire thickness of the lift being densified. Water for jetting shall be from a continuous supply of water under pressure.
 - 2. **Use of Vibration** - Where densities are required which cannot be attained by jetting alone, the Engineer may direct the Contractor to supplement the jetting process with the application of vibrating compacting equipment to the backfill.
 - 3. **Lift Thickness** - The lift of backfill shall not exceed that which can be readily densified by the jetting procedure, but in no case shall the undensified lift exceed ten (10) feet for jetting.

4. Character of Material - The material being used with the water settling methods to backfill the trenches in street rights-of-way shall have a sand equivalent of at least thirty (30) when tested in accordance with the State of California Department of Transportation Test Method No. California 217. Where the nature of the material excavated from the trench is generally unsuitable for densification with water, the Contractor may, at no cost to the District, import suitable material for jetting, or densify the excavated material by other methods. If water densification methods are employed, the Contractor shall, at his expense, provide a sump and pump to remove the accumulated water from the downstream end of the construction.
5. Damage to Adjacent Improvements - The Contractor shall make their own determination that the use of flooding or jetting methods will not result in damage to existing improvements. Permission to use such methods in densifying backfill shall not be construed as guarantying or implying that adjacent ground and improvements will be unaffected.
- h. Compaction Test - Compaction shall be tested in accordance with the methods specified by the State of California Department of Transportation Method No. California 216, or ASTM D1557.

Compaction test of the backfill will be required approximately every two hundred and fifty (250) feet, or more often if tests indicate the need, along the alignment on the main pipeline and, in addition, approximately twenty percent (20%) of all laterals within the street rights-of-way. The tests shall be made at varying depths with the density as shown on Standard Drawing No. W-20.

The Contractor at his expense shall excavate the holes for all of the tests, backfill the holes and compact this backfill, and pave the surface, if required, after the test.

Compaction tests of the backfill shall be at the Contractor's expense except where otherwise specified in the Contract Document. All compaction tests which do not meet the specified requirements shall be at the Contractor's expense without any compensation therefore. These latter costs will be paid by the District and deducted from the progress payments to the Contractor.

- i. Excess Excavated Material - The Contractor shall make the necessary arrangements for and shall remove and dispose of all excess or waste material. All costs for the disposal of excess or waste material shall be borne by the Contractor.

It is the intent of these Detailed Technical Provisions that all surplus material not required for backfill shall be disposed of by the Contractor outside the limits of the public

rights-of-way and in accordance with the requirement of the County grading ordinance or ordinance of any other agencies having jurisdiction at no cost to the District.

Excavated material shall not be deposited on private property unless written permission from the District thereof is secured by the Contractor. Copies of said written permission, duly signed by the District of the private property involved, shall be furnished to the Engineer by the Contractor before such material is placed on private property.

- j. Imported Backfill Material - Whenever the excavated material is unsuitable for backfill, the Contractor shall arrange for the furnishing of imported backfill material (per Sections 4.1.11b. and 4.1.11g4) at his own expense; Sand Equivalent Factor (SE) shall be a minimum of 30 (SE = 30 or better). He shall dispose of the excess trench excavation as specified in the preceding paragraph. The backfilling with imported material shall be done in accordance with the methods described.
- k. Completion of Cleanup - The Contractor shall restore all areas and objects that were damaged or disrupted due to construction activities to a condition equal to that prior to construction. All fences, walls, shrubs, sprinkler systems, substructures or any other improvement removed or disturbed by the Contractor during construction shall be replaced and/or repaired to the satisfaction of the Engineer immediately as that portion of the pipeline is installed at the Contractor's expense. Said restoration shall be completed by the Contractor as an immediate follow-up of any portion of the pipeline installation.

4.1.12. STRUCTURAL EARTHWORK

- a. Structural Excavation - The site shall be cleared of all natural obstructions, pavements, Utilities and other items which will interfere with construction. Any method of excavation may be employed which, in the opinion of the Contractor, is considered best. Ground shall not be dug by machinery nearer than three (3) inches from any finished subgrade without the express approval of the Engineer. The last three (3) inches shall be removed without disturbing the subgrade. Should the excavation be carried below the lines and grades indicated on the Plans, the Contractor shall, at his own expense, refill such excavated space to the proper elevation in accordance with the procedures specified for backfill, or, if under footings, the space shall be filled with concrete.

Excavation shall extend a sufficient distance from walls and footing to allow for placing and removal of forms, installation of services, and for inspection, except where concrete is authorized to be deposited directly against excavated surfaces.

- b. Backfilling - After completion of foundation footings and walls, and of other construction below the elevation of the final grade, and prior to backfilling, all forms shall be removed and

the excavation shall be cleaned of all debris. Unless otherwise shown, material for backfilling shall consist of excavated material, or imported sand, gravel or other material approved by the Engineer and shall be free of lumps, hard material exceeding six (6) inches in greatest dimension, trash, lumber or other debris. Backfill shall be placed in horizontal layers not exceeding nine (9) inches in thickness, and shall have a moisture content such that the required degree of compaction may be obtained. Each layer shall be compacted by hand or machine tampers or by other suitable equipment or means to a relative compaction of a least ninety percent (90%). Dewatering shall be maintained during the placement of compacted clayey backfill.

- c. Stripping - All vegetation, such as roots, brush, heavy sods, heavy growths of grass and all decayed vegetable matter, rubbish, and other unsuitable material within the area of the Work, shall be stripped or otherwise removed before fill is started.
- d. Grading - After stripping has been done, excavation of every description and of whatever substance encountered within the grading limits of the Work shall be performed to the lines and grades indicated on the Drawings. All suitable excavated material shall be transported to and placed in the fill area within the limits of the Work. All excavated materials which are considered unsuitable by the Engineer, and any surplus of excavated material which is not required for fill shall be known as waste and shall be disposed of as directed in Section 4.1.11i. During construction and excavation filling shall be performed in a manner and sequence that will provide drainage at all times.

Ditches shall be cut accurately to the cross sections and grade indicated. Any excessive ditch excavation shall be backfilled to grade either with suitable, thoroughly compacted material, or with suitable stone or cobble to form and adequate paving.

Surfaces under paved areas, dikes and elsewhere as directed by the Engineer shall be wetted and compacted prior to placing fill.

- e. Fills or Embankments - Fills or embankments shall be constructed at the locations and to the lines and grades indicated on the Plans. Suitable material from excavations may be used for fill. Material shall be placed in horizontal layers of from eight (8) to twelve (12) inches in loose depth for the full width of the cross section and compacted as specified. Embankment Fill shall be placed in a stepped pattern where the width is five times (5x) greater than the depth of the fill; stepped pattern shall start at the bottom of the embankment. Compaction shall be ninety percent (90%) for each fill layer. A geotechnical fabric shall be placed in the upper three (3) inches of the embankment; overlap seams two-foot (2-ft) minimum.

For general fill areas, the fill shall be compacted to ninety percent (90%) relative compactions.

For roadways and all areas to be paved, the fill shall be compacted, by means of a tamping roller or three-wheel power roller, to at least ninety percent (90%) relative compaction.

Dikes and embankments shall be compacted by the use of compaction rollers or three-wheel power rollers to ninety percent (90%) relative compaction.

Relative compaction shall be as determined in accordance with the State of California Department of Transportation, Test Method No. California 216, or ASTM D1557.

- f. Finish Grading - All areas covered by the Work, including excavated and filled section and transition areas, shall be graded uniformly to the elevations shown on the Plans. The finished surface shall be reasonably smooth, compacted, and free from any irregular surface changes. The degree of finish shall be that ordinarily obtainable from either blade-grader or scraper operations. The finished surface shall be not more than five-hundredths of a foot (0.05-ft) above or below the established grade. Ditches shall be paved with concrete or shotcrete to drain readily. The surface of areas to be paved, on which a surface course is to be placed, shall not vary more than five-hundredths (0.05) foot from established grade and approved cross section.
- g. County and Local Grading Ordinances - In addition to the requirements herein set forth for structural earthwork, all work shall be in accordance with the requirements of the County grading ordinance or ordinance of any other agencies having jurisdiction.

4.1.13. DRILLING AND BLASTING

- a. Use of Explosives - All operations, storage and handling of explosives shall be according to provisions of Division II, Part I, of the Health and Safety Code, State of California, and shall comply with all State, County and local laws.
- b. Skilled Workmen - Drilling and blasting are to be done only by personnel skilled in these techniques.
- c. Safety - All necessary precautions shall be taken for protection of life and property. Warnings shall be given to nearby property owners that blasting is in progress. Safety mats shall be used to restrict flying particles. The Contractor shall size each "shot" to minimize nuisance and reduce the possibility of damage to local structures.
- d. Blasting shall have prior written approval from the District.

4.1.14. FINAL CLEANUP

After all earthwork operations have been completed, the right-of-way and all other areas shall be dressed smooth and left in a neat and presentable condition to the satisfaction of the Engineer and District.

4.1.15. SHOP DRAWINGS

The Contractor shall submit six (6) copies of Shop Drawings for shoring and bracing system for review and approval. Digital submittals shall conform to the requirements stated elsewhere in this document.

SECTION 4.2. CONCRETE CONSTRUCTION

4.2.01. SCOPE

The Contractor shall furnish all labor, equipment, materials and appliances necessary to complete construction of Portland cement concrete as shown on the Plans and as specified herein.

4.2.02. COMPOSITION

Concrete shall be composed of Portland cement, sand, coarse aggregate, water, and admixtures as specified or approved, all well mixed and brought to the proper consistency suitable for the specific conditions of placement and in accordance with the requirements of these Detailed Technical Provisions.

4.2.03. CLASSES OF CONCRETE

All Portland cement concrete used on the Work shall be one of the classes described below. Unless otherwise stated, each class shall be used in the locations as listed:

- a. Class I
Compressive Strength - 3,000 psi minimum at 28-day
Mix - 6 sacks minimum, test required - 7 sacks, test not required.
Use - walls, beams, slabs, footings.
Equivalent California State Highway Designation - Class D (for 7 sack mix), or Section 201 of the Greenbook, Table 201-1-1.2(A).
Maximum water - cement (w/c) ratio: 0.45

- b. Class IV
Compressive Strength - 2,500 psi minimum at 28-day
Mix - 6 sack, test not required.
Use - Paving, cradles, curbs, gutters, sidewalks, thrust blocks, manhole bases, pipe encasement, or where specified.
Equivalent California State Highway Designation - Class B or Section 201 of the Greenbook, Table 201-1-1.2(A).
Maximum water - cement (w/c) ratio: 0.45

4.2.04. PORTLAND CEMENT

Unless otherwise specified by a soils report or the District Engineer, Portland cement, shall be Type II, complying with ASTM C150, and shall have a total alkali content not exceeding 0.6 percent when calculated as sodium oxide as determined by methods given in ASTM C114.

4.2.05. SAND

Sand shall be washed natural sand having hard, strong and durable particles and which does not contain more than two percent (2%) by weight of such deleterious substances as clay lumps, shale, schist, alkali, mica, coated grains, or soft and flaky particles. Sand shall be graded uniformly from fine to coarse such that the combined grading of coarse aggregate and sand set forth in Section 4.2.06 will be met. Not more than three percent (3%) shall pass the No. 200 screen as determined by ASTM C117.

4.2.06. COARSE AGGREGATE

Coarse aggregate shall be a clean, hard, fine-grained, uncoated sound crushed rock, or washed gravel or combination of both. It shall be free from oil, organic matter or other deleterious substances and shall not contain more than two percent (2%) by weight of shale or cherty material; and shall show a loss of not more than ten (10) percent when tested for soundness in sodium sulfated solution in accordance with ASTM C88. Coarse aggregate shall be graded uniformly from one-quarter (1/4) inch size to maximum size. The combined grading of coarse and fine aggregate shall fall within the following percentage by weight:

Sieve Size	Percentage Passing Sieves		
	1-1/2" Max	1" Max	3/4" Max
2"	100		
1-1/2"	90-100	100	
1"	50-86	90-100	100
3/4"	45-75	55-100	90-100
3/8"	38-55	45-75	60-80
No. 4	30-45	35-50	40-60
No. 8	23-38	27-45	30-45
No. 16	17-33	20-35	20-35
No. 30	10-17	12-20	13-23
No. 50	4-9	5-10	5-15
No. 100	1-3	1-4	1-5
No. 200	0-2	0-2	0-2

4.2.07. MIXING WATER

Mixing water shall be clean and free from deleterious amounts of acids, alkalis, salts or organic materials.

4.2.08. ADMIXTURES

No admixtures shall be used without the District or Engineer's approval and any ready-mix concrete with admixtures indicated found on the job site will be rejected.

4.2.09. REINFORCING STEEL

Reinforcing steel shall consist of deformed bars of the size called for on the Plans. Steel shall conform to ASTM A615; longitudinal reinforcing steel for columns shall be hard grade; all other reinforcing steel shall be either intermediate or hard grade. Deformations shall conform to ASTM A615, A 616, and A 617. If specified, mill certificates showing conformity with these requirements shall be furnished to the Engineer for each melt if so requested. Wire reinforcement shall conform to ASTM A82.

4.2.10. MIXING

Job mixing of structural concrete shall not be permitted.

Transit mix concrete shall be batched, mixed and delivered in accordance with ASTM C94, except that truck agitators may not be used. All concrete shall be deposited in place not more than forty five (45) minutes after water is added when the temperature of the concrete exceeds 85 °F, and not more than one and one-half (1-1/2) hours after water is added when the temperature of the concrete is less than 85 °F. Certified public weighmaster tickets shall be delivered to the Engineer or his representative in the field prior to placing the concrete to which the ticket applies. **Water shall not be added to the concrete at the job site.**

4.2.11. RETEMPERING

Retempering of concrete which has partially hardened, that is mixing with or without additional cement, aggregate, or water, will not be permitted.

4.2.12. COMPACTING

Concrete, during and immediately after depositing, shall be thoroughly worked around the reinforcement and embedded fixtures and into corners of the forms. Internal vibrators shall be used for all walls, and self-supporting beams or slabs. Vibrators shall be handled by experienced workmen and care shall be taken to avoid separation of aggregate due to over vibration. At least one (1) vibrator shall be used for each fifteen (15) cubic yards per hour of concrete placed. Standby vibrators shall be kept on hand.

4.2.13. CURING

All concrete and grout shall receive a curing compound, or other approved method, as soon as the concrete or grout has sufficiently set.

Curing compound shall be of a nature and composition not deleterious to concrete, and thinned to a working consistency either with a volatile solvent or by emulsification with water. The curing compound shall be of a standard and uniform quality ready for use as shipped by the Manufacturer. Curing compound shall form a continuous, unbroken membrane which shall adhere to moist concrete and which will not disintegrate, check, peel from the surface, nor show signs of such deterioration within thirty (30) days after application under actual working conditions. The compound shall be sufficiently transparent and free from color that there will be no permanent change in the color of the concrete. The compound shall contain, however, a temporary dye of sufficient color to make the membrane clearly visible for a period of at least four (4) hours after application. If the Contractor applies a deleterious compound to paint, plaster, gunite, or other surface treatment, he shall thoroughly sandblast the surface to remove all vestiges of the compound. This sandblasting shall be at the Contractor's expense.

4.2.14. COLD WEATHER REQUIREMENTS

Adequate equipment shall be provided for heating the concrete during freezing or near freezing weather. No frozen materials or materials containing ice shall be used.

All concrete materials and reinforcement, forms, fillers and ground which the concrete is to come in contact with shall be free from ice and frost. Whenever the temperature of the surrounding air is below 40 °F, all concrete placed shall have a temperature of between 70 °F and 80 °F and an adequate means shall be provided for maintaining a temperature of between 50 °F and 80 °F during the curing period.

The housing, covering or other protection used in connection with curing, shall remain in place and intact at least twenty four (24) hours after the artificial heating is discontinued. **The use of salt or chemicals for the prevention of freezing is prohibited.**

When heating of concrete materials is required, the mixing of water and aggregate shall be heated to not more than 90 °F prior to being placed in the mixer, so that the temperature of the mixed concrete shall not be less than 70 °F nor more than 80 °F. Aggregates shall be heated either by steam or by dry heat, and the heating apparatus shall be of a type which will heat the mass uniformly and in such a manner as to preclude the possible occurrence of overheated areas, or hot spots, which will burn the material. Flame throwers, or others, similar direct heating devices will not be allowed.

4.2.15. HOT WEATHER REQUIREMENTS

Concrete shall not be deposited when the atmospheric temperature is above 85 °F unless the Contractor follows the requirements as specified in this section of the Specification.

1. Use Cool Materials - Coarse aggregates shall be sprayed with water at least two (2) hours before mixing.
2. Subgrade and forms shall be thoroughly soaked the night before, then sprinkled again shortly before placement. There should be no standing water when concrete is deposited.
3. Protection Against Evaporation - Freshly poured concrete surfaces and exposed wall form shall be covered or screened. Spray shall be provided upwind of concrete.
4. Start the curing process as soon as possible. The Contractor shall refer to Section 4.2.13 for curing method.

SECTION 4.3. CONDUCTOR PIPE

4.3.01. STEEL CONDUCTOR TUBE

- a. Materials - Steel conductor tube shall be butt welded of sheets conforming to ASTM A283. Conductor tube used shall not have a thickness of less than one-fourth (1/4) inch with a minimum diameter of twenty four (24) inches. All field joints shall be butt welded in full circumference in accordance with Standard Drawing No. W-18.
- b. Installation - Steel conductor tube of the size and thickness specified on the Plans shall be installed in place by jacking methods without the use of water or air, at the locations shown on the Plans and to grades required to install the pipelines. Should voids or loss of ground occur during jacking operations, said voids shall be filled with grout consisting of a lean mixture of cement and sand.

Pipelines shall be installed within the conductor tube to the lines and grades shown on the Plans. The pipe shall be supported on wood skids in such a manner as to relieve the pipe joints from all load and bearing. The annular space between the conductor tube and pipe shall be filled with washed sand.

SECTION 4.4. EROSION CONTROL

4.4.01. GENERAL

The Contractor shall provide erosion control measures as defined herewith on all areas where the natural vegetation has been disturbed by the installation of water facilities and in accordance with the Storm Water Pollution Prevention Plan (SWPPP), whichever is more stringent. If a ground cover other than natural vegetation has been disturbed, this section does not apply and the Contractor shall replace said ground cover in kind.

4.4.02. PREPARATION

After the backfill has been compacted and the pipeline tested, the Contractor shall remove and dispose of rocks and debris from the area to be reseeded. No seeding shall be performed during windy weather or when the ground is too wet or in an untillable condition. The fertilizer and seed shall be spread before the straw cover material is applied. Commercial fertilizer shall not be applied until after the seed has been sown.

4.4.03. MATERIAL

Materials shall consist of the following:

- a. Seed - The seed shall consist of the following mixture: Crested Wheatgrass, forty-seven percent (47%); Intermediate Wheatgrass, twenty-seven percent (27%); Wimmera Ryegrass, thirteen percent (13%); Blando Ryegrass, thirteen percent (13%). The seed shall be spread at the rate of one hundred (100) pounds per acre and shall be applied by the use of a “Cyclone Seed Sower” or equal.
- b. Fertilizer - The fertilizer shall be Ammonium Phosphate (16-20-0) spread at the rate of three hundred (300) pounds per acre and shall be applied by the use of a “Cyclone Seed Sower” or equal.
- c. Mulch - After the application of the seed and fertilizer, new straw (stable bedding straw shall not be used) shall be uniformly spread at the approximate rate of four (4) tons per acre. The straw shall then be “mulched” into the ground by the use of a “wire” roller or other approved equipment.

4.4.04. PROTECTION FOR STEEP SLOPES

In cases where the grade over the pipe line exceeds twenty-five percent (25%) slope, the Contractor shall provide additional erosion control measures to stabilize the backfill material. The Contractor shall submit to the District for its approval, special engineering details of the method to be used.

SECTION 4.5. REMOVAL AND REPLACEMENT OF PAVED SURFACES

4.5.01. GENERAL

Street pavement and surfaces shall be removed and replaced in all areas of construction excavation in conformance with the various encroachment permits or where not covered by an encroachment permit as specified herein. Resurfacing of existing pavement and surfaces damaged or removed in connection with construction of the improvements, including all appurtenances, shall conform to the provisions of permits issued by the State of California Department of Transportation or the County Transportation Department or local Street Department under whose jurisdiction the road falls, for the work within the rights-of-way of these respective agencies.

4.5.02. EXCAVATION AND BACKFILL

The Contractor shall refer to Section 4.1 “Earthwork” of these Detailed Technical Provisions for all requirements relating trench excavation and backfill.

4.5.03. PAVEMENT REMOVAL

- a. General - Street pavement, existing road surfacing or other surfaced areas shall be removed within the limits of all construction excavations prior to proceeding with excavation operations of any nature. Surplus material shall be removed as provided in Section 4.1 “Earthwork” of these Detailed Technical Provisions. Prior to removal of existing surfacing, pavement cuts shall be made as specified here. All pavement cuts shall be neat and straight along both sides of the trench, and approximately parallel to the alignment of the pipe, to provide an unfractured and level pavement replacement. Where large irregular surfaces are removed, such trimming or cutting as hereinafter provided shall be parallel with roadway centerline or at right angles to the same. All cut edges shall provide clean, solid, vertical faces, free from all loose material.
- b. Plant-Mix Surfacing (Asphalt Concrete Pavement) - Street surfaced with asphalt concrete pavement shall be cut at the limits of the trench and/or excavation prior to removal of existing surfacing. Cuts shall be made by sawing, disk or other approved equipment.

4.5.04. REPLACEMENT

- a. In all streets or areas in which the surface is removed, broken or damaged by equipment, or in which the ground has caved in or settled due to the installation of the improvements, the surface shall be restored to the original grade and crown section by the Contractor. In the absence of specific designation on the Plans, and where the street has been improved with

roadway surface, base course, curb, sidewalk or gutter, trenches or damaged sections shall be restored with the type of improvement conforming to that which existed at the time the Contractor entered upon the work.

Prior to resurfacing, the existing surfacing shall be removed as provided above. All work shall match the appearance of the existing improvements and finished pavement shall not deviate from existing grade by more than one-eighth (1/8) inch in ten (10) feet and shall be free from ruts, depressions and irregularities.

- b. State Highway Rights-of-Way - Construction of water or sewer lines within State highway rights-of-way shall be subject to Department of Transportation utility encroachment permit. All work done within highway rights-of-way shall conform to the “Terms and Conditions Relating to Utility Encroachments”, as issued by the State Department of Transportation, and as to details as indicated on the Plans.
- c. County and Local Roads - The Contractor’s attention is directed to the requirements of the County or Local Transportation Department regarding resurfacing of excavations in County or local roads. The specifications, policies and procedures of said County or Local Transportation Department shall supersede all other provisions of this section within the jurisdiction of the County or local Road Department, but only if such specifications exceed the requirements of these Specifications.
- d. Base Material - Base material shall be furnished, placed and compacted in the trench excavation when required by the agency having jurisdiction or to replace existing base course.
- e. Plant - Mix Surfacing (Asphalt Concrete Pavement) - All asphalt concrete surfaces, including but not limited to pavements, curbs, driveways, and sidewalks, which are removed, damaged or broken by the Contractor’s installation or improvements under this Contract, shall be replaced and/or reconstructed. All asphalt concrete shall be placed on compacted fills or base material as hereinbefore specified, and replacement and/or reconstruction shall be to the same dimensions as existing surfaces unless otherwise stated herein or required by the agency having jurisdiction over the road.

Materials and workmanship for asphalt concrete replacement and/or reconstruction shall conform to the requirements of Section 39 of the latest edition of the State of California Departments of Transportation Standard Specifications for State Highways and Section 203 of the latest edition of the Greenbook, or as directed, for County and Local Streets.

Plant-mix surfacing shall be Type B3 PR70-10 asphalt concrete conforming to the above mentioned specifications for the base course and Type C2 PR 70-1 for surface wearing course.

Mineral aggregate for Type C and Type B asphalt concrete shall be steam refined asphalt and shall conform to the provisions in Section 203 or Section 92 as stated in the previously named specifications.

- f. Road - Mix Surfacing - Not permitted without prior approval of the District.
- g. Temporary Resurfacing - The Contractor shall furnish, place, and maintain temporary resurfacing as herein specified, over backfill in paved streets or driveways.

Temporary resurfacing shall be placed at the locations and of the thickness required by the permit and/or by the Engineer and shall consist of cold-mix asphalt concrete. Binder shall be liquid, grade SC-800 or approved equal.

Temporary resurfacing shall be place to the grade of existing surfaces and rolled and compacted no later than five (5) calendar days after the pipe has been laid. The Contractor shall maintain all temporary resurfacing in proper, usable condition until the permanent resurfacing operations are to be commenced. Temporary resurfacing shall be removed and disposed of by the Contractor before permanent resurfacing is placed in conformance with the Plans and Specifications.

SECTION 4.6. CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES

4.6.01. APPLICABILITY

The construction criteria presented in this section apply to sewer laterals that cross above a water main, but not to those house laterals that cross below a water main.

Water mains or non-potable pipelines that are twenty four (24) inches in diameter or larger may pose a higher degree of public health concern because of the large volumes of flow involved. Therefore, installation of water mains or non-potable pipelines twenty four (24) inches in diameter or larger should be reviewed and approved in writing by the Department of Public Health Services (DPHS) of the State of California on a case-by-case basis prior to construction.

In no case, should water mains and non-potable pipelines conveying sewage or other liquids be installed in the same trench.

4.6.02. REGULATORY REQUIREMENTS FOR WATER MAIN SEPERATION

Unless otherwise specified in these Specifications, any new development project in which all the underground facilities are being constructed for the first time must comply with the following regulatory requirements (existing Section 64630 and proposed Section 64572, Title 22 of California Code of Regulations):

Section 64630, Title 22 of California Code of Regulations

- (a) Water mains shall be installed at least:
 - (1) Ten (10) feet horizontally from and one (1) foot higher than sanitary sewer mains located parallel to the main.
 - (2) One (1) foot higher than sanitary sewer mains crossing the main.
 - (3) Ten (10) feet, and preferably twenty-five (25) feet, horizontally from sewage leach fields, cesspools, seepage pits and septic tanks.
- (b) Separation distances specified in (a) shall be measured from the nearest outside edges of the facilities.
- (c) Where the requirements of (a) and (b) cannot be met due to topography, inadequate right-of-way easements, or conflicts with other provisions of these regulations, lesser separation is permissible if:

- (1) The water main and the sewer are located as far apart as feasible within the conditions listed above; but no closer than four (4) horizontal feet with special construction pursuant to DPHS requirements.
 - (2) The water main and the sewer are not installed within the same trench.
 - (3) The water main is appropriately constructed to prevent contamination of the water in the main by sewer leakage.
- (d) Water mains shall be disinfected according to AWWA C-601 before being placed in service.
- (e) Installation of water mains near the following sources of potential contamination shall be subject to written approval by the DPHS on a case-by-case basis:
- (1) Storage ponds or land disposal sites for wastewater or industrial process water containing toxic materials or pathogenic organisms.
 - (2) Solid waste disposal sites.
 - (3) Facilities such as storage tanks and pipe mains where malfunction of the facility would subject the water in the main to toxic or pathogenic contamination.

Proposed Section 64572, Title 22 of California Code of Regulations

- (a) New water mains and new water supply lines shall not be installed in the same trench as, and shall be at least ten (10) feet horizontally from, and one (1) foot vertically above, any parallel pipeline conveying:
- (1) Untreated sewage,
 - (2) Primary or secondary treated sewage,
 - (3) Disinfected secondary-2.2 recycled water (defined in Section 60301.220, Title 22 of California Code of Regulations),
 - (4) Disinfected secondary-23 recycled water (defined in Section 60301.225, Title 22 of California Code of Regulations), and
 - (5) Hazardous fluids such as fuels, industrial wastes, and wastewater sludge.
- (b) New water mains and new water supply lines shall be installed at least four (4) feet horizontally from, and one (1) foot vertically above, any parallel pipeline conveying:

- (1) Disinfected tertiary recycled water (defined in Section 60301.230, Title 22 of California Code of Regulations), and
- (2) Storm drainage.
- (c) New water supply lines conveying raw water to be treated for drinking purposes shall be installed at least four (4) feet horizontally from, and one (1) foot vertically below, any water main.
- (d) If crossing a pipeline conveying a fluid listed in subsection (a) or (b), a new water main shall be constructed perpendicular to and at least one (1) foot above that pipeline. No connection joints shall be made in the water main within eight (8) horizontal feet of fluid pipeline.
- (e) The vertical separation specified in subsections (a), (b), and (c) is required only when the horizontal distance between a water main and pipeline is ten (10) feet or less.
- (f) New water mains shall not be installed within one-hundred (100) horizontal feet of any sanitary landfill, wastewater disposal pond, or hazardous waste disposal site, or within twenty-five (25) feet of any cesspool, septic tank, sewage leach field, seepage pit, or groundwater recharge project site.
- (g) The minimum separation distances set forth in this section shall be measured from the nearest outside edge of each pipe barrel.

4.6.03. ALTERNATIVE CRITERIA FOR CONSTRUCTION

4.6.03.01. Water Mains, and Sewers and Other Non-Potable Fluid-Carrying Pipelines

When new water mains, new sanitary sewer mains, or other non-potable fluid-carrying pipelines are being installed in existing developed areas, local conditions (e.g., available space, limited slope, existing structures) may create a situation in which there is no alternative but to install water mains, sanitary sewer mains, or other non-potable pipelines at a distance less than that required by the regulations [existing Section 64630 (proposed Section 64572) of Title 22 of California Code of Regulations]. In such cases, through permit action, DPHS may approve alternative construction criteria. The alternative approach is allowed under the proposed regulation Section 64551(c), Title 22 of California Code of Regulations:

“A water system that proposes to use an alternative to the requirements in this chapter shall demonstrate to the Department how it will institute additional mitigation measures to ensure that the proposed alternative would not result in an increased risk to public health.”

Appropriate alternative construction criteria for two different cases in which the regulatory criteria for sanitary sewer main and water main separation cannot be met are shown in Figures 1 and 2 of Standard Drawing No. S-1 in these Specifications.

1. **Case 1** - New sanitary sewer main and a new or existing water main; alternative construction criteria apply to the sanitary sewer main.
2. **Case 2** - New water main and an existing sanitary sewer main; alternative construction criteria may apply to either or both the water main and sanitary sewer main.

Case 1: New Sanitary Sewer Main Installation (Figures 1 and 2 of Standard Drawing No. S-1)

Zone Special Construction Required for Sanitary Sewer Main

- A Sanitary sewer mains parallel to water mains shall not be permitted in this zone without prior written approval from the DPHS and the District.
- B If the water main paralleling the sanitary sewer main does not meet the Case 2 Zone B requirements, the sanitary sewer main should be constructed of one of the following:
 1. High density polyethylene (HDPE) pipe with fusion welded joints (per AWWA C-906);
 2. Spirally-reinforced HDPE pipe with gasketed joints (per ASTM F894);
 3. Extra strength vitrified clay pipe with compression joints;
 4. PVC sewer pipe with rubber ring joints (per ASTM D3034) or equivalent;
 5. Cast or ductile iron pipe with compression joints; or
 6. Reinforced concrete pressure pipe with compression joints (per AWWA C-302).
- C If the water main crossing below the sanitary sewer main does not meet the requirements for Case 2 Zone C, the sanitary sewer main should have no joints within ten (10) feet from either side of the water main (in Zone C) and should be constructed of one of the following:
 1. A continuous section of ductile iron pipe with hot dip bituminous coating; or
 2. One of the Zone D options 1, 3, 4, or 5 below.
- D If the water main crossing above the sanitary sewer main does not meet the Case 2 Zone D requirements, the sanitary sewer main should have no joints within four (4) feet from either side of the water main (in Zone D) and be constructed of one of the following:

1. HDPE pipe with fusion-welded joints (per AWWA C-906);
2. Ductile iron pipe with hot dip bituminous coating and mechanical joints (gasketed, bolted joints);
3. A continuous section of DR 14 PVC pipe (per AWWA C-900) or equivalent, centered over the pipe being crossed;
4. Any sanitary sewer main within a continuous sleeve.

Case 2: New water mains Installation (Figures 1 and 2 of Standard Drawing No. S-1)

Zone Special Construction Required for Water Main

- A No water mains parallel to sanitary sewer mains shall be constructed without prior written approval from the DPHS.
- B If the sanitary sewer main paralleling the water main does not meet the Case 1 Zone B requirements, the water main should be constructed of one of the following:
1. HDPE pipe with fusion welded joints (per AWWA C-906);
 2. Ductile iron pipe with hot dip bituminous coating;
 3. Dipped and wrapped one-fourth-inch-thick welded steel pipe;
 4. DR 14 PVC water pipe (per AWWA C-900 & C-905) or equivalent; or
- C If the sanitary sewer main crossing above the water main does not meet the Case 1 Zone C requirements, the water main should have no joints within ten (10) feet from either side of the sanitary sewer main (in Zone C) and be constructed of one of the following:
1. HDPE pipe with fusion-welded joints (per AWWA C-906);
 2. Ductile iron pipe with hot dip bituminous coating;
 3. Dipped and wrapped one-fourth-inch-thick welded steel pipe;
 4. DR 14 PVC water pipe (per AWWA C-900 & C-905); or
- D If the sanitary sewer main crossing below the water main does not meet the requirements for Case 1 Zone D, the water main should have no joints within eight feet from either side of the sanitary sewer main (in Zone D) and should be constructed as for Zone C.

4.6.03.02. Water Mains and Pipelines Conveying Non-Potable Fluids

When the basic separation criteria cannot be met between water mains and pipelines conveying non-potable fluids, the requirements described above for sanitary sewer mains should apply. This includes the requirements for selecting special construction materials and the separation requirements shown in Figures 1 and 2 of Standard Drawing No. S-1. Note that not all construction materials allowed for sanitary sewer mains will be appropriate for other non-potable fluid lines. For example, certain plastic lines may not be appropriate for the transport of some fuel products. The selection of compatible materials of construction for non-potable fluids is a decision to be made by the project engineer.

4.6.03.03. Water Mains and Sewage Force Mains

- a. Sewage force mains shall not be installed within ten (10) feet (horizontally) of a water main regardless of construction methods or materials.
- b. When a sewage force main must cross a water main, the crossing should be as close as practical to the perpendicular. The sewage force main should be at least one foot below the water main; support the water main during construction to prevent separation of joints.
- c. When a new sewage force main crosses under an existing water main, and a one-foot (1') vertical separation cannot be provided, all portions of the sewage force main within eight (8) feet (horizontally) of the outside walls of the water main should be enclosed in a continuous sleeve. In these cases, a minimum vertical separation distance of four (4) inches should be maintained between the outside edge of the bottom of the water main and the top of the continuous sleeve.
- d. When a new water main crosses over an existing sewage force main, the water main should be constructed of pipe materials with a minimum rated working pressure of 200 psi or the equivalent.

4.6.03.03. Water Mains and Tertiary Treated Recycled Water or Storm Drainage

The basic separation criteria for water mains and pipelines conveying tertiary treated recycled water or storm drainage lines are a four (4) foot horizontal separation where lines are running parallel and a one (1) foot vertical separation (water line above recycled or storm drainage) where the lines cross each other.

When these criteria cannot be met, the Zone A criteria apply where lines are running parallel, and the Zone C and Zone D criteria apply where the lines cross each other as shown on Figures 1 and 2 of Standard Drawing No. S-1. For these situations, the Zone "P" criteria are in effect and prohibit construction less than one (1) foot in parallel installations and less than four (4) inches in vertical (crossing) situations.

For tertiary treated recycled water and storm drainage lines, the Zone B criteria (requirements for special pipe) do not apply as the basic separation criteria is a four (4) foot horizontal separation criteria for parallel lines. The tertiary treated recycled water lines should be constructed in accordance with the color-coding, and labeling requirements per Section 116815, California Health and Safety Code of Regulations.

4.6.04. MISCELLANEOUS GUIDANCE

- a. More stringent requirements may be necessary if conditions such as high groundwater exist. HDPE or similar pipe may be required to provide flexibility to move without potential joint leaks.
- b. Sanitary sewer mains should not be installed within twenty five (25) horizontal feet of a low head (5 psi or less pressure) water main.
- c. New water mains and sanitary sewer mains should be pressure tested in accordance with Manufacturer's Specifications during manufacture, and the Standard Drawings during construction.
- d. When installing water mains, sewers, or other pipelines, measures should be taken to prevent or minimize disturbances of existing pipelines. Disturbance of the conduit's supporting base could eventually result in pipeline failure.
- e. Special consideration should be given to the selection of pipe materials if corrosive conditions are likely to exist; refer to soils report for the project. These conditions may be due to soil type and/or the nature of the fluid conveyed in the conduit, such as a septic sewage producing corrosive hydrogen sulfide.

NOTE: Dimensions are from the outside of the water main to the outside of the other pipeline, manhole, or sleeve.

SECTION 4.7. WATER QUALITY SAMPLE STATION

4.7.01. GENERAL

Water quality sample station shall be installed as called for on the Drawings and in accordance with Standard Drawing No. W-9, and as specified herein. Service lateral shall be installed in accordance with Standard Drawing No. W-5.

4.7.02. MATERIALS

Water quality sample station shall be Koraleen Station Guard XLT for Cold Climates or approved equal, per Standard Drawing No. W-9.

4.7.03. EARTHWORK

The Contractor shall refer to Section 4.1 “Earthwork” of these Detailed Technical Provisions for all requirements relating trench excavation and backfill.

4.7.04. SERVICE LATERAL

Each water quality sample station shall be connected to the water main with one-inch (1”) water service lateral per Standard Drawing No. W-5. The corporation stop, copper tubing, angle meter stop and valve box shall be furnished and installed in accordance with the applicable specification as specified on Section 4.8. of these Detailed Technical Provisions.

SECTION 4.8. WATER SERVICE

4.8.01 GENERAL

Services shall be installed at the locations shown on the Plans, at right angles to the centerline of the main (unless otherwise shown) and shall be spaced a minimum of four (4) feet from any sewer lateral. No services will be permitted in driveway areas or under any structure (wall, retaining wall, garden wall, footing, residence/commercial, or out-building).

All pipes, valves and fittings shall have a minimum working pressure rating of one hundred sixty (160) psi.

Water service connections shall be installed in conformance with Standard Drawing No. W-5 and other applicable Standard Drawings.

The area designated on Standard Drawing No. W-5 as Future Meter Box shall be backfilled after covering the angle meter stop with an inverted polyethylene bag securely tied or taped below said stop. The bag shall be of a size to adequately enclose the entire angle meter stop and shall be black, four (4) to six (6) mils in thickness as manufactured by Transparent Products Corp., 1727 West Pico Blvd., Los Angeles, CA 90015, or approved equal. Care shall be taken not to puncture or tear the bag during backfilling of the future meter box area.

An electronic mini-marker manufactured by 3M Corp., or approved equal, shall be placed twelve (12) inches in front of the meter box in accordance with the manufacturer's recommendations.

4.8.02. EARTHWORK

The Contractor shall refer to Section 4.1 "Earthwork" of these Detailed Technical Provisions for all requirements relating trench excavation and backfill.

4.8.03. SERVICE SADDLES

Wide body strap service saddles shall be furnished and installed for water services. The saddle shall be as manufactured by Smith-Blair or approved equal sized to fit 9.05-inch C-900 PVC pressure pipe (eight-inch diameter.), or size appropriately for the main to be tapped. Casting shall be tapped with fully formed threads, iron pipe size. Strap shall be Type 304 stainless steel. Bolts, nuts and washers to be 5/8-inch N.C. roll thread Teflon coated.

Taps for pressure pipe shall be iron pipe thread sized for the diameter of service to be used and shall be welded to steel pressure pipe in the field. Ductile iron pipe shall be tapped to receive threaded corporation stops.

4.8.04. CORPORATION STOP

A corporation stop shall be provided at the main for each service pipeline indicated on the Drawings. Corporation stop shall be bronze body conforming to ASTM B62-63 with iron pipe size threads and compression-type coupling for copper pipe size polyethylene pipe. Corporation stops shall be Ford F-1100, or approved equal.

4.8.05. SERVICE LINES

Service lines shall be constructed as shown on the Drawings using one-inch (1") or larger polyethylene pressure pipe PE 3406 conforming to AWWA C-901. The pipe shall be copper pipe size one inch (1") or larger, nominal size as indicated on the Drawings, with a dimension ratio of not more than 9.3.

4.8.06. ANGLE METER STOP

Meter stops shall be provided at the water meter locations of each new service as indicated on the construction Drawings. For water meters placed on level area, use James Jones J-182 or approved equal. For water meters placed on steep hillsides or bank, use Ford KV13-332W or approved equal for dual service and KV43-332W or approved equal for single service. Standard Drawings No. W-5A and W-5B shall be referred for details.

SECTION 4.9. PIPE, FITTINGS AND INSTALLATION FOR WATER SYSTEM

4.9.01. GENERAL

The Contractor shall furnish all labor, materials and equipment and perform all the Work to furnish, install and test all pipe, pipe supports, valves, fittings, pipe thrust restraints and all required appurtenances as shown on the Drawings and as required to make the entire piping system operable. Piping runs shown on the Drawings shall be followed as closely as possible, except for minor adjustments to avoid architectural and structural features. If major relocations are required they shall be approved by the District. Piping around all equipment shall be arranged to permit ready access to and removal of equipment or parts. Parallel runs of pipe shall be grouped and kept uniformly parallel.

Ductile iron pipe, PVC pipe or cement mortar lined and coated steel (CML&C STL) pipe shall be used for twelve-inch (12") diameter and smaller pipe.

Ductile iron pipe or CML&C STL pipe shall be used for fourteen-inch (14") diameter and larger pipe.

C-900 PVC pipe may alternately be used based on the appropriate pressure rating noted in the Feasibility Study.

The Contractor shall submit Shop Drawings showing the pipe material specifications, dimension, joint detail, piping laying diagram to the District for approval prior to the manufacturing of any piping.

The appropriate AWWA Standards and Specifications shall be used as minimum standards or specifications for the manufacture, installation or construction of all of the District's water transmission and distribution pipelines.

4.9.02. CAST IRON OR DUCTILE IRON PIPE AND FITTING

- a. Where cast iron (CI) pipe is called for on the Plans, it shall be the Contractor's option to use either cast iron or ductile iron (DI) pipe.
- b. All cast iron pipes shall be manufactured in accordance with American National Standard Institution Standard A21.8 (ANSI A21.8) and AWWA C-106 and shall be rated for minimum 150 psi internal working pressure.

- c. All ductile iron pipes shall be manufactured in accordance with ANSI A21.51 and AWWA C-151 and shall be Class 51 thickness for pipe up to twelve-inch (12") diameter, and Class 52 for pipe larger than fourteen-inch (14") diameter.
- d. All cast iron or ductile iron pipe fittings shall be manufactured in accordance with ANSI A21.10 and AWWA C-110 or ANSI A21.53 and AWWA C-153.
- e. All cast iron or ductile iron pipe and fittings shall have cement-mortar lining per ANSI A21.4 and AWWA C-104. Cement shall be of Type II Cement.
- f. Bolts, nuts and washers for flanged joints shall conform to the recommendations of the pipe Manufacturer and shall be uniformly tightened. Ring gaskets shall be lubricated and installed in accordance with the Manufacturer's recommendations.
- g. Ductile iron pipe may, at the Contractor's option (if not noted on the Plans), have push-on, mechanical or 125-pound. flanged joints. Where flexibility of joints is a factor, such as where piping enters or exits a structure a flexible coupling shall be used. Pipe with flange joint shall not be used for underground installation.
- h. Mechanical joints shall consist of a stuffing box into which an endless rubber ring is compressed by a follower gland. The gasket must be fully confined and under constant compression. Mechanical joint pipe shall be installed in accordance with Manufacturer's recommendations.
- i. DI fitting adjacent to a valve shall have flanged ends. Flanged coupling adapter shall be provided with the pipe and fittings furnished.
- j. All ductile iron pipe and fitting shall be installed with an eight (8) mils thick polyethylene tube for all underground installation.

4.9.03. CEMENT MORTAR LINED AND COATED STEEL (CML&C STL) PIPE

Cement mortar lined and coated or painted steel (CML&C STL) pipe and fittings shall be manufactured in accordance with AWWA C-200 except as further noted in these Specifications. Minimum thickness of steel plate shall be 10 gauges, or as determined the formula specified in AWWA C-200. The pipe shall be rated for the minimum 150 psi working pressure or class as indicated on the Drawing.

- a. Pipe - Pipe shall consist of the following component parts - A welded sheet steel or plate steel cylinder with joints formed integrally with the steel cylinder or with steel joints rings welded to the ends; a dense cement-mortar lining; a dense, concentric, steel reinforced

- exterior mortar coating or shop primed, as specified; a self-centering bell and spigot joint with a circular pre-formed rubber gasket, so designed that the joint will be watertight under all conditions of service or welded lap joints, or plain end as required.
- b. Steel for Cylinders - The steel for cylinders shall be hotrolled low carbon steel sheets conforming to ASTM A283, Class B or C, or A570, Class C. The minimum acceptable yield strength of the steel shall be 33,000 psi. Design stress shall not exceed 15,000 psi in any case.
- c. Exterior of Pipe - The exterior of pipe shall be either cement mortar coated or shop primed and in accordance with the following:
1. Cement mortar coating shall be applied in accordance with AWWA C-205. All buried pipe shall be cement mortar coated. Type II cement shall be used for all mortar coating.
 2. Shop coating for exterior of pipe above ground or in structure shall conform to painting specifications.
 3. Marking - The following information shall be clearly stenciled on each section of pipe; pressure class; inside diameter in inches; name of manufacture; date of manufacture.
- d. Interior of Pipe - The interior of pipe shall be cement mortar lined. Lining may be placed by the centrifugal, pneumatic, or hand method, in order, whichever is applicable as determined by the pipe Manufacturer. Cement shall be Type II cement.
- e. Bell and Spigot Joints - Bell and spigot joints shall be made with rubber gaskets restrained or confined to an annular space in such manner that movement of the pipe or hydrostatic pressure cannot displace the gasket. Spigot and bell ends shall be formed by cold rolling or swaging or hot die and mandrel process. The deformation of the gasket in the joints of the installed pipe shall not exceed forty five percent (45%) nor be less than twenty percent (20%) of the stretched gasket diameter.
- f. Welded Field Joints - Welded field joints shall meet the requirements of AWWA C-206.
- g. Flange Joints - Flanged joints shall meet the requirements of AWWA C-207.

h. Diameters - Diameters shown for steel pipe larger than twelve (12) inches indicate required inside diameter after lining. Steel pipe twelve (12) inches in diameter and smaller shall be standard mill diameters.

i. Special Fitting

1. Wherever a bend exceeds the allowable deflection, a special fitting is required and shall be fabricated in accordance with this section. Special fittings shall extend a minimum distance back from the last weld equal to half of the diameter of the pipe, but not less than twelve (12) inches. The Contractor shall furnish and install specially fabricated special fittings and bends for closures, curves, bends, reducer, and connections to valves. The special fittings and bends shall have a minimum design equal to the adjoining pipe. Steel plates used in the fabrication shall conform to ASTM A283, Grade B or C, and shall not be stressed more than 13,500 psi at the design pressure.

Fittings shall conform to applicable sections of AWWA C-208 and C-206. Fittings adjacent to a valve or a blind flange shall be contain flanged ends.

2. The minimum wall thickness of all special fittings shall be 0.1875 inch unless otherwise noted.
3. All piping special fittings shall have a minimum wall thickness of the largest class pipe which it joins. Wire reinforcement, either Spiral Wire Reinforcement or Wire Fabric Reinforcement shall conform to either ASTM A82 or A185. Fabric shall be sufficiently lapped to secure the full strength of the mesh.
4. Cast Iron Fittings (Alternate) - In lieu of fabricated fittings the Contractor may choose to use cast iron in the installation of welded steel pipe. In this case the cast iron fittings shall be the mechanical joint type with cement linings conforming to AWWA C-110 (ASA A21.10). The class of each fitting shall conform to the class of welded pipe to be used. Only one (1) field cut of the welded steel pipe will be permitted at each cast iron fitting location. Protection of all inside joint recesses and outside joints shall be as hereafter specified.

j. Testing - Testing of fittings shall be by a hydrostatic test equal to one hundred fifty percent (150%) of the design working pressure.

- k. Bends - Unless otherwise indicated, bends shall have minimum centerline radius of two and one-third (2-1/3) times its diameter. The maximum deflection at a mitered girth seam shall be twenty two and one-half (22-1/2) degrees.
- l. Outlets - Collars and wrappers on outlets shall have a minimum thickness determined by the following:

$$T = \frac{P \times D_p \times D_o}{36,000 \times W}$$

T = Thickness of the collar or wrapper in inches.

P= Design pressure in psi.

D_p = Inside diameter of pipe cylinder in inches.

D_o = Diameter of opening (major axis in ellipse) in inches.

W = Width of collar or wrapper in inches.

The width of the collars or wrappers shall be not less than one-third (1/3) or more than one-half (1/2) of the inside diameter of the outlet, measured on the surface of the cylinder. Outlets three (3) inches in diameter or less may be installed without collars. Where specifically called for in lieu of collars or wrappers, crotch plates may be used on outlets larger than twelve (12) inches in diameter. The design of crotch plates shall be based on AWWA Manual No. 11.

- m. Long Radius Curves - Horizontal and vertical long radius curves may be formed of straight pipe by taking small angular deflections at the bell and spigot joints, not exceeding the published allowable deflections.
- n. Rubber Gaskets - The gaskets for joints shall be circular, free from imperfections, dense, and consist of first grade natural rubber or synthetic rubber, or a suitable combination of both. Gaskets shall conform to the following physical requirements when tested in accordance with Federal Test Methods Standard No. 601.

Tensile Strength, Natural Rubber.....	2,700 psi
Tensile Strength, Synthetic Rubber.....	2,300 psi
Elongation at Rapture, Minimum.....	4.75%
Specific Gravity.....	1.15 to 1.25
Compression Set Test, Maximum.....	15%
Shore Durometer, Type A.....	50 - 60
Tensile Strength after Aging, Minimum of Original.....	80%

- o. Bond Clip - bond clip or jumpers shall be furnished and installed as recommended by the pipe manufacture. Minimum three (3) clips per joint.
- p. Drawings - Prior to the manufacture of any pipe, the Contractor shall submit for approval detailed drawings of the pipe layout, including the required pull at each pipe joint which may be necessary to construct the pipeline in accordance with the Drawings.

4.9.04. POLYVINYL CHLORIDE (PVC) WATER PIPE

This specification covers the furnishing of polyvinyl chloride (PVC) pressure pipe in nominal diameters four (4) inches through twelve (12) inches for potable water distribution projects as designated on project drawings.

- a. Pipe - The pipe shall be fabricated in accordance with AWWA C-900 for “Polyvinyl Chloride (PVC) Pressure Pipe, 4 Inch through 12 Inch for Water” and shall be rated for operating pressure as noted on the Plans.
- b. Joints - Shall be gasket, push-on type conforming to AWWA C-900. Since each pipe Manufacturer has a different design for push-on joints, gaskets shall be part of a complete pipe section and purchased as such. Lubricant shall be as recommended by the pipe Manufacturer and shall not adversely affect the potable qualities of the water to be transported.
- c. Markings - All PVC pipe shall be clearly marked in accordance with AWWA C-900. Intervals shall not exceed five (5) feet.
- d. Approvals - PVC water pipe shall be approved by the Underwriters Laboratory (UL) and by Factory Mutual (FM).
- e. Tests and Reports - The Contractor shall provide test reports duly certified by the Manufacturer’s testing facility or an approved testing laboratory of full compliance with AWWA C-900. Pipe shall be rejected for failure to comply with any requirement of this specification.
- f. Fittings - All elbows, tees, crosses, reducers, and other special fittings in PVC pipeline shall be either cast iron or ductile iron pipe fitting per Section 4.9.2 with AWWA C-104 Type II cement mortar lining. All fittings adjacent to a valve shall have flanged ends. Flanged coupling adaptor shall be provided with pipe and fitting supplied.

- g. Deflection - Deflections shall not exceed the pipe Manufacturer's printed recommendations. On factory installed couplings no deflection shall be allowed for the factory joint unless the coupling is "broken loose" by the Contractor prior to installing.
- h. End Separation - Ends of pipe sections shall be so manufactured that in conjunction with couplings and rings they shall provide, when assembled, automatic separation of pipe ends.
- i. Pipe Ends - PVC pipe shall be of a design for which there is available, from local stock, cast iron fittings and gate valves having bells with sealing ring grooves of the same design as the ring groove of the couplings with which the pipe sections are joined.
- j. Locator Wire - In continuous runs of PVC pipeline, a 12 gauge TW solid copper wire shall be taped to the pipeline in accordance with Standard Drawing No. W-14. The wire shall be attached to all gate valves. Copper wire shall be continuous. Purpose of this wire to aid in locating the pipe.
- k. Shop Drawings - Shop Drawings of all pipe and fittings shall be submitted to the Engineer and shall be approved by him prior to fabrication of the pipe and fittings.

4.9.05. GALVANIZED IRON PIPE AND FITTINGS

Galvanized iron pipe shall conform to ASTM A53 or ANSI B36.10 welded Schedule 40 galvanized. The fittings shall be ANSI B16.3 screwed, banded and galvanized for a working pressure of 150 psi.

4.9.06. TAPPING OUTLET

Tapping outlet for PVC pipe and ductile iron pipe lines shall be Mueller Catalog No. H-615, Class 150 mechanical joint tapping sleeve or approved equal. Tapping out for steel pipe shall be of weld-on outlet per Standard Drawing No. W-10.

4.9.07. FLANGES, GASKETS, AND BOLTS

Flanges shall conform to dimensions and drilling of ANSI B16.1, Class 125, or as called for on the Drawings. Flange gaskets shall be ring type, Johns-Manville Style 60S, Granite, or approved equal. Thickness shall be one-sixteenth (1/16) inch for pipe eighteen (18) inches and smaller, and one-eighth (1/8) inch for larger pipes. Flange assembly bolts shall be standard hexagon head machine bolts with heavy hot pressed hexagon nuts. Threads shall conform to ANSI B1.1, coarse thread series, Class 2 fit. Bolt length shall be such that after the joints are made up, the bolts shall protrude through the nut, but not more than two (2) inches. Flanges on steel pipe shall be welded to the pipe in accordance with AWWA C-207.

4.9.08. FLEXIBLE COUPLINGS AND FLANGED COUPLING ADAPTORS

Flexible couplings shall be Romac Style 501, Smith-Blair Type 442, long barrel, or approved equal. Flanged coupling adapters shall be Smith-Blair Type 912, Romac Style FCA501, or approved equal. Flexible coupling and flanged coupling adaptors for underground use shall be epoxy coated.

4.9.09. TEMPORARY BULKHEADS

The Contractor shall furnish and install complete, all the necessary temporary bulkheads or steel boilerheads and appurtenances thereto in the pipeline used for water line pressure and leakage test and for backfilling purpose and shall remove such bulkheads upon completion of the line.

4.9.10. INSTALLATION OF UNDERGROUND PIPE

The Contractor shall, after excavating the trench and preparing the proper bedding for the pipe, furnish all necessary facilities for properly lowering and placing sections of the pipe in the trench without damage and shall properly install the pipe. The section of the pipe shall be fitted together correctly and shall be laid true to line and grade in accordance with survey control. The full length of the barrel of the pipe shall have a uniform bearing upon the bedding material, but if the pipe has a projecting bell, suitable excavation shall be made to receive the bell which shall not bear on the subgrade. The bottom of the pipe shall be closely fitted to the bedding material for the specified width. Pipe shall be laid upgrade. Any pipe which is not in true alignment, both vertical and horizontal, or shows any undue settlement after laying, shall be taken up and re-laid correctly by the Contractor at his own expense, when so ordered by the District. No pipe shall be laid which is damaged, cracked, checked, or spalled or has any other defect deemed by the District to make it unacceptable, and all such sections shall be permanently removed from the Work.

4.9.11. INSTALLATION OF DUCTILE IRON AND CAST IRON PIPE

- a. Pipe Laying - All pipes shall be carefully inspected for defects before installation. Such inspection shall include light tapping with a hammer while the pipe is suspended in the air. No pipe or fitting which is cracked or which shows defects excluded by the Specifications for such fittings shall be used. Any injuries to the protective coating of the pipe or fittings shall be carefully repaired by the Contractor with coal tar pitch varnish. The pipes, valves, and fittings shall be carefully cleaned immediately before installation. Every open end of a pipe shall be carefully plugged or capped before leaving the Work. For bell and spigot pipe, the position or direction of bells, which shall normally face the direction of flow, may be altered from the positions shown on the Plans with the permission of the District. Bells and spigots must be thoroughly cleaned and free from oil, grease, blisters, or excess coating before spigots are inserted into bells. The spigot end of the pipe shall be brought to true line and grade and be inserted to the full depth of the socket before the joints are made. The inner surface of the pipe shall conform at the joints, and the annular space for the

jointing materials shall be of uniform width and depth. If any pipe does not allow sufficient space for jointing material, it shall be replaced by one of the proper dimensions. The maximum deflection angle in bell and spigot cast iron pipe joints shall be no more than three (3) degrees. Laying of cast iron pipe shall conform to line and grade as shown on the Drawings.

- b. Piping Through Walls - Piping through walls shall be installed in accordance with the Drawing and shall be accomplished by the installation of a wall insert of the same size as the pipe penetrating the wall. Care shall be exercised to insure a watertight installation.
- c. Neoprene-Ring Joints - Between lengths of case iron pipe, neoprene gasket joints can be used. Joints shall be "Tyton" or approved equal. Installation shall be in accordance with the Manufacturer's recommendations. Gasket seats and neoprene gaskets shall be thoroughly cleaned before assembly. The completed joint shall have a uniform contact by the gasket between the outer surface of the spigot and the gasket seat of the bell.
- d. Flanged Joints - Flanged pipe shall be cut true to length. Joints shall be made up square, with even pressure upon the gaskets and shall be perfectly watertight.

Gaskets shall be full faced and shall fit the inside dimension of the pipe accurately, so that no surplus material projects out into the flow area. The completed joint shall be smooth and properly aligned. Flanged pipe shall not generally be allowed for underground installation.

4.9.12. INSTALLATION - CEMENT MORTAR LINED AND COATED STEEL (CML&C STL) PIPE

While pipe is being transported or handled during construction operations, every reasonable precaution shall be taken to prevent damage thereto. Pipe shall be handled with suitable equipment approved by the Manufacturer, such as multiple padded slings, designed to prevent scuffing and denting of the pipe. Pipe sections shall be supported on padded bolsters or cradles and separated so that they do not bear against each other during transporting. The pipe shall not be placed directly on rough ground, but shall be supported in a manner which will protect that pipe against injury, wherever stored.

Any pipe section that is damaged shall be repaired as prescribed by the Engineer, if in his opinion, a satisfactory repair can be made; otherwise, the pipe section shall be replaced with the undamaged section at the Contractor's expense.

Immediately in advance of placing any pipe or fittings in the trench, all loose rocks or other material which would interfere with the proper laying of the pipe shall be removed from the trench. The bottom of the trench must be trimmed so that the barrel of the pipe shall be supported throughout

its entire length. Bell holes shall be provided at pipe joints of sufficient depth so that each joint can be made as required by the type of pipe being used.

When the trench has been properly prepared, the pipe and fittings shall be lowered therein, singly, without undue jar or strain and assembled piece by piece inside the trench. Proper slings shall be used in lowering pipe to prevent damage to pipe surfaces. Before lowering, and while suspended, each joint of pipe shall be inspected for defects. Any damaged, defective or unsound pipe shall be immediately removed. All foreign matter or dirt shall be removed from the inside of the pipe and the outer surface of the spigot ends and the inner surface of the bell before it is lowered into position inside the trench and pipe shall be kept clean during pipe-laying operations. All valves, fittings, and specials shall likewise be cleaned thoroughly before being placed the pipeline.

Each length of pipe shall be accurately adjusted to line and grade and held in position by earth packed on each side. No blocking of any kind shall be used to support the pipe or hold it in position. The pipe shall be installed in accordance with Manufacturer's recommendations. Departure from and return to established alignment and grade shall not exceed 1/16 inch per linear foot of pipe and at no point shall the maximum departure from established line and grade be greater than one-inch. Accumulation of departure from the design stationing shall be avoided insofar as practicable.

Where long-radius curves or bends are allowed to be made by deflecting the pipe sections, the deflection shall be limited to that recommended by the Manufacturer of the pipe. Deflection in steel pipe may be made by the use of bevel end pipe with a bevel not to exceed five degrees. Where changes in grade or alignment cannot be made by the above means, or where specifically indicated by the Drawings, shop fabricated or mitered pipe bends shall be used.

No pipe shall be laid in water nor shall water be permitted to enter the pipe. Pipe ends shall be closed when pipe laying is not in progress. Pipe shall be laid uphill with bells upgrade and with identification marks on top unless otherwise approved by the Engineer.

The joining of pipe sections shall be such as to produce watertight lines for the conveyance of water. When laying pipelines, the pipe shall be carried by multiple padded slings, unless otherwise approved by the Engineer, which should be located around the pipe in such a manner as to prevent vibration and deflection of the pipe. The pipe shall not be dragged on the bottom of the trench, but shall be supported by the slings while being fitted into the adjacent section. Any disbondment of the mortar coating from the steel cylinder will not be allowed. When rubber gasket joint pipe is being laid, ends of the pipe shall be thoroughly cleaned with wire brushes or the equivalent to remove all foreign materials, including sealing compound, if any, from surfaces which are to be incorporated in the joint. The spigot recess, the rubber gasket, and the bell shall be lubricated with a soft, vegetable soap compound.

After lubrication, the gasket shall be thoroughly stretched when placing in the spigot groove so that there is a uniform volume of rubber distributed around the circumference. The gasket shall not be twisted, rolled, cut, crimped or otherwise injured or forced out of position during closure of the joint. After the joint is assembled, a thin metal feeler gauge shall be inserted between the bell and the spigot and the position of the rubber gasket and checked around the complete circumference of the pipe. If the gasket is not in the proper position, the pipe shall be withdrawn, the gasket checked to see that it is not cut or damaged, the pipe re-laid, and the gasket position again checked.

The edge of the lining of the bell end shall be “buttered” with cement mortar prior to assembly. The lining in both the bell and spigot ends shall be dampened prior to application of the mortar. The joint shall then be closed and a rubber sewer ball or squeegee shall be pulled through the pipe to remove excess mortar extruded on the inside surface of the pipe. The mortar shall be mixed in proportion of not richer than one part, by weight, of cement to two parts, by weight, of clean, well-graded sand, and just sufficient water to obtain the proper consistency. To improve workability of the mortar, the Contractor, with the Engineer’s approval, may replace not more than seven percent, by weight, of cement with approved pozzolan, or may add an approved air-entrained agent in the mortar, or may use any combination of these. Any mortar which has become so stiff that proper placement without retempering cannot be assured shall be wasted. The Contractor shall prepare the mortar in small batches so as to avoid stiffening of the mortar prior to its application. The finished joint shall be smooth and flush with the adjacent pipe surfaces. For pipe 24-inches in diameter and larger, after the pipe zone bedding and backfill have been densified, the inside joint recess shall first be moistened, then filled and painted with a stiff cement mortar consisting of 1 part cement to 1-1/2 parts of sand. The finished joint shall be smooth and flush with the adjacent pipe surfaces. Interior joint painting operations shall not be conducted within two joints of pipe laying operations.

After laying, the exterior joint recesses shall be filled with grout. Grout used for filling the outside joints by the pouring method shall be mixed in proportions of one part cement, by weight, to not more than two parts, by weight, to not more than two parts, by weight, of sand passing a No. 16 mesh screen and thoroughly mixed with water to the consistency of rich cream. A cloth band 9 inches wide shall be placed around the outside of the pipes and centered over the joint. The joint band shall be bound to each pipe by use of steel box strapping. The band shall completely and snugly encase the joint except for an opening at the top through which to pour the grout. The outside grout space, prior to filling with grout, shall be flushed with water so that the surfaces of the joint to be in contact with the grout filling will be thoroughly moistened when the grout is poured. Fluid grout shall be poured in only one opening in this joint and pouring shall be continuous until grout appears at the other side. The grout shall be rodded on both sides of the pipe, if necessary, to settle the grout and more grout added to fill the joint completely. The bands shall not be removed from about the joint. Exposed portions of the joint, after filling, shall be covered with wet burlap or moist earth. If backfill material is to be hydraulically consolidated, outside joint grout shall be poured and allowed to set before consolidation of the backfill material.

Field joints shall be welded at the locations shown on the Drawings and at locations where make-up field joints are required, as approved by the Engineer. The welded joints shall be by means of lap welding with ends shop-formed for lap welding or by means of a 6-inch butt strap. Hand holes shall be provided for the placement of mortar lining, in butt strap connections. All preparations of ends of pipe and all welding of joints shall be in accordance with AWWA C-206.

All flanged joints shall be installed complete with bolts in accordance with American Standards Association requirement and with full-face gaskets fabricated from 1/16-inch cloth inserted rubber gasket material. Gasket shall have bolt holes punched. All bolts and nuts and all gaskets shall be lubricated before assembly with Dearborn No-Oxide Grease No. 2 or approved equal.

Flexible couplings shall be sleeve type as manufactured by Dresser, Smith-Blair or approved equal. Prior to installation of sleeve type couplings, the pipe ends shall be thoroughly cleaned of all oil, dust, loose scale, rust and other foreign matter for a distance back from the end of the pipe of at least eight (8) inches. Middle ring, follower, and gaskets shall be assembled on the pipe ends in accordance with the coupling Manufacturer's recommendations. Gaskets, pipe ends, and middle ring flares shall be lubricated with a vegetable soap to facilitate the joining. Middle rings shall be accurately centered over the pipe ends. Bolts shall be tightened to the torque recommended by the coupling Manufacturer.

4.9.13. INSTALLATION - POLYVINYL CHLORIDE (PVC) WATER PIPE

PVC pipe shall be stored, handled and installed in accordance with Manufacturer's instructions.

- a. Embedment Requirements - The embedment requirements for PVC water pipe shall be in accordance with AWWA C-900, Appendix A.6 – "Installation" and Section 4.1 "Earth Work" of these Detailed Technical Provisions.
- b. Service Connections - All service line connections to PVC water pipe shall be made in accordance with the recommendations of AWWA Manual No. M23, "PVC Pipe - Design and Installation", Chapter 9 and Standard Drawings No. W-5A and W-5B of these Specifications. There shall be no direct taps made on PVC pipe.

4.9.14. CONCRETE THRUST BLOCK, CRADLE AND PIPE ENCASEMENT

The Contractor shall refer to AWWA Manual No. M23 and Section 4.15, "Concrete Thrust Block, and Blankets", of these Detailed Technical Provisions for all requirements relating concrete thrust block, cradle and pipe encasement

4.9.15. TESTING AND DISINFECTION OF WATER LINES

The Contractor shall refer to Section 4.10, "Water Pipeline Testing and Disinfection", of these Detailed Technical Provisions for all requirements relating testing and disinfection of water lines.

SECTION 4.10. WATER PIPELINE TESTING AND DISINFECTION

4.10.01. GENERAL

All water facilities including water pipes, service laterals, valves, blow-offs, flush-outs, hydrants and any other appurtenances shall be water tight, cleaned and disinfected before they are placed in services. Testing and disinfection, as a minimum, shall meet appropriate AWWA specifications unless otherwise specified.

4.10.02. TESTING

Pressure and leakage tests shall be performed in accordance with the AWWA standard procedures for Pressure and Leakage Test (Section 7 of AWWA C-605), except as herein modified.

Separate tests shall be performed for pressure test and leakage test.

Upon the completion of the lying, jointing, and backfilling, and the proper curing of the joints, the pipeline or portions thereof shall be hydrostatically tested. For convenience of testing, the pipeline may be divided into sections and each section shall not exceed four thousand (4,000) feet. The maximum elevation difference for each test section shall not exceed fifty (50) feet. Bulkheads shall be constructed to safely withstand the hydraulic pressures imposed upon them. No payment will be made expressly for the Work and materials required for the bulkheads and any compensation desired by the Contractor for this Work shall be included in the price quoted for the installation of pipe. The Contractor shall have no claim against the District by reason of required construction due to omission of the installation of any or all main line valves.

- a. Preparation - After the section of pipeline has been bulkheaded and completely filled with water, it shall be allowed to stand under a light pressure a minimum of twenty four (24) hours to allow the concrete to obtain a maximum absorption of water and to allow the escape of air from any pockets. Refer to Section 4.10.3 of these Detailed Technical Provisions for filling and contact requirements.
- b. Pressure Test - After the installed pipeline is properly filled and has been purged of all air, a test pressure equal to the higher of one hundred fifty percent (150%) of working pressure, or pressure rating of pipe plus fifty (50) psi, shall be applied by means of an approved pumping equipment connected to the pipe in a manner satisfactory to the District inspector. The duration of pressure test shall be two (2) hour minimum. The pressure shall be maintained within five (5) psi of the test pressure.

- c. Leakage Test - Leakage that shall be conducted immediately following pressure test. Test pressure shall be one hundred fifty percent (150%) of working pressure and the duration shall be two (2) hours minimum. Leakage shall be defined as the quantity of water that must be supplied into the pipe section being test to maintain the pressure within five (5) psi of the specified test pressure. The allowable leakage shall be smaller than ten and one-half (10.5) gallons per day per miles per inch diameter of the pipe being tested. The Contractor shall determine the points of leakage, make the necessary repairs, and make another test. This procedure shall be continued until the leakage falls below the allowable amount. Leakage shall be determined by metering the water injected into the pipeline while under the required pressure. The Contractor shall submit to the District before and after the test gauge, and the meter used so that the District may test these devices.
- d. Test Equipment - The Contractor shall provide all calibrated meters for measurement of leakage, all bulkheads or boilerheads, piping, calibrated gauges, pumps and other equipment, and all power and labor necessary for the performance of pressure tests satisfactory to the District. The Contractor shall furnish all necessary equipment and labor to fill each section of pipeline tested and for pumping the water from one test section of pipeline tested and for pumping the water from one test section to another as may be necessary for obtaining and maintaining the required water pressure and for filling the entire pipeline with water after the conclusion of the testing, as hereinafter provided.
- e. Corrections - The Contractor at his own expense, shall do any excavation necessary to locate and repair leaks or other defects which may develop under test, including removal of backfill already placed, shall replace such excavated material, and shall make all repairs necessary to meet the required water tightness after which the test shall be repeated until the pipe meets the test requirements. All tests shall be made in the presence of the District. After the pipe has met successfully with the test requirements specified herein, the entire pipeline shall be filled with water and so maintained until the completion of the contract unless otherwise ordered by the District.

4.10.03. DISINFECTION

- a. General - Prior to connecting to existing water lines or putting into service, all water mains, water services and attached appurtenances shall be disinfected in accordance with AWWA C-651, except as specified, modified or supplemented herewith. Tablet method may be used.
- b. Tablet Method - The tablet method consists of placing calcium hypochlorite tablets in the water main as it is being installed and then filling the main with potable water when

installation is completed. This method may be used only if the pipes and appurtenances are kept clean and dry during construction.

Placing of calcium hypochlorite tablets. During construction, five-gram (5-gram) calcium hypochlorite tablet shall be placed in each section of pipe. Also, one such tablet shall be placed in each hydrant, hydrant branch, and other appurtenance. The number of 5-gram tablets required for each pipe section shall be $0.0012 d^2L$ rounded to the next higher integer, where d is the inside pipe diameter, in inches, and L is the length of the pipe section, in feet. Table 1 shows the number of tablets required for commonly used sizes of pipe. The tablets shall be attached by a food-grade adhesive. Such as Permatex Form-A-Gasket No. 2 and Permatex Clear RTV Silicone Adhesive Sealant, which are manufactured by Loctite Corporation, Kansas City, KS 66115 or approved equal. These products have both been approved by the United States Drug Administration (USDA) for uses that may involve contact with edible products. There shall be no adhesive on the tablet except on the broadside attached to the surface of the pipe. Attach all the tablets inside and at the top of the main, with approximately equal numbers of tablets at each end of a given pipe length. If the tablets are attached before the pipe section is placed in the trench, their position shall be marked on the section so it can be readily determined that the pipe is installed with the tablets at the top.

Table. Number of 5-g Calcium Hypochlorite Tablets Required for Dose of 25 mg/L*

Pipe Diameter (inches)	Length of Pipe Section (feet)		
	18	20	40
Number of 5-g Calcium Hypochlorite Tables			
4	1	1	1
6	1	1	2
8	2	2	4
10	3	3	5
12	4	4	7
16	6	7	13

* Based on 3.25-gram available chlorine per tablet; any portion of tablet rounded to next higher integer.

Filling and contact. When installation has been completed, the main shall be filled with water at a rate such that water within the main will flow at a velocity no greater than one (1) foot per second. Precautions shall be taken to ensure that air pockets are eliminated. This water shall remain in the pipe for at least twenty four (24) hours. If the water temperature is less than 41 °F the water shall remain in the pipe for at least 48 hours.

- c. Gas Injection Disinfection - The Contractor shall provide an outlet for the connection of injection chlorination equipment, after which the Contractor shall inject chlorine solution into the main for the necessary disinfection.
- d. Residual Chlorine Test - After 24 hours of retention, the hypochlorite solution shall be tested by the District, and to be acceptable, shall have a minimum of twenty five (25) parts per million (ppm) of residual chlorine.
- e. Additional Disinfection - If the test results are not satisfactory, the Contractor shall provide a two-inch (2") outlet for the connection of injection type chlorination equipment, after which the Contractor shall inject chlorine solution into the main for the necessary additional disinfection.
- f. Final Flushing - Following the period of retention and after testing of residual chlorine by the District, the chlorinated water shall be thoroughly flushed from the line until the replacement water throughout the length of the pipeline is comparable in quality to the water served the public for the existing system.

The Contractor shall be responsible to meet State's National Pollutant Discharge Elimination System (NPDES) permit requirements (Section CAG 998001) prohibiting discharge of chlorinated flush water into natural drainage courses. On a case-by-case base, the District may permit flush water to be discharged into the District's sewer system.

Care shall be taken that the extremities of the main and the services are free of chlorinated water before being placed in service and that all new service connections are thoroughly flushed out before the meters are installed. When a hypochlorite solution has been used for disinfection of the main, the flushing shall be in a direction opposite to that from which the line was filled.

Bacteriological Test - After final flushing and before the new water main is connected to the distribution system, two consecutive sets of acceptable samples, taken at least twenty four (24) hours apart, shall be collected from the new main. At least one set of samples shall be collected from every twelve-hundred-foot (1200') of the new water main, plus one set from the end of the line and at least one set from each branch. All samples shall be tested for bacteriological quality in accordance with Standard Methods for the Examination of Water and Wastewater, and shall show the absence of coliform organisms. The District will take water samples for bacteriological test in accordance with the Standards of the DPHS of the State of California. If test fails, the Contractor shall re-disinfect and flush the water system for additional bacteriological test as necessary.

- g. Redisinfection - If the initial disinfection fails to produce satisfactory bacteriological results or if other water quality is affected, the new main may be reflashed and shall be resampled. If check samples also fail to produce acceptable results, the main shall be rechlorinated by the continuous-feed or slug method until satisfactory results are obtained.

Note: Hit velocities in the existing system, resulting from flushing the new main, may disturb sediment that has accumulated in the existing mains. When check samples are taken, it is advisable to sample water entering the new main to determine the source of turbidity.

- h. Find Connection to Existing Mains - The new pipe, fittings, couplings and valve required for the connection shall be spray-disinfected or swabbed with a minimum 1 percent solution of chlorine just prior to being installed. The maximum length of connection from the end of a new main to the existing main shall be ten (10) feet.

SECTION 4.11. FIRE HYDRANT ASSEMBLIES

4.11.01. GENERAL

Fire hydrant assemblies shall be as called for on Standard Drawing No. W-2, and as specified in the other applicable sections of these Specifications.

Fire Hydrants shall be Mueller A-423 Super Centurion 250 or approved equal with 6-inch hydrant shoe inlet size, five-inch (5") minimum hydrant valve size, and two-and-one-half-inch (2-1/2") National Standard hose thread outlets, and one four-and-one-half-inch (4-1/2") California Standard thread pumper outlet. Direction to open hydrant shall be counter-clockwise with one-and-one-half-inch (1-1/2") point to flat pentagon operating nut. The hydrants are to be traffic model with O-ring seals on operating stems separating threads from water chamber, having features to oil or grease lubricate threads, or permanent lubrication, and having breakaway features on barrel and shaft. Hydrants shall be installed at the locations shown on the Plans.

4.11.02. EXCAVATION AND BACKFILL

The Contractor shall refer to Section 4.1, "Earthwork", of these Specifications for all requirements relating to excavation and backfill.

4.11.03. FIELD PAINTING

All fire hydrants shall be surface prepared to receive paint by scraping and wire brushing, and shall be painted with one (1) coat of surface primer and two (2) coats of finish paint. The paint shall be Chex-Rust Primer and Safety Yellow Speed Tec 313-02 finish, as manufactured by Fuller Paint Company; or 1069 Heavy Duty Rust Inhibitive Red Primer and 9348 Safety Yellow finish coat, as manufactured by Rust-Oleum, or approved equal paint system using compatible primer and finish supplied by one Manufacturer.

SECTION 4.12. FLUSH-OUT AND BLOW-OFF ASSEMBLIES

4.12.01. FLUSH-OUT ASSEMBLIES

Flush-out assemblies shall be installed in accordance with Standard Drawing No. W-8, and as specified hereon and the other applicable sections of these Specifications.

Flush-Outs shall be constructed of the size and at the locations shown on the Plans.

4.12.02. BLOW-OFF ASSEMBLIES

Blow-off assemblies shall be installed in accordance with Standard Drawing No. W-7, and as specified hereon and the other applicable sections of these Specifications.

Blow-Offs shall be constructed of either 4-inch or 6-inch size at the locations shown on the Plans.

4.12.03. EXCAVATION AND BACKFILL

The Contractor shall refer to Section 4.1, “Earthwork”, of these Specifications for all requirements relating to excavation and backfill.

SECTION 4.13. VALVES, VALVE BOXES AND COVERS

4.13.01. SCOPE

The Contractor shall furnish all material, labor, and equipment necessary for the complete installation of all valves as called for on the Drawings, Standard Drawing No. W-11 and as specified herein.

The Contractor shall submit Shop Drawings showing the dimension, construction and material of valves to the District for approval prior to shipment.

4.13.02. GATE VALVES

Gate valves shall be resilient seated (R.S.) valves meeting the requirement of the latest specifications of AWWA C-509.

All gate valves shall be rated for a minimum of one hundred and fifty (150) psi working pressure as manufactured by Mueller Co., CLOW Corporation, Stockham Valve and Fitting Co., or approved equal.

The valves shall have iron body cover and O-ring plate, O-ring pressure seals, high-strength iron wedge with rubber bond that meet ASTM D429, bronze stem. Steel bolts and nuts shall be cadmium-plate, and gland bolts shall have bronze nuts.

Valves two-and-one-half-inch (2-1/2") and smaller shall have tapped American Standard Pipe Threads and handwheel.

Valves three-inch (3") and larger for above ground, indoor installation shall be of the rising stem OS&Y type with handwheels. Valves for above-ground, outdoor installation shall be of non-rising stem (NRS) type with handwheels. All above ground gate valves shall be furnished with flanges conforming to the ASME/ANSI B16.1 (Standard for Class 125 Cast Iron Pipe Flanges and Flanged Fittings).

Valves for underground (buried) installation shall be of non-rising stem (NRS) type with two -inch (2") operation nut and shall be furnished with flanged joint and flanged coupling adaptors.

The valves shall be furnished in the sizes indicated on the Drawings. Valves with welding ends will not be permitted for use in welded steel lines. All valves interior shall be protected with two-part thermosetting epoxy per AWWA C-550.

4.13.03. BUTTERFLY VALVES

Butterfly valves shall be Class 150B and shall conform to the latest specifications of the AWWA C-504. The valves shall be of the rubber seated, tight closing type, furnished with flanged ends, cast iron body and disc, and a molded rubber seat that is recess mounted, bonded, and mechanically secured to the valve body. All valve interior face shall be protected with two-part thermosetting epoxy per AWWA C-550, Tnemec 20, plastic 70, or equal to 8 mils

Valves shall be manufactured by Pratt, Muller or approved equal. Unless otherwise indicated, all butterfly valves shall be furnished with worm and gear type manual operator.

Manual operators shall be of the worm and gear type and shall be self-locking to prevent the valve disc from creeping or fluttering when in any intermediate position between open and closed. The gear operators shall be permanently lubricated, totally enclosed, with adjustable stops for the open and closed position to prevent the valve disc from overtravel in either direction and except on units for buried or submerged service shall have a valve disc positions indicator. The gear ratio and handwheel diameter shall be designed so that a pull of not more than eight (80) pounds on a handwheel or chainwheel (or one hundred and fifty (150) foot pound input on buried applications) will produce an output torque equivalent to 1.5 times of the maximum operating tongue specified in AWWA C-504.

On buried installations, the gear box shall be fixed to the valve and the stem with two-inch (2") square operating nut shall be extended through a slip-type valve box, to the surface. A ground level position indicator, Pratt Diviner, shall be included.

4.13.04. EXCAVATION AND BACKFILL

The Contractor shall refer to Section 4.1, "Earthwork", of these Detailed Technical Provisions for all requirements relating to excavation and backfill.

4.13.05. OPENING DIRECTION

Wrench nut shall turn left (counter-clockwise) to open the valve.

4.13.06. VALVE ENDS

The valve ends shall be of flanged end. Flanged coupling adapters shall be provided with each valve installed below grade. Valves with welding ends will not be permitted for use in welded steel lines.

4.13.07. VALVE BOXES AND COVERS

All valves installed below ground shall be provided with valve box and cover.

Valves boxes and covers shall be as shown on Standard Drawing No. W-11.

SECTION 4.14. AIR VALVES ASSEMBLIES

4.14.01. GENERAL

The air valve assembly shall be a combination air valve consisting of an air and vacuum valve and an air release valve and shall include service lateral, shut-off valves, piping, enclosure etc. and other appurtenances and shall be as called for on the Drawings and the Standard Drawing No. W-6 and other applicable Standard Drawings. Installations shall be made at the locations and sizes as shown on the Plans.

4.14.02. EARTHWORK

The Contractor shall refer to Section 4.1, "Earthwork", of these Detailed Technical Provisions for all requirements relating to excavation and backfill.

4.14.03. CORPORATION STOPS

All corporation stops shall be positioned per Standard Drawings No. W-5A and W-5B.

4.14.04. GATE VALVES

All gate valves shall be per Standard Drawing No. W-6 or approved equal.

4.14.05. AIR AND VACUUM VALVES

All air and vacuum valves shall be manufactured by APCO (Series 140 for 2-inch thru 3 inches, and Series 150 for 4-inches and larger), Crispin Type S, or approved equal.

4.14.06. FIELD PAINTING

All air valve assembly and enclosure shall be surfaced prepared to receive field paint by solvent cleaned in accordance with SSPC-SP 1 (Society for Protective Coatings Surface Preparation Standards- Solvent Cleaning) and shall be painted with one (1) coat of surface primer, 2 mils of Tnemec 32-1200, Kopper 40 or equal and two (2) coats of finish coat, 3 mils of Tnemec Series 2, Kopper Galmortex 501 enamel or approved equal to a total dry film thickness of 8 mils. The color shall be green.

SECTION 4.15. CONCRETE THRUST BLOCKS AND BLANKETS

4.15.01. CONCRETE THRUST BLOCKS

Concrete thrust blocks shall be installed in accordance with Standard Drawings No. W-3A and W-3B and shall be Class IV concrete as specified on Section 4.2 of these Detailed Technical Provisions.

4.15.02. CONCRETE BLANKET

- a. General - Concrete blankets shall be constructed at the locations shown on the Plans and in accordance with Standard Drawing No. S-3. Concrete shall be of Class IV, as specified on Section 4.2 of these Detailed Technical Provisions.
- b. Blanket Type - Concrete blanket is to be used at locations where the pipe is to be protected from wheel loadings.

4.15.03. EXCAVATION AND BACKFILL

The Contractor shall refer to Section 4.1, “Earthwork”, of these Detailed Technical Provisions for all requirements relating to excavation and backfill.

4.15.04. CONCRETE CONSTRUCTION

The Contractor shall refer to Section 4.2, “Concrete Construction”, of these Detailed Technical Provisions for all requirements relating to concrete construction.

SECTION 4.16. BACKFLOW PREVENTERS

4.16.01. GENERAL

Water user shall comply with all orders, instructions, regulations, and notices from the DPHS of State of California with respect to the installation, testing and maintenance of backflow prevention devices.

Water user shall be responsible for all costs associated with the installation, testing and maintenance of backflow prevention devices as authorized in Section 116800 and Section 116805 of California Health and Safety Code, Part 12 Drinking Water, Chapter 5 Water Equipment and Control, Article 2 Cross-Connection Control by Water User.

4.16.02. TYPE OF PROTECTION

The type of protection shall be approved by the District and shall be in accordance with California Code of Regulations, Title 17, Division 1, Chapter 5, Group 4, Sections 7583, 7584, 7585, 7586, 7601, 7602, 7603, 7604 and 7605.

As a minimum, all commercial and irrigation water service shall be protected with a reduced pressure principal type backflow prevention assembly in accordance with current District Standards, Policies and Resolutions. All fire service lines shall be protected with a backflow preventer per Standard Drawing No. W-22.

4.16.03. INSTALLATION

Installation of backflow prevention assembly shall be in accordance with Standard Drawing No. W-13 (for reduced pressure principal type backflow prevention assembly) or Standard Drawing No. W-16 (for double check valve with detector check backflow prevention assembly).

4.16.04. MANUFACTURES

Backflow prevention assembly shall be approved by University of Southern California Foundation for Cross Connection Control and Hydraulic Research and shall be manufactured by FEBCO, Wilkin or approved equal.

SECTION 4.17. RESIDENTIAL FIRE SERVICE

4.17.01. GENERAL

The installation of a residential fire sprinkler system should comply to California Fire Code (CFC) Chapter 9, Section 903, NFPA 13D (*Standard for the installation in Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*), California Building Code, International Fire Code and other applicable codes, unless otherwise indicated in these Specifications.

The piping arrangement and the meter location of a residential fires service should be in conformance with Standard Drawing No. W-22.

4.17.02. FIRE SPRINKLER SYSTEM DESIGNER AND INSTALLER

The Plans of the residential fire sprinkler system shall be designed by a C-16 (sprinklers) licensed contractor or be a Registered Professional Engineer (Civil, Mechanical or Fire Protection), licensed by the State of California (Board of Professional Engineers). All copies of the Plans shall be stamped and signed by the licensed individuals.

The design of a fire sprinkler system requires communication with the District so that available water pressures and flow to the residential fire system can be determined and the design can meet the District's requirements. The Plans are subject to approval by the District.

The fire sprinkler system shall be installed by an individual who holds a State of California C-16 (sprinklers) license or, by owner-builder of an owner-occupied, single family dwelling.

4.17.03. EARTHWORK

The Contractor shall refer to Section 4.1, "Earthwork", of these Detailed Technical Provisions for all requirements relating to excavation and backfill.

4.17.04. BACKFLOW PREVENTER

Backflow preventer (reduced pressure backflow preventer assembly) is required for new installed residential fire system. Existing systems do not require additional backflow protection if they already have some form of acceptable directional flow-control protection in place (ex: single check valve or alarm check valve) until the system is substantially altered.

4.17.05. RESIDENTIAL FIRE METER

Per Article 15 of Running Springs Water District Ordinance No. 8, Rules and Regulations for Water Service, Article 15, If the Fire Department requires that a property is to install a fire protection

sprinkler system, a meter or meters of appropriate size for both the fire protection service and potable service line will be required, as well as an appropriate cross connection control device. The fire meter should be Zenner Performance Multi-Jet Type Magnetic Drive Residential Fire Meter or approved equal.

4.17.06. FIRE SPRINKLER SYSTEM MAINTENANCE

It is the responsibility of the building owner for properly maintaining a sprinkler system. A minimum monthly maintenance program should include the following:

- a. Visual inspection of all sprinklers to ensure against obstruction of spray.
- b. Inspection of all valves to ensure that they are open.
- c. Testing of all waterflow devices.
- d. Testing of the alarm system, where installed. (Note that where it appears likely that the test will result in a fire department response, notification to the fire department should be made prior to the test.)
- e. Operation of pumps, where employed.
- f. Checking of the pressure of air used with dry systems.
- g. Checking of water level in tanks, where employed.
- h. Special attention to ensure that sprinklers are not painted either at the time of installation or during subsequent redecoration. When sprinkler piping or areas next to sprinklers are being painted, the sprinklers should be protected by covering them with a bag, which should be removed immediately after painting is finished.

SECTION 4.18. CHAIN-LINK FENCE AND GATE

4.18.01 GENERAL

The Contractor shall furnish all equipment, labor and material necessary to do fencing, all as shown on the Drawings and as necessary for a complete job.

The work shall consist of furnishing and constructing a six-foot (6') high chain-link fence with twelve-inch (12") barbwire extension in accordance with Section 206-6 and Section 304-3 of the Standard Specifications for Public Works Construction (Greenbook) and at the locations shown on the Drawings. All earth, trees, bush, existing fence designed to be removed, and other obstructions which interfere with the proper construction of the fence shall be removed and disposed of and will be considered as part of the fence construction. Refer to Standard Drawing M-1.

4.18.02. MATERIALS

Chain-link fence shall be complete with fabric, end corner, gate and line posts, gate with lockable devices, extension arms with three-strands of barbed wire, post anchors, and other necessary appurtenances.

The fence shall have six feet zero inch (6'-0") fabric above ground when erected. The fabric shall consist of nine-gauge (9-gauge) 6M galvanized wire woven with two-inch (2") mesh fulfilling the requirements of ASTM A392. Barbed wire shall be four-point pattern, composed of two strands of twelve-and-one-half-gauge (12-1/2-gauge) galvanized steel wire with barbs spaced five-inches (5") apart and shall conform to ASTM 121.

The line posts shall be two-inch (2") nominal diameter, 2.375-inch outsider diameter by 3.65 pounds per foot, galvanized steel pipe and spaced not more than ten feet zero inches (10'-0") apart. Top rails shall be one-and-one-quarter-inch (1-1/4") nominal diameter, 1.90-inch outsider diameter by 2.27 pounds per foot galvanized steel pipe. Gate posts and corner posts shall be 3.5-inch nominal diameter, 4.0 inch outsider diameter by 9.11 pounds per foot galvanized steel pipe and shall be strongly and durably attached to the line posts according to the best practice. The posts shall be set in the ground to a depth of three (3) feet and centered in concrete cylindrical footing eight-inch (8") in diameter.

SECTION 4.19. FURNISH AND INSTALL PLASTIC SEWER PIPE SYSTEM

4.19.01. GENERAL

- a. Description - The Contractor shall furnish all labor, material, tools, and equipment required for the complete construction of pipelines, manholes, cleanouts, and other allied structures and appurtenances as stated on the bidding sheets, shown on the Contract Drawings, and specified herein, all within the time as stated in the Contract Documents.

These provisions establish the requirements for the use of PVC pipe for house lateral and main line sewer construction. Use is limited to those projects which specify or indicate PVC sewer pipe as an alternate.

PVC pipe may only be used where indicated on Plans or approved by the District. When pipe and fittings are fabricated by the same Manufacturer, the Contractor will not be allowed to use fittings from other Manufacturers. PVC laterals may be used with clay pipe main except those mains subject to industrial flows, as determined by the District.

- b. Care & Handling - Pipe shall be stored at the jobsite in unit packages provided by the Manufacturer. Caution shall be exercised to avoid compression, damage or deformation to bell ends of the pipe. If pipe is to be exposed to direct sunlight for more than fourteen (14) days, pipe must be covered with an opaque material while permitting adequate air circulation above and around the pipe to prevent excessive heat accumulation.

If pipe is strung along trench prior to installation, string only pipe to be used within a twenty-four-hour (24-hour) period; all pipe is to be laid on a flat surface. The interior as well as all sealing surfaces of pipe, fittings, and other accessories shall be kept free from dirt and foreign matter. Gaskets shall be protected from excessive exposure to heat, direct sunlight, ozone, oil and grease. Solvent cement when used shall be stored in tightly sealed containers away from excessive heat.

- c. Job Conditions - The Contractor shall familiarize himself and comply with all applicable state, county and municipal rules and regulations pertaining to sanitation, fire protection and safety, and all provisions of the Contract Documents.

4.19.02. MATERIALS

- a. PVC solid wall pipe shall meet the requirements of ASTM D-3034, SDR 35.

b. Pipe Jointing shall be as follows:

1. PVC Pipe Gasket Joint Assembly - The assembly of the gasket joint should be performed as recommended by the pipe Manufacturer. The elastomeric gaskets may be supplied separately in cartons or prepositioned in the bell joint or coupling at the factory. When gaskets are color coded, be sure to consult the pipe Manufacturer or its literature for the significance. In all cases, clean the gaskets, the bell or coupling interior, especially the groove area (except when gasket is permanently installed) and the spigot area with a rag, brush or paper towel to remove any dirt or foreign material before the assembling. Inspect the gasket, pipe spigot bevel, gasket groove, and sealing surfaces for damage or deformation. When gaskets are separate, use only gaskets which are designed for and supplied with the pipe. Install them as recommended by the Manufacturer.

Lubricant should be applied as specified by the pipe Manufacturer. Bacterial growth or damage to the gaskets or the pipe, may occur with the use of non-approved lubricants. Use only lubricant supplied by the pipe Manufacturer. After lubrication, the pipe is ready to be joined. Good alignment of the pipe is essential for ease of assembly. Align the spigot to the bell and insert the spigot into the bell until it contacts the gasket uniformly. Do not swing or “stab” the joint; that is, do not suspend the pipe and swing into the bell. When a field-cut is necessary, a square cut is required. Use a factory-finished beveled end as a guide for proper bevel angle and depth of bevel plus distance to the insertion reference mark.

2. PVC Solvent-Cemented Joint Assembly - Solvent-cemented joints should be made in accordance with ASTM D2855 (Standard Recommended Practice for Making Solvent-Cemented Joints with Polyvinyl Chloride (PVC) Pipe and Fittings).

c. Portland Cement Concrete - All concrete shall meet the requirements of Section 4.2, “Concrete Construction”, of these Detailed Technical Provisions, except that only Type V or Type II Portland cement shall be used.

d. Portland Cement Mortar - All cement mortar used for construction purposes shall consist of one (1) part Portland cement (Type V or Type II) to two (2) parts silica sand by volume and moistened with sufficient water to permit placing, buttering, caulking or coating without crumbling, unless otherwise approved by the District.

- e. Manhole Connections - Connections of PVC sewer pipe to a manhole shall be watertight. Concrete manhole connections shall be “O” ring type produced from elastomeric compound or prefabricated manhole waterstop, grouted or locked into the manhole wall; the type shall be approved by the District prior to use. Additional requirements may be imposed by the District for manhole connections in projects constructed in areas of high or potentially high ground water. Manhole stub-outs shall be included in manhole installations, and shall be of the size designated on the Drawings. All stub-outs shall be plugged for future connection, with neoprene stoppers or approved equal.

4.19.03. INSTALLATION OF PIPE

Shall start at the low end of each section and proceed upgrade. All bell and spigot pipe shall be laid with the bell end upgrade. Assembly of all types of pipe shall be done in strict conformance with the requirements of the pipe Manufacturer. Curved PVC deflection shall not exceed the pipe Manufacturer’s recommendations.

Pipe shall be accurately laid to alignment and grade shown on the Drawings or established by the Engineer. Where grade stakes are provided with which to establish the proper pipeline grade, pipe shall be laid in the field to grade within a tolerance of two-hundredth (0.02) foot, or five-hundredth (0.05) foot cumulative deviation from elevations set at one-hundred-foot (100’) stations.

Sags, or standing water in pipe, shall meet the following criteria:

Pipe Slope	Complies with Specification	Does not Comply w/ Specifications Resulting in No Payment	Does not Comply w/ Specifications & Reconstruction is Required
≤ 0.4%	1/3” or less sag	≥ 1/3”	≥ 1/2”
≤ 0.7%	1/2” or less sag	≥ 1/2”	≥ 1”
≥ 0.7%	3/4” or less sag	≥ 3/4”	≥ 1-1/2”

Sag limits may be increased twenty five percent (25%) for eight-inch (8”) diameter; fifty percent (50%) for ten-inch (10”) diameter; seventy five percent (75%) for twelve-inch (12”) diameter; and one hundred percent (100%) for pipe diameter greater than twelve-inch (12”).

If standing water depth in the sag exceeds the value listed under “No Payment”, then to compensate for anticipated higher than average pipeline operation and maintenance cost, no payment will be made for construction. The nonpayment amount will include all construction costs including such items as excavation, pipe installation, backfilling, resurfacing, etc., for the length of standing water that exceeds the value for “No Payment”. For Developer installed pipeline, the Developer shall pay the district the cash equivalent of three (3) years of maintenance and operation at the current

District rates plus a two percent (2%) increase for the last two (2) years of the payment, or the pipeline shall be replaced as specified at Developer’s cost.

Due to unacceptably high operation and maintenance costs and poor system reliability, pipelines with sag depths exceeding those listed for “Reconstruction is Required” will be rejected. Reconstruction of the entire length of standing water plus twenty (20) feet on each side of the standing water or to the next farthest pipe joint will be required; sawcutting of the pipe to meet the inclusive requirements will not be allowed. Damaged or cut pipe must be removed and not reused.

- a. **Bedding** - All pipes shall be laid in a bed prepared by hand work, dug true to line and grade, to furnish a true and firm bearing for the pipe throughout its entire length. Adjustment of pipes to lines and grade shall be made by scraping away or filling in and tamping material under the body of the pipe throughout its entire length, and **not by blocking or wedging**. Where a hand-shaped trench bottom conforming to barrel of pipe is not available or practical.

The flexibility of plastic pipe may cause a possible problem in maintaining line and grade. Therefore, special care must be taken in the preparation of the subgrade and in the placement of bedding to ensure that the pipe is lade true to line and grade as required in this specification.

PVC pipe shall be bedded as shown in the following table:

Pipe Size	Depth of Cover	Bedding Required
4” to 15”	0’ to 20’	Per Standard Drawing No. S-2
	Greater than 20’	Special Design
Greater than 15”		Special Design

- b. **Bell Holes** – Bell holes shall be provided at the ends of each pipe length, of sufficient size to permit making up the particular type of joint being used.
- c. **Alignment** - Pipes shall be laid in accurate conformity with the prescribed lines and grades, which alignment shall be obtained by plumbing and measuring from a tightly stretched wire or line running parallel with the flow line grade and supported over the centerline of the sewer by batter boards or bars accurately placed and firmly fastened in place across the trench; or by some other comparable method acceptable to the District.

Alternate use of commercial LASER grade setting systems in lieu of string lines specified herein is acceptable when the following requirements and conditions are met:

1. The Contractor shall have the responsibility of providing an instrument operator who is qualified and trained in the operation of the LASER and said operator must adhere to the provisions of the State of California Construction Safety Orders issued by the Division of Industrial Safety. Attention is particularly directed to Sections 1516, and 1800 through 1901, of said Orders for applicable requirements.
 2. All LASER control points shall be established bench marks or construction off-set stakes identified on cut sheets and set in the field for the work. LASER set up points shall be on these control points or on points set directly from them by instrument.
 3. Pipe alignment shall not deviate from that shown on the Plans by more than three-quarter-inch (3/4") pipe diameter, nor shall it change in alignment more than two (2) inches in twenty (20) feet.
 4. After each length of pipe has been laid to line and grade, it shall be jointed to the preceding section as hereinafter specified, and after said jointing procedure has commenced, there shall be no movement of the pipe whatsoever in subsequent operations.
- d. Pipe Cleaning - Before each new length of pipe is placed, the interior of the preceding pipe shall be carefully cleaned of all dirt and debris. At all times when the work of installing pipe is not in progress, all opening into the pipe and the ends of the pipe in the trench shall be tightly closed to prevent entrance of animals and foreign materials.

The Contractor shall take all necessary precaution to prevent the pipe from floating due to water entering the trench from any source, shall assume full responsibility for any damage due to this cause and shall at his own expense restore and replace the pipe to its specified condition and grade if it is displaced due to floating.

- e. Laterals and Cleanouts - shall be constructed at the points indicated on the Plans, and in accordance with the Standard Drawings. Connections of house laterals to sewer mains shall be made with factory-molded wye or tee connections.

Wye or tee branches shall be laid with the axis of the "Y" or "T" entering the main sewer at an angle above the horizontal axis of said main, unless specifically called out otherwise on the Plans or on the Special Conditions. But, unless specifically called out otherwise, this angle shall not exceed forty five degrees (45°).

Whenever any service connection is to be temporarily blanked off, it shall be plugged with a cover or plug recommended by the Manufacturer of the pipe.

Lateral connections to existing mains shall be made pursuant to the provisions of the appropriate Standard Drawing for saddle connection to the existing main pipe material. All sewers of this project are new sewers. Accordingly, laterals installed by saddle connections as shown on Standard Drawing No. S-7 and will be allowed only where unanticipated laterals are added after the sewer main is laid past the point of connection. In such case, the already laid sewer main is laid past the point of connection, and the already laid sewer main is shown on the Standard Drawing as "existing sewer main". **Refer to the beginning of this Document for work on pipelines that do or may contain asbestos material.**

- f. New Sewer Laterals on Existing Plastic Main - The required excavation and cleaning of main surfaces for a tap and saddle shall be performed by the Contractor and when such taps are installed by District forces, the Contractor shall have the additional materials and equipment at the jobsite as follows: barricades, proper pipe, trench shoring for excavations greater than five (5) feet in depth, standard bedding material as specified in these Specifications, and a ladder long enough to extend two-and-one-half (2-1/2) feet above the top of the excavation. The excavation shall provide a minimum clearance of three (3) inches under and six (6) inches on each side of the main sewer for a distance of twelve (12) inches each way along the main from the point of connection. The outer surface of the main in this exposed area shall be thoroughly cleaned.

New sewer laterals on existing vitrified clay pipe mains subject to commercial or industrial flows shall be constructed of vitrified clay pipe in accordance with the requirements for vitrified clay pipes.

The excavation above the main, for the tap working area, shall be a minimum of two (2) feet in width without under-cut sides and shall be properly shored. Before the tap is made, the Contractor shall have sufficient standard bedding material at the site of the work to adequately backfill under the saddle to support it. No backfill shall be placed on the saddle fitting within one-half (1/2) hour after the completion of work by the District forces. If the Contractor breaks or otherwise damages the main while excavating for the tap, he shall notify the District and the District shall make repairs as necessary at the expense of the Contractor.

Manholes shall be constructed in the locations and to the dimensions as shown on the Drawings. Cast-in-place concrete shall conform to the requirements set forth in Section

4.2, “Concrete Construction”, in these Detailed Technical Provisions. Pre-cast units shall be assembled accurately with full-bed mortar joints.

Unless otherwise shown on the Drawings, the sewer pipe shall be laid continuously throughout the location of the manhole. After the manhole has been constructed, the open channel shall be formed by cutting the pipe and removing the top half. If the open channel cannot be formed in this manner, it shall be formed of concrete with the depth equal to the diameter of the sewer pipe. The floor of the manhole shall slope at least two (2) inches from the sides of the manhole to the open channel.

When completed, the top of the manhole cover shall be accurately brought to the grade shown for on the Standard Drawings. The manholes shall be constructed so that there is not more than nineteen (19) inches of throat section between the top of the cone and the bottom of the frame.

When located in roadway subgrades, manholes shall be constructed up to the proper elevation preparatory to street paving, and temporarily covered with planks or steel plates. After paving operations have been completed the temporary covers shall be removed and the frames and covers installed to pavement grade per Standard Drawing No. S-5.

- g. Mark of Laterals - Laterals shall be marked on as build plans in the following format:

$$\frac{D_1 - D_2}{L}$$

where D_1 is the distance from downstream manhole in foot; D_2 is the cover depth at the end of lateral in foot; L is the length of the lateral in foot.

4.19.04. CLEANING SEWER LINES AND MANDREL TEST

All sanitary sewer mains and laterals shall be flushed with water and “balled” or cleaned by an acceptable method prior to testing to ensure that all dirt, debris, and obstructions are removed. This work must be performed in the presence of and to the satisfaction of the District; the Contractor shall notify the District at least forty eight (48) hours prior to starting the cleaning work.

Following the placement and densification of backfill and prior to the placing of permanent pavement, all main line pipe shall be cleaned and then mandrel-tested to measure for obstructions (deflections, joint offsets and lateral pipe intrusions). A rigid mandrel approved by the Engineer, with a circular cross section having a diameter of at least ninety-five percent (95%) of the specified average inside diameter, shall be pulled through the pipe by hand.

Ninety-five percent (95%) of the specified average inside diameter for PVC pipe taken from the appropriate ASTM requirements are as follows:

Pipe Nominal Diameter	95% of the Specified Average Inside Diameter
4"	3.77"
6"	5.61"
8"	7.51"
10"	9.39"
12"	11.17"
15"	13.68"

Mandrel test shall be performed between thirty (30) and forty five (45) calendar days after installation and backfill compaction. In the event permanent pavement is placed prior to that time, mandrel test shall be required prior to pavement placement and a second mandrel test must be completed within thirty (30) calendar days after compaction or backfill.

The backfill shall be removed and re-compacted for any section of pipe that fails the mandrel test.

Re-rounders shall not be used to correct excessive pipe deformation.

4.19.05. LEAKAGE TESTS

All sanitary sewers shall be tested for tightness after they and all appurtenances have been completed, backfilled (except for test tees) and compacted, and are ready for service. Tests shall be made on each section, including manholes, from one manhole or test tee to the next, unless grades are flat enough to permit testing two (2) or more sections at one time.

The test method required (water test or air test) shall be determined by the Engineer; all leakage tests shall be made in the presence of the District.

- a. Preparation for Tests - Each section of sewer, including service laterals, between successive manholes shall be tested by closing the lower end of the section to be tested, the inlet sewer of the upper manhole, and the ends of service laterals with stoppers, and filling the pipe and manhole with water to a level of four (4) feet above the invert of the open sewer in the upper terminal. After the section has been filled, it shall be allowed to stand for a sufficient length of time to allow the manhole to absorb what water it will, prior to making the leakage test described in the following paragraphs (Water Test and Air Test). This period of time for absorption of water shall not be less than thirty (30) minutes nor greater than twenty four (24) hours.

b. Test Procedure and Allowable Leakage

1. Water Test - The leakage test shall consist of measuring the quantity of water required to maintain the water level at the elevation prescribed in the above paragraph for a period of one (1) hour. The water used in the test shall be measured through a meter or by other means satisfactory to the District. The allowable leakage shall be computed from the following formula:

$$E = 0.0012 \times L \times D/H$$

Where E = Allowable leakage in gallons
 L = Length of the sewer and house connections tested in feet
 D = Inside diameter of the pipe in inches
 H = Difference in the elevation (in feet) between water surface in the upper manhole and the invert of the pipe at the lower manhole

If the leakage during the test period exceeds the allowable leakage, the sewer line shall be overhauled and, if necessary, relaid until the joints hold satisfactorily under the test.

2. Air Test (including Forcemain Extension) – The length of the line to be air tested at one time shall be limited to the length between adjacent manholes. Air test procedure shall be as follows:

Pressurize the test section to four (4.0) psi and hold at four (4.0) psi for not less than two (2) minutes. Add air if necessary to keep the pressure at four (4.0) psi. Disconnect air supply. When pressure decreases to three and one-half (3.5) psi, start stopwatch. Determine the time in seconds that is required for the internal pressure to reach two and one-half (2.5) psi. This time interval shall be greater than time given in the following table. The section of pipe shall not have passed if the time is less than shown. After the test, the air shall be release from the opposite end of the section.

Sewer Size	Minimum Time
4 inches	113 minutes (1 hr 53 min)
6 inches	170 minutes (2 hrs 50 min)
8 inches	226 minutes (3 hrs 46 min)
10 inches	283 minutes (4 hrs 43 min)
12 inches	340 minutes (5 hrs 40 min)
15 inches	425 minutes (7 hrs 05 min)

Sewer Size	Minimum Time
18" or larger	510 minutes (8 hrs 30 min)

When the prevailing groundwater is above the sewer being tested, air pressure shall be increased forty-three-hundredth (0.43) psi for each foot the water table is above the flow line of the sewer.

If the test is not passed, the leak shall be found and repaired to the satisfaction of the Engineer.

Building or service laterals shall be considered part of the lateral to which they are connected and no adjustment of test time shall be allowed to compensate for the smaller diameter of the house sewers.

The pressure gauge used shall be supplied by the Contractor and shall have minimum divisions of one-tenth (0.10) psi, and shall have an accuracy of four-hundredth (0.04) psi. Accuracy and calibration of the gauge shall be certified by a reliable testing firm at six (6) month intervals or when requested by the Engineer. Calibration tests shall have been completed no more than 30 calendar days in advance of the test or intended use.

- c. Alternate Infiltration Test - If excessive groundwater is encountered in the construction of a section of the sewer, the test for leakage previously described shall not be used. The end of the sewer at the upper structure shall be closed sufficiently to prevent the entrance of water and pumping of groundwater shall be discontinued for at least three (3) days, after which the section shall be tested for infiltration. The allowable infiltration for any portion of the sewer system should not exceed one hundred (100) gallons per inch of internal pipe diameter per mile per day (4.6 l/mm/km/day), including manholes. Infiltration in excess of this amount shall be reduced to a quantity within the specified amount before the sewer will be accepted. In any case, the Contractor shall stop any individual leaks that may be observed.

Unless other specified, infiltration will be measured through a meter or by other means satisfactory to the Engineer.

- d. Manhole Leakage Test - When the air pressure test is used for testing of the pipe, the manholes shall be water tested. Each manhole shall be filled with water four (4) feet above flow line of the manhole with the inlet and outlet of each manhole plugged. The maximum leakage rate shall be ten (10) gallons per hour per manhole test to be run for a minimum of thirty (30) minutes.

If the manhole leakage thus determined is excessive, the Contractor shall waterproof the interior of the manhole by applying a coating of poly-epoxy or an approved waterproofing material.

4.19.06. SEWER PIPE REPAIRS

Sewer pipe leakage in excess of the allowable maximum shall be corrected by repairs acceptable to the District; retesting is required between manholes/clean-outs.

The section of damaged pipe will be cut out and the ends of the remaining pipe and replacement pipe will be prepared per Section 4.18.2 c. 1. The closure will be made with a flexible “closure coupling” as supplied by the Manufacturer of type pipe used.

PVC pipe and fitting with flexible couplings shall be used for asbestos cement pipe repairs. Refer to the beginning of this Document regarding Asbestos Containing Material.

4.19.07. ELECTRONIC MARKERS

It shall be required of the Contractor to place the required markers at the end of each lateral. Unless waived by the District, two-inch (2”) wide metallic detectable locator tape shall be placed with each lateral, approximately six (6) inches above the pipe per Standard Drawing S-7.

4.19.08. FINAL ACCEPTANCE

Prior to putting any sewer into service, or before final acceptance, all sewer facilities shall be visually checked and all foreign objects, materials or obstructions removed from the facilities. If dirt, silt or other materials are found, the Engineer may require that the facilities be cleaned by flushing, balling, rodding or other means so that the materials may be removed from the system.

SECTION 4.20. MANHOLES AND CLEANOUTS

4.20.01. GENERAL

All manholes shall be constructed in conformance with the District's Standard Drawings No. S-4A and S-4B. All such structures shall be built into the sewer lines at the locations shown on the Plans. Pipe for future lateral sewer lines shall be built into the structures as shown on the Plans, and the outer ends closed with a cap securely fixed in place. The caps shall be so fixed as to be easily removed in the future and shall be watertight. **One-piece cone and shaft will not be accepted.**

All manhole frames and covers shall be furnished in conformance with the District's Standard Drawings No. S-5. Manhole frames and covers will be furnished by the Contractor upon prior approval by the District. Such prior approval by the District shall in no way nullify the District's right to accept or reject any individual unit as furnished or as installed.

4.20.02. PRECAST MANHOLES

Precast manhole sections will be manufactured in a plant designed for this type of work. All units will conform to the details on the above referenced drawings with eccentric cone top sections. Concrete used in the precast sections shall be manufactured of approved and selected materials in such proportions to produce a Class I concrete as per Section 4.2, "Concrete Construction", of these Detailed Technical Provisions, with a minimum compressive strength of 3,000 psi. Sections will be compacted by vibration or centrifugal force and cured according to approved practice, either by steam, sprinkling, membrane solution or a combination of these methods. Manholes shall conform to ASTM C478.

Note: Dry-cast manholes may absorb excessive amounts of water during leakage tests which may give a false failure indicator during the test. Wet-cast manholes have not shown this tendency. The Contractor may use either type of manhole, but is fore-cautioned about false test results.

All sections shall be "tongue and groove" as shown on the Standard Drawings No. S-4A and S-4B, with a minimum depth of three-fourth-inch (3/4"). All edges shall be true and even to enable a close fit when sections are placed together. A maximum tolerance of one-fourth-inch (3/16") will be permitted when two (2) sections are placed together in either a lateral or vertical direction.

4.20.03. MANHOLE BASE

Manhole bases shall be monolithic construction of Class IV concrete and shall be poured to the size, line and grade as shown on the Standard Drawings No. S-4A and S-4B and Plans. The Contractor is referred to Section 4.2, "Concrete Construction", of these Detailed Technical Provisions.

In laying the pipe up to structures, no pipe shall be allowed to project beyond the inside of the wall of the structure. Flexible joints shall be provided in all sewer pipes (except PVC and ABS pipe) outside of manholes, but within 12-inches of concrete base. PVC pipe shall be provided with a suitable sealing ring prior to being poured into base.

A notch or groove conforming to the precast manhole section shall be formed on the top of the base section before the concrete has set.

4.20.04. PRECAST MANHOLE JOINTS

Precast manhole sections shall be tongue and groove alternately on both ends of the sections, and shall be laid with the grooved portion facing up. Each section shall beset so as to enable the manhole to rise vertically above the base.

A concrete waterproof mortar shall be placed on the top of each ring, completely covering the grooved portion prior to the installation of the next precast section. Excess mortar shall flow out equally on both sides of the joint for the complete circumference of the ring and shall be “mounded” smoothly on both the inside and outside of the joint as shown on Standard Drawings No. S-4A and S-4B. Finish mortar joint should have a minimum thickness of one-fourth inch (1/4”).

Mortar shall consist of one (1) part volume of cement and three (3) parts by volume of sand. Mortar shall be mixed in a suitable mixer in a watertight mixing box. The materials must be thoroughly mixed dry until the mass assumes a uniform color and then sufficient water added to bring the mixture to a workable consistency. No mortar which has begun to set shall be used and no retempering thereof will be permitted. Mortar shall conform to Section 4.2 of these Detailed Technical Provisions.

4.20.05. GRADE RINGS

Precast grade rings shall be used to reach desired height of the manhole cover within the limits shown on Standard Drawings No. S-4A and S-4B. Minor adjustments shall be made by the use of “shims” under the frame. Alternate HDPE grade rings are acceptable up to twelve (12) inches in height. Grade rings are not required for manholes constructed in easements unless needed for adjustment to finish grade.

4.20.06. CASTINGS

All castings shall be of tough gray iron, free from cracks and swells. The iron shall conform to the requirements of ASTM A48, Class 30. Prior to shipment, the Contractor shall submit a certified metal analysis test report to the District from an independent testing laboratory listing test values of minerals used and the class of the iron. Foundry markings shall not be cast of the face on the covers.

- a. Manhole/Cleanout Frame and Cover - Manhole or cleanout frame and cover shall be called Pamrex or approved equal. Frame and cover shall be manufactured from ductile iron. Frame shall be circular, incorporated a seating ring and a fitted plug in the hinge housing, and be available in a twenty-four-inch (24") clear opening. The frame depth shall not exceed 4 (four) inches, and the flange shall incorporate bedding slots, locking mechanism, and lifting eyes. Covers shall be hinge and incorporated a 90 degree (90°) blocking system to prevent accidental closure. Covers shall be one man operable using standard tools and shall be capable of withstanding a test of load of 80,000 pounds.
- b. Nameplate and Stamp - A nameplate on the sanitary sewer manhole cover may be required per District' request. After the manhole is set, the Contractor shall stamp the number of the manhole on the north side of the rim. The stamp shall be clearly imprinted with a one-half-inch (1/2") die with the number of the manhole corresponding to the manhole number shown on the Plans.
- c. Easement Rings - Any manhole placed outside of pavement shall be provided with an easement ring in accordance with Standard Drawing No. S-5. Castings shall be precast into Class IV concrete by using forms to the dimensions indicated on the Standard Drawing. The tongue shall conform to the groove on the grade ring or cone section.

4.20.07. ELEVATION OF MANHOLE AND CLEANOUT FRAMES AND COVERS ON LOCAL, COUNTY AND STATE ROADS

Manhole frames and covers installed in the pavement of a Local, County or State road shall be installed with a 12-inch wide and 8-inch deep concrete collar to keep twelve (12) inches from the surface of the existing pavement, as per Standard Drawing S-5; The concrete collar shall be 1/8 inch below the final grade of the manhole frame and cover shall be one eighth (1/8) inch below the finished concrete collar. The final grade of the concrete collar shall be one eighth (1/8) inch below the grade of pavement of old asphalt, one quarter below the grade of pavement of asphalt two months old, and three eighth (3/8) inch below the grade of pavement of asphalt two weeks old.

SECTION 4.21. MACHINE TAPPING INTO EXISTING SEWER FOR LATERALS

4.21.01. GENERAL

This Work includes all labor, equipment, appliances and materials as required or necessary for machine tapping into existing sewer lines of the size as shown on the Plans, furnishing and installing the necessary fittings as shown in detail on the Plans, performing the necessary excavation and backfill, and any additional pavement removal and replacement over that paid for as "Pavement Replacement".

The Contractor shall take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby. He will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.

4.21.02. CONNECTIONS

Connections shall be of the saddle type installed in the main sewer. Connections of this type shall be made in a smooth, round hole, machine-drilled into the main sewer pipe. The fitting used in the connection shall be made in such a manner as to insure that no protrusion of the fitting into the main sewer pipe shall result. The connector shall fit the contour of the inside of the sanitary sewer and shall be specifically designed to fit the particular size main sewer pipe into which the connection is made. The machined-drilled hole shall be such size to provide one-eighth-inch (1/8") clearance between outside of the fitting and the hole. The space thus provided shall be completely filled with joint material. The space between the shoulder of the fitting and the face of the main sewer pipe shall be one-eighth-inch (1/8") thick and this space shall also be completely filled with joint material. Refer to the front of the Document for information regarding Asbestos Containing Materials.

4.21.03. JOINT MATERIAL

The joint material used for the connection shall be Permalite Plastics Corporation "Sea Goin Poxy Putty #1324" or approved equal.

4.21.04. DRILLING MACHINE

The drilling machine shall be of the type manufactured by Pilot Manufacturing Company, Torrance California, or approved equal.

4.21.05. EXISTING SEWER PIPE

Care shall be taken in working around, excavating around, and tapping into the existing sewer line to prevent damage to it. The cost of repairing or replacing any damaged section of the existing sewer line will be at the Contractor's expense.

4.21.06. EXCAVATION AND BACKFILL

The Contractor shall refer to Section 4.1, "Earthwork", of these Detailed Technical Provisions for all requirements relating to excavation and backfill.

4.21.07. LOCATION AND SIZE

The location of the laterals to be tapped into the existing sewer, as shown on the Plans is approximate only and the exact location will be determined in the field by the Engineer to best serve the property in question.

The size of the hole to be cut in the existing sewer line will be as shown on the Plans.

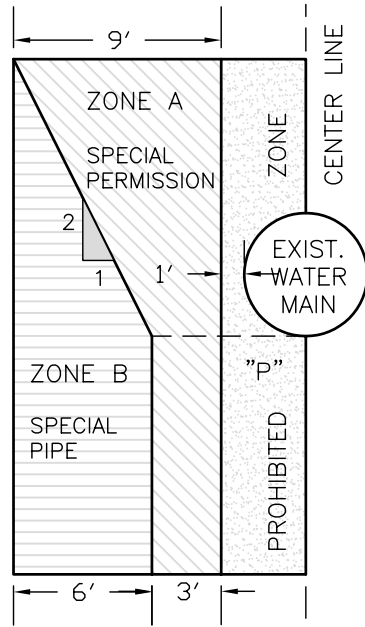
4.21.08. INSPECTION AND APPROVAL

All the Work and material used in machine tapping are subjected to inspection and approval by the District prior to putting into service or before final acceptance.

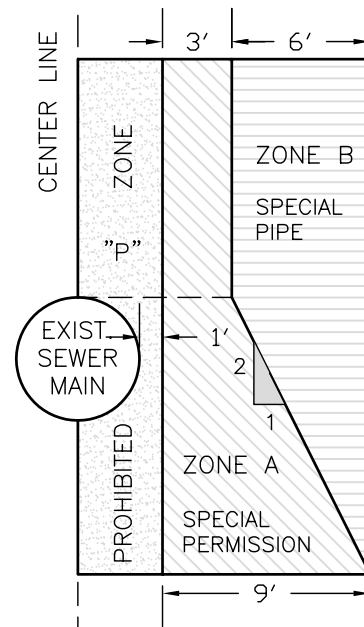
PART 5.
STANDARD DRAWINGS

LIST OF STANDARD DRAWINGS

Standard Drawing No. S-1 Separation of Water Mains and Sanitary Sewers
Standard Drawing No. S-2 Pipe Bedding
Standard Drawing No. S-3 Concrete Blanket
Standard Drawing No. S-4A Precast Concrete Manhole
Standard Drawing No. S-4B Precast Drop Manhole
Standard Drawing No. S-5 Standard Manhole Cover
Standard Drawing No. S-6 Standard Cleanout Type ABS or PVC
Standard Drawing No. S-7 Sewer Lateral
Standard Drawing No. S-8 Chimney and Deep Lateral
Standard Drawing No. S-9 Cut-Off Wall
Standard Drawing No. W-1 Typical Trench Details
Standard Drawing No. W-2 Fire Hydrant Installation
Standard Drawing No. W-3A Concrete Thrust Blocks for Pipelines
Standard Drawing No. W-3B Concrete Thrust Blocks for Pipelines
Standard Drawing No. W-4 Pipe Encasement Details
Standard Drawing No. W-5A Dual or Single Service Connection for Bank Area
Standard Drawing No. W-5B Dual or Single Service Connection for Level Area
Standard Drawing No. W-6 Air & Vacuum Valve Assembly
Standard Drawing No. W-7 4" X 6" Blow-Off Assembly
Standard Drawing No. W-8 2" X 4" Dead-End Flush-Out
Standard Drawing No. W-9 Sample Station Detail
Standard Drawing No. W-10 Tapping Outlets for Steel Pipe
Standard Drawing No. W-11 Valve Box and Cover
Standard Drawing No. W-12 Guard Post Installation Detail
Standard Drawing No. W-13 Backflow Preventer
Standard Drawing No. W-14 Locator Wire Installation
Standard Drawing No. W-15 Pressure Regulation Station Detail
Standard Drawing No. W-16 Fire Service Installation Detail
Standard Drawing No. W-17 Adjustable Pipe Support
Standard Drawing No. W-18 Conductor Tube Detail
Standard Drawing No. W-19 Marker Post
Standard Drawing No. W-20 Trench Detail
Standard Drawing No. W-21 Double Check Assembly Size 3" thru 10"
Standard Drawing No. W-22 Residential Fire Service
Standard Drawing No. M-1 Retaining Wall
Standard Drawing No. M-2 Chain-Link Fence

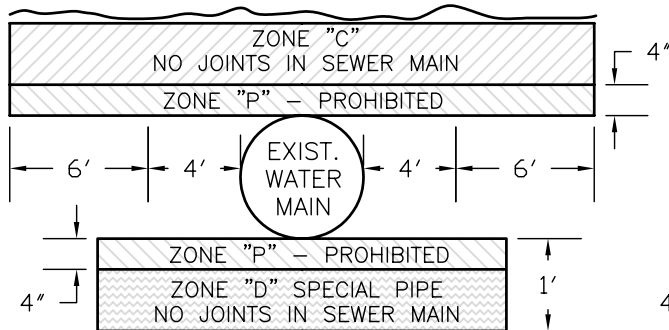


CASE 1: NEW SEWER MAIN

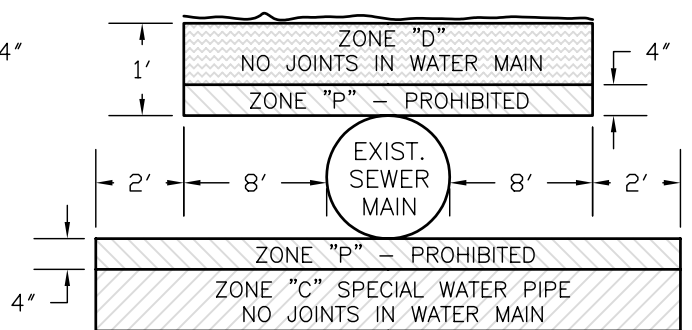


CASE 2: NEW WATER MAIN

FIGURE 1. PARALLEL CONSTRUCTION
NOT TO SCALE



CASE 1: NEW SEWER MAIN



CASE 2: NEW WATER MAIN

FIGURE 2. CROSSINGS
NOT TO SCALE

NOTES:

1. ZONE IDENTICAL ON EITHER SIDE OF CENTER LINES.
2. ZONE "P" IS A PROHIBITED ZONE. SECTION 64630(e)(2) CALIFORNIA CODE OF REGULATIONS, TITLE 22 (CURRENT) ; OR SECTION 64572(a) CALIFORNIA CODE OF REGULATIONS, TITLE 22 (PROPOSED).

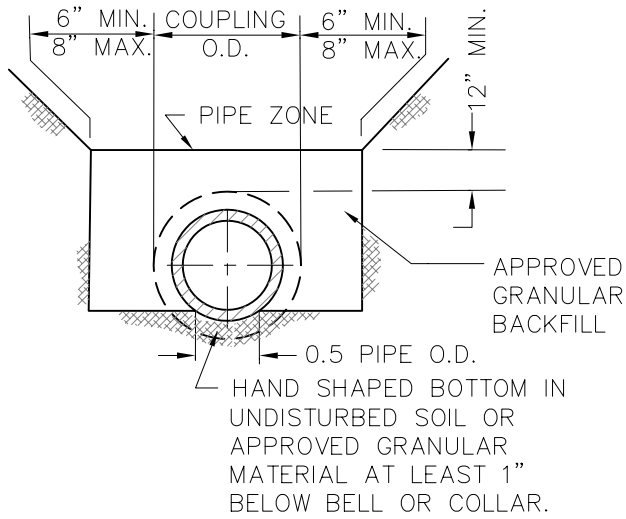


RUNNING SPRINGS WATER DISTRICT

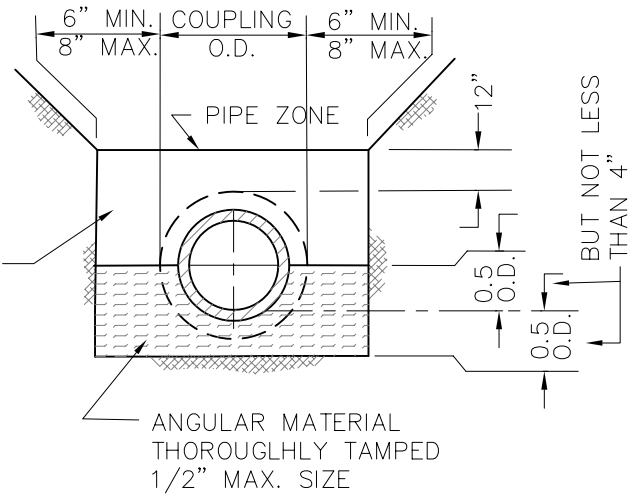
RYAN GROSS
GENERAL MANAGER

SEPARATION OF WATER
MAINS & SANITARY SEWERS

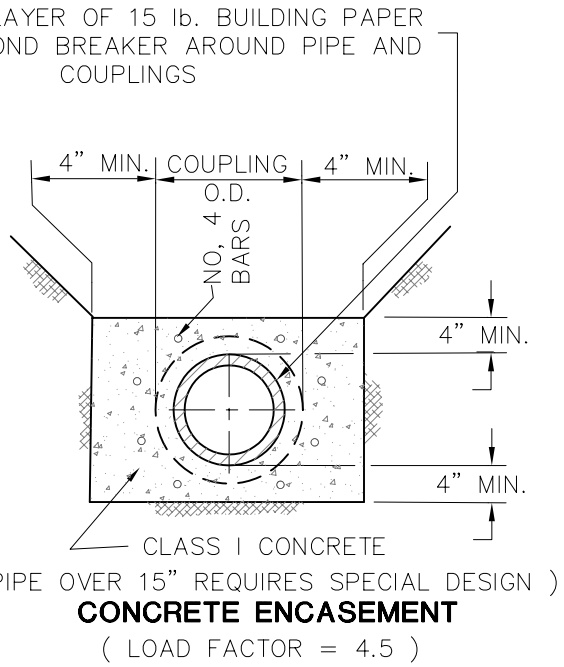
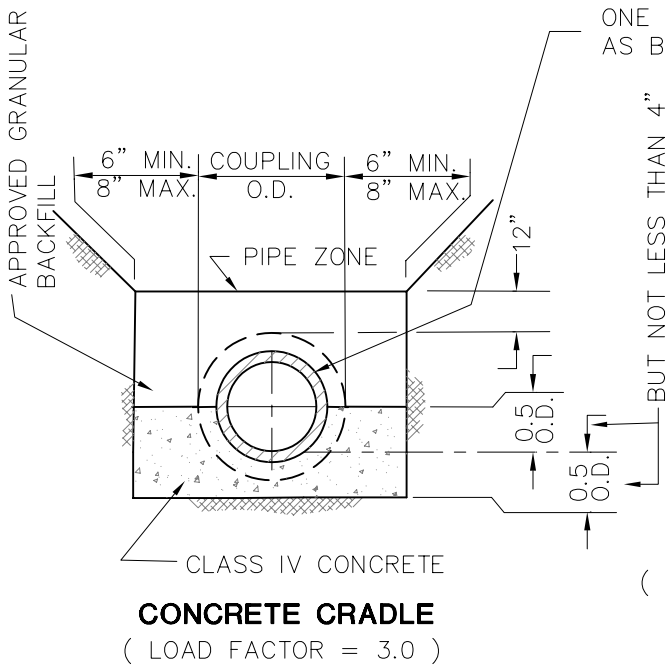
STANDARD DRAWING **162** **S-1**



NORMAL BEDDING
(LOAD FACTOR = 1.5)



SPECIAL BEDDING
(LOAD FACTOR = 1.9)



NOTES:

ALL BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS.



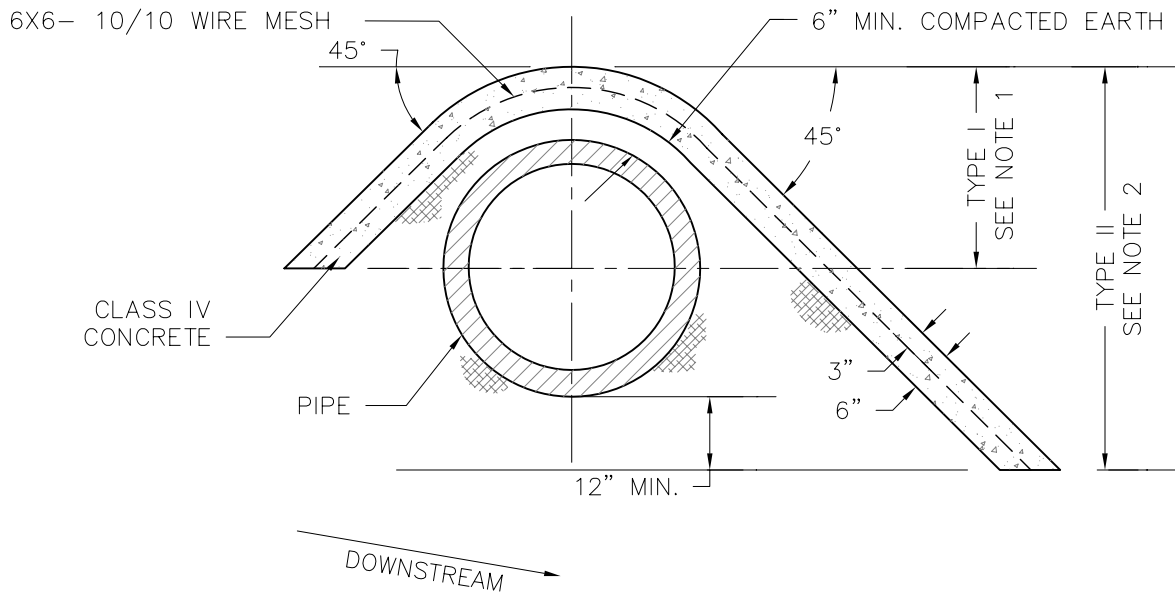
RUNNING SPRINGS WATER DISTRICT

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GENERAL MANAGER

PIPE BEDDING

STANDARD DRAWING **163**

S-2



NOTES:

1. THE DOWNSTREAM TOE OF TYPE I CONCRETE BLANKET ENDS AT THE CENTERLINE OF PIPE AS SHOWN ABOVE.
2. THE DOWNSTREAM TOE OF TYPE II CONCRETE BLANKET ENDS 12" BELOW THE BOTTOM OF PIPE AS SHOWN ABOVE.



RUNNING SPRINGS WATER DISTRICT

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GENERAL MANAGER

CONCRETE BLANKET

STANDARD DRAWING **164** **s-3**

EASEMENTS ← → PAVED SURFACES

LOCKING CAST IRON MANHOLE FRAME & COVER PER STD. NO. S-5, SET TO FINISH GRADE.

CLASS IV CONCRETE

NATURAL GROUND

12"W X 8"D CONCRETE COLLAR

SEE STD. DWG S-5 FOR DETAILS

AC PAVING

1/8"

NO GRADE RINGS REQUIRED

2'-0" DIAM.

6"

ADJUSTING HDPE RINGS AS REQD. MAX. = 12", MIN. = 9"

NOTE:

1. PLACE ECCENTRIC COVER UPSTREAM.
2. ALL JOINTS SHALL BE BANDED INSIDE AND OUT.
3. CHANNELS OF MANHOLE BOTTOMS TO BE FORMED IN CONCRETE. SIDE INLETS SHALL HAVE CHANNELS CURVED IN THE DIRECTION OF FLOW BUT NOT TO RESTRICT THE PLACEMENT OF MECHANICAL PLUGS.
4. BASE SHALL BE POURED AT LEAST 24 HOURS PRIOR TO INSTALLING MANHOLE RINGS - BROOM FINISH.

MORTAR ALL JOINTS PRIOR TO PLACING NEXT RING.

TONGUE AND GROOVE, CONCRETE, PRECAST RINGS.

32"

12"

6"

16" OR 24"

6"

16" OR 24"

36" OR 48"

VARIABLE

2"

9"

SLOPE 1":12"

SLOPE 1":12"

4'-0" DIA.

1" MIN. COVER

6'-0" DIA.

CLASS IV CONCRETE

GROOVE TO BE FORMED IN MANHOLE BASE

SECTION A-A

APPROVED WATER STOP REQUIRED FOR PVC PIPE.

SHELF

OUTLET

4'-0" DIAM.

6"

CONCRETE COLLAR

6"

FRAME & COVER

INLET

6"

CONCRETE COLLAR

6"

FRAME & COVER

INLET

6"

CONCRETE COLLAR

6"

FRAME & COVER

PLAN SECTION

NOTE:

DRY-CAST CONCRETE MANHOLE COMPONENTS MAY ABSORB LARGE AMOUNTS OF WATER DURING LEAK TESTS AND MAY GIVE INCORRECT TEST DATA.

WET-CAST CONCRETE MANHOLE COMPONENTS HAVE NOT SHOWN THIS TENDENCY. CONTRACTOR MAY USE EITHER METHOD FOR OBTAINING CONCRETE MANHOLE COMPONENTS.

LEAK RETESTS SHALL BE BACK-CHARGED TO THE CONTRACTOR.



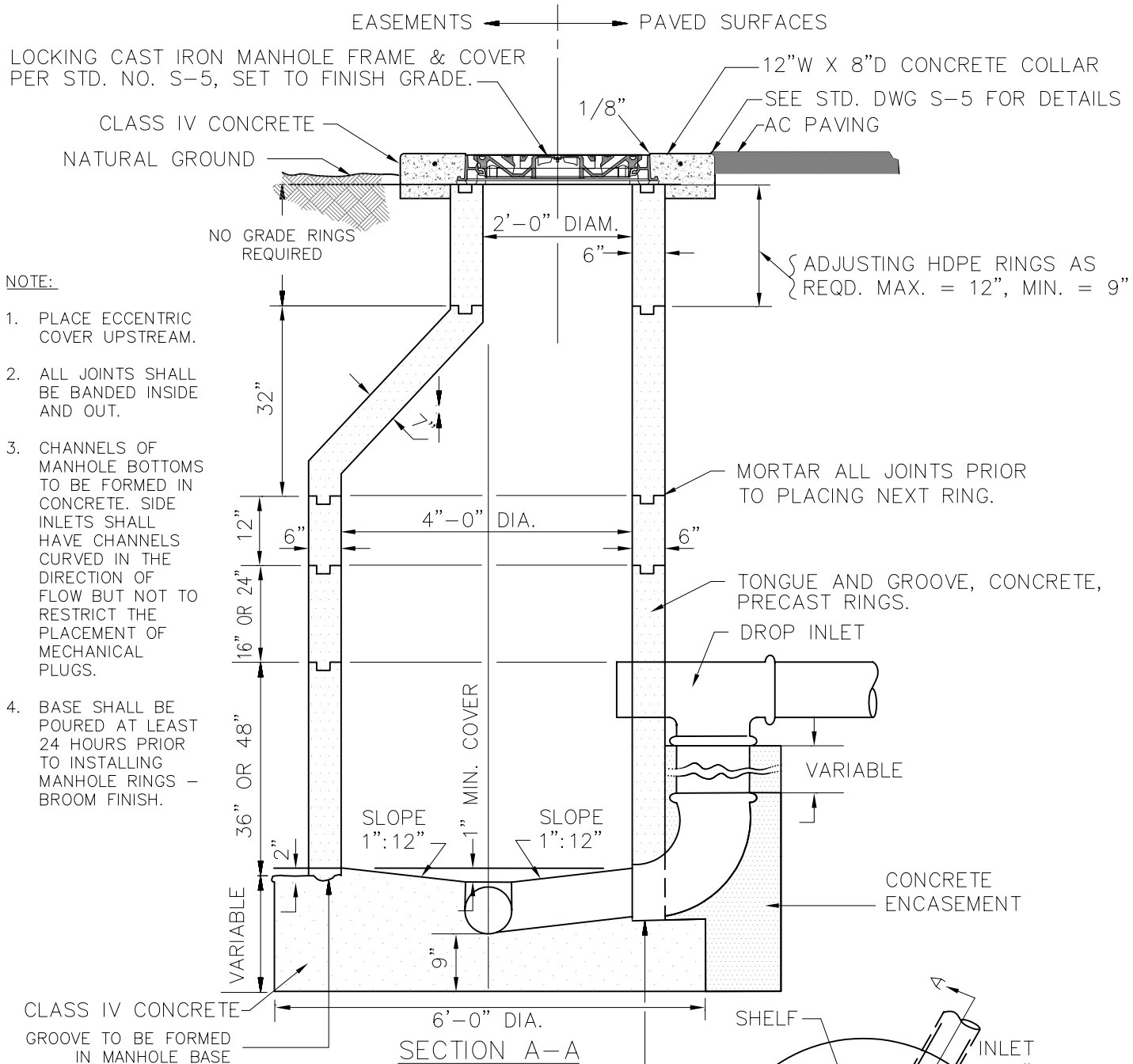
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

PRECAST CONCRETE MANHOLE

STANDARD DRAWING **165** **S-4A**

LAST UPDATED: 3/2013



NOTE:

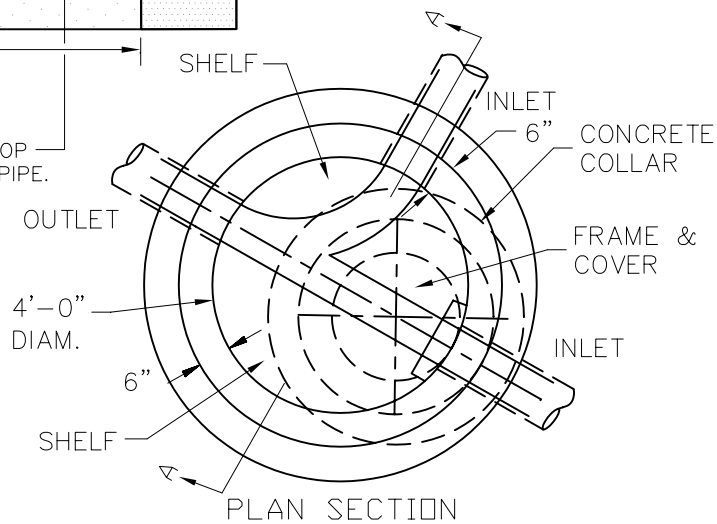
1. PLACE ECCENTRIC COVER UPSTREAM.
2. ALL JOINTS SHALL BE BANDED INSIDE AND OUT.
3. CHANNELS OF MANHOLE BOTTOMS TO BE FORMED IN CONCRETE. SIDE INLETS SHALL HAVE CHANNELS CURVED IN THE DIRECTION OF FLOW BUT NOT TO RESTRICT THE PLACEMENT OF MECHANICAL PLUGS.
4. BASE SHALL BE POURED AT LEAST 24 HOURS PRIOR TO INSTALLING MANHOLE RINGS - BROOM FINISH.

NOTE:

DRY-CAST CONCRETE MANHOLE COMPONENTS MAY ABSORB LARGE AMOUNTS OF WATER DURING LEAK TESTS AND MAY GIVE INCORRECT TEST DATA.

WET-CAST CONCRETE MANHOLE COMPONENTS HAVE NOT SHOWN THIS TENDANCY. CONTRACTOR MAY USE EITHER METHOD FOR OBTAINING CONCRETE MANHOLE COMPONENTS.

LEAK RETESTS SHALL BE BACK-CHARGED TO THE CONTRACTOR.

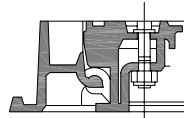


RUNNING SPRINGS WATER DISTRICT

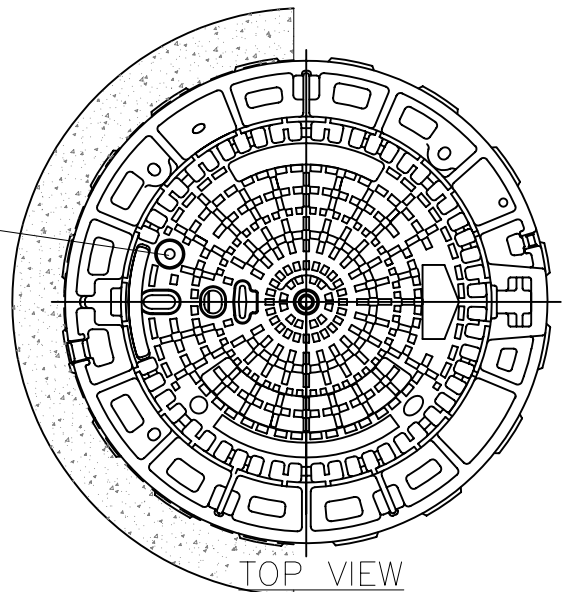
RYAN GROSS
GENERAL MANAGER

PRECAST DROP MANHOLE

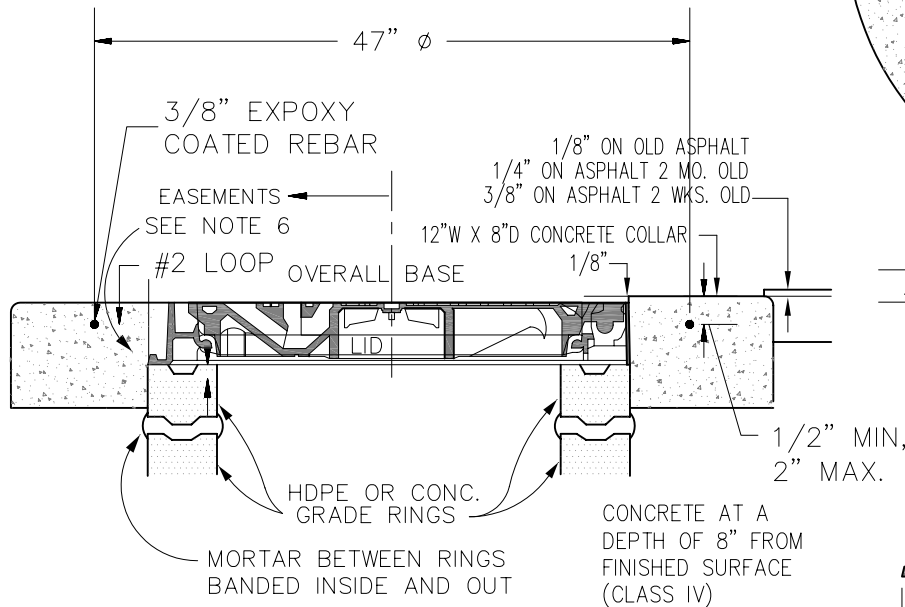
STANDARD DRAWING **166** **S-4B**



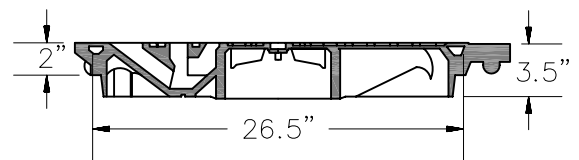
LOCKING MECHANISM



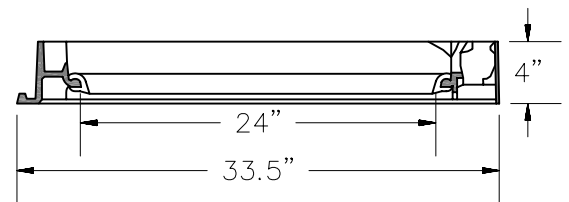
TOP VIEW



SECTION THRU FRAME SHOWING
TYPICAL INSTALLATION



COVER SECTION VIEW



FRAME SECTION VIEW

NOTES:

1. MANHOLE COVER SHALL BE DESIGNED FOR AASHTO H-20 LOADING.
2. MANHOLE COVER AND FRAME SHALL BE CALLED PAMREX OR APPROVED LOCKING EQUAL. COVER AND FRAME SHALL BE MANUFACTURED FROM DUCTILE IRON. SUBMIT "OR EQUAL" REQUEST TO DISTRICT 15 WORKING DAYS PRIOR TO INTENDED USE FOR REVIEW AND APPROVAL. UNLESS APPROVED IN WRITING BY THE DISTRICT, "OR EQUAL" SUBSTITUTES SHALL NOT BE INSTALLED.
3. COVERS SHALL BE HINGED AND INCORPORATE A 90 DEGREE BLOCKING SYSTEM TO PREVENT ACCIDENTAL CLOSURE. COVERS SHALL BE ONE MAN OPERABLE USING STANDARD TOOLS AND SHALL BE CAPABLE OF WITHSTANDING A TEST LOAD OF 80,000 LBS.
4. FRAMES SHALL BE CIRCULAR, INCORPORATE A SEATING RING AND A FITTED PLUG IN THE HINGE HOUSING, AND BE AVAILABLE IN A 24 INCH CLEAR OPENING. THE FRAME DEPTH SHALL NOT EXCEED 4 INCHES, AND THE FLANGE SHALL INCORPORATE BEDDING SLOTS, BOLT HOLES, AND LIFTING EYES.
5. ALL COMPONENTS SHALL BE BLACK COATED.
6. FRAME WEIGHT: 73 LBS. COVER WEIGHT: 122 LBS. TOTAL WEIGHT: 195 LBS.
7. PAMREX IS AVAILABLE FROM JIM COX SALES, INC. (800) 838-7377.
8. RSWD SEWER SHALL BE INSTALLED ON THE LOCKING LID.

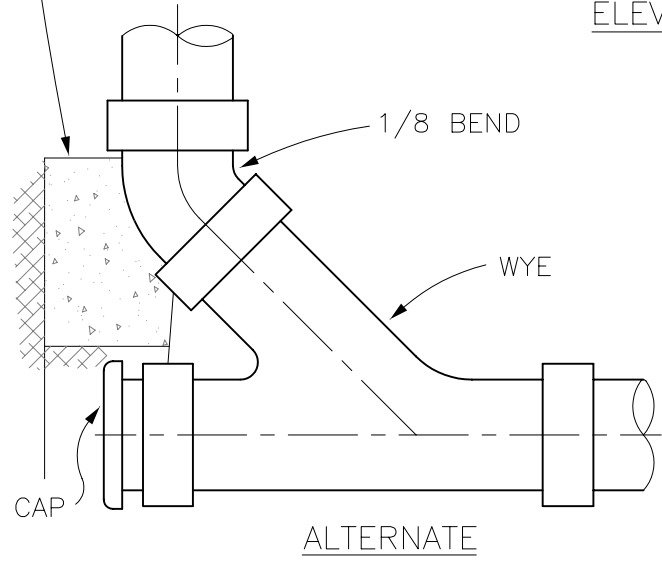
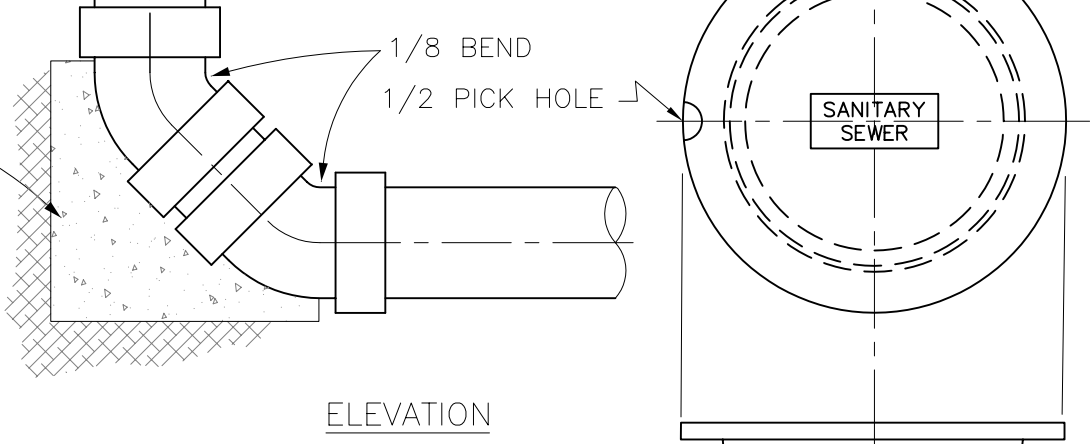
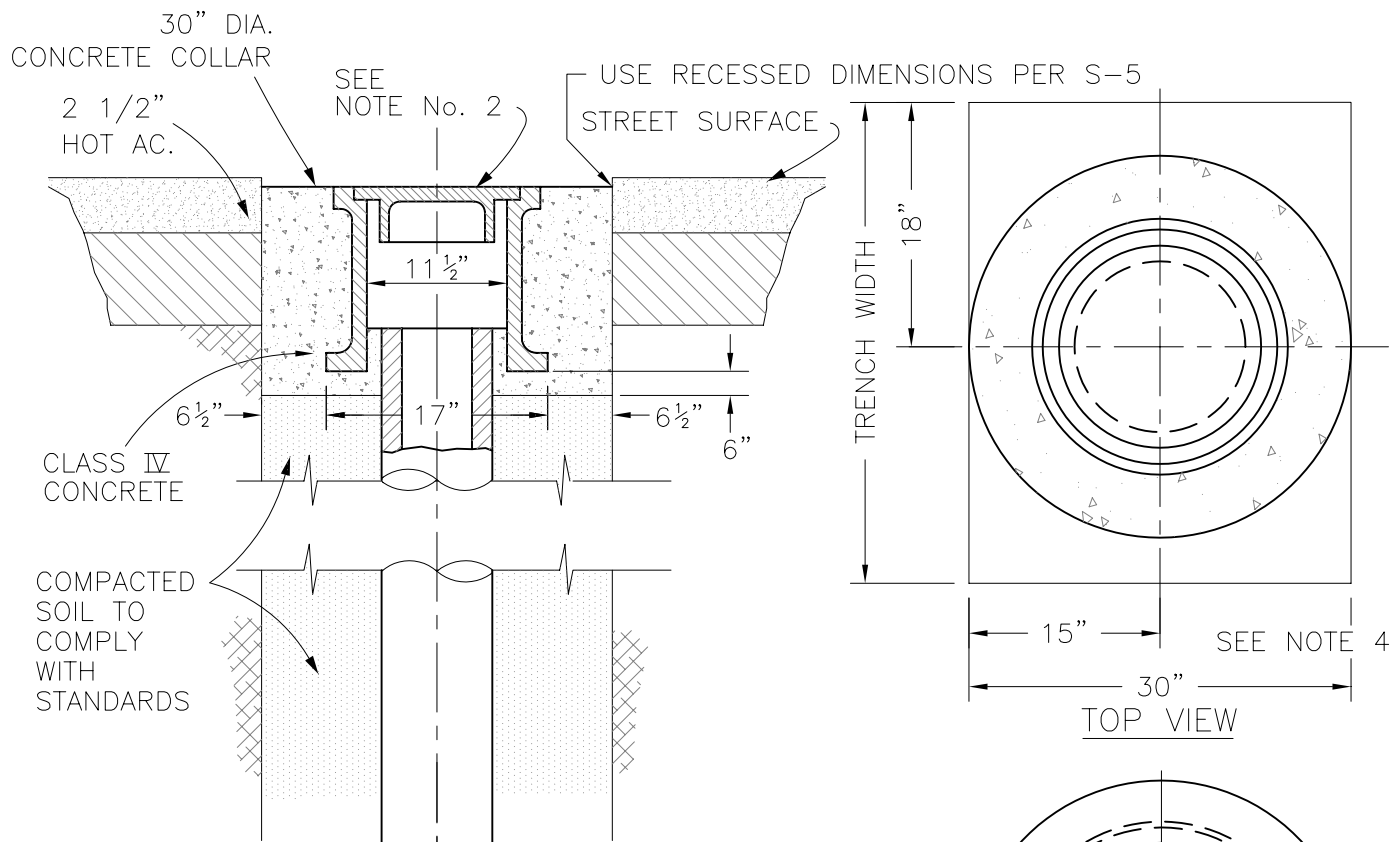


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

STANDARD MANHOLE COVER

STANDARD DRAWING **167** **S-5**



COVER

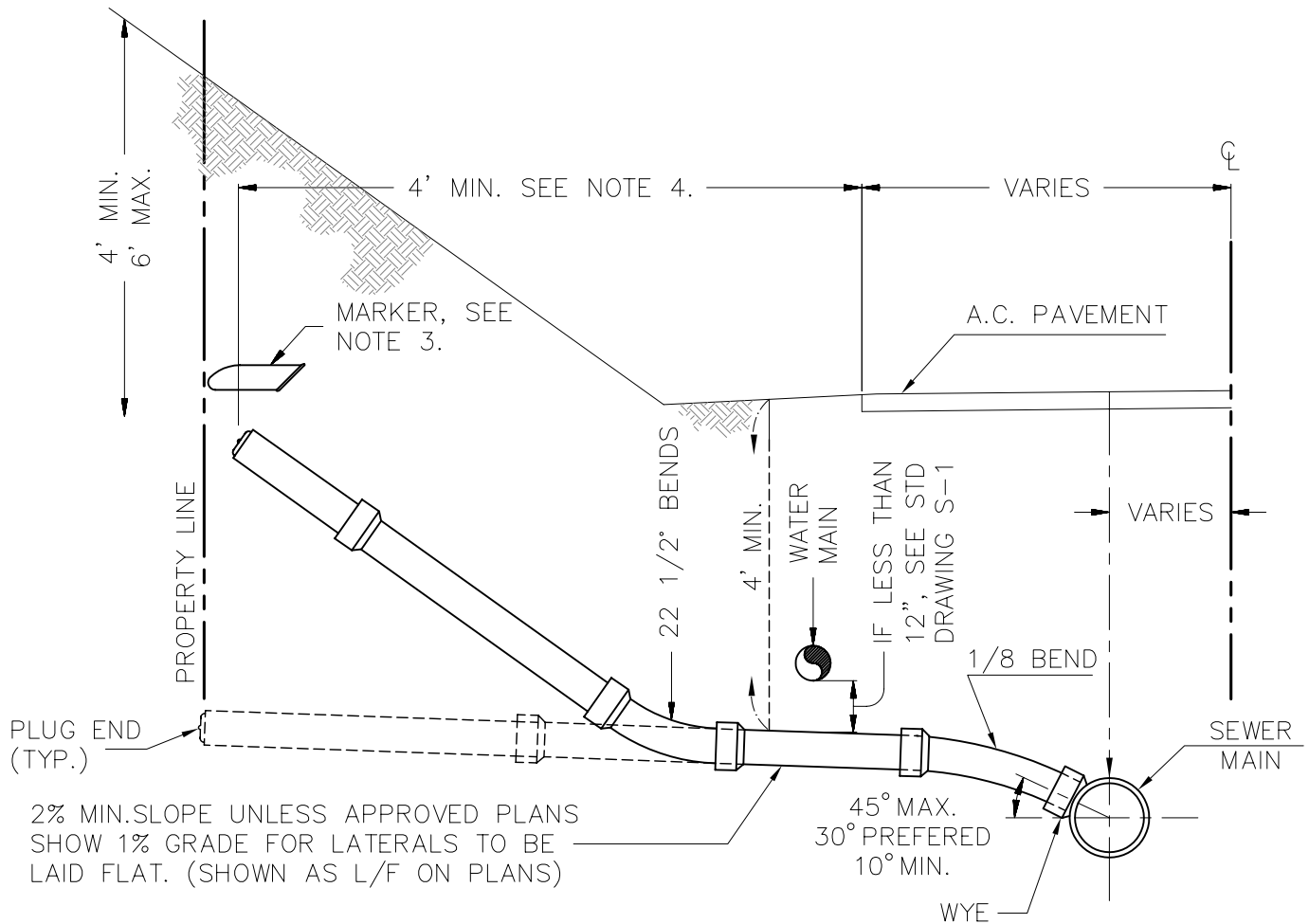
- NOTES**
1. CLENOUT PIPE MUST BE SAME DIAMETER AS MAIN LINE SEWER.
 2. CASTING SHALL BE ALHAMBRA FOUNDRY A-1241 (REVISED) OR APPROVED EQUAL BY THE ENGINEER.
 3. COVER, FRAME & CONCRETE PAD ARE TYPICAL FOR 8" MAIN LINE SEWERS ONLY.
 4. CONCRETE COLLAR ON MAINLINE, BUT NOT AT PROPERTY LINE.



RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

STANDARD CLENOUT



NOTES:

1. 4" PIPE FOR SINGLE DWELLINGS. 6" MIN. FOR ALL OTHER LATERALS.
2. LATERAL LOCATIONS AS NOTED ON THE "AS-BUILT" PLANS SHALL BE MEASURED AT RIGHT ANGLES TO STREET CENTERLINE FROM THE CENTERLINE OF THE NEAREST DOWNSTREAM MANHOLE COVER.
3. MAKER SHALL BE A 15" DIAMETER PASSIVE ELECTRONIC MARKER PLACED FLAT AND 12" MIN. ABOVE END OF LATERAL, BUT NOT TO EXCEED 5' DEEP. MAKER SHALL HAVE REPULSE FREQUENCY OF 122.5 KHZ.
4. END OF LATERAL SHALL BE AT PROPERTY LINE, BUT IN NO CASE SHALL IT BE LESS THAN 4' OUTSIDE EDGE OF PAVEMENT.
5. PROPERTY OWNER SHALL BE RESPONSIBLE FOR INSTALLING CLEANOUT AT PROPERTY LINE TO MEET LOCAL PLUMBING CODES.



RUNNING SPRINGS WATER DISTRICT

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GENERAL MANAGER

SEWER LATERAL

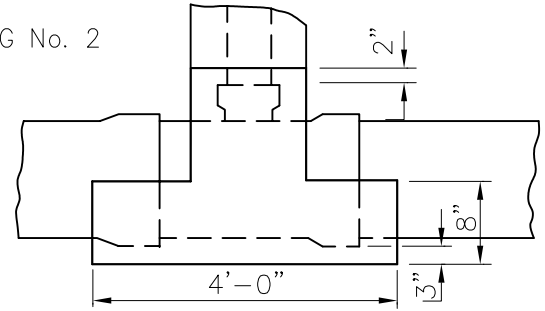
STANDARD DRAWING **169**

S-7

WYE OR DOUBLE WYE, SEE PLANS FOR INDIVIDUAL REQUIREMENTS

FRAME & COVER PER STD. DRAWING No. 2

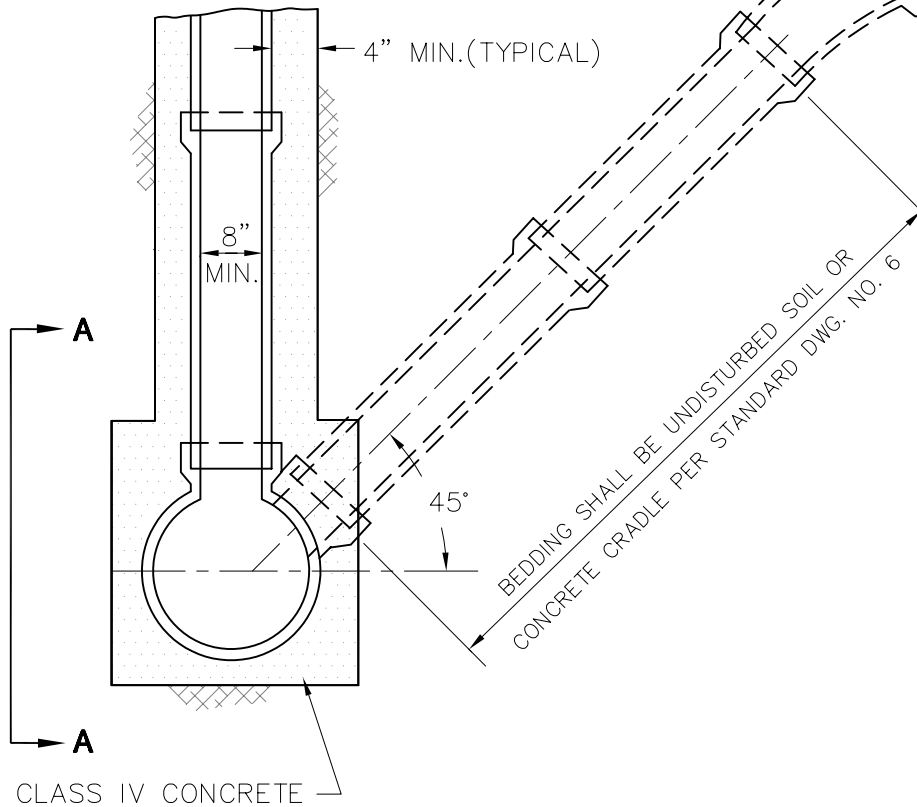
SEE STANDARD DRAWING NO. S-7 FOR BUILDING LATERAL DETAIL



SECTION A-A

SEE STANDARD DWG. NO. S-7 FOR BUILDING LATERAL DETAIL

ALTERNATE METHOD



NOTES:

1. SEE CONSTRUCTION DRAWINGS FOR LOCATION AND SIZE OF LATERALS AND CHIMNEYS.
2. NOT TO BE USED UNLESS AUTHORIZED BY THE DISTRICT.

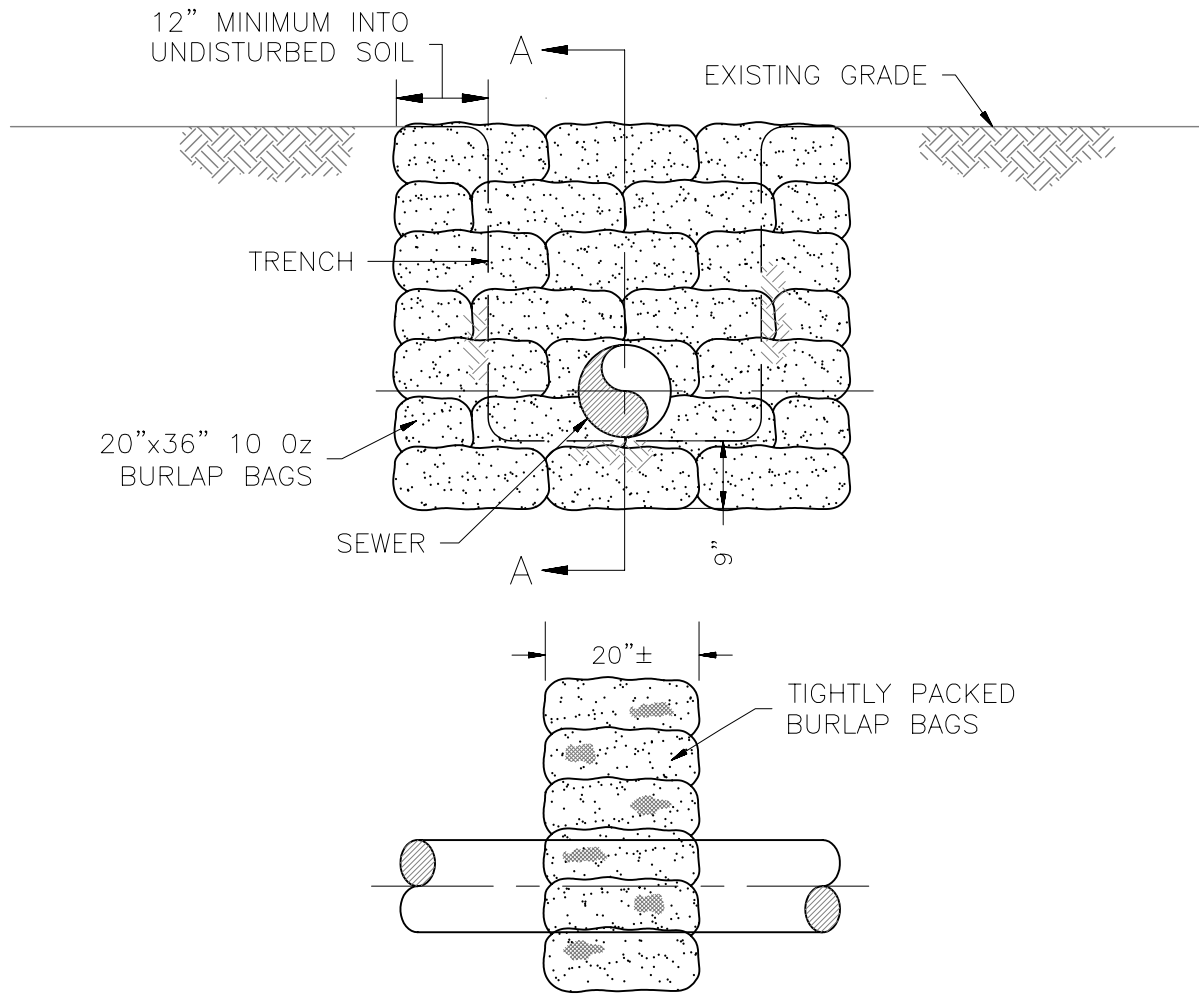


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

CHIMNEY & DEEP LATERAL

STANDARD DRAWING NO. **170** **S-8**



SECTION A-A

NOTES:

1. FILL BAGS 4/5 FULL WITH SOIL MIXTURE IMMEDIATELY PLACED AND TAMPED TO CONFORM WITH ADJACENT BAGS.
2. SOIL MIXTURE SHALL CONTAIN AN SAND EQUIVALENT (S.E.) VALUE OF 30 OR GREATER, CEMENT MIXTURE SHALL BE 3-1/2 SACKS PER CU. YD.
3. SPACING OF CUT OFF WALLS SHALL BE APPROXIMATELY EVERY 50 LINEAL FEET ON SLOPES GREATER THAN 30% OR ON ALL SEWERS WITHIN AN ERODED DRAINAGE COURSE.
4. AS AN ALTERNATIVE, CUT-OFF WALLS CAN BE CONSTRUCTED BY FORMING TO ABOVE DIMENSIONS AND POURING WITH 3:1 SOIL-CEMENT MIXTURE.



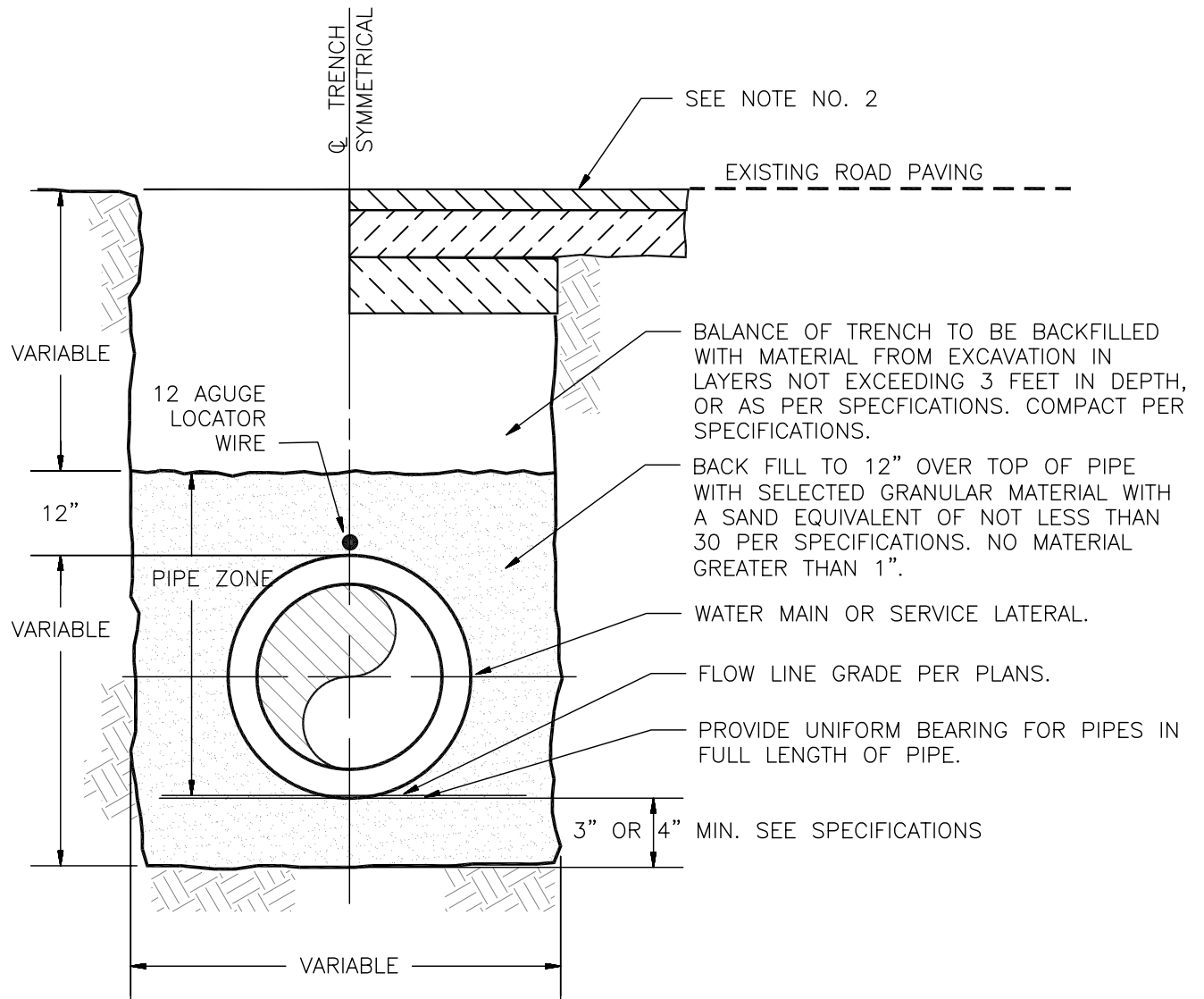
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

CUT-OFF WALL

STANDARD DRAWING **171**

S-9



NOTES:

1. WIDTH OF TRENCH
 MINIMUM = PIPE O.D. + 12"
 MAXIMUM = PIPE O.D. + 16"
2. REPLACE ASPHALT CONCRETE PAVEMENT AND ROAD BASE IN ACCORDANCE WITH EXCAVATION PERMIT.

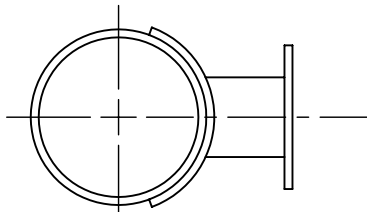


RUNNING SPRINGS WATER DISTRICT

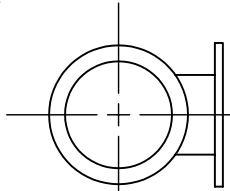
RYAN GROSS
 GENERAL MANAGER

TYPICAL TRENCH DETAIL

STANDARD DRAWING **172** **W-1**



USE 6" FLANGED SADDLED OUTLET FOR INSTALLATION ON 12" OR LARGER PIPE



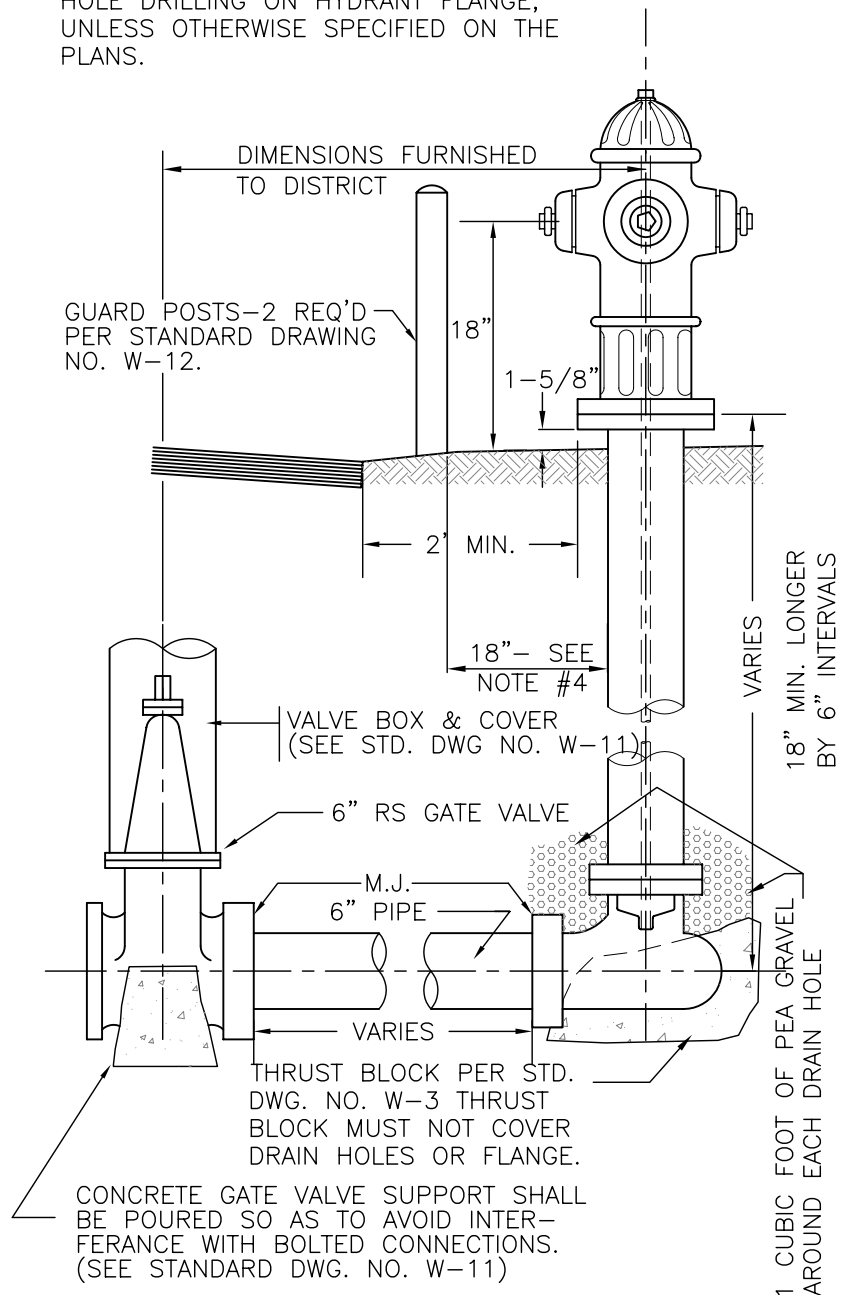
USE C.I. TEE FOR INSTALLATION ON 6", 8" OR 10" PIPELINE

PIPELINE INSTALLATION

NOTES:

1. HYDRANT TO BE PAINTED BE PAINTED WITH ONE COAT OF SURFACE PRIMER & TWO COATS OF FINISH PAINT. THE PAINT SHALL BE CHEX-RUST PRIMER & SAFETY YELLOW SPEED TEC 313-02 FINISH PER FULLER PAINT COMPANY OR 1069 HEAVY DUTY RUST INHIBITIVE RED PRIMER & 9348 SAFETY YELLOW FINISH COAT PER RUST-OLEUM, OR SELECTED/APPROVED BY DISTRICT.
2. FIRE HYDRANT TO BE LOCATED A MINIMUM OF 2 FEET CLEARANCE FROM ANY OBSTRUCTION.
3. FIRE HYDRANT LOCATIONS TO BE DETERMINED BY DISTRICT.
4. LARGE OUTLET TO BE POINTED TOWARDS THE STREET.
5. HYDRANT TO FACE STREET.

USE MUELLER A-423 SUPER CENTRURION 250 3-WAY (5-1/4" MAIN VALVE OPENING) HYDRANT HEAD OR APPROVED EQUAL, 8 HOLE DRILLING ON HYDRANT FLANGE, UNLESS OTHERWISE SPECIFIED ON THE PLANS.



FIRE HYDRANT ASSEMBLY WITH SAFETY FLANGE

6. WHEN THE THRUST BLOCK IS TO BE POURED, DO NOT TO BLOCK THE HYDRANT DRAIN HOLES.
7. UNLESS OTHERWISE SPECIFIED BY THE DISTRICT, THE SETBACK IS 2 FEET MINIMUM FROM THE CURB FACE TO THE NEAREST POINT ON THE HYDRANT



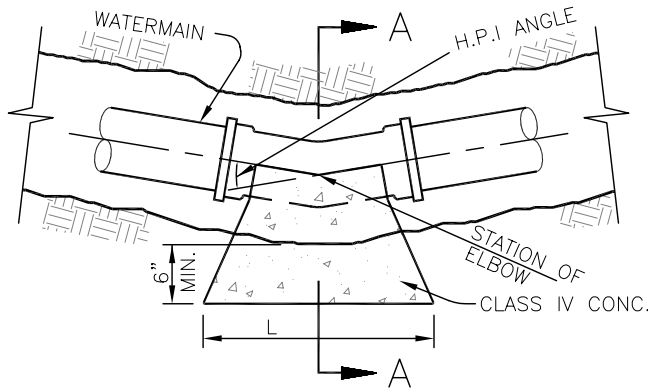
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

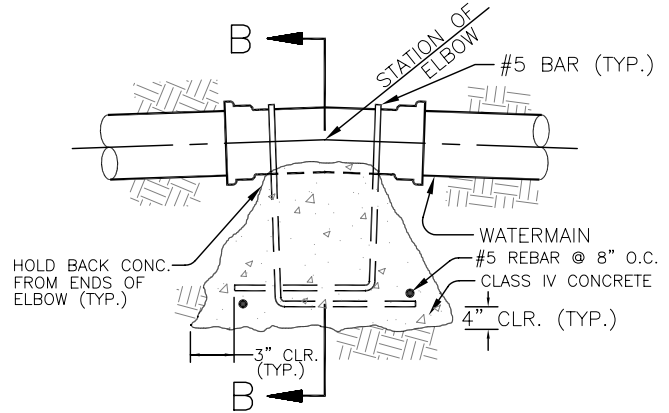
FIRE HYDRANT INSTALLATION
(6" X 2.5" & 1" - 4.5")
SUPER FIRE HYDRANT (DRY BARRELL)

STANDARD DRAWING **173** **W-2**

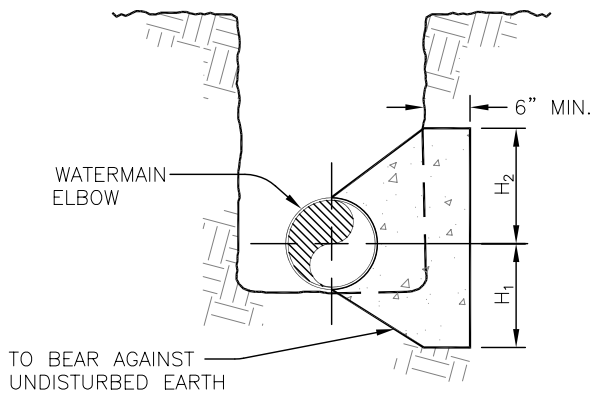
LAST UPDATED: 3/2013



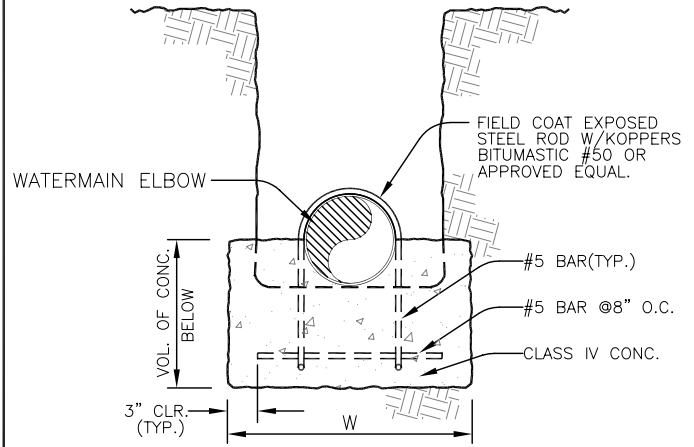
SECTIONAL PLAN



SECTIONAL ELEVATION



SECTION A-A



SECTION B-B

HORIZONTAL THRUST BLOCK

PIPE DIA.	H ₁	H ₂	L	H.P.I. ANGLE
4"	1/2 O.D.	1/2 O.D.	4'-0"	5° TO 41°
4"	4"	4"	4'-0"	42° TO 83°
4"	10"	5"	4'-0"	84° TO 104°
6"	1/2 O.D.	1/2 O.D.	4'-0"	5° TO 27°
6"	6"	6"	4'-0"	28° TO 51°
6"	1'-6"	9"	4'-0"	52° TO 90°
8"	1/2 O.D.	1/2 O.D.	4'-0"	5° TO 20°
8"	8"	8"	4'-0"	21° TO 36°
8"	1'-8"	10"	4'-0"	37° TO 54°
8"	2'-2"	1'-1"	4'-0"	55° TO 78°
8"	2'-8"	1'-4"	4'-0"	79° TO 111°
10"	1/2 O.D.	1/2 O.D.	4'-0"	5° TO 16°
10"	10"	10"	4'-0"	17° TO 28°
10"	1'-10"	11"	4'-0"	29° TO 39°
10"	2'-4"	1'-2"	4'-0"	40° TO 53°
10"	2'-10"	1'-5"	4'-0"	54° TO 70°
10"	2'-10"	1'-5"	6'-0"	71° TO 120°
12"	1/2 O.D.	1/2 O.D.	4'-0"	5° TO 13°
12"	12"	12"	4'-0"	14° TO 22°
12"	2'-0"	12"	4'-0"	23° TO 30°
12"	2'-6"	1'-3"	4'-0"	31° TO 40°
12"	3'-0"	1'-6"	4'-0"	41° TO 52°
12"	3'-0"	1'-6"	6'-0"	53° TO 83°

VERTICAL ANCHOR BLOCK

PIPE DIA.	W	VOLUME OF CONC (cu ft)	GRADE % DIFFERENCE
4"	1'-6"	4.3	5 TO 15
4"	1'-6"	6.5	16 TO 25
4"	1'-6"	8.6	26 TO 35
4"	1'-6"	10.8	36 TO 45
4"	1'-6"	13.0	46 TO 55
4"	1'-6"	15.1	56 TO 65
6"	2'-0"	7.6	5 TO 10
6"	2'-0"	11.4	11 TO 25
6"	2'-0"	15.2	26 TO 40
6"	2'-0"	22.8	41 TO 55
8"	2'-0"	10.3	5 TO 10
8"	2'-0"	15.5	11 TO 20
8"	2'-0"	20.6	21 TO 30
8"	2'-0"	31.0	31 TO 40
8"	2'-0"	41.3	41 TO 55
10"	2'-6"	20.9	5 TO 15
10"	2'-6"	27.8	16 TO 25
10"	2'-6"	41.7	26 TO 35
10"	2'-6"	55.6	36 TO 45
10"	2'-6"	69.5	46 TO 55
12"	2'-6"	27.6	5 TO 15
12"	2'-6"	36.8	16 TO 25
12"	2'-6"	55.3	26 TO 35
12"	2'-6"	73.7	36 TO 45
12"	2'-6"	92.1	46 TO 55

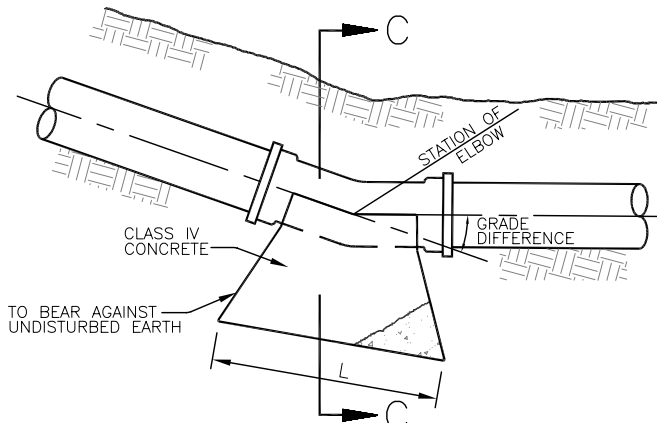


RUNNING SPRINGS WATER DISTRICT

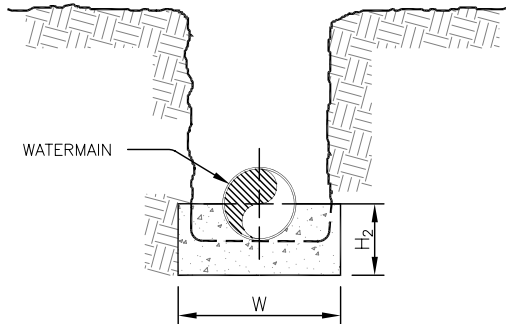
RYAN GROSS
GENERAL MANAGER

CONCRETE THRUST BLOCKS FOR PIPELINES
CLASS 200 P.S.I. MAX.

STANDARD DRAWING **174** **W-3A**

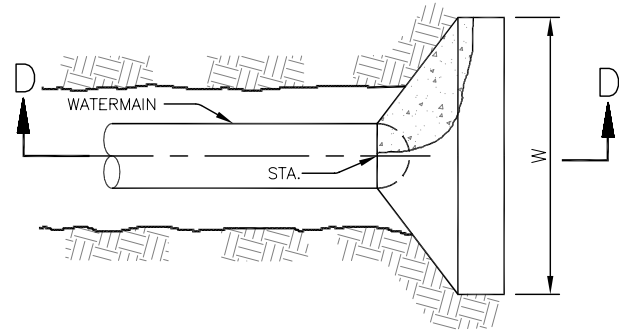


SECTIONAL ELEVATION

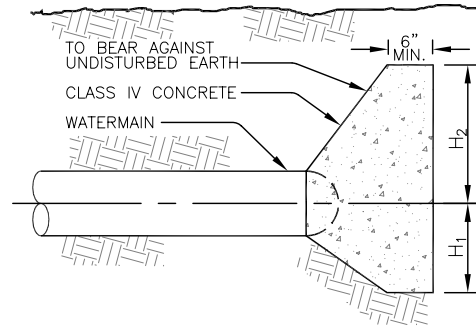


SECTION C-C
VERTICAL BEARER BLOCK

PIPE DIA.	W	H ₂	L	GRADE % DIFF.
4"	1'-6"	8"	1'-0"	5 TO 60
6"	2'-0"	9"	1'-0"	5 TO 40
6"	2'-0"	9"	1'-6"	41 TO 55
8"	2'-0"	10"	1'-0"	5 TO 25
8"	2'-0"	10"	1'-6"	16 TO 40
8"	2'-0"	10"	2'-0"	41 TO 55
10"	2'-6"	1'-2"	1'-0"	5 TO 10
10"	2'-6"	1'-2"	2'-0"	11 TO 40
10"	2'-6"	1'-2"	3'-0"	41 TO 60
12"	2'-6"	1'-3"	2'-0"	5 TO 25
12"	2'-6"	1'-3"	3'-0"	26 TO 45
12"	2'-6"	1'-3"	4'-0"	46 TO 60

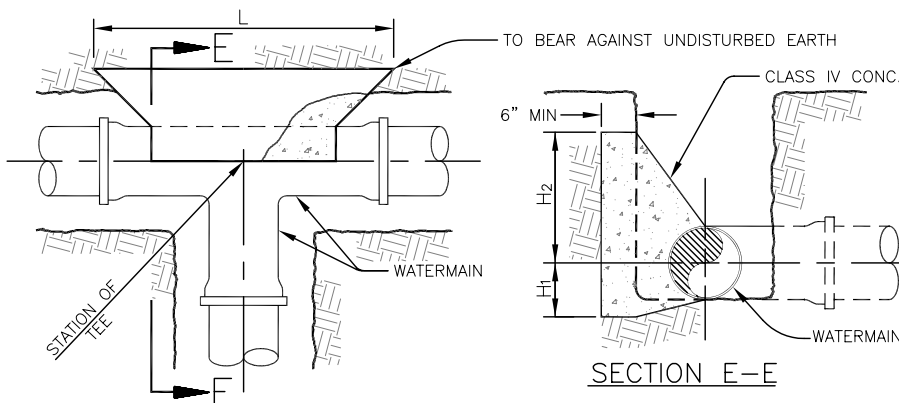


SECTIONAL PLAN



SECTION D-D
END THRUST BLOCK

*PIPE DIA.	H ₁	H ₂	L
4"	9"	6"	3'-6"
6"	1'-6"	9"	4'-0"
8"	2'-2"	1'-1"	4'-0"
10"	2'-10"	1'-5"	4'-0"
12"	3'-0"	1'-6"	5'-0"



SECTIONAL PLAN

SECTION E-E
TEE THRUST BLOCK

*PIPE DIA.	H ₁	H ₂	L
4"	9"	6"	3'-6"
6"	1'-6"	9"	4'-0"
8"	2'-2"	1'-1"	4'-0"
10"	2'-10"	1'-5"	4'-0"
12"	3'-0"	1'-6"	5'-0"

* USE OUTLET PIPE DIAMETER

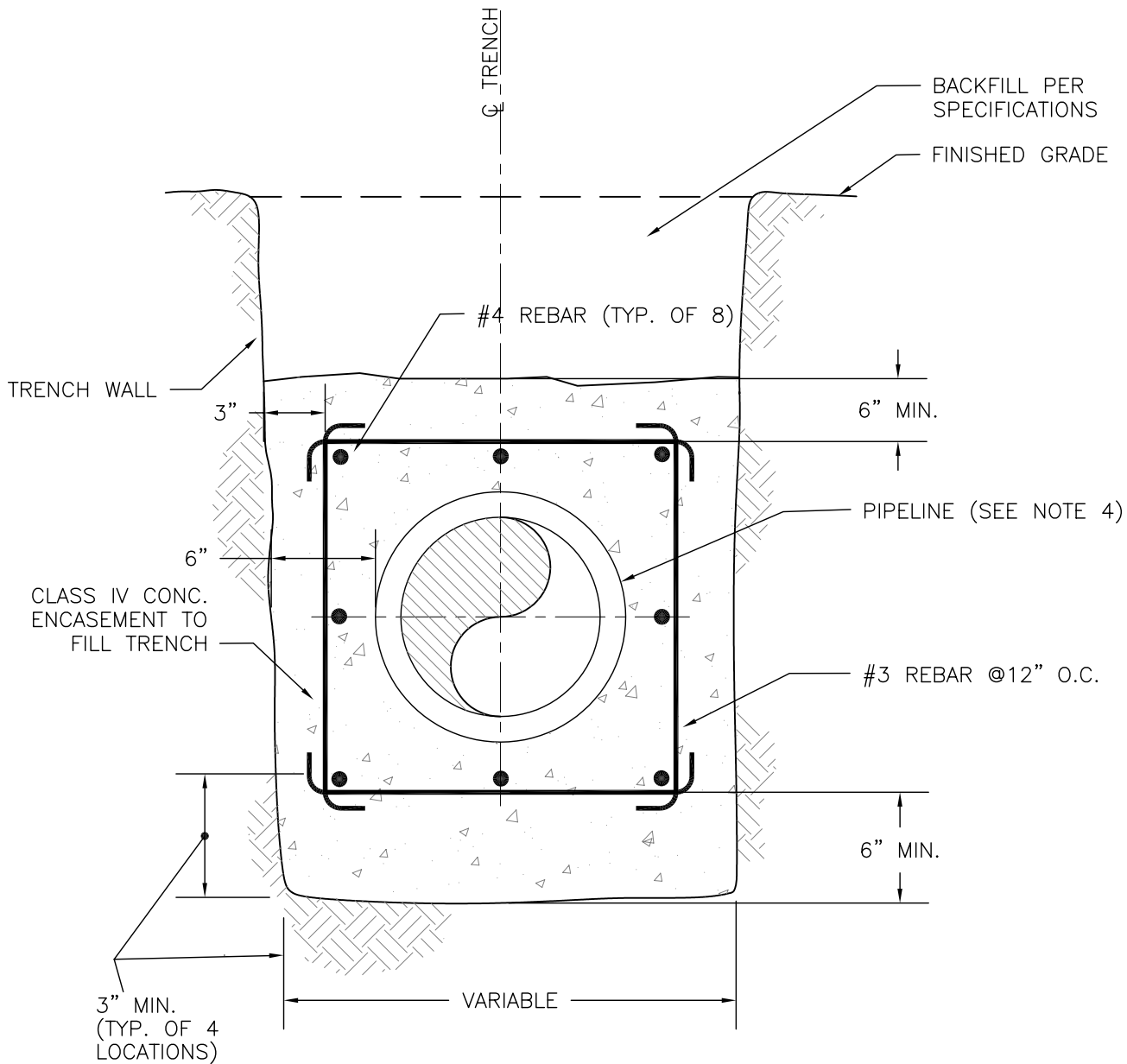


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

CONCRETE THRUST BLOCKS
FOR PIPELINES
CLASS 200 P.S.I. MAX.

STANDARD DRAWING **175** **W-3B**



NOTES:

1. PIPE ENCASEMENT TO BE INSTALLED WHERE INDICATED ON THE PLANS AND/OR AS DIRECTED IN THE FIELD BY THE DISTRICT.
2. CONTRACTOR SHALL TAKE DUE PRECAUTION AGAINST PIPE FLOTATION DURING PLACING OF THE CONCRETE.
3. IF ANY PIPE APPURTENANCE, SUCH AS OUTLETS, MANWAYS, ETC., ARE REQUIRED IN THE AREA WHERE PIPE ENCASEMENT IS REQUIRED, THE ENCASEMENT SHALL BE FORMED SO THAT REASONABLE ACCESS APPURTENANCES.
4. WRAP PIPE WITH THREE (3) LAYERS OF 20 LB FELT PAPER.

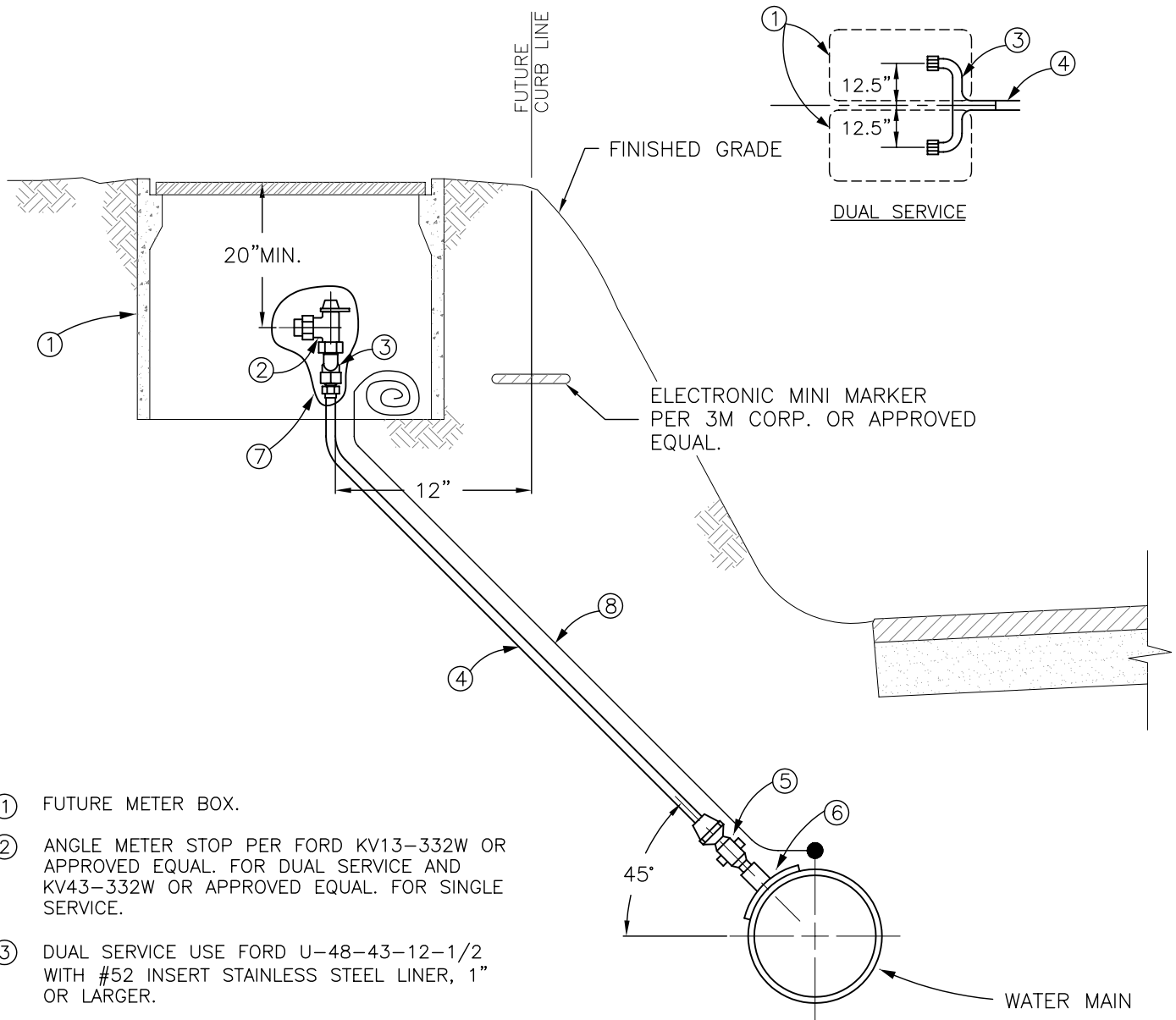


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

PIPE ENCASEMENT DETAIL

STANDARD DRAWING **176** **W-4**



- ① FUTURE METER BOX.
- ② ANGLE METER STOP PER FORD KV13-332W OR APPROVED EQUAL. FOR DUAL SERVICE AND KV43-332W OR APPROVED EQUAL. FOR SINGLE SERVICE.
- ③ DUAL SERVICE USE FORD U-48-43-12-1/2 WITH #52 INSERT STAINLESS STEEL LINER, 1" OR LARGER.
- ④ 1" OR LARGER HIGH DENSITY POLYETHYLENE (HDPE) PE 3406 PIPE PER AWWA C-901, COPPER PIPE SIZE.
- ⑤ CORPORATION STOP PER FORD F-1100 WITH #52 STAINLESS STEEL LINER, 1" OR LARGER.
- ⑥ 1 1/4" WELDED SADDLE FOR STEEL PIPE OR SMITH-BLAIR, NYLON COATED 315 WITH FULLY FORMED TAPPED THREADS, IRON PIPE SIZE AND TYPE 304 STAINLESS STEEL STRAP. BOLTS, NUTS, WASHERS TO BE 5/8" N.C. TEFLON COATED FOR C-900 8" PVC PIPE.
- ⑦ POLYETHYLENE BAG, 4-6 MILS PER TRANSPARENT PRODUCTS CORPS. OR APPROVED EQUAL.
- ⑧ LOCATION WIRE PER STANDARD DRAWING NO. W-14.

NOTES:

- 1. MINIMUM COVER OVER SERVICE LATERAL SHALL BE 42" INCHES.



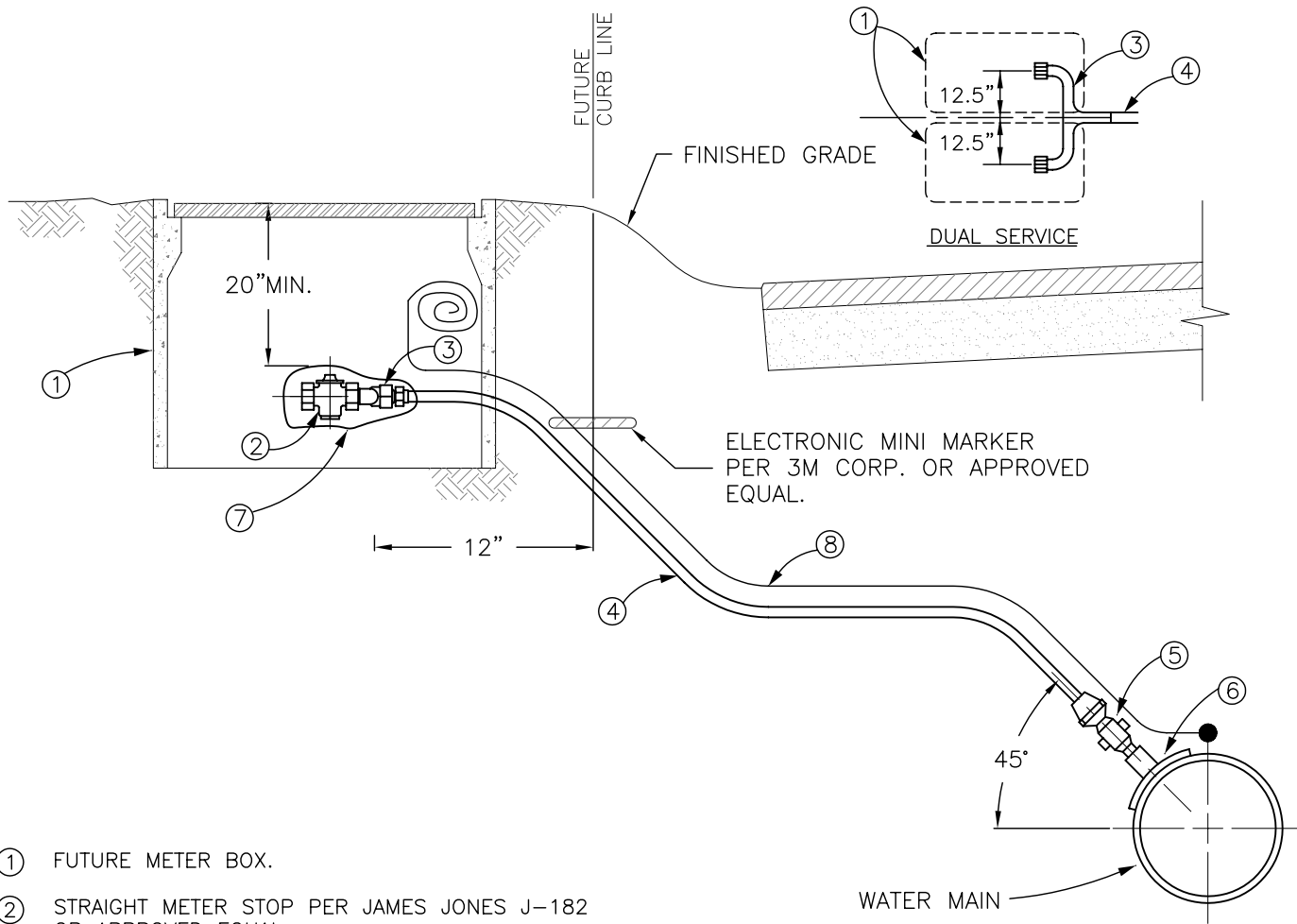
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

DUAL OR SINGLE SERVICE
CONNECTION FOR BANK AREA

STANDARD DRAWING **177** **W-5A**

LAST UPDATED: 3/2013



- ① FUTURE METER BOX.
- ② STRAIGHT METER STOP PER JAMES JONES J-182 OR APPROVED EQUAL.
- ③ DUAL SERVICE USE FORD U-48-43-12-1/2 WITH #52 INSERT STAINLESS STEEL LINER, 1" OR LARGER.
- ④ 1" OR LARGER HIGH DENSITY POLYETHYLENE (HDPE) PE 3406 PIPE PER AWWA C-901, COPPER PIPE SIZE.
- ⑤ CORPORATION STOP PER FORD F-1100 WITH #52 STAINLESS STEEL LINER, 1" OR LARGER.
- ⑥ 1 1/4" WELDED SADDLE FOR STEEL PIPE OR SMITH-BLAIR, NYLON COATED 315 WITH FULLY FORMED TAPPED THREADS, IRON PIPE SIZE AND TYPE 304 STAINLESS STEEL STRAP. BOLTS, NUTS, WASHERS TO BE 5/8" N.C. TEFLON COATED FOR C-900 8" PVC PIPE.
- ⑦ POLYETHYLENE BAG, 4-6 MILS PER TRANSPARENT PRODUCTS CORPS. OR APPROVED EQUAL.
- ⑧ LOCATION WIRE PER STANDARD DRAWING NO. W-14.

NOTES:

- 1. MUELLER WINGLOCKS H-11026 ARE APPROVED FOR LEVEL SERVICE SETTINGS.
- 2. MINIMUM COVER OVER SERVICE LATERAL SHALL BE 42" INCHES.

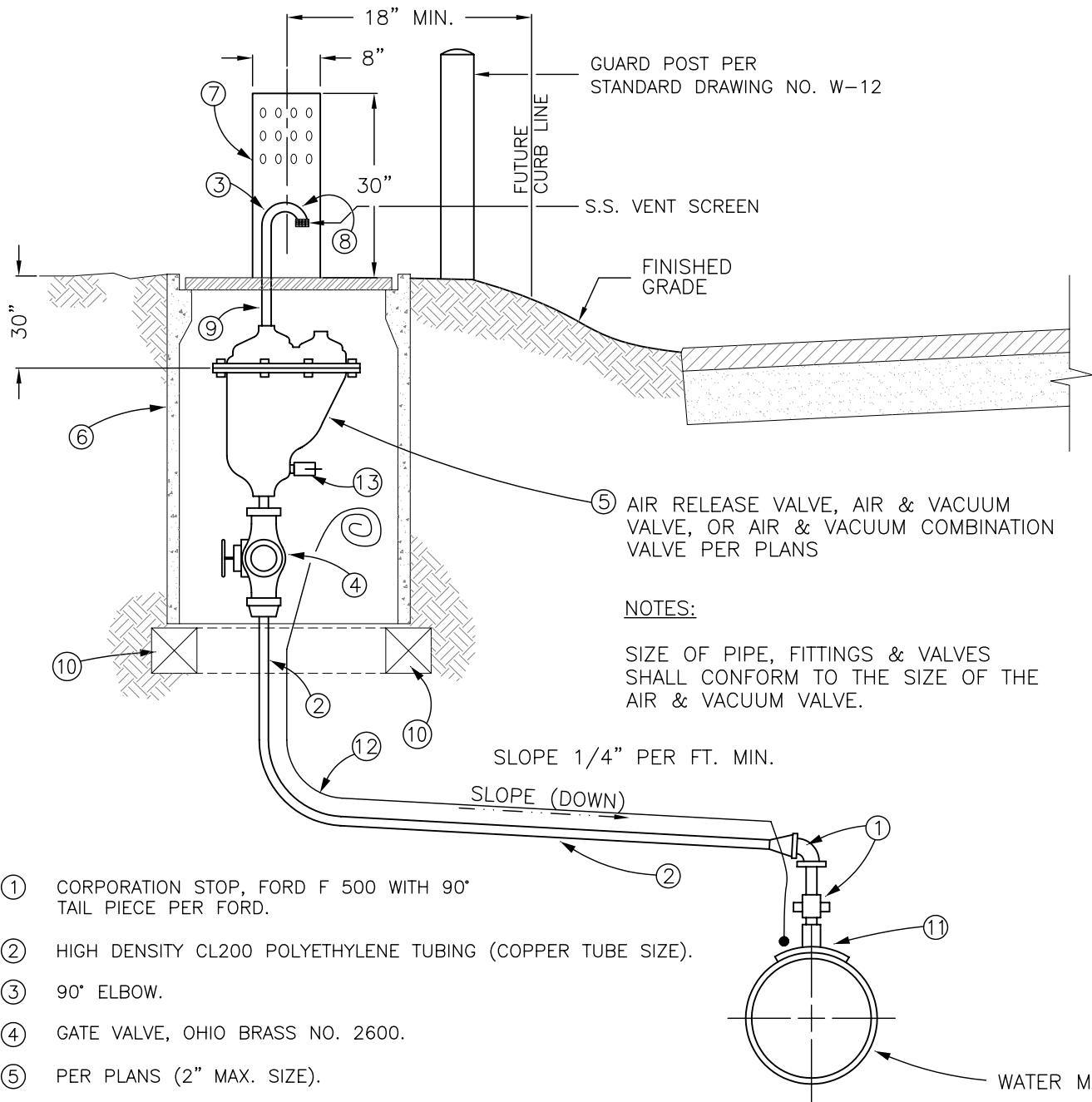


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

DUAL OR SINGLE SERVICE
CONNECTION FOR LEVEL AREA

STANDARD DRAWING **178** **W-5B**



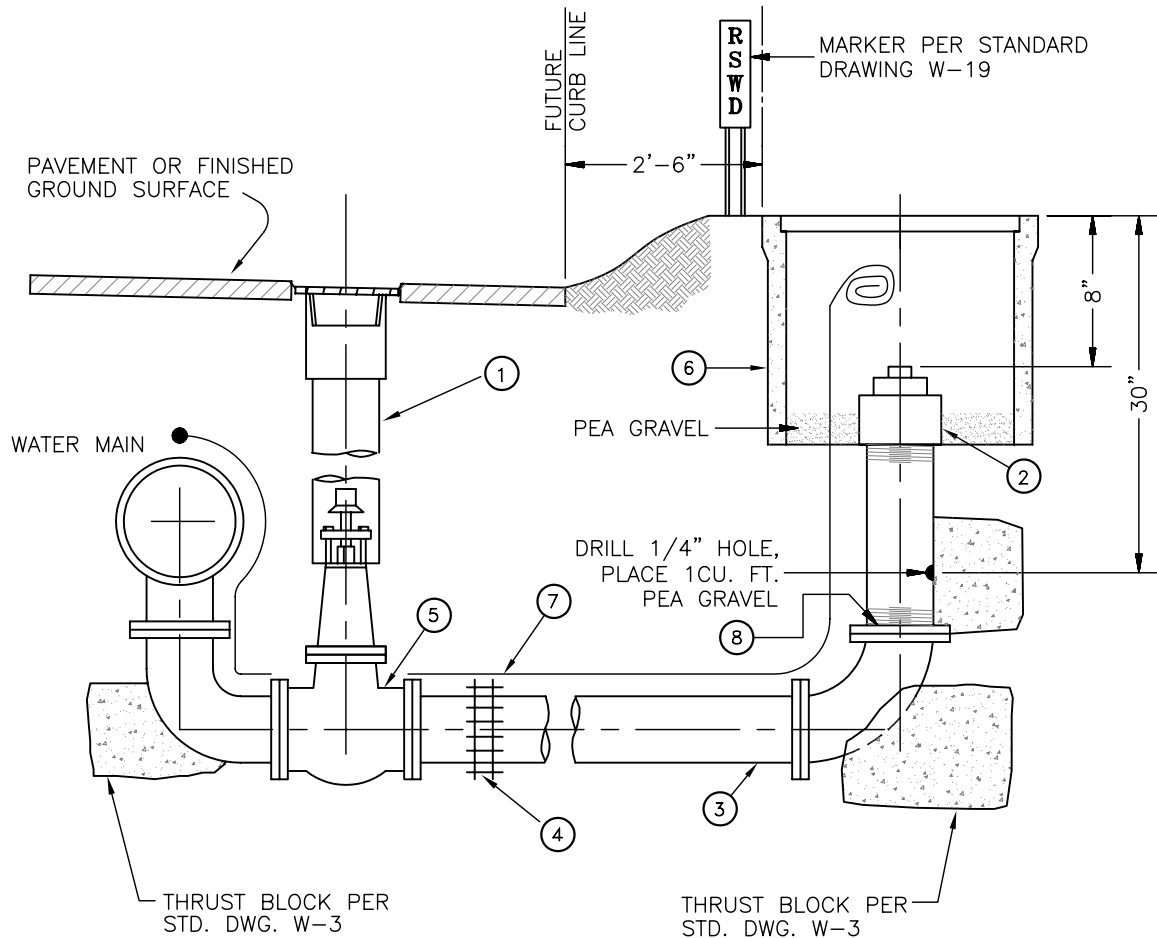
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

AIR & VACUUM
VALVE ASSEMBLY

STANDARD DRAWING **179** **W-6**

LAST UPDATED: 3/2013



NOTES:

1. 4" BLOW-OFF WILL BE REQUIRED FOR 6" - 12" WATER MAIN.
6" BLOW-OFF WILL BE REQUIRED FOR 14" AND LARGER WATER MAIN.
2. SIZE OF PIPE, VALVE AND FITTINGS SHALL CONFORM TO THE SIZE OF BLOW-OFF REQUIRED.

- ① 8" VALVE BOX AND COVER PER STANDARD DRAWING NO. W-11
- ② 4" OR 6" THREAD GALVANIZED IRON PIPE COUPLING WITH SLOTTED PLUG
- ③ 4" OR 6" DUCTILE IRON PIPE
- ④ 4" OR 6" FLEXIBLE COUPLING
- ⑤ 4" OR 6" F X M.J. RESILIENT SEATED GATE VALVE WITH PRESSURE RATING TO MATCH MAIN LINE. SEE STANDARD DRAWING NO. W-11
- ⑥ 14" X 14" (MIN.) UTILITY BOX
- ⑦ LOCATION WIRE PER STANDARD DRAWING NO. W-14
- ⑧ COMPANION FLANGE

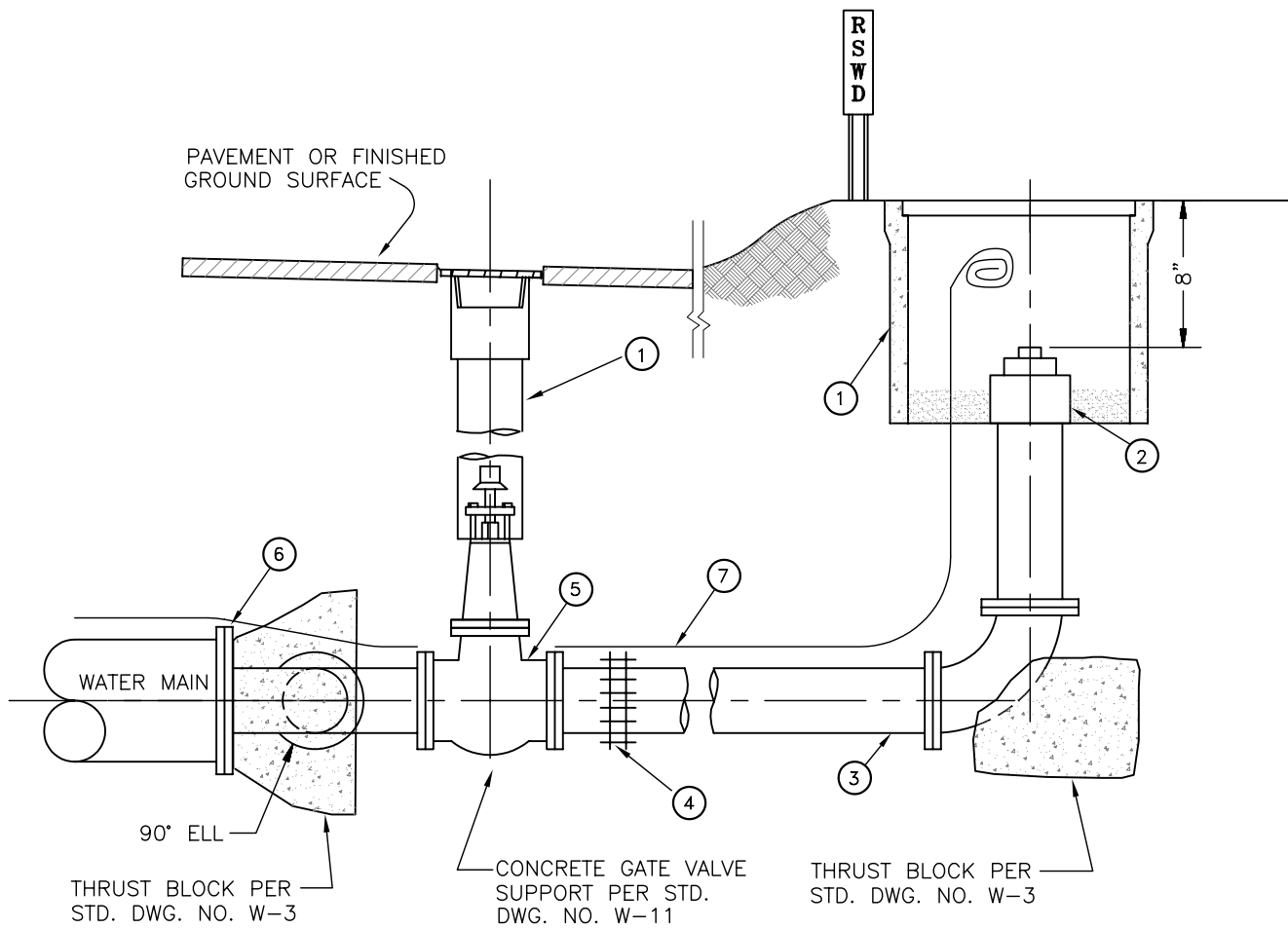


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

4" & 6" BLOW-OFF ASSEMBLY

STANDARD DRAWING **180** **W-7**



NOTES:

1. A 2" FLUSH-OUT SHALL BE REQUIRED FOR A 6" AND SMALLER WATER MAIN. A 4" FLUSH-OUT SHALL BE REQUIRED FOR A 8" AND LARGER WATER MAIN.
2. SIZE OF PIPE, VALVE AND FITTINGS SHALL CONFORM TO THE SIZE OF FLUSH-OUT REQUIRED.

- ① 14" X 14" (MIN.) UTILITY BOX
- ② 2" OR 4" THREAD GALVANIZED IRON PIPE COUPLING WITH SLOTTED PLUG.
- ③ 2" STANDARD GALVANIZED OR 4" DUCTILE IRON PIPE
- ④ 2" OR 4" FLEXIBLE COUPLING
- ⑤ 2" SCREWED GATE VALVE WITH WRENCH NUT OR 4" F X F RESILIENT SEATED GATE VALVE
- ⑥ DUCTILE IRON PLUG OR CAP WITH 2" OR 4" THREADED OUTLET.
- ⑦ LOCATION WIRE PER STANDARD DRAWING NO. W-14.

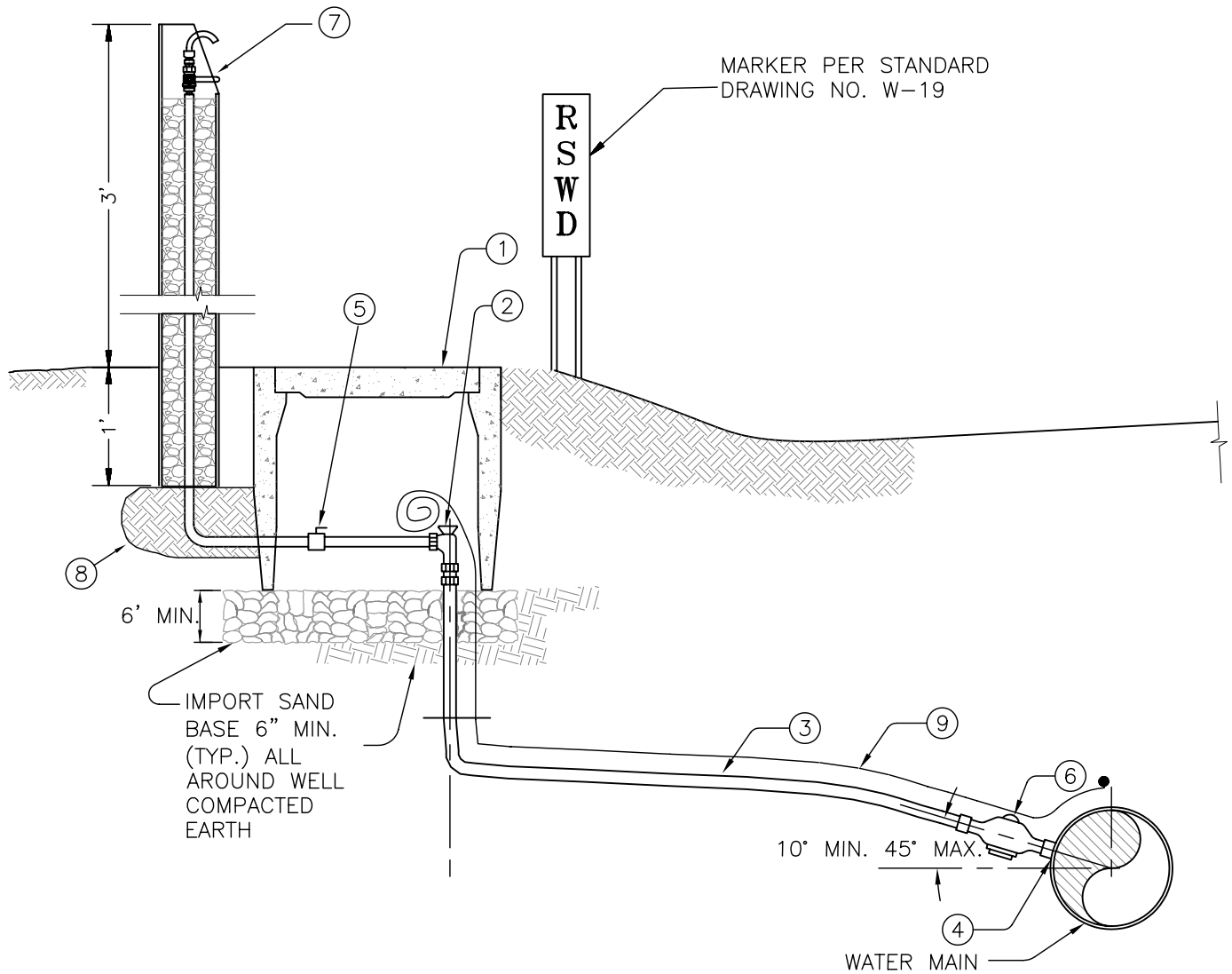


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

2" & 4" DEAD-END FLUSH-OUT

STANDARD DRAWING **181** **W-8**



- ① METER BOX AND COVER PURCHASED FROM THE DISTRICT
- ② 1" INVERTED KEY ANGLE METER VALVE, THREAD X PACK JOINT
- ③ SERVICE PER STANDARD DRAWING NO. W-5
- ④ 1" SERVICE SADDLE PER STANDARD DRAWING NO. W-5
- ⑤ 1" STOP AND WASTE VALVE WITH LEVER OPERATOR
- ⑥ 1" \varnothing BALL CORPORATION STOP PER STANDARD DRAWING NO. W-5
- ⑦ SAMPLING STATION, BY KORALEEN STATION GUARD XLT FOR COLD CLIMATES OR APPROVED EQUAL
- ⑧ 90° COMPACTED SOIL
- ⑨ LOCATION WIRE



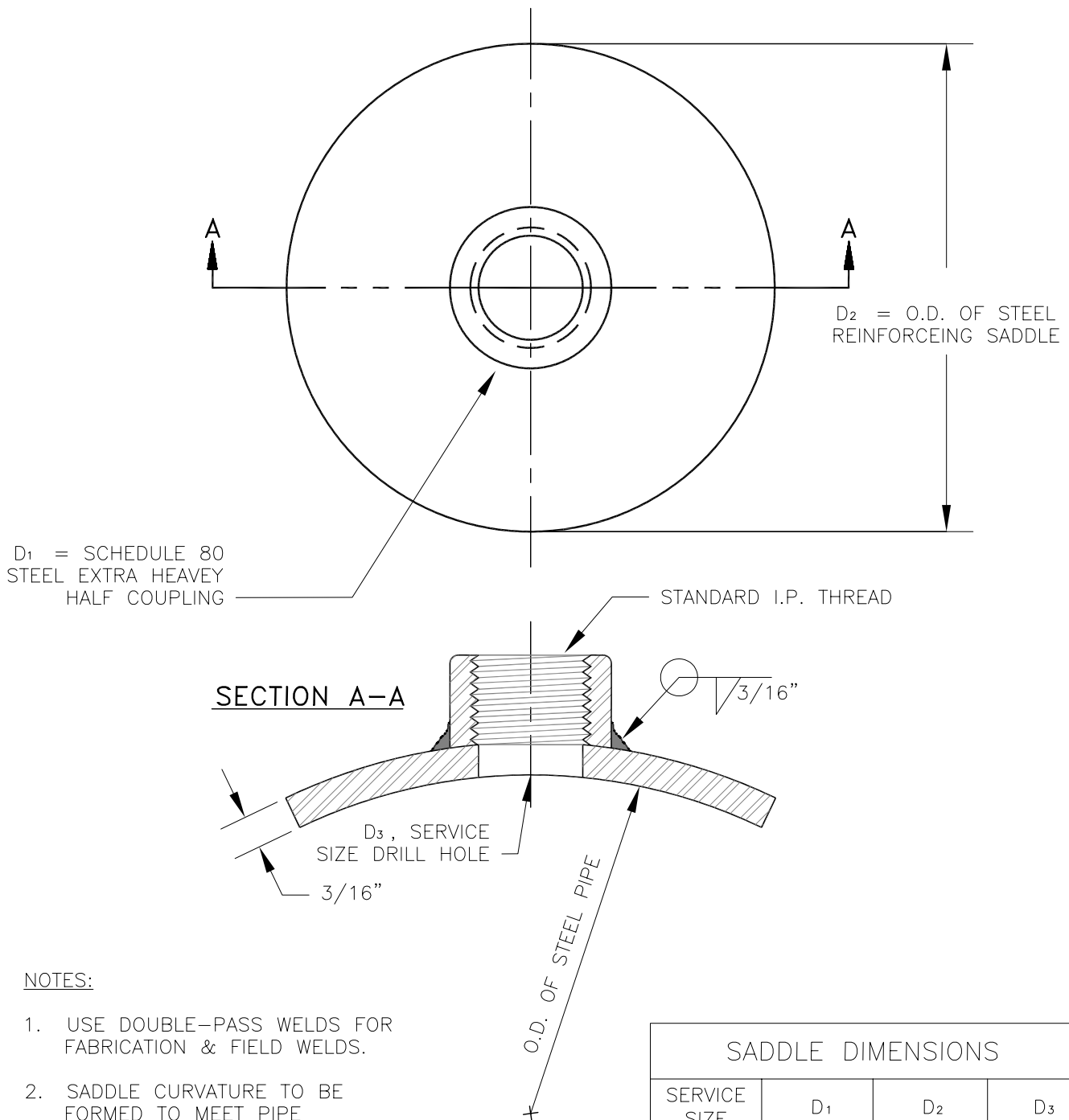
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

SAMPLE STATION DETAIL

STANDARD DRAWING **182** **W-9**

LAST UPDATED: 3/2013



NOTES:

1. USE DOUBLE-PASS WELDS FOR FABRICATION & FIELD WELDS.
2. SADDLE CURVATURE TO BE FORMED TO MEET PIPE DIAMETERS.
3. WHEN INSTALLED, OUTLET TO BE COATED WITH SAME COATING AS PIPE.
4. I.P. X I.P. NYLON BUSHING (USE I.P. X M.J. CORPORATION STOP.

SADDLE DIMENSIONS			
SERVICE SIZE	D ₁	D ₂	D ₃
1"	2"	5"	1-1/2"
1-1/2"	2-1/2"	6"	2"
2"	3"	7"	2-1/2"



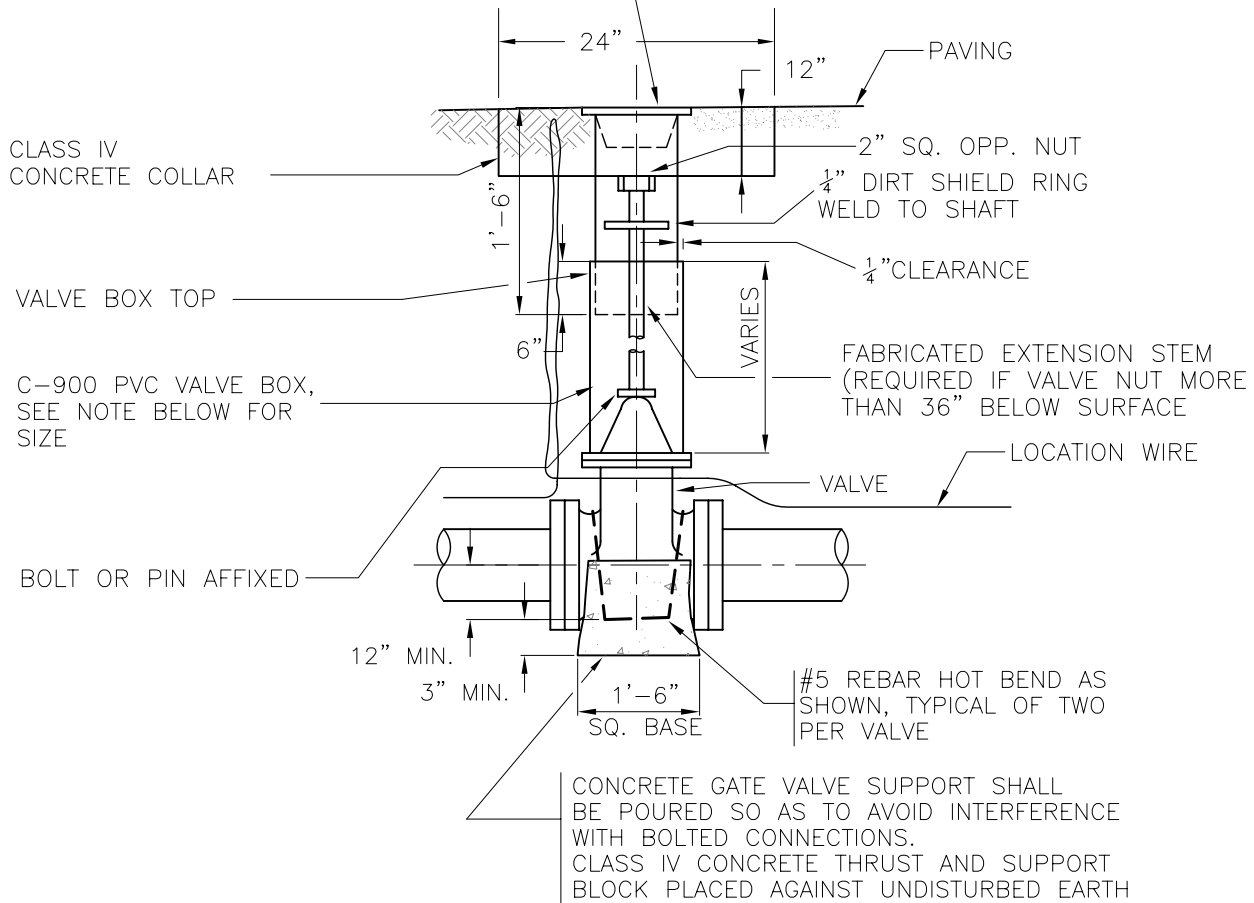
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

TAPPING OUTLET
FOR STEEL PIPE
1" THRU 2"

STANDARD DRAWING **183** **W-10**

VALVE BOX COVER, CAST IRON LABELED "WATER"
 PAINT WITH ONE (1) COAT 1069 HEAVY DUTY RUST INHIBITIVE
 RED PRIMER AND TWO (2) COATS OF RUST-O-LEUM BLUE
 HYDRANT ENAMEL



NOTE:

O.D. OF VALVE BOX

1. 2"-6" VALVE - 6.90"
2. 8"-16" VALVE - 9.05"



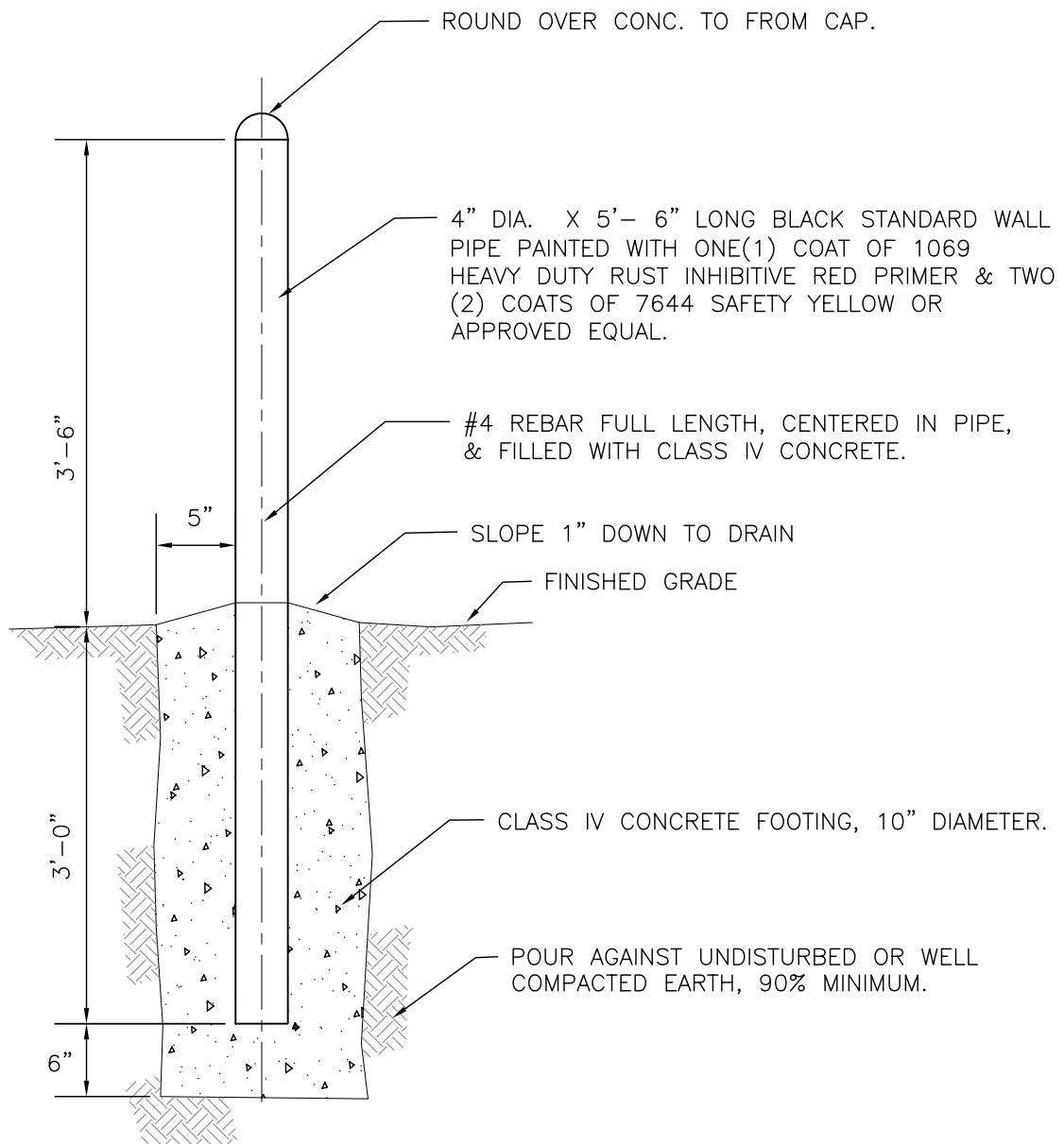
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
 GENERAL MANAGER

VALVE BOX & COVER

STANDARD DRAWING **184** **W-11**

LAST UPDATED: 3/2013



NOTES:

1. GUARD POSTS ARE 2' TO 3' INTERVAL PER DIRECTION, AND 36" FROM ϕ OF FIRE HYDRANT, 24" FROM ϕ OF AIR VALVE.
2. LOCATION SHALL BE AS SHOWN ON PLAN VIEW, REQUIRED BY OTHER STANDARD DRAWINGS, OR AS DIRECTED IN THE FIELD BY THE INSPECTOR OR THE ENGINEER.

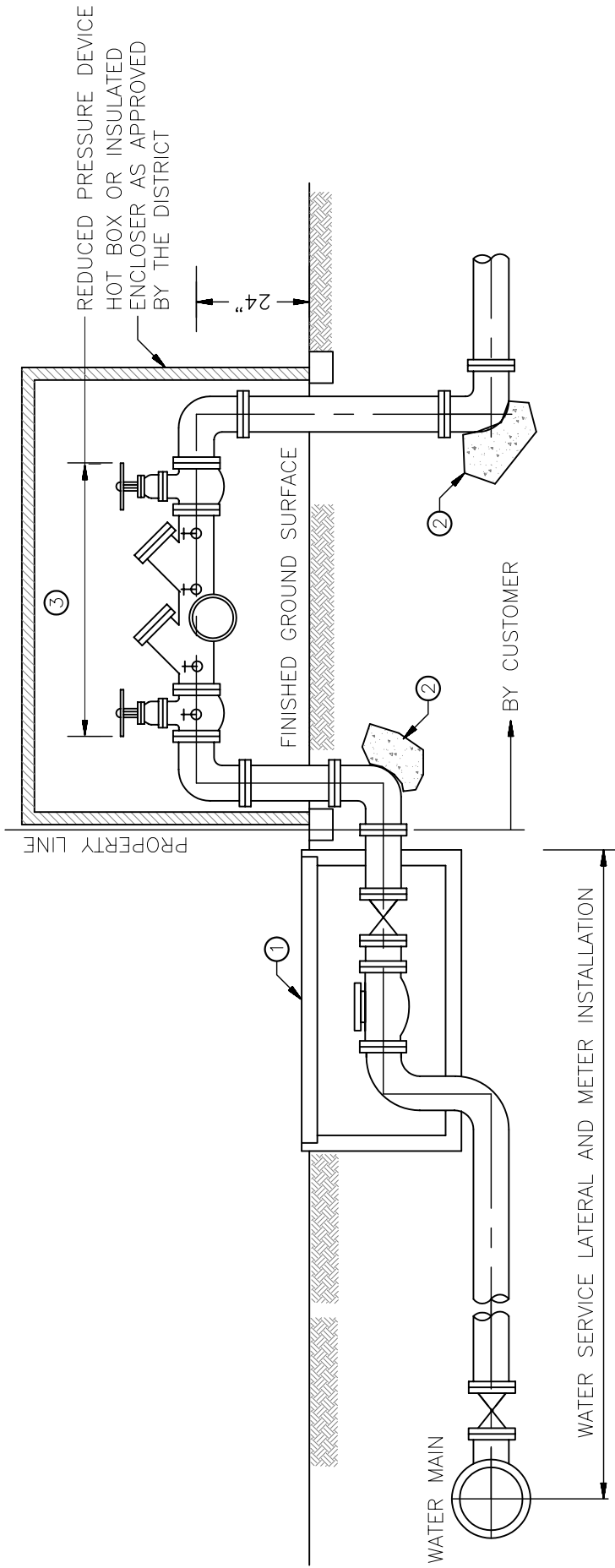


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

GUARD POST
INSTALLATION DETAIL

STANDARD DRAWING **185** **W-12**



NOTES:

1. NO CONNECTIONS OR TEES BETWEEN WATER METER AND R.P. DEVICES.
2. INSTALL R.P. DEVICE AT PROPERTY LINE, DEPENDING ON RIGHT-OF-WAY R.P. DEVICE MAYBE INSTALLED PARALLEL TO PROPERTY LINE.
3. INSTALLATION SHALL BE APPROVED BY THE DISTRICT.
4. R.P. DEVICES SHALL BE APPROVED BY UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION PER HEALTH SERVICE DEPARTMENT'S REQUIREMENTS AND SHALL BE FEBCO OR APPROVED EQUAL.
5. MINIMUM 24" CLEARANCE REQUIRED AROUND THE R.P. DEVICE.
6. R.P. DEVICE SHALL BE MINIMUM 24" ABOVE FINISH GROUND.
7. EACH R.P. DEVICE SHALL BE PROVIDED WITH TEST COCKS, SIZE AS LISTED BELOW:
 FOR 3/4" TO 2" DEVICE, USE 1/4" COCKS
 FOR 2-1/2" TO 4" DEVICE, USE 1/2" COCKS
 FOR 6" AND LARGER DEVICE, USE 3/4" COCKS

- ① WATER METER AND METER BOX. METER TO REGISTER IN CUBIC FEET.
- ② CONCRETE THRUST BLOCK PER STANDARD DRAWING NO. W-3.
- ③ REDUCED PRESSURE (R.P.) PRINCIPAL TYPE BACKFLOW PREVENTER PER SPECIFICATIONS, SIZE AS INDICATED ON PLANS.



RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

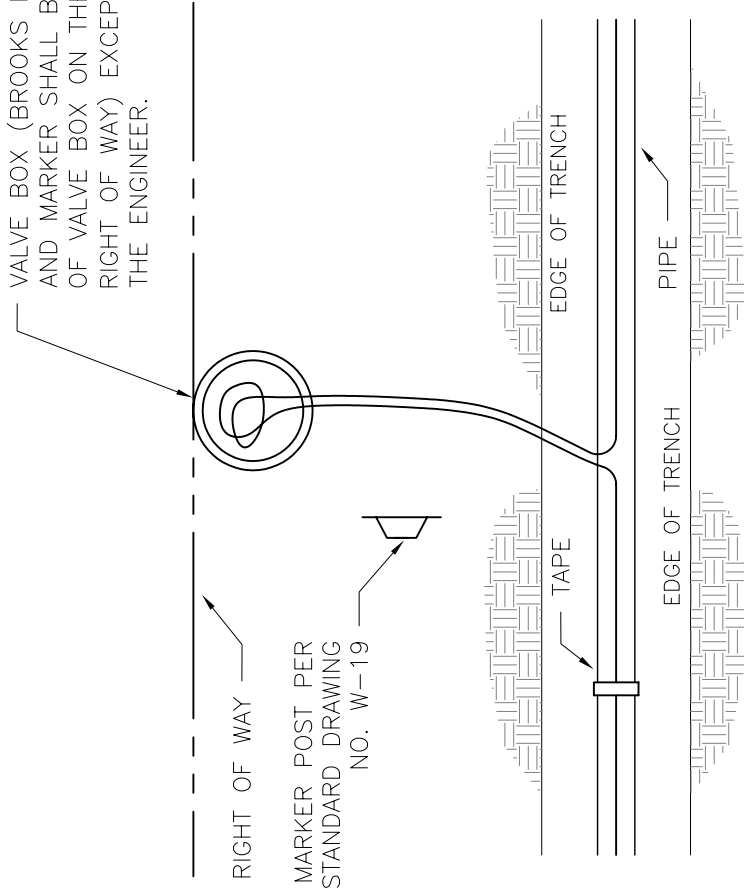
**BACKFLOW PREVENTER
(REDUCED PRESSURE)**

STANDARD DRAWING NO.

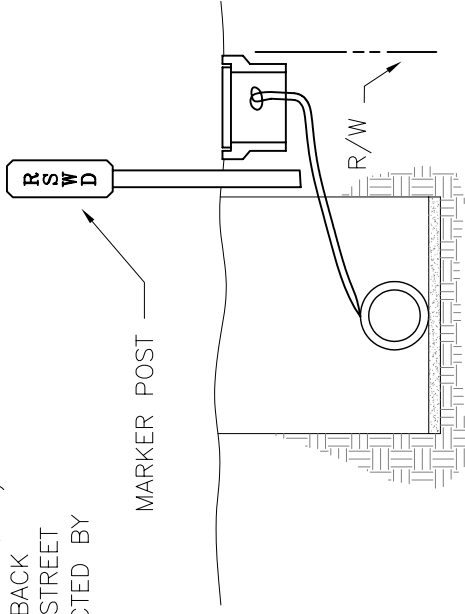
W-13

LAST UPDATED: 3/2013

VALVE BOX (BROOKS NO. 1-SP OR APPROVED EQUAL) AND MARKER SHALL BE LOCATED WITH THE BACK OF VALVE BOX ON THE PROPERTY LINE (IN STREET RIGHT OF WAY) EXCEPT AS OTHERWISE DIRECTED BY THE ENGINEER.



PLAN VIEW



NOTES:

LOCATOR WIRE: (12 GAUGE TWISTED WIRE SOLID COPPER WIRE)

1. TO BE PLACED ON TOP OF PIPE & SECURED WITH TAPE.
2. LOCATOR WIRE SHALL BE BROUGHT TO THE SURFACE AT 660 FEET O.C. MAXIMUM BY FIRE HYDRANTS OR INSTALL R.S.W.D. MARKER POST (GIVE STATIONS AT VALVE BOXES).
3. LOOP 2 FEET OR WIRE IN BROOKS NO. 1-SP, OR APPROVED EQUAL, VALVE BOX WITHIN 2 FEET OF FIRE HYDRANT OR R.S.W.D. MARKER.
4. WIRE TO BE CONTINUOUS.
5. LOCATOR WIRE SHALL BE INSTALLED OVER ALL WATERLINES, RECLAIMED WATERLINES AND FORCE MAINS.
6. USE A CAST IRON COVER LABELED WATER, SEWER OR RECLAIMED (RECLAIMED TO BE PAINTED LAVENDER).



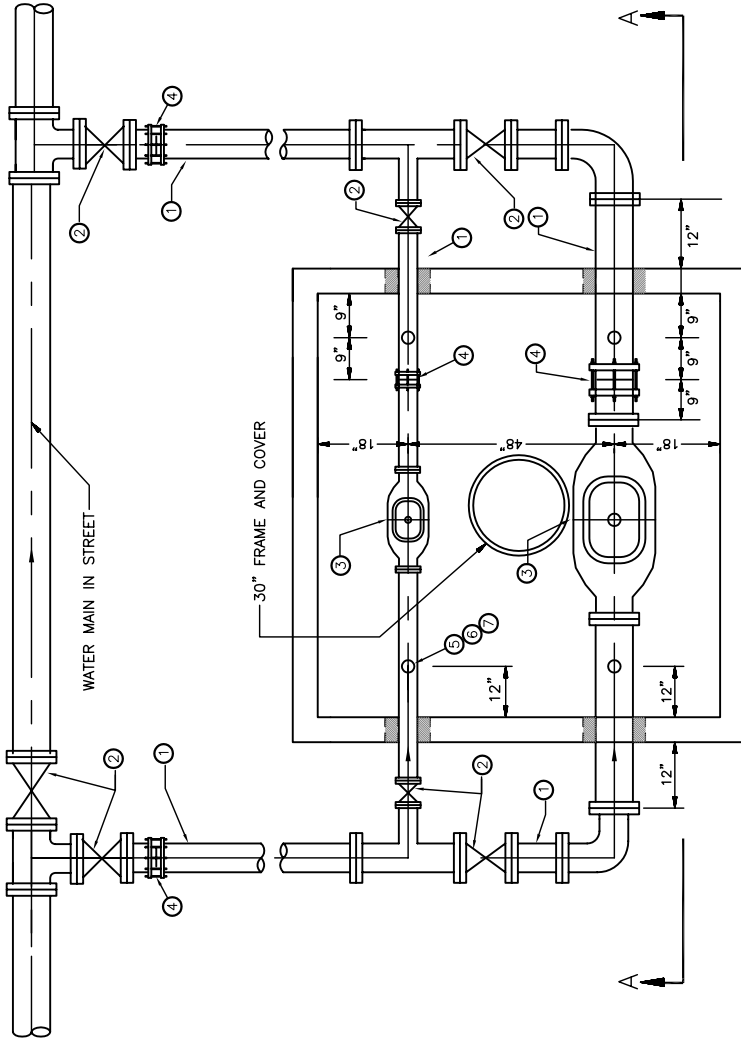
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

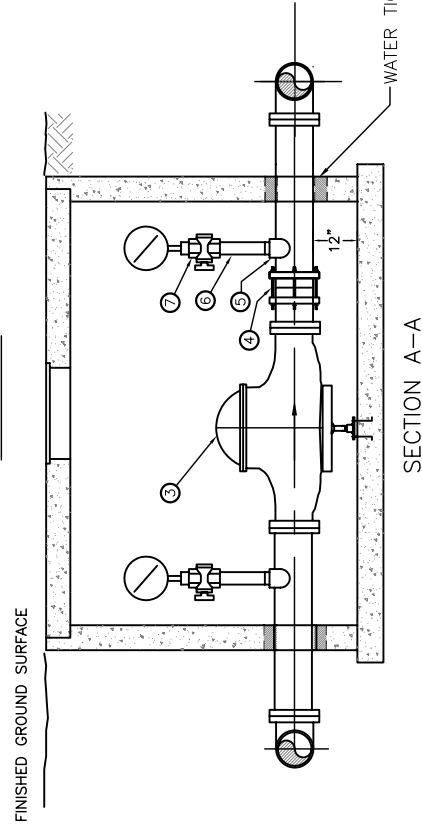
LOCATOR WIRE INSTALLATION

STANDARD DRAWING NO.

W-14



PLAN VIEW



SECTION A-A

ITEM	QTY	DESCRIPTION
①	--	DUCTILE IRON PIPE, SAME SIZE AS VALVE, SEE PLAN FOR SIZE.
②	7	R.S. GATE VALVE AND VALVE BOX PER STD. DWG. W-11, SAME SIZE AS PIPELINE.
③	2	PRESSURE REDUCING VALVE, SIZE AS INDICATED ON PLAN. (CLAYTON 90G-01KC)
④	4	FLEXIBLE COUPLING PER SPEC.
⑤	4	1" NOZZLE
⑥	4	1" ϕ X 4" LONG SCH. 40 GALV. IRON PIPE THREADED BOTH ENDS.
⑦	4	1" ϕ GATE VALVE, INSIDE I.P.T. X INSIDE I.P.T. WITH BUSHING AND PRESSURE GAGE

NOTES:

1. VALVE SHALL HAVE APPROVED PIPE SUPPORT.
2. CONCRETE VAULT SHALL BE DESIGNED FOR H-20 LOADING WITH REMOVABLE CONCRETE TOP AND 30-INCH DIAMETER TRAFFIC FRAME AND COVER. SUBMIT DESIGN FOR REVIEW AND APPROVAL BY THE DISTRICT.
3. SIZE PER CAST CONCRETE VAULT TO PROVIDE MINIMUM CLEARANCE AS SHOWN.
4. SIZE SMALL PRV TO MEET AVERAGE DAILY DEMAND; SIZE LARGE PRV TO MEET THE HIGHER OF PEAK HOUR DEMAND AND PEAK DAILY DEMAND PLUS FIRE FLOW.
5. ALL JOINTS TO BE RESTRAINED.



RUNNING SPRINGS WATER DISTRICT

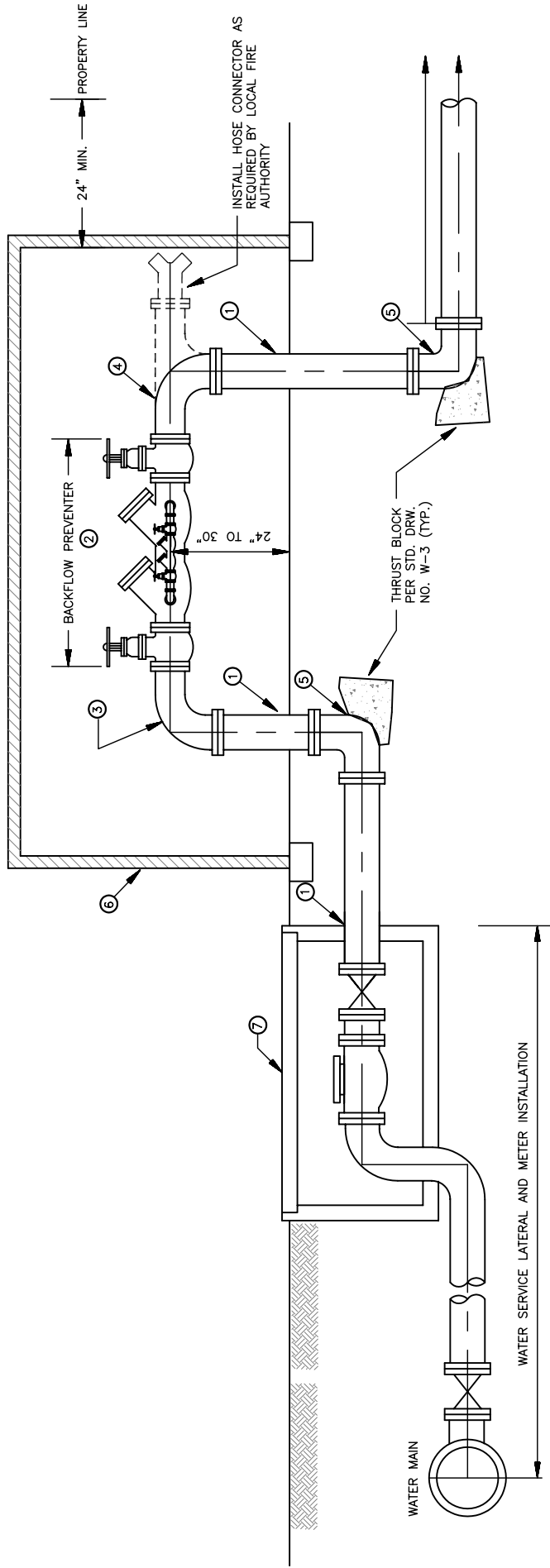
RYAN GROSS
GENERAL MANAGER

**PRESSURE REGULATION
STATION DETAIL**
FOR BELOW GROUND INSTALLATION

STANDARD DRAWING NO.

W-15

LAST UPDATED: 3/2013



- NOTES:
- ① DUCTILE IRON BRANCH PIPELINE (SIZE = SIZE OF BACKFLOW PREVENTER + 2")
 - ② DOUBLE CHECK BACKFLOW PREVENTER, FEBCO, WILKIN OR APPROVED EQUAL. SIZE PER PLANS
 - ③ DUCTILE IRON FLANGED REDUCING ELBOW
 - ④ FLANGED REDUCING ELBOW OR FLANGED TEE WHEN HOSE CONNECTOR IS REQUIRED
 - ⑤ F X M.J. ELBOW
 - ⑥ HOT BOX OR INSULATED ENCLOSURE AS APPROVED BY THE DISTRICT
 - ⑦ WATER METER AND METER BOX TO REGISTER IN CUBIC FEET

1. 24" MINIMUM CLEARANCE REQUIRED AROUND THE DEVICE.
2. DEPENDING ON THE RIGHT-OF-WAY, DEVICE MAY HAVE TO BE INSTALLED PARALLEL TO PROPERTY LINE.



RUNNING SPRINGS WATER DISTRICT

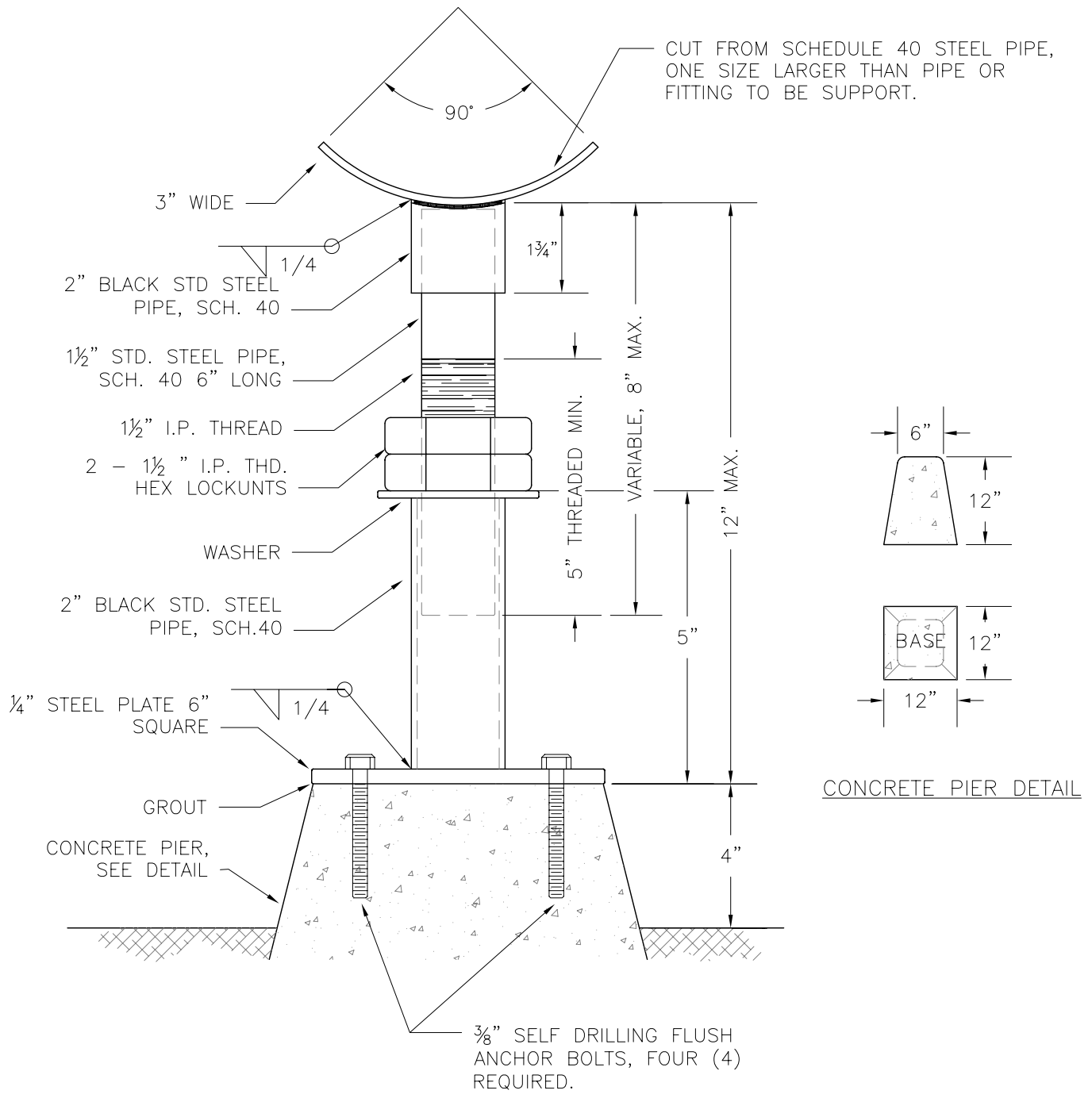
RYAN GROSS
GENERAL MANAGER

**FIRE SERVICE
INSTALLATION DETAIL**

STANDARD DRAWING NO.

W-16

LAST UPDATED: 3/2013



NOTES:

1. IN EVENT SUPPORT IS MOUNTED ON CONCRETE SLAB OR FLOOR, PIER NOT REQUIRED.
2. ALL EXPOSED METAL SURFACES SHALL BE PROTECTED IN ACCORDANCE WITH THE SPECIFICATIONS, EXCEPT THE THREADS.
3. DIMENSIONS OF CONCRETE PIER MAY BE INCREASED DEPENDING ON FIELD CONDITIONS.

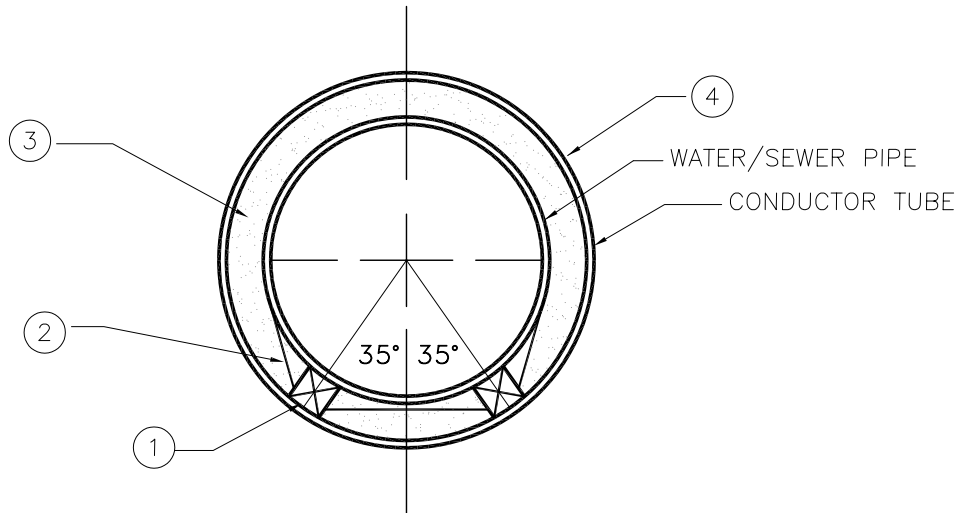
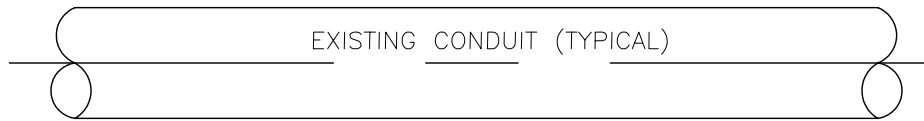


RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

ADJUSTABLE PIPE SUPPORT

STANDARD DRAWING **190** **W-17**



- ① 4" X 4" ROUGH REWOOD SKID, CUT TO BEAR ON CONDUCTOR TUBE
- ② ¾" WIDE X 0.045" THICK STAINLESS STEEL BAND
- ③ BLOWN SAND
- ④ STEEL CONDUCTOR TUBE PER ASTM A28 (WALL THICKNESS MIN. ¼" OR PER PLANS)

NOTES:

1. MINIMUM 4" CLEARANCE IS REQUIRED BETWEEN INNER WALL OF CONDUCTOR TUBE AND OUTER WALL OF WATER/SEWER PIPE.
2. CONDUCTOR TUBES 30 INCHES IN DIAMETER AND GREATER REQUIRE CAL-OSHA PERMIT.



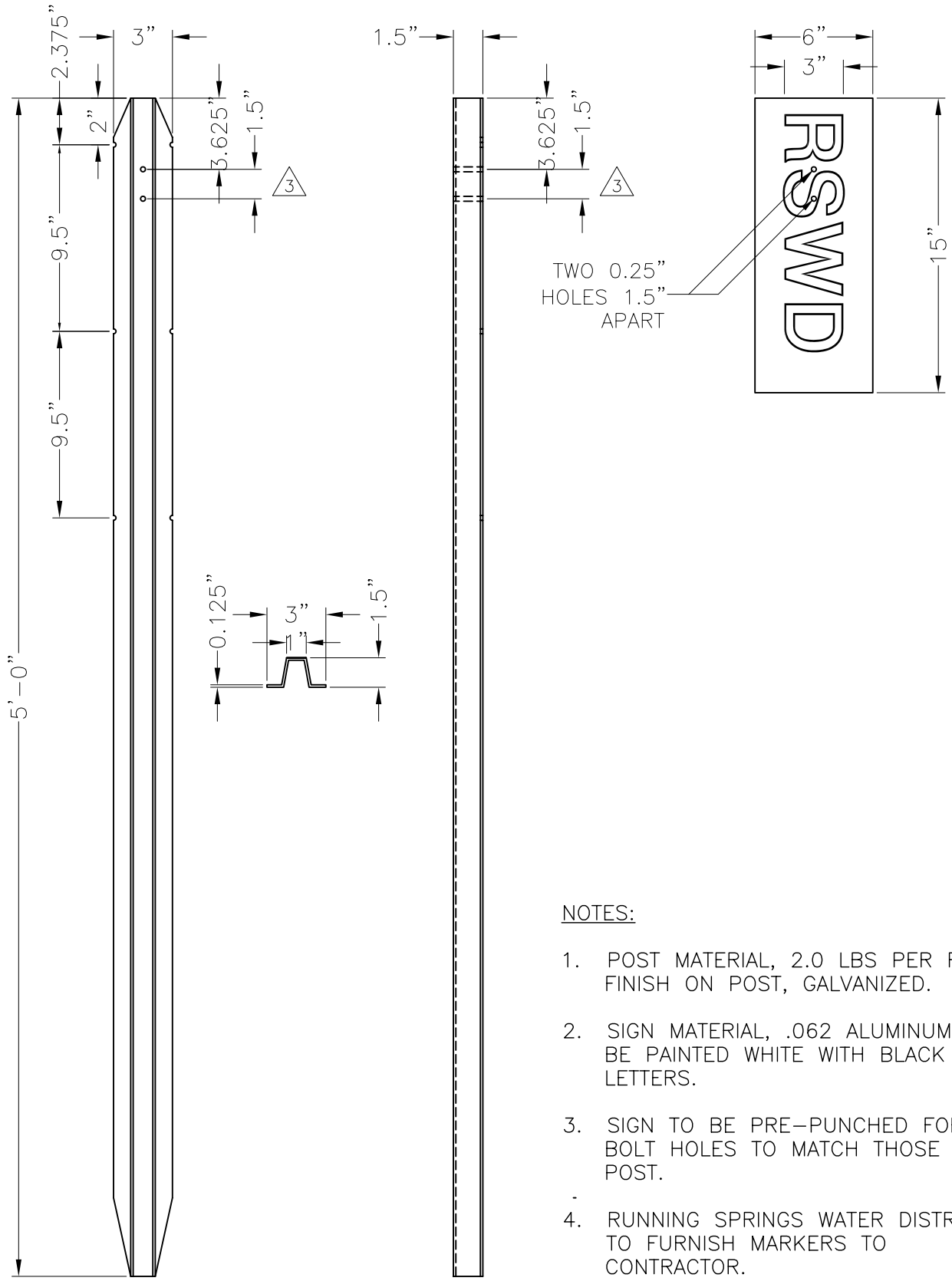
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

CONDUCTOR TUBE DETAIL

STANDARD DRAWING **191** **W-18**

LAST UPDATED: 3/2013



NOTES:

1. POST MATERIAL, 2.0 LBS PER FOOT; FINISH ON POST, GALVANIZED.
2. SIGN MATERIAL, .062 ALUMINUM: TO BE PAINTED WHITE WITH BLACK LETTERS.
3. SIGN TO BE PRE-PUNCHED FOR BOLT HOLES TO MATCH THOSE IN POST.
4. RUNNING SPRINGS WATER DISTRICT TO FURNISH MARKERS TO CONTRACTOR.



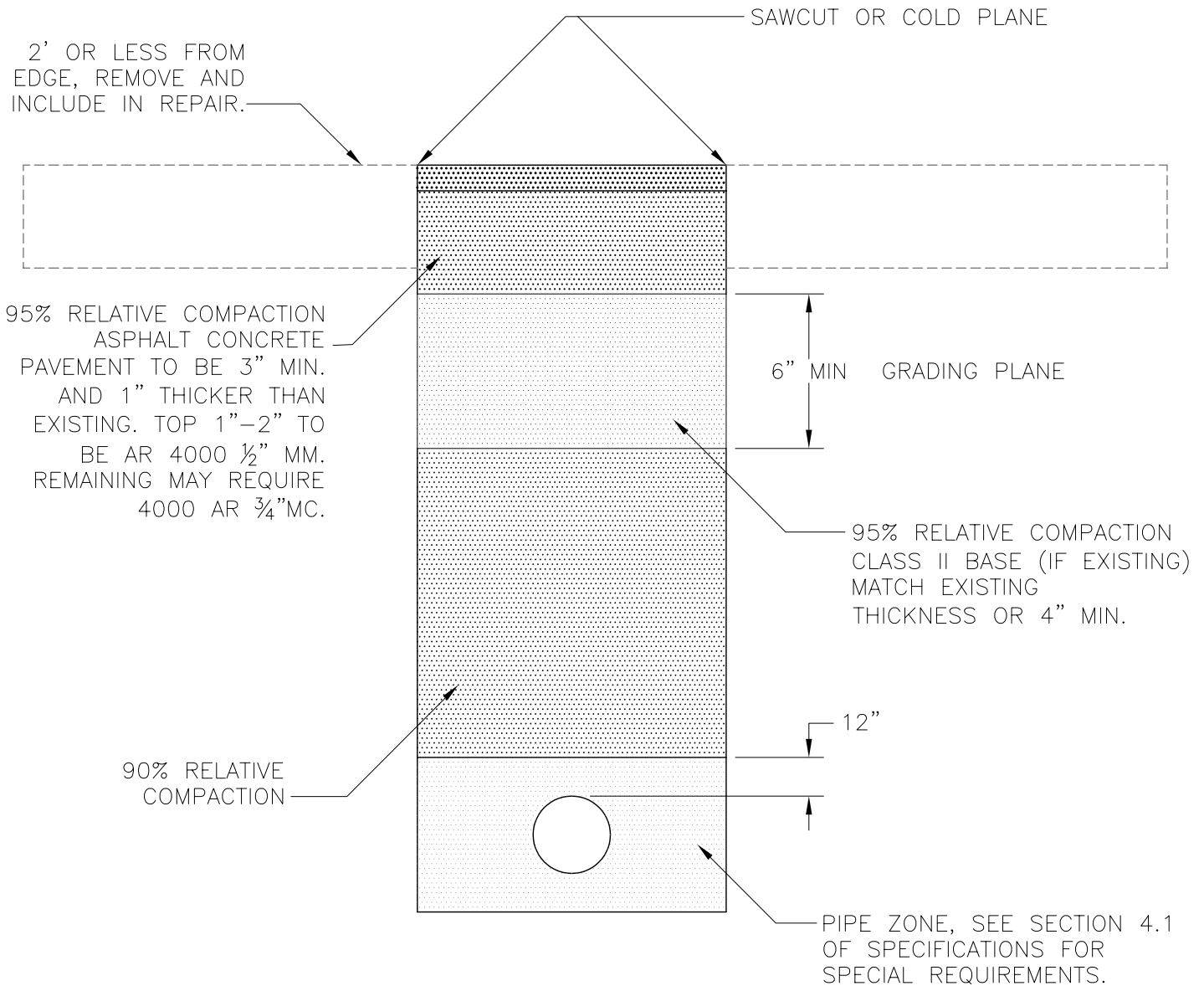
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

MARKER POST

STANDARD DRAWING **192** **W-19**

LAST UPDATED: 3/2013



NOTES:

1. ALL EXCAVATIONS WITHIN COUNTY RIGHT-OF-WAY REQUIRE AN EXCAVATION PERMIT FROM THE ROAD PERMIT SECTION.
2. TEMPORARY PAVING 2" THICK COMPACTED SMOOTH AND FLUSH, SHALL BE PLACED IN ALL AREAS PAVING WAS REMOVED PRIOR TO OPENING TO TRAFFIC AND AT THE END OF EACH DAY.
3. COMPACTION TEST ON BACKFILL IN THE 90% RELATIVE COMPACTION ZONE SHALL BE AT VARYING DEPTHS ON 250' INTERVALS AND SUBMITTED TO INSPECTION PRIOR TO PERMANENT PAVING. CLASS II AGGREGATE BASE AND THE GRADING PLANE SHALL BE 95% RELATIVE COMPACTION ON 500' INTERVALS.
4. NOTIFY PERMIT INSPECTOR ONE WORKING DAY PRIOR TO STARTING A PROJECT AND FOR EACH PHASE OF CONSTRUCTION.



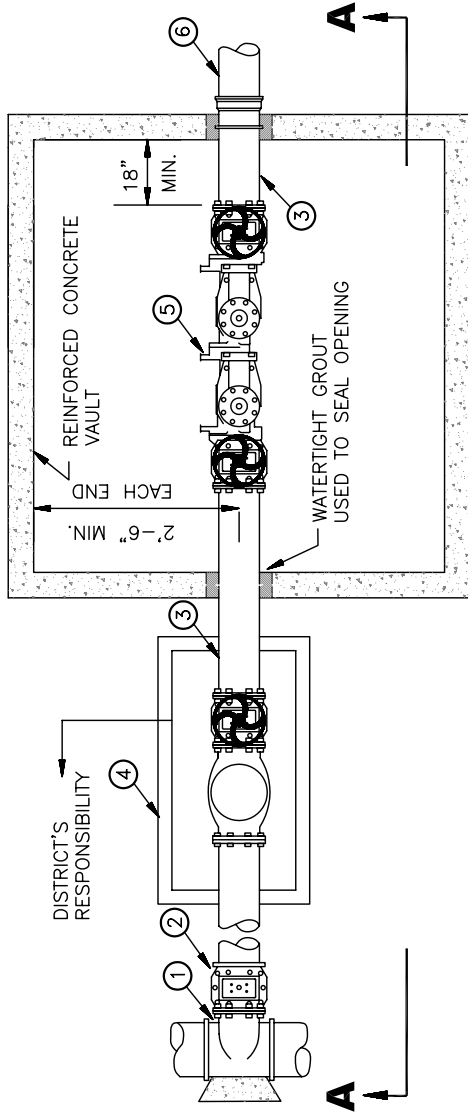
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

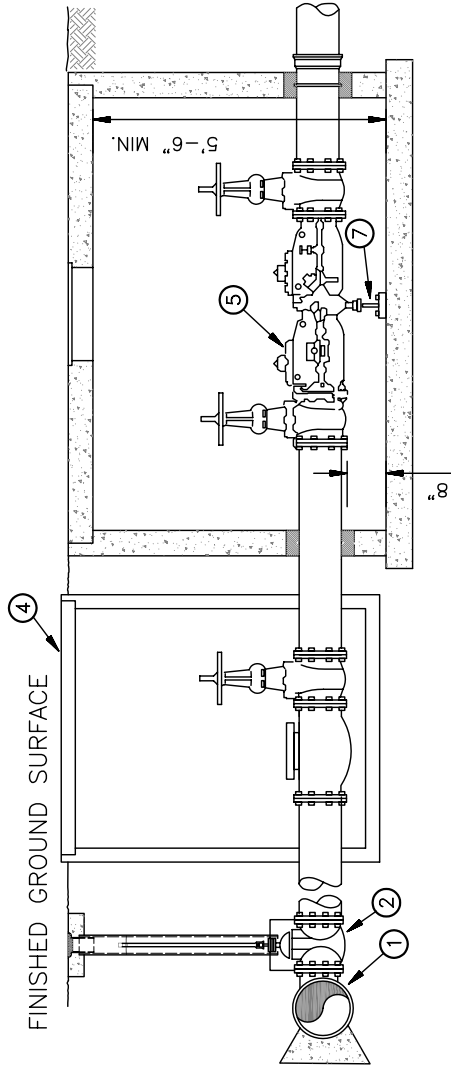
TRENCH DETAIL

STANDARD DRAWING **193** **W-20**

LAST UPDATED: 3/2013



PLAN VIEW



SECTION A-A

ITEM	QTY	DESCRIPTION
①	1	TEE OR TAPPING TEE, FLANGED.
②	1	GATE VALVE FLG'D & VALVE BOX PER STANDARD DRAWING NO. W-11
③	A.R.	DUCTILE IRON PIPE WITH RESTRAINED JOINT.
④	1	WATER METER AND METER BOX.
⑤	1	DOUBLE CHECK ASSEMBLY, CLA-VAL MODEL 16.
⑥	A.R.	PVC 900 PIPE
⑦	1	ADJUSTABLE PIPE SUPPORT PER STANDARD DRAWING W-17.

NOTES:

1. ALL NUTS AND BOLTS FOR GATE VALVE AND TAPPING TEE TO BE GRADE 316 STAINLESS STEEL.
2. WATER METER TO REGISTER IN CUBIC FEET.
3. ITEMS LISTED MAY BE SUBSTITUTED WITH AN APPROVED EQUAL, UNLESS OTHERWISE NOTED.
4. A.R. = AS REQUIRED.
5. SUPPLY HEAVY CHAINS AND LOCKS TO LOCK HANDWHEELS ON VALVES.
6. CONCRETE VAULT SHALL BE DESIGNED FOR H-20 LOADING WITH REMOVABLE CONCRETE TOP AND 30-INCH DIAMETER TRAFFIC FRAME AND COVER; SUBMIT DESIGN FOR REVIEW AND APPROVAL BY THE DISTRICT.



RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

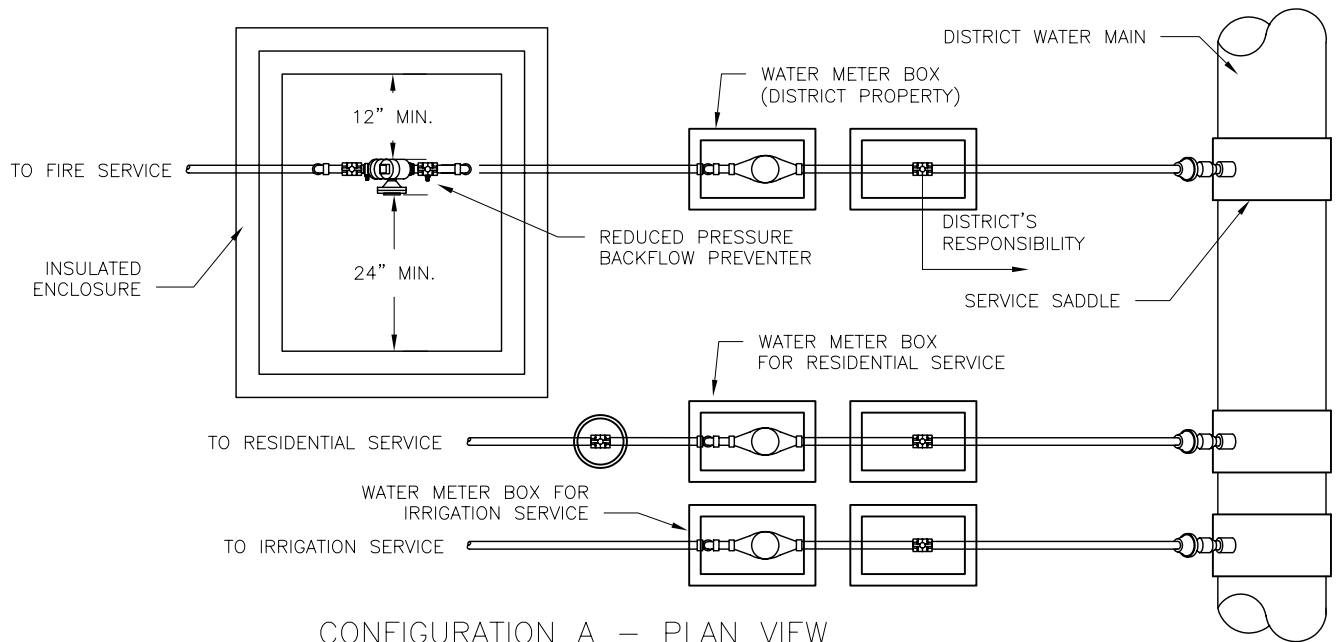
DOUBLE CHECK ASSEMBLY
SIZE 3" THRU 10"

FOR BELOW GROUND INSTALLATION

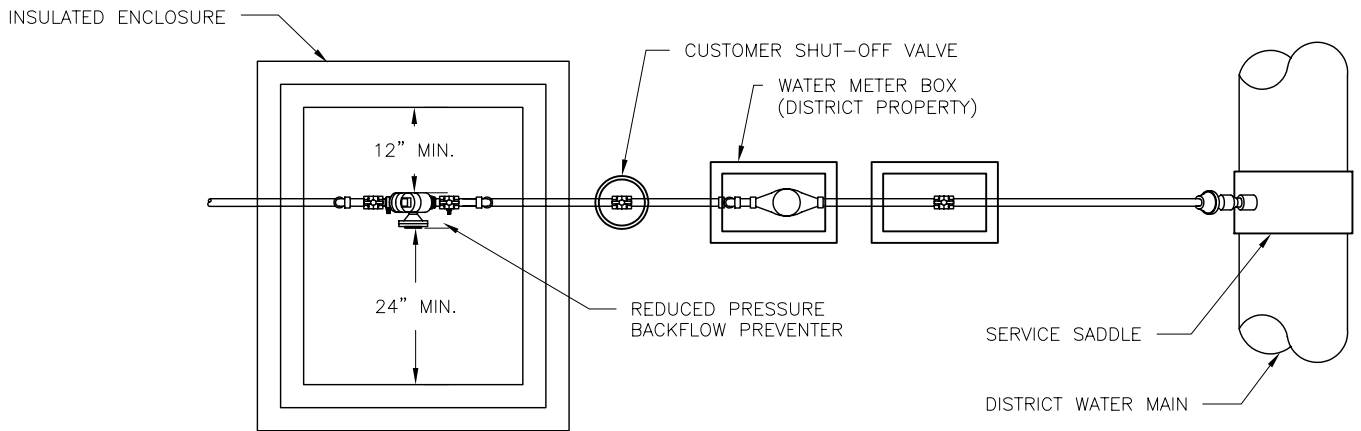
STANDARD DRAWING NO.

W-21

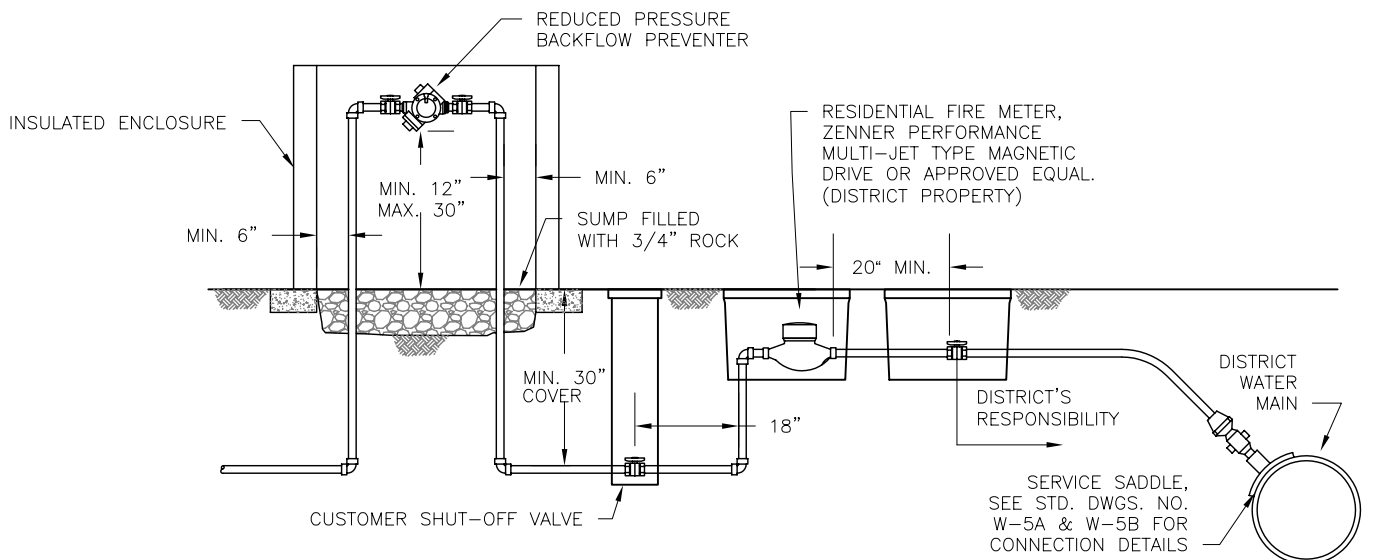
LAST UPDATED: 3/2013



CONFIGURATION A – PLAN VIEW



CONFIGURATION B – PLAN VIEW



CONFIGURATION B – PROFILE VIEW



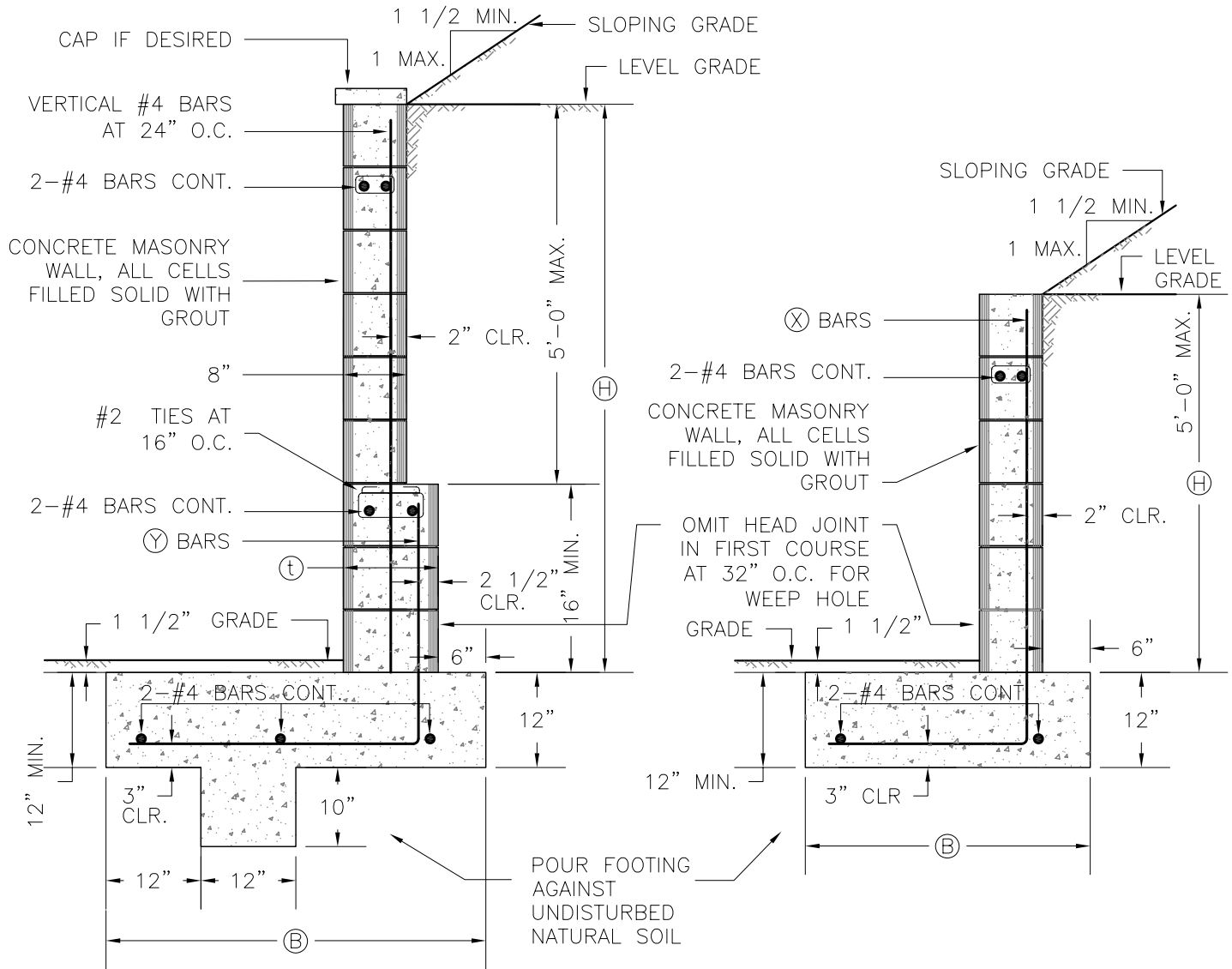
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

RESIDENTIAL FIRE SERVICE

STANDARD DRAWING **195** **W-22**

LAST UPDATED: 3/2013



H	t	DESIGN FOR SLOPING GRADE ABOVE WALL		DESIGN FOR LEVEL GRADE ABOVE WALL	
		B	Y BARS	B	Y BARS
6'	12"	4'-0"	#5 AT 24" O.C.	3'-3"	#4 AT 24" O.C.
7'	12"	4'-9"	#6 AT 16" O.C.	3'-10"	#4 AT 16" O.C.
8'	12"	5'-6"	#7 AT 16" O.C.	4'-6"	#5 AT 16" O.C.

TYPICAL SECTION OVER 5 FT
NOT TO SCALE

H	t	DESIGN FOR SLOPING GRADE ABOVE WALL		DESIGN FOR LEVEL GRADE ABOVE WALL	
		B	X BARS	B	X BARS
3'	6"	2'-3"	#3 AT 24" O.C.	1'-9"	#3 AT 32" O.C.
4'	8"	3'-0"	#4 AT 24" O.C.	2'-2"	#4 AT 48" O.C.
5'	8"	3'-6"	#5 AT 16" O.C.	2'-9"	#4 AT 24" O.C.

TYPICAL SECTION 5 FT MAX.
NOT TO SCALE

NOTES

1. CONCRETE IN FOOTING TO TEST - 2,000 PSI AT 28 DAYS
2. CONCRETE BLOCK - GRADE "A" UNITS A.S.T.M. C-90
3. GROUT - 1 PART CEMENT, 3 PARTS SAND, 2 PARTS PEA GRAVEL
4. MORTAR - 1 PART CEMENT, 1/2 PART LIME PUTTY, 4 1/2 PARTS SAND

MAXIMUM STRESSES

1. $f_s = 18,000$ PSI
2. $f_m = 225$ PSI
3. SHEAR $V = 15$ PSI
4. BOND $U = 100$ PSI
5. SOIL PRESSURE = 1,000 LBS PER SQ. FT
6. CONCRETE TO SOIL FRICTION COEFFICIENT = 0.4



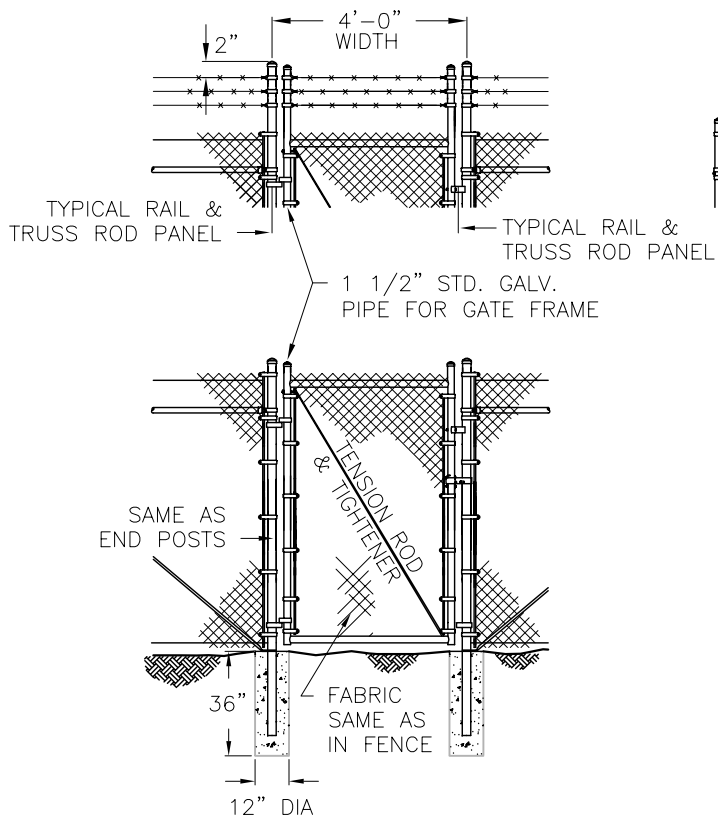
RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

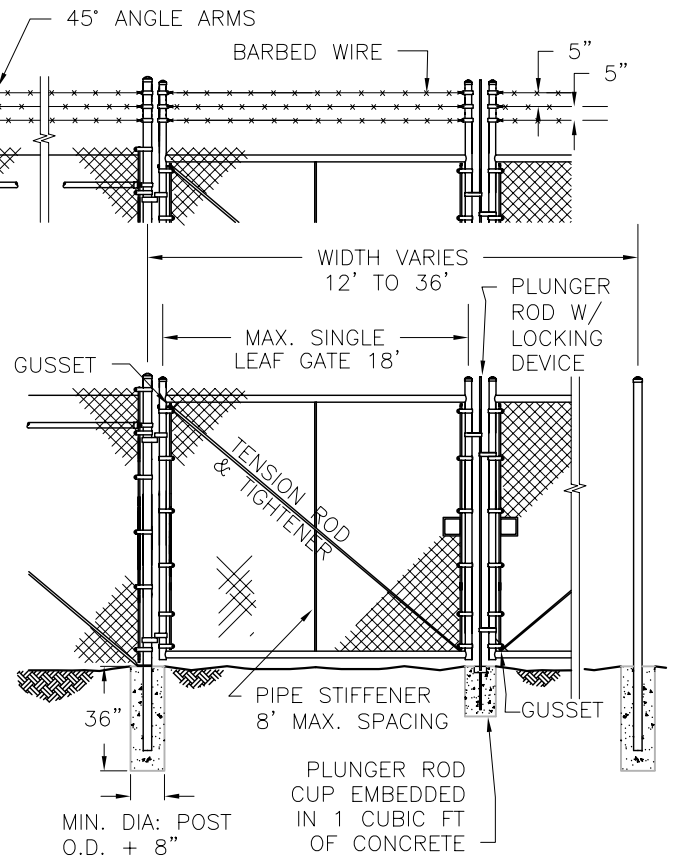
RETAINING WALL

STANDARD DRAWING **196**

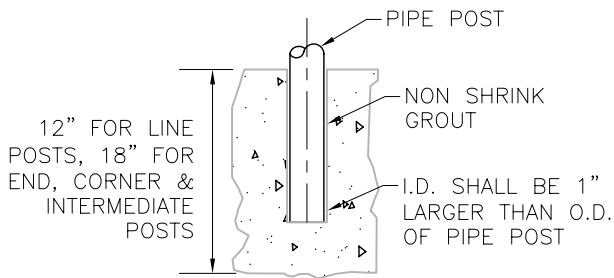
M-1



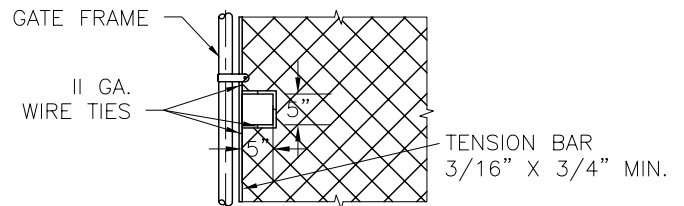
TYPICAL FENCE WITH WALK GATE



TYPICAL FENCE WITH DRIVE GATE



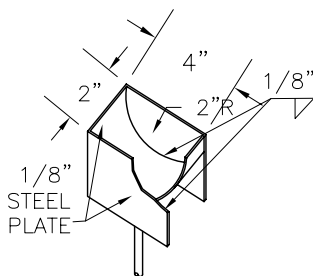
POST EMBODIMENT DETAIL IN CONC. HEADWALLS, RETAINING WALLS, CHANNEL WALLS, ETC.



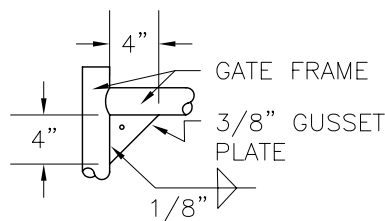
DETAIL OF CUT-OUT FOR CHAIN AND LOCK

NOTES:

1. SECURE DRIVE FIT GALVANIZED CAP TO POST WITH 1/4" ROUND HEAD RIVET.
2. NOMINAL FENCE HEIGHT SHALL BE 5' UNLESS OTHERWISE SPECIFIED.
3. IF CHAIN-LINK FENCE WITH TOP RAIL IS SPECIFIED, DELETE STEEL TENSION WIRE AT THE TOP AND THE PIPE RAILS AT INTERMEDIATE, END AND CORNER POSTS. EXTEND TENSION ROD TO THE TOP RAIL.
4. BARBED WIRE SHALL BE USED ONLY WHEN SPECIFIED.
5. ALL DATA SHOWN ON TYPICAL DETAILS SHALL BE APPLICABLE TO OTHER PERTINENT DETAILS.



PLUNGER ROD CUP DETAIL



GUSSET DETAIL



RUNNING SPRINGS WATER DISTRICT

RYAN GROSS
GENERAL MANAGER

CHAIN-LINK FENCE AND GATES

STANDARD DRAWING **197** **M-2**

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017
TO: Board of Directors
FROM: Ryan Gross, General Manager
SUBJECT: CONSIDER ADOPTING RESOLUTION NO. 20-17, CERTIFYING DELINQUENT CHARGES TO BE PLACED ON THE TAX ROLL FOR FISCAL YEAR 2017/2018

RECOMMENDED BOARD ACTION

It is recommended that the Board of Directors adopt Resolution No. 20-17, Certifying Delinquent Charges to be placed on the Tax Roll for Fiscal Year 2017/2018 and authorize the General Manager to execute the Agreement for Collection of Special Taxes, Fees and Assessments.

REASON FOR RECOMMENDATION

This year, San Bernardino County has a new annual requirement for agencies applying special assessments and taxes to the tax roll. Agencies are required to fill out and submit the attached PDF agreement before the levy submittal deadline of August 10, 2017.

BACKGROUND INFORMATION

In summary, the agreement states that the Agency guarantees that the taxes and assessments being submitted to the County comply with all requirements of state law.

FISCAL INFORMATION

N/A

ATTACHMENTS

Attachment 1 – Resolution No. 20-17
Attachment 2 – Agreement

RESOLUTION NO. 20-17
RESOLUTION OF THE BOARD OF DIRECTORS OF
RUNNING SPRINGS WATER DISTRICT CERTIFYING
DELINQUENT CHARGES TO BE PLACED ON THE TAX
ROLL FOR FISCAL YEAR 2017/2018

WHEREAS, Water Code Section 31701 provides that this Board of Directors shall annually furnish to the Board of Supervisors of San Bernardino County a statement of those delinquent and unpaid charges for water and other services, or either, requested in writing by the owner of property served by the District which remain delinquent and unpaid for 60 days or more on July 1st of each year; and

WHEREAS, Water Code Section 31701.5 provides that any charges for water and other services or either shall be added to and become a part of the annual taxes next levied upon the property for which the charges are unpaid and upon the property subject to the charges for any other district services and shall constitute a lien on that property as of the same time and in the same manner as does the tax lien securing such annual taxes; and

WHEREAS, this Board of Directors has ascertained and identified delinquent and unpaid charges for water and other services requested in writing by the owner of the property that remained delinquent and unpaid for 60 days or more on July 1, 2017;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Running Springs Water District as follows:

Section 1. Delinquent and unpaid charges for water and other services, or either, requested in writing by the owner of the property that remained delinquent and unpaid for 60 days or more on July 1, 2017, are attached to this resolution as “Exhibit A” and by this reference made a part thereof.

Section 2. The Secretary of this Board of Directors shall transmit a certified copy of this resolution to the Clerk of the Board of Supervisors of San Bernardino County so that each delinquency certified herein may be included on the tax bill prepared for the corresponding assessor's parcel number shown on “Exhibit A.”

ADOPTED this 19th day of July, 2017.

Ayes:

Noes:

Abstentions:

Absent:

President of the Board of Directors

ATTEST:

Board Secretary

CERTIFICATION

I, JOAN EATON, SECRETARY OF THE BOARD OF DIRECTORS OF THE RUNNING SPRINGS WATER DISTRICT, HEREBY CERTIFY THAT THE FOREGOING IS A FULL, TRUE AND CORRECT COPY OF THE RESOLUTION ADOPTED BY THE BOARD OF DIRECTORS OF SAID DISTRICT AT THE REGULAR MEETING OF SAID BOARD HELD ON THE 19TH DAY OF JULY, 2017, BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSENT:

ABSTAIN:

Board Secretary
Running Springs Water District



**RUNNING SPRINGS WATER DISTRICT
A MULTI-SERVICE INDEPENDENT SPECIAL DISTRICT**

EXHIBIT A

31242 Hilltop Boulevard • P.O. Box 2206
Running Springs, CA 92382

July 10, 2017

**DELINQUENT WATER FEES
AGENCY WW22
ACCOUNT #SU02**

The following assessments are submitted for placement on the 2017-18 tax roll:

<u>PARCEL NUMBER</u>	<u>TOTAL DOLLARS</u>
0295016710000	529.25
0295045480000	651.01
0295053660000	434.73
0295062270000	286.79
0295111040000	560.98
0295291220000	584.67
0296271230000	470.46
0296282110000	623.69
<u>0328381010000</u>	<u>706.00</u>
9	4847.58

Also enclosed is a certified copy of Article II of our Ordinance No. 13 authorizing the collection of delinquent water fees on the tax bill. If there are any questions, please do not hesitate to call me at (909) 867-2766.

Sincerely,

A handwritten signature in cursive script that reads "Linda Mayfield".

Linda Mayfield, RSWD Billing Clerk



AUDITOR-CONTROLLER/TREASURER/TAX COLLECTOR
AGREEMENT FOR COLLECTION OF SPECIAL
TAXES, FEES, AND ASSESSMENTS
FISCAL YEAR 2017-18

THIS AGREEMENT is made and entered into this 19th day of July, 2017, by and between the COUNTY OF SAN BERNARDINO, hereinafter referred to as "County" and the Running Springs Water District, hereinafter referred to as "District".

WITNESSETH:

WHEREAS, Government Code Sections 29304 and 51800 authorize the County to recoup its collection costs when the County collects taxes, fees, or assessments for any school district, special district, zone or improvement district thereof; and

WHEREAS, the District and County have determined that it is in the public interest that the County, when requested by District, collect on the County tax rolls the special taxes, fees, and assessments for District.

NOW, THEREFORE, IT IS AGREED by and between the parties hereto as follows:

1. County agrees, when requested by District as hereinafter provided to collect on the County tax rolls the special taxes, fees, and assessments of District, and of each zone or improvement District thereof.

2. When County is to collect District's special taxes, fees, and assessments, District agrees to notify in writing the Auditor-Controller (268 W. Hospitality Lane, 4TH floor, San Bernardino, CA 92415) of the County on or before the 10th day of August of each fiscal year of the Assessor's parcel numbers and the amount of each special tax, fee, or assessment to be so collected. Any such notice, in order to be effective, must be received by the Auditor-Controller by said date.

3. County may charge District an amount per parcel for each special tax, fee, or assessment that is to be collected on the County tax rolls by the County for the District, not to exceed County's actual cost of collection.

4. District warrants that the taxes, fees, or assessments imposed by District and collected pursuant to this Agreement comply with all requirements of state law, including but not limited to, Articles XIIC and XIID of the California Constitution (Proposition 218).

5. District hereby releases and forever discharges County and its officers, agents and employees from any and all claims, demands, liabilities, costs and expenses, damages, causes of action, and judgments, in any manner arising out of District's responsibility under

this agreement, or other action taken by District in establishing a special tax, fee, or assessment and implementing collection of special taxes, fees or assessments as contemplated in this agreement.

6. The County Auditor/Controller has not determined the validity of the taxes or assessments to be collected pursuant to this contract, and the undersigned District hereby assumes any and all responsibility for making such a determination. The undersigned District agrees to indemnify, defend and hold harmless the County and its authorized officers, employees, agents and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this contract or the imposition of the taxes or assessments collected pursuant to this contract, and for any costs or expenses incurred by the County on account of any claim therefore, except where such indemnification is prohibited by law. If any judgment is entered against County or any other indemnified party as a result of action taken to implement this Agreement, District agrees that County may offset the amount of any judgment paid by County or by any indemnified party from any monies collected by County on District's behalf, including property taxes, special taxes, fees, or assessments. County may, but is not required to, notify District of its intent to implement any offset authorized by this paragraph.

7. District agrees that its officers, agents and employees will cooperate with County by answering inquiries made to District by any person concerning District's special tax, fee, or assessment, and District agrees that its officers, agents and employees will not refer such individuals making inquiries to County officers or employees for response.

8. District shall not assign or transfer this agreement or any interest herein and any such assignment or transfer or attempted assignment or transfer of this agreement or any interest herein by District shall be void and shall immediately and automatically terminate this agreement

9. This agreement shall be effective for the 2017/18 fiscal year.

10. Either party may terminate this agreement for any reason upon thirty days written notice to the other party. The County Auditor/Controller shall have the right to exercise County's right and authority under this contract including the right to terminate the contract.

11. County's waiver of breach of any one term, covenant, or other provision of this agreement, is not a waiver of breach of any other term, nor subsequent breach of the term or provision waived.

12. Each person signing this agreement represents and warrants that he or she has been fully authorized to do so.

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the day and year first above written.

District: Running Springs Water District

By: _____

Printed Name: Ryan Gross

Title: General Manager

Date: July 19, 2017

OSCAR VALDEZ,
AUDITOR-CONTROLLER/TREASURER/TAX COLLECTOR
SAN BERNARDINO COUNTY

By Authorized Deputy: _____

Printed Name: _____

Title: _____

Date: _____

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017

TO: Board of Directors

FROM: George Corley, Fire Chief
Ryan Gross, General Manager

SUBJECT: CONSIDER ADOPTION OF RESOLUTION 21-17, FINDING THAT CERTAIN PROPERTIES LOCATED IN THE DISTRICT CONSTITUTE A PUBLIC NUISANCE AND ORDERING NOTIFICATION TO PROPERTY OWNERS AND SETTING A PUBLIC HEARING

RECOMMENDED BOARD ACTION

Consider adoption of Resolution No. 21-17, finding that certain properties located in the District constitute a public nuisance and ordering notification to property owners and setting a public hearing.

REASON FOR RECOMMENDATION

This is the next step for the current year in the Running Springs Fire Department's annual hazard abatement program.

BACKGROUND INFORMATION

On June 20, 2012 the Running Springs Water District (District) Board of Directors adopted Ordinance No. 38, amending Ordinance No. 37 and establishing procedures and fees for providing notice to abate weeds and fire hazard waste upon real property. Ordinance No. 36 was adopted on March 16, 2011, adopting procedures for abatement of hazardous weed and/or waste.

Running Springs Fire Department staff has inspected the properties listed in Exhibit A of Resolution 21-17 and found that those properties at the time of inspection materially hamper or interfere with the prevention or suppression of fire upon the property or adjacent properties or endanger the public safety by creating a fire hazard and therefore constitute a public nuisance.

The proposed resolution would: (1) declare that the properties listed in Exhibit A constitute a public nuisance; (2) direct the Fire Chief or his authorized representative to provide notice to the owners of the properties of a public hearing to be conducted on

September 20, 2017 at 9:00am and; (3) that the Board of Directors shall hear and consider all objections or protests to the proposed removal of weeds and/or waste.

FISCAL INFORMATION

N/A

ATTACHMENTS

Attachment 1 – Resolution 21-17

RESOLUTION NO. 21-17

**RESOLUTION OF THE BOARD OF DIRECTORS OF
RUNNING SPRINGS WATER DISTRICT FINDING THAT
CERTAIN PROPERTIES LOCATED IN THE DISTRICT
CONSTITUTE A PUBLIC NUISANCE AND ORDERING
NOTIFICATION TO PROPERTY OWNERS AND SETTING A
PUBLIC HEARING**

WHEREAS, pursuant to Water Code section 31120, Running Springs Water District may exercise any of the powers, functions, and duties which are vested in, or imposed upon, a fire protection district pursuant to the Fire Protection District Law of 1987; and

WHEREAS, Running Springs Water District is authorized, pursuant to Water Code section 31120 and Health and Safety Code section 13879, to abate hazardous weeds and waste pursuant to the procedures set forth in Health and Safety Code section 14875 *et. seq.*; and

WHEREAS, pursuant to the procedures set forth in Health and Safety Code section 14875 *et. seq.* and Ordinance Nos. 36, 37 and 38, the Board of Directors of the Running Springs Water District may declare weeds growing upon streets, sidewalks, or private property a public nuisance that may be abated pursuant to the provisions therein; and

WHEREAS, the Fire Inspector of the Running Springs Water District or his or her authorized representative inspected the properties described in Exhibit "A," attached hereto and by this reference incorporated herein, and found that those properties materially hamper or interfere with the prevention or suppression of fire upon the property or adjacent properties or endanger the public safety by creating a fire hazard, and therefore constitute a public nuisance; and

WHEREAS, the Fire Inspector or his or her authorized representative has asked the Board of Directors to find and determine that said weeds and/or waste matter constitute a public nuisance and the Board desires to declare, by resolution, that said weeds constitute a public nuisance pursuant to California Health and Safety Code section 14875 *et seq.* and Ordinance Nos. 36, 37 and 38; and

WHEREAS, the Board of Directors desires to authorize the Fire Inspector or his or her authorized representative to provide notice to the owners of the properties described in Exhibit "A" of a public hearing to be conducted on September 20, 2017 at 9:00 am, pursuant to Health and Safety Code section 14890 *et seq.* and Sections 2.5 and 2.6 of Ordinance Nos. 36, 37 and 38; and

WHEREAS, at the public hearing, the Board of Directors intends to hear any or all objections or protests, if any, to the proposed removal of weeds;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Running Springs Water District as follows:

Section 1. All of the recitals set forth above are true.

Section 2. The Board of Directors has determined and hereby declares that the

properties described in Exhibit “A,” attached hereto and by this reference incorporated herein, located within the Running Springs Water District’s boundaries contain weeds and/or waste that constitute a public nuisance pursuant to the provisions of Health and Safety Code section 14875 *et seq.*

Section 3. The Board of Directors directs the Fire Inspector or his authorized representative to provide notice to the owners of the properties described in Exhibit “A” of a public hearing to be conducted on September 20, 2017 at 9:00 am at which time the Board of Directors shall consider all objections or protests to the proposed removal of weeds. Notice shall be provided pursuant to the provisions of Health and Safety Code section 14890 *et seq.* and Sections 2.5 and 2.6 of Ordinance Nos. 36, 37 and 38.

Section 4. The Board of Directors further directs that at the time of the public hearing, the Board of Directors shall hear and consider all objections or protests, if any, to the proposed removal of weeds and/or waste, and may continue the hearing from time to time. Upon the conclusion of the hearing, the Board of Directors shall allow or overrule any or all objections, whereupon the Board of Directors shall acquire jurisdiction to proceed and perform the work of removing the public nuisance, and the decision of the Board of Directors shall be final, except as provided in Health and Safety Code sections 14920 and 14921.

ADOPTED this 19th day of July, 2017.

Ayes:

Noes:

Abstentions:

Absent:

President of the Board of Directors

ATTEST:

Board Secretary

EXHIBIT "A"
LIST OF PROPERTIES

TO BE PROVIDED AT BOARD MEETING

BOOK		
Ref. No.	PARCEL NUMBER	STREET ADDRESS
1		
2		
3		
BOOK		
	PARCEL NUMBER	STREET ADDRESS

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017

TO: Board of Directors

FROM: Ryan Gross, General Manager

SUBJECT: CONSIDER APPROVING RESOLUTION NO. 22-17, REDUCING MONTHLY RATES FOR DISTRICT FIRE METER SERVICE

RECOMMENDED BOARD ACTION

Consider approving Resolution No. 22-17, reducing monthly rates for District fire meter service.

REASON FOR RECOMMENDATION

District staff has evaluated the rate structure for monthly fire meter service and is recommending a revised and reduced rate for these services.

BACKGROUND INFORMATION

On June 18, 2014 the District Board of Directors adopted Resolution No. 13-14 setting forth the District's current rates and charges. The following table shows the proposed changes and reduction in monthly fire service charges:

Number of Existing Connections	Fire Service Meter Size (inches)	Fixed Monthly Fire Meter Service Charge for the Fiscal Year Ending				Revenue Difference
		2018 (Proposed)	2019 (Proposed)	2018 (Current)	Change	
14	3/4	n/a	n/a	\$24.96	n/a	-
4	1 & smaller	\$24.96	\$26.21	\$41.50	-\$16.54	-\$793.92
0	1.5	\$41.50	\$43.58	\$58.04	-\$16.54	-
0	2	\$58.04	\$60.95	\$74.59	-\$16.55	-
0	3	\$74.59	\$78.32	\$91.09	-\$16.50	-
2	4	\$91.09	\$95.65	\$107.64	-\$16.55	-\$397.20
0	6	\$107.64	\$113.02	\$124.18	-\$16.54	-
1	8	\$124.18	\$130.39	\$140.72	-\$16.54	-\$198.48
Annual Private Fire Meter Service Revenue Difference						-\$1,389.60

FISCAL INFORMATION

The proposed new monthly fire service rates would slightly reduce revenue by approximately \$1,390 per year.

ATTACHMENTS

Attachment 1 – Resolution No. 22-17

RESOLUTION 22-17

**RESOLUTION OF THE BOARD OF DIRECTORS OF RUNNING SPRINGS
WATER DISTRICT REDUCING RATES FOR DISTRICT FIRE METER
SERVICES**

WHEREAS, Ordinance No. 8 of the Running Springs Water District (“District”) provides that fees and charges for water service will be established by resolution of the District’s Board of Directors; and

WHEREAS, it is in the best interest of this District and the public for whom services are provided to have these and other fees and charges set forth in written resolution; and

WHEREAS, on June 18, 2014, the Board of Directors adopted Resolution No. 13-14 setting forth the District’s current rates and charges; and

WHEREAS, the Board of Directors finds it to be in the best interest of the public and the District to reduce the rates for fire meter service within the District; and

WHEREAS, Section 4(a) of Resolution No. 13-14 sets forth the Rates for Fire Meter Service within the District; and

WHEREAS, the monthly Fire Meter Service Charges set forth herein will replace the rates set forth in Section 4(a) of Resolution No. 13-14 for the fiscal years ending in 2018, 2019 and beyond if no other changes are made; and

WHEREAS, the Board of Directors intends no other changes to Resolution No. 13-14 and therefore the balance of Resolution No. 13-14 will continue to be in effect;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Running Springs Water District as follows:

Rates for Fire Meter Service within District: Fixed monthly fire meter service charge for connected meters within the District shall vary according to the size of the meter, and shall be billed monthly as follows:

Fire Service Meter Size (inches)	Fixed Monthly Fire Meter Service Charge for the Fiscal Year Ending	
	2018	2019
1 and smaller	\$24.96	\$26.21
1.5	\$41.50	\$43.58
2	\$58.04	\$60.95
3	\$74.59	\$78.32
4	\$91.09	\$95.65
6	\$107.64	\$113.02
8	\$124.18	\$130.39

ADOPTED this 19th day of July 2017

Ayes:

Noes:

Abstentions:

Absent:

 President, Board of Directors
 Running Springs Water District

ATTEST:

 Secretary, Board of Directors
 Running Springs Water District

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017

TO: Board of Directors

FROM: Ryan Gross, General Manager

SUBJECT: CONSIDER APPROVING ORDINANCE NO. 49, ADOPTING RULES AND REGULATIONS FOR WATER AND WASTEWATER SERVICE

RECOMMENDED BOARD ACTION

Consider approving Ordinance No. 49, Adopting Rules and Regulations for Water and Wastewater Service.

REASON FOR RECOMMENDATION

To reorganize, combine and restate all of the various rules and regulations, policies and procedures of the District related to water and wastewater services.

BACKGROUND INFORMATION

The District has previously adopted Ordinance No. 8, Rules and Regulations for Water Service, as amended by Ordinance Nos. 13, 15, 18, 20, 22, 27, 31, 32 and 33. The District has also previously adopted Ordinance No. 23, Regulating the Use and Construction of Public Sewer Facilities. These previously adopted ordinances have now been reorganized, combined and restated in Ordinance No. 49. Attachment 1 includes a copy of the newspaper Public Notice that was published on July 6, 2017.

ATTACHMENTS

Attachment 1 – Newspaper Public Notice
Attachment 2 – Ordinance No. 49

July 6, 2017 - July 12, 2017

CLASSIFIED ADS, NOTICES Conti

07/13/2017

Public Notice

Notice is hereby given that the Board of Directors of the Running Springs Water District will consider adoption of Ordinance No. 49 in the District's Board Room located at 31242 Hilltop Blvd., Running Springs, CA 92382 at 9:00 a.m. on Wednesday, July 19, 2017. A summary of the proposed Ordinance No. 49 is as follows:

ORDINANCE OF THE BOARD OF DIRECTORS OF RUNNING SPRINGS WATER DISTRICT ADOPTING RULES AND REGULATIONS FOR WATER AND WASTEWATER SERVICE

The Running Springs Water District ("District") has adopted Ordinance No. 8, Rules and Regulations for Water Service, as amended by Ordinance Nos. 13, 15, 18, 20, 22, 27, 31, 32 and 33; and the District has adopted Ordinance No. 23, Regulating the Use and Construction of Public Sewer Facilities. This new proposed Ordinance No. 49 reorganizes, combines and restates the District's Rules and Regulations for Water and Wastewater Service. The Rules and Regulations for Water and Wastewater Service are contained in the full text of the Ordinance which is available at the Running Springs Water District office or by calling (909) 867-2766. Interested parties will be given an opportunity to present comments orally or in writing at the Board meeting. Copies of the full text of the proposed ordinance are available at the District office.

The Alpenhorn News

ORDINANCE NO. 49
ORDINANCE OF THE BOARD OF DIRECTORS OF RUNNING SPRINGS WATER
DISTRICT ADOPTING RULES AND REGULATIONS FOR WATER AND
WASTEWATER SERVICE

WHEREAS, The Running Springs Water District (“District”) has adopted Ordinance No. 8, Rules and Regulations for Water Service, as amended by Ordinance Nos. 13, 15, 18, 20, 22, 27, 31, 32 and 33; and

WHEREAS, the District has adopted Ordinance No. 23, Regulating the Use and Construction of Public Sewer Facilities; and

WHEREAS, the District now desires to reorganize, combine and restate the District’s Rules and Regulations for Water and Wastewater Service in the form attached hereto.

NOW, THEREFORE, BE IT ORDAINED by the Board of Directors of Running Springs Water District as follows:

1. The Rules and Regulations for Water and Wastewater Service as set forth in Exhibit “A” which is attached and incorporated by reference are adopted; and
2. Ordinance Nos. 8, 13, 15, 18, 20, 22, 23, 27, 31, 32 and 33 are rescinded, superseded and replaced with this Ordinance No. 49.

ADOPTED this 19th day of July, 2017.

Ayes:
Noes:
Abstentions:
Absent:

President of the Board of Directors
of Running Springs Water District

ATTEST:

Board Secretary

Running Springs Water District



Rules and Regulations for Water and Wastewater Service

Adopted: July 19, 2017
Ordinance No. 49

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SECTION 1.0 GENERAL PROVISIONS

1.1 Introduction

The rules and regulations for water and wastewater service set forth herein identify the terms and conditions under which the Running Springs Water District will provide water and wastewater service to its customers. By accepting service, customers and owners explicitly and implicitly agree to be bound by these rules and regulations for water and wastewater service and to hold harmless the District, its employees, Board members, agents and representatives from any liability associated with the implementation of these rules and regulations for water and wastewater service or for service provided hereunder.

1.2 General Policy

The general policy of the District is to acquire, maintain, and operate adequate water and wastewater systems within the District to serve the residents of the District and to serve such areas outside the District as deemed appropriate by the Board of Directors. This is an ordinance regulating the use and construction of public water and wastewater facilities, the installation and connection of sewer laterals, and the discharge of wastes into the public sewer systems, and providing penalties for violation thereof, as ordained and enacted by the Boards of Directors of said District.

1.3 Authority

The general powers of the District are contained in the County Water District Law, beginning with Section 30000 of the California Water Code. These powers include, without limitation, the right to levy taxes; to acquire, construct, and operate water and wastewater facilities within the District; and to compel connection to the sewerage systems.

1.4 Short Title

This Ordinance shall be known and may be cited as "Rules and Regulations for Water and Wastewater Service."

1.5 Words and Phrases

For purposes of this Ordinance, all words used herein in the present tense shall include the future tense; all words in the plural number shall include the singular number; all words in the singular number shall include the plural number; and all words in either gender shall include the other gender.

1.6 Water System

The functional system owned, operated and maintained by the District for the supply, treatment, storage and distribution of potable water for public and private uses and including all raw water pumping, facilities, transmission mains, treatment plants, storage reservoirs, distribution pipelines, fire hydrants and appurtenances, lands, right-of-ways and easements.

1.7 Wastewater System

The functional system owned, operated and maintained by the District for the collection, treatment and disposal of wastewater coming from public and private dischargers and including all sewers, manholes, pumping stations, treatment and disposal facilities, appurtenances, lands, right-of-ways and easements.

1.8 Validity

If any provision of this Ordinance or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this Ordinance, not held invalid, and to this end the provisions of this Ordinance are declared to be severable.

1.9 Pressure Conditions

All applicants for water service connection or water service shall accept such conditions of water pressure and service as are provided by the District's distribution system at the location of the proposed service connection, and the District shall not be responsible for any damages arising from low pressure or high pressure conditions. Water pressure shall, as a minimum, comply with standards set forth by the State Health Department.

1.10 Interruption of Service for Emergency Repairs

The District may interrupt water and/or wastewater service to any customer or customers when necessary to make emergency repairs or when other such emergencies necessitate such interruption, and the District shall not have any responsibility for damage arising out of such an interruption in service.

1.11 Tampering with District Property

No one except an employee or representative of the District shall at any time or in any manner operate the curb stops, meter valves, main-cocks, gates or valves of the District's water or wastewater system or interfere with water meters, their connections, street mains, or other parts of such water or wastewater system; provided that licensed plumbers may close and open District curb stops in order to repair a customer's control valve.

1.12 Penalty for Violation

If any person fails to comply with all or any part of these rules and regulations, or a District resolution, ordinance or order fixing rates and fees, the District may pursue any remedy provided to it by law. Violations and penalties are further considered in Section 21.0 of these rules and regulations.

1.13 Charges for Work by District Personnel

The Board of Directors shall establish by resolution a charge for work done by District personnel and District equipment to be paid by owners or customers requesting such work, or in the event of damage to District water or wastewater system facilities, by the person or persons responsible for such damage. The amount owing for any such work shall be billed by the District to the person requesting same or responsible therefor as soon as is reasonably possible following the completion of such work, and said amount shall be due and payable as of the date of the District's bill and delinquent if not paid within thirty (30) days thereafter. The schedule of rates for work by District personnel and equipment shall be made available at the District office for inspection by any interested person.

1.14 Notices

Notice from the District shall be given in writing and shall be mailed, postage prepaid, to the customer to whom water and/or wastewater service is billed; provided that where conditions warrant, in emergencies, and where required by law, the District may provide notification either by telephone, email or messenger. Notice from an owner or customer to the District shall be given either in writing, by email or verbally at the District office or by telephone to the District office.

1.15 Annexation

The District has the power, pursuant to applicable provisions of law, to annex areas that can be served by the District. The terms of annexation may include, among others, the payments of fees and transfer of facilities.

1.16 Fees

The District has the power, subject to approval of Board of Directors, to charge special fees. Generally, charges will be made for operations performed by the District for the benefit of those charged.

1.17 Sale of By Products

The District has the power, subject to approval of Board of Directors, to sell treated and reclaimed wastewater or any other by-product to private individuals, corporations or to public entities.

SECTION 2.0 DEFINITIONS

2.1 Applicant for Permit

"Applicant for Permit" shall mean the person making application for a water and/or sewer connection permit hereunder and shall be the owner of the premises involved or their authorized agent or authorized licensed plumber or contractor.

2.2 Board of Directors

"Board of Directors" means the Board of Directors of the Running Springs Water District, County of San Bernardino, State of California.

2.3 Building Sewer

"Building sewer" shall mean that portion of sewer from the building sewer drain to the public sewer, including the sewer lateral and cleanout.

2.4 Contractor

"Contractor" shall mean an individual, firm, corporation, partnership, or association duly licensed by the State of California to perform the type of work to be done under the permit, contract or agreement.

2.5 Cost

"Cost" means the cost of labor, material, transportation, supervision, engineering, and all other necessary overhead expenses.

2.6 County

"County" shall mean the County of San Bernardino, State of California.

2.7 Cross-Connection

"Cross-Connection" means any physical connection between the piping system from a District service connection and that of any other water supply which is not or cannot be, approved as safe and potable for human consumption, whereby water from the unapproved source may be forced or drawn into the District's distribution mains.

2.8 Customer

"Customer" means a person who receives water service from the District.

2.9 Developer

"Developer" means a person who makes application to the District for water service for subdivided property within the District.

2.10 District

"District" means Running Springs Water District.

2.11 District Engineer

"District Engineer" shall mean the engineer appointed by the Board and acting for the District.

2.12 Dwelling or Living Unit

"Dwelling or living unit" shall mean any residence, apartment, habitation, or other structure designed to be occupied by persons or family and requiring water and/or wastewater service.

2.13 Fire Service Connection

"Fire Service Connection" means the service line extending from a District water main to the property line of premises for the purpose of providing private fire protection service and the shut-off valve, meter and meter box, back-flow protection device, check valve and detector check meter, if any.

2.14 Fixture Unit Equivalent

"Fixture unit equivalent" shall mean the unit equivalent of a plumbing fixture as indicated in the latest edition of Uniform Plumbing Code.

2.15 General Manager

"General Manager" shall mean the person appointed by the Board as the Manager of Running Springs Water District.

2.16 Inspector

"Inspector" shall mean the person who shall perform the work of inspecting sewerage facilities under the jurisdiction or control of the District.

2.17 Main

"Main" means a waterline in a street, highway, alley, or easement used for public and private fire protection and for general distribution of water.

2.18 Owner

“Owner” shall mean the person owning in fee, or the person in whose name the legal title to the property appears, by deed duly recorded in the County Recorder’s Office, or the person in possession of the property or buildings under claim of ownership, or exercising acts of ownership over same for himself, or as executor, administrator, guardian or trustee of the owner.

2.19 Permit

“Permit” shall mean any written authorization required pursuant to this Ordinance or may any other regulation of the Board.

2.20 Person

"Person" means an individual or a company, association, co-partnership, or public or private corporation.

2.21 Premises

"Premises" means a lot or parcel of real property under one ownership, except where there are well defined boundaries or partitions such as fences, hedges, or other restrictions preventing the common use of the property by the several occupants, in which case each portion so separated shall be deemed as separate premises. Each living unit in an apartment house or condominium and each separate office in an office building shall be considered a single premise.

2.22 Private Fire Protection Service

"Private Fire Protection Service" means water service and facilities for building sprinkler systems, hydrants, hose reels, and other facilities installed on private property for fire protection, and the water available therefor.

2.23 Public Fire Protection Service

"Public Fire Protection Service" means the services and facilities of the entire water supply, storage, and distribution system of the District, including the fire hydrants affixed thereto and the water available for fire protection, excepting house service connections and appurtenances thereto.

2.24 Public Sewer

“Public sewer” shall mean a sewer lying within a public right of way or easement which is controlled by or under the jurisdiction of the District. It shall not include any portion of a building sewer.

2.25 Regular Water Service

"Regular Water Service" means water service and facilities rendered for normal, domestic, commercial, and industrial purposes on a permanent basis, and the water available therefor.

2.26 Service Connection

"Service Connection" means the service line extending from a District water main to the property line of premises and the meter and curb stop installed at or near the property line.

2.27 Sewage Treatment Plant

"Sewage treatment plant" shall mean any arrangement of devices and structure used for treating sewage.

2.28 Sewerage Works

"Sewerage works" shall mean all facilities for collecting, plumbing, treating and disposing of sewage.

2.29 Sewer

"Sewer" shall mean a pipe or conduit for carrying sewage.

2.30 Sewer Lateral

"Sewer lateral" shall mean that portion of a sewer lying within a public right of way or easement connecting a building sewer to the public sewer.

2.31 Subdivision

"Subdivision" means any division of an existing parcel of land within the District into five (5) or more lots, including a subdivision, a land division subject to a parcel map, and a condominium project.

2.32 Suspended Solids

"Suspended solids" shall mean solids that either float on the surface of, or are in suspension in, water, sewage or other liquids and which are removable by laboratory filtering.

2.33 Temporary Fire Hydrant Service

"Temporary Fire Hydrant Service" means temporary service from a District fire hydrant for construction work and other uses of limited duration with approved meter and appurtenances and the water available therefor.

2.34 Uniform Plumbing Code

"Uniform Plumbing Code" shall mean that code as published by the International Association of Plumbing and Mechanical Officials and adopted by the County of San Bernardino as its plumbing code. The code shall be the latest edition published and adopted by the County, and by this reference shall be incorporated herein and made a part of this Ordinance.

2.35 Uniform Plumbing Code Definitions

"Uniform Plumbing Code Definitions" being Chapter 1 of the County Plumbing Code are hereby incorporated as part of the definitions of this Ordinance except as specifically modified herein.

2.36 User

"User" shall mean the person or person owning or controlling property or improvements to which the sewer facilities of the District are connected or available.

2.37 Wastewater Department

"Wastewater Department" means the Board of Directors of the District performing functions related to the District wastewater service, together with the General Manager, the Wastewater Collection and Treatment Division Supervisors and the Administration Supervisor and other duly authorized representatives.

2.38 Watercourse

"Watercourse" shall mean a channel in which a flow of water occurs, either continuously or intermittently.

2.39 Water Department

"Water Department" means the Board of Directors of the District performing functions related to the District water service, together with the General Manager, the Water Division Supervisor and the Administration Supervisor and other duly authorized representatives.

SECTION 3.0 GENERAL USE REGULATIONS

3.1 Waste

No customer shall knowingly permit leaks or waste of water. When water is wastefully or negligently used on a customer's premises, the District may discontinue service to such premises if such conditions are not corrected by the customer within fourteen (14) days after receipt of a verbal or written notice thereof from the District and such service shall not be resumed until such condition is corrected. In the absence of the customer from premises where water is being wasted due to an apparent leak, the District may close the curb stop to prevent further loss of water, and shall thereupon notify the customer of such action at the address on file at the District office; and provided that the District shall not be liable for any damage to the premises or appliances therein due to such action.

3.2 District Facilities on Private Property

Upon making application for water and/or wastewater service, an owner or customer consents to the installation by the District on customer's property of such facilities as may be necessary to provide water and/or wastewater service thereto, and all such facilities installed by the District on such premises for the purpose of providing water and/or wastewater service shall be and remain the property of the District and may be maintained, repaired, or replaced by the District without the consent of the owner or occupant of the property. No payments shall be made by the District to the owner or customer for placing or maintaining such District facilities on the premises and the owner or customer shall use reasonable care not to damage such facilities. Any relocation of such facilities at the request of the owner shall be at the expense of the owner.

3.3 Damage to Water and/or Wastewater System Facilities

Owners of premises shall be liable for damage to District water and/or wastewater service facilities resulting from acts of the owners or their tenants agents, employees or contractors' including the breaking or destruction of locks on or near meters and any damage to a meter, including damage by hot water or steam from a boiler or heater on the owner's premises. An owner shall reimburse the District for the cost of repairing any such damage promptly upon presentation of a bill therefor.

3.4 Ground Wire Attachments

No person, firm or corporation shall attach any ground wire or wires or otherwise use as part of any electrical circuit any pipe or other plumbing which is or may be connected to a service connection or main belonging to the District, and the District may disconnect any such ground wire that has been connected to a District main or service connection. The owner of the premises where any such ground wire connection has been made,

and the person responsible for making the ground wire connection, shall be liable to the District for any damage occasioned thereby to the District's water system or injury to District personnel.

3.5 Owner's Control Valve

The owner shall arrange for the installation of a control valve (stop-and-waste valve) on the customer's side of each service connection to control the flow of water to the water system on the premises. If the on-site plumbing includes outside faucets or sprinklers, the owner shall place the control valve at a location which allows water to be shut off to the outside fixtures as well, or alternatively may install another control valve for the shutoff of water to outside plumbing fixtures. The owner shall not rely on the District's curb stop to control the flow of water through the meter and shall pay for all water delivered to the premises regardless of whether the District's curb stop is turned on or off. Except as provided in Section 1.11 of Section 1, the District's curb stop may only be operated by District employees, and no owner or occupant of any premises shall use the District's curb stop to control the water supply to the water system on such premises. The customer shall be responsible for turning off their control valve(s) in order to protect against water loss from leaks in the plumbing on the customer's side of the meter. In the event that the District finds it necessary to shut off the flow of water at the District's curb stop or meter in order to prevent the loss of water as a result of the customer's failure to use the control valve(s), the customer will be required to pay the District's standard service charge then in effect.

3.6 Cross-Connections

All owners of premises and customers in the District shall comply with state and federal laws governing the separation of dual water systems and the installation of back-flow protective devices to protect the public water supply from the danger of contamination through cross-connection. Whenever such back-flow protective devices are found to be necessary with respect to any premises, all water supply lines from the District's mains entering such premises or any buildings or structures thereon shall be protected by an approved back-flow device and such back-flow protective device shall be installed as close to the District's service connection as possible. Plans for the installation of such back-flow protective devices shall be approved by the District prior to installation and the District shall inspect each such device and its installation. Immediately following such installation, the owner shall be responsible for having such back-flow protective device tested by a District approved tester at the expense of the owner. Annually thereafter, the owner shall have the device tested, as may be required by the District or by the health department having jurisdiction, and shall be serviced, repaired or replaced whenever they are found to be defective, at the expense of the owner. Lawn sprinkler heads shall be equipped with an air gap separating the sprinkler heads from the other portions of the water system on the premises. Water service shall be discontinued to any premises if any defect is found in a back-flow protective device or if the District finds dangerous unprotected cross-connections on such premises, and service shall not be restored until such defect or dangerous condition is corrected.

3.7 Special Circumstances

When an owner of premises or the occupant is engaged in the handling of dangerous corrosive liquids or industrial or processed waters, the District may require such owner or occupant to eliminate certain plumbing or piping connections on such premises as an additional precaution and in order to protect against back-flow.

3.8 Pressure Regulating Valves

Pressure regulating valves shall be installed on the customer's side of all water service connections by the owner to protect the owner's water system from damage due to variations in water pressure in the District's main.

3.9 Ingress and Egress

District employees shall have the right of ingress and egress to all premises to which the District provides water and/or wastewater service, but not to buildings and structures on such premises, at reasonable hours for any purpose reasonably connected with the furnishing of water and/or wastewater service thereto. Water and/or Wastewater Department employees shall carry identification cards with them at all times during working hours, and upon entering premises for the purposes aforesaid shall display same to the owner or occupant thereof upon request.

3.10 Non-Registering Water Meters

If a water meter is found not to be registering, the District shall bill the person whose name appears on the application for service through said meter for the period of time from the date of the last meter reading when said meter was registering through the date of the discovery that said meter was not registering, based upon the District's minimum monthly water rate or based upon the estimated consumption of water through said meter during said period of time to which shall be applied the District's water rate schedule, whichever method results in a greater amount; provided that such an estimate of consumption shall be made based upon previous consumption of water through said meter for a comparable period or by such other method as is determined by the General Manager to be most equitable.

3.11 Replacement

The District may replace a water meter for testing or in the event that the General Manager or Water Division Supervisor determines that it may not be registering accurately or should be replaced because of its age or condition.

SECTION 4.0 WATER AND WASTEWATER DEPARTMENTS

4.1 Water Department

The District's Water Department consists of the General Manager, the Administration Supervisor, the Water Division Supervisor and District employees under the supervision of said Division Supervisor.

4.2 Wastewater Department

The District's Wastewater Department consists of the General Manager, the Administration Supervisor, the Wastewater Collection Division Supervisor, Wastewater Treatment Division Supervisor and District employees under the supervision of said Division Supervisors.

4.3 General Manager

The General Manager shall be responsible for the application and enforcement of the rules and regulations herein set forth and for the general supervision of the Administration Supervisor, Water Division Supervisor and other employees of the Water Department.

4.4 Administration Supervisor

The Administration Supervisor shall oversee the billing for and collection of charges for water and wastewater services. This includes the computation, preparation and mailing of all bills for water service, the making and depositing of collections, maintenance of proper books of account, collections, account for and refund deposits, and whatever else is necessary or directed by the District Auditor to set up and maintain an efficient and economical bookkeeping system for the District and shall perform any other duties now or hereafter prescribed by the General Manager.

4.5 Water Division Supervisor

The Water Division Supervisor shall be responsible for the operation and maintenance of the water system and shall regularly inspect all physical facilities related to said system to insure that they are in good repair and proper working order. The Water Division Supervisor shall supervise all repair or construction work authorized by the Board of Directors or the General Manager and perform such other duties as may be prescribed by the General Manager.

4.6 Wastewater Collection Division Supervisor

The Wastewater Collection Division Supervisor shall be responsible for the operation and maintenance of the wastewater collection system and shall regularly inspect all

physical facilities related to said system to insure that they are in good repair and proper working order. The Wastewater Collection Division Supervisor shall supervise all repair or construction work authorized by the Board of Directors or the General Manager and perform such other duties as may be prescribed by the General Manager.

4.7 Wastewater Treatment Division Supervisor

The Wastewater Treatment Division Supervisor shall be responsible for the operation and maintenance of the wastewater treatment system and shall regularly inspect all physical facilities related to said system to insure that they are in good repair and proper working order. The Wastewater Treatment Division Supervisor shall supervise all repair or construction work authorized by the Board of Directors or the General Manager and perform such other duties as may be prescribed by the General Manager.

SECTION 5.0
WATER AND WASTEWATER RATES, CONNECTION FEES AND CAPACITY
CHARGES

5.1 Water and Wastewater Rates

The rates and charges for different classes of water service and wastewater service by the District shall be established by resolution of the Board of Directors. Any such resolution adopted by the Board of Directors may also provide for and establish an amount to be deposited with the District by an applicant for water and/or wastewater service as a deposit to insure payment of bills for water and wastewater services supplied by the District. Nothing in this Ordinance shall be construed as limiting the authority of the Board of Directors to establish any fee or charge related to water service which is legally permissible. The current rates are identified in the attached Exhibit A-1 – Rates, Fees and Charges.

5.2 Connection and Capacity Charges

The Board of Directors, by resolution, shall establish and from time to time revise charges for installation of service connections to the District's water and wastewater systems and for the use of capacity in the District's water and wastewater systems. Such charges may vary depending upon the size of the meter or any other factors set forth in the resolution; provided, however, that the charges shall not exceed the estimated reasonable costs of making the connections or providing the capacity unless the schedule of charges is submitted to, and approved by, a popular vote of two-thirds of the electors in the District who vote on the issue. Any resolution establishing or revising connection or capacity charges shall be adopted only at a regularly scheduled meeting of the Board of Directors, with notice of the meeting mailed at least fourteen (14) days prior to the meeting to any interested party who has filed a written request with the District for notice of the meeting within one year preceding the meeting. At least ten (10) days prior to the meeting, the District shall make available to the public data substantiating the District's estimate of the reasonable costs of making connections and providing capacity in the District's water and wastewater systems, and the revenue sources anticipated to cover these costs. The current rates are identified in the attached Exhibit A-1 – Rates, Fees and Charges.

SECTION 6.0 REGULAR WATER SERVICE

6.1 Application

An owner requesting water service for their property shall make application for water service at the District office. Such owner shall furnish the District with all information necessary for the District to complete a water service agreement and shall thereafter sign such agreement, and at such time the owner shall also pay the District's service installation, connection, water development, capacity and other applicable charges in full. Each new owner of property who fails to make proper application for water service shall have their water service discontinued pursuant to Section 10.6 of these Rules and Regulations. An application for water service shall not be approved unless signed by the owner of the property to be served; provided, however, that any person who receives residential water service through a master meter, or who receives individually metered service in a multi-unit residential structure or mobile home park shall be entitled to become a customer of the District even if the owner of the property to be served refuses to sign the application for service, if such service is feasible and the person agrees to such terms and conditions of service as may be imposed by the Board of Directors on a case-by-case basis.

6.2 Contractor Convenience

When a contractor desires service to a building under construction and the owner is not available to sign the water service agreement and pay the required service installation, connection and capacity charges, the contractor may obtain temporary water service by paying these charges; provided that the District shall make no refund of said charges to the contractor and the contractor shall look solely to the owner for reimbursement; and provided further that if the District is unable to obtain from the owner a signed agreement for water service within thirty (30) days after the contractor obtains temporary water service from the District, the District may discontinue water service to the contractor. This section does not apply to temporary fire hydrant service for construction water.

6.3 Undeveloped Property

The District shall not install a water meter to serve undeveloped property until installation of the building pad for the structure to be served is complete or it is determined by the District that there is sufficient evidence of construction progress on the property. In the event that the building pad has not been installed within one year after the applicant has submitted a signed application and has paid applicable fees and charges, the application shall be void and the applicant shall be entitled to a refund of all fees and charges deposited with the District, less the District's service charge for processing the application.

The District may, however, install a water meter to an undeveloped lot if in the opinion of the General Manager, a vacant lot has suffered substantial vegetation damage from a wild fire and the owner of the property wishes to install a meter solely for irrigation purposes and erosion control in accordance with the following provisions:

- a. Customer will pay the Residential meter installation charge then in effect.
- b. A fixed monthly charge will be billed to the customer equal to the monthly Irrigation meter rate then in effect.
- c. Customer will be billed for any and all additional assessments and fees normally billed to Residential metered customers, including the Infrastructure Repair and Replacement (IRR) charge.
- d. Customer will not incur any sewer installation or sewer monthly fees until after a structure has been connected to the sewer system.
- e. If customer decides to build a structure at a later date, the customer will be required to pay the Water Facilities Capacity Charge then in effect in addition to all applicable sewer fees.

6.4 Undertaking of Applicant

The act of an owner in signing an agreement for water service to their property signifies willingness and intention to comply with this and other ordinances, regulations, policies and procedures of the District as they now exist or may hereafter be amended, and to make prompt payment for all water delivered to the premises by the District.

6.5 Payment for Previous Service

An application for water service shall not be honored if the applicant has a delinquent account with the District for water or other service, unless the applicant has entered into an agreement with the District pursuant to Section 10.8 to pay the delinquent amount in installments and has complied with the terms of the agreement. The General Manager, in his discretion, shall be authorized to transfer a delinquent bill for water or other service to new premises owned by the person responsible for paying the delinquency, and to secure payment by recording a lien upon the premises as authorized by law.

6.6 Size and Location of Services

The District shall determine the location of all service connections and the size of meters, pipes and other facilities to be installed therein. An owner shall not lay any pipeline from their residence or business establishment to the curb or property line until the Water Division Supervisor has approved the location and size of the water service.

6.7 General

Service installation shall be made only to property abutting distribution mains in public streets, alleys and easements, or extensions of such mains as herein provided. The District shall not be responsible for the relocation of services installed in new subdivisions prior to the completion of street improvements.

6.8 Curb Stop

Every service connection installed by the District shall be equipped with a curb stop on the inlet side of the meter. Such curb stops shall be used exclusively by the District, and shall not relieve the owner of responsibility for installing their own control valve on the owner's side of the service connection. If a curb stop is damaged as a result of use thereof by an owner or occupant of premises, such curb stop shall be replaced at the owner's expense.

6.9 Changes Resulting in Increased Water Consumption

An owner who plans to make material changes in the size, character or extent of equipment or operations utilizing water service through a District service connection which will result in a significant increase in use of water through such connection shall, prior to making any such change, notify the District in writing of such plans so that the District may determine whether an increased capacity charge will be due and payable, and whether any changes will be necessary in the size of the meter and other parts of the service connection to accommodate the expected increase in water usage. If the District determines that such changes in the service connection will be necessary, the owner shall file a new application for water service with the District and pay to the District the District's charge for the modifications of the service connection. If the District finds that an owner has made such material changes which have resulted in a significant increase in water usage on such owner's premises without notifying the District thereof, the District shall notify such owner of:

- a. Any increased capacity charge that may be due and payable;
- b. The modifications, if any, which will be necessary in the service connection to accommodate such increased water usage; and
- c. The District's requirement for the Owner to make a new application for water service and to pay the District's charge for modification of such water service.

If the owner does not make such application and pay applicable charges within ten (10) days after receipt of such notification, the District may discontinue water service to the owner's premises until the owner makes such application and pays such charges and the necessary modification of the service connection is completed.

6.10 Number of Buildings Served by a Single Connection

Service connections shall be installed by the District in accordance with the following requirements:

- a. One Connection per Building. Each residence or building under separate ownership shall receive water service through a separate service connection; provided that two (2) or more residences owned by the same person and located on the same lot or parcel may at the discretion of the General Manager be supplied water through the same service connection, and the General Manager may limit the number of such residences which may be supplied with water.
- b. Adjoining Lots. A service connection to one property shall not be used to supply water to an adjoining property, whether such adjoining property is owned by the same or a different owner, or to supply property across a street or alley from the property where the service connection is located.
- c. Division of Property. When a lot or parcel for which a service connection has been installed is subdivided or split, the service connection shall be used only to supply the portion of such lot or parcel where such service connection is located and the owner or owners of the other lots or parcels created by such subdivision or lot split shall make application to the District for water service.

6.11 Resale or Use of Water Away from Property Served

Water supplied by the District to any customer or customer of the District shall not be resold as a commodity to any other person, either within or outside the District, except as specifically permitted in writing by the Board of Directors upon such terms and conditions as the Board of Directors may impose in its discretion. Further, water supplied by the District may be utilized only upon the property served, and shall not be transported for use upon any other property either within or outside the District, except as specifically permitted in writing by the Board of Directors upon such terms and conditions as the Board of Directors may impose in its discretion. Exceptions permitted by the Board of Directors pursuant to this Section may be revoked or modified by the Board of Directors in the event of a water shortage.

6.12 Service Connections as Property of the District

The portion of a service connection extending from the District's water main to the property line and including the meter, meter box, curb stop and check valve are the property of and shall be maintained by the District.

6.13 Owner's System

All pipes and fixtures installed and located beyond the meter or check valve to provide water services to premises shall be installed by the owner of such premises in compliance with the requirements of the County of San Bernardino and shall thereafter be maintained by the owner. The District shall not be responsible for water loss due to leaks or any other occurrence involving facilities on the owner's side of the service connection not furnished and maintained by the District.

SECTION 7.0 WATER METERS

7.1 Installation and Ownership

Water meters shall be installed by the District as near to the property line as is practicable. Meters when installed shall be owned by the District. Water meters may be locked by the District and no lock shall be altered or broken except by an authorized District employee.

7.2 Testing and Deposit

Water meters shall be tested by the District prior to installation and no meter shall be installed which registers more than two percent (2%) fast or slow. An owner requesting that a water meter serving property owned or occupied by him/her be tested at the District office shall deposit with the District an amount which in the opinion of the General Manager shall cover the cost of such testing. If the water meter registers more than two percent (2%) fast, such deposit shall be refunded but if the water meter registers less than two percent (2%) fast such deposit shall be retained by the District. The owner requesting a water meter test, or the owner's representative, may request to be present when said test is conducted. No deposit shall be required for the testing of a water meter with the District's portable test meter prior to the removal of such water meter.

7.3 Adjustments for Water Meter Errors

If a water meter is tested and found to be registering more than two percent (2%) fast or slow, the District will immediately replace the inaccurate water meter and recalculate the probable flow through the water meter during the period in which the water meter is determined by the District to have been inaccurate. If the water meter is determined to have registered fast, the District shall refund to the existing owner the excess amounts collected from such owner during the period of inaccuracy. If a water meter is determined to have registered slow, the District shall bill the owner for the water which has been consumed by such owner and not paid during the period of inaccuracy.

SECTION 8.0 TEMPORARY FIRE HYDRANT SERVICE

8.1 General

The General Manager or appointed designee may make water service available for construction work and other uses of limited duration through meters installed on fire hydrants in the District's water system. Such water service is hereinafter referred to as "temporary fire hydrant service."

8.2 Application Deposit

A person, firm or corporation seeking temporary fire hydrant service must first obtain permission from the General Manager, and complete and sign the Fire Hydrant Meter/Hydrant Use Rental Agreement. In signing the agreement, the applicant shall agree to using and operating the hydrant in accordance with instructions issued by the General Manager. At the time the Fire Hydrant Meter/Hydrant Use Agreement is signed, the applicant shall make a deposit with the District. The deposit amount required, based on meter size, is identified in the attached Exhibit A-1 – Rates, Fees and Charges.

In addition to the meter deposit, a meter set-up fee of \$50 will be charged to cover the cost of setting and picking up the meter.

8.2.1 Daily Hydrant Meter Rental Fee

A hydrant meter rental fee of \$2.50 will be charged each day the applicant has requested the use of the meter. This fee will be charged daily, whether or not water was consumed on any given day. The rental fee will commence on the date the meter is set. It is the responsibility of the applicant to notify the District when the customer has finished with the use of the meter. The daily rental charge will cease on the notification date from the applicant, whether or not the meter is picked up by the District on that date.

8.2.2 Moving of Fire Hydrant Meters

Once a fire hydrant meter has been installed in the location specified by District staff, an additional \$25 charge shall be paid before a change in location, size or type of meter is made. Any change in the location of the fire hydrant meter also must be approved by District staff.

8.3 Installation and Operation

All meters and control valves for temporary fire hydrant service shall be initially installed by District employees. The control valve must be used to control the flow of water from the hydrant, and the hydrant valve shall not be used for this purpose. Proper wrenches must be used to operate hydrant valves.

8.4 Responsibility for Meters and Valves

The applicant shall exercise due care to prevent damage to the meter and control valve. If the meter is not locked to the fire hydrant, applicant shall remove the meter and control valve and store them in a safe place at the conclusion of each workday. The applicant shall then be responsible for securing the hydrant caps snugly enough so that they cannot be removed without the use of a hydrant wrench. If a meter or control valve is damaged or lost, the applicant shall be responsible for the cost of replacement or repairs.

8.5 Unauthorized Use

Temporary fire hydrant service shall be taken only from the hydrant or hydrants designated by the District. Tampering with or using any fire hydrant for the unauthorized use of water therefrom is a criminal misdemeanor and may also result in civil penalties.

8.6 Payment of Water Usage Charges

Temporary fire hydrant service meters shall be read at least every thirty (30) days during such service and at the conclusion thereof. The customer shall be billed on the basis of such meter readings at the District's then current rate for such service at the end of each calendar month and all such bills shall become delinquent on the fifteenth (15th) day of the following month. Failure to pay any bill for temporary fire hydrant service shall result in the discontinuance of such service and the District shall apply the customer's deposit to the delinquent amount. The District shall not resume such service until said deposit is restored and any further delinquent amounts are paid in full. If at the conclusion of temporary fire hydrant service all bills for such service have been paid in full, the customer's deposit shall be refunded; provided that no such refund shall be made until all such bills are paid in full, and if this does not occur within thirty (30) days after the conclusion of such service, the District shall apply the customer's deposit to the delinquent bills and refund the balance if any to the customer or in the event that the deposit is not sufficient to fully pay such delinquent amounts bill the customer for the balance.

8.7 Discontinuance of Service

The District may discontinue temporary fire hydrant service at any time, if in the opinion of the General Manager such action is warranted to protect District property or in the event of an emergency, and the District shall exercise every reasonable effort to notify the customer of an impending discontinuance before actually discontinuing service.

SECTION 9.0 TERMINATION OF WATER SERVICE

9.1 Termination for Nonpayment

Except as hereinafter provided, the failure to pay a delinquent water bill within twenty one (21) days after the District mails notice of the delinquency shall result in the District terminating water service to the premises by locking the meter, and the District shall not unlock the meter and resume service to the premises until all delinquent amounts, plus the unlocking fee then in effect, are paid in full. Further, the failure to pay a delinquent bill for water service within two (2) months from the date such locking occurs shall result in the District deactivating the water service account. Accounts that are locked and subsequently deactivated due to nonpayment shall not be reactivated until all delinquent bills for water service including the District's reconnection/reactivation fee and any accumulated loan repayment and/or Infrastructure Repair and Replacement (IRR) charges for the time period that the meter was deactivated have been paid in full. Fees for unlocking and reactivating the account shall be established by resolution of the Board of Directors, and may be changed from time to time. Notwithstanding the above, the District will not terminate water service for non-payment for the following reasons:

- a. While a District investigation of a customer dispute or complaint is still pending;
- b. When a customer has been granted an extension of time for payment of the bill;
- c. Upon certification by a licensed physician that to do so will be life threatening, the customer is financially unable to pay the bill in the normal payment period, and the customer has executed an agreement with the District to pay the delinquency in installments over a period of time.

9.2 Notice of Impending Termination of Water Service

Upon delinquency in payment of the District's bill for water service, the District will mail written notice of impending termination of water service, postage prepaid, to the person to whom such service is billed at least fifteen (15) days prior to the date of the proposed termination of service. Written notice will include the following information:

- a. The name and address of the customer whose account is delinquent;
- b. The amount of the delinquency;
- c. The date by which payment or an arrangement for payment is required in order to avoid termination of service;
- d. The procedure for obtaining information on the availability or non-availability of financial assistance; and

- e. The telephone number of the District's General Manager or other District representative to discuss arrangements for payment.

In addition, the District will make a reasonable, good faith effort to contact an adult person residing at the premises by telephone, in person or by hanging a door tag at least ten (10) days prior to termination of service. Water service will not be terminated for non-payment of a delinquency on any Saturday, Sunday, legal holiday, or at any time during which the District's business office is not open to the public.

9.3 Voluntary Disconnection

An owner may request in writing that the water service to the premises where water service is received be deactivated or disconnected. Upon receipt of written request, the District shall deactivate and/or physically disconnect the water service to such premises. Following such a deactivation or disconnection, the owner may have the water service reactivated and/or reconnected by paying the balance on the account including the District's reactivation/reconnection fee then in effect and all accumulated loan repayment and/or Infrastructure Repair and Replacement (IRR) charges for the time period that the meter was deactivated and/or disconnected.

9.4 Emergency Discontinuance

Upon request of the owner or customer in the event of an emergency, if the control valve on the customer's side of the meter is not working properly, the District may turn off the District's curb stop. In such event, if the Water Division Supervisor determines that the customer's control valve is not operating properly through no fault of the customer, no charge shall be made for such service regardless of when the request is made. However, if such request is made outside of normal working hours of the District, field personnel and the Water Division Supervisor determines that there was no emergency or that the customer's control valve was not functioning as a result of improper maintenance, or if there was no customer control valve as required by these Rules and Regulations, the customer shall be liable to the District for the District's cost in having its employees provide such service. The customer shall remain responsible for any water which passes through the meter, notwithstanding the District's failure to comply with a request to turn off the curb stop or failure of its District's curb stop to operate correctly, it being the responsibility of the customer to regulate such flows with the installation of a control valve on the customer's side of the meter.

9.5 Vacating Premises

Owners desiring to discontinue service shall notify the District prior to the owner or tenant vacating the premises receiving water service, and an owner or customer who vacates premises without notifying the District thereof and requesting a discontinuance of service shall continue to be liable to the District for all water supplied by the District through the service connection and meter to said premises until the District is made

aware of the fact that the premises have been vacated and an Application for water services is made by the new owner or occupant of such premises.

SECTION 10.0 BILLING

10.1 Billing

The General Manager shall establish water meter reading and billing periods so that water meters will be read and bills sent on approximately the same day of each month.

10.2 Payment of Bills

The customer and/or the property owner shall be responsible for payment of the District's bills for all water which passes through the meter serving the premises. Bills for water and/or wastewater service shall be due and payable as of the date of mailing and shall be delinquent twenty one (21) days thereafter. Payment of bills shall be made in cash, by personal check (other than a second party check), certified check, credit card, debit card or other cash-equivalent. A customer whose check is returned by their bank for insufficient funds shall be charged a service charge as set forth by resolution of the District's Board of Directors. The General Manager has the discretion to require any customer to pay their bill in cash.

10.3 New Service

New water and/or wastewater services installed during and for less than a full billing period shall receive an adjustment on the District's monthly service charges based upon the number of days during said billing period when water and/or wastewater services are supplied through such new service.

10.4 Inclement Weather

At times when water meters cannot be read because of inclement weather, the District may bill based upon average monthly consumption during the immediately preceding two-month period and the prior year month, or at the customer's option, shall bill only the minimum monthly charge applicable to that water meter until conditions permit the recommencement of regular water meter readings, whereupon the District will adjust the next subsequent bill to reflect the quantity of water actually consumed and amounts paid during the period when the meters could not be read; provided that a customer shall have the option of paying more than the charge for previous average consumption based upon their estimate of the amount of water which the customer has and will consume during the period when the meter cannot be read.

10.5 Owner Responsibility

Except as otherwise provided in Section 6.1 or as hereinafter provided, the owner of the premises to be served shall be the only person authorized to apply for water and/or wastewater service from the District and shall be responsible for payment of all District fees and charges for such service. In the event of the owner's failure to pay any District

fee or charge when due, the District shall be entitled to record a lien upon the premises receiving water and/or wastewater service, or upon other property owned by the owner if authorized by law, in addition to pursuing any other remedy legally available to the District. In unusual circumstances when an occupant of premises needs water and/or wastewater service from the District before an application for water and/or wastewater service can be signed by the owner and returned to the District, the District in its discretion may accept a deposit from the occupant prior to commencement of water and/or wastewater service equal to twice the District's average monthly usage charge plus service fees for that type of service or a similar type of service, and thereafter may provide temporary water service to the premises pending receipt of an application for water and/or wastewater service signed by the owner of the premises.

10.6 Water Use without Application

A person who takes legal title to and occupies premises and thereafter uses water from an active service connection without having made application to the District for water service shall be liable to the District for water delivered from the date of the District's last meter reading of a meter at such premises, and if the meter is found to be inoperative, the billing for such water delivered shall be based upon an estimate of the amount delivered. If such a person does not make proper application for water service within ten (10) days after receipt of notification to do so from the District, or if such person does not promptly pay the District's bill for water delivered from the date of the District's last meter reading to the date of such bill, the water service to such person's premises shall be discontinued by the District without further notice.

10.7 Responsibility for Water Loss or Resulting Damage

The customer and/or the property owner shall be responsible for paying all charges for water supplied through a water meter as a result of leaks in the owner's water system or plumbing, or as a result of the owner or occupant leaving plumbing fixtures turned on during the time when the owner or occupant is absent from the premises, or for any other water loss on the owner's side of the meter, and the District shall not be responsible for any damage or monetary loss which may result therefrom. If the District is requested by an owner or occupant to turn on the water to a residence, and such residence is vacant and the District's employees ascertain that the water meter to the residence is registering, the District's employees shall not turn on the water service but shall leave the same turned off at the curb stop on the inlet side of the water meter. Upon discovery of a leak in an owner's water system, which in the discretion of the General Manager is causing a waste of water, the General Manager may discontinue service to the premises until such leak is repaired. Water service to the premises may not be resumed until all delinquent bills for water service have been paid in full.

10.8 Disputes

If a customer, within five (5) days after receipt of a bill, disputes the amount of a bill for water and/or wastewater service or that such a bill is owed by him/her, the customer

shall notify the District in writing of such dispute. The dispute may be presented to the Board of Directors at a Board meeting for their determination. The District may enter into an agreement with the customer permitting him/her to pay the bill or the adjusted balance in installments over a specified period of time not to exceed twelve (12) months. The District will not terminate water and/or wastewater service for non-payment of the bill during the term of such an agreement, so long as the customer is complying with the agreement and also paying the District's bills for subsequent water and/or wastewater service when due. However, upon breach of the agreement, the customer shall only be entitled to a ten (10) day notice of termination.

10.9 Extension of Payment Period

Within twenty (20) days after the date the District has mailed a notice of delinquency the customer may seek an extension of the payment period of a bill asserted to be beyond their ability to pay during the normal payment period. An extension may be granted by the District Administration Staff. If the customer has not requested an extension in advance and requests it at the time a serviceman arrives at the residence to lock the meter, there will be a service charge which is equal to one-half of the current locking charge.

10.10 California Public Records Act

Except as otherwise provided in the California Public Records Act, the name, credit history, utility usage data, home address and telephone number of District customers and employees shall be exempt from disclosure to the public.

10.11 Owner and Tenant/Agent Billing Agreements

Effective January 1, 2015, the Running Springs Water District is required to notify delinquent occupants of a residence that they may become a customer of the District for residential water and/or wastewater services if they are willing and able to assume responsibility for subsequent charges. Tenants may now become a co-customer of the owner and therefore, a signed agreement from both the owner and tenant must be on file at the District. Tenants, who have become co-customers of the District, will then receive the monthly Water and Sewer Bill in place of the owner on record. If the account becomes delinquent, both the owner and tenant will receive a copy of the Termination of Water Service Notice.

A deposit of \$200 will be required for tenants to establish co-customer service with the District. This deposit will be refunded at the close of account and only when the closed account is paid in full. In addition, tenants must comply with all policies of the Running Springs Water District.

Owner and Tenant/Agent Billing Agreements are available at the District office.

10.12 Extraordinary Water Loss Policy

Under the following circumstances the District may approve a request by a Customer to reduce the consumption fees portion of a Customer's high-consumption water bill, on a one-time basis, if the Customer has properly installed a Customer shut-off valve immediately adjacent to the Customers water meter, downstream of the meter.

In the event a customer incurs an extraordinary water loss due to system failure or some other catastrophic event, not due to the Customer's own negligence, the District may adjust the unit rate charged for the water to equal only the rate the District is then paying to the Crestline Lake Arrowhead Water Agency (CLAWA) plus 15%. If the District also determines that the water loss occurred outdoors and did not enter the District's sewer system, the 15% sewer usage fee component of the sewer bill will also be waived.

This adjustment will not be applied to any losses of water after the date that the Customer has been notified by the District of suspicious or unusual water deliveries through the Customer's connection. Said notification may be made by any means available including, but not limited to, telephone, electronic mail, personal contact or United States mail service.

The District may provide this one-time only reduction to the consumption fees portion of a Customer's high-consumption water bill, to Customers who make the request and then provide evidence of a new, properly installed, Customer shut-off valve installation. A Customer who receives an adjustment will not qualify for consideration of a subsequent adjustment, even if caused by a separate event.

**SECTION 11.0
COLLECTION OF DELINQUENT BILLS**

11.1 Legal Action

The District may collect delinquent bills for water and/or wastewater service by civil action in court.

11.2 Collection on Tax Bills

Pursuant to Sections 31701 and 31701.5 of the Water Code, the District may cause delinquent or unpaid charges for water and/or wastewater service which have been delinquent and unpaid for sixty (60) days or more on July 1 of any year to be added to the annual taxes next levied upon the property upon which the water and/or wastewater services were used. Such delinquent or unpaid charges shall be collected along with the annual taxes levied against such property.

11.3 Statement of Lien

Upon discontinuance of water and/or wastewater service for failure to pay delinquent rates, charges or fees, the District may immediately record a statement of lien with the county recorder of any county in which the customer responsible for paying the delinquency is known or suspected to own real property. The statement of lien shall set forth the name of the customer responsible for paying the delinquency, the amount and nature of the delinquency, and applicable filing fees, penalties, and interest. The lien shall be released upon payment in full of all amounts due.

SECTION 12.0 MAIN EXTENSIONS

12.1 Deposit and Design

If the General Manager determines upon reviewing an application for regular water service that a District water main is not available to the property, or if an existing water main is not capable because of its size or condition to provide adequate water pressure and fire protection service to the premises for which application is made, the owner-applicant shall deposit with the District concurrently with the filing of their application for water service the estimated cost, as determined by the District's engineer, of the design and installation of an extension of the District's water main or of a new main which will provide adequate water service to the applicant's premises. Thereafter, the District's engineers shall design the water main extension or new water main and the District shall have such main extension or new main installed. The main shall be designed and constructed to extend to the far boundary of the property to be served.

12.2 Oversizing, Participation, Transfer of Services

The District may elect to install a main extension or a new main of a diameter which exceeds the diameter of the main which, in the opinion of the District's engineer, would be necessary to provide water service to an applicant's premises; in which case the District shall pay the difference between that cost as estimated by the District's engineer and the cost of the labor and materials actually installed. Provided, that if a new main is installed, the District may elect to transfer services from the existing District main to the new main, and to connect to such new main new homes and business establishments constructed on properties that were adjacent to and would have received water service from such existing main, and no reimbursement shall be owing to the applicant as a result thereof.

12.3 Additional Cost or Refund

If the cost of a main extension or new main, or the applicant's share of such cost, exceeds the amount of the applicant's deposit, the applicant shall pay such excess to the District before receiving water service from the District. If the cost of such a main extension or new main, or the applicant's share thereof, is less than the amount of the applicant's deposit, the District shall refund the balance thereof to the applicant.

12.4 Reimbursement

The District may enter into a reimbursement agreement with an applicant who pays for a water main extension or new water main whereby the District shall for a period of ten (10) years or until the applicant is fully reimbursed the cost or their proportionate share of the cost of the water main extension or new water main, whichever first occurs, collect from each property owner who connects a service lateral to such water main a reimbursement charge in an amount to be determined by the Board of Directors which

represents a proportionate fair share of such cost, and pay over such charge to the applicant; provided that pursuant to Section 12.2 no reimbursement shall be owing to the applicant with respect to connections to such water main resulting from the transfer of services from an existing District main or with respect to service laterals for new homes and business establishments constructed on properties that were adjacent to and would have received water service from such existing main.

SECTION 13.0 WATER SERVICE TO SUBDIVISIONS

13.1 Application

A developer requesting water service for a subdivision within the District shall file a letter of application with the District containing or accompanied by the following:

- a. The name, address and telephone number of the developer and the developer's engineer;
- b. Three (3) copies of a map showing the topography and boundaries of the proposed subdivision and tentative lot and road layout;
- c. A legal description of the property which is proposed for subdivision; and
- d. A statement as to whether or not the subdivision of the proposed property is to be phased and, if so a projection of the timing of the development of each phase of the subdivision.

13.2 Feasibility Study and Availability Letter

Upon receipt of such a letter of Application, the District shall conduct an investigation and determine the District's cost of conducting a feasibility study with regard to providing water service to the proposed subdivision, and upon completion of such study shall transmit to the developer a statement of the District's cost for the feasibility study. Upon receipt from the developer of the cost of the feasibility study, the District staff shall undertake an investigation of the feasibility of providing water service to the proposed subdivision and shall report the findings of such study to the Board of Directors. Upon receiving the feasibility study report from the District staff, the Board of Directors shall either approve or disapprove of the District providing water service to the proposed subdivision, and if the Board approves such service, shall authorize the General Manager to issue a letter to the San Bernardino County Planning Department and the developer stating that the District's water system is available to the proposed subdivision, and that upon the developer making satisfactory financial and other arrangements with the District regarding the construction of facilities to extend the District's water system to the proposed subdivision and the construction of the water system within the proposed subdivision and otherwise complying with the District's rules and regulations regarding water service, the District will provide water service to the proposed subdivision.

13.3 Main Extensions

If the General Manager determines that it is necessary to extend a District water main or mains to bring the District's water system to the exterior boundaries of a proposed subdivision or if the General Manager determines that an existing District water main is

not of sufficient size to provide adequate water pressure and fire protection service to a proposed subdivision, the developer shall deposit with the District at the time he presents the plans and specifications for the water system for the proposed subdivision to the District for approval for purposes of the recording of the final map for the proposed subdivision the estimated cost, as determined by the District's engineer, of the design and installation of the water main extension or the water main which in the opinion of the District's engineer is needed to replace an existing inadequate water main. Such amount shall be utilized by the District to design and install such water main extension or new water main; provided that the District may determine to install a main of greater size than, in the opinion of the District's engineer, would be necessary to supply the proposed subdivision with water service, in which event the District shall be responsible for the difference between that cost as estimated by the District's engineer and the cost of labor and materials actually installed. If the cost of the design and installation of the water main extension or new water main, not including the cost differential, if any, for oversized pipe exceeds the amount of the developer's deposit, the District shall notify the developer thereof in writing and the developer shall pay such excess to the District before receiving water service for the subdivision from the District, or if the cost of the design and installation of such water main extension or new water main is less than the amount of the developer's deposit, the District shall refund the balance thereof to the developer.

13.4 Reimbursement

Upon completion of the installation of a main extension or new water main and upon payment by the developer of the full amount of the cost of the design and installation of the water main extension or new water main, not including the cost differential, if any, for oversized pipe, the District may enter into a reimbursement agreement with the developer whereby the District shall for a period of ten (10) years or until the developer is fully reimbursed the cost of the non-oversized portion of the water main extension or new water main, whichever first occurs, collect from each property owner who connects a service lateral to such water main, a reimbursement charge in an amount to be determined by the Board of Directors which represents a proportionate fair share of such cost, and pay over such charge to the developer; provided that if such a water main replaces an existing District water main, the District may elect to transfer existing water customers from such existing main to the new main and to connect to such new main new homes and business establishments constructed on properties that were adjacent to and would have received water service from such existing main, and no reimbursement shall be owing to the developer as a result thereof.

13.5 On-Site Water System

The developer shall also construct and install at the developer's sole expense the water system within the proposed subdivision, including service lines from the main to the lots to be served. The plans and specifications for such water system shall be prepared in accordance with the District's standard construction specifications and such water system shall be constructed and installed in compliance with the District's requirements.

13.6 Plan Check

A developer requesting approval of the plans and specifications for a water system for a proposed subdivision for purposes of the recording of the final map for the proposed subdivision with the County Recorder of the County of San Bernardino shall pay to the District the District's plan check fee and shall concurrently therewith deliver to the District the following documents:

- a. Three (3) copies of the plans and specifications for the water system;
- b. A performance bond in a form and issued by a surety acceptable to the District, naming the District as obligee, and issued in a principal amount equal to 100% of the total estimated cost, as determined by the District's engineer, of the construction of the water system and facilities shown in said plans, and conditioned upon the satisfactory completion of the construction and installation of the water system and facilities and guaranteeing that such water system and facilities shall be free from defects resulting from faulty materials or workmanship for a period of two (2) years from the acceptance thereof by the District;
- c. A labor and material payment bond in a form and issued by a surety acceptable to the District naming the District as obligee, and issued in a principal amount equal to 100% of the total estimated cost as determined by the District's engineer, of the construction and installation of the water system and facilities and conditioned upon the payment by the developer and the developer's contractor of claims of all persons entitled to file mechanic's liens or stop notices pursuant to Civil Code Secs. 3110, 3111, 3112 and 3118.

Upon delivery of such plans, documents and the plan check fee, the District's engineer shall review the plans and specifications and if they are prepared in conformance with the District's requirements and if such other documents are in satisfactory form, shall certify same to the Board of Directors, whereupon the Board of Directors shall authorize the General Manager to make the required certifications to the County of San Bernardino for recording of the final map for the subdivision, and the District shall thereupon also issue to the developer a construction permit authorizing construction of the water system and facilities for the subdivision.

13.7 Construction and Inspection

Prior to commencing construction of a water system in a proposed subdivision or any required extension or replacement of a District water main (hereinafter collectively referred to as "water system"), the developer shall notify the District and shall deposit with the District the District's inspection fee for inspecting the installation and construction of the water system. The District shall inspect the construction and installation of the water system, to insure that such construction is accomplished in

compliance with the District's requirements. The District's employees and agents who perform such inspection shall have no duty to the developer or the developer's contractor and shall inspect solely for the District to insure that the water system is constructed and installed in accordance with the District's requirements.

13.8 Acceptance of Water System

Upon satisfactory completion of the construction and installation of a water system in a subdivision and any required extension or replacement of a District water main, as determined by the District's engineer, the developer or their contractor shall file a notice of completion with the County Recorder of the County of San Bernardino and shall furnish the District with a conformed copy of such notice containing thereon the stamp of the Recorder indicating the time and date of recording and the book and page number where said notice was recorded. Upon the expiration of the statutory period for the filing of mechanic's liens, the developer or the developer's contractor shall deliver to the District copies of all mechanic's liens which have been recorded and lien waivers or releases from all persons filing such mechanic's liens and from all other subcontractors, material and equipment suppliers, and all persons supplying labor for the construction and installation of the water system indicating that all such persons have been paid in full for the labor, equipment or materials supplied by them for such construction. At such time the developer shall also deliver to the District (1) duly executed and acknowledged grants of easements for all pipelines and other water system facilities which have been constructed and installed other than in the public streets within the subdivision, (2) a duly executed and acknowledged grant deed conveying unto the District all water system facilities installed within the subdivision and all extensions of the District's water mains to provide water service to the subdivision, and (3) a duly executed and acknowledged grant deed conveying to the District all water rights pertaining to the subdivision. All such instruments shall be in a form acceptable to the District's legal counsel. The developer shall also deliver to the District one set of reproducible record drawings for the water system and one set of prints showing the exact locations, depths and descriptions of all water system facilities within the subdivision. Upon receipt of all such drawings and documents, and upon receiving written certification from the District's engineer that the water system has been constructed and installed in accordance with the District's requirements, the Board of Directors shall adopt a resolution accepting the water system and all such grants of easements and deeds and authorizing the recordation of same.

SECTION 14.0 PUBLIC FIRE PROTECTION

14.1 Use of Fire Hydrants

Fire hydrants are installed in the District's water system for the use of District employees and firefighters and employees and firefighters of other fire protection agencies, and no other person shall use a District fire hydrant without first obtaining the written approval of the General Manager. A person obtaining such written approval shall operate the specified hydrant or hydrants in accordance with instructions issued by the General Manager.

14.2 Relocation or Replacement of Hydrants

Any person requesting the relocation or replacement of a fire hydrant in the District's water system shall be responsible for all costs of such relocation or replacement, and shall deposit with the District at the time of such request, the estimated cost of such relocation or replacement, and if the actual cost thereof exceeds the amount of such deposit, shall pay the balance of such cost to the District within ten (10) days after receipt of an invoice therefor from the District, or if such cost is less than the amount of such deposit, the District shall refund the balance to the depositor.

14.3 Additional Hydrants

If a property owner requests installation of additional fire hydrants in the District's water system in order to comply with increased requirements for the spacing of hydrants necessitated by a change in the zoning for the owner's property or an intended change in use of such property, or if the District determines upon examining an application for water service that the intended use of the property for which such application is made will necessitate the installation of additional hydrants, the owner of such property shall be responsible for the cost of installing such additional hydrants and shall deposit with the District the estimated cost of such installation, and if the actual cost thereof exceeds the amount of such estimate, shall pay the balance of such cost to District within ten (10) days after receipt of an invoice therefor from the District, or if such cost is less than the amount of such deposit, the District shall refund the balance to such owner.

14.4 Maintenance

The District's personnel shall maintain all fire hydrants installed in the District's water system. If a fire hydrant is damaged by act of any person, such person shall be responsible for the cost of the repair or replacement of said hydrant.

SECTION 15.0 PRIVATE FIRE PROTECTION SERVICE

15.1 Application and Deposit

A person seeking private fire protection service from the District shall enter into an agreement with the District setting forth the terms and conditions of such service. Each such applicant shall deposit with the District, concurrently with the execution of such agreement, an amount equal to the estimated cost of the installation of the fire service connection which may include at the General Manager's discretion, a shut-off valve, meter box and meter, back-flow protection device and detector check meter. If the actual cost of such installation exceeds the amount of such deposit, the applicant shall pay to the District the balance of such cost within ten (10) days after receiving an invoice therefor from the District, or if such actual cost is less than the amount of such deposit, the District shall refund the balance to the applicant. The installation of all fire service connections shall be made by District employees or a contractor selected by the District.

15.2 On-Site System

Each applicant for private fire protection service shall be responsible for and bear the entire cost of the installation of the building sprinkler system and other facilities to be installed on the applicant's property beyond the fire service connection. Upon the installation of such facilities and the fire service connection, the applicant shall be responsible for the maintenance and annual testing of the back-flow protection device, check valve and detector check meter, if any, and the facilities installed on the applicant's property to provide fire protection service. If the District finds that a back-flow protection device, check valve or detector check meter is not operating properly, it may repair or replace same and charge the owner the cost thereof.

15.3 Cross-Connections

There shall be no connection between a private fire protection service and any other water distribution system on an applicant's property and such private fire protection service shall be equipped with back-flow protective devices to protect against contamination of the public water supply.

15.4 Use of Water

There shall be no water used through a private fire protection service except for extinguishing fires and for testing the building sprinkler system and other facilities on the applicant's property. Any consumption recorded on a meter for private fire protection service which relates to water which is used for purposes other than those hereinabove permitted shall be billed at twice the District's regular domestic water rate.

15.5 Monthly Rates

Each person receiving private fire protection service from the District shall pay a monthly rate for such service to be established by the District's Board of Directors upon receipt of the application and which may be revised from time to time. The current rates are identified in the attached Exhibit A-1 – Rates, Fees and Charges.

15.6 Storage Tanks

No water storage tank connected to a building sprinkler system shall be filled with water from the private fire service connection without the written approval of the General Manager. All water thus used shall be billed at the District's regular domestic water rates.

15.7 Violation of Agreement

If water is used from a private fire service connection in violation of the agreement for such service or this Ordinance, the District may disconnect and remove the fire service connection.

15.8 Water Pressure

The District does not by entering into an agreement for or providing private fire protection service assume responsibility for loss or damage due to lack of water or pressure and agrees only to furnish such quantities and pressures as are available in its general distribution system. Private fire protection service is subject to shut-downs and variations required by the operation of the District's water system.

15.9 Commencement of Service

When a fire service connection is installed, the valve governing same shall be closed and sealed, and remain so until a written order is received from the applicant to have the water turned on. If the District does not require a meter in such a connection and if water is used through the connection for any purpose other than extinguishing fires, the District may install a meter in the fire service connection at the applicant's expense.

SECTION 16.0
RESIDENTIAL LANDSCAPE IRRIGATION METER SERVICE POLICY

16.1 Application and Deposit

A District customer who has an active residential water meter serving a single family residence on a one acre or less in size parcel may request that a separate residential landscape irrigation meter be installed to service the same property. The residential landscape irrigation meter will be installed by the District and paid for by the customer at the actual cost of material, labor, and equipment, including District overhead (“time-and-material”). To initiate a request for residential landscape irrigation meter service, the customer will submit a completed Residential Landscape Irrigation Meter Service Application to the District Office. The size of the requested meter will be specified at the time of application.

An estimated residential landscape irrigation meter connection deposit is required prior to installation. The deposit amount required, based on meter size, is identified in the attached Exhibit A-1 – Rates, Fees and Charges. In the event the actual time-and-material installation cost is less than the estimated meter connection deposit, the difference will be refunded to the customer. If the actual time-and-material installation charge is more than the estimated meter connection deposit, the customer will be billed for the difference.

The installation of all irrigation meter services shall be made by District employees or a contractor selected by the District.

16.2 Irrigation Meter Connection

It will be the responsibility of the customer to make the connection from the customer’s landscape irrigation system pipeline to the District residential landscape irrigation meter.

16.3 Backflow Prevention

If the District determines a backflow prevention device is warranted, the customer shall install an approved device on the customer’s irrigation system pipeline at a suitable location as determined by the District. To activate the residential landscape irrigation meter service, the District requires that the device be initially tested and certified by a San Bernardino County Certified Backflow Tester. Thereafter, annual testing of the backflow device at the customer’s expense is required to keep the residential landscape irrigation meter service active.

16.4 Cross-Connections

There shall be no connections between the residential landscape irrigation meter service line and any other residential plumbing on the customer’s property. Failure to abide by this provision will result in termination of the residential landscape irrigation

meter service. The customer agrees to make the customer's water system available for District inspection to determine that compliance with this stipulation is maintained.

16.5 Monthly Service Charge

Each customer that receives active residential landscape irrigation meter service from the District shall pay a monthly service charge. The monthly service charge is established by the District's Board of Directors and may be revised from time to time. The current rates are identified in the attached Exhibit A-1 – Rates, Fees and Charges.

16.6 Water Usage Charge

The water usage charge for water consumed and recorded by a residential landscape irrigation meter will be the same as the water usage charge for water consumed and recorded by a normal residential meter. The residential landscape irrigation meter service water usage charge is established by the District's Board of Directors and may be revised from time to time. The current rates are identified in the attached Exhibit A-1 – Rates, Fees and Charges.

16.7 Not-Applicable Fees and Charges

Residential landscape irrigation meter service will not be subject to the District's Water Facilities Capacity Charge, any Infrastructure Repair and Replacement (IRR) charges or the Residential Wastewater Service System Usage Charge.

16.8 Other Terms, Conditions, Fees and Charges for Service

With the exception of the non-applicable fees and charges identified above, residential landscape irrigation meter service will be subject to all applicable terms, conditions, fees, and charges for water service. This includes the terms and conditions set forth in the District's Rules and Regulations for Water and Wastewater Service, as well as the fees and charges identified in the most recent Resolution setting forth fees and charges for the District. The current rates are identified in the attached Exhibit A-1 – Rates, Fees and Charges.

16.9 Violation of Agreement

Violation of any of the provisions of this Section may result in termination of residential landscape irrigation meter service and will be subject to other remedies as are set forth in the District's Rules and Regulations for Water and Wastewater Service.

**SECTION 17.0
USE OF THE PUBLIC WASTEWATER SYSTEM**

17.1 Use of Public Sewers

Use of public sewer shall be specified in Chapter 3, General Regulations, of the Uniform Plumbing Codes and the provisions of this Ordinance. The Board may adopt rules and regulations on permissible discharges to the sewer system; providing for the control of prohibited wastes; grease, oil and sand interceptors; maintenance of flow equalizing systems; swimming pool discharges, and tests. The determination of a permissible discharge may require an acceptable analysis or tests from the discharges as evidence that the discharged wastes will not adversely affect the sewer system and/or treatment facilities.

17.2 Occupancy Prohibited

No building, industrial facility or other structure shall be occupied until the owner of the premises has complied with all rules and regulations of the District.

17.3 Sewer Required

The owner of any house, building, or property used for human occupancy, employment, recreation, or other purposes situated within the District and abutting on any street in which there is or shall have been located a public sewer of the District, is hereby required at their expense to connect said building directly with sewers of the District, in accordance with the provisions of this Ordinance, and to pay the District's rates and charges then in effect for connection to the public sewer, within such time as the District may require, but in no event more than 90 days after installation of the sewer. The District, in its discretion, may suspend enforcement of this requirement for any property connected to a septic system on the date of adoption of this Ordinance, provided that such property is not located within the Deep Creek watershed (generally north of Highway 18), and further provided that enforcement shall not be suspended beyond the date of a change in ownership of any such property.

17.4 Septic Tank System Use

Use of a septic tank system within the District is generally prohibited. The District may grant an exemption to this prohibition if the property using a septic tank is two hundred (200) feet or more from the nearest District sewer line and the septic tank system is fully approved, permitted and operational in accordance with the regulations of the San Bernardino County Department of Building and Safety and Department of Environmental Health Services.

The District will not grant such an exemption if an assessment district or other regulation prohibits use of a septic tank system in a particular area.

If a property is already using a septic tank and the septic tank is not failing and the property is outside an assessment district boundary and the property is not otherwise required to connect to the wastewater system, then the District may allow the property to continue using a septic tank so long as the requirements of this section are met.

SECTION 18.0
BUILDING SEWER AND CONNECTIONS TO PUBLIC WASTEWATER SYSTEM

18.1 Permit Required

No person shall make a connection to any public sewer without first obtaining a written permit from the District and paying all required fees. The owner or his agent shall make application on a form furnished by the District. The permit application shall be supplemented by any plans, specifications or other information considered pertinent in the judgment of the General Manager.

18.2 Connection

The connection of the building sewer to the public sewer system shall be inspected by the District and if found to be satisfactory, the District shall affix an approval tag to the connection. The building sewer shall be inspected by the Department of Building and Safety of the County, but not before the approval tag of the District has been affixed.

18.3 Rules and Regulations

The District may adopt, subject to approval of the Board, rules and regulations for making connection to public sewers, including but not limited to permit, connection and inspection fees, procedures for installation for services, notices, testing and other regulations.

18.4 Separate Sewers

Reference is made to the Uniform Plumbing Code – Independent Systems.

18.5 Old Building Sewers

Old building sewers may be used in connection with new buildings only when they are found, on examination and tested by the District, to meet all requirements of this Ordinance. If an existing building sewer is not to be used after demolition of a building, the building sewer must be disconnected at the property line and the building sewer remaining between the property line and the public sewer must be capped by the owner at the property line. Disconnection and capping after demolition is subject to inspection and approval by the District.

18.6 Building Sewer Too Low

Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such building drain shall be lifted to the public sewer by a pump or other approved means installed, owned and operated by the owner.

18.7 Backwater Valve Required

The District may require the installation of an approved backwater valve as specified in the Uniform Plumbing Code, wherever the lowest plumbing fixture in the building is lower than the elevation of the sewer in the street, or whenever deemed necessary by the District to protect the owner's property.

18.8 Illegal Connection

No person shall make connection of roof downspouts, exterior foundation drains, areaway drains, or other sources of surface runoff or groundwater to a building sewer or building drain which in turn is connected directly or indirectly to a public sewer.

18.9 Local Regulations

The connection of the building sewer into the public sewer or sewer lateral shall conform to the requirements of the District, shall be under District jurisdiction, and shall be installed by a licensed and insured contractor.

18.10 Building Sewer Maintenance

The user shall bear the burden and all expenses related to maintenance and repair or replacement of the building sewer.

18.11 Inspection of Private Property

The District's inspector shall inspect, as often as they deem necessary, buildings and premises for the purpose of ascertaining any violation of the purpose or provisions of this Ordinance and of any other law or standard affecting sewer service. Whenever the District's inspector finds it necessary to make such an inspection, the inspector is authorized to enter such building or premises at all reasonable times to inspect the same or to perform any duty authorized by this Ordinance; provided that if such building or premises is occupied, the inspector shall first present proper credentials and request entry, and if such building or premises is unoccupied, the inspector shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and request entry. If such entry is refused, the inspector shall have recourse to every remedy provided by law to secure entry, and shall be authorized to obtain a proper inspection warrant or other remedy provided by law to secure entry. Owners, occupants or any other persons having charge, care or control of any building or premises shall, after proper request is made as herein provided, promptly permit entry therein for the purpose of inspection and examination pursuant to this Ordinance.

SECTION 19.0 PUBLIC SEWER CONSTRUCTION

When deemed appropriate by the District, in its discretion, the District may reimburse the user for maintenance costs incurred by the user to remove a blockage in the public sewer which prevents proper operation of the user's building sewer. Conversely, the District may bill the user for costs incurred by the District to remove a blockage produced by use of the user's building sewer, and to pursue any and all remedies for nonpayment within 30 days thereafter.

19.1 Approval Required

No person shall construct or extend any public sewer without first obtaining written approval from the District and paying all fees. The provision does not apply to condominiums and private sewers and appurtenances under contracts entered into with the District. Design and construction of public sewer systems shall be in accordance with the Design Criteria and Technical Specifications of the District.

19.2 Bonding of Improvements

A Faithful Performance Bond, when required, shall be furnished by the owner to the District. The bond shall be not less than one hundred twenty five percent (125%) of the construction estimate as approved by the engineer. The bond shall guarantee the completion of construction of those sewerage facilities proposed. The bond should be accompanied by an improvement agreement between the owner and the District.

19.3 Liability

The District and its officers, agents, and employees shall not be responsible for any liability, injury or death to any person, or damage to any property arising during, or growing out of the performance of any work or construction by any applicant, contractor or owner. The applicant shall hold the District and its officers, agents, and employees harmless from any liability imposed by law upon District or its officers, agents, or employees, including all costs, expenses, fees and interest incurred in defending same, or in seeking to enforce this provision. Applicant shall be solely liable for any defects in the performance of his work, or any failure which may develop therein.

19.4 Subdivisions

The developer or his engineer shall contact the District to determine whether or not sewer service is feasible. They will furnish a tentative tract map showing lot sizes, street layout, and elevations based on USGS datum, points of connection to the District's sewers, possible pump station and flow data based on the design criteria of the District. The District Engineer will review the tract map and determine whether sewer service is feasible and whether any oversizing will be required to facilitate extension of the District's system.

19.5 Main Extensions Other Than Subdivisions

Main extensions to serve one or more parcels of land may be made by the owner or owners of said land. The owner or his engineer shall follow the same procedure for main extensions as outlined for subdivisions in Section 20.4. In lieu of this procedure, the owner or owners may request the District to make the necessary investigation, prepare plans and have the work constructed. The owner or owners shall advance all necessary funds for the investigation, plan preparation and construction prior to the District commencing any of the work described above.

19.6 Main Service Charge

When persons, owning land to which sewer mains are adjacent in streets or rights-of-way (which mains have been installed by the District or an applicant for service) make application for sewer service to a lot, parcel, tract or subdivision, they shall reimburse the District or applicant for their proportionate share of the cost of said main. Their proportionate share of said cost shall be cost per frontage foot for benefited land, as set forth in the application and so determined by the District.

19.7 Payment of Cost of Oversized Mains

In the event the District elects to install sewers of greater size than, in the opinion of the District, shall be adequate to supply any new subdivision with sewer service, the owner or owners of the proposed subdivision shall not be required to pay more than the cost of mains which, in the opinion of the District, are adequate to supply such subdivision with sewer service. The District shall pay for the incremental cost of the oversized pipeline facilities, but no other adjustment of the cost of installation shall be made.

19.8 Refunds

When sewer main extensions are made and paid for by an applicant and said main extension shall be of benefit to another person or persons in the future, said applicant may enter into a refund agreement with the District. Said refund agreement shall provide for a refund payment from main service charges collected by the District for service connection to a main, paid for by a new applicant. Said refund shall be computed on the basis of actual cost to the person making the original main extension per frontage foot benefited for which the main service charge is collected. All refund agreements shall become null and void ten years from the date first written.

19.9 Plans and Specifications

The developer, their engineer and any other person proposing the construction of public sewers within the District will prepare plans and specifications for construction of said sewer in accordance with the District's "Design Criteria and Technical Specifications". Plans and specifications along with a copy of the tract map indicating sewer easements

shall be submitted to the District Engineer for approval. This submittal will not relieve the developer or other persons constructing public sewer facilities from compliance with other requirements of State and local agencies.

19.10 Plan Checking

The District Engineer will review the sewer plans for compliance with its requirements and will approve such plans after the following conditions have been satisfied:

- a. The District has certified the plans as complying with District's rules and regulations and as being in accordance with master sewerage plans for the area.
- b. The applicant has paid the required plan checking fee, the schedule for which shall be adopted by the Board.

19.11 Construction

The developer shall arrange for construction of facilities in accordance with the approved plans and specifications and construction methods as set forth by the District's rules and regulations. A five day advanced notice to start construction is required along with approval for construction plans and specifications. Construction of public sewers or sewer laterals as defined by this Ordinance shall be performed by a person or contractor duly licensed by the State of California.

19.12 Inspection

All public sewer construction and/or repair work shall be inspected by the District, its representative or an inspector acting for the District to insure compliance with all requirements of the District. No construction shall be accepted until it has been inspected and approved for acceptance. No work shall commence until the required inspection fee has been paid. The schedule of inspection fees shall be determined by the General Manager or District Engineer.

19.13 Service Refused

The District may refuse service for noncompliance with its rules and regulations, ordinances, resolutions and policies, and for failure to pay applicable fees.

19.14 Acceptance of facilities

Before the District will accept sewers and/or appurtenances into its maintained system, the developer shall furnish:

- a. A recorded Notice of Completion and evidence that the sewer work has been completed in accordance with approved plans and specifications.

- b. One set of reproducible as-built plans, plus one set of prints, showing exact locations, depths and description of all facilities in both hard copy and electronic format.
- c. Original recorded easement documents for sewers not in public property, or not within a tract boundary.
- d. The original recorded quitclaim deed transferring the title of the sewer facilities to the District.
- e. A letter from the District Engineer certifying that facilities were installed according to plans and specifications.
- f. Operation and maintenance manuals on any pump stations and/or mechanical equipment.

19.15 Easement

Where it is necessary to cross private property to achieve construction, or to provide access for future sewers serving adjacent or upstream tributary land, the following procedure shall be used in the preparation, review and processing of the easements and easement documents. The developer shall prepare easement documents with description for all sewer mains which do not lie within public roads, are outside of recorded tracts, and/or are on private property. The easements shall be delineated on the plans and the recording data shall be shown on the as-built plans. All District sewer easements shall be of not less than ten feet in width. The District Engineer shall review easement documents with descriptions as part of the plan review. The developer shall have them executed, notarized, and submit completed documents to the District for recording.

SECTION 20.0 PERMITS AND FEES

20.1 Permit Required

No authorized person shall uncover, make any connection with or opening into, use, alter, or disturb any public sewer or perform any work on any public sewer and lateral sewer without first obtaining a written permit from District.

20.2 Permit Procedure

The Board shall adopt procedures for application and approval of permits regulating the use and construction of the sewer facilities. Permits shall specifically state the obligations and liability for costs of the permittee.

20.3 Street Excavation Permit

A separate permit must be secured from the County, or any other agency having jurisdiction there over, by the owners or contractors intending to excavate in a public street for the purpose of installing sewers or making lateral connections.

20.4 Connection Permit

A connection permit will not be issued until the County Road Department Excavation Permit and/or State Highway Encroachment Permit, as required, is issued. The connection permit will not be issued until the required set of prints have been submitted and all fees paid.

20.5 Fee Requirements

The Board shall adopt, by resolution, fees for the issuance of permits and for special services, including but not limited to, inspection, construction, plan checking and preparing special studies, and may further require fees for annexations, connections and use of sewer facilities. The current rates, fees and charges are identified in the attached Exhibit A-1 – Rates, Fees and Charges.

SECTION 21.0 VIOLATION, ENFORCEMENT AND PENALTIES

21.1 Unlawful Wastewater Disposal

It is unlawful for any person to connect, construct, install, provide, maintain or use any other means of sewage disposal from any building in the area served by sewer of said District except as provided herein. Septic tank use must be in accordance with Section 17.4 of these rules and regulations. Any person violating this provision may be subject to the penalties provided by law and these rules and regulations.

21.2 Unlawful Water Use

It is unlawful for any person to connect and otherwise extract water from the District's water supply and distribution system other than as stated in these rules and regulations. Any person violating this provision may be subject to penalties provided by law and these rules and regulations.

21.3 Protection from Damage

No person shall willfully or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment that is part of the District's water or wastewater systems. Any person violating this provision may be subject to the penalties provided by law and these rules and regulations.

21.4 Investigation Powers

No person may represent himself or herself to be an authorized employee or representative of the District except as designated by the General Manager. Each duly authorized employee and representative of the District shall carry evidence establishing his or her position as such.

Upon exhibiting the proper credentials and identification, such an authorized employee or representative of the District shall be permitted to enter in and upon any and all buildings, industrial facilities and properties for the purpose of inspection, re-inspection, observation, measurement, sampling, testing or otherwise performing such duties as may be necessary to assure compliance with the provisions of these rules and regulations of the District. If such entry is refused the District shall have recourse to every remedy provided by law to secure entry.

Such an entry for inspection shall only be done upon two (2) days prior notice to the owner/customer of the subject property unless an emergency situation exists. Such notice may be given in writing or by phone or in person. The investigation shall be made with the consent of the owner/customer, or the tenant, of the subject property. If consent is refused, then the District may proceed to obtain a warrant as provided by law.

21.5 Violation

Any person found to be violating any provision of these rules and regulations of the District may be served by the District with a written correction notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations.

Whenever a violation creates an emergency or hazard, the notice of violation may be oral, followed by a written notice as soon as reasonably possible and may require immediate correction.

Each person may be held strictly responsible under the provisions of this or any other ordinance, resolution, rule or regulation of the District for their own acts and for any and all authorized acts of their authorized representatives or employees.

Upon being notified by the District or authorized representative of any violations of these rules and regulations, the person having responsibility for the property, facility or work causing the violation shall immediately cease and desist from such violation and shall cause the commencement of such measures and procedures as may be necessary to correct the violation within the time specified by the District.

If the violation or hazard is not terminated and corrected during the length of time specified, the District shall cause the violation or hazard to be corrected and shall collect from the owner the cost thereof.

21.6 Public Nuisance

Continued habitation of any building or continued operation of any commercial facility in violation of the provisions of these rules and regulations or any other ordinance, resolution, rule or regulation of the District shall constitute a public nuisance. The District shall cause proceedings to be brought for the abatement of the occupancy of the building or commercial facility during the period of such violation.

21.7 Disconnection of Service

As an alternative method of enforcing the provisions of this or any other ordinance, rule or regulation of the District, the District, at its discretion, shall have the power to turn off and/or to disconnect the customer from the sewer and/or water system or facilities of the District.

Upon turn off and/or disconnection the District shall estimate the cost of the turn off and turn on and/or the estimated cost of the disconnection and reconnection to the system and before such user is turned on and/or reconnected the District shall require payment or a deposit covering the estimated costs. This amount may be in addition to any outstanding fees owed by the customer to the District.

The District shall refund or credit any part of such deposit remaining after payment of all costs of turn on or turn off and/or disconnection of service and reconnection or shall bill the customer for any related costs in excess of the deposit.

The District shall give ten (10) days written notice to the occupant, owner or user of the premises or property that said system will be shut off or disconnected, unless the San Bernardino County Health Department determines that an emergency situation exists that endangers the health of people within the area, in which case written notice of the turn off and/or disconnection need to be given. Where there is a shut off and/or disconnection, a "Notice of Turn off and/or Disconnection" shall be posted on the property. During the period of such disconnection, occupancy of such premises by human beings shall constitute a public nuisance, whereupon the District shall cause proceedings to be brought for the abatement of the occupancy of said premises by human beings during the period of such disconnection. In such event, and as a condition of reconnection, there is to be paid to the District a reasonable attorney's fee and cost of suit arising in said action.

Neither the District nor any of its employees or agents may be held accountable for any damage which may occur to a person or a property during or because of disconnection of service.

21.8 Abatement

During any period of disconnection of service from an authorized water or wastewater system, habitation of affected premises by humans may constitute a public nuisance whereupon the District may cause proceedings to be brought for the abatement of such nuisance. This provision shall not apply to any premises that are not required by these rules and regulations to be connected to the District's water and/or wastewater system.

21.9 Liability for Violation

Any person violating any of the provisions of any ordinance, resolution, rule or regulation of the District shall be liable to the District for all expense, loss and damage accruing to the District by reason of such violation, including reimbursement of attorney fees. This provision shall be enforced in addition to any other remedy provided by law to the District because of such violation.

21.10 Civil Enforcement

The District hereby declares that the foregoing procedures are established as a means of civil enforcement of the terms and conditions of its ordinances, resolutions, rules and regulations, and not to affect forfeiture.

21.11 Variance

When any person claims special circumstances and is of the opinion that a variance is necessary or that any provision of any ordinances, resolutions, rule or regulation of the District is unjust or inequitable as applied to his or her facilities or property, and that such special circumstances make his or her facilities or property different from any other properties which are subject to the provision disputed, that person may file a written statement request for variance with the District stating the special circumstances, citing the provision disputed and requesting suspension or modification of that provision as applied to his or her facilities or property.

The Board shall hold a hearing on the written request for variance within ninety (90) days of the receipt of the request, at which the person requesting the variance shall put forth all evidence of special circumstances necessitating the variance. Within a reasonable time after the hearing, the Board may either deny, approve, or conditionally approve with conditions the variance. Any approval or conditional approval shall include findings that (1) a special circumstance exists, which causes the property in question to differ from other properties in the District, (2) strict enforcement of the rule in question would be unjust or inequitable in the circumstances, (3) the variance is reasonably necessary to avoid or mitigate the unjust or inequitable condition, and (4) the variance will not negatively impact the health, safety, and welfare of the community.

The Board may impose any conditions on the variance, including limitations on the scope or time of the variance. Any variance with a stated time limitation shall automatically expire unless extended by the Board. In no event, regardless of the stated conditions, shall any variance remain in effect beyond the time in which the special circumstances exist.

A variance may be revoked where: (1) the variance is no longer necessary due to changed circumstances, (2) the conditions on the variance are not strictly complied with, or (3) the variance negatively impacts the health, safety, and welfare of the community or the public interest otherwise requires revocation. The Board shall give notice of an intent to revoke and a hearing on the proposed revocation prior to completing any revocation. The Board may, in its sole discretion, provide an "amortization period," constituting a reasonable period of time in which a variance will terminate.

Nothing herein shall create any right to approval of a request for a variance. A variance shall not modify any fee or fees imposed by the District.

21.12 Appeals

If the District determines to impose a fine on a person ("violator") who has violated any provision of these rules and regulations, the District shall cause a written notice of the violation to be sent to the violator. The notice shall provide, in sufficient detail, the violation(s), the amount of the penalty being imposed, and the date or times by which the penalty shall be paid to the District. Service of any notice required under this Section

shall be made by personal service in the same manner as a summons in a civil action; or registered United States mail, which service shall be completed at the time of deposit into the United States mail.

A violator may appeal the imposition of any penalty by submitting the appeal in writing to the District. All appeals shall be submitted to the District within thirty (30) calendar days of the date of the notice of the imposition of the penalty.

The District General Manager, or his/her designee, shall review the appeal and any related information provided by the violator and, if necessary, cause an investigation and report to be made concerning the imposition of any penalty. The District General Manager, or his/her designee, shall have twenty (20) calendar days from the submission of the appeal to render a decision on whether to grant the appeal and mail notice thereof to the violator. If the General Manager, or his/her designee, grants the appeal and determines that any penalty was imposed in error or should be reduced, within fifteen (15) calendar days of such determination, the District General Manager, or his/her designee, shall either refund the penalty or any portion thereof, if paid by the violator, for which the appeal was granted, including any additional penalties or interest related thereto and give written notice thereof or determine and correct the amount of the penalty for the violator, including any additional penalties or interest related thereto and give written notice thereof.

The decision of the District General Manager, or his/her designee, may be appealed by the violator to the Board. Such appeal must be submitted in writing and filed with the District within fifteen (15) calendar days of the date of decision of the General Manager, or his/her designee. The Board shall conduct a hearing on such appeal at its next regularly scheduled Board meeting; provided, however, the Board shall have received the notice of appeal at least fifteen (15) calendar days prior to such meeting. If the appeal is not submitted within at least fifteen (15) calendar days prior to a regularly scheduled Board meeting, then the hearing shall be held at the next following regularly scheduled Board meeting. A notice of the hearing shall be mailed to the violator at least ten (10) calendar days before the date fixed for the hearing. The Board shall review the decision of the District General Manager, or his/her designee. The determination of the Board shall be conclusive and constitute a final order. Notice of the determination by the Board shall be mailed to the violator within ten (10) calendar days of such determination.

If the appeal is granted in whole or in part, within ten (10) calendar days from the date of the mailing of the notice of determination by the Board, the District shall either refund the penalty or any portion thereof, if paid by the violator, including any other penalties or interest related thereto for which the appeal was granted or determine and impose the correct amount of the penalty for the violator, including any other penalties or interest related thereto.

If the appeal is denied or granted in part, the violator shall have twenty (20) calendar days from the date of the mailing of the notice of determination by the Board to pay the penalty, and any other penalties and interest fixed by the Board.

Until the conclusion of the appeal process, all provisions and decisions under appeal shall remain in full force and effect until the conclusion of the appeal process.

If a violator subject to the imposition of a penalty pursuant to these rules and regulations, after notice has been provided as set forth herein, fails to pay the penalty when due, the violator shall become liable to the District for interest at the rate of one percent (1%) per month on the delinquent penalty(ies) amount.

21.13 Penalties for Violation

As authorized by law, with regard to construction and use of water and wastewater facilities, any person violating any of the provisions of these rules and regulations and failing to correct such violation within the time allowed therefore, shall be guilty of a misdemeanor.

As authorized by law, any person convicted of a violation of any provision of these rules and regulations, unless otherwise stated specifically provided in these rules and regulations, shall be punishable by a fine or by imprisonment in the County jail or by both such fine and imprisonment.

21.14 Continuing Violations

Each person who violates any provision of these rules and regulations may be guilty of a separate offense for each and every day during any portion of which such violation is committed, continued or permitted by such person and may be punished accordingly.

SECTION 22.0
STANDARDS FOR DOMESTIC WATER AND SEWER FACILITIES

The District's design criteria, technical specifications and standards for domestic water and sewer facilities shall be adopted by resolution of the Board of Directors and may be amended from time to time. A copy of the subject resolution as adopted shall be on file in the office of the District and shall be available for inspection upon request.

**RUNNING SPRINGS WATER DISTRICT
RATES AND FEES EFFECTIVE JULY 1, 2017**

EXHIBIT A-1

WATER FEES:

WATER RATES:

METER SIZE	MONTHLY SERVICE FEES	GALLONS PER MINUTE
3/4" METER	\$ 29.92	20 GPM
1" METER	\$ 67.40	50 GPM
1.5" METER	\$ 129.80	100 GPM
2" METER	\$ 204.71	160 GPM
3" METER	\$ 441.88	350 GPM

GALLONS PER MINUTE - BASED ON METER SIZE AND MANUFACTURER'S MAX FLOW RATE

USAGE: \$0.0447 PER CU. FT.

7.48 GAL PER CU. FT. - 43,560 CU. FT. PER ACRE FOOT = APPROX \$1,856

OUT OF DISTRICT (RESOLUTION 14-05): \$0.0497 PER CU. FT

WATER INFRASTRUCTURE REPAIR/REPLACEMENT

MONTHLY CHARGE: \$1.88 /MONTH

METER INSTALLATION:

3/4" METER \$1,060.00

1" METER \$1,272.00

1.5" METER COST OF METER AND INSTALLATION PLUS 10%, PLUS \$703.00

WATER FACILITIES CAPACITY CHARGE: \$4,322.00/EDU

DELINQUENT FEE: \$6.00 OR 3% OF UNPAID BALANCE

TURN OFF/ON AND LOCK/UNLOCK: \$35.00 (\$17.50 EA. CALL) REG. HRS. MON-FRI \$70.00 OR PORTION THEREOF (\$35.00 EA. CALL) FOR AFTER HRS. (5PM), INCLUDING WEEKENDS AND HOLIDAYS. METERS ARE NOT UNLOCKED BETWEEN THE HOURS OF 7PM-7AM

CUSTOMER SERVICE FEE: \$17.50

(EACH TIME AN OPERATOR IS SENT TO THE RESIDENCE TO LOCK THE METER AND PAYMENT IS COLLECTED OR AN EXTENSION IS GRANTED PER THE REQUEST OF THE CUSTOMER)

DISCONNECT/RECONNECT FEES: \$150.00 PLUS UNPAID DWR,

WPCP LOAN FEES AND WATER/SEWER INFRASTRUCTURE REPAIR AND REPLACEMENT MONTHLY FEES

SEWER FEES:

DOMESTIC SERVICE AND RESIDENTIAL USAGE:

\$41.58/MO PLUS 15% OF WATER USAGE

COMMERCIAL SERVICE: \$41.58/MO PLUS 33 1/3% OF WATER USAGE

WASTEWATER INFRASTRUCTURE REPAIR AND REPLACEMENT

MONTHLY CHARGES: \$5.25

(INCLUDES \$3.00/MO TO REPAY SEWER TREATMENT PLANT LOAN AND \$2.25/MO TO HELP FUND OTHER NECESSARY WASTEWATER IMPROVEMENTS)

SEWER FACILITIES CAPACITY CHARGE \$ 5,646.00 /EDU

DISCHARGE OF PUMPED SEWAGE: \$50.00

FOR EACH LOAD OF 1,500 GALLONS OR LESS

CUSTOMER SERVICE:

HOT TAPS- THE FEE FOR HOT TAPPING SHALL BE TIME AND MATERIAL WHICH CONSISTS OF THE REGULAR WAGE SCHEDULE FOR STRAIGHT TIME PLUS MATERIAL (NOT TIME CHARGEABLE TO OTHERS)

PLUGGED LATERALS/DYE TESTING: THE USER/CUSTOMER MAY BE RESPONSIBLE FOR REIMBURSING THE DISTRICT FOR TIME AND MATERIAL IF IT IS DETERMINED TO BE THE CUSTOMER'S RESPONSIBILITY FOR BLOCKAGE OF THE BUILDING SEWER/LATERAL/SEWER LINE (ORDINANCE #23)

RESIDENTIAL LANDSCAPE IRRIGATION METER:

METER SIZE	INSTALLATION DEPOSIT	MONTHLY SERVICE FEES
3/4" METER	\$ 300.00	\$ 12.50
1" METER	\$ 400.00	\$ 31.22
1.5" METER	\$ 600.00	\$ 62.42
2" METER	\$ 800.00	\$ 99.88

USAGE: \$0.0447 PER CU. FT.

FIRE SERVICE WATER FEES:

METER SIZE	INSTALLATION DEPOSIT	MONTHLY SERVICE FEES
1" OR SMALLER	\$ 2,500.00	\$ 24.96
1.5" METER	\$ 3,000.00	\$ 41.50
2" METER	\$ 3,500.00	\$ 58.04
3" METER	\$ 4,000.00	\$ 74.59
4" METER	\$ 4,500.00	\$ 91.09
6" METER	TIME & MATERIAL	\$ 107.64
8" METER	TIME & MATERIAL	\$ 124.18

USAGE: \$0.0894 PER CU. FT.

HYDRANT METER RENTAL CHARGE (RESOLUTION 22-17)

METER SIZE	INSTALLATION DEPOSIT
3/4" METER	\$ 100.00
1" METER	\$ 150.00
1.5" METER	\$ 400.00
2.5" METER	\$ 900.00

SET-UP FEE: \$50.00 **DAILY RENTAL FEE** \$2.50

METER RELOCATION: \$25.00

CONSTRUCTION WATER: \$0.0894 PER CU. FT.

MISCELLANEOUS FEES:

PLAN CHECK: \$50.00 FOR WATER/SEWER & \$75.00 FOR FIRE

ANNUAL AVAILABILITY FEES:

\$30.00 WATER \$10.00 SEWER \$65.00 FIRE SUPPRESSION

(FEES VARY BASED ON PARCEL SIZE & NUMBER OF STRUCTURES ON THE PROPERTY)

DISTRICT BOUNDRY MAP

AS DETERMINED BY ENGINEERING CONSULTANTS

SPHERE OF INFLUENCE MAPS: \$2.00

STANDARDS & SPECS: \$34.50

URBAN WATER MANAGEMENT PLAN: \$40.00

PHOTOCOPYING SERVICE: \$0.15 PER COPY

DISTRICT DOCUMENTS: \$0.15 PER COPY

RECORDING LIEN FEE: \$30.00

RETURN CHECK FEE: \$20.00

DELINQUENT WATER/SEWER COLLECTION FEE: \$30.00

SPRINKLER, ALARM, STANDPIPE, EXTINGUISHING,

OR SPECIAL SYSTEM REVIEW \$75.00 PLUS CONSULTANT FEE IF REQUIRED

ADDITIONAL COMMERCIAL INSPECTIONS AFTER THE INITIAL

INSPECTION AND ONE FOLLOW UP \$65.00

TECHNICAL CONSULTATION \$40.00 PER HOUR FOR DEPARTMENT

TIME OR ACTUAL CONSULTANT FEE FOR OUTSIDE ASSISTANCE

REVISED 7/12/17 WM

CSDA BOARD OF DIRECTORS 2017 ELECTION



**SOUTHERN
NETWORK**

SEAT C

term ends 2020

Please vote for only one.

- Arlene Schafer***
Costa Mesa Sanitary District
- Kristin Bloomer**
Desert Water Agency
- John DeMonaco**
Chino Valley Independent Fire District
- Richard Hall**
Mojave Water Agency
- Michael Mack**
Rainbow Municipal Water District

All fields must be completed for ballot to be counted.

** incumbent running for re-election*

SIGNATURE:	DATE:
MEMBER DISTRICT:	

Must be received by **5pm, August 4, 2017**. CSDA, 1112 I Street, Suite 200, Sacramento, CA 95814



**California Special
Districts Association**
Districts Stronger Together

RECEIVED
JUN - 5 2017
CALIFORNIA SPECIAL DISTRICTS ASSOCIATION

CALIFORNIA SPECIAL DISTRICTS ASSOCIATION

2017 BOARD ELECTIONS

MAIL BALLOT INFORMATION

Dear Member:

A mail ballot has been enclosed for your district's use in voting to elect a representative to the CSDA Board of Directors in your Network for Seat C.

Each of CSDA's six (6) networks has three seats on the Board. Each of the candidates is either a board member or management-level employee of a member district located in your network. Each Regular Member (district) in good standing shall be entitled to vote for one (1) person to represent its network.

We have enclosed the candidate information for each candidate who submitted one. Please vote for **only one** candidate to represent your network in Seat C, **unless otherwise noted on the actual ballot**, and be sure to sign, date and fill in your member district information. If any part of the ballot is not complete, the ballot will not be valid and will not be counted.

Please utilize the enclosed return envelope to return the completed ballot. Ballots must be received at the CSDA office at 1112 I Street, Suite 200, Sacramento, CA 95814 by **5:00pm on Friday, August 4, 2017**.

If you do not use the enclosed envelope, please mail in your ballot to:

California Special Districts Association
Attn: 2017 Board Elections
1112 I Street, Suite 200
Sacramento, CA 95814

Please contact Beth Hummel at 877.924.2732 or bethh@cdda.net with any questions.



2017 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information **MUST** accompany your nomination form and Resolution/minute order:

Name: Arlene Schafer

District/Company: Costa Mesa Sanitary District

Title: Secretary

Elected/Appointed/Staff: Elected

Length of Service with District: 20 Years

- 1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):**

Current member of the CSDA Board of Directors, Legislative Committee, Membership Commission Chair, Fiscal Committee and attendee of Legislative Days, Annual Conference, SDLA certificate holder.

- 2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):**

Member of CSAC and was a member of the League when serving on the City Council.

- 3. List local government involvement (such as LAFCo, Association of Governments, etc.):**

LAFCO member representing special districts, former Chair and Vice Chair of the ISDOC and currently serving as an Executive Committee member, OCCOG Board member.

- 4. List civic organization involvement:**

President of Harbor-Mesa Lions (2 terms), Costa Mesa Republican Federation of Women, OC Federation of Women, 3rd Vice President Ways & Means, Costa Mesa for Responsible Government member.

RE-ELECT ARLENE SCHAFER CALIFORNIA SPECIAL DISTRICTS ASSOCIATION SOUTHERN NETWORK

Arlene Schafer—Secretary Costa Mesa Sanitary District



As the former Mayor of the City of Costa Mesa, it has been an honor to serve as your representative on the California Special Districts Association (CSDA) for the past two years and now I humbly ask for your support to re-elect me to the Southern Network for another term. I believe my 28 years of experience as a local government leader that includes 20 years serving special districts in a variety of different capacities makes me the best candidate. In March, the Little Hoover Commission will release its report on special districts and its very likely the report will focus on the role Local Agency Formation Commissions play in special district formation and reorganization. CSDA was an active participant in the public hearings where commissioners learned how special districts provide vital services in our communities and are directly accountable to our voters and ratepayers. During my term as a member of the Board of Directors, CSDA successfully advocated for special districts by using the latest technology for outreaching such as CSDA's campaign website, "Districts Make the Difference" and the new online video, "Districts Empower our Communities." I believe it is extremely important for CSDA to keep its foot on the pedal on advocacy by letting legislators, media, business leaders, schools and the general public know how important we are in our communities.

PREVIOUS CSDA EXPERIENCE

- ◆ Board President
- ◆ Board Vice President
- ◆ Board Secretary
- ◆ Finance Corporation
- ◆ Legislation Committee
- ◆ Fiscal Committee
- ◆ CSDA Membership Committee
- ◆ Recruitment & Planning Committee

Currently, I am serving on the Board of Directors for the Costa Mesa Sanitary District (CMSD) where I have been a Board member for 20 years. I am proud to be part of an organization that has been a District of Distinction since 2009, earned the Transparency Certificate of Excellence for four consecutive years and CMSD is one of few special districts in California that received Gold Recognition in Special District Governance.

If re-elected, I will continue to support CSDA's public outreach campaign about the essential services we provide and I will work collaboratively with CSDA Board of Directors and staff on providing essential training and professional development to help your agency succeed. Please vote for Arlene Schafer by August 4, 2017.

Joan Eaton

From: Ryan Gross
Sent: Wednesday, June 14, 2017 1:53 PM
To: Joan Eaton
Subject: CSDA 2017 Board of Directors Elections

From: Arlene Schafer [<mailto:aschafer@cmsdca.gov>]
Sent: Wednesday, June 14, 2017 11:51 AM
Subject: CSDA 2017 Board of Directors Elections

Dear Executive Leaders,

Please forward this email to your Board of Directors. Thank you very much for your cooperation and assistance regarding this matter.

Dear Southern Network Members:

It has been an honor and a privilege to represent you on CSDA's Board of Directors for the past three years, and most recently as Secretary of the Executive Board. As one of your three Southern Network representatives, I believe we have achieved many accomplishments to help Southern Network special districts succeed in good governance by offering more training and professional development opportunities in Southern California, as some of the training opportunities are described below.

- Supervisory Skills for the Public Sector in Vista
- Financial Management for Special Districts in Rancho Cucamonga
- Hammering Out a Legal Framework for Construction and Business Matters in Fountain Valley
- Board Member Best Practices in Claremont

As your representative I am very proud to work collaboratively with CSDA Board of Directors and staff for creating "Districts Make the Difference" campaign that promote the message about special districts and the difference we make in our communities. I am also proud to serve on CSDA's Legislative and Membership Committees where we work together advocating bills from the California Legislature that support special districts and we always want to make sure your membership to CSDA is valued.

As you probably know by now, I am running for re-election to CSDA Board of Directors and I hope I can count on your support because special districts are once again, under attack by the media, legislators and oversight agencies. If re-elected, I will continue to work hard as your representative to ensure our voice is heard about the great programs and services we provide in our communities and I will continue to serve on various CSDA committees to make certain training opportunities and memberships do not diminish.

If you have any suggestions on how I can better serve the Southern Network, please don't hesitate to email me at aschafer@cmsd.ca.gov. Thank you for your consideration and please don't forget to vote by August 4, 2017.
Sincerely,

Arlene Schafer

Costa Mesa Sanitary District Board of Directors and Secretary to the Board
CSDA Board of Directors and Secretary to the Board



**California Special
Districts Association**
Districts Stronger Together

2017 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information **MUST** accompany your nomination form and Resolution/minute order:

Name: Kristin Bloomer

District/Company: Desert Water Agency

Title: Secretary-Treasurer

Elected/Appointed/Staff: Elected

Length of Service with District: 12/4/15 - Current

1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):

I recently attended the CSDA Legislative Days event.

2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):

I am a member of ACWA and attend their conferences.

3. List local government involvement (such as LAFCo, Association of Governments, etc.):

City of Palm Springs Measure J Oversight Committee, Desert Water Agency Finance and Legislative Committees

4. List civic organization involvement:

Palm Springs SunUp Rotary Club, Palm Springs Woman's Club, St. Theresa

School PTA President, Desert Roundtable

****Candidate Statement** – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. **Any statements received in the CSDA office after May 31, 2017 will not be included with the ballot.**

Kristin Bloomer's Candidate Statement

I was first elected to the Desert Water Agency Board in 2015 and currently serve as Secretary-Treasurer on the Board of Desert Water Agency. However, service to my community has always played an important role in my life. I am dedicated to improving the quality of life for my community. Throughout my life, influence in community affairs and local government has grown. I have focused on the priority of shaping local government to strengthen the local and regional economies and create solutions to local and regional challenges. Southern California is faced with many challenges and I believe that challenges present opportunities, and that the Southern Network cannot afford to miss capitalizing upon those opportunities.

I am a longtime Palm Springs resident. My community service started early, when as a teenager, I volunteered with The Braille Institute and the National Charity League of Palm Springs.

My dedication to community service includes:

- Palm Springs Measure J Oversight Commission Vice-Chair
- Palm Springs Sunup Rotary Club past-President and current Assistant District Governor
- Founding President of the Desert Valley Women's Club
- Member of the Palm Springs Woman's Club
- St Theresa School Parent Teacher Group Board President
- Volunteer Volleyball Coach at Palm Springs High School
- Finance and Legislative Committee of Desert Water Agency



**California Special
Districts Association**
Districts Stronger Together

2017 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information **MUST** accompany your nomination form and Resolution/minute order:

Name: John DeMonaco

District/Company: Chino Valley Independent Fire District

Title: Director

Elected/Appointed/Staff: Elected

Length of Service with District: 11 years

- 1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):**

I am on the Legislative and Fiscal Committees

I have also served on the Education and Membership Committees

- 2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):**

I am on the Board of Directors for the Fire Districts Association of California

- 3. List local government involvement (such as LAFCo, Association of Governments, etc.):**

N/A

- 4. List civic organization involvement:**

I am a member and past Chairman of the Rotary Club of Chino. I am also a Board Member of the Chino Rotary Foundation.

****Candidate Statement** – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. **Any statements received in the CSDA office after May 31, 2017 will not be included with the ballot.**

I am seeking election to a seat on the Board of Directors of the California Special Districts Association.

I have served on the Board of Directors of the Chino Valley Independent Fire District for 11 years, elected in 2006. I am very proud to state that our Fire District is the **first** fire district to receive the District of Distinction Accreditation from the Special Districts Leadership Foundation (SDLF). We have been a District of Distinction since 2008. We also have obtained a District of Transparency Certificate of Excellence. I have completed the SDLF Recognition of Special District Governance.

I serve on the CSDA Legislative and the Fiscal Committees. I have previously served on the CSDA Education and Membership committees.

I am a retired Fire Chief with 33 years of Fire Service experience. I have been involved in city, county, JPAs and special districts in various capacities. I am currently on the Board of Directors of the Fire Districts Association of California and also serve on their Conference Committee. I am a Past President of the Chino Rotary Club and past Chairman of the Chino Rotary Foundation.

I understand, and I am committed to legislative advocacy for special districts. Special Districts provide one of the most effective, efficient, and accountable forms of local service. It is vital that we continue to work together to influence and monitor policy decisions affecting California special districts.

My commitment, extensive experience, and education in public service and as a special district board member and policy-maker, provides me with the ability to effectively serve as a CSDA Board Member representing all California Special Districts. I look forward to your support!

Please contact me at (909) 816-8396 or email at jdemonaco@chofire.org.

John DeMonaco

John DeMonaco
jdemonaco@chofire.org
(909) 816-8396

June 1, 2017

Dear CSDA Colleague,

My name is John DeMonaco and I am requesting your **VOTE** in the upcoming 2017 election for a seat on the Board of Directors of the California Special Districts Association, Southern Network. The CSDA Southern Network is very large and includes approximately 180 Special Districts within the Counties of San Diego, Imperial, Riverside, San Bernardino, Los Angeles and Orange.

I am a strong advocate of Special Districts. I believe that Special Districts are the strongest form of government that impacts our residents on a daily basis. Immediately after I was elected, I became involved with CSDA and volunteered to serve on numerous committees. I have previously served on the CSDA Education and Membership Committees and I now serve on the CSDA Legislative and the Fiscal Committees. I also serve on the CSDA Little Hoover Commission Working Group.

Serving on these main CSDA committees has given me the insight and understanding into the “workings” of the association. I understand CSDA’S budget and finances, the educational programs, and what CSDA needs to offer its member districts. With this experience, I will be an effective board member from the “get-go.”

Serving on the Legislative Committee, I understand, and I am committed to legislative advocacy for special districts. I recognize the importance of working together to represent the common interest of all California Special Districts and the residents we serve. Special Districts provide one of the most effective, efficient, and accountable forms of local service. The California Special District Association monitors ALL legislation so that special districts can continue to deliver core services and can continue to be efficient. It is vital that the CSDA Legislative Staff with the direction of the Board of Directors continues to work to influence and monitor policy decisions affecting California special districts.

I am on the Board of Directors of the Chino Valley Independent Fire District since 2006, serving my community for 11 years. I will be up for re-election in 2020. I am very proud to state that our Fire District is the **first** fire district to receive the District of Distinction Accreditation from the Special Districts Leadership Foundation (SDLF). We have been a District of Distinction since 2008. We also have obtained a District of Transparency Certificate of Excellence. I have completed the Special District Leadership Academy and have earned the SDLF Recognition of Special District Governance. Our District Board is in process of receiving the SDLF Gold Recognition of Special District Governance.

I am a retired Fire Chief with 33 years of Fire Service experience. I have been involved in city, county, JPAs and special districts in various capacities. I am currently on the Board of Directors of the Fire Districts Association of California and also serve on the FDAC Conference Committee. I am a current board member and Past President of the Chino Rotary Club and past Chairman and member of the Chino Rotary Foundation.

I believe in Special Districts and the service that we provide. Special Districts provide one of the most effective, efficient, and accountable forms of local service. I am committed to legislative advocacy for special districts. It is vital that we continue to work together to influence and monitor policy decisions affecting California special districts.

My commitment and extensive experience, education in public service and as a special district board member & policy-maker, provides me with the ability to effectively serve as a CSDA Board Member representing all California Special Districts. If elected, I will work hard to support all Special Districts. Your District's **VOTE** will be greatly appreciated. I look forward to your support. If you would like to speak with me or I can be of any assistance, please contact me at (909) 816-8396 or email at jdemonaco@chofire.org. Thank you.

Respectfully,



John DeMonaco



2017 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information **MUST** accompany your nomination form and Resolution/minute order:

Name: Richard Hall

District/Company: Mojave Water Agency

Title: Director, Division 3

Elected/Appointed/Staff: Elected

Length of Service with District: 17 years

1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):

Currently serving on the Professional Development Committee and Membership Committee

2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):

Mojave Water Agency is a member of ACWA

3. List local government involvement (such as LAFCo, Association of Governments, etc.):

Currently President of the Association of San Bernardino County Special Districts

4. List civic organization involvement:

Member of the Elks Association, Kiwanis, Summit Valley Property Owners

****Candidate Statement** – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. **Any statements received in the CSDA office after May 31, 2017 will not be included with the ballot.**

CANDIDATE STATEMENT

My name is Richard Hall and I am currently a Director for the Mojave Water Agency and President of the Association of the San Bernardino County Special Districts and have served as an elected official for more than 35 years in two Special District organizations. I am interested in the CSDA Board of Directors position for Southern District Seat C – here is a list of my qualifications:

- First-hand knowledge and experience to ensure that we have safe, quality drinking water.
- Knowledge and experience in Recreation and Parks through 20 years on the Hesperia Recreation and Parks Special District board and served as president four times.
- Knowledge and experience in Property Owners Association in Summit Valley, California where I helped to bring electricity and natural gas to the owners and served as president.
- Knowledge and experience in Engineering and Management at General Dynamics Program Office working with the Federal and State government.
- Reduced taxes through leadership as well as set policy to purchase quality water, build water discharge facilities, and given tax money back to residents who helped reduce water usage.
- Continue to fight to bring 21st century technology to our Agency to study in order to better ensure management of our water resources by advanced computer systems, deep monitor wells, and other state of the art methods.
- Worked closely with community leaders and residents for best policies and strategies including getting State and Federal funding for safe, drinkable water and other needed projects and programs..
- Support funding colleges and students for research and development for continued new resource solutions for present and future issues.

I know that more needs to be done and have plans to meet these challenges. Let us protect our future and provide leadership with someone who knows how.



California Special
Districts Association
Districts Stronger Together

2017 CSDA BOARD CANDIDATE INFORMATION SHEET

The following information **MUST** accompany your nomination form and Resolution/minute order:

Name: Michael Mack

District/Company: Rainbow Municipal Water District

Title: Director, Division 5

Elected/Appointed/Staff: Elected

Length of Service with District: 5 months

1. Do you have current involvement with CSDA (such as committees, events, workshops, conferences, Governance Academy, etc.):

I am the officially appointed RMWD representative for CSDA.

2. Have you ever been associated with any other state-wide associations (CSAC, ACWA, League, etc.):

I serve as the RMWD representative of both ACWA & CSDA.

3. List local government involvement (such as LAFCo, Association of Governments, etc.):

I worked for the city of San Marcos, CA for over 30 years as Parks Superintendent.

4. List civic organization involvement:

Past President of P.T.A.

*** SEE ATTACHED STATEMENT ***

****Candidate Statement** – Although it is not required, each candidate is requested to submit a candidate statement of no more than 300 words in length. **Any statements received in the CSDA office after May 31, 2017 will not be included with the ballot.**

ENDLESS POSSIBILITIES



My name is Michael Mack and I am honored to be seeking election to be on the Board of Directors of California Special Districts Association.

I was elected to the Rainbow Municipal Water District Board of Directors in December 2016 and appointed to serve as the District's representative at both ACWA and CSDA. My background includes a degree in horticulture and worked for the City of San Marcos for over thirty years. As the Parks Department Supervisor, I had many responsibilities including reviewing plans and inspection of new park and street median installations. I was both a Certified Playground Inspector and Irrigation Auditor. One of my main responsibilities was ensuring efficient usage of water resources. I calculated, determined, and programmed water requirements for the plant material for all parks and street medians within the City.

I have learned the importance of CSDA is we are the support system to help ensure efficient and productive services to both small and large communities throughout California at the local level of city governments. As your CSDA Board Member, I see endless possibilities and promise to tackle and meet the challenges our districts face. We all must work together for present and future needs for our special districts and by doing so we can and will achieve our goals. We must be proactive with our legislators and with this energy and commitment we can make the difference between success and failure.

I am very honored to have this chance to serve all of you and given this opportunity. I feel extensive service and experience in the public sector, I will work effortlessly to make those endless possibilities become reality.

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017

TO: Board of Directors

FROM: Isaiah Hall, Collections Division Supervisor
Ryan Gross, General Manager

**SUBJECT: CONSIDER AWARDING CONTRACT FOR DOWNTOWN
SEWER REPAIR**

RECOMMENDED BOARD ACTION

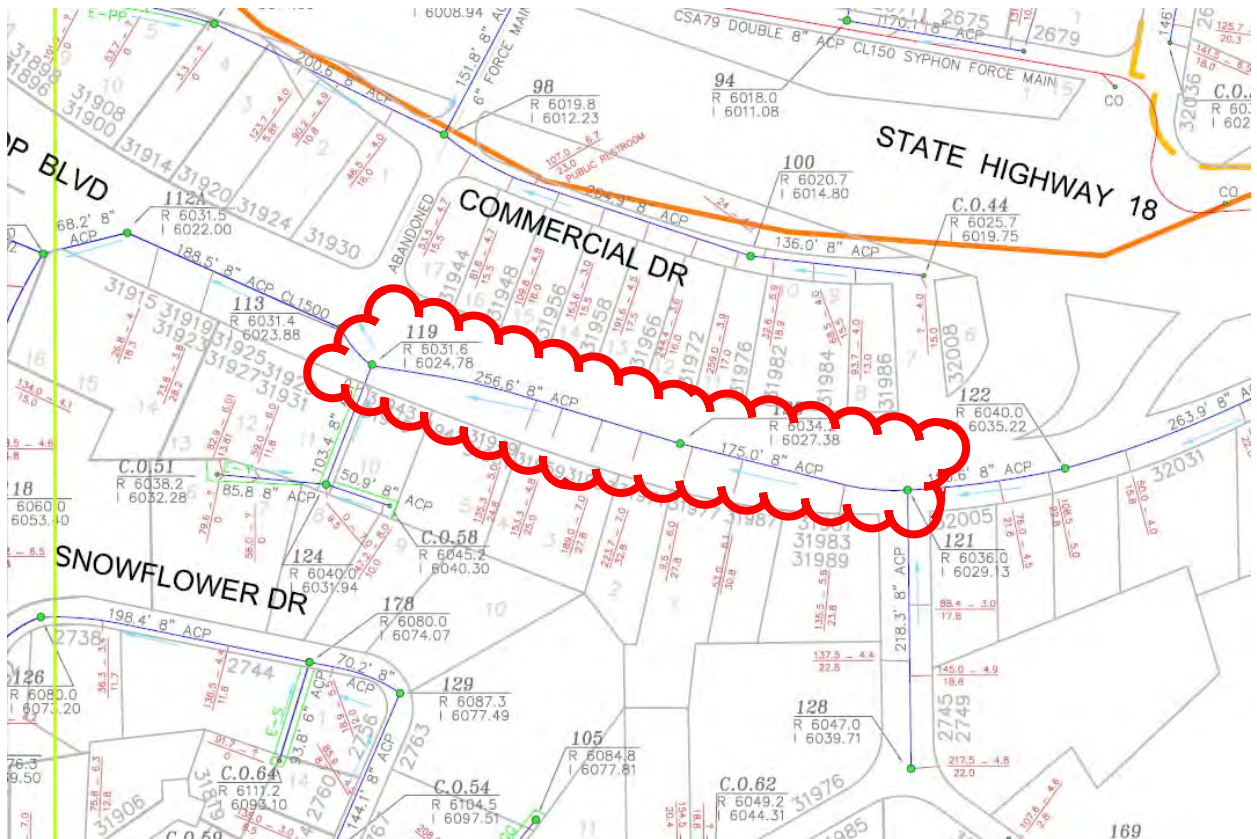
It is recommended that the Board of Directors:

1. Award contract for the downtown sewer repair project to the low bidder;
2. Authorize the General Manager to execute the contract, and;
3. Authorize the General Manager to approve change orders for the Project during the course of the project as required not to exceed 15% of the original construction contract amount.

REASON FOR RECOMMENDATION

The 8 inch sewer pipeline shown below is damaged and in need of repair.







FISCAL INFORMATION

The fiscal year 2017/2018 budget includes \$45,000 for this project which will be funding out of the Wastewater Capital Improvement Project Reserve which has a balance of \$202,068.

Bids will be presented at the Board meeting.

RUNNING SPRINGS WATER DISTRICT**MEMORANDUM**

DATE: July 19, 2017

TO: Board of Directors

FROM: Trevor Miller, Treatment Division Supervisor
Ryan Gross, General Manager

SUBJECT: CONSIDER AUTHORIZING EXPENDITURE FOR WASTEWATER TREATMENT PLANT MEMBRANE BIO-REACTOR (MBR) IMPROVEMENTS

RECOMMENDED BOARD ACTION

Consider authorizing expenditure for wastewater treatment plant membrane bioreactor (MBR) improvements. Staff is proposing an alternative to replacing the existing MBR 1 membrane cartridges with the newer US1000 technology. Additional details will be provided and discussed at the July 19, 2017 Board meeting.

BACKGROUND INFORMATION

At the time of publishing this agenda staff had not received final pricing and scope of supply so additional details will be presented at the Board meeting.

In 2002 the District upgraded the wastewater treatment plant to a membrane bioreactor (MBR) plant utilizing Kubota EK300 submerged membrane units (SMUs). Each EK300 SMU consisted of 300 type “510” flat plate cartridges. Upon completion of the MBR upgrade in 2002 there were 16 EK300 SMUs in service at the treatment plant, 8 in MBR 1 and 8 in MBR 2. In 2010 the District upgraded MBR 1 to a more efficient SMU design by Kubota called the RW300 which also consists of 300 cartridges with the exception that they are 50% taller. This upgrade increased the capacity of the MBR treatment plant as well as improved the efficiency. During the upgrade of MBR 1 to the RW300 SMUs, 7 of the 8 EK300 SMUs were moved to MBR 2. While moving the 7 EK300 SMUs to MBR 2, a high failure rate of the type “510” cartridges was observed. This high failure rate left 2 of the 7 EK300 SMUs empty and needing replacement cartridges. Over the last 7 years the District has replaced as many type “510” cartridges as the operations and maintenance (O&M) Budget would permit. To address the high failure rate of the type “510” cartridges and their need for replacement, the 5 year Capital Improvement Budget for the Wastewater Treatment Plant called for the replacement of 7 EK300 SMUs in MBR 2 with 8 RW300 SMUs and installation of the remaining 8 EK300 SMUs into both MBR basins (4 EK300 in each MBR basin). The 5 year plan had that particular upgrade scheduled for fiscal year 2016/2017.

At the September 16, 2015 board meeting the Board of Directors authorized a requested budget amendment for the purchase of 900 type “510” cartridges to replace failed cartridges from the

original upgrade to the MBR treatment system in 2002. These failed cartridges were discovered during our annual MBR takedown and maintenance. At the time of the board meeting, the District's best option was to replace the failed cartridges to maintain the integrity of the MBR system.

In the weeks following the September 16, 2015 board meeting, an option was presented to the District by Ovivo (formerly Enviroquip, the original MBR system manufacturer) to participate in the validation process of a concept that includes stacking two of their new style SMU's, the OV480, one on top of the other, to create the OV960 SMU. The concept of stacking SMUs is not a new concept, it has been done with the Kubota SMUs, but it had not been done with the Ovivo OV480. Due to the depth of the District's MBR basins, our facility is a good fit for the validation of the stacked OV480's. The validation process was to ensure that stacking two OV480's will produce the desired results: higher permeate flows with a reduction in energy consumption. The OV480 has already been proven in the wastewater industry and is in place in several locations across the US as well as thousands of installations in Europe.

To reward the District for participating in the validation process and limit the District's financial exposure, Ovivo offered to break up the cost of the equipment into 2 payments. The first payment was to be due once the equipment arrived on site. The second payment not due until after July 1, 2016.

During the validation period, if the OV960's did not perform as outlined in the performance guarantee, the District's only financial obligation to Ovivo would have been the first installment that was paid when the equipment arrived. In addition to only paying the first installment, the District would retain ownership of all equipment outlined in the agreement.

CURRENT STATUS

Installing these 5 Ovivo OV960 Submerge Membrane Units (SMUs) addressed several concerns regarding the wastewater treatment plant both currently and in future years. These include rising energy costs, failing type "510" cartridges, the results of their failure, their cost of replacement and staffing at the treatment plant.

To address the rising energy costs the OV960 SMU was expected to be 30% more energy efficient. After running them for 6 months, the energy savings appears to be more along the lines of 40%. In regards to the failing type "510" cartridges from the original MBR upgrade in 2002, the 5 OV960 SMUs replaced all of the type "510" cartridges in MBR 2 while providing a 28% increase in treatment capacity. The OV960 SMUs will also require approximately 50% less labor during the annual MBR maintenance.

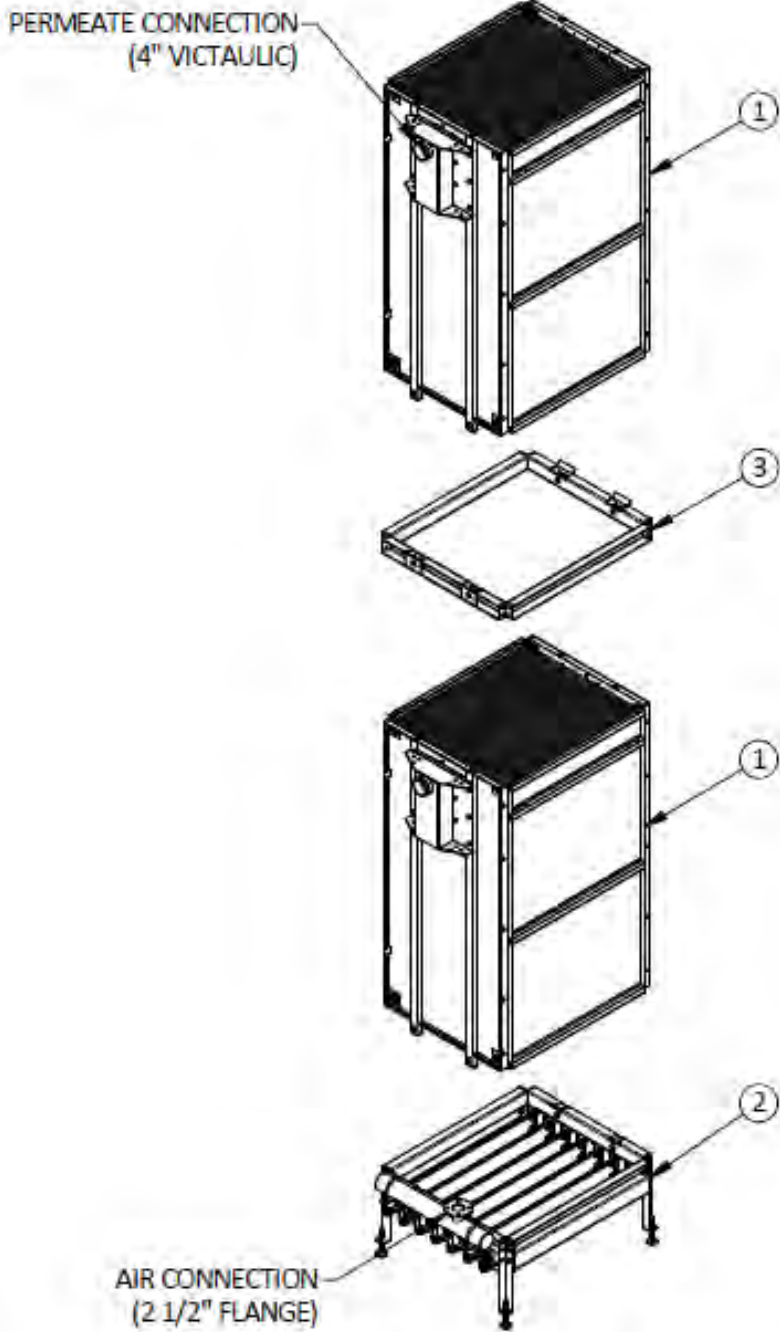
The original estimated cost savings to the District was approximately \$565,590 over the ten year expected life of the OV960 membranes (Refer to Table 3). Now that MBR 2 is online and a more in depth evaluation of the treatment process and the ancillary equipment has been performed, the projected cost savings appears to be approximately \$529,128 over ten years (Refer to Table 3a). This does not include the additional cost savings that would also be achieved from eliminating the

need to fill the vacant treatment plant operator position which is approximately \$56,000 per year in salary and benefits.

The following photos show what the OV960 SMUs and look like installed in the MBR basin.

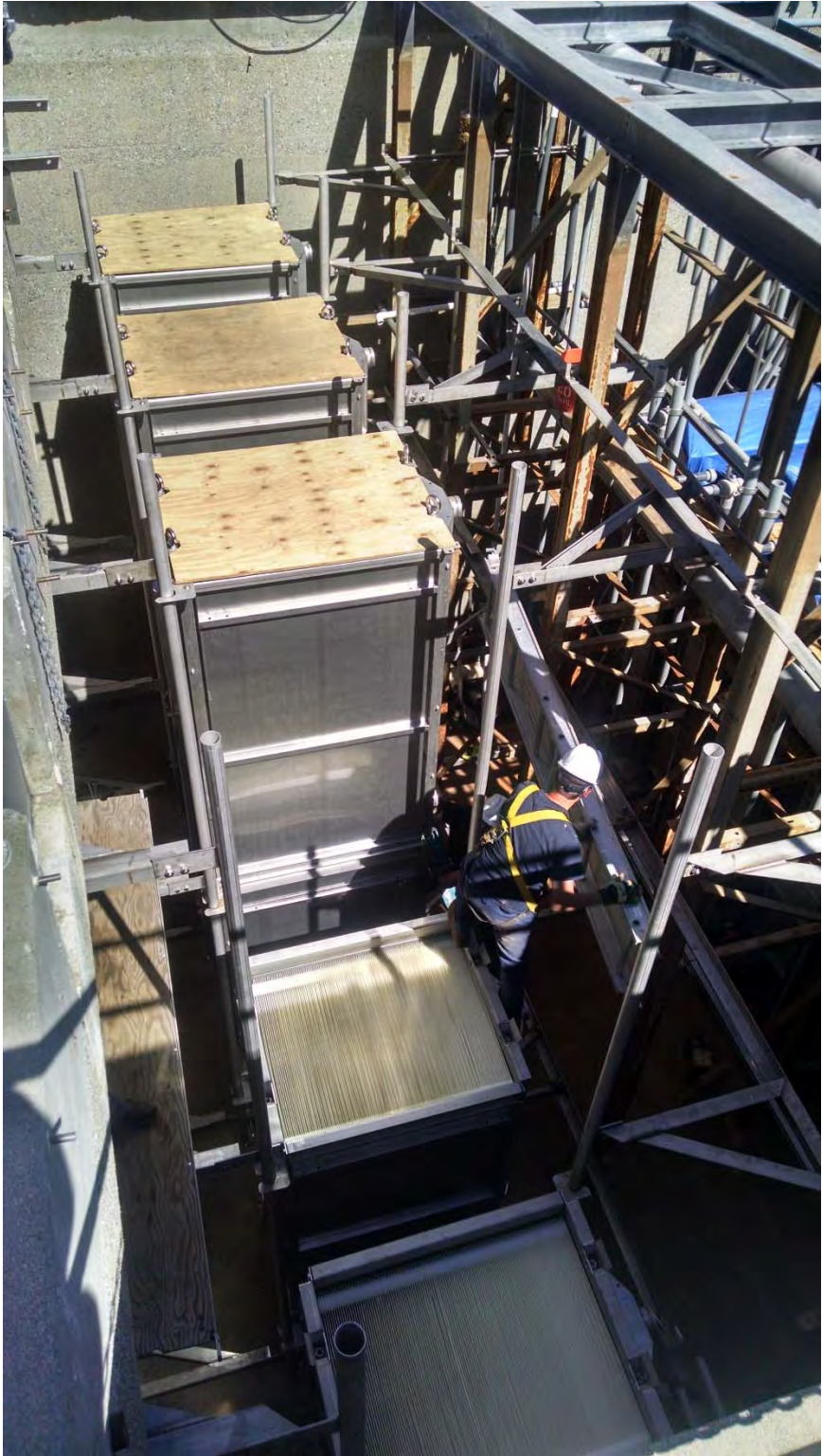
Ovivo OV480 SMU





Ovivo OV960 SMU

- 1 – OV480 Cassette
- 2 – OV480 Diffuser Module
- 3 – OV960 Spacer Assembly



Five Ovivo OV960 SMU Installation at RSWD WWTP



Five Ovivo OV960 SMU's Installed at RSWD WWTP

FISCAL INFORMATION

Additional information to be provided at the July 19, 2017 Board meeting.

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017
TO: Board of Directors
FROM: Ryan Gross, General Manager
SUBJECT: Quarterly Budget/Financial Summary

BACKGROUND INFORMATION

Attachment 1 lists the Running Springs Water District designated reserve fund balances as of June 30, 2017. Attachment 2 compares the current year to prior year summary statement of net position, changes in net position and liquidity ratios. Attachment 3 contains the budget report and account summary through the fourth quarter of fiscal year 2016/2017.

ATTACHMENTS

Attachment 1 – Designated reserve fund balances as of June 30, 2017.
Attachment 2 – Net Position and Liquidity Ratio Summary
Attachment 3 – Quarterly Budget Report and Account Summary

Designated Reserve Fund Balances as of June 30, 2017	Fund Balance
Fire & Ambulance Department	
Breathing Apparatus Equipment Replacement	76,855
Future Equipment Replacement	12,178
Workers Comp PASIS Outstanding Claims	12,432
Subtotal Fire & Ambulance Department Designated Reserve Funds	101,465
Fire Department Operating Reserve	1,467,259
Ambulance Department Operating Reserve	31,985
Subtotal Fire & Ambulance Department Operating Reserve Funds	1,499,243
Recommended Reserve Fund Target (6 Months Operating Expenses)	1,022,579
Operating Reserve Surplus / (Shortfall)	476,665
Wastewater Division	
Wastewater Capital Improvement Project Reserve	202,068
Wastewater System Connection & Capacity Charges	119,603
Wastewater Infrastructure R&R Reserve (CWSRF Debt Reserve)	169,143
Subtotal Wastewater Designated Reserve Funds	490,813
Wastewater Operating Reserve Fund	124,164
Recommended Operating Reserve Fund Target (4 Months Operating Expenses)	499,285
Operating Reserve Surplus / (Shortfall)	(375,121)
Water Division	
Water Capital Improvement Project Reserve	140,952
Water System Connection & Capacity Charges	5,382
Water Infrastructure R&R Reserve (MFC Debt Reserve)	65,341
Subtotal Water Designated Reserve Funds	211,675
Water Operating Reserve	361,774
Recommended Operating Reserve Fund Target (4 Months Operating Expenses)	530,659
Operating Reserve Surplus / (Shortfall)	(168,886)
Assessment Districts	
Sewer Assessment District No. 7 O&M	25,053
Water Assessment District No. 9 Construction Funds	37,739
Water Assessment District No. 10 Construction Funds	26,421
Water Assessment District No. 10 O&M	207,170
Water Assessment District No. 10 Bond Reserve Fund	112,006
Subtotal Assessment Districts	408,389
Total District Designated & Operating Reserve Funds	2,789,134
Assessment District Funds	408,389
Combined Pooled Cash	3,197,523
Checking Account (General)	133,121
LAIF	2,928,139
York Insurance Deposit	17,358
BNY Mellon (AD #10 Bond Reserve)	117,906
Petty Cash	1,000
Combined Pooled Cash	3,197,523

Running Springs Water District
Executive Summary - Q1 6/30/2017

SUMMARY STATEMENT OF NET POSITION

	6/30/2017	6/30/2016	Change
Cash and investments	\$ 3,197,523	\$ 2,465,162	\$ 732,361
Receivables	1,054,344	996,622	57,722
Other current assets	95,490	88,430	7,060
Total current assets	4,347,357	3,550,214	797,143
Capital assets, net	21,199,747	21,102,054	97,693
Other noncurrent assets	-	67,217	(67,217)
Deferred outflows of resources	1,450,544	1,450,544	-
Total Assets and Deferred Outflows of Resources	26,997,648	26,170,029	827,619
Current liabilities	572,744	678,294	(105,550)
Noncurrent liabilities	9,538,732	9,118,624	420,108
Deferred inflows of resources	613,040	613,040	-
Total Liabilities and Deferred Inflows of Resources	10,724,516	10,409,958	314,558
Net Position	\$ 16,273,132	\$ 15,760,071	\$ 513,061

SUMMARY STATEMENT OF CHANGES IN NET POSITION

	QE Actual 06/30/17	YTD Actual	YTD Budget	Variance to Budget: Favorable (Unfavorable)	PY QE Actual 06/30/16	PY YTD Actual	Variance to PY YTD: Favorable (Unfavorable)
Operating revenues	\$ 1,002,718	\$ 4,333,708	\$ 4,074,186	\$ 259,522	\$ 953,521	\$ 3,928,423	\$ 405,285
Operating expenses	(1,376,123)	(6,024,378)	(5,850,301)	(174,077)	(1,502,998)	(5,924,465)	(99,914)
Other income	818,725	2,231,170	2,221,455	9,715	1,094,630	2,534,051	(302,881)
Other expenses	(2,771)	(27,439)	(22,584)	(4,855)	(37,369)	(37,533)	10,095
Change in net position	\$ 442,549	\$ 513,061	\$ 422,756	\$ 90,305	\$ 507,785	\$ 500,476	\$ 12,585

LIQUIDITY RATIOS

	6/30/2017	6/30/2016	Change
Quick Ratio (cash and investments / current liabilities)	5.58	3.63	1.95
Current Ratio (current assets / current liabilities)	7.59	5.23	2.36
Working capital (current assets - current liabilities)	\$ 3,774,613	\$ 2,871,920	\$ 902,693

Liquidity is the ability to cover short-term obligations.

Quick Ratio is more rigorous form of the ratio that includes only cash, temporary investments and receivables.

Current Ratio indicates the extent to which current liabilities are covered by assets expected to be converted into cash in the near future.

Budget Report

Account Summary

Running Springs Water District

For Fiscal: 2016-2017 Period Ending: 06/30/2017

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
Fund: 200 - Water Operating Fund							
Revenue							
200-40100-00	Service Charges - Residential	1,040,337.00	1,040,337.00	83,919.02	1,043,387.24	3,050.24	100.29 %
200-40200-00	Service Charges - Commercial	0.00	0.00	3,066.04	9,163.92	9,163.92	0.00 %
200-40300-00	Service Charges - Landscape Irrigation	0.00	0.00	11.90	35.70	35.70	0.00 %
200-40500-00	Service Charges - Fire Hydrant Base C...	0.00	0.00	2,413.36	3,970.35	3,970.35	0.00 %
200-40700-00	Credit Card Fee Revenue	0.00	0.00	123.50	334.75	334.75	0.00 %
200-41100-00	Water Usage / metered charges - Res...	698,640.00	698,640.00	59,555.71	708,431.93	9,791.93	101.40 %
200-41200-00	Water Usage / metered charges - Co...	0.00	0.00	6,525.65	12,217.50	12,217.50	0.00 %
200-41400-00	Water Usage / metered charges - Out...	0.00	0.00	322.53	833.83	833.83	0.00 %
200-41500-00	Water Usage / metered charges - Fire...	0.00	0.00	54.87	139.40	139.40	0.00 %
200-41600-00	Water Usage - Landscape	0.00	0.00	459.18	900.86	900.86	0.00 %
200-43000-00	Meter Turn-on & Shut-Off Charge	17,000.00	17,000.00	1,560.00	12,055.00	-4,945.00	70.91 %
200-44000-00	Delinquent Fees	40,000.00	40,000.00	1,644.38	34,601.08	-5,398.92	86.50 %
200-45000-00	Inventory Sales - Water	0.00	0.00	0.00	197.85	197.85	0.00 %
200-49000-00	Other service fees	0.00	0.00	275.50	839.50	839.50	0.00 %
200-70200-00	Property Tax - Penalties & cost on del...	0.00	0.00	0.00	1,097.12	1,097.12	0.00 %
200-70500-00	In lieu of taxes	0.00	0.00	389.31	1,557.24	1,557.24	0.00 %
200-71000-00	Availability Charges	44,000.00	44,000.00	0.00	37,458.51	-6,541.49	85.13 %
200-72200-00	Connection Fee - Fire Sprinkler Meter	0.00	0.00	0.00	5,182.70	5,182.70	0.00 %
200-74000-00	Interest Income	1,700.00	1,700.00	7.54	2,603.38	903.38	153.14 %
200-75600-00	Infrastructure R&R Fees	69,000.00	69,000.00	5,577.90	66,771.37	-2,228.63	96.77 %
200-78000-00	Miscellaneous Income-Non Op	22,000.00	22,000.00	0.00	15,423.99	-6,576.01	70.11 %
	Revenue Total:	1,932,677.00	1,932,677.00	165,906.39	1,957,203.22	24,526.22	101.27 %
Expense							
200-50100-00	Salaries and wages	742,347.00	742,347.00	55,151.83	735,414.16	6,932.84	99.07 %
200-50110-00	Salaries and wages - Overtime	0.00	0.00	2,804.85	10,853.98	-10,853.98	0.00 %
200-50120-00	Medicare Tax	10,866.00	10,866.00	819.87	11,851.25	-985.25	109.07 %
200-50130-00	Worker's Compensation Insurance	13,000.00	13,000.00	0.00	13,513.22	-513.22	103.95 %
200-50140-00	Employee Benefits-Group Insurance	87,691.00	87,691.00	10,146.50	97,935.27	-10,244.27	111.68 %
200-50150-00	Employee Benefits-Retirement	235,159.00	235,159.00	20,320.97	265,532.03	-30,373.03	112.92 %
200-50160-00	Employee Benefits-Uniform Allowance	1,725.00	1,725.00	166.03	1,399.92	325.08	81.15 %
200-52200-00	Bank charge	0.00	0.00	0.00	70.78	-70.78	0.00 %
200-52300-00	Community Relations	1,350.00	1,350.00	46.34	734.42	615.58	54.40 %
200-53050-00	Deposits Over and Short	0.00	0.00	-6.00	-8.19	8.19	0.00 %
200-53100-00	Depreciation	206,456.00	206,456.00	17,233.16	208,738.94	-2,282.94	101.11 %
200-53120-00	Director's Compensation Fees	2,850.00	2,850.00	82.50	1,991.45	858.55	69.88 %
200-53200-00	Education & Seminars	3,500.00	3,500.00	58.31	2,154.45	1,345.55	61.56 %
200-54100-00	Gas, Fuel & Oil	9,270.00	9,270.00	1,252.51	6,690.54	2,579.46	72.17 %
200-54300-00	Insurance - liability	24,000.00	24,000.00	0.00	19,501.10	4,498.90	81.25 %
200-55100-00	Janitorial Services	0.00	0.00	485.00	1,425.00	-1,425.00	0.00 %
200-56100-00	Memberships & Subscriptions	6,026.00	6,026.00	0.00	4,651.35	1,374.65	77.19 %
200-56150-00	Misc expense	5,586.00	5,586.00	266.51	3,741.33	1,844.67	66.98 %
200-57100-00	Permits & Fees	22,313.00	22,313.00	80.00	32,709.64	-10,396.64	146.59 %
200-57120-00	Postage	27,836.00	27,836.00	1,980.83	21,725.69	6,110.31	78.05 %
200-57141-00	Professional Services - Acct, Legal, En...	72,276.00	72,276.00	2,859.40	60,677.39	11,598.61	83.95 %
200-57142-00	Use 57141 - Professional Svc-Comput...	35,000.00	35,000.00	495.00	34,219.80	780.20	97.77 %
200-57312-00	Repairs and maintenance - Fuel Stora...	700.00	700.00	0.00	329.10	370.90	47.01 %
200-57313-00	Repairs and maintenance - Equipment	12,710.00	12,710.00	2,575.35	11,063.18	1,646.82	87.04 %
200-57314-00	Repairs and maintenance - Source of ...	21,046.00	21,046.00	3,371.11	9,581.05	11,464.95	45.52 %
200-57400-00	Safety Equipment & Clothing	0.00	0.00	0.00	310.64	-310.64	0.00 %
200-57440-00	Office Supplies & Materials	28,530.00	28,530.00	1,946.82	25,664.01	2,865.99	89.95 %

Budget Report

For Fiscal: 2016-2017 Period Ending: 06/30/2017

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
200-58200-00	Uncollectible Accounts	0.00	0.00	0.22	2,025.29	-2,025.29	0.00 %
200-58250-00	Utilities - Heat & Lights	18,052.00	18,052.00	1,066.97	13,348.45	4,703.55	73.94 %
200-58253-00	Utilities - Power for Pumping	74,100.00	74,100.00	7,636.07	61,357.92	12,742.08	82.80 %
200-58300-00	Vehicle Maintenance	6,200.00	6,200.00	375.68	8,395.88	-2,195.88	135.42 %
200-59100-00	Water Purchases	149,880.00	149,880.00	12,641.13	176,495.95	-26,615.95	117.76 %
200-59200-00	Water Testing & Analysis	33,214.00	33,214.00	2,744.38	26,450.31	6,763.69	79.64 %
200-84000-00	Interest Expense	16,691.00	16,691.00	0.00	16,690.70	0.30	100.00 %
200-86000-00	Administrative Expense Reimbursen...	-69,939.00	-69,939.00	-5,778.57	-69,342.84	-596.16	99.15 %
200-88000-00	Other Expense	0.00	0.00	668.24	668.24	-668.24	0.00 %
	Expense Total:	1,798,435.00	1,798,435.00	141,491.01	1,818,561.40	-20,126.40	101.12 %
	Fund: 200 - Water Operating Fund Surplus (Deficit):	134,242.00	134,242.00	24,415.38	138,641.82	4,399.82	103.28 %
Fund: 210 - Water Capital Improvement Fund							
Revenue							
210-77000-00	Rental & Leasing Of Property	10,636.00	10,636.00	892.00	10,636.00	0.00	100.00 %
	Revenue Total:	10,636.00	10,636.00	892.00	10,636.00	0.00	100.00 %
	Fund: 210 - Water Capital Improvement Fund Total:	10,636.00	10,636.00	892.00	10,636.00	0.00	100.00 %
Fund: 220 - Water Capacity Charge Fund - Restricted							
Revenue							
220-72100-00	Fac. Capacity Chg.	10,764.00	10,764.00	0.00	5,382.00	-5,382.00	50.00 %
	Revenue Total:	10,764.00	10,764.00	0.00	5,382.00	-5,382.00	50.00 %
	Fund: 220 - Water Capacity Charge Fund - Restricted Total:	10,764.00	10,764.00	0.00	5,382.00	-5,382.00	50.00 %
Fund: 300 - Sewer Collection							
Revenue							
300-40100-00	Service Charges - Residential	1,335,074.00	1,335,074.00	111,896.72	1,340,448.20	5,374.20	100.40 %
300-40200-00	Service Charges - Commercial	45,292.00	45,292.00	3,537.95	42,233.01	-3,058.99	93.25 %
300-41100-00	Sewer Usage / metered charges - Res...	86,904.00	86,904.00	8,310.89	93,592.84	6,688.84	107.70 %
300-41200-00	Sewer Usage / metered charges - Co...	8,086.00	8,086.00	632.39	8,020.65	-65.35	99.19 %
300-44000-00	Delinquent Fees	0.00	0.00	1,527.45	2,822.20	2,822.20	0.00 %
300-45000-00	Inventory Sales -Sewer	0.00	0.00	1,150.31	10,417.53	10,417.53	0.00 %
300-49000-00	Other service fees	0.00	0.00	25.00	1,562.19	1,562.19	0.00 %
300-70200-00	Property Tax - Penalties & cost on del...	0.00	0.00	0.00	169.50	169.50	0.00 %
300-71000-00	Availability Charges	14,000.00	14,000.00	0.00	13,426.63	-573.37	95.90 %
300-73000-00	Sewer Hot Taps & Septic Waste Dump..	3,000.00	3,000.00	0.00	750.00	-2,250.00	25.00 %
300-74000-00	Interest Income	7,000.00	7,000.00	0.00	-2,014.67	-9,014.67	28.78 %
300-75300-00	Other Charges-Treatment Plant Impr...	108,000.00	108,000.00	0.00	232.80	-107,767.20	0.22 %
300-75600-00	Infrastructure R&R Fees	82,000.00	82,000.00	15,677.13	188,648.64	106,648.64	230.06 %
300-78000-00	Delinquent Charges & Service Fees	15,000.00	15,000.00	0.00	860.57	-14,139.43	5.74 %
300-78900-00	Sewer Rev Allocation: 55% Collect & ...	0.00	-971,483.00	-64,241.02	-874,806.84	96,676.16	90.05 %
	Revenue Total:	1,704,356.00	732,873.00	78,516.82	826,363.25	93,490.25	112.76 %
Expense							
300-50100-00	Salaries and wages	339,708.00	339,708.00	21,509.97	290,813.70	48,894.30	85.61 %
300-50110-00	Salaries and wages - Overtime	0.00	0.00	1,586.19	6,903.67	-6,903.67	0.00 %
300-50120-00	Medicare Tax	0.00	4,931.00	319.17	2,624.24	2,306.76	53.22 %
300-50130-00	Worker's Compensation Insurance	10,500.00	10,500.00	0.00	10,846.53	-346.53	103.30 %
300-50140-00	Employee Benefits-Group Insurance	37,424.00	37,424.00	2,655.42	39,289.88	-1,865.88	104.99 %
300-50150-00	Employee Benefits-Retirement	111,620.00	111,620.00	8,836.80	108,658.95	2,961.05	97.35 %
300-50160-00	Employee Benefits-Uniform Allowance	0.00	1,540.00	0.00	900.34	639.66	58.46 %
300-52300-00	Community relations	0.00	700.00	0.00	411.61	288.39	58.80 %
300-53100-00	Depreciation	415,000.00	123,932.00	13,267.39	160,323.73	-36,391.73	129.36 %
300-53120-00	Director's Compensation Fees	0.00	2,850.00	0.00	1,666.50	1,183.50	58.47 %
300-53200-00	Education & Seminars	1,000.00	1,000.00	58.31	968.61	31.39	96.86 %
300-54100-00	Gas, Fuel & Oil	6,127.00	6,127.00	725.85	5,140.93	986.07	83.91 %
300-56100-00	Memberships & Subscriptions	4,922.00	4,922.00	89.00	4,682.71	239.29	95.14 %
300-56150-00	Misc expense	0.00	0.00	0.00	124.42	-124.42	0.00 %
300-56300-00	Office Supplies	750.00	750.00	0.00	647.53	102.47	86.34 %
300-57100-00	Permits & Fees	11,571.00	11,571.00	62.99	11,141.99	429.01	96.29 %

Budget Report

For Fiscal: 2016-2017 Period Ending: 06/30/2017

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
300-57140-00	Professional Services - Collection	2,200.00	2,200.00	354.72	1,868.34	331.66	84.92 %
300-57310-00	Repairs and maintenance - Collection	26,550.00	26,550.00	2,308.30	7,171.75	19,378.25	27.01 %
300-57311-00	Repairs and maintenance - Lift Station	33,705.00	33,705.00	0.00	32,286.97	1,418.03	95.79 %
300-57314-10	Do Not Use-Repairs and maintenance...	51,700.00	0.00	0.00	0.00	0.00	0.00 %
300-57440-00	Supplies & Materials	6,843.00	6,843.00	90.84	403.29	6,439.71	5.89 %
300-58252-00	Utilities - Lift Station	24,744.00	24,744.00	2,702.93	23,879.09	864.91	96.50 %
300-58301-00	Vehicle Maintenance - Collections	4,650.00	4,650.00	0.00	6,037.10	-1,387.10	129.83 %
300-84000-00	Interest Expense	6,489.00	0.00	0.00	0.00	0.00	0.00 %
300-86000-00	Administrative Expense	0.00	12,646.00	1,053.83	12,645.96	0.04	100.00 %
300-90000-00	Interfund Transfer	0.00	0.00	0.00	256,709.96	-256,709.96	0.00 %
	Expense Total:	1,095,503.00	768,913.00	55,621.71	986,147.80	-217,234.80	128.25 %
	Fund: 300 - Sewer Collection Surplus (Deficit):	608,853.00	-36,040.00	22,895.11	-159,784.55	-123,744.55	443.35 %
Fund: 310 - Sewer Capital Improvement Fund							
Revenue							
310-75500-00	Leachate Loads	15,000.00	15,000.00	0.00	8,509.20	-6,490.80	56.73 %
	Revenue Total:	15,000.00	15,000.00	0.00	8,509.20	-6,490.80	56.73 %
Expense							
310-90000-00	Interfund Transfer	0.00	0.00	0.00	-40,169.50	40,169.50	0.00 %
	Expense Total:	0.00	0.00	0.00	-40,169.50	40,169.50	0.00 %
	Fund: 310 - Sewer Capital Improvement Fund Surplus (Deficit):	15,000.00	15,000.00	0.00	48,678.70	33,678.70	324.52 %
Fund: 320 - Sewer Capacity Charge Fund - Restricted							
Revenue							
320-72100-00	Fac. Capacity Chg.	11,292.00	11,292.00	0.00	11,292.00	0.00	100.00 %
	Revenue Total:	11,292.00	11,292.00	0.00	11,292.00	0.00	100.00 %
Expense							
320-90000-00	Interfund Transfer	0.00	0.00	0.00	203,000.00	-203,000.00	0.00 %
	Expense Total:	0.00	0.00	0.00	203,000.00	-203,000.00	0.00 %
	Fund: 320 - Sewer Capacity Charge Fund - Restricted Surplus (Deficit):	11,292.00	11,292.00	0.00	-191,708.00	-203,000.00	-1,697.73 %
Fund: 350 - Sewer Treatment							
Revenue							
350-42100-00	O&M Payments-Arrowbear CWD	0.00	104,286.00	0.00	108,517.21	4,231.21	104.06 %
350-42200-00	O&M Payments-CSA 79	0.00	130,367.00	0.00	127,790.28	-2,576.72	98.02 %
350-74000-00	Interest Income	0.00	0.00	0.00	-2,103.27	-2,103.27	0.00 %
350-74200-00	California Demand response program ..	0.00	4,450.00	0.00	2,401.83	-2,048.17	53.97 %
350-75100-00	Capital Payments - Arrowbear CWD	0.00	29,925.00	0.00	48,172.40	18,247.40	160.98 %
350-75200-00	Capital Payments-CSA 79	0.00	42,188.00	0.00	40,859.23	-1,328.77	96.85 %
350-78900-00	Sewer Rev Allocation: 45% Treat & 5...	0.00	971,483.00	64,241.02	874,806.84	-96,676.16	90.05 %
	Revenue Total:	0.00	1,282,699.00	64,241.02	1,200,444.52	-82,254.48	93.59 %
Expense							
350-50100-00	Salaries and wages	0.00	314,212.00	26,378.74	348,751.87	-34,539.87	110.99 %
350-50110-00	Salaries and wages - Overtime	0.00	0.00	1,466.96	5,267.12	-5,267.12	0.00 %
350-50120-00	Medicare Tax	0.00	4,551.00	400.87	4,427.25	123.75	97.28 %
350-50130-00	Worker's Compensation Insurance	0.00	11,835.00	0.00	10,092.57	1,742.43	85.28 %
350-50140-00	Employee Benefits-Group Insurance	0.00	31,414.00	2,196.87	22,822.38	8,591.62	72.65 %
350-50150-00	Employee Benefits-Retirement	0.00	93,068.00	7,261.06	90,547.79	2,520.21	97.29 %
350-50160-00	Employee Benefits-Uniform Allowance	0.00	1,050.00	191.09	1,062.31	-12.31	101.17 %
350-52300-00	Community relations	0.00	0.00	38.20	65.31	-65.31	0.00 %
350-53100-00	Depreciation	0.00	291,068.00	23,863.04	287,789.57	3,278.43	98.87 %
350-53120-00	Director's Compensation Fees	0.00	0.00	82.50	2,028.00	-2,028.00	0.00 %
350-53200-00	Education & Seminars	0.00	1,500.00	58.31	840.99	659.01	56.07 %
350-53300-00	Effluent Disposal	0.00	9,000.00	0.00	4,649.48	4,350.52	51.66 %
350-54100-00	Gas, Fuel & Oil	0.00	4,475.00	126.43	5,978.09	-1,503.09	133.59 %
350-54300-00	Insurance - liability	0.00	23,000.00	0.00	22,494.11	505.89	97.80 %
350-56100-00	Memberships & Subscriptions	0.00	4,481.00	139.00	3,776.99	704.01	84.29 %
350-57100-00	Permits & Fees	0.00	31,654.00	0.00	26,122.49	5,531.51	82.53 %

Budget Report

For Fiscal: 2016-2017 Period Ending: 06/30/2017

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
350-57140-00	Professional Services - Treatment	0.00	57,400.00	2,022.93	87,907.42	-30,507.42	153.15 %
350-57310-00	Repairs & maintenance - Sewer Inter...	0.00	4,525.00	0.00	2,641.65	1,883.35	58.38 %
350-57314-00	Repairs & maintenance - Treatment P...	0.00	51,700.00	7,640.28	36,533.26	15,166.74	70.66 %
350-57400-00	Safety Equipment & Clothing	0.00	0.00	0.00	186.50	-186.50	0.00 %
350-57430-00	Solids Handling	0.00	53,020.00	5,809.73	66,503.04	-13,483.04	125.43 %
350-57440-00	Miscellaneous Supplies & Materials	0.00	5,943.00	758.24	9,889.80	-3,946.80	166.41 %
350-57444-00	Supplies - Office	0.00	5,950.00	0.00	309.94	5,640.06	5.21 %
350-58100-00	Telephone	0.00	0.00	96.17	891.72	-891.72	0.00 %
350-58251-00	Utilities - Joint Use Facilities	0.00	103,368.00	17,003.05	99,368.49	3,999.51	96.13 %
350-58301-00	Vehicle Maintenance - Treatment	0.00	7,950.00	720.52	5,760.97	2,189.03	72.47 %
350-59200-00	Wastewater Testing & Analysis	0.00	9,692.00	3,144.00	17,425.87	-7,733.87	179.80 %
350-84000-00	Interest Expense	0.00	6,489.00	0.00	6,489.34	-0.34	100.01 %
350-86000-00	Administrative Expense	0.00	16,596.00	1,383.00	16,596.00	0.00	100.00 %
350-90000-00	Interfund Transfer	0.00	0.00	0.00	-419,540.46	419,540.46	0.00 %
	Expense Total:	0.00	1,143,941.00	100,780.99	767,679.86	376,261.14	67.11 %
	Fund: 350 - Sewer Treatment Surplus (Deficit):	0.00	138,758.00	-36,539.97	432,764.66	294,006.66	311.88 %
Fund: 400 - Ambulance Operating Fund							
Revenue							
400-40000-00	Service Charges	850,000.00	850,000.00	82,104.27	1,117,276.46	267,276.46	131.44 %
400-40050-00	Ambulance Contractural Allowance	-310,000.00	-310,000.00	-12,677.08	-571,703.95	-261,703.95	184.42 %
400-44000-00	Ambulance Late Fees	4,000.00	4,000.00	120.00	3,090.00	-910.00	77.25 %
400-49000-00	Other service fees	0.00	0.00	0.00	166.66	166.66	0.00 %
400-74000-00	Interest Income	0.00	0.00	0.00	1,376.72	1,376.72	0.00 %
400-76000-00	Medi-Cal GEMT Support Reimburse...	0.00	100,000.00	0.00	59,976.61	-40,023.39	59.98 %
	Revenue Total:	544,000.00	644,000.00	69,547.19	610,182.50	-33,817.50	94.75 %
Expense							
400-50100-00	Salaries and wages	398,801.00	398,801.00	19,521.84	417,162.61	-18,361.61	104.60 %
400-50110-00	Salaries and wages - Overtime	0.00	0.00	5,287.91	20,033.26	-20,033.26	0.00 %
400-50120-00	Medicare Tax	0.00	5,783.00	358.54	6,263.05	-480.05	108.30 %
400-53100-00	Depreciation	28,732.00	28,732.00	2,808.35	41,880.45	-13,148.45	145.76 %
400-54100-00	Gas, Fuel & Oil	10,395.00	10,395.00	965.21	7,328.58	3,066.42	70.50 %
400-54300-00	Insurance - liability	7,500.00	7,500.00	0.00	7,231.80	268.20	96.42 %
400-56100-00	Memberships & Subscriptions	2,450.00	2,450.00	0.00	3,434.84	-984.84	140.20 %
400-57140-00	Professional Services	27,500.00	27,500.00	455.74	30,417.31	-2,917.31	110.61 %
400-57310-00	Repairs and maintenance - Spec. Pur...	2,000.00	2,000.00	205.77	1,422.82	577.18	71.14 %
400-57441-00	Supplies & Materials - Medical	12,920.00	12,920.00	1,757.24	22,538.60	-9,618.60	174.45 %
400-57442-00	Supplies & Materials - Misc	6,000.00	6,000.00	617.77	7,138.21	-1,138.21	118.97 %
400-57443-00	Supplies & Materials - Station	1,840.00	1,840.00	532.44	1,622.44	217.56	88.18 %
400-58100-00	Communications	1,440.00	1,440.00	190.57	1,296.61	143.39	90.04 %
400-58200-00	Uncollectible Accounts	0.00	0.00	0.00	3,956.78	-3,956.78	0.00 %
400-58300-00	Vehicle Maintenance	13,400.00	13,400.00	1,928.49	15,287.51	-1,887.51	114.09 %
400-84000-00	Interest Expense	0.00	0.00	0.00	1,168.42	-1,168.42	0.00 %
400-86000-00	Administrative Expense	9,685.00	9,685.00	807.08	9,684.96	0.04	100.00 %
	Expense Total:	522,663.00	528,446.00	35,436.95	597,868.25	-69,422.25	113.14 %
	Fund: 400 - Ambulance Operating Fund Surplus (Deficit):	21,337.00	115,554.00	34,110.24	12,314.25	-103,239.75	10.66 %
Fund: 500 - Fire Operating Fund							
Revenue							
500-46000-00	Hazard Abatement Program	7,500.00	7,500.00	340.00	16,653.73	9,153.73	222.05 %
500-49000-00	Other service fees	16,700.00	16,700.00	380.00	2,196.62	-14,503.38	13.15 %
500-49500-00	Other service fees - Fire Payroll Reim...	0.00	0.00	0.00	203,515.07	203,515.07	0.00 %
500-70000-00	Property Taxes	1,425,000.00	1,425,000.00	0.00	1,519,559.61	94,559.61	106.64 %
500-70100-00	Property Taxes - PY Taxes and Assess...	0.00	0.00	0.00	9,777.99	9,777.99	0.00 %
500-70200-00	Property Tax - Penalties & cost on del...	0.00	0.00	0.00	236.56	236.56	0.00 %
500-70300-00	Property Tax - Homeowners Property...	0.00	0.00	2,516.17	16,774.54	16,774.54	0.00 %
500-71000-00	Availability Charges	205,000.00	205,000.00	0.00	196,052.18	-8,947.82	95.64 %
500-74000-00	Interest Income	1,500.00	1,500.00	0.00	10,608.11	9,108.11	707.21 %
500-76000-00	Grants	0.00	0.00	0.00	5,710.00	5,710.00	0.00 %

Budget Report

For Fiscal: 2016-2017 Period Ending: 06/30/2017

		Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
500-78000-00	Miscellaneous Income-Non Op	0.00	0.00	0.00	-239.76	-239.76	0.00 %
	Revenue Total:	1,655,700.00	1,655,700.00	3,236.17	1,980,844.65	325,144.65	119.64 %
	Expense						
500-50100-00	Salaries and wages	741,416.00	741,416.00	58,818.95	819,933.73	-78,517.73	110.59 %
500-50110-00	Salaries and wages - Overtime	0.00	0.00	11,017.52	38,766.05	-38,766.05	0.00 %
500-50120-00	Medicare Tax	10,751.00	10,751.00	987.59	12,266.53	-1,515.53	114.10 %
500-50130-00	Worker's Compensation Insurance	45,000.00	45,000.00	112.00	42,147.17	2,852.83	93.66 %
500-50140-00	Employee Benefits-Group Insurance	92,355.00	92,355.00	6,901.32	95,815.10	-3,460.10	103.75 %
500-50150-00	Employee Benefits-Retirement	421,211.00	421,211.00	34,871.06	438,116.54	-16,905.54	104.01 %
500-50160-00	Employee Benefits-Uniform Allowance	5,000.00	5,000.00	148.87	3,059.87	1,940.13	61.20 %
500-50170-00	Unemployment Benefit Expenses	0.00	0.00	0.00	271.85	-271.85	0.00 %
500-52300-00	Community relations	2,600.00	2,600.00	338.43	2,703.03	-103.03	103.96 %
500-53100-00	Do Not Use - Depreciation	81,924.00	0.00	0.00	0.00	0.00	0.00 %
500-53120-00	Director's Compensation Fees	2,850.00	2,850.00	85.00	1,411.00	1,439.00	49.51 %
500-53200-00	Education & Seminars	6,500.00	6,500.00	61.03	5,030.04	1,469.96	77.39 %
500-54100-00	Gas, Fuel & Oil	11,630.00	11,630.00	1,245.98	8,064.89	3,565.11	69.35 %
500-54200-00	Hazard Abatement Expense	7,500.00	7,500.00	0.00	7,934.32	-434.32	105.79 %
500-54300-00	Insurance - liability	11,670.00	11,670.00	0.00	12,094.54	-424.54	103.64 %
500-56100-00	Memberships & Subscriptions	4,340.00	4,340.00	585.36	3,360.25	979.75	77.43 %
500-56300-00	Office Expense	3,300.00	3,300.00	344.50	4,424.85	-1,124.85	134.09 %
500-57100-00	Permits & Fees	6,436.00	6,436.00	0.00	4,433.52	2,002.48	68.89 %
500-57140-00	Professional Services	36,200.00	36,200.00	3,379.76	35,135.36	1,064.64	97.06 %
500-57143-00	Professional Services - Dispatching Se...	38,000.00	38,000.00	0.00	37,617.35	382.65	98.99 %
500-57310-00	Repairs and maintenance - Structures...	8,500.00	8,500.00	1,821.63	5,072.04	3,427.96	59.67 %
500-57400-00	Safety Equipment & Clothing	26,500.00	26,500.00	1,198.93	17,339.95	9,160.05	65.43 %
500-58100-00	Telephone	0.00	0.00	0.00	360.27	-360.27	0.00 %
500-58250-00	Utilities - Heat & Lights	18,696.00	18,696.00	2,477.12	22,426.64	-3,730.64	119.95 %
500-58300-00	Vehicle Maintenance	20,355.00	20,355.00	330.00	22,970.79	-2,615.79	112.85 %
500-81000-00	Tax fee	0.00	0.00	6.29	2,422.18	-2,422.18	0.00 %
500-86000-00	Administrative Expense	30,416.00	30,416.00	2,534.66	30,415.92	0.08	100.00 %
	Expense Total:	1,633,150.00	1,551,226.00	127,266.00	1,673,593.78	-122,367.78	107.89 %
	Fund: 500 - Fire Operating Fund Surplus (Deficit):	22,550.00	104,474.00	-124,029.83	307,250.87	202,776.87	294.09 %
	Fund: 510 - Fire - Workers Comp PASIS Fund						
	Expense						
510-50130-00	Worker's Comp Insurance Claims	0.00	0.00	64.26	524.44	-524.44	0.00 %
	Expense Total:	0.00	0.00	64.26	524.44	-524.44	0.00 %
	Fund: 510 - Fire - Workers Comp PASIS Fund Total:	0.00	0.00	64.26	524.44	-524.44	0.00 %
	Fund: 590 - Fire - GW (Government Wide)						
	Revenue						
590-70000-00	Property Taxes	0.00	0.00	0.00	-45,979.69	-45,979.69	0.00 %
	Revenue Total:	0.00	0.00	0.00	-45,979.69	-45,979.69	0.00 %
	Expense						
590-50100-00	Salaries and wages	0.00	0.00	0.00	-29,439.05	29,439.05	0.00 %
590-53100-00	Depreciation	0.00	81,924.00	6,346.80	79,501.38	2,422.62	97.04 %
	Expense Total:	0.00	81,924.00	6,346.80	50,062.33	31,861.67	61.11 %
	Fund: 590 - Fire - GW (Government Wide) Surplus (Deficit):	0.00	-81,924.00	-6,346.80	-96,042.02	-14,118.02	117.23 %
	Report Surplus (Deficit):	834,674.00	422,756.00	-84,668.13	507,609.29	84,853.29	120.07 %

Group Summary

Account Typ...	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)	Percent Used
Fund: 200 - Water Operating Fund						
Revenue	1,932,677.00	1,932,677.00	165,906.39	1,957,203.22	24,526.22	101.27 %
Expense	1,798,435.00	1,798,435.00	141,491.01	1,818,561.40	-20,126.40	101.12 %
Fund: 200 - Water Operating Fund Surplus (Deficit):	134,242.00	134,242.00	24,415.38	138,641.82	4,399.82	103.28 %
Fund: 210 - Water Capital Improvement Fund						
Revenue	10,636.00	10,636.00	892.00	10,636.00	0.00	100.00 %
Fund: 210 - Water Capital Improvement Fund Total:	10,636.00	10,636.00	892.00	10,636.00	0.00	100.00 %
Fund: 220 - Water Capacity Charge Fund - Restricted						
Revenue	10,764.00	10,764.00	0.00	5,382.00	-5,382.00	50.00 %
Fund: 220 - Water Capacity Charge Fund - Restricted Total:	10,764.00	10,764.00	0.00	5,382.00	-5,382.00	50.00 %
Fund: 300 - Sewer Collection						
Revenue	1,704,356.00	732,873.00	78,516.82	826,363.25	93,490.25	112.76 %
Expense	1,095,503.00	768,913.00	55,621.71	986,147.80	-217,234.80	128.25 %
Fund: 300 - Sewer Collection Surplus (Deficit):	608,853.00	-36,040.00	22,895.11	-159,784.55	-123,744.55	443.35 %
Fund: 310 - Sewer Capital Improvement Fund						
Revenue	15,000.00	15,000.00	0.00	8,509.20	-6,490.80	56.73 %
Expense	0.00	0.00	0.00	-40,169.50	40,169.50	0.00 %
Fund: 310 - Sewer Capital Improvement Fund Surplus (Deficit):	15,000.00	15,000.00	0.00	48,678.70	33,678.70	324.52 %
Fund: 320 - Sewer Capacity Charge Fund - Restricted						
Revenue	11,292.00	11,292.00	0.00	11,292.00	0.00	100.00 %
Expense	0.00	0.00	0.00	203,000.00	-203,000.00	0.00 %
Fund: 320 - Sewer Capacity Charge Fund - Restricted Surplus (Deficit):	11,292.00	11,292.00	0.00	-191,708.00	-203,000.00	-1,697.73 %
Fund: 350 - Sewer Treatment						
Revenue	0.00	1,282,699.00	64,241.02	1,200,444.52	-82,254.48	93.59 %
Expense	0.00	1,143,941.00	100,780.99	767,679.86	376,261.14	67.11 %
Fund: 350 - Sewer Treatment Surplus (Deficit):	0.00	138,758.00	-36,539.97	432,764.66	294,006.66	311.88 %
Fund: 400 - Ambulance Operating Fund						
Revenue	544,000.00	644,000.00	69,547.19	610,182.50	-33,817.50	94.75 %
Expense	522,663.00	528,446.00	35,436.95	597,868.25	-69,422.25	113.14 %
Fund: 400 - Ambulance Operating Fund Surplus (Deficit):	21,337.00	115,554.00	34,110.24	12,314.25	-103,239.75	10.66 %
Fund: 500 - Fire Operating Fund						
Revenue	1,655,700.00	1,655,700.00	3,236.17	1,980,844.65	325,144.65	119.64 %
Expense	1,633,150.00	1,551,226.00	127,266.00	1,673,593.78	-122,367.78	107.89 %
Fund: 500 - Fire Operating Fund Surplus (Deficit):	22,550.00	104,474.00	-124,029.83	307,250.87	202,776.87	294.09 %
Fund: 510 - Fire - Workers Comp PASIS Fund						
Expense	0.00	0.00	64.26	524.44	-524.44	0.00 %
Fund: 510 - Fire - Workers Comp PASIS Fund Total:	0.00	0.00	64.26	524.44	-524.44	0.00 %
Fund: 590 - Fire - GW (Govenment Wide)						
Revenue	0.00	0.00	0.00	-45,979.69	-45,979.69	0.00 %
Expense	0.00	81,924.00	6,346.80	50,062.33	31,861.67	61.11 %
Fund: 590 - Fire - GW (Govenment Wide) Surplus (Deficit):	0.00	-81,924.00	-6,346.80	-96,042.02	-14,118.02	117.23 %
Report Surplus (Deficit):	834,674.00	422,756.00	-84,668.13	507,609.29	84,853.29	120.07 %

Fund Summary

Fund	Original Total Budget	Current Total Budget	Period Activity	Fiscal Activity	Variance Favorable (Unfavorable)
200 - Water Operating Fund	134,242.00	134,242.00	24,415.38	138,641.82	4,399.82
210 - Water Capital Improvement F	10,636.00	10,636.00	892.00	10,636.00	0.00
220 - Water Capacity Charge Fund -	10,764.00	10,764.00	0.00	5,382.00	-5,382.00
300 - Sewer Collection	608,853.00	-36,040.00	22,895.11	-159,784.55	-123,744.55
310 - Sewer Capital Improvement Ft	15,000.00	15,000.00	0.00	48,678.70	33,678.70
320 - Sewer Capacity Charge Fund -	11,292.00	11,292.00	0.00	-191,708.00	-203,000.00
350 - Sewer Treatment	0.00	138,758.00	-36,539.97	432,764.66	294,006.66
400 - Ambulance Operating Fund	21,337.00	115,554.00	34,110.24	12,314.25	-103,239.75
500 - Fire Operating Fund	22,550.00	104,474.00	-124,029.83	307,250.87	202,776.87
510 - Fire - Workers Comp PASIS Fu	0.00	0.00	-64.26	-524.44	-524.44
590 - Fire - GW (Govenment Wide)	0.00	-81,924.00	-6,346.80	-96,042.02	-14,118.02
Report Surplus (Deficit):	834,674.00	422,756.00	-84,668.13	507,609.29	84,853.29

RUNNING SPRINGS WATER DISTRICT

MEMORANDUM

DATE: July 19, 2017
TO: Board of Directors
FROM: Ryan Gross, General Manager
SUBJECT: QUARTERLY INVESTMENT REPORT

RECOMMENDED BOARD ACTION

This is an information item only.

REASON FOR RECOMMENDATION

This is an information item only.

BACKGROUND INFORMATION

The District's Policy for Investment of Surplus Funds is set forth in the attached Resolution No. 1-96. In accordance with this policy Attachment 2 contains a copy of the latest Local Agency Investment Fund (LAIF) remittance advice indicating the amount invested and the rate of return. The District's surplus funds are invested in accordance with this policy and the District is able to meet its anticipated expenditure requirements for the next subsequent six months.

FISCAL INFORMATION

This is an information item only.

ATTACHMENTS

Attachment 1 – Resolution No. 1-96
Attachment 2 – LAIF Remittance Advice

RESOLUTION NO. 1-96

**RESOLUTION OF THE BOARD OF DIRECTORS OF
RUNNING SPRINGS WATER DISTRICT SETTING FORTH
A POLICY FOR INVESTMENT OF SURPLUS FUNDS**

WHEREAS, the Legislature of the State of California has declared that the deposit and investment of public funds by local officials and local agencies is an issue of State-wide concern; and

WHEREAS, the Legislature has directed that the treasurer or chief fiscal officer of each local agency shall annually render to the legislative body of the local agency a statement of investment policy, which the legislative body of the local agency shall consider at a public meeting; and

WHEREAS, the Legislature has also directed that the treasurer or chief fiscal officer of each local agency shall render a quarterly report to the legislative body of each local agency which includes the type of investment, issuer, date of maturity par and dollar amount invested on all securities, investments and monies held by the local agency, a description of any of the local agency's funds, investments, or programs that are under the management of contracted parties, and shall include a statement whether the investment portfolio is in compliance with the local agency's investment policy and a statement denoting the ability of the local agency to meet its expenditure requirements for the next subsequent six months; and

WHEREAS, the Legislature has determined that if a local agency has placed all of its investments in the Local Agency Investment Fund or in Federal Deposit Insurance Corporation-insured accounts in a bank or savings and loan association, the treasurer or chief fiscal officer may satisfy the above reporting requirements by simply supplying to the governing body and to the auditor of the local agency the most recent statement or statements received by the local agency from these institutions; and

WHEREAS, Government Code Section 16429.1 provides that notwithstanding any other provision of law, a local governmental official, with the consent of the governing body of that agency, having money in its treasury not required for immediate needs, may remit such surplus funds to the State Treasurer for deposit in the Local Agency Investment Fund for the purpose of investment;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Running Springs Water District as follows:

1. It is the policy of the Running Springs Water District to invest funds in a manner which will provide the highest investment return with the maximum security while meeting the daily cash flow demands of the District and conforming to all statutes governing the investment of Running Springs Water District funds.

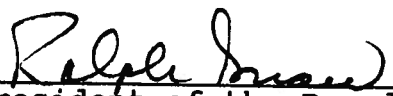
2. This Board of Directors determines that the most feasible and flexible method of implementing this policy, at least expense to the District, is to invest all surplus District funds in the Local Agency Investment Fund of the State of California.

3. Responsibility for deposits into and withdrawals from the Local Agency Investment Fund is hereby delegated to the District's General Manager.

4. At least quarterly, the General Manager will provide the Board of Directors with the most recent copies of statements from the Local Agency Investment Fund indicating amounts invested and rates of return. With each such quarterly report, the General Manager shall also indicate to the Board of Directors whether the District's surplus funds are invested in accordance with this policy, and whether the District is able to meet its anticipated expenditure requirements for the next subsequent six months.

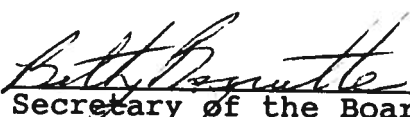
5. This policy shall be reviewed by the Board of Directors at least on an annual basis, and any modifications must be approved by the Board of Directors.

ADOPTED this 21st day of February, 1996.



President of the Board of
Directors of Running Springs
Water District

ATTEST:



Secretary of the Board of
Directors of Running Springs
Water District



BETTY T. YEE

California State Controller

LOCAL AGENCY INVESTMENT FUND
REMITTANCE ADVICE

Agency Name	RUNNING SPRINGS WATER DISTRICT
Account Number	90-36-002

As of 07/14/2017, your Local Agency Investment Fund account has been directly credited with the interest earned on your deposits for the quarter ending 06/30/2017.

Earnings Ratio		.00002531309414880
Interest Rate		0.92%
Dollar Day Total	\$	243,060,660.23
Quarter End Principal Balance	\$	2,928,138.71
Quarterly Interest Earned	\$	6,152.62