



AGENDA

ADJOURNED REGULAR MEETING OF THE CARSON RECLAMATION AUTHORITY

"In accordance with the Americans with Disabilities Act of 1990, if you require a disability related modification or accommodation to attend or participate in this meeting, including auxiliary aids or services, please call the City Clerk's office at 310-952-1720 at least 48 hours prior to the meeting." (Government Code Section 54954.2)

CALL TO ORDER: CARSON RECLAMATION AUTHORITY

ROLL CALL:

CLOSED SESSION: (NONE)

ORAL COMMUNICATIONS – CLOSED SESSION ITEMS ONLY

ANNOUNCEMENT OF CLOSED SESSION ITEMS

RECESS INTO CLOSED SESSION

RECONVENE: OPEN SESSION

REPORT ON CLOSED SESSION ACTIONS

ORAL COMMUNICATIONS – MEMBERS OF THE PUBLIC (LIMITED TO ONE HOUR)

The public may address the members of the Carson Reclamation Authority on any matters within the jurisdiction of the Carson Reclamation Authority or on any items on the agenda of the Carson Reclamation Authority, other than closed session matters, prior to any action taken on the agenda. Speakers are limited to no more than three minutes, speaking once. Oral communications will be limited to one(1) hour unless extended by order of the Chair with the approval of the Authority Board.

APPROVAL OF MINUTES:

TUESDAY, MAY 5, 2015 (REGULAR)
TUESDAY, JUNE 16, 2015 (SPECIAL)
TUESDAY, JULY 7, 2015 (REGULAR)
TUESDAY, AUGUST 4, 2015 (REGULAR)
TUESDAY, SEPTEMBER 1, 2015 (REGULAR)
TUESDAY, FEBRUARY 2, 2016 (REGULAR)
TUESDAY, MARCH 1, 2016 (REGULAR)
TUESDAY, APRIL 5, 2016 (REGULAR)

CONSENT (Items 1-12)

These items are considered to be routine items of AUTHORITY business and have, therefore, been placed on the CONSENT CALENDAR. If AUTHORITY wishes to discuss any item or items, then such item or items should be removed from the CONSENT CALENDAR. For items remaining on the CONSENT CALENDAR, a single motion to ADOPT the recommended action is in order.

Item No. 1. 2016-670 CONSIDER RESOLUTION NO. 16-11-CRJPA APPROVING CLAIMS AND DEMANDS IN THE AMOUNT OF \$690,972.69

Recommendations: TAKE the following actions:

1. APPROVE Resolution No. 16-11-CRJPA, "A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY OF THE CITY OF CARSON, CALIFORNIA, APPROVING CLAIMS AND DEMANDS IN THE AMOUNT OF \$690,972.69."
2. AUTHORIZE the Chairman to execute the Resolution following approval as to form by the Authority Attorney.

Item No. 2. 2016-594 AMENDMENTS TO THE FY 2015/16 BUDGET OF THE CARSON RECLAMATION AUTHORITY

Recommendations: WAIVE further reading and ADOPT RESOLUTION No. 16-08-CRJPA, "A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY AMENDING THE FY 2015/16 BUDGET"

Item No. 3. 2016-608 APPROVAL OF AGREEMENT FOR CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND DIRTONU, INC. D/B/A MUROW CM

Recommendations: TAKE the following actions:

1. APPROVE the Agreement for Consulting Services between the Carson Reclamation Authority and Dirtonu, Inc. d/b/a Murrow CM (Consultant).
2. AUTHORIZE the Chairman to execute the Agreement for Consulting Services, which shall be in substantially the same form as attached hereto upon approval as to form by the Authority Counsel.

Item No. 4. 2016-610 APPROVE AGREEMENT FOR ENVIRONMENTAL CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC. ("SCS ENGINEERS")

Recommendations: TAKE the following actions:

1. APPROVE Agreement for Consulting Services between the Carson Reclamation Authority and Stearns, Conrad and Schmidt Consulting Engineers, Inc.
2. AUTHORIZE the Chairman to execute the Agreement which will be in substantially the same form as attached hereto upon approval as to form by Authority Counsel.

Item No. 5. 2016-612 CONSIDER RESOLUTION NO. 16-10-CRJPA AMENDING THE MEETING TIME OF THE CARSON RECLAMATION AUTHORITY BOARD

Recommendations: WAIVE further reading and APPROVE Resolution No. 16-10-CRJPA, "A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY AMENDING THE MEETING TIME OF THE CARSON RECLAMATION AUTHORITY BOARD."

Item No. 6. 2016-613 APPROVAL OF AGREEMENT FOR CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND LEIGHTON CONSULTING, INC.

Recommendations: TAKE the following actions:

1. APPROVE Agreement for Consulting Services between the Carson Reclamation Authority and Leighton Consulting, Inc.; and
2. AUTHORIZE Chairman to execute such Agreement in substantially the same form as attached hereto upon approval as to form by the Authority Counsel

Item No. 7. 2016-614 APPROVE AGREEMENT FOR CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND SEG ADVISORS

Recommendations: TAKE the following actions:

1. APPROVE Agreement for Consulting Services between the Carson Reclamation Authority and SEG Advisors.
2. AUTHORIZE the Chairman to execute the Agreement for Consulting Services, which shall be in substantially the same form as the Agreement attached hereto, upon approval as to form by the Authority Counsel.

Item No. 8. 2016-639 APPROVAL OF AGREEMENT FOR CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND CUMMINGS CURLEY AND ASSOCIATES, INC.

Recommendations: TAKE the following actions:

1. APPROVE Agreement for Consulting Services between the Carson Reclamation Authority and Cummings Curley and Associates, Inc.
2. AUTHORIZE the Chairman to execute the Agreement for Consulting Services, which shall be in substantially the same form as the Agreement attached hereto, upon approval as to form by the Authority Counsel.

Item No. 9. 2016-651 ANNUAL STATEMENT OF INVESTMENT POLICY

Recommendations: APPROVE and ADOPT the amended Statement of Investment Policy

Item No. 10. 2016-662 APPROVAL OF WORK ORDER REQUESTS FROM TETRA TECH BY THE CARSON RECLAMATION AUTHORITY, REPLACING PREVIOUSLY APPROVED CHANGE ORDERS AND AUTHORIZING ADDITIONAL TASKS

Recommendations: APPROVE Work Order Request to approve Work Orders 29, 30, 31, 32, 33, 36, 37, 38, and 39, listed and described below, which have been reviewed and approved by the CRA's project manager and the environmental consultant.

Item No. 11. 2016-663 CARSON RECLAMATION AUTHORITY MONTHLY INVESTMENT REPORT

Recommendations: RECEIVE and FILE

Item No. 12. 2016-458 CONSIDER APPROVAL OF A MEMORANDUM OF UNDERSTANDING BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND WEST BASIN MUNICIPAL WATER DISTRICT FOR RECLAIMED WATER AT THE 157 ACRE AUTHORITY-OWNED SITE

Recommendations: TAKE the following actions:

1. APPROVE the Memorandum of Understanding by and between the Carson Reclamation Authority and West Basin Municipal Water District.
2. AUTHORIZE the Chairman to execute the Memorandum of Understanding following approval as to form by Authority Counsel.

SPECIAL ORDERS OF THE DAY (NONE)

Public testimony is restricted to three minutes per speaker, speaking once (excepting applicants who are afforded a right of rebuttal, if desired), unless extended by order of the Chair with the approval of the Authority.

DISCUSSION (Item 13)

Item No. 13. 2016-595 ADOPTION OF FY 2016/17 BUDGET OF THE CARSON RECLAMATION AUTHORITY, RESOLUTION NO. 16-09 CRJPA

Recommendations: WAIVE further reading and ADOPT RESOLUTION No. 16-09-CRJPA, "A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY ADOPTING THE FY 2016/17 BUDGET AND APPROVING APPROPRIATIONS FOR THE 2016/17 FISCAL YEAR."

ORDINANCE SECOND READING (NONE)

ORAL COMMUNICATIONS (MEMBERS OF THE PUBLIC)

The public may at this time address the members of the Carson Reclamation Authority on any matters within the jurisdiction of the Carson Reclamation Authority. No action may be taken on non-agendized items except as authorized by law. Speakers are requested to limit their comments to no more than three minutes each, speaking once.

ORAL COMMUNICATIONS (AUTHORITY MEMBERS)

ANNOUNCEMENT OF UNFINISHED OR CONTINUED CLOSED SESSION ITEMS (AS NECESSARY)

RECESS TO CLOSED SESSION

RECONVENE TO OPEN SESSION

ADJOURNMENT



File #: 2016-670, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

CONSIDER RESOLUTION NO. 16-11-CRJPA APPROVING CLAIMS AND DEMANDS IN THE AMOUNT OF \$690,972.69

I. SUMMARY

This action approves invoices in the amount of \$690,972.69 submitted for work pursuant to contracts and agreements previously approved by the Carson Reclamation Authority (CRA) Board.

II. RECOMMENDATION

TAKE the following actions:

1. APPROVE Resolution No. 16-11-CRJPA, "A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY OF THE CITY OF CARSON, CALIFORNIA, APPROVING CLAIMS AND DEMANDS IN THE AMOUNT OF \$690,972.69."
2. AUTHORIZE the Chairman to execute the Resolution following approval as to form by the Authority Attorney.

III. ALTERNATIVES

1. TAKE another action the Authority deems appropriate.

1.

IV. BACKGROUND

Since May, 2015 the CRA Board has taken a number of actions to move the remediation of the former Cal-Compact Landfill project forward and to create systems that allow the

review and approval of the work undertaken by the remediation contractor, Tetra Tech, and other contractors and consultants in a fair but transparent manner.

This action includes the approval of a Claims and Demands Resolution approving several Tetra Tech invoices (payment request numbers 135-145), which have been reviewed and approved by the CRA's Project Manager (SEG Advisors) and Environmental Services Advisor (SCS Engineers). Also included are payments to the CRA's auditors, Vasquez & Company, as well as the Department of Toxic Substances Control, and monthly payments to SEG and SCS.

V. FISCAL IMPACT

The total expenditure in this period is \$690,972.69.

VI. EXHIBITS

1. Resolution No. 16-11-CRJPA. (pgs. 3-4)

Prepared by: John Raymond, Community Development Director

RESOLUTION NO. 16-11-CRJPA

RESOLUTION NO. 16-11-CRJPA, A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY RATIFYING CLAIMS AND DEMANDS IN THE AMOUNT OF \$690,972.69

THE CARSON RECLAMATION AUTHORITY DOES HEREBY RESOLVE, DETERMINE AND ORDER AS FOLLOWS:

Section 1: The following claims and demands have been audited as required by law and are hereby ratified in the amount hereinafter set forth:

Payee Name	Payment Number	Purpose	Invoice Number	Payment Amount
Tetra Tech	137	WO21: Site Security & Maintenance	51036739	\$64,275.45
Tetra Tech	136	WO23: Maintain Storage Yard	51036072	\$348.41
Tetra Tech	142	WO25: Project Management	51037304	\$110,621.08
Tetra Tech	138	WO22: Watering Prescriptive Cover	51036742	\$9,083.96
Tetra Tech	135	WO17: Interim Air Intrusion Controls	51036079	\$7,365.75
Tetra Tech	143	WO19: Perimeter Air Monitoring	51037556	\$59,785.13
Tetra Tech	144	WO20: Vector Control	51037552	\$5,261.07
Tetra Tech	140	WO16: Import of Fill & Stockpiling	51036745	\$102,664.46
Tetra Tech	139	WO24: LFGETS OM&M	51036916	\$76,680.43
Tetra Tech	141	COR 209: Storm Water Pollution Pre	51036735	\$75,557.28
Tetra Tech	145	COR 211: Alt. Compliance Plan	51037549	\$1,761.21
Total Tetra Tech				\$513,404.23
Vasquez & Company				\$2,500.00
Dept. of Toxic Substances		July-December, 2015 & January-March, 2016		\$79,461.40
Lee Kosmont Advisory		February, March & April 2016		\$18,411.75
Placeworks				\$14,387.31
SCS Engineering				\$22,808.00
SEG Advisors		March & April 2016		\$40,000.00
Total Other Invoices				\$177,568.46
TOTAL OF ALL INVOICES				\$690,972.69

On June 8, 2016, the Carson Reclamation Authority ratified the above Demands and the City Treasurer is hereby directed by pay, out of the funds named hereon, to each of the Claimants listed above, the amount of warrant appearing opposite their respective names, for the purpose stated on the respective demands, making a total of \$690,972.69.

PASSED, APPROVED and ADOPTED this 8th day of June, 2016.

CARSON RECLAMATION AUTHORITY, a
public body

By: _____
Executive Director John S. Raymond

ATTEST:

Deputy Secretary Joy Simarago

CERTIFICATION

In accordance with Section 37.202 of the California Government Code, I hereby certify that the above demands are accurate and that funds are available for payment thereof. I certify under penalty of perjury that the foregoing is true and correct.

EXECUTED THE _____ DAY OF
_____ AT CARSON, CALIFORNIA

EXECUTIVE DIRECTOR
JOHN S. RAYMOND



File #: 2016-594, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

AMENDMENTS TO THE FY 2015/16 BUDGET OF THE CARSON RECLAMATION AUTHORITY

I. SUMMARY

The Carson Reclamation Authority Board approved the FY 2015/16 Budget of the Authority when it adopted Resolution No. 15-03-CRJPA on July 7, 2015. In the course of the fiscal year, there were changes in the remediation activities and in the development plan which necessitated adjustments to the approved appropriation. Staff is requesting Board approval of all the budget changes during the fiscal year by adopting Resolution No. 16-08-CRJPA, attached to this report as Exhibit No. 1.

II. RECOMMENDATION

WAIVE further reading and ADOPT RESOLUTION No. 16-08-CRJPA, "A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY AMENDING THE FY 2015/16 BUDGET"

III. ALTERNATIVES

1. TAKE another action that may be deemed appropriate.

IV. BACKGROUND

As stipulated under Article II, Section 2.03, Subsection (a) of the Joint Powers Agreement (Agreement) dated February 17, 2015, which governed the formation of the Carson Reclamation Joint Powers Authority, the Authority Board shall adopt an annual budget by approval of not less than 2/3 of the Board. The fiscal year 2015/16 budget of the Authority was approved unanimously on July 7, 2015. Since then, identification of new or increased remediation work, and engagement of essential goods and services necessitated adjustments to the approved funding. According to Article II, Section 2.03, Subsection (c)

of the Agreement, no expenditures in excess of those budgeted shall be made without the prior approval of an amended annual budget by the Board by not less than a majority vote of the total Board membership.

To be compliant with this provision, staff is requesting approval of fiscal year 2015/16 budget amendments by adopting Resolution No. 16-08-CRJPA attached as Exhibit No. 1.

There were new revenue sources that were not known at the time of the adoption of the budget which are also being accounted for in the attached resolution. Some of the adjustments have been previously brought before the Board but staff still included them in Resolution No.16-08-CRJPA to memorialize all the budget changes in one document and to effect corrections where necessary. After implementing the changes, the budgeted expenditures, as amended, should total \$9,640,990. The details of the amended budget are shown on Exhibit No. 2 of the staff report regarding the adoption of the proposed CRA budget for FY 2016/17. This budget adoption report is part of the discussion item in today's agenda.

V. FISCAL IMPACT

If the CRA Board approves the proposed amendments, the revenue projections of the Carson Reclamation Authority for fiscal year 2015/16 will increase by \$12,249,655, from \$51,951,000 to \$64,200,655. The budgeted expenditures will also increase by \$871,910, from \$8,769,080 to \$9,640,990.

VI. EXHIBITS

1. Resolution No. 16-08-CRJPA amending FY 2015/16 budget. (pgs. 3-4)

1.

Prepared by: Trini H. Catbagan, Controller

RESOLUTION NO. 16-08-CRJPA

A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY
AMENDING THE FISCAL YEAR 2015/16 BUDGET

WHEREAS, the Carson Reclamation Authority adopted the Authority's budget for Fiscal Year 2015/16 on July 7, 2015; and

WHEREAS, new and increased remediation work, procurement of required insurance and other goods, and the engagement of essential professional services necessitated adjustments to the approved budget; and

WHEREAS, Article II, Section 2.03, Subsection (c) of the Joint Power Agreement which governed the formation of the Carson Reclamation Authority provides that no expenditures in excess of those budgeted shall be made without the prior approval of an amended annual budget by the Board by not less than a majority vote of the total Board membership; and

WHEREAS, the Carson Reclamation Authority desires to amend FY 2015/16 budget.

NOW, THEREFORE, THE CARSON RECLAMATION AUTHORITY DOES HEREBY RESOLVE, FIND, DETERMINE, AND ORDER AS FOLLOWS:

Section 1. The following amendments will be made to the Authority's budget:

<u>Account Number</u>	<u>Program & Object Description</u>	<u>Amount Increase/(Decrease)</u>
78-00-999-000-9001	Proceeds of sale of bonds	\$ 90,000
78-00-999-000-4920	Reimbursement of bond issuance costs	280,000
78-00-999-000-4802	Reimbursement of carry costs	5,179,504
78-00-999-000-9182	Operating transfers from Carson SA	6,665,151
78-00-999-965-4401	Interest income on investments	35,000
78-70-782-965-7801	Project management	23,430
78-70-782-965-7802	Site security and site maintenance	188,428
78-70-782-965-7803	Storage yard maintenance	(14,728)
78-70-782-965-7804	Quarterly soil gas monitoring	(36,943)
78-70-782-965-7805	Watering prescriptive clay cover	(26,370)
78-70-782-965-7806	SWPPP-Stormwater pollution prevention plan	101,552
78-70-782-965-7807	Perimeter air monitoring	(85,619)
78-70-782-965-7808	Vector control	(51,371)
78-70-782-820-7810	Miscellaneous operations and maintenance	(73,068)
78-70-782-965-7811	Reclaimed water used for dust suppression	21,477
78-70-782-965-7812	Support CRA with AIG	30,000
78-70-782-965-7813	Concrete crushing for SWPPP	173,011
78-70-782-965-7814	Evaluate conceptual mall development plan	105,313
78-70-782-965-7815	Support and coordinate design for Lenardo Dr.	104,396

Section 1. (Continued) The following amendments will be made to the Authority's budget:

<u>Account Number</u>	<u>Program & Object Description</u>	<u>Amount Increase/(Decrease)</u>
78-70-782-965-7816	Import of fill and stockpiling	\$ 330,062
78-70-782-820-7820	Cost estimate to start LFG system per DTSC	10,566
78-70-782-820-7821	Redesign LFG system fro Cells A3 and A5	41,342
78-70-782-820-7823	Construction management of LFG system	21,159
78-70-782-965-7823	Construction management of LFG system	(76,921)
78-70-782-965-7824	AQMD Alternative compliance plan	43,113
78-70-782-965-7825	Interim air intrusion control	53,455
78-70-782-965-7830	LFG System O & M (Cells 3 & 5)	(9,276)
78-70-781-965-6004	Professional services	192,426
78-70-782-965-6004	Professional services	182,114
78-70-781-965-6015	Application Fees	5,113
78-70-781-965-6019	Administrative reimbursement to the City	100,000
78-70-781-965-6020	Computer and related accessories	871
78-70-781-965-6028	Liability insurance	169,000
78-70-781-965-7841	CRA Reimbursement to the developer	(524,600)
78-70-781-965-9501	Operating transfer out to the City general fund	(20,000)
78-70-782-821-7850	Alternative use plan	(251,000)
78-70-782-821-6004	Professional services	144,978

Section 2. The Authority Clerk shall certify to the adoption of this resolution and shall keep a copy of this resolution attached to the FY 2015/16 budget on file, the same shall be in force and effect.

PASSED, APPROVED, and ADOPTED this 8th day of June 2016.

Authority Chairman

ATTEST:

Authority Clerk

APPROVED AS TO FORM:

Authority Attorney



File #: 2016-608, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

APPROVAL OF AGREEMENT FOR CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND DIRTONU, INC. D/B/A MURROW CM

I. SUMMARY

This is a proposed agreement for consulting services (Agreement) between the Carson Reclamation Authority (Authority) and Dirtonu, Inc. d/b/a Murrow CM (Consultant) for dry utility coordination and design services for the Authority-owned 157-acre former landfill site located at 20400 Main Street (Site).

The contract term would be from July 1, 2016 to June 30, 2017 and would be for a fixed contract amount of \$12,500.

II. RECOMMENDATION

TAKE the following actions:

1. APPROVE the Agreement for Consulting Services between the Carson Reclamation Authority and Dirtonu, Inc. d/b/a Murrow CM (Consultant).
2. AUTHORIZE the Chairman to execute the Agreement for Consulting Services, which shall be in substantially the same form as attached hereto upon approval as to form by the Authority Counsel.

III. ALTERNATIVES

TAKE another action the Authority Board deems appropriate.

IV. BACKGROUND

As the development of the Carson 157 project continues to move forward, a number of expert consulting services will be needed. At this point the Authority has assumed the Master Developer function previously performed by Carson Marketplace, and is negotiating with a retail developer to take at least one cell, and interviewing other developers on the balance of the site. The deeper into the negotiation process the Authority goes, the more detailed and technical the information requests from developers become. Many of the questions are specifically related to the remediation activity and can be satisfactorily answered by Tetra Tech, the remediation contractor on site. One of the early lead time items, however, is the design and coordination of “dry utilities” on the site, which at this point is largely electrical service to be provided by Southern California Edison. Edison will not commit to completing the design and scheduling the installation of the utilities until a demand study is completed, and that study largely depends on the design of the site and the identification of end uses. Since only Cell 2 has enough design to work with Edison at this point, it is likely that power will be delivered to the 157 acre site at two points.

If the City enters an Agreement with the developer interested in Cell 2 in the next few weeks, the Consultant will work with the Developer’s dry utility design time to coordinate the Edison service. The Consultant will also work on the balance of the site.

Dirtonu, Inc. d/b/a Murrow CM performed the dry utility services for Carson Marketplace as part of the original project design process, and has a deep understanding of the previous and existing site conditions. They were engaged by Starwood Property Group, the previous owner of the Site, and the Authority is re-engaging them at this point.

Under the Agreement (Exhibit No. 1), the Consultant will perform the following services:

- Review existing designs located in the perimeter road
- Recheck locations of existing laterals for damage, capacity, and feasibility
- Calculate loading to determine sizing capacity
- Prepare design documents for approvals with SCE, AT&T, TWC, SCG to top of deck
- Interface with consultant team to gather all information required for submittals to all utility companies
- Prepare submittal packages and submit plans to all utilities (SCE, AT&T, TWC, SCG)
- Distribute preliminary and final designs within the consultant team for review/approval
- Review and process utility contract(s) and easement(s) (*if required*) for execution and payment between client and utility companies
- Coordinate utility pre-construction meeting between the client, contractor and each utility representative
- Prepare Utility Composite Exhibits
- Prepare Dry Utility Cost Estimate
- Provide service feed for possible irrigation controller

The Consultant has many years of experience and is familiar with the Site having worked on it under the former owner. In addition to providing dry utility coordination services the Consultant provides other construction oversight services such as fee analysis, and cost estimating which enhances their ability to serve the Authority.

The Consultant will begin work once all necessary plans (civil, architectural, and MEP)

become available to allow for one submittal effort to all the utilities. The fixed-fee of \$12,500 is based on one utility work order.

V. FISCAL IMPACT

The fixed-fee of \$12,500 will be included in the FY 2016-17 Authority budget.

VI. EXHIBITS

1. Agreement for Consulting Services. (pgs. 3-26)

Prepared by: Amelia Soto, Project Manager

PROFESSIONAL SERVICES AGREEMENT

By and Between

CARSON RECLAMATION AUTHORITY

and

Dirtonu, Inc. dba Murow CM

EXHIBIT NO. 01

3

**AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN THE CARSON RECLAMATION AUTHORITY AND
DIRTONU, INC. DBA MUROW CM**

THIS AGREEMENT FOR CONTRACT SERVICES (herein“ Agreement”) is made and entered into this 1st day of July, 2016 by and between the Carson Reclamation Authority (“CRA”) and Dirtonu, Inc. dba Murow CM, a California corporation (“Consultant”). CRA and Consultant are sometimes hereinafter individually referred to as “Party” and hereinafter collectively referred to as the “Parties”.

RECITALS

A. CRA has sought the performance of the services defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by the CRA to perform those services.

C. CRA has authority to enter into and execute this Agreement.

D. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

OPERATIVE PROVISIONS

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, the Consultant shall provide those services specified in the “Scope of Services” attached hereto as Exhibit “A” and incorporated herein by this reference, which services may be referred to herein as the “services” or “work” hereunder. As a material inducement to the CRA entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the work and services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all services described herein. Consultant covenants that it shall follow the highest professional standards in performing the work and services required hereunder and that all materials will be of good quality, fit for the purpose intended. For purposes of this Agreement, the phrase “highest professional standards” shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances.

1.2 Consultant's Proposal.

The Scope of Service shall include the Consultant's scope of work in Consultant's proposal and shall be incorporated herein by this reference as though fully set forth herein. In the event of any inconsistency between the terms of such proposal and this Agreement, the terms of this Agreement shall govern.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning, and shall render all services hereunder in accordance with all ordinances, resolutions, statutes, rules, and regulations of the City of Carson and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement. Consultant shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Consultant's performance of the services required by this Agreement, and shall indemnify, defend and hold harmless CRA, its officers, employees or agents of CRA, against any such fees, assessments, taxes penalties or interest levied, assessed or imposed against CRA hereunder.

1.5 Familiarity with Work.

By executing this Agreement, Consultant warrants that Consultant (i) has thoroughly investigated and considered the scope of services to be performed, (ii) has carefully considered how the services should be performed, and (iii) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services hereunder. Should the Consultant discover any latent or unknown conditions, which will materially affect the performance of the services hereunder, Consultant shall immediately inform the CRA of such fact and shall not proceed except at CRA's risk until written instructions are received from the Contract Officer.

1.6 Care of Work.

The Consultant shall adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the work by CRA, except such losses or damages as may be caused by CRA's own negligence.

1.7 Further Responsibilities of Parties.

Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to act in good faith to execute all

instruments, prepare all documents and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the service of the other.

1.8 Additional Services.

CRA shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to or deducting from said work. No such extra work may be undertaken unless a written order is first given by the Contract Officer to the Consultant, incorporating therein any adjustment in (i) the Contract Sum for the actual cost of the extra work, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum or \$25,000, whichever is less; or in the time to perform of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively must be approved by the CRA Board. It is expressly understood by Consultant that the provisions of this Section shall not apply to services specifically set forth in the Scope of Services. Consultant hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor. CRA may in its sole and absolute discretion have similar work done by other contractors. No claims for an increase in the Contract Sum or time for performance shall be valid unless the procedures established in this Section are followed.

1.9 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as Exhibit "B" and incorporated herein by this reference. In the event of a conflict between the provisions of Exhibit "B" and any other provisions of this Agreement, the provisions of Exhibit "B" shall govern.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, CRA agrees to pay Consultant the amounts specified in the "Schedule of Compensation" attached hereto as Exhibit "C" and incorporated herein by this reference. The total compensation, including reimbursement for actual expenses, shall not exceed Twelve Thousand Five Hundred Dollars (\$12,500) (the "Contract Sum"), unless additional compensation is approved pursuant to Section 1.8.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion; (ii) payment in accordance with specified tasks or the percentage of completion of the services less contract retention; (iii) payment for time and materials based upon the Consultant's rates as specified in the Schedule of Compensation, provided that (a) time estimates are provided for the performance of sub tasks, (b) contract retention is maintained, and (c) the Contract Sum is not exceeded; or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

Compensation may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved in writing by the Contract Officer in advance, or actual subcontractor expenses of an approved subcontractor pursuant to Section 4.5, and only if specified in the Schedule of Compensation. The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by the CRA. Coordination of the performance of the work with City is a critical component of the services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending said meetings.

2.4 Invoices.

Each month Consultant shall furnish to CRA an original invoice for all work performed and expenses incurred during the preceding month in a form approved by CRA's Executive Director. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the Agreement. The invoice shall detail charges for all necessary and actual expenses by the following categories: labor (by sub-category), travel, materials, equipment, supplies, and sub-contractor contracts. Sub-contractor charges shall also be detailed by such categories. Consultant shall not invoice CRA for any duplicate services performed by more than one person.

CRA shall independently review each invoice submitted by the Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement. Except as to any charges for work performed or expenses incurred by Consultant which are disputed by CRA, or as provided in Section 7.3. CRA will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice; however, Consultant acknowledges and agrees that due to CRA warrant run procedures, the City cannot guarantee that payment will occur within this time period. In the event any charges or expenses are disputed by CRA, the original invoice shall be returned by CRA to Consultant for correction and resubmission. Review and payment by the CRA of any invoice provided by the Consultant shall not constitute a waiver of any rights or remedies provided herein or any applicable law.

2.5 Waiver.

Payment to Consultant for work performed pursuant to this Agreement shall not be deemed to waive any defects in work performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all services within the time period(s) established in the "Schedule of Performance" attached hereto as Exhibit "D" and incorporated herein by this

reference. When requested by the Consultant, extensions to the time period(s) specified in the Schedule of Performance may be approved in writing by the Contract Officer but not exceeding one hundred eighty (180) days cumulatively. Any greater increases, taken either separately or cumulatively must be approved by the CRA Board.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Consultant, including, but not restricted to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including the CRA, if the Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified. The Contract Officer's determination shall be final and conclusive upon the parties to this Agreement. In no event shall Consultant be entitled to recover damages against the CRA for any delay in the performance of this Agreement, however caused, Consultant's sole remedy being extension of the Agreement pursuant to this Section.

3.4 Term.

Unless earlier terminated in accordance with Article 7 of this Agreement, this Agreement shall continue in full force and effect until completion of the services but not exceeding one (1) year from the date hereof, except as otherwise provided in the Schedule of Performance (Exhibit "D") and Section 3.2 of this Agreement.

ARTICLE 4. COORDINATION OF WORK

4.1 Representatives and Personnel of Consultant.

The following principals of Consultant ("Principals") are hereby designated as being the principals and representatives of Consultant authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith:

_____	_____
(Name)	(Title)
_____	_____
(Name)	(Title)
_____	_____
(Name)	(Title)

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Principals were a substantial inducement for CRA to enter into this Agreement. Therefore, the Principals shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the services

8

hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the exclusive direction and control of the Principals. For purposes of this Agreement, the Principals may not be replaced nor may their responsibilities be substantially reduced by Consultant without the express written approval of CRA. Additionally, Consultant shall utilize only competent personnel to perform services pursuant to this Agreement. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement. Consultant shall notify CRA of any changes in Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement, prior to and during any such performance.

4.2 Status of Consultant.

Consultant shall have no authority to bind CRA in any manner, or to incur any obligation, debt or liability of any kind on behalf of or against the CRA, or the City, whether by contract or otherwise, unless such authority is expressly conferred under this Agreement or is otherwise expressly conferred in writing by CRA. Consultant shall not at any time or in any manner represent that Consultant or any of Consultant's officers, employees, or agents are in any manner officials, officers, employees or agents of CRA. Neither Consultant, nor any of Consultant's officers, employees or agents, shall obtain any rights to retirement, health care or any other benefits which may otherwise accrue to CRA's employees. Consultant expressly waives any claim Consultant may have to any such rights.

4.3 Contract Officer.

The Contract Officer shall be such person as may be designated by the Executive Director. It shall be the Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the services and the Consultant shall refer any decisions which must be made by CRA to the Contract Officer. Unless otherwise specified herein, any approval of CRA required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the Executive Director, to sign all documents on behalf of the CRA required hereunder to carry out the terms of this Agreement.

4.4 Independent Consultant.

Neither the CRA nor any of its employees shall have any control over the manner, mode or means by which Consultant, its agents or employees, perform the services required herein, except as otherwise set forth herein. CRA shall have no voice in the selection, discharge, supervision or control of Consultant's employees, servants, representatives or agents, or in fixing their number, compensation or hours of service. Consultant shall perform all services required herein as an independent contractor of CRA and shall remain at all times as to CRA a wholly independent contractor with only such obligations as are consistent with that role. Consultant shall not at any time or in any manner represent that it or any of its agents or employees are agents or employees of CRA. CRA shall not in any way or for any purpose become or be deemed to be a partner of Consultant in its business or otherwise or a joint venture or a member of any joint enterprise with Consultant.

4.5 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, its principals and employees were a substantial inducement for the CRA to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the services required hereunder without the express written approval of the CRA. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of CRA. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release the Consultant or any surety of Consultant of any liability hereunder without the express consent of CRA.

ARTICLE 5. INSURANCE, INDEMNIFICATION AND BONDS

5.1 Insurance Coverages.

The Consultant shall procure and maintain, at its sole cost and expense, in a form and content satisfactory to CRA, during the entire term of this Agreement including any extension thereof, the following policies of insurance which shall cover all elected and appointed officers, employees and agents of CRA:

(a) Commercial General Liability Insurance (ISO Occurrence Form CG0001 or equivalent). A policy of comprehensive general liability insurance written on a per occurrence basis for bodily injury, personal injury and property damage. The policy of insurance shall be in an amount not less than \$1,000,000.00 per occurrence or if a general aggregate limit is used, then the general aggregate limit shall be twice the occurrence limit.

(b) Workers Compensation Insurance. A policy of workers compensation insurance in such amount as will fully comply with the laws of the State of California and which shall indemnify, insure and provide legal defense for the Consultant against any loss, claim or damage arising from any injuries or occupational diseases occurring to any worker employed by or any persons retained by the Consultant in the course of carrying out the work or services contemplated in this Agreement.

(c) Automotive Insurance (Form CA 0001 (Ed 1/87) including "any auto" and endorsement CA 0025 or equivalent). A policy of comprehensive automobile liability insurance written on a per occurrence basis for bodily injury and property damage in an amount not less than \$1,000,000. Said policy shall include coverage for owned, non-owned, leased and hired cars.

(d) Professional Liability. Professional liability insurance appropriate to the Consultant's profession. This coverage may be written on a "claims made" basis, and must include coverage for contractual liability. The professional liability insurance required by this Agreement must be endorsed to be applicable to claims based upon, arising out of or related to services performed under this Agreement. The insurance must be maintained for at least 5 consecutive years following the completion of Consultant's services or the termination of this

Agreement. During this additional 5-year period, Consultant shall annually and upon request of the CRA submit written evidence of this continuous coverage.

(e) Additional Insurance. Policies of such other insurance, as may be required in the Special Requirements.

(f) Subcontractors. Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

5.2 General Insurance Requirements.

All of the above policies of insurance shall be primary insurance and the CGL and Automobile policies shall name the CRA, its elected and appointed officers, employees and agents as additional insureds and any insurance maintained by CRA or its officers, employees or agents shall apply in excess of, and not contribute with Consultant's insurance. The insurer is deemed hereof to waive all rights of subrogation and contribution it may have against the CRA, its officers, employees and agents and their respective insurers. The insurance policy must specify that where the primary insured does not satisfy the self-insured retention, any additional insured may satisfy the self-insured retention. All of said policies of insurance shall provide that said insurance may not be amended or cancelled by the insurer or any party hereto without providing thirty (30) days prior written notice by certified mail return receipt requested to the CRA. In the event any of said policies of insurance are cancelled, the Consultant shall, prior to the cancellation date, submit new evidence of insurance in conformance with Section 5.1 to the Contract Officer. No work or services under this Agreement shall commence until the Consultant has provided the CRA with Certificates of Insurance or appropriate insurance binders evidencing the above insurance coverages and said Certificates of Insurance or binders are approved by the CRA. CRA reserves the right to inspect complete, certified copies of all required insurance policies at any time. Any failure to comply with the reporting or other provisions of the policies including breaches or warranties shall not affect coverage provided to CRA.

All certificates shall name the CRA as additional insured (providing the appropriate endorsement) and shall conform to the following "cancellation" notice:

CANCELLATION:

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATED THEREOF, THE ISSUING COMPANY SHALL MAIL THIRTY (30)-DAY ADVANCE WRITTEN NOTICE TO CERTIFICATE HOLDER NAMED HEREIN.

[to be initialed]

Agent's Initials

CRA, its respective elected and appointed officers, directors, officials, employees, agents and volunteers are to be covered as additional insureds as respects: liability arising out of activities Consultant performs; products and completed operations of Consultant; premises

owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations on the scope of protection afforded to CRA, and their respective elected and appointed officers, officials, employees or volunteers. Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

Any deductibles or self-insured retentions must be declared to and approved by CRA. At the option of CRA, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CRA or its respective elected or appointed officers, officials, employees and volunteers or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration, defense expenses and claims. The Consultant agrees that the requirement to provide insurance shall not be construed as limiting in any way the extent to which the Consultant may be held responsible for the payment of damages to any persons or property resulting from the Consultant's activities or the activities of any person or persons for which the Consultant is otherwise responsible nor shall it limit the Consultant's indemnification liabilities as provided in Section 5.3.

In the event the Consultant subcontracts any portion of the work in compliance with Section 4.5 of this Agreement, the contract between the Consultant and such subcontractor shall require the subcontractor to maintain the same policies of insurance that the Consultant is required to maintain pursuant to Section 5.1, and such certificates and endorsements shall be provided to CRA.

5.3 Indemnification.

To the full extent permitted by law, Consultant agrees to indemnify, defend and hold harmless the CRA, its officers, employees and agents ("Indemnified Parties") against, and will hold and save them and each of them harmless from, any and all actions, either judicial, administrative, arbitration or regulatory claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities whether actual or threatened (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising out of or in connection with the negligent performance of the work, operations or activities provided herein of Consultant, its officers, employees, agents, subcontractors, or invitees, or any individual or entity for which Consultant is legally liable ("indemnors"), or arising from Consultant's reckless or willful misconduct, or arising from Consultant's or indemnors' negligent performance of or failure to perform any term, provision, covenant or condition of this Agreement, and in connection therewith:

(a) Consultant will defend any action or actions filed in connection with any of said claims or liabilities and will pay all costs and expenses, including legal costs and attorneys' fees incurred in connection therewith;

(b) Consultant will promptly pay any judgment rendered against the CRA, its officers, agents or employees for any such claims or liabilities arising out of or in connection with the negligent performance of or failure to perform such work, operations or activities of Consultant hereunder; and Consultant agrees to save and hold the CRA, its officers, agents, and employees harmless therefrom;

(c) In the event the CRA, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Consultant for such damages or other claims

arising out of or in connection with the negligent performance of or failure to perform the work, operation or activities of Consultant hereunder, Consultant agrees to pay to the CRA, its officers, agents or employees, any and all costs and expenses incurred by the CRA, its officers, agents or employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees.

Consultant shall incorporate similar, indemnity agreements with its subcontractors and if it fails to do so Consultant shall be fully responsible to indemnify City hereunder therefore, and failure of CRA to monitor compliance with these provisions shall not be a waiver hereof. This indemnification includes claims or liabilities arising from any negligent or wrongful act, error or omission, or reckless or willful misconduct of Consultant in the performance of professional services hereunder. The provisions of this Section do not apply to claims or liabilities occurring as a result of CRA's sole negligence or willful acts or omissions, but, to the fullest extent permitted by law, shall apply to claims and liabilities resulting in part from CRA's negligence, except that design professionals' indemnity hereunder shall be limited to claims and liabilities arising out of the negligence, recklessness or willful misconduct of the design professional. The indemnity obligation shall be binding on successors and assigns of Consultant and shall survive termination of this Agreement.

5.4 Sufficiency of Insurer.

Insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, The Key Rating Guide or in the Federal Register, and only if they are of a financial category Class VII or better, unless such requirements are waived by the Executive Director due to unique circumstances. If this Agreement continues for more than 3 years duration, or in the event the Executive Director determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the City, the Consultant agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the Executive Director.

ARTICLE 6. RECORDS, REPORTS, AND RELEASE OF INFORMATION

6.1 Records.

Consultant shall keep, and require subcontractors to keep, such ledgers books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and services performed hereunder (the "books and records"), as shall be necessary to perform the services required by this Agreement and enable the Contract Officer to evaluate the performance of such services. Any and all such documents shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such books and records at all times during normal business hours of CRA, including the right to inspect, copy, audit and make records and transcripts from such records. Such records shall be maintained for a period of 3 years following completion of the services hereunder, and the CRA shall have access to such records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the books and records may be given to CRA, and access shall be provided by Consultant's successor in interest.

6.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that the City is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services contemplated herein or, if Consultant is providing design services, the cost of the project being designed, Consultant shall promptly notify the Contract Officer of said fact, circumstance, technique or event and the estimated increased or decreased cost related thereto and, if Consultant is providing design services, the estimated increased or decreased cost estimate for the project being designed.

6.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "documents and materials") prepared by Consultant, its employees, subcontractors and agents in the performance of this Agreement shall be the property of CRA and shall be delivered to CRA upon request of the Contract Officer or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by CRA of its full rights of ownership use, reuse, or assignment of the documents and materials hereunder. Any use, reuse or assignment of such completed documents for other projects and/or use of uncompleted documents without specific written authorization by the Consultant will be at the CRA's sole risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use, reuse or assignment. Consultant may retain copies of such documents for its own use. Consultant shall have the right to use the concepts embodied therein. All subcontractors shall provide for assignment to CRA of any documents or materials prepared by them, and in the event Consultant fails to secure such assignment, Consultant shall indemnify CRA for all damages resulting therefrom.

6.4 Confidentiality and Release of Information.

(a) All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than CRA without prior written authorization from the Contract Officer.

(b) Consultant, its officers, employees, agents or subcontractors, shall not, without prior written authorization from the Contract Officer or unless requested by the CRA Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the work performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives CRA notice of such court order or subpoena.

(c) If Consultant, or any officer, employee, agent or subcontractor of Consultant, provides any information or work product in violation of this Agreement, then CRA shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

(d) Consultant shall promptly notify CRA should Consultant, its officers, employees, agents or subcontractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any party regarding this Agreement and the work performed there under. CRA retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with CRA and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by CRA to control, direct, or rewrite said response.

ARTICLE 7. ENFORCEMENT OF AGREEMENT AND TERMINATION

7.1 California Law.

This Agreement shall be interpreted, construed and governed both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

7.2 Disputes; Default.

In the event that Consultant is in default under the terms of this Agreement, the CRA shall not have any obligation or duty to continue compensating Consultant for any work performed after the date of default. Instead, the CRA may give notice to Consultant of the default and the reasons for the default. The notice shall include the timeframe in which Consultant may cure the default. This timeframe is presumptively thirty (30) days, but may be extended, though not reduced, if circumstances warrant. During the period of time that Consultant is in default, the CRA shall hold all invoices and shall proceed with payment on the invoices only when the default is cured. In the alternative, the CRA may, in its sole discretion, elect to pay some or all of the outstanding invoices during the period of default. If Consultant does not cure the default, the CRA may take necessary steps to terminate this Agreement under this Article. Any failure on the part of the CRA to give notice of the Consultant's default shall not be deemed to result in a waiver of the CRA's legal rights or any rights arising out of any provision of this Agreement.

7.3 Retention of Funds.

Consultant hereby authorizes CRA to deduct from any amount payable to Consultant (whether or not arising out of this Agreement) (i) any amounts the payment of which may be in dispute hereunder or which are necessary to compensate CRA for any losses, costs, liabilities, or damages suffered by CRA, and (ii) all amounts for which CRA may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, CRA may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of CRA to exercise such right to deduct or to withhold shall not, however,

affect the obligations of the Consultant to insure, indemnify, and protect CRA as elsewhere provided herein.

7.4 Waiver.

Waiver by any party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by CRA of any work or services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

7.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

7.6 Legal Action.

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant shall file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et. seq., in order to pursue a legal action under this Agreement.

7.7 Termination Prior to Expiration of Term.

This Section shall govern any termination of this Contract except as specifically provided in the following Section for termination for cause. The CRA reserves the right to terminate this Contract at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of the Consultant, the period of notice may be such shorter time as may be determined by the Contract Officer. In addition, the Consultant reserves the right to terminate this Contract at any time, with or without cause, upon sixty (60) days' written notice to CRA, except that where termination is due to the fault of the CRA, the period of notice may be such shorter time as the Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all services hereunder except such as may be specifically approved by the Contract Officer. Except where the Consultant has initiated termination, the Consultant shall be entitled to compensation for all services rendered prior to the effective date of the notice of termination and for any services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 7.3. In the event the Consultant has initiated termination, the Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to

this Section, the terminating party need not provide the non-terminating party with the opportunity to cure pursuant to Section 7.2.

7.8 Termination for Default of Consultant.

If termination is due to the failure of the Consultant to fulfill its obligations under this Agreement, CRA may, after compliance with the provisions of Section 7.2, take over the work and prosecute the same to completion by contract or otherwise, and the Consultant shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the CRA shall use reasonable efforts to mitigate such damages), and CRA may withhold any payments to the Consultant for the purpose of set-off or partial payment of the amounts owed the CRA as previously stated.

7.9 Attorneys' Fees.

If either party to this Agreement is required to initiate or defend or made a party to any action or proceeding in any way connected with this Agreement, the prevailing party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorney's fees. Attorney's fees shall include attorney's fees on any appeal, and in addition a party entitled to attorney's fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 8. CRA OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

8.1 Non-liability of CRA Officers and Employees.

No officer or employee of the CRA shall be personally liable to the Consultant, or any successor in interest, in the event of any default or breach by the CRA or for any amount which may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

8.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of CRA or which would in any way hinder Consultant's performance of services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of CRA in the performance of this Agreement.

No officer or employee of the CRA shall have any financial interest, direct or indirect, in this Agreement nor shall any such officer or employee participate in any decision relating to the Agreement which effects his financial interest or the financial interest of any corporation, partnership or association in which he is, directly or indirectly, interested, in violation of any

State statute or regulation. The Consultant warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

8.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, ancestry, or other protected class in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, creed, religion, sex, marital status, national origin, ancestry, or other protected class.

8.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of work and/or services covered by this Agreement, and should the any liability or sanctions be imposed against CRA for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse CRA for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by CRA.

ARTICLE 9. MISCELLANEOUS PROVISIONS

9.1 Notices.

Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by prepaid, first-class mail, in the case of the CRA, to the Executive Director and to the attention of the Contract Officer, Carson Reclamation Authority c/o City of Carson 701 E Carson Street, Carson, California 90745 and in the case of the Consultant, to the person at the address designated on the execution page of this Agreement. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated at the time personally delivered or in seventy-two (72) hours from the time of mailing if mailed as provided in this Section.

9.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

9.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

9.4 Integration; Amendment.

This Agreement including the attachments hereto is the entire, complete and exclusive expression of the understanding of the parties. It is understood that there are no oral agreements between the parties hereto affecting this Agreement and this Agreement supersedes and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the parties, and none shall be used to interpret this Agreement. No amendment to or modification of this Agreement shall be valid unless made in writing and approved by the Consultant and by the City Council. The parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

9.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

9.6 Corporate Authority.

The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year first-above written.

CRA:
CARSON RECLAMATION AUTHORITY

Albert Robles, Chairman

ATTEST:

Authority Secretary

APPROVED AS TO FORM:
ALESHIRE & WYNDER, LLP

Sunny K. Soltani, Authority Counsel

CONSULTANT:Dirtonu, Inc. dba Murow
CM, a California corporation

By: _____
Name:
Title:

By: _____
Name:
Title:

Address: _____

Two signatures are required if a corporation.

NOTE: CONSULTANT'S SIGNATURES SHALL BE DULY NOTARIZED, AND APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER	DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> CORPORATE OFFICER _____ TITLE(S)	_____ TITLE OR TYPE OF DOCUMENT
<input type="checkbox"/> PARTNER(S) <input type="checkbox"/> LIMITED <input type="checkbox"/> GENERAL	_____ NUMBER OF PAGES
<input type="checkbox"/> ATTORNEY-IN-FACT <input type="checkbox"/> TRUSTEE(S) <input type="checkbox"/> GUARDIAN/CONSERVATOR <input type="checkbox"/> OTHER _____ _____	_____ DATE OF DOCUMENT

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

SIGNER(S) OTHER THAN NAMED ABOVE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

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<input type="checkbox"/> CORPORATE OFFICER		TITLE OR TYPE OF DOCUMENT
_____	TITLE(S)	
<input type="checkbox"/> PARTNER(S)	<input type="checkbox"/> LIMITED	_____
	<input type="checkbox"/> GENERAL	NUMBER OF PAGES
<input type="checkbox"/> ATTORNEY-IN-FACT		_____
<input type="checkbox"/> TRUSTEE(S)		DATE OF DOCUMENT
<input type="checkbox"/> GUARDIAN/CONSERVATOR		
<input type="checkbox"/> OTHER _____		

SIGNER IS REPRESENTING:		_____
(NAME OF PERSON(S) OR ENTITY(IES))		SIGNER(S) OTHER THAN NAMED ABOVE

EXHIBIT "A"

SCOPE OF SERVICES

I. Consultant shall perform the following Services:

Pursuant to your request, we are pleased to submit this proposal to provide dry utility coordination services and design for the Authority's project located at the former Cal-Compact site. Our services are identified within the "Scope of Work". Our proposal is based on necessary plans (civil, architectural, MEP) being available at one time allowing for 1 submittal effort to all the utilities. Our proposal is based on 1 utility work order which consist of:

Complete Dry Utility Conduit and Lateral Lines up the slope and stub out on top deck.

EXHIBIT "B"

SPECIAL REQUIREMENTS

None.

EXHIBIT "C"

SCHEDULE OF COMPENSATION

Services will be performed for a fixed-fee of Twelve Thousand Five Hundred Dollars (\$12,500) per the schedule of fees listed below. The Contract Officer may approve increases in the Contract Sum in accordance with Section 1.8.

TOTAL FEE (Billing Schedule)

<i>Site Visit, Existing Facilities Check</i>	<i>\$ 2,500.00</i>
<i>Submittal Packages to Utilities</i>	<i>\$ 2,500.00</i>
<i>Utility Design from stub location to top of deck</i>	<i>\$ 5,000.00</i>
<i>Cost Estimate / Invoices and Contracts</i>	<i>\$ 1,250.00</i>
<i>Preconstruction Meeting</i>	<i>\$ 1,250.00</i>

EXHIBIT "D"

SCHEDULE OF PERFORMANCE

- I. Consultant shall make reasonable efforts to perform the following Services in accordance with the following schedule:**

	<u>Time to Perform</u>	<u>Deadline Date</u>
Dry Utility coordination & Design	1 YEAR	06/30/2017

- II. Consultant shall deliver the following tangible work products to the City by the following dates.**

A. None

- III. The Contract Officer may approve extensions for performance of the services in accordance with Section 3.2.**



File #: 2016-610, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

APPROVE AGREEMENT FOR ENVIRONMENTAL CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS, INC. ("SCS ENGINEERS")

I. SUMMARY

The proposed agreement for consulting services (Agreement) between the Carson Reclamation Authority (Authority) and Stearns, Conrad and Schmidt Consulting Engineers, Inc. (Consultant) is for continued oversight of the remediation construction and operation/monitoring work currently being performed by Tetra Tech on the Authority-owned 157-acre former landfill site located at 20400 Main Street (Site). Under the Agreement, the Consultant will perform the following services:

- Oversee Tetra Tech's performance to ensure work is within approved scope and being performed in a cost-effective manner, including interaction with regulatory agencies as necessary.
- Evaluate Tetra Tech's invoices to ensure work billed for was, in fact, performed in a safe and responsible manner at reasonable cost.
- Evaluate proposed change orders to determine if proposed work is necessary, outside of scope of original contracts, and to be performed at reasonable cost.
- Advocate the Authority's position in arbitration or other dispute over the propriety and cost of proposed change orders.
- Oversee implementation of the mitigation measures set forth in the ballot initiative for development of the stadium option.

The Agreement is for one (1) year commencing on July 1, 2016 and ending on June 30, 2017. Compensation under the agreement is not to exceed \$180,000, billed on a time and materials basis. There may be additional work requested of SCS outside this scope of work, for which Authority Staff will bring a contract amendment to the Board at a future

date.

II. RECOMMENDATION

TAKE the following actions:

1. APPROVE Agreement for Consulting Services between the Carson Reclamation Authority and Stearns, Conrad and Schmidt Consulting Engineers, Inc.
2. AUTHORIZE the Chairman to execute the Agreement which will be in substantially the same form as attached hereto upon approval as to form by Authority Counsel.

III. ALTERNATIVES

TAKE another action the Board deems appropriate.

IV. BACKGROUND

For the past several years, Tetra Tech has performed landfill remediation work at the 157 acre Site, owned by the Authority since May, 2015. Because there have been numerous proposed uses for the Site, and because, at present, the ultimate mix of uses of the Site is uncertain, the remediation plan is constantly evolving. Given the nature of the Tetra Tech's Guaranteed Fixed Price Contract for the original project (and tied to the original site plan and original project schedule), most work undertaken today by Tetra Tech is submitted to the Authority as a change order. Work that is part of the original scope of work set forth in the fixed price contract is paid through a Trust Account and not paid for by the Authority. This includes construction work related to the groundwater collection system, the landfill gas system, and the building protection system, but not associated construction management, project management, operation of the installed landfill gas system, monitoring, or site maintenance. These latter items are submitted to the Authority as change orders, and will likely to be billed as such until the Site is developed.

The Tetra Tech contract contemplates change order work valued at tens of millions of dollars, and the Authority does not have the staff resources or scientific or technical expertise to closely oversee the implementation of the Tetra Tech contract to ensure necessary work is being performed in a cost-effective manner and to evaluate change orders. Staff believes that the savings achieved by peer oversight of Tetra Tech will likely be greater than the cost of a well-qualified firm performing such oversight. This is especially significant given that Trust Account and bond proceeds are involved in funding remediation.

After a Request for Qualifications/Proposals was issued on June 3, 2015, the Consultant was selected to serve as the environmental oversight consultant for the project. A contract was executed between the Authority and the Consultant but expires on July 1, 2016. There is still a lot of work to be performed for preparation of Site development and

oversight services are still needed.

The Consultant has been frugal with the Authority's funds. The Original Agreement was originally for six months at \$300,000, but the Authority extended it for to full year, and even with the extension only about half of the contracted funds were spent. The proposed \$180,000 continues those services at about the same per-monthly cost. The Consultant is more than qualified to continue to provide its environmental oversight services to the project. Therefore, staff recommends approval of the Agreement (Exhibit No. 1).

As mentioned in the summary above, there may be work outside the scope of the contract review that the Authority may desire to have the Consultant perform, including an analysis of the Environmental Protection Program Policy (the "EPP Policy") that Carson Marketplace purchased from American International Special Lines Insurance Company ("Insurer" or "AIG"). The Authority assumed the policy from Carson Marketplace. The Cost Cap policy is what provided the financial assurance that there were funds available to complete the remediation, as required by DTSC. That scope would come back to the Authority in a contract amendment,

V. FISCAL IMPACT

The maximum contract amount of \$180,000 will be included in the Authority's FY 2016-17 budget.

VI. EXHIBITS

1. Form Agreement for Consulting Services. (pgs. 4-27).

Prepared by: Amelia Soto, Project Manager

PROFESSIONAL SERVICES AGREEMENT

By and Between

CITY OF CARSON

and

Stearns, Conrad and Schmidt Consulting Engineers, Inc. (“SCS Engineers”)

EXHIBIT NO. 01

4

**AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN THE CARSON RECLAMATION AUTHORITY AND
SCS ENGINEERS**

THIS AGREEMENT FOR CONTRACT SERVICES (herein“ Agreement”) is made and entered into this 1st day of July, 2016 by and between the Carson Reclamation Authority (“CRA”) and Stearns, Conrad and Schmidt Consulting Engineers, Inc. (“Consultant”). CRA and Consultant are sometimes hereinafter individually referred to as “Party” and hereinafter collectively referred to as the “Parties”).

RECITALS

A. CRA has sought, by issuance of a request for qualifications/proposals, the performance of the services defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by the CRA to perform those services.

C. CRA has authority to enter into and execute this Agreement.

D. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

OPERATIVE PROVISIONS

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, the Consultant shall provide those services specified in the “Scope of Services” attached hereto as Exhibit “A” and incorporated herein by this reference, which services may be referred to herein as the “services” or “work” hereunder. As a material inducement to the CRA entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the work and services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all services described herein. Consultant covenants that it shall follow the highest professional standards in performing the work and services required hereunder and that all materials will be of good quality, fit for the purpose intended. For purposes of this Agreement, the phrase “highest professional standards” shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances.

1.2 Consultant's Proposal.

The Scope of Service shall include the Consultant's scope of work in Consultant's proposal and shall be incorporated herein by this reference as though fully set forth herein. In the event of any inconsistency between the terms of such proposal and this Agreement, the terms of this Agreement shall govern.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning, and shall render all services hereunder in accordance with all ordinances, resolutions, statutes, rules, and regulations of the City of Carson and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement. Consultant shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Consultant's performance of the services required by this Agreement, and shall indemnify, defend and hold harmless CRA, its officers, employees or agents of CRA, against any such fees, assessments, taxes penalties or interest levied, assessed or imposed against CRA hereunder.

1.5 Familiarity with Work.

By executing this Agreement, Consultant warrants that Consultant (i) has thoroughly investigated and considered the scope of services to be performed, (ii) has carefully considered how the services should be performed, and (iii) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services hereunder. Should the Consultant discover any latent or unknown conditions, which will materially affect the performance of the services hereunder, Consultant shall immediately inform the CRA of such fact and shall not proceed except at CRA's risk until written instructions are received from the Contract Officer.

1.6 Care of Work.

The Consultant shall adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the work by CRA, except such losses or damages as may be caused by CRA's own negligence.

1.7 Further Responsibilities of Parties.

Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to act in good faith to execute all

instruments, prepare all documents and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the service of the other.

1.8 Additional Services.

CRA shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to or deducting from said work. No such extra work may be undertaken unless a written order is first given by the Contract Officer to the Consultant, incorporating therein any adjustment in (i) the Contract Sum for the actual cost of the extra work, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum or \$25,000, whichever is less; or in the time to perform of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively must be approved by the CRA Board. It is expressly understood by Consultant that the provisions of this Section shall not apply to services specifically set forth in the Scope of Services. Consultant hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor. CRA may in its sole and absolute discretion have similar work done by other contractors. No claims for an increase in the Contract Sum or time for performance shall be valid unless the procedures established in this Section are followed.

1.9 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as Exhibit "B" and incorporated herein by this reference. In the event of a conflict between the provisions of Exhibit "B" and any other provisions of this Agreement, the provisions of Exhibit "B" shall govern.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, CRA agrees to pay Consultant the amounts specified in the "Schedule of Compensation" attached hereto as Exhibit "C" and incorporated herein by this reference. The total compensation, including reimbursement for actual expenses, shall not exceed One Hundred Fifty Thousand Dollars (\$150,000) (the "Contract Sum"), unless additional compensation is approved pursuant to Section 1.8.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion; (ii) payment in accordance with specified tasks or the percentage of completion of the services less contract retention; (iii) payment for time and materials based upon the Consultant's rates as specified in the Schedule of Compensation, provided that (a) time estimates are provided for the performance of sub tasks, (b) contract retention is maintained, and (c) the Contract Sum is not exceeded; or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

Compensation may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved in writing by the Contract Officer in advance, or actual subcontractor expenses of an approved subcontractor pursuant to Section 4.5, and only if specified in the Schedule of Compensation. The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by the CRA. Coordination of the performance of the work with City is a critical component of the services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending said meetings.

2.4 Invoices.

Each month Consultant shall furnish to CRA an original invoice for all work performed and expenses incurred during the preceding month in a form approved by CRA's Executive Director. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the Agreement. The invoice shall detail charges for all necessary and actual expenses by the following categories: labor (by sub-category), travel, materials, equipment, supplies, and sub-contractor contracts. Sub-contractor charges shall also be detailed by such categories. Consultant shall not invoice CRA for any duplicate services performed by more than one person.

CRA shall independently review each invoice submitted by the Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement. Except as to any charges for work performed or expenses incurred by Consultant which are disputed by CRA, or as provided in Section 7.3. CRA will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice; however, Consultant acknowledges and agrees that due to CRA warrant run procedures, the City cannot guarantee that payment will occur within this time period. In the event any charges or expenses are disputed by CRA, the original invoice shall be returned by CRA to Consultant for correction and resubmission. Review and payment by the CRA of any invoice provided by the Consultant shall not constitute a waiver of any rights or remedies provided herein or any applicable law.

2.5 Waiver.

Payment to Consultant for work performed pursuant to this Agreement shall not be deemed to waive any defects in work performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all services within the time period(s) established in the "Schedule of Performance" attached hereto as Exhibit "D" and incorporated herein by this

reference. When requested by the Consultant, extensions to the time period(s) specified in the Schedule of Performance may be approved in writing by the Contract Officer but not exceeding one hundred eighty (180) days cumulatively.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Consultant, including, but not restricted to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including the CRA, if the Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified. The Contract Officer's determination shall be final and conclusive upon the parties to this Agreement. In no event shall Consultant be entitled to recover damages against the CRA for any delay in the performance of this Agreement, however caused, Consultant's sole remedy being extension of the Agreement pursuant to this Section.

3.4 Term.

Unless earlier terminated in accordance with Article 7 of this Agreement, this Agreement shall continue in full force and effect until completion of the services but not exceeding six (6) months from the date hereof, except as otherwise provided in the Schedule of Performance (Exhibit "D").

ARTICLE 4. COORDINATION OF WORK

4.1 Representatives and Personnel of Consultant.

The following principals of Consultant ("Principals") are hereby designated as being the principals and representatives of Consultant authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith:

<u>Thomas Dong</u> (Name)	<u>Vice President</u> (Title)
_____ (Name)	_____ (Title)
_____ (Name)	_____ (Title)

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Principals were a substantial inducement for CRA to enter into this Agreement. Therefore, the Principals shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the services hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the

9

exclusive direction and control of the Principals. For purposes of this Agreement, the Principals may not be replaced nor may their responsibilities be substantially reduced by Consultant without the express written approval of CRA. Additionally, Consultant shall utilize only competent personnel to perform services pursuant to this Agreement. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement. Consultant shall notify CRA of any changes in Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement, prior to and during any such performance.

4.2 Status of Consultant.

Consultant shall have no authority to bind CRA in any manner, or to incur any obligation, debt or liability of any kind on behalf of or against City, whether by contract or otherwise, unless such authority is expressly conferred under this Agreement or is otherwise expressly conferred in writing by CRA. Consultant shall not at any time or in any manner represent that Consultant or any of Consultant's officers, employees, or agents are in any manner officials, officers, employees or agents of CRA. Neither Consultant, nor any of Consultant's officers, employees or agents, shall obtain any rights to retirement, health care or any other benefits which may otherwise accrue to CRA's employees. Consultant expressly waives any claim Consultant may have to any such rights.

4.3 Contract Officer.

The Contract Officer shall be such person as may be designated by the Executive Director. It shall be the Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the services and the Consultant shall refer any decisions which must be made by CRA to the Contract Officer. Unless otherwise specified herein, any approval of CRA required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the Executive Director, to sign all documents on behalf of the CRA required hereunder to carry out the terms of this Agreement.

4.4 Independent Consultant.

Neither the CRA nor any of its employees shall have any control over the manner, mode or means by which Consultant, its agents or employees, perform the services required herein, except as otherwise set forth herein. CRA shall have no voice in the selection, discharge, supervision or control of Consultant's employees, servants, representatives or agents, or in fixing their number, compensation or hours of service. Consultant shall perform all services required herein as an independent contractor of CRA and shall remain at all times as to CRA a wholly independent contractor with only such obligations as are consistent with that role. Consultant shall not at any time or in any manner represent that it or any of its agents or employees are agents or employees of CRA. CRA shall not in any way or for any purpose become or be deemed to be a partner of Consultant in its business or otherwise or a joint venture or a member of any joint enterprise with Consultant.

4.5 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, its principals and employees were a substantial inducement for the CRA to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the services required hereunder without the express written approval of the CRA. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of CRA. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release the Consultant or any surety of Consultant of any liability hereunder without the express consent of CRA.

ARTICLE 5. INSURANCE, INDEMNIFICATION AND BONDS

5.1 Insurance Coverages.

The Consultant shall procure and maintain, at its sole cost and expense, in a form and content satisfactory to CRA, during the entire term of this Agreement including any extension thereof, the following policies of insurance which shall cover all elected and appointed officers, employees and agents of CRA:

(a) Commercial General Liability Insurance (ISO Occurrence Form CG0001 or equivalent). A policy of comprehensive general liability insurance written on a per occurrence basis for bodily injury, personal injury and property damage. The policy of insurance shall be in an amount not less than \$1,000,000.00 per occurrence or if a general aggregate limit is used, then the general aggregate limit shall be twice the occurrence limit.

(b) Workers Compensation Insurance. A policy of workers compensation insurance in such amount as will fully comply with the laws of the State of California and which shall indemnify, insure and provide legal defense for the Consultant against any loss, claim or damage arising from any injuries or occupational diseases occurring to any worker employed by or any persons retained by the Consultant in the course of carrying out the work or services contemplated in this Agreement.

(c) Automotive Insurance (Form CA 0001 (Ed 1/87) including "any auto" and endorsement CA 0025 or equivalent). A policy of comprehensive automobile liability insurance written on a per occurrence for bodily injury and property damage in an amount not less than \$1,000,000. Said policy shall include coverage for owned, non-owned, leased and hired cars.

(d) Professional Liability. Professional liability insurance appropriate to the Consultant's profession. This coverage may be written on a "claims made" basis, and must include coverage for contractual liability. The professional liability insurance required by this Agreement must be endorsed to be applicable to claims based upon, arising out of or related to services performed under this Agreement. The insurance must be maintained for at least 5 consecutive years following the completion of Consultant's services or the termination of this Agreement. During this additional 5-year period, Consultant shall annually and upon request of the CRA submit written evidence of this continuous coverage.

(e) Additional Insurance. Policies of such other insurance, as may be required in the Special Requirements.

(f) Subcontractors. Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

5.2 General Insurance Requirements.

All of the above policies of insurance shall be primary insurance and the CGL and Automobile policies shall name the CRA, its elected and appointed officers, employees and agents as additional insureds and any insurance maintained by CRA or its officers, employees or agents shall apply in excess of, and not contribute with Consultant's insurance. The insurer is deemed hereof to waive all rights of subrogation and contribution it may have against the CRA, its officers, employees and agents and their respective insurers. The insurance policy must specify that where the primary insured does not satisfy the self-insured retention, any additional insured may satisfy the self-insured retention. All of said policies of insurance shall provide that said insurance may not be amended or cancelled by the insurer or any party hereto without providing thirty (30) days prior written notice by certified mail return receipt requested to the CRA. In the event any of said policies of insurance are cancelled, the Consultant shall, prior to the cancellation date, submit new evidence of insurance in conformance with Section 5.1 to the Contract Officer. No work or services under this Agreement shall commence until the Consultant has provided the CRA with Certificates of Insurance or appropriate insurance binders evidencing the above insurance coverages and said Certificates of Insurance or binders are approved by the CRA. CRA reserves the right to inspect complete, certified copies of all required insurance policies at any time. Any failure to comply with the reporting or other provisions of the policies including breaches or warranties shall not affect coverage provided to CRA.

All certificates shall name the CRA as additional insured (providing the appropriate endorsement) and shall conform to the following "cancellation" notice:

CANCELLATION:

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATED THEREOF, THE ISSUING COMPANY SHALL MAIL THIRTY (30)-DAY ADVANCE WRITTEN NOTICE TO CERTIFICATE HOLDER NAMED HEREIN.

[to be initialed]

Agent's Initials

CRA, its respective elected and appointed officers, directors, officials, employees, agents and volunteers are to be covered as additional insureds as respects: liability arising out of activities Consultant performs; products and completed operations of Consultant; premises owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations on the scope of protection afforded to CRA, and their respective elected and appointed officers, officials, employees or volunteers.

Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

Any deductibles or self-insured retentions must be declared to and approved by CRA. At the option of CRA, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CRA or its respective elected or appointed officers, officials, employees and volunteers or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration, defense expenses and claims. The Consultant agrees that the requirement to provide insurance shall not be construed as limiting in any way the extent to which the Consultant may be held responsible for the payment of damages to any persons or property resulting from the Consultant's activities or the activities of any person or persons for which the Consultant is otherwise responsible nor shall it limit the Consultant's indemnification liabilities as provided in Section 5.3.

In the event the Consultant subcontracts any portion of the work in compliance with Section 4.5 of this Agreement, the contract between the Consultant and such subcontractor shall require the subcontractor to maintain the same policies of insurance that the Consultant is required to maintain pursuant to Section 5.1, and such certificates and endorsements shall be provided to CRA.

5.3 Indemnification.

To the full extent permitted by law, Consultant agrees to indemnify, defend and hold harmless the CRA, its officers, employees and agents ("Indemnified Parties") against, and will hold and save them and each of them harmless from, any and all actions, either judicial, administrative, arbitration or regulatory claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities whether actual or threatened (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising out of or in connection with the negligent performance of the work, operations or activities provided herein of Consultant, its officers, employees, agents, subcontractors, or invitees, or any individual or entity for which Consultant is legally liable ("indemnors"), or arising from Consultant's reckless or willful misconduct, or arising from Consultant's or indemnors' negligent performance of or failure to perform any term, provision, covenant or condition of this Agreement, and in connection therewith:

(a) Consultant will defend any action or actions filed in connection with any of said claims or liabilities and will pay all costs and expenses, including legal costs and attorneys' fees incurred in connection therewith;

(b) Consultant will promptly pay any judgment rendered against the CRA, its officers, agents or employees for any such claims or liabilities arising out of or in connection with the negligent performance of or failure to perform such work, operations or activities of Consultant hereunder; and Consultant agrees to save and hold the CRA, its officers, agents, and employees harmless therefrom;

(c) In the event the CRA, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Consultant for such damages or other claims arising out of or in connection with the negligent performance of or failure to perform the work, operation or activities of Consultant hereunder, Consultant agrees to pay to the CRA, its officers, agents or employees, any and all costs and expenses incurred by the CRA, its officers, agents or

employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees.

Consultant shall incorporate similar, indemnity agreements with its subcontractors and if it fails to do so Consultant shall be fully responsible to indemnify City hereunder therefore, and failure of CRA to monitor compliance with these provisions shall not be a waiver hereof. This indemnification includes claims or liabilities arising from any negligent or wrongful act, error or omission, or reckless or willful misconduct of Consultant in the performance of professional services hereunder. The provisions of this Section do not apply to claims or liabilities occurring as a result of CRA's sole negligence or willful acts or omissions, but, to the fullest extent permitted by law, shall apply to claims and liabilities resulting in part from CRA's negligence, except that design professionals' indemnity hereunder shall be limited to claims and liabilities arising out of the negligence, recklessness or willful misconduct of the design professional. The indemnity obligation shall be binding on successors and assigns of Consultant and shall survive termination of this Agreement.

5.4 Sufficiency of Insurer.

Insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, The Key Rating Guide or in the Federal Register, and only if they are of a financial category Class VII or better, unless such requirements are waived by the Executive Director due to unique circumstances. If this Agreement continues for more than 3 years duration, or in the event the Executive Director determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the City, the Consultant agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the Executive Director.

ARTICLE 6. RECORDS, REPORTS, AND RELEASE OF INFORMATION

6.1 Records.

Consultant shall keep, and require subcontractors to keep, such ledgers books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and services performed hereunder (the "books and records"), as shall be necessary to perform the services required by this Agreement and enable the Contract Officer to evaluate the performance of such services. Any and all such documents shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such books and records at all times during normal business hours of CRA, including the right to inspect, copy, audit and make records and transcripts from such records. Such records shall be maintained for a period of 3 years following completion of the services hereunder, and the CRA shall have access to such records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the books and records may be given to CRA, and access shall be provided by Consultant's successor in interest.

6.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that the City is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services contemplated herein or, if Consultant is providing design services, the cost of the project being designed, Consultant shall promptly notify the Contract Officer of said fact, circumstance, technique or event and the estimated increased or decreased cost related thereto and, if Consultant is providing design services, the estimated increased or decreased cost estimate for the project being designed.

6.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "documents and materials") prepared by Consultant, its employees, subcontractors and agents in the performance of this Agreement shall be the property of CRA and shall be delivered to CRA upon request of the Contract Officer or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by CRA of its full rights of ownership use, reuse, or assignment of the documents and materials hereunder. Any use, reuse or assignment of such completed documents for other projects and/or use of uncompleted documents without specific written authorization by the Consultant will be at the CRA's sole risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use, reuse or assignment. Consultant may retain copies of such documents for its own use. Consultant shall have the right to use the concepts embodied therein. All subcontractors shall provide for assignment to CRA of any documents or materials prepared by them, and in the event Consultant fails to secure such assignment, Consultant shall indemnify CRA for all damages resulting therefrom.

6.4 Confidentiality and Release of Information.

(a) All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than CRA without prior written authorization from the Contract Officer.

(b) Consultant, its officers, employees, agents or subcontractors, shall not, without prior written authorization from the Contract Officer or unless requested by the CRA Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the work performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives CRA notice of such court order or subpoena.

(c) If Consultant, or any officer, employee, agent or subcontractor of Consultant, provides any information or work product in violation of this Agreement, then CRA shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

(d) Consultant shall promptly notify CRA should Consultant, its officers, employees, agents or subcontractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any party regarding this Agreement and the work performed there under. CRA retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with CRA and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by CRA to control, direct, or rewrite said response.

ARTICLE 7. ENFORCEMENT OF AGREEMENT AND TERMINATION

7.1 California Law.

This Agreement shall be interpreted, construed and governed both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

7.2 Disputes; Default.

In the event that Consultant is in default under the terms of this Agreement, the CRA shall not have any obligation or duty to continue compensating Consultant for any work performed after the date of default. Instead, the CRA may give notice to Consultant of the default and the reasons for the default. The notice shall include the timeframe in which Consultant may cure the default. This timeframe is presumptively thirty (30) days, but may be extended, though not reduced, if circumstances warrant. During the period of time that Consultant is in default, the CRA shall hold all invoices and shall proceed with payment on the invoices only when the default is cured. In the alternative, the CRA may, in its sole discretion, elect to pay some or all of the outstanding invoices during the period of default. If Consultant does not cure the default, the CRA may take necessary steps to terminate this Agreement under this Article. Any failure on the part of the CRA to give notice of the Consultant's default shall not be deemed to result in a waiver of the CRA's legal rights or any rights arising out of any provision of this Agreement.

7.3 Retention of Funds.

Consultant hereby authorizes CRA to deduct from any amount payable to Consultant (whether or not arising out of this Agreement) (i) any amounts the payment of which may be in dispute hereunder or which are necessary to compensate CRA for any losses, costs, liabilities, or damages suffered by CRA, and (ii) all amounts for which CRA may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, CRA may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of CRA to exercise such right to deduct or to withhold shall not, however,

affect the obligations of the Consultant to insure, indemnify, and protect CRA as elsewhere provided herein.

7.4 Waiver.

Waiver by any party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by CRA of any work or services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

7.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

7.6 Legal Action.

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant shall file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et. seq., in order to pursue a legal action under this Agreement.

7.7 Termination Prior to Expiration of Term.

This Section shall govern any termination of this Contract except as specifically provided in the following Section for termination for cause. The CRA reserves the right to terminate this Contract at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of the Consultant, the period of notice may be such shorter time as may be determined by the Contract Officer. In addition, the Consultant reserves the right to terminate this Contract at any time, with or without cause, upon sixty (60) days' written notice to CRA, except that where termination is due to the fault of the CRA, the period of notice may be such shorter time as the Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all services hereunder except such as may be specifically approved by the Contract Officer. Except where the Consultant has initiated termination, the Consultant shall be entitled to compensation for all services rendered prior to the effective date of the notice of termination and for any services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 7.3. In the event the Consultant has initiated termination, the Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to

this Section, the terminating party need not provide the non-terminating party with the opportunity to cure pursuant to Section 7.2.

7.8 Termination for Default of Consultant.

If termination is due to the failure of the Consultant to fulfill its obligations under this Agreement, CRA may, after compliance with the provisions of Section 7.2, take over the work and prosecute the same to completion by contract or otherwise, and the Consultant shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the CRA shall use reasonable efforts to mitigate such damages), and CRA may withhold any payments to the Consultant for the purpose of set-off or partial payment of the amounts owed the CRA as previously stated.

7.9 Attorneys' Fees.

If either party to this Agreement is required to initiate or defend or made a party to any action or proceeding in any way connected with this Agreement, the prevailing party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorney's fees. Attorney's fees shall include attorney's fees on any appeal, and in addition a party entitled to attorney's fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 8. CRA OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

8.1 Non-liability of CRA Officers and Employees.

No officer or employee of the CRA shall be personally liable to the Consultant, or any successor in interest, in the event of any default or breach by the CRA or for any amount which may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

8.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of CRA or which would in any way hinder Consultant's performance of services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of CRA in the performance of this Agreement.

No officer or employee of the CRA shall have any financial interest, direct or indirect, in this Agreement nor shall any such officer or employee participate in any decision relating to the Agreement which effects his financial interest or the financial interest of any corporation, partnership or association in which he is, directly or indirectly, interested, in violation of any

18

State statute or regulation. The Consultant warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

8.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, ancestry, or other protected class in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, creed, religion, sex, marital status, national origin, ancestry, or other protected class.

8.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of work and/or services covered by this Agreement, and should the any liability or sanctions be imposed against CRA for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse CRA for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by CRA.

ARTICLE 9. MISCELLANEOUS PROVISIONS

9.1 Notices.

Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by prepaid, first-class mail, in the case of the CRA, to the Executive Director and to the attention of the Contract Officer, Carson Reclamation Authority c/o City of Carson 701 E Carson Street, Carson, California 90745 and in the case of the Consultant, to the person at the address designated on the execution page of this Agreement. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated at the time personally delivered or in seventy-two (72) hours from the time of mailing if mailed as provided in this Section.

9.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

9.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

9.4 Integration; Amendment.

This Agreement including the attachments hereto is the entire, complete and exclusive expression of the understanding of the parties. It is understood that there are no oral agreements between the parties hereto affecting this Agreement and this Agreement supersedes and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the parties, and none shall be used to interpret this Agreement. No amendment to or modification of this Agreement shall be valid unless made in writing and approved by the Consultant and by the City Council. The parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

9.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

9.6 Corporate Authority.

The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year first-above written.

CRA:
CARSON RECLAMATION AUTHORITY

Albert Robles, Chairman

ATTEST:

_____, Authority Secretary

APPROVED AS TO FORM:
ALESHIRE & WYNDER, LLP

Sunny K. Soltani, Authority Counsel

CONSULTANT:

By: _____
Name:
Title:

By: _____
Name:
Title:

Address: _____

Two signatures are required if a corporation.

NOTE: CONSULTANT'S SIGNATURES SHALL BE DULY NOTARIZED, AND APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER		DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL		_____
<input type="checkbox"/> CORPORATE OFFICER		TITLE OR TYPE OF DOCUMENT
_____	TITLE(S)	
<input type="checkbox"/> PARTNER(S)	<input type="checkbox"/> LIMITED	_____
	<input type="checkbox"/> GENERAL	NUMBER OF PAGES
<input type="checkbox"/> ATTORNEY-IN-FACT		
<input type="checkbox"/> TRUSTEE(S)		_____
<input type="checkbox"/> GUARDIAN/CONSERVATOR		DATE OF DOCUMENT
<input type="checkbox"/> OTHER _____		

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

SIGNER(S) OTHER THAN NAMED ABOVE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER		DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL		_____
<input type="checkbox"/> CORPORATE OFFICER		TITLE OR TYPE OF DOCUMENT
_____	TITLE(S)	
<input type="checkbox"/> PARTNER(S)	<input type="checkbox"/> LIMITED	_____
	<input type="checkbox"/> GENERAL	NUMBER OF PAGES
<input type="checkbox"/> ATTORNEY-IN-FACT		
<input type="checkbox"/> TRUSTEE(S)		_____
<input type="checkbox"/> GUARDIAN/CONSERVATOR		DATE OF DOCUMENT
<input type="checkbox"/> OTHER _____		

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

SIGNER(S) OTHER THAN NAMED ABOVE

EXHIBIT "A"

SCOPE OF SERVICES

I. Consultant will perform the following Services:

A. Oversee Tetra Tech's performance of the contracts to ensure work is within approved scope and being performed in a cost-effective manner, including interaction with regulatory agencies as necessary.

B. Evaluate Tetra Tech's invoices to ensure work billed for was, in fact, performed in a safe and responsible manner at reasonable cost.

C. Evaluate proposed change orders to determine if proposed work is necessary, outside of scope of original contracts, and to be performed at reasonable cost.

D. Advocate the Authority's position in arbitration or other dispute over the propriety and cost of proposed change orders.

E. Oversee implementation of the mitigation measures set forth in the ballot initiative for development of the stadium option.

II. As part of the Services, Consultant will prepare and deliver the following tangible work products to the City:

A. As requested by the Executive Director

III. In addition to the requirements of Section 6.2, during performance of the Services, Consultant will keep the CRA apprised of the status of performance by delivering the following status reports:

A. Written reports as requested by the Executive Director.

B. Oral reports and presentations before the CRA Board as requested by the Executive Director..

IV. All work product is subject to review and acceptance by the CRA, and must be revised by the Consultant without additional charge to the CRA until found satisfactory and accepted by CRA.

V. Consultant will utilize the following personnel to accomplish the Services:

A. Principal engineers and geologists

B. Technicians

C. Clerical staff

EXHIBIT "B"

**SPECIAL REQUIREMENTS
(Superseding Contract Boilerplate)**

None.

EXHIBIT "C"

SCHEDULE OF COMPENSATION

- I. Consultant shall perform the following tasks at the following rates:**
Tasks A, B, C, D and E at time and materials per attached fee schedule, Exhibit C-1. There shall be no premium for time spent in arbitrations.
- II. The CRA will compensate Consultant for the Services performed upon submission of a valid invoice. Each invoice is to include:**
- A.** Line items for all personnel describing the work performed, the number of hours worked, and the hourly rate.
 - B.** Line items for all materials and equipment properly charged to the Services.
 - C.** Line items for all other approved reimbursable expenses claimed, with supporting documentation.
 - D.** Line items for all approved subcontractor labor, supplies, equipment, materials, and travel properly charged to the Services.
- III. The total compensation for the Services shall not exceed the Contract Sum as provided in Section 2.1 of this Agreement.**
- IV. The Consultant's billing rates for all personnel are attached as Exhibit C-1.**

EXHIBIT "D"

SCHEDULE OF PERFORMANCE

- I. Consultant shall make reasonable efforts to perform the following Services in accordance with the following schedule:**

	<u>Time to Perform</u>	<u>Deadline Date</u>
Provide Engineering Consulting Svs	1 Year	06/30/17

- II. Consultant shall deliver the following tangible work products to the City by the following dates.**

A. None

- III. The Contract Officer may approve extensions for performance of the services in accordance with Section 3.2.**



File #: 2016-612, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

CONSIDER RESOLUTION NO. 16-10-CRJPA AMENDING THE MEETING TIME OF THE CARSON RECLAMATION AUTHORITY BOARD

I. SUMMARY

On May 3, 2016, the Board requested Staff to bring back a Resolution changing the regular Board meeting time from 4:00 p.m. on the first Tuesday of each month to 4:30 p.m. on the first Tuesday of each month. The Bylaws state that the Board can make such changes by Resolution, which amend the Bylaws.

II. RECOMMENDATION

WAIVE further reading and APPROVE Resolution No. 16-10-CRJPA, "A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY AMENDING THE MEETING TIME OF THE CARSON RECLAMATION AUTHORITY BOARD."

III. ALTERNATIVES

1. TAKE another action the Authority Board deems appropriate.

1.

IV. BACKGROUND

Section 2.06 of the Bylaws allows a change by resolution.

V. FISCAL IMPACT

NONE.

VI. EXHIBITS

Resolution No. 16-10-CRJPA. (pgs. 2-4)

Prepared by: John Raymond, Executive Director

RESOLUTION NO. 16-10-CRJPA

A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY
AMENDING THE MEETING TIME OF THE CARSON
RECLAMATION AUTHORITY BOARD

WHEREAS, on January 20, 2015, the governing Boards of the Housing Authority and Carson Community Facilities Districts Nos. 2012-1 and 2012-2 ("CFDs") approved each Board's authority to enter into an agreement for the formation of this Carson Reclamation Joint Powers Authority (CRJPA) for the purpose of overseeing, and facilitating the remediation of contaminated properties in the City of Carson; this was achieved pursuant to the Joint Exercise of Powers Act, commencing with section 6500 et seq. of the Government Code; and

WHEREAS, the JPA Agreement was adopted on February 17, 2015 and amended on March 17, 2015 ("the First Amended Joint Powers Agreement of the Carson Reclamation Authority"); and

WHEREAS, the Carson Reclamation Joint Powers Authority will facilitate and fund the environmental study, investigation, remediation and reclamation of any and all contaminated properties in the City, or the acquisition and subsequent reclamation of contaminated properties. These powers include any improvements on property related to environmental clean-up and any negotiations or processing of property reclamation required in connection with the California Department of Toxic Substances Control ("DTSC") or any other State or Federal environmental agency. The Authority's powers may extend beyond mere property remediation to development planning and implementation; and

WHEREAS, the Authority assumed the obligation to complete environmental remediation and site development preparation for the 157-acre property known as the former Cal Compact site ("Site") under a Fixed Price Operations and Maintenance Environmental Assurance Agreement ("EAA") dated December 31, 2007 with Tetra Tech, Inc.; and

WHEREAS, Section 2.06 of the Bylaws of the Carson Reclamation Joint Powers Authority ("Regular Meetings") provides that the CRA Board may fix and change the regular meeting time to another by noting the change of time in the minutes of the meeting of the Board at which the address (sic) was fixed or changed, and such fixing or changing of such change shall be processed as an amendment to these Bylaws.

NOW, THEREFORE, THE CARSON RECLAMATION AUTHORITY OF THE CITY OF CARSON, CALIFORNIA, DOES RESOLVE AS FOLLOWS:

Section 1. The foregoing recitals are true and correct and are incorporated by reference herein.

Section 2. Section 2.06.01 shall be added to the Bylaws and shall read as follows:

2.06.01 The Carson Reclamation Authority (“CRA”) hereby establishes the time of 4:30 p.m. on the first Tuesday of each month as the regular meeting time of the CRA Board.

Section 3. All other provisions of the Bylaws remain unchanged.

Section 4. The CRA hereby authorizes and directs staff to execute and deliver any and all documents and instruments and to do and cause to be done any and all acts and things necessary or proper for carrying out the transactions contemplated by this Resolution, the Bylaws of the Carson Reclamation Joint Powers Authority, and the First Amended Joint Powers Agreement of the Carson Reclamation Authority.

Section 5. The Secretary of the CRA shall certify to the adoption of this Resolution.

PASSED, APPROVED and ADOPTED at a regular meeting of the Carson Reclamation Authority on this 8th day of June, 2016.

Chair

ATTEST:

Authority Secretary

APPROVED AS TO FORM:

Authority Counsel

ATTEST

I, _____, Secretary of the Carson Reclamation Authority, hereby attest to and certify that the foregoing resolution is the original resolution adopted by the Carson Reclamation Authority at its regular meeting held on the 8th day of June, 2016, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Authority Secretary

4



File #: 2016-613, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

APPROVAL OF AGREEMENT FOR CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND LEIGHTON CONSULTING, INC.

I. SUMMARY

The proposed Agreement between the Carson Reclamation Authority (Authority) and Leighton Consulting, Inc. (Consultant) is for on-call geotechnical consultation services for the remediation project on the 157-acre former landfill site located at 20400 Main Street (Site).

The term of the contract would be from July 1, 2016 to June 30, 2017 and would be for a not-to-exceed amount of \$20,000.

II. RECOMMENDATION

TAKE the following actions:

1. APPROVE Agreement for Consulting Services between the Carson Reclamation Authority and Leighton Consulting, Inc.; and
2. AUTHORIZE Chairman to execute such Agreement in substantially the same form as attached hereto upon approval as to form by the Authority Counsel.

III. ALTERNATIVES

TAKE another action the Authority Board deems appropriate.

IV. BACKGROUND

As the development of the Carson 157 project continues to move forward, a number of expert consulting services will be needed. At this point the Authority has assumed the Master Developer function previously performed by Carson Marketplace, and is negotiating

with a retail developer to take at least one cell, and interviewing other developers on the balance of the site. The deeper into the negotiation process the Authority goes, the more detailed and technical the information requests from developers become. Many of the questions are specifically related to the remediation activity and can be satisfactorily answered by Tetra Tech, the remediation contractor on site. Due to the complexity of developing on a former landfill site, however, geotechnical engineering services are essential. The services of a qualified geotechnical engineer, such as the Consultant, are necessary in order to ensure successful development of the Site.

Leighton Consulting, Inc. performed the geotechnical services for Carson Marketplace as part of the original Specific Plan and entitlement process, and has a deep understanding of the previous and existing site conditions. They were engaged by Starwood Property Group, the previous owner of the Site, and the Authority is re-engaging them for on-call advisory services at this point.

At the point a Developer is engaged on all or part of the site, they would hire the Consultant or another consultant to provide specific, project-related geotechnical engineering services.

The Consultant's services shall include:

- engineering analysis
- updating of geotechnical reports
- responses to requests for information (RFI's)
- review of geotechnical aspects of project documentation
- participation in meetings and conference calls

The Consultant will provide on-call geotechnical engineering consultation to support the marketing and development of the Site. The Consultant has many years of experience and is familiar with the Site, having worked on it under the former ownership.

The Consultant will provide its services on an as-needed basis for a not-to-exceed contract amount of \$20,000.

V. FISCAL IMPACT

The not-to-exceed contract amount of \$20,000 is included in the Authority's FY 2016-17 Budget.

VI. EXHIBITS

1. Agreement for Consulting Services. (pgs. 3-28)

Prepared by: Amelia Soto, Project Manager

PROFESSIONAL SERVICES AGREEMENT

By and Between

CARSON RECLAMATION AUTHORITY

and

Leighton Consulting, Inc.

EXHIBIT NO. 01

3

**AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN THE CARSON RECLAMATION AUTHORITY AND
LEIGHTON CONSULTING, INC.**

THIS AGREEMENT FOR CONTRACT SERVICES (herein“ Agreement”) is made and entered into this 1st day of July, 2016 by and between the Carson Reclamation Authority (“CRA”) and Leighton Consulting, Inc. (“Consultant”). CRA and Consultant are sometimes hereinafter individually referred to as “Party” and hereinafter collectively referred to as the “Parties”.

RECITALS

A. CRA has sought the performance of the services defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by the CRA to perform those services.

C. CRA has authority to enter into and execute this Agreement.

D. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

OPERATIVE PROVISIONS

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, the Consultant shall provide those services specified in the “Scope of Services” attached hereto as Exhibit “A” and incorporated herein by this reference, which services may be referred to herein as the “services” or “work” hereunder. As a material inducement to the CRA entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the work and services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all services described herein. Consultant covenants that it shall follow the highest professional standards in performing the work and services required hereunder and that all materials will be of good quality, fit for the purpose intended. For purposes of this Agreement, the phrase “highest professional standards” shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances.

1.2 Consultant's Proposal.

The Scope of Service shall include the Consultant's scope of work in Consultant's proposal and shall be incorporated herein by this reference as though fully set forth herein. In the event of any inconsistency between the terms of such proposal and this Agreement, the terms of this Agreement shall govern.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning, and shall render all services hereunder in accordance with all ordinances, resolutions, statutes, rules, and regulations of the City of Carson and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement. Consultant shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Consultant's performance of the services required by this Agreement, and shall indemnify, defend and hold harmless CRA, its officers, employees or agents of CRA, against any such fees, assessments, taxes penalties or interest levied, assessed or imposed against CRA hereunder.

1.5 Familiarity with Work.

By executing this Agreement, Consultant warrants that Consultant (i) has thoroughly investigated and considered the scope of services to be performed, (ii) has carefully considered how the services should be performed, and (iii) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services hereunder. Should the Consultant discover any latent or unknown conditions, which will materially affect the performance of the services hereunder, Consultant shall immediately inform the CRA of such fact and shall not proceed except at CRA's risk until written instructions are received from the Contract Officer.

1.6 Care of Work.

The Consultant shall adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the work by CRA, except such losses or damages as may be caused by CRA's own negligence.

1.7 Further Responsibilities of Parties.

Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to act in good faith to execute all

instruments, prepare all documents and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the service of the other.

1.8 Additional Services.

CRA shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to or deducting from said work. No such extra work may be undertaken unless a written order is first given by the Contract Officer to the Consultant, incorporating therein any adjustment in (i) the Contract Sum for the actual cost of the extra work, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum or \$25,000, whichever is less; or in the time to perform of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively must be approved by the CRA Board. It is expressly understood by Consultant that the provisions of this Section shall not apply to services specifically set forth in the Scope of Services. Consultant hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor. CRA may in its sole and absolute discretion have similar work done by other contractors. No claims for an increase in the Contract Sum or time for performance shall be valid unless the procedures established in this Section are followed.

1.9 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as Exhibit "B" and incorporated herein by this reference. In the event of a conflict between the provisions of Exhibit "B" and any other provisions of this Agreement, the provisions of Exhibit "B" shall govern.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, CRA agrees to pay Consultant the amounts specified in the "Schedule of Compensation" attached hereto as Exhibit "C" and incorporated herein by this reference. The total compensation, including reimbursement for actual expenses, shall not exceed Twenty Thousand Dollars (\$20,000) (the "Contract Sum"), unless additional compensation is approved pursuant to Section 1.8.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion; (ii) payment in accordance with specified tasks or the percentage of completion of the services less contract retention; (iii) payment for time and materials based upon the Consultant's rates as specified in the Schedule of Compensation, provided that (a) time estimates are provided for the performance of sub tasks, (b) contract retention is maintained, and (c) the Contract Sum is not exceeded; or (iv) such other methods as may be specified in the Schedule of Compensation.

6

2.3 Reimbursable Expenses.

Compensation may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved in writing by the Contract Officer in advance, or actual subcontractor expenses of an approved subcontractor pursuant to Section 4.5, and only if specified in the Schedule of Compensation. The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by the CRA. Coordination of the performance of the work with City is a critical component of the services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending said meetings.

2.4 Invoices.

Each month Consultant shall furnish to CRA an original invoice for all work performed and expenses incurred during the preceding month in a form approved by CRA's Executive Director. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the Agreement. The invoice shall detail charges for all necessary and actual expenses by the following categories: labor (by sub-category), travel, materials, equipment, supplies, and sub-contractor contracts. Sub-contractor charges shall also be detailed by such categories. Consultant shall not invoice CRA for any duplicate services performed by more than one person.

CRA shall independently review each invoice submitted by the Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement. Except as to any charges for work performed or expenses incurred by Consultant which are disputed by CRA, or as provided in Section 7.3. CRA will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice; however, Consultant acknowledges and agrees that due to CRA warrant run procedures, the City cannot guarantee that payment will occur within this time period. In the event any charges or expenses are disputed by CRA, the original invoice shall be returned by CRA to Consultant for correction and resubmission. Review and payment by the CRA of any invoice provided by the Consultant shall not constitute a waiver of any rights or remedies provided herein or any applicable law.

2.5 Waiver.

Payment to Consultant for work performed pursuant to this Agreement shall not be deemed to waive any defects in work performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all services within the time period(s) established in the "Schedule of Performance" attached hereto as Exhibit "D" and incorporated herein by this

reference. When requested by the Consultant, extensions to the time period(s) specified in the Schedule of Performance may be approved in writing by the Contract Officer but not exceeding one hundred eighty (180) days cumulatively. Any greater increases, taken either separately or cumulatively must be approved by the CRA Board.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Consultant, including, but not restricted to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including the CRA, if the Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified. The Contract Officer's determination shall be final and conclusive upon the parties to this Agreement. In no event shall Consultant be entitled to recover damages against the CRA for any delay in the performance of this Agreement, however caused, Consultant's sole remedy being extension of the Agreement pursuant to this Section.

3.4 Term.

Unless earlier terminated in accordance with Article 7 of this Agreement, this Agreement shall continue in full force and effect until completion of the services but not exceeding one (1) year from the date hereof, except as otherwise provided in the Schedule of Performance (Exhibit "D") and Section 3.2 of this Agreement.

ARTICLE 4. COORDINATION OF WORK

4.1 Representatives and Personnel of Consultant.

The following principals of Consultant ("Principals") are hereby designated as being the principals and representatives of Consultant authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith:

_____	_____
(Name)	(Title)
_____	_____
(Name)	(Title)
_____	_____
(Name)	(Title)

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Principals were a substantial inducement for CRA to enter into this Agreement. Therefore, the Principals shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the services

8

hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the exclusive direction and control of the Principals. For purposes of this Agreement, the Principals may not be replaced nor may their responsibilities be substantially reduced by Consultant without the express written approval of CRA. Additionally, Consultant shall utilize only competent personnel to perform services pursuant to this Agreement. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement. Consultant shall notify CRA of any changes in Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement, prior to and during any such performance.

4.2 Status of Consultant.

Consultant shall have no authority to bind CRA in any manner, or to incur any obligation, debt or liability of any kind on behalf of or against the CRA, or the City, whether by contract or otherwise, unless such authority is expressly conferred under this Agreement or is otherwise expressly conferred in writing by CRA. Consultant shall not at any time or in any manner represent that Consultant or any of Consultant's officers, employees, or agents are in any manner officials, officers, employees or agents of CRA. Neither Consultant, nor any of Consultant's officers, employees or agents, shall obtain any rights to retirement, health care or any other benefits which may otherwise accrue to CRA's employees. Consultant expressly waives any claim Consultant may have to any such rights.

4.3 Contract Officer.

The Contract Officer shall be such person as may be designated by the Executive Director. It shall be the Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the services and the Consultant shall refer any decisions which must be made by CRA to the Contract Officer. Unless otherwise specified herein, any approval of CRA required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the Executive Director, to sign all documents on behalf of the CRA required hereunder to carry out the terms of this Agreement.

4.4 Independent Consultant.

Neither the CRA nor any of its employees shall have any control over the manner, mode or means by which Consultant, its agents or employees, perform the services required herein, except as otherwise set forth herein. CRA shall have no voice in the selection, discharge, supervision or control of Consultant's employees, servants, representatives or agents, or in fixing their number, compensation or hours of service. Consultant shall perform all services required herein as an independent contractor of CRA and shall remain at all times as to CRA a wholly independent contractor with only such obligations as are consistent with that role. Consultant shall not at any time or in any manner represent that it or any of its agents or employees are agents or employees of CRA. CRA shall not in any way or for any purpose become or be deemed to be a partner of Consultant in its business or otherwise or a joint venture or a member of any joint enterprise with Consultant.

4.5 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, its principals and employees were a substantial inducement for the CRA to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the services required hereunder without the express written approval of the CRA. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of CRA. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release the Consultant or any surety of Consultant of any liability hereunder without the express consent of CRA.

ARTICLE 5. INSURANCE, INDEMNIFICATION AND BONDS

5.1 Insurance Coverages.

The Consultant shall procure and maintain, at its sole cost and expense, in a form and content satisfactory to CRA, during the entire term of this Agreement including any extension thereof, the following policies of insurance which shall cover all elected and appointed officers, employees and agents of CRA:

(a) Commercial General Liability Insurance (ISO Occurrence Form CG0001 or equivalent). A policy of comprehensive general liability insurance written on a per occurrence basis for bodily injury, personal injury and property damage. The policy of insurance shall be in an amount not less than \$1,000,000.00 per occurrence or if a general aggregate limit is used, then the general aggregate limit shall be twice the occurrence limit.

(b) Workers Compensation Insurance. A policy of workers compensation insurance in such amount as will fully comply with the laws of the State of California and which shall indemnify, insure and provide legal defense for the Consultant against any loss, claim or damage arising from any injuries or occupational diseases occurring to any worker employed by or any persons retained by the Consultant in the course of carrying out the work or services contemplated in this Agreement.

(c) Automotive Insurance (Form CA 0001 (Ed 1/87) including "any auto" and endorsement CA 0025 or equivalent). A policy of comprehensive automobile liability insurance written on a per occurrence for bodily injury and property damage in an amount not less than \$1,000,000. Said policy shall include coverage for owned, non-owned, leased and hired cars.

(d) Professional Liability. Professional liability insurance appropriate to the Consultant's profession. This coverage may be written on a "claims made" basis, and must include coverage for contractual liability. The professional liability insurance required by this Agreement must be endorsed to be applicable to claims based upon, arising out of or related to services performed under this Agreement. The insurance must be maintained for at least 5 consecutive years following the completion of Consultant's services or the termination of this

Agreement. During this additional 5-year period, Consultant shall annually and upon request of the CRA submit written evidence of this continuous coverage.

(e) Additional Insurance. Policies of such other insurance, as may be required in the Special Requirements.

(f) Subcontractors. Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

5.2 General Insurance Requirements.

All of the above policies of insurance shall be primary insurance and the CGL and Automobile policies shall name the CRA, its elected and appointed officers, employees and agents as additional insureds and any insurance maintained by CRA or its officers, employees or agents shall apply in excess of, and not contribute with Consultant's insurance. The insurer is deemed hereof to waive all rights of subrogation and contribution it may have against the CRA, its officers, employees and agents and their respective insurers. The insurance policy must specify that where the primary insured does not satisfy the self-insured retention, any additional insured may satisfy the self-insured retention. All of said policies of insurance shall provide that said insurance may not be amended or cancelled by the insurer or any party hereto without providing thirty (30) days prior written notice by certified mail return receipt requested to the CRA. In the event any of said policies of insurance are cancelled, the Consultant shall, prior to the cancellation date, submit new evidence of insurance in conformance with Section 5.1 to the Contract Officer. No work or services under this Agreement shall commence until the Consultant has provided the CRA with Certificates of Insurance or appropriate insurance binders evidencing the above insurance coverages and said Certificates of Insurance or binders are approved by the CRA. CRA reserves the right to inspect complete, certified copies of all required insurance policies at any time. Any failure to comply with the reporting or other provisions of the policies including breaches or warranties shall not affect coverage provided to CRA.

All certificates shall name the CRA as additional insured (providing the appropriate endorsement) and shall conform to the following "cancellation" notice:

CANCELLATION:

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATED THEREOF, THE ISSUING COMPANY SHALL MAIL THIRTY (30)-DAY ADVANCE WRITTEN NOTICE TO CERTIFICATE HOLDER NAMED HEREIN.

[to be initialed]

Agent's Initials

CRA, its respective elected and appointed officers, directors, officials, employees, agents and volunteers are to be covered as additional insureds as respects: liability arising out of activities Consultant performs; products and completed operations of Consultant; premises

11

owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations on the scope of protection afforded to CRA, and their respective elected and appointed officers, officials, employees or volunteers. Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

Any deductibles or self-insured retentions must be declared to and approved by CRA. At the option of CRA, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CRA or its respective elected or appointed officers, officials, employees and volunteers or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration, defense expenses and claims. The Consultant agrees that the requirement to provide insurance shall not be construed as limiting in any way the extent to which the Consultant may be held responsible for the payment of damages to any persons or property resulting from the Consultant's activities or the activities of any person or persons for which the Consultant is otherwise responsible nor shall it limit the Consultant's indemnification liabilities as provided in Section 5.3.

In the event the Consultant subcontracts any portion of the work in compliance with Section 4.5 of this Agreement, the contract between the Consultant and such subcontractor shall require the subcontractor to maintain the same policies of insurance that the Consultant is required to maintain pursuant to Section 5.1, and such certificates and endorsements shall be provided to CRA.

5.3 Indemnification.

To the full extent permitted by law, Consultant agrees to indemnify, defend and hold harmless the CRA, its officers, employees and agents ("Indemnified Parties") against, and will hold and save them and each of them harmless from, any and all actions, either judicial, administrative, arbitration or regulatory claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities whether actual or threatened (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising out of or in connection with the negligent performance of the work, operations or activities provided herein of Consultant, its officers, employees, agents, subcontractors, or invitees, or any individual or entity for which Consultant is legally liable ("indemnors"), or arising from Consultant's reckless or willful misconduct, or arising from Consultant's or indemnors' negligent performance of or failure to perform any term, provision, covenant or condition of this Agreement, and in connection therewith:

(a) Consultant will defend any action or actions filed in connection with any of said claims or liabilities and will pay all costs and expenses, including legal costs and attorneys' fees incurred in connection therewith;

(b) Consultant will promptly pay any judgment rendered against the CRA, its officers, agents or employees for any such claims or liabilities arising out of or in connection with the negligent performance of or failure to perform such work, operations or activities of Consultant hereunder; and Consultant agrees to save and hold the CRA, its officers, agents, and employees harmless therefrom;

(c) In the event the CRA, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Consultant for such damages or other claims

arising out of or in connection with the negligent performance of or failure to perform the work, operation or activities of Consultant hereunder, Consultant agrees to pay to the CRA, its officers, agents or employees, any and all costs and expenses incurred by the CRA, its officers, agents or employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees.

Consultant shall incorporate similar, indemnity agreements with its subcontractors and if it fails to do so Consultant shall be fully responsible to indemnify City hereunder therefore, and failure of CRA to monitor compliance with these provisions shall not be a waiver hereof. This indemnification includes claims or liabilities arising from any negligent or wrongful act, error or omission, or reckless or willful misconduct of Consultant in the performance of professional services hereunder. The provisions of this Section do not apply to claims or liabilities occurring as a result of CRA's sole negligence or willful acts or omissions, but, to the fullest extent permitted by law, shall apply to claims and liabilities resulting in part from CRA's negligence, except that design professionals' indemnity hereunder shall be limited to claims and liabilities arising out of the negligence, recklessness or willful misconduct of the design professional. The indemnity obligation shall be binding on successors and assigns of Consultant and shall survive termination of this Agreement.

5.4 Sufficiency of Insurer.

Insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, The Key Rating Guide or in the Federal Register, and only if they are of a financial category Class VII or better, unless such requirements are waived by the Executive Director due to unique circumstances. If this Agreement continues for more than 3 years duration, or in the event the Executive Director determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the City, the Consultant agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the Executive Director.

ARTICLE 6. RECORDS, REPORTS, AND RELEASE OF INFORMATION

6.1 Records.

Consultant shall keep, and require subcontractors to keep, such ledgers books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and services performed hereunder (the "books and records"), as shall be necessary to perform the services required by this Agreement and enable the Contract Officer to evaluate the performance of such services. Any and all such documents shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such books and records at all times during normal business hours of CRA, including the right to inspect, copy, audit and make records and transcripts from such records. Such records shall be maintained for a period of 3 years following completion of the services hereunder, and the CRA shall have access to such records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the books and records may be given to CRA, and access shall be provided by Consultant's successor in interest.

6.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that the City is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services contemplated herein or, if Consultant is providing design services, the cost of the project being designed, Consultant shall promptly notify the Contract Officer of said fact, circumstance, technique or event and the estimated increased or decreased cost related thereto and, if Consultant is providing design services, the estimated increased or decreased cost estimate for the project being designed.

6.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "documents and materials") prepared by Consultant, its employees, subcontractors and agents in the performance of this Agreement shall be the property of CRA and shall be delivered to CRA upon request of the Contract Officer or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by CRA of its full rights of ownership use, reuse, or assignment of the documents and materials hereunder. Any use, reuse or assignment of such completed documents for other projects and/or use of uncompleted documents without specific written authorization by the Consultant will be at the CRA's sole risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use, reuse or assignment. Consultant may retain copies of such documents for its own use. Consultant shall have the right to use the concepts embodied therein. All subcontractors shall provide for assignment to CRA of any documents or materials prepared by them, and in the event Consultant fails to secure such assignment, Consultant shall indemnify CRA for all damages resulting therefrom.

6.4 Confidentiality and Release of Information.

(a) All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than CRA without prior written authorization from the Contract Officer.

(b) Consultant, its officers, employees, agents or subcontractors, shall not, without prior written authorization from the Contract Officer or unless requested by the CRA Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the work performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives CRA notice of such court order or subpoena.

(c) If Consultant, or any officer, employee, agent or subcontractor of Consultant, provides any information or work product in violation of this Agreement, then CRA shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

(d) Consultant shall promptly notify CRA should Consultant, its officers, employees, agents or subcontractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any party regarding this Agreement and the work performed there under. CRA retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with CRA and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by CRA to control, direct, or rewrite said response.

ARTICLE 7. ENFORCEMENT OF AGREEMENT AND TERMINATION

7.1 California Law.

This Agreement shall be interpreted, construed and governed both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

7.2 Disputes; Default.

In the event that Consultant is in default under the terms of this Agreement, the CRA shall not have any obligation or duty to continue compensating Consultant for any work performed after the date of default. Instead, the CRA may give notice to Consultant of the default and the reasons for the default. The notice shall include the timeframe in which Consultant may cure the default. This timeframe is presumptively thirty (30) days, but may be extended, though not reduced, if circumstances warrant. During the period of time that Consultant is in default, the CRA shall hold all invoices and shall proceed with payment on the invoices only when the default is cured. In the alternative, the CRA may, in its sole discretion, elect to pay some or all of the outstanding invoices during the period of default. If Consultant does not cure the default, the CRA may take necessary steps to terminate this Agreement under this Article. Any failure on the part of the CRA to give notice of the Consultant's default shall not be deemed to result in a waiver of the CRA's legal rights or any rights arising out of any provision of this Agreement.

7.3 Retention of Funds.

Consultant hereby authorizes CRA to deduct from any amount payable to Consultant (whether or not arising out of this Agreement) (i) any amounts the payment of which may be in dispute hereunder or which are necessary to compensate CRA for any losses, costs, liabilities, or damages suffered by CRA, and (ii) all amounts for which CRA may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, CRA may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of CRA to exercise such right to deduct or to withhold shall not, however,

affect the obligations of the Consultant to insure, indemnify, and protect CRA as elsewhere provided herein.

7.4 Waiver.

Waiver by any party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by CRA of any work or services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

7.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

7.6 Legal Action.

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant shall file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et. seq., in order to pursue a legal action under this Agreement.

7.7 Termination Prior to Expiration of Term.

This Section shall govern any termination of this Contract except as specifically provided in the following Section for termination for cause. The CRA reserves the right to terminate this Contract at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of the Consultant, the period of notice may be such shorter time as may be determined by the Contract Officer. In addition, the Consultant reserves the right to terminate this Contract at any time, with or without cause, upon sixty (60) days' written notice to CRA, except that where termination is due to the fault of the CRA, the period of notice may be such shorter time as the Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all services hereunder except such as may be specifically approved by the Contract Officer. Except where the Consultant has initiated termination, the Consultant shall be entitled to compensation for all services rendered prior to the effective date of the notice of termination and for any services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 7.3. In the event the Consultant has initiated termination, the Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to

this Section, the terminating party need not provide the non-terminating party with the opportunity to cure pursuant to Section 7.2.

7.8 Termination for Default of Consultant.

If termination is due to the failure of the Consultant to fulfill its obligations under this Agreement, CRA may, after compliance with the provisions of Section 7.2, take over the work and prosecute the same to completion by contract or otherwise, and the Consultant shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the CRA shall use reasonable efforts to mitigate such damages), and CRA may withhold any payments to the Consultant for the purpose of set-off or partial payment of the amounts owed the CRA as previously stated.

7.9 Attorneys' Fees.

If either party to this Agreement is required to initiate or defend or made a party to any action or proceeding in any way connected with this Agreement, the prevailing party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorney's fees. Attorney's fees shall include attorney's fees on any appeal, and in addition a party entitled to attorney's fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 8. CRA OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

8.1 Non-liability of CRA Officers and Employees.

No officer or employee of the CRA shall be personally liable to the Consultant, or any successor in interest, in the event of any default or breach by the CRA or for any amount which may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

8.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of CRA or which would in any way hinder Consultant's performance of services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of CRA in the performance of this Agreement.

No officer or employee of the CRA shall have any financial interest, direct or indirect, in this Agreement nor shall any such officer or employee participate in any decision relating to the Agreement which effects his financial interest or the financial interest of any corporation, partnership or association in which he is, directly or indirectly, interested, in violation of any

State statute or regulation. The Consultant warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

8.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, ancestry, or other protected class in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, creed, religion, sex, marital status, national origin, ancestry, or other protected class.

8.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of work and/or services covered by this Agreement, and should the any liability or sanctions be imposed against CRA for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse CRA for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by CRA.

ARTICLE 9. MISCELLANEOUS PROVISIONS

9.1 Notices.

Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by prepaid, first-class mail, in the case of the CRA, to the Executive Director and to the attention of the Contract Officer, Carson Reclamation Authority c/o City of Carson 701 E Carson Street, Carson, California 90745 and in the case of the Consultant, to the person at the address designated on the execution page of this Agreement. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated at the time personally delivered or in seventy-two (72) hours from the time of mailing if mailed as provided in this Section.

9.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

9.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

9.4 Integration; Amendment.

This Agreement including the attachments hereto is the entire, complete and exclusive expression of the understanding of the parties. It is understood that there are no oral agreements between the parties hereto affecting this Agreement and this Agreement supersedes and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the parties, and none shall be used to interpret this Agreement. No amendment to or modification of this Agreement shall be valid unless made in writing and approved by the Consultant and by the City Council. The parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

9.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

9.6 Corporate Authority.

The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year first-above written.

CRA:
CARSON RECLAMATION AUTHORITY

Albert Robles, Chairman

ATTEST:

Authority Secretary

APPROVED AS TO FORM:
ALESHIRE & WYNDER, LLP

Sunny K. Soltani, Authority Counsel

CONSULTANT:
LEIGHTON ASSOCIATES, INC.

By: _____
Name:
Title:

By: _____
Name:
Title:

Address: _____

Two signatures are required if a corporation.

NOTE: CONSULTANT'S SIGNATURES SHALL BE DULY NOTARIZED, AND APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER		DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL		_____
<input type="checkbox"/> CORPORATE OFFICER		TITLE OR TYPE OF DOCUMENT
_____	TITLE(S)	
<input type="checkbox"/> PARTNER(S)	<input type="checkbox"/> LIMITED	_____
	<input type="checkbox"/> GENERAL	NUMBER OF PAGES
<input type="checkbox"/> ATTORNEY-IN-FACT		_____
<input type="checkbox"/> TRUSTEE(S)		DATE OF DOCUMENT
<input type="checkbox"/> GUARDIAN/CONSERVATOR		
<input type="checkbox"/> OTHER _____		

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

SIGNER(S) OTHER THAN NAMED ABOVE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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CAPACITY CLAIMED BY SIGNER	DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> CORPORATE OFFICER _____ TITLE(S)	_____ TITLE OR TYPE OF DOCUMENT
<input type="checkbox"/> PARTNER(S) <input type="checkbox"/> LIMITED <input type="checkbox"/> GENERAL <input type="checkbox"/> ATTORNEY-IN-FACT <input type="checkbox"/> TRUSTEE(S) <input type="checkbox"/> GUARDIAN/CONSERVATOR <input type="checkbox"/> OTHER _____ _____	_____ NUMBER OF PAGES
	_____ DATE OF DOCUMENT

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

SIGNER(S) OTHER THAN NAMED ABOVE

EXHIBIT "A"

SCOPE OF SERVICES

I. Consultant shall perform the following Services:

Provide on-call geotechnical engineering consultation to support the project. Services are anticipated to include: engineering analysis, updating of geotechnical reports, responses to requests for information (RFI's), review of geotechnical aspects of project documentation, and participation in meetings and conference calls.

EXHIBIT "B"

SPECIAL REQUIREMENTS

None.

EXHIBIT "C"

SCHEDULE OF COMPENSATION

Services will be performed on a time-and-materials basis per the schedule of fees listed below. The contract is for a not-to-exceed amount of Twenty Thousand Dollars (\$20,000).

CLASSIFICATION	\$/HR	CLASSIFICATION	\$/HR
Technician I	85	Project Administrator/Word Processor/Dispatcher	80
Technician II / Special Inspector	95	Information Specialist	110
Senior Technician / Senior Special Inspector	105	CAD Operator	120
Prevailing Wage (Field Soils / Materials Tester) *	132	GIS Specialist	135
Prevailing Wage (Building / Construction Inspector) *	138	Staff Engineer / Geologist / Scientist	140
Prevailing Wage (Source Inspector, NDT, and Soil Remediation O&M) *	145	Senior Staff Engineer / Geologist / Scientist / ASMR	150
System Operation & Maintenance Specialist	140	Operations / Laboratory Manager	170
Non Destructive Testing	140	Project Engineer / Geologist / Scientist	170
Deputy Inspector	142	Senior Project Engineer / Geologist / Scientist / SMR	195
Field / Laboratory Supervisor	140	Associate	215
Source Inspector I	135	Principal	235
Source Inspector II	140	Senior Principal	275
Source Inspector III	145	* See Prevailing Wages in Terms and Conditions	

GEOTECHNICAL LABORATORY TESTING

METHOD	\$/TEST	METHOD	\$/TEST
CLASSIFICATION & INDEX PROPERTIES		California Bearing Ratio (CBR, ASTM D 1883)	
Photograph of sample	10	- 3 point	500
Moisture content (ASTM D 2216)	20	- 1 point	185
Moisture & density (ASTM D 2937) ring samples	30	R-Value (CTM301) untreated	310
Moisture & density (ASTM D 2937) Shelbytube or cutting	40	R-Value (CTM301) lime or cement treated soils	340
Aterberg limits (ASTM D 4318) 3 points:	150	SOIL CHEMISTRY & CORROSION	
- Single point, non-plastic	85	pH Method A (ASTM 4972 or CTM 643)	45
- Aterberg limits (organic ASTM D 2487 / 4318)	180	Electrical resistivity - single point - as received moisture	45
- Visual classification as non-plastic (ASTM D 2488)	10	Minimum resistivity 3 moisture content points (ASTM G 187/CTM 643)	90
Particle size		pH + minimum resistivity (CTM 643)	130
- Sieve only 1½ inch to #200, (ASTM D 6913/CTM 202)	135	Sulfate content - gravimetric (CTM 417 B Part II)	70
- Large sieve - 6 inch to #200 (ASTM D 6913/CTM 202)	175	Sulfate screen (Hach)	30
- Hydrometer only (ASTM D 422)	110	Chloride content (AASHTO T291/CTM 422)	70
- Sieve + hydrometer (≤3" sieve, ASTM D 422)	185	Corrosion suite : minimum resistivity, sulfate, chloride, pH (CTM 643)	245
- Percent passing #200 sieve, wash only (ASTM D 1140)	70	Organic matter content (ASTM 2974)	65
Specific gravity-fine (passing #4, ASTM D 854/CTM 207)	125	SHEAR STRENGTH	
Specific gravity-coarse (ASTM C 127/CTM 206) > #4 retained	100	Pocket penetrometer	15
- Total porosity - on Shelbytube sample (calculated from density & specific gravity)	165	Direct shear (ASTM D 3080, mod., 3 points)	
- Total porosity - on other sample	155	- Consolidated undrained - 0.05 inch/min (CU)	285
Shrinkage limits (max method, ASTM D 4943)	126	- Consolidated drained - 0.05 inch/min (CD)	345
Pinhole dispersion (ASTM D 4647)	210	- Residual shear EM1110-2-1906-IXA	50
Dispersive characteristics (double hydrometer ASTM D 4221)	90	(price per each additional pass after shear)	
As-received moisture & density (chunk/carved samples)	60	Remolding or hand trimming of specimens (3 points)	90
Sand Equivalent (SE, ASTM D 2419/CTM 217)	105	Oriented or block hand trimming (per hour)	65
COMPACTION & PAVEMENT SUBGRADE TESTS		Single point shear	105
Standard proctor compaction, (ASTM D 698) 4 points:		Torsional shear (ASTM D 6467 / ASTM D 7608)	820
- 4 inch diameter mold (Methods A & B)	160	CONSOLIDATION & EXPANSION/SWELL TESTS	
- 6 inch diameter mold (Method C)	215	Consolidation (ASTM D 2435)	195
Modified proctor compaction (ASTM D 1557) 4 points		- Each additional time curve	45
- 4 inch diameter mold (Methods A & B)	220	- Each additional load/unload w/o time reading	40
- 6 inch diameter mold (Method C)	245	Expansion Index (EI, ASTM D 4829)	130
Check point (per point)	65	Swell/collapse - Method A (ASTM D 4546-A, up to 10 load/unloads w/o time curves)	290
Relative compaction of untreated/treated soils/aggregates (CTM 216)	250	Single load swell/collapse - Method B (ASTM D 4546-B, seat, load & inundate only)	105
Relative density (0.1 ft mold, ASTM D 4253, D 4254)	235		

METHOD	\$/TEST	METHOD	\$/TEST
TRIAxIAL TESTS		HYDRAULIC CONDUCTIVITY TESTS	
Unconfined compression strength of cohesive soil (with stress/strain plot, ASTM D 2166)	135	Triaxial permeability in flexible-wall permeameter with backpressure saturation at one effective stress (EPA 9100/ASTM D 5084, falling head Method C)	310
Unconsolidated undrained triaxial compression test on cohesive soils (USACE Q test, ASTM D 2850, per confining stress)	170	- Each additional effective stress	120
Consolidated undrained triaxial compression test for cohesive soils, (ASTM D 4767, CU, USACE R-bar test) with back pressure saturation & pore water pressure measurement (per confining stress)	375	- Hand trimming of soil samples for horizontal K	60
Consolidated drained triaxial compression test (CD, USACE Stest), with volume change measurement. Price per soil type below EM 1110-2-1906 (X):		Remolding of test specimens	65
- Sand or silty sand soils (per confining stress)	375	Permeability of granular soils (ASTM D 2434)	135
- Silt or clayey sand soils (per confining stress)	500	SOIL-CEMENT	
- Clay soils (per confining stress)	705	Moisture-density curve for soil-cement mixtures (ASTM D 558)	240
- Three-stage triaxial (sand or silty sand soils)	655	Wet-dry durability of soil-cement mixtures (ASTM D 559) ¹	1,205
- Three-stage triaxial (silt or clayey sand soils)	875	Compressive strength of molded soil-cement cylinders (ASTM D 1633) per cylinder ¹	60
- Three-stage triaxial (clay soils)	1,235	Soil-cement remolded specimen (for shear strength, consolidation, etc.) ¹	235
Remolding of test specimens	65	¹ Compaction (ASTM D 558 maximum density) should also be performed - not included in above price	

CONSTRUCTION MATERIALS LABORATORY TESTING

SAMPLE TRANSPORT	\$/TRIP	METHOD	\$/TEST
Pick-up & delivery (weekdays, per trip, <50 mile radius from Leighton office)	85	Theoretical maximum density and specific gravity of HMA (CTM 309/AASHTO T209)	130
METHOD	\$/TEST	Thickness or height of compacted bituminous paving mixture specimens (ASTM 3549)	40
CONCRETE STRENGTH CHARACTERISTICS		Rubberized asphalt (add to above rates)	+ 25%
Concrete cylinders compression (ASTM C 39) (6" x 12")	25	AGGREGATE PROPERTIES	
Compression, concrete or masonry cores (testing only) ≤ 6 inch diameter (ASTM C 42)	40	Sieve analysis fine & coarse aggregate, ASTM C 136/ CTM 202) with finer than #200 wash (ASTM C117)	135
Trimming concrete cores (per core)	20	LA Rattler-smaller coarse aggregate <1.5" (ASTM C 131/ AASHTO T 96)	200
Flexural strength of concrete (simple beam with 3rd pt. loading, ASTM C 78/CTM 523)	85	LA Rattler-larger coarse aggregate 1-3" (ASTM C 535)	250
Flexural strength of concrete (simple beam w/ center pt. loading, ASTM 293/CTM 523)	85	Durability Index (DI, CTM 229)	200
Non shrink grout cubes (2", ASTM C 109/C1107)	25	Cleanliness value of coarse aggregate (CTM 227)	210
Drying shrinkage (four readings, up to 90 days, 3 bars, ASTM C 157)	400	Unit weight of aggregate (CTM 212)	50
HOT MIX ASPHALT (HMA)		Soundness, magnesium (ASTM C 88)	225
Compacted AC Resistance to Moist Damage (AASHTO T 283)	2,100	Soundness, sodium	650
Hamburg Wheel, 4 briquettes (modified) (AASHTO T 324)	900	Uncompacted void content - fine aggregate (CTM 234/ AASHTO T 304)	130
Gyratory Compaction (AASHTO T 312)	350	Flat & elongated particles in coarse aggregate (CTM 235/ ASTM D 4791)	215
Extraction by ignition oven, percent asphalt (ASTM D 6307 /CTM 382/AASHTO T 308)	150	Percent of crushed particles (CTM 205/AASHTO T 335)	135
Ignition oven correction correlation values	quote	Organic impurities in concrete sand (CTM 213)	60
Extraction by centrifuge, percent asphalt (ASTM D 2172)	150	Specific gravity - coarse aggregate (CTM 206)	100
Gradation of extracted aggregate (ASTM D 5444/CTM 202)	135	Specific gravity - fine aggregate (CTM 207)	125
Stabilometer value (CTM 366)	265	Sand Equivalent (CT 217/AASHTO T 176)	
Bituminous mixture preparation (CTM 304)	80	Apparent specific gravity of fine aggregate (CTM 208)	130
Moisture content of asphalt (CTM 370)	60	Moisture content of aggregates by oven drying (CTM 226/AASHTO T 255)	40
Bulk specific gravity - molded specimen or cores (ASTM D 1188/ CTM 308/AASHTO T 275)	55	Clay lumps, friable particles (ASTM C142)	175
Maximum density - Hveem (CTM 308)	200		

METHOD	\$/TEST	METHOD	\$/TEST
MASONRY		SLAB-ON-GRADE MOISTURE EMISSION KIT	
Mortar cylinders (2" by 4", ASTM C 780)	25	Moisture test kit (excludes labor to perform test, ASTM E 1907)	60
Grout prisms (3" by 6", ASTM C 1019)	25	REINFORCING STEEL	
Masonry core s compression, ≤6" diameter (testing only, ASTM C 42)	40	Rebar tensile test, up to No. 10 (ASTM A 370)	45
CMU compression to size 8" x 8" x 16" (3 required, ASTM C 140)	45	Rebar tensile test, No. 11 & over (ASTM A 370)	100
CMU moisture content, absorption & unit weight (3 required, ASTM C 140)	40	Rebar bend test, up to No. 11 (ASTM A 370)	45
CMU linear drying shrinkage (ASTM C 426)	175	STEEL	
CMU grouted prisms (compression test ≤8" x 8" x 16", ASTM E 447 C 1314)	180	Tensile strength, ≤100,000 pounds axial load (ASTM A 370)	45
CMU grouted prisms (compression test > 8" x 8" x 16", ASTM E 447 C 1314)	250	Prestressing wire, tension (ASTM A 416)	150
Masonry core-shear, Title 24 (test only)	70	Sample preparation (cutting)	50
BRICK		SPRAY APPLIED FIREPROOFING	
Compression (cost for each, 5 required, ASTM C 67)	40	Unit weight (density, ASTM E 605)	60

EQUIPMENT, SUPPLIES & MATERIALS

	\$/UNIT		\$/UNIT
1/4 inch Grab plates	5 each	Manometer	25 day
1/4 inch Tubing (bonded)	0.55 foot	Mileage	0.54 mile
1/4 inch Tubing (single)	0.35 foot	Nitrile gloves	20 pair
3/8 inch Tubing, clear vinyl	0.55 foot	Nuclear moisture and density gauge	88 day
4-Gas meter (RKI Eagle or similar)	120 day	Pachometer	25 day
Air flowmeter and purge pump (200 cc/min)	50 day	pH/Conductivity/Temperature meter	55 day
Box of 24 soil drive-sample rings	120 box	Photo-ionization Detector (PID)	110 day
Brass sample tubes	10 each	Pump, Typhoon 2 or 4 stage	50 day
Caution tape (1000-foot roll)	20 each	QED bladder pump w/QED control box	160 day
Combination lock or padlock	11 each	Resistivity field meter & pins	50 day
Compressed air tank and regulator	50 day	Slip / Threaded Cap, 2-inch or 4-inch diameter,	15 each
Concrete coring machine (≤6-inch-dia)	150 day	PVC Schedule 40	
Consumables (gloves, rope, soap, tape, etc.)	35 day	Slope inclinometer	200 day
Core sample boxes	11 each	Soil sampling T-handle (Encore)	10 day
Crack monitor	25 each	Soil sampling tripod	35 day
Cutoff saws, reciprocating, electric (Saws All)	75 day	Stainless steel bailer	40 day
Disposable bailers	12 each	Submersible pump, 10 gpm, high powered	160 day
Disposable bladders	10 each	Gunfos 2-inch with controller	
Dissolved oxygen meter	45 day	Submersible pump/transfer pump, 10-25 gpm	50 day
DOT 55-gallon containment drum with lid	65 each	Survey/fence stakes	8 each
Double-ring infiltrometer	125 day	Tedlar® bags	18 each
Dual-stage interface probe	80 day	Traffic cones (≤25) barricades (single lane)	50 day
GEM 2000	130 day	Turbidity meter	70 day
Generator, portable gasoline fueled, 3,500 watts	90 day	Tyvek® suit (each)	18 each
Global Positioning System (GPS)	80 day	Vapor sampling box	45 day
Hand auger set	90 day	Vehicle usage	20 hour
HDPE safety fence (≤100 feet)	40 roll	VeloCalc	35 day
Horiba U-51 water quality meter	135 day	Visqueen (20 x 100 feet)	100 roll
In-situ level troll 500 (each)	90 day	Water level indicator (electronic well sounder)	60 day
In-situ troll 9500, low flow water sampling	150 day	<300 feet deep well	
Lockable equipment box	15 day	Well service truck usage	200 day
Magnahelic gauge	15 day	ZIPLEVEL®	15 day

Other specialized geotechnical and environmental testing & monitoring equipment are available, and priced per site

EXHIBIT "D"

SCHEDULE OF PERFORMANCE

- I. Consultant shall make reasonable efforts to perform the following Services in accordance with the following schedule:**

	<u>Time to Perform</u>	<u>Deadline Date</u>
Geotechnical support services	1 YEAR	06/30/2017

- II. Consultant shall deliver the following tangible work products to the City by the following dates.**

A. None

- III. The Contract Officer may approve extensions for performance of the services in accordance with Section 3.2.**



File #: 2016-614, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

APPROVE AGREEMENT FOR CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND SEG ADVISORS

I. SUMMARY

The proposed Agreement between the Carson Reclamation Authority (Authority) and SEG Advisors (Consultant) is for project management consulting services on the remediation project on the 157-acre former landfill site located at 20400 Main Street (Site).

The term of the agreement would be from July 1, 2016 to June 30, 2017 with a maximum contract amount of \$20,000 per month (Agreement).

II. RECOMMENDATION

TAKE the following actions:

1. APPROVE Agreement for Consulting Services between the Carson Reclamation Authority and SEG Advisors.
2. AUTHORIZE the Chairman to execute the Agreement for Consulting Services, which shall be in substantially the same form as the Agreement attached hereto, upon approval as to form by the Authority Counsel.

III. ALTERNATIVES

TAKE another action the Board deems necessary.

IV. BACKGROUND

Prior to the acquisition of the Project Site by the Authority in May, 2015, the Consultant has worked on the Site for the previous owner, Starwood Property Group, for many years. Under previous Site ownership the Consultant played a major role in the day to day oversight of Tetra Tech, the engineering/construction firm responsible for the remediation

of the Site, and worked with the Department of Toxic Substances Control (DTSC), the Southern California Air Quality Management District (SCAQMD) and other regulatory agencies to ensure regulatory compliance.

In addition, he was responsible for negotiating the development deals and potential end-user leases for retailers on the various cells.

Under the Agreement, the Consultant will perform the following services:

- Act as liaison between the Authority and environmental and development professionals including, but not limited to Tetra Tech and SCS Engineers, on all construction, operation and monitoring activities on the former Site.
- Conduct and attend meetings of the Authority, environmental and development professionals, and other stakeholders, as needed, to facilitate the flow and consistency of information between and among the Authority, environmental and development professionals regarding the Site.
- Assist in the evaluation, processing and, as needed, adjudication of change orders related to the Site.
- Identify various options for development of the Site, and evaluate and advise the Authority as to the benefits, detriments and risks posed by same. This is particularly important today as the Authority is negotiating with one developer on at least Cell 2, and also evaluating development proposals of different types for the balance of the site.

The Consultant's work for the Authority will also include monitoring the budget and working with Authority staff on reviewing change order requests and reporting to the Authority Board as needed. The Consultant will also be involved in all project meetings, including work with the regulatory agencies. The Consultant also has working knowledge of the various insurance policies needed for the Site, including the AIG policy (the "EPP"), which significantly impacts costs for the project. Currently the Authority is seeking to renew the Pollution Liability Policy as well, and has engaged a specialist from the law firm of Greenberg Traurig in Philadelphia. The Consultant is part of the team determining the most cost effective insurance package going forward, and dealing with other contractual changes that result for the renewal of the environmental policy.

The Consultant's point person, Mr. John Gebhardt, has been a project manager for various development companies, including J.H. Synder Company and Voit Development Company. He served as the development manager for the 80-acre Simi Valley Business Center. Mr. Gebhardt has a BA from UCLA in Economics and is a Certified Public Accountant (CPA). He holds the designations of Real Property Administration (RPA) and Facilities Management Administration (FMA).

He has familiarity with most of the companies that are proposing development of the Site,

and has helped the Authority assess the quality of the proposals as well as the strength and experience of the development teams. That service will become more valuable in next fiscal years as the Authority begins to negotiate specific development agreements with one or more developers.

The Consultant has an existing contract with the Authority, but that contract will expire at the end of this fiscal year. The approval of the Agreement (Exhibit No. 1) is recommended.

V. FISCAL IMPACT

The contract amount of \$240,000 will be included in the Authority's FY 2016-17 budget.

VI. EXHIBITS

1. Agreement for
Consulting Services. (pgs. 3-26)
Prepared by: Amelia Soto, Project Manager

PROFESSIONAL SERVICES AGREEMENT

By and Between

CITY OF CARSON

and

SEG Advisors (John Gebhardt)

EXHIBIT NO. 01

3

**AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN THE CARSON RECLAMATION AUTHORITY AND
SEG ADVISORS**

THIS AGREEMENT FOR CONTRACT SERVICES (herein“ Agreement”) is made and entered into this 1st day of July, 2016 by and between the Carson Reclamation Authority (“CRA”) and SEG Advisors (“Consultant”). CRA and Consultant are sometimes hereinafter individually referred to as “Party” and hereinafter collectively referred to as the “Parties”).

RECITALS

A. CRA has sought, by issuance of a request for qualifications/proposals, the performance of the services defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by the CRA to perform those services.

C. CRA has authority to enter into and execute this Agreement.

D. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

OPERATIVE PROVISIONS

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, the Consultant shall provide those services specified in the “Scope of Services” attached hereto as Exhibit “A” and incorporated herein by this reference, which services may be referred to herein as the “services” or “work” hereunder. As a material inducement to the CRA entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the work and services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all services described herein. Consultant covenants that it shall follow the highest professional standards in performing the work and services required hereunder and that all materials will be of good quality, fit for the purpose intended. For purposes of this Agreement, the phrase “highest professional standards” shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances.

1.2 Consultant's Proposal.

The Scope of Service shall include the Consultant's scope of work in Consultant's proposal and shall be incorporated herein by this reference as though fully set forth herein. In the event of any inconsistency between the terms of such proposal and this Agreement, the terms of this Agreement shall govern.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning, and shall render all services hereunder in accordance with all ordinances, resolutions, statutes, rules, and regulations of the City of Carson and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement. Consultant shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Consultant's performance of the services required by this Agreement, and shall indemnify, defend and hold harmless CRA, its officers, employees or agents of CRA, against any such fees, assessments, taxes penalties or interest levied, assessed or imposed against CRA hereunder.

1.5 Familiarity with Work.

By executing this Agreement, Consultant warrants that Consultant (i) has thoroughly investigated and considered the scope of services to be performed, (ii) has carefully considered how the services should be performed, and (iii) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services hereunder. Should the Consultant discover any latent or unknown conditions, which will materially affect the performance of the services hereunder, Consultant shall immediately inform the CRA of such fact and shall not proceed except at CRA's risk until written instructions are received from the Contract Officer.

1.6 Care of Work.

The Consultant shall adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the work by CRA, except such losses or damages as may be caused by CRA's own negligence.

1.7 Further Responsibilities of Parties.

Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to act in good faith to execute all

instruments, prepare all documents and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the service of the other.

1.8 Additional Services.

CRA shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to or deducting from said work. No such extra work may be undertaken unless a written order is first given by the Contract Officer to the Consultant, incorporating therein any adjustment in (i) the Contract Sum for the actual cost of the extra work, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum or \$25,000, whichever is less; or in the time to perform of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively must be approved by the CRA Board. It is expressly understood by Consultant that the provisions of this Section shall not apply to services specifically set forth in the Scope of Services. Consultant hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor. CRA may in its sole and absolute discretion have similar work done by other contractors. No claims for an increase in the Contract Sum or time for performance shall be valid unless the procedures established in this Section are followed.

1.9 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as Exhibit "B" and incorporated herein by this reference. In the event of a conflict between the provisions of Exhibit "B" and any other provisions of this Agreement, the provisions of Exhibit "B" shall govern.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, CRA agrees to pay Consultant the amounts specified in the "Schedule of Compensation" attached hereto as Exhibit "C" and incorporated herein by this reference. The total compensation, including reimbursement for actual expenses, shall not exceed Two Hundred Forty Thousand Dollars (\$240,000) (the "Contract Sum"), unless additional compensation is approved pursuant to Section 1.8.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion; (ii) payment in accordance with specified tasks or the percentage of completion of the services less contract retention; (iii) payment for time and materials based upon the Consultant's rates as specified in the Schedule of Compensation, provided that (a) time estimates are provided for the performance of sub tasks, (b) contract retention is maintained, and (c) the Contract Sum is not exceeded; or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

Compensation may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved in writing by the Contract Officer in advance, or actual subcontractor expenses of an approved subcontractor pursuant to Section 4.5, and only if specified in the Schedule of Compensation. The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by the CRA. Coordination of the performance of the work with City is a critical component of the services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending said meetings.

2.4 Invoices.

Each month Consultant shall furnish to CRA an original invoice for all work performed and expenses incurred during the preceding month in a form approved by CRA's Executive Director. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the Agreement. The invoice shall detail charges for all necessary and actual expenses by the following categories: labor (by sub-category), travel, materials, equipment, supplies, and sub-contractor contracts. Sub-contractor charges shall also be detailed by such categories. Consultant shall not invoice CRA for any duplicate services performed by more than one person.

CRA shall independently review each invoice submitted by the Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement. Except as to any charges for work performed or expenses incurred by Consultant which are disputed by CRA, or as provided in Section 7.3. CRA will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice; however, Consultant acknowledges and agrees that due to CRA warrant run procedures, the City cannot guarantee that payment will occur within this time period. In the event any charges or expenses are disputed by CRA, the original invoice shall be returned by CRA to Consultant for correction and resubmission. Review and payment by the CRA of any invoice provided by the Consultant shall not constitute a waiver of any rights or remedies provided herein or any applicable law.

2.5 Waiver.

Payment to Consultant for work performed pursuant to this Agreement shall not be deemed to waive any defects in work performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all services within the time period(s) established in the "Schedule of Performance" attached hereto as Exhibit "D" and incorporated herein by this

reference. When requested by the Consultant, extensions to the time period(s) specified in the Schedule of Performance may be approved in writing by the Contract Officer but not exceeding one hundred eighty (180) days cumulatively.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Consultant, including, but not restricted to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including the CRA, if the Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified. The Contract Officer's determination shall be final and conclusive upon the parties to this Agreement. In no event shall Consultant be entitled to recover damages against the CRA for any delay in the performance of this Agreement, however caused, Consultant's sole remedy being extension of the Agreement pursuant to this Section.

3.4 Term.

Unless earlier terminated in accordance with Article 7 of this Agreement, this Agreement shall continue in full force and effect until completion of the services but not exceeding six (6) months from the date hereof, except as otherwise provided in the Schedule of Performance (Exhibit "D").

ARTICLE 4. COORDINATION OF WORK

4.1 Representatives and Personnel of Consultant.

The following principals of Consultant ("Principals") are hereby designated as being the principals and representatives of Consultant authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith:

<u>Thomas Dong</u> (Name)	<u>Vice President</u> (Title)
_____ (Name)	_____ (Title)
_____ (Name)	_____ (Title)

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Principals were a substantial inducement for CRA to enter into this Agreement. Therefore, the Principals shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the services hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the

8

exclusive direction and control of the Principals. For purposes of this Agreement, the Principals may not be replaced nor may their responsibilities be substantially reduced by Consultant without the express written approval of CRA. Additionally, Consultant shall utilize only competent personnel to perform services pursuant to this Agreement. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement. Consultant shall notify CRA of any changes in Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement, prior to and during any such performance.

4.2 Status of Consultant.

Consultant shall have no authority to bind CRA in any manner, or to incur any obligation, debt or liability of any kind on behalf of or against City, whether by contract or otherwise, unless such authority is expressly conferred under this Agreement or is otherwise expressly conferred in writing by CRA. Consultant shall not at any time or in any manner represent that Consultant or any of Consultant's officers, employees, or agents are in any manner officials, officers, employees or agents of CRA. Neither Consultant, nor any of Consultant's officers, employees or agents, shall obtain any rights to retirement, health care or any other benefits which may otherwise accrue to CRA's employees. Consultant expressly waives any claim Consultant may have to any such rights.

4.3 Contract Officer.

The Contract Officer shall be such person as may be designated by the Executive Director. It shall be the Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the services and the Consultant shall refer any decisions which must be made by CRA to the Contract Officer. Unless otherwise specified herein, any approval of CRA required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the Executive Director, to sign all documents on behalf of the CRA required hereunder to carry out the terms of this Agreement.

4.4 Independent Consultant.

Neither the CRA nor any of its employees shall have any control over the manner, mode or means by which Consultant, its agents or employees, perform the services required herein, except as otherwise set forth herein. CRA shall have no voice in the selection, discharge, supervision or control of Consultant's employees, servants, representatives or agents, or in fixing their number, compensation or hours of service. Consultant shall perform all services required herein as an independent contractor of CRA and shall remain at all times as to CRA a wholly independent contractor with only such obligations as are consistent with that role. Consultant shall not at any time or in any manner represent that it or any of its agents or employees are agents or employees of CRA. CRA shall not in any way or for any purpose become or be deemed to be a partner of Consultant in its business or otherwise or a joint venture or a member of any joint enterprise with Consultant.

4.5 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, its principals and employees were a substantial inducement for the CRA to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the services required hereunder without the express written approval of the CRA. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of CRA. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release the Consultant or any surety of Consultant of any liability hereunder without the express consent of CRA.

ARTICLE 5. INSURANCE, INDEMNIFICATION AND BONDS

5.1 Insurance Coverages.

The Consultant shall procure and maintain, at its sole cost and expense, in a form and content satisfactory to CRA, during the entire term of this Agreement including any extension thereof, the following policies of insurance which shall cover all elected and appointed officers, employees and agents of CRA:

(a) Commercial General Liability Insurance (ISO Occurrence Form CG0001 or equivalent). A policy of comprehensive general liability insurance written on a per occurrence basis for bodily injury, personal injury and property damage. The policy of insurance shall be in an amount not less than \$1,000,000.00 per occurrence or if a general aggregate limit is used, then the general aggregate limit shall be twice the occurrence limit.

(b) Workers Compensation Insurance. A policy of workers compensation insurance in such amount as will fully comply with the laws of the State of California and which shall indemnify, insure and provide legal defense for the Consultant against any loss, claim or damage arising from any injuries or occupational diseases occurring to any worker employed by or any persons retained by the Consultant in the course of carrying out the work or services contemplated in this Agreement.

(c) Automotive Insurance (Form CA 0001 (Ed 1/87) including "any auto" and endorsement CA 0025 or equivalent). A policy of comprehensive automobile liability insurance written on a per occurrence for bodily injury and property damage in an amount not less than \$1,000,000. Said policy shall include coverage for owned, non-owned, leased and hired cars.

(d) Professional Liability. Professional liability insurance appropriate to the Consultant's profession. This coverage may be written on a "claims made" basis, and must include coverage for contractual liability. The professional liability insurance required by this Agreement must be endorsed to be applicable to claims based upon, arising out of or related to services performed under this Agreement. The insurance must be maintained for at least 5 consecutive years following the completion of Consultant's services or the termination of this Agreement. During this additional 5-year period, Consultant shall annually and upon request of the CRA submit written evidence of this continuous coverage.

(e) Additional Insurance. Policies of such other insurance, as may be required in the Special Requirements.

(f) Subcontractors. Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

5.2 General Insurance Requirements.

All of the above policies of insurance shall be primary insurance and the CGL and Automobile policies shall name the CRA, its elected and appointed officers, employees and agents as additional insureds and any insurance maintained by CRA or its officers, employees or agents shall apply in excess of, and not contribute with Consultant's insurance. The insurer is deemed hereof to waive all rights of subrogation and contribution it may have against the CRA, its officers, employees and agents and their respective insurers. The insurance policy must specify that where the primary insured does not satisfy the self-insured retention, any additional insured may satisfy the self-insured retention. All of said policies of insurance shall provide that said insurance may not be amended or cancelled by the insurer or any party hereto without providing thirty (30) days prior written notice by certified mail return receipt requested to the CRA. In the event any of said policies of insurance are cancelled, the Consultant shall, prior to the cancellation date, submit new evidence of insurance in conformance with Section 5.1 to the Contract Officer. No work or services under this Agreement shall commence until the Consultant has provided the CRA with Certificates of Insurance or appropriate insurance binders evidencing the above insurance coverages and said Certificates of Insurance or binders are approved by the CRA. CRA reserves the right to inspect complete, certified copies of all required insurance policies at any time. Any failure to comply with the reporting or other provisions of the policies including breaches or warranties shall not affect coverage provided to CRA.

All certificates shall name the CRA as additional insured (providing the appropriate endorsement) and shall conform to the following "cancellation" notice:

CANCELLATION:

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATED THEREOF, THE ISSUING COMPANY SHALL MAIL THIRTY (30)-DAY ADVANCE WRITTEN NOTICE TO CERTIFICATE HOLDER NAMED HEREIN.

[to be initialed]

Agent's Initials

CRA, its respective elected and appointed officers, directors, officials, employees, agents and volunteers are to be covered as additional insureds as respects: liability arising out of activities Consultant performs; products and completed operations of Consultant; premises owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations on the scope of protection afforded to CRA, and their respective elected and appointed officers, officials, employees or volunteers.

11

Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

Any deductibles or self-insured retentions must be declared to and approved by CRA. At the option of CRA, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CRA or its respective elected or appointed officers, officials, employees and volunteers or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration, defense expenses and claims. The Consultant agrees that the requirement to provide insurance shall not be construed as limiting in any way the extent to which the Consultant may be held responsible for the payment of damages to any persons or property resulting from the Consultant's activities or the activities of any person or persons for which the Consultant is otherwise responsible nor shall it limit the Consultant's indemnification liabilities as provided in Section 5.3.

In the event the Consultant subcontracts any portion of the work in compliance with Section 4.5 of this Agreement, the contract between the Consultant and such subcontractor shall require the subcontractor to maintain the same policies of insurance that the Consultant is required to maintain pursuant to Section 5.1, and such certificates and endorsements shall be provided to CRA.

5.3 Indemnification.

To the full extent permitted by law, Consultant agrees to indemnify, defend and hold harmless the CRA, its officers, employees and agents ("Indemnified Parties") against, and will hold and save them and each of them harmless from, any and all actions, either judicial, administrative, arbitration or regulatory claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities whether actual or threatened (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising out of or in connection with the negligent performance of the work, operations or activities provided herein of Consultant, its officers, employees, agents, subcontractors, or invitees, or any individual or entity for which Consultant is legally liable ("indemnors"), or arising from Consultant's reckless or willful misconduct, or arising from Consultant's or indemnors' negligent performance of or failure to perform any term, provision, covenant or condition of this Agreement, and in connection therewith:

(a) Consultant will defend any action or actions filed in connection with any of said claims or liabilities and will pay all costs and expenses, including legal costs and attorneys' fees incurred in connection therewith;

(b) Consultant will promptly pay any judgment rendered against the CRA, its officers, agents or employees for any such claims or liabilities arising out of or in connection with the negligent performance of or failure to perform such work, operations or activities of Consultant hereunder; and Consultant agrees to save and hold the CRA, its officers, agents, and employees harmless therefrom;

(c) In the event the CRA, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Consultant for such damages or other claims arising out of or in connection with the negligent performance of or failure to perform the work, operation or activities of Consultant hereunder, Consultant agrees to pay to the CRA, its officers, agents or employees, any and all costs and expenses incurred by the CRA, its officers, agents or

employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees.

Consultant shall incorporate similar, indemnity agreements with its subcontractors and if it fails to do so Consultant shall be fully responsible to indemnify City hereunder therefore, and failure of CRA to monitor compliance with these provisions shall not be a waiver hereof. This indemnification includes claims or liabilities arising from any negligent or wrongful act, error or omission, or reckless or willful misconduct of Consultant in the performance of professional services hereunder. The provisions of this Section do not apply to claims or liabilities occurring as a result of CRA's sole negligence or willful acts or omissions, but, to the fullest extent permitted by law, shall apply to claims and liabilities resulting in part from CRA's negligence, except that design professionals' indemnity hereunder shall be limited to claims and liabilities arising out of the negligence, recklessness or willful misconduct of the design professional. The indemnity obligation shall be binding on successors and assigns of Consultant and shall survive termination of this Agreement.

5.4 Sufficiency of Insurer.

Insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, The Key Rating Guide or in the Federal Register, and only if they are of a financial category Class VII or better, unless such requirements are waived by the Executive Director due to unique circumstances. If this Agreement continues for more than 3 years duration, or in the event the Executive Director determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the City, the Consultant agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the Executive Director.

ARTICLE 6. RECORDS, REPORTS, AND RELEASE OF INFORMATION

6.1 Records.

Consultant shall keep, and require subcontractors to keep, such ledgers books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and services performed hereunder (the "books and records"), as shall be necessary to perform the services required by this Agreement and enable the Contract Officer to evaluate the performance of such services. Any and all such documents shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such books and records at all times during normal business hours of CRA, including the right to inspect, copy, audit and make records and transcripts from such records. Such records shall be maintained for a period of 3 years following completion of the services hereunder, and the CRA shall have access to such records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the books and records may be given to CRA, and access shall be provided by Consultant's successor in interest.

6.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that the City is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services contemplated herein or, if Consultant is providing design services, the cost of the project being designed, Consultant shall promptly notify the Contract Officer of said fact, circumstance, technique or event and the estimated increased or decreased cost related thereto and, if Consultant is providing design services, the estimated increased or decreased cost estimate for the project being designed.

6.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "documents and materials") prepared by Consultant, its employees, subcontractors and agents in the performance of this Agreement shall be the property of CRA and shall be delivered to CRA upon request of the Contract Officer or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by CRA of its full rights of ownership use, reuse, or assignment of the documents and materials hereunder. Any use, reuse or assignment of such completed documents for other projects and/or use of uncompleted documents without specific written authorization by the Consultant will be at the CRA's sole risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use, reuse or assignment. Consultant may retain copies of such documents for its own use. Consultant shall have the right to use the concepts embodied therein. All subcontractors shall provide for assignment to CRA of any documents or materials prepared by them, and in the event Consultant fails to secure such assignment, Consultant shall indemnify CRA for all damages resulting therefrom.

6.4 Confidentiality and Release of Information.

(a) All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than CRA without prior written authorization from the Contract Officer.

(b) Consultant, its officers, employees, agents or subcontractors, shall not, without prior written authorization from the Contract Officer or unless requested by the CRA Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the work performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives CRA notice of such court order or subpoena.

(c) If Consultant, or any officer, employee, agent or subcontractor of Consultant, provides any information or work product in violation of this Agreement, then CRA shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

(d) Consultant shall promptly notify CRA should Consultant, its officers, employees, agents or subcontractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any party regarding this Agreement and the work performed there under. CRA retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with CRA and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by CRA to control, direct, or rewrite said response.

ARTICLE 7. ENFORCEMENT OF AGREEMENT AND TERMINATION

7.1 California Law.

This Agreement shall be interpreted, construed and governed both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

7.2 Disputes; Default.

In the event that Consultant is in default under the terms of this Agreement, the CRA shall not have any obligation or duty to continue compensating Consultant for any work performed after the date of default. Instead, the CRA may give notice to Consultant of the default and the reasons for the default. The notice shall include the timeframe in which Consultant may cure the default. This timeframe is presumptively thirty (30) days, but may be extended, though not reduced, if circumstances warrant. During the period of time that Consultant is in default, the CRA shall hold all invoices and shall proceed with payment on the invoices only when the default is cured. In the alternative, the CRA may, in its sole discretion, elect to pay some or all of the outstanding invoices during the period of default. If Consultant does not cure the default, the CRA may take necessary steps to terminate this Agreement under this Article. Any failure on the part of the CRA to give notice of the Consultant's default shall not be deemed to result in a waiver of the CRA's legal rights or any rights arising out of any provision of this Agreement.

7.3 Retention of Funds.

Consultant hereby authorizes CRA to deduct from any amount payable to Consultant (whether or not arising out of this Agreement) (i) any amounts the payment of which may be in dispute hereunder or which are necessary to compensate CRA for any losses, costs, liabilities, or damages suffered by CRA, and (ii) all amounts for which CRA may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's obligation under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, CRA may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of CRA to exercise such right to deduct or to withhold shall not, however,

affect the obligations of the Consultant to insure, indemnify, and protect CRA as elsewhere provided herein.

7.4 Waiver.

Waiver by any party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by CRA of any work or services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

7.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

7.6 Legal Action.

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant shall file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et. seq., in order to pursue a legal action under this Agreement.

7.7 Termination Prior to Expiration of Term.

This Section shall govern any termination of this Contract except as specifically provided in the following Section for termination for cause. The CRA reserves the right to terminate this Contract at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of the Consultant, the period of notice may be such shorter time as may be determined by the Contract Officer. In addition, the Consultant reserves the right to terminate this Contract at any time, with or without cause, upon sixty (60) days' written notice to CRA, except that where termination is due to the fault of the CRA, the period of notice may be such shorter time as the Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all services hereunder except such as may be specifically approved by the Contract Officer. Except where the Consultant has initiated termination, the Consultant shall be entitled to compensation for all services rendered prior to the effective date of the notice of termination and for any services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 7.3. In the event the Consultant has initiated termination, the Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to

this Section, the terminating party need not provide the non-terminating party with the opportunity to cure pursuant to Section 7.2.

7.8 Termination for Default of Consultant.

If termination is due to the failure of the Consultant to fulfill its obligations under this Agreement, CRA may, after compliance with the provisions of Section 7.2, take over the work and prosecute the same to completion by contract or otherwise, and the Consultant shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the CRA shall use reasonable efforts to mitigate such damages), and CRA may withhold any payments to the Consultant for the purpose of set-off or partial payment of the amounts owed the CRA as previously stated.

7.9 Attorneys' Fees.

If either party to this Agreement is required to initiate or defend or made a party to any action or proceeding in any way connected with this Agreement, the prevailing party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorney's fees. Attorney's fees shall include attorney's fees on any appeal, and in addition a party entitled to attorney's fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 8. CRA OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

8.1 Non-liability of CRA Officers and Employees.

No officer or employee of the CRA shall be personally liable to the Consultant, or any successor in interest, in the event of any default or breach by the CRA or for any amount which may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

8.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of CRA or which would in any way hinder Consultant's performance of services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of CRA in the performance of this Agreement.

No officer or employee of the CRA shall have any financial interest, direct or indirect, in this Agreement nor shall any such officer or employee participate in any decision relating to the Agreement which effects his financial interest or the financial interest of any corporation, partnership or association in which he is, directly or indirectly, interested, in violation of any

State statute or regulation. The Consultant warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

8.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, ancestry, or other protected class in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, creed, religion, sex, marital status, national origin, ancestry, or other protected class.

8.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of work and/or services covered by this Agreement, and should the any liability or sanctions be imposed against CRA for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse CRA for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by CRA.

ARTICLE 9. MISCELLANEOUS PROVISIONS

9.1 Notices.

Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by prepaid, first-class mail, in the case of the CRA, to the Executive Director and to the attention of the Contract Officer, Carson Reclamation Authority c/o City of Carson 701 E Carson Street, Carson, California 90745 and in the case of the Consultant, to the person at the address designated on the execution page of this Agreement. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated at the time personally delivered or in seventy-two (72) hours from the time of mailing if mailed as provided in this Section.

9.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

9.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

9.4 Integration; Amendment.

This Agreement including the attachments hereto is the entire, complete and exclusive expression of the understanding of the parties. It is understood that there are no oral agreements between the parties hereto affecting this Agreement and this Agreement supersedes and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the parties, and none shall be used to interpret this Agreement. No amendment to or modification of this Agreement shall be valid unless made in writing and approved by the Consultant and by the City Council. The parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

9.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

9.6 Corporate Authority.

The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year first-above written.

CRA:
CARSON RECLAMATION AUTHORITY

Albert Robles, Chairman

ATTEST:

_____, Authority Secretary

APPROVED AS TO FORM:
ALESHIRE & WYNDER, LLP

Sunny K. Soltani, Authority Counsel

CONSULTANT:

By: _____
Name:
Title:

By: _____
Name:
Title:

Address: _____

Two signatures are required if a corporation.

NOTE: CONSULTANT'S SIGNATURES SHALL BE DULY NOTARIZED, AND APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER		DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL		_____
<input type="checkbox"/> CORPORATE OFFICER		TITLE OR TYPE OF DOCUMENT
_____	TITLE(S)	
<input type="checkbox"/> PARTNER(S) <input type="checkbox"/> LIMITED	<input type="checkbox"/> GENERAL	_____
<input type="checkbox"/> ATTORNEY-IN-FACT		NUMBER OF PAGES
<input type="checkbox"/> TRUSTEE(S)		
<input type="checkbox"/> GUARDIAN/CONSERVATOR		_____
<input type="checkbox"/> OTHER _____		DATE OF DOCUMENT

SIGNER IS REPRESENTING:		_____
(NAME OF PERSON(S) OR ENTITY(IES))		SIGNER(S) OTHER THAN NAMED ABOVE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER		DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL		_____
<input type="checkbox"/> CORPORATE OFFICER		TITLE OR TYPE OF DOCUMENT
_____	TITLE(S)	
<input type="checkbox"/> PARTNER(S) <input type="checkbox"/> LIMITED		_____
<input type="checkbox"/> ATTORNEY-IN-FACT <input type="checkbox"/> GENERAL		NUMBER OF PAGES
<input type="checkbox"/> TRUSTEE(S)		
<input type="checkbox"/> GUARDIAN/CONSERVATOR		_____
<input type="checkbox"/> OTHER _____		DATE OF DOCUMENT
SIGNER IS REPRESENTING:		_____
(NAME OF PERSON(S) OR ENTITY(IES))		SIGNER(S) OTHER THAN NAMED ABOVE

EXHIBIT "A"

SCOPE OF SERVICES

I. Consultant will perform the following Services:

- A. Act as liaison between the Authority and environmental and development professionals including, but not limited to Tetra Tech, on all construction, operation and monitoring activities on the former Cal-Compact landfill site in Carson, California ("Site").
- B. Conduct and attend meetings of the Authority, environmental and development professionals, and other stakeholders, as needed, to facilitate the flow and consistency of information between and among the Authority, environmental and development professionals regarding the Site.
- C. Assist in the evaluation, processing and, as needed, adjudication of change orders related to the Site.
- D. Facilitate the implementation of mitigation measures identified in the 2015 ballot measure related to the Site as adopted by the City of Carson.
- E. Identify various options for development of the Site, and evaluate and advise the Authority as to the benefits, detriments and risks posed by same.

II. As part of the Services, Consultant will prepare and deliver the following tangible work products to the Authority:

- A. Written reports to the Authority and Project Manager as requested.

III. In addition to the requirements of Section 6.2, during performance of the Services, Consultant will keep the Authority apprised of the status of performance by delivering the following status reports:

- A. Oral reports to the Authority and Project Manager as requested.

IV. All work product is subject to review and acceptance by the Authority, and must be revised by the Consultant without additional charge to the Authority until found satisfactory and accepted by the Authority.

V. Consultant will utilize the following personnel to accomplish the Services:

John A. Gebhardt

EXHIBIT "B"

**SPECIAL REQUIREMENTS
(Superseding Contract Boilerplate)**

None.

EXHIBIT "C"

SCHEDULE OF COMPENSATION

I. Consultant shall perform the following tasks at the following rates:

All tasks performed under Exhibit A "Scope of Services" shall be performed for a flat fee of Twenty Thousand Dollars (\$20,00) per month beginning July 1, 2016 and ending June 30, 2016.

II. The Authority will compensate Consultant for the Services performed upon submission of a valid invoice. Each invoice is to include:

A. Line items for all personnel describing the work performed, the number of hours worked, and the hourly rate.

B. Line items for all materials and equipment properly charged to the Services.

C. Line items for all other approved reimbursable expenses claimed, with supporting documentation. Insurance reimbursement in an amount not to exceed \$6,803.20 and HAZWOPER training required by OSHA reimbursement in an amount not to exceed \$285 are approved.

D. Line items for all approved subcontractor labor, supplies, equipment, materials, and travel properly charged to the Services.

III. The total compensation for the Services shall not exceed the Contract Sum as provided in Section 2.1 of this Agreement.

EXHIBIT "D"

SCHEDULE OF PERFORMANCE

I. Consultant shall make reasonable efforts to perform the following Services in accordance with the following schedule:

	<u>Time to Perform</u>	<u>Deadline Date</u>
Exhibit A	1 Year	06/30/17

II. Consultant shall deliver the following tangible work products to the City by the following dates.

A. None

III. The Contract Officer may approve extensions for performance of the services in accordance with Section 3.2.



File #: 2016-639, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

APPROVAL OF AGREEMENT FOR CONSULTING SERVICES BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND CUMMINGS CURLEY AND ASSOCIATES, INC.

I. SUMMARY

This is an agreement for consulting services (Agreement) between the Carson Reclamation Authority (Authority) and Cummings Curley and Associates, Inc. (Consultant) for landscape design services on the Authority-owned 157-acre former landfill site located at 20400 Main Street (Site).

The contract term would be from July 1, 2016 to June 30, 2017 and would be for a not-to-exceed contract amount of \$55,069.

II. RECOMMENDATION

TAKE the following actions:

1. APPROVE Agreement for Consulting Services between the Carson Reclamation Authority and Cummings Curley and Associates, Inc.
2. AUTHORIZE the Chairman to execute the Agreement for Consulting Services, which shall be in substantially the same form as the Agreement attached hereto, upon approval as to form by the Authority Counsel.

III. ALTERNATIVES

TAKE another action the Authority Board deems appropriate.

IV. BACKGROUND

As the development of the Carson 157 project continues to move forward, a number of

expert consulting services will be needed. At this point the Authority has assumed the Master Developer function previously performed by Carson Marketplace, and is negotiating with a retail developer to take at least one cell, and interviewing other developers on the balance of the site. The deeper into the negotiation process the Authority goes, the more detailed and technical the information requests from developers become. Many of the questions are specifically related to the remediation activity and can be satisfactorily answered by Tetra Tech, the remediation contractor on site.

Cummings Curley and Associates, Inc. performed the landscape design and design of the Site's irrigation systems, which now must be reexamined in order to coordinate with other disciplines in preparation of Site development.

The Consultant provided these services for Carson Marketplace as part of the original Specific Plan and entitlement process, and has a deep understanding of the previous and existing site conditions. They were engaged by Starwood Property Group, the previous owner of the Site, and the Authority is re-engaging them for advisory services at this point.

Under the Agreement (Exhibit No. 1), the Consultant will perform the following services:

- Review of existing proposed site plans
- Design development of permanent landscape and irrigation
- Complete construction documents for planting and irrigation
- Plan check processing with regulatory agencies (DTSC, Cal Water, etc)
- Design development to potentially implement use of treated groundwater for site irrigation in addition to use of purchased recycled water
- Attend coordination meetings
- Provide stakeholder presentations

The Consultant has many years of experience and is familiar with the Site. The term of the Agreement would be from July 1, 2016 to June 30, 2017 for a not-to-exceed contract amount of \$50,069.

V. FISCAL IMPACT

The not-to-exceed contract amount of \$50,069 will be included in the FY 2016-17 Authority budget.

VI. EXHIBITS

1. Agreement for Consulting Services. (pgs. 3-26)

Prepared by: Amelia Soto, Project Manager

PROFESSIONAL SERVICES AGREEMENT

By and Between

CARSON RECLAMATION AUTHORITY

and

Cummings Curley And Associates, Inc.

EXHIBIT NO. 01

**AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN THE CARSON RECLAMATION AUTHORITY AND
CUMMINGS CURLEY AND ASSOCIATES, INC.**

THIS AGREEMENT FOR CONTRACT SERVICES (herein“ Agreement”) is made and entered into this 1st day of July, 2016 by and between the Carson Reclamation Authority (“CRA”) and Cummings Curley and Associates, Inc. (“Consultant”). CRA and Consultant are sometimes hereinafter individually referred to as “Party” and hereinafter collectively referred to as the “Parties”).

RECITALS

A. CRA has sought the performance of the services defined and described particularly in Article 1 of this Agreement.

B. Consultant, following submission of a proposal for the performance of the services defined and described particularly in Article 1 of this Agreement, was selected by the CRA to perform those services.

C. CRA has authority to enter into and execute this Agreement.

D. The Parties desire to formalize the selection of Consultant for performance of those services defined and described particularly in Article 1 of this Agreement and desire that the terms of that performance be as particularly defined and described herein.

OPERATIVE PROVISIONS

NOW, THEREFORE, in consideration of the mutual promises and covenants made by the Parties and contained herein and other consideration, the value and adequacy of which are hereby acknowledged, the parties agree as follows:

ARTICLE 1. SERVICES OF CONSULTANT

1.1 Scope of Services.

In compliance with all terms and conditions of this Agreement, the Consultant shall provide those services specified in the “Scope of Services” attached hereto as Exhibit “A” and incorporated herein by this reference, which services may be referred to herein as the “services” or “work” hereunder. As a material inducement to the CRA entering into this Agreement, Consultant represents and warrants that it has the qualifications, experience, and facilities necessary to properly perform the services required under this Agreement in a thorough, competent, and professional manner, and is experienced in performing the work and services contemplated herein. Consultant shall at all times faithfully, competently and to the best of its ability, experience and talent, perform all services described herein. Consultant covenants that it shall follow the highest professional standards in performing the work and services required hereunder and that all materials will be of good quality, fit for the purpose intended. For purposes of this Agreement, the phrase “highest professional standards” shall mean those standards of practice recognized by one or more first-class firms performing similar work under similar circumstances.

1.2 Consultant's Proposal.

The Scope of Service shall include the Consultant's scope of work in Consultant's proposal and shall be incorporated herein by this reference as though fully set forth herein. In the event of any inconsistency between the terms of such proposal and this Agreement, the terms of this Agreement shall govern.

1.3 Compliance with Law.

Consultant shall keep itself informed concerning, and shall render all services hereunder in accordance with all ordinances, resolutions, statutes, rules, and regulations of the City of Carson and any Federal, State or local governmental entity having jurisdiction in effect at the time service is rendered.

1.4 Licenses, Permits, Fees and Assessments.

Consultant shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the services required by this Agreement. Consultant shall have the sole obligation to pay for any fees, assessments and taxes, plus applicable penalties and interest, which may be imposed by law and arise from or are necessary for the Consultant's performance of the services required by this Agreement, and shall indemnify, defend and hold harmless CRA, its officers, employees or agents of CRA, against any such fees, assessments, taxes penalties or interest levied, assessed or imposed against CRA hereunder.

1.5 Familiarity with Work.

By executing this Agreement, Consultant warrants that Consultant (i) has thoroughly investigated and considered the scope of services to be performed, (ii) has carefully considered how the services should be performed, and (iii) fully understands the facilities, difficulties and restrictions attending performance of the services under this Agreement. If the services involve work upon any site, Consultant warrants that Consultant has or will investigate the site and is or will be fully acquainted with the conditions there existing, prior to commencement of services hereunder. Should the Consultant discover any latent or unknown conditions, which will materially affect the performance of the services hereunder, Consultant shall immediately inform the CRA of such fact and shall not proceed except at CRA's risk until written instructions are received from the Contract Officer.

1.6 Care of Work.

The Consultant shall adopt reasonable methods during the life of the Agreement to furnish continuous protection to the work, and the equipment, materials, papers, documents, plans, studies and/or other components thereof to prevent losses or damages, and shall be responsible for all such damages, to persons or property, until acceptance of the work by CRA, except such losses or damages as may be caused by CRA's own negligence.

1.7 Further Responsibilities of Parties.

Both parties agree to use reasonable care and diligence to perform their respective obligations under this Agreement. Both parties agree to act in good faith to execute all

5

instruments, prepare all documents and take all actions as may be reasonably necessary to carry out the purposes of this Agreement. Unless hereafter specified, neither party shall be responsible for the service of the other.

1.8 Additional Services.

CRA shall have the right at any time during the performance of the services, without invalidating this Agreement, to order extra work beyond that specified in the Scope of Services or make changes by altering, adding to or deducting from said work. No such extra work may be undertaken unless a written order is first given by the Contract Officer to the Consultant, incorporating therein any adjustment in (i) the Contract Sum for the actual cost of the extra work, and/or (ii) the time to perform this Agreement, which said adjustments are subject to the written approval of the Consultant. Any increase in compensation of up to ten percent (10%) of the Contract Sum or \$25,000, whichever is less; or in the time to perform of up to one hundred eighty (180) days may be approved by the Contract Officer. Any greater increases, taken either separately or cumulatively must be approved by the CRA Board. It is expressly understood by Consultant that the provisions of this Section shall not apply to services specifically set forth in the Scope of Services. Consultant hereby acknowledges that it accepts the risk that the services to be provided pursuant to the Scope of Services may be more costly or time consuming than Consultant anticipates and that Consultant shall not be entitled to additional compensation therefor. CRA may in its sole and absolute discretion have similar work done by other contractors. No claims for an increase in the Contract Sum or time for performance shall be valid unless the procedures established in this Section are followed.

1.9 Special Requirements.

Additional terms and conditions of this Agreement, if any, which are made a part hereof are set forth in the "Special Requirements" attached hereto as Exhibit "B" and incorporated herein by this reference. In the event of a conflict between the provisions of Exhibit "B" and any other provisions of this Agreement, the provisions of Exhibit "B" shall govern.

ARTICLE 2. COMPENSATION AND METHOD OF PAYMENT.

2.1 Contract Sum.

Subject to any limitations set forth in this Agreement, CRA agrees to pay Consultant the amounts specified in the "Schedule of Compensation" attached hereto as Exhibit "C" and incorporated herein by this reference. The total compensation, including reimbursement for actual expenses, shall not exceed Fifty-Five Thousand Sixty-Nine Dollars (\$55,069) (the "Contract Sum"), unless additional compensation is approved pursuant to Section 1.8.

2.2 Method of Compensation.

The method of compensation may include: (i) a lump sum payment upon completion; (ii) payment in accordance with specified tasks or the percentage of completion of the services less contract retention; (iii) payment for time and materials based upon the Consultant's rates as specified in the Schedule of Compensation, provided that (a) time estimates are provided for the performance of sub tasks, (b) contract retention is maintained, and (c) the Contract Sum is not exceeded; or (iv) such other methods as may be specified in the Schedule of Compensation.

2.3 Reimbursable Expenses.

Compensation may include reimbursement for actual and necessary expenditures for reproduction costs, telephone expenses, and travel expenses approved in writing by the Contract Officer in advance, or actual subcontractor expenses of an approved subcontractor pursuant to Section 4.5, and only if specified in the Schedule of Compensation. The Contract Sum shall include the attendance of Consultant at all project meetings reasonably deemed necessary by the CRA. Coordination of the performance of the work with City is a critical component of the services. If Consultant is required to attend additional meetings to facilitate such coordination, Consultant shall not be entitled to any additional compensation for attending said meetings.

2.4 Invoices.

Each month Consultant shall furnish to CRA an original invoice for all work performed and expenses incurred during the preceding month in a form approved by CRA's Executive Director. By submitting an invoice for payment under this Agreement, Consultant is certifying compliance with all provisions of the Agreement. The invoice shall detail charges for all necessary and actual expenses by the following categories: labor (by sub-category), travel, materials, equipment, supplies, and sub-contractor contracts. Sub-contractor charges shall also be detailed by such categories. Consultant shall not invoice CRA for any duplicate services performed by more than one person.

CRA shall independently review each invoice submitted by the Consultant to determine whether the work performed and expenses incurred are in compliance with the provisions of this Agreement. Except as to any charges for work performed or expenses incurred by Consultant which are disputed by CRA, or as provided in Section 7.3. CRA will use its best efforts to cause Consultant to be paid within thirty (30) days of receipt of Consultant's correct and undisputed invoice; however, Consultant acknowledges and agrees that due to CRA warrant run procedures, the City cannot guarantee that payment will occur within this time period. In the event any charges or expenses are disputed by CRA, the original invoice shall be returned by CRA to Consultant for correction and resubmission. Review and payment by the CRA of any invoice provided by the Consultant shall not constitute a waiver of any rights or remedies provided herein or any applicable law.

2.5 Waiver.

Payment to Consultant for work performed pursuant to this Agreement shall not be deemed to waive any defects in work performed by Consultant.

ARTICLE 3. PERFORMANCE SCHEDULE

3.1 Time of Essence.

Time is of the essence in the performance of this Agreement.

3.2 Schedule of Performance.

Consultant shall commence the services pursuant to this Agreement upon receipt of a written notice to proceed and shall perform all services within the time period(s) established in the "Schedule of Performance" attached hereto as Exhibit "D" and incorporated herein by this

7

reference. When requested by the Consultant, extensions to the time period(s) specified in the Schedule of Performance may be approved in writing by the Contract Officer but not exceeding one hundred eighty (180) days cumulatively. Any greater increases, taken either separately or cumulatively must be approved by the CRA Board.

3.3 Force Majeure.

The time period(s) specified in the Schedule of Performance for performance of the services rendered pursuant to this Agreement shall be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Consultant, including, but not restricted to, acts of God or of the public enemy, unusually severe weather, fires, earthquakes, floods, epidemics, quarantine restrictions, riots, strikes, freight embargoes, wars, litigation, and/or acts of any governmental agency, including the CRA, if the Consultant shall within ten (10) days of the commencement of such delay notify the Contract Officer in writing of the causes of the delay. The Contract Officer shall ascertain the facts and the extent of delay, and extend the time for performing the services for the period of the enforced delay when and if in the judgment of the Contract Officer such delay is justified. The Contract Officer's determination shall be final and conclusive upon the parties to this Agreement. In no event shall Consultant be entitled to recover damages against the CRA for any delay in the performance of this Agreement, however caused, Consultant's sole remedy being extension of the Agreement pursuant to this Section.

3.4 Term.

Unless earlier terminated in accordance with Article 7 of this Agreement, this Agreement shall continue in full force and effect until completion of the services but not exceeding one (1) year from the date hereof, except as otherwise provided in the Schedule of Performance (Exhibit "D") and Section 3.2 of this Agreement.

ARTICLE 4. COORDINATION OF WORK

4.1 Representatives and Personnel of Consultant.

The following principals of Consultant ("Principals") are hereby designated as being the principals and representatives of Consultant authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith:

_____	_____
(Name)	(Title)
_____	_____
(Name)	(Title)
_____	_____
(Name)	(Title)

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing Principals were a substantial inducement for CRA to enter into this Agreement. Therefore, the Principals shall be responsible during the term of this Agreement for directing all activities of Consultant and devoting sufficient time to personally supervise the services

8

hereunder. All personnel of Consultant, and any authorized agents, shall at all times be under the exclusive direction and control of the Principals. For purposes of this Agreement, the Principals may not be replaced nor may their responsibilities be substantially reduced by Consultant without the express written approval of CRA. Additionally, Consultant shall utilize only competent personnel to perform services pursuant to this Agreement. Consultant shall make every reasonable effort to maintain the stability and continuity of Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement. Consultant shall notify CRA of any changes in Consultant's staff and subcontractors, if any, assigned to perform the services required under this Agreement, prior to and during any such performance.

4.2 Status of Consultant.

Consultant shall have no authority to bind CRA in any manner, or to incur any obligation, debt or liability of any kind on behalf of or against the CRA, or the City, whether by contract or otherwise, unless such authority is expressly conferred under this Agreement or is otherwise expressly conferred in writing by CRA. Consultant shall not at any time or in any manner represent that Consultant or any of Consultant's officers, employees, or agents are in any manner officials, officers, employees or agents of CRA. Neither Consultant, nor any of Consultant's officers, employees or agents, shall obtain any rights to retirement, health care or any other benefits which may otherwise accrue to CRA's employees. Consultant expressly waives any claim Consultant may have to any such rights.

4.3 Contract Officer.

The Contract Officer shall be such person as may be designated by the Executive Director. It shall be the Consultant's responsibility to assure that the Contract Officer is kept informed of the progress of the performance of the services and the Consultant shall refer any decisions which must be made by CRA to the Contract Officer. Unless otherwise specified herein, any approval of CRA required hereunder shall mean the approval of the Contract Officer. The Contract Officer shall have authority, if specified in writing by the Executive Director, to sign all documents on behalf of the CRA required hereunder to carry out the terms of this Agreement.

4.4 Independent Consultant.

Neither the CRA nor any of its employees shall have any control over the manner, mode or means by which Consultant, its agents or employees, perform the services required herein, except as otherwise set forth herein. CRA shall have no voice in the selection, discharge, supervision or control of Consultant's employees, servants, representatives or agents, or in fixing their number, compensation or hours of service. Consultant shall perform all services required herein as an independent contractor of CRA and shall remain at all times as to CRA a wholly independent contractor with only such obligations as are consistent with that role. Consultant shall not at any time or in any manner represent that it or any of its agents or employees are agents or employees of CRA. CRA shall not in any way or for any purpose become or be deemed to be a partner of Consultant in its business or otherwise or a joint venture or a member of any joint enterprise with Consultant.

4.5 Prohibition Against Subcontracting or Assignment.

The experience, knowledge, capability and reputation of Consultant, its principals and employees were a substantial inducement for the CRA to enter into this Agreement. Therefore, Consultant shall not contract with any other entity to perform in whole or in part the services required hereunder without the express written approval of the CRA. In addition, neither this Agreement nor any interest herein may be transferred, assigned, conveyed, hypothecated or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of CRA. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Consultant, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release the Consultant or any surety of Consultant of any liability hereunder without the express consent of CRA.

ARTICLE 5. INSURANCE, INDEMNIFICATION AND BONDS

5.1 Insurance Coverages.

The Consultant shall procure and maintain, at its sole cost and expense, in a form and content satisfactory to CRA, during the entire term of this Agreement including any extension thereof, the following policies of insurance which shall cover all elected and appointed officers, employees and agents of CRA:

(a) Commercial General Liability Insurance (ISO Occurrence Form CG0001 or equivalent). A policy of comprehensive general liability insurance written on a per occurrence basis for bodily injury, personal injury and property damage. The policy of insurance shall be in an amount not less than \$1,000,000.00 per occurrence or if a general aggregate limit is used, then the general aggregate limit shall be twice the occurrence limit.

(b) Workers Compensation Insurance. A policy of workers compensation insurance in such amount as will fully comply with the laws of the State of California and which shall indemnify, insure and provide legal defense for the Consultant against any loss, claim or damage arising from any injuries or occupational diseases occurring to any worker employed by or any persons retained by the Consultant in the course of carrying out the work or services contemplated in this Agreement.

(c) Automotive Insurance (Form CA 0001 (Ed 1/87) including "any auto" and endorsement CA 0025 or equivalent). A policy of comprehensive automobile liability insurance written on a per occurrence for bodily injury and property damage in an amount not less than \$1,000,000. Said policy shall include coverage for owned, non-owned, leased and hired cars.

(d) Professional Liability. Professional liability insurance appropriate to the Consultant's profession. This coverage may be written on a "claims made" basis, and must include coverage for contractual liability. The professional liability insurance required by this Agreement must be endorsed to be applicable to claims based upon, arising out of or related to services performed under this Agreement. The insurance must be maintained for at least 5 consecutive years following the completion of Consultant's services or the termination of this

Agreement. During this additional 5-year period, Consultant shall annually and upon request of the CRA submit written evidence of this continuous coverage.

(e) Additional Insurance. Policies of such other insurance, as may be required in the Special Requirements.

(f) Subcontractors. Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

5.2 General Insurance Requirements.

All of the above policies of insurance shall be primary insurance and the CGL and Automobile policies shall name the CRA, its elected and appointed officers, employees and agents as additional insureds and any insurance maintained by CRA or its officers, employees or agents shall apply in excess of, and not contribute with Consultant's insurance. The insurer is deemed hereof to waive all rights of subrogation and contribution it may have against the CRA, its officers, employees and agents and their respective insurers. The insurance policy must specify that where the primary insured does not satisfy the self-insured retention, any additional insured may satisfy the self-insured retention. All of said policies of insurance shall provide that said insurance may not be amended or cancelled by the insurer or any party hereto without providing thirty (30) days prior written notice by certified mail return receipt requested to the CRA. In the event any of said policies of insurance are cancelled, the Consultant shall, prior to the cancellation date, submit new evidence of insurance in conformance with Section 5.1 to the Contract Officer. No work or services under this Agreement shall commence until the Consultant has provided the CRA with Certificates of Insurance or appropriate insurance binders evidencing the above insurance coverages and said Certificates of Insurance or binders are approved by the CRA. CRA reserves the right to inspect complete, certified copies of all required insurance policies at any time. Any failure to comply with the reporting or other provisions of the policies including breaches or warranties shall not affect coverage provided to CRA.

All certificates shall name the CRA as additional insured (providing the appropriate endorsement) and shall conform to the following "cancellation" notice:

CANCELLATION:

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATED THEREOF, THE ISSUING COMPANY SHALL MAIL THIRTY (30)-DAY ADVANCE WRITTEN NOTICE TO CERTIFICATE HOLDER NAMED HEREIN.

[to be initialed]

Agent's Initials

CRA, its respective elected and appointed officers, directors, officials, employees, agents and volunteers are to be covered as additional insureds as respects: liability arising out of activities Consultant performs; products and completed operations of Consultant; premises

11

owned, occupied or used by Consultant; or automobiles owned, leased, hired or borrowed by Consultant. The coverage shall contain no special limitations on the scope of protection afforded to CRA, and their respective elected and appointed officers, officials, employees or volunteers. Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

Any deductibles or self-insured retentions must be declared to and approved by CRA. At the option of CRA, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CRA or its respective elected or appointed officers, officials, employees and volunteers or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration, defense expenses and claims. The Consultant agrees that the requirement to provide insurance shall not be construed as limiting in any way the extent to which the Consultant may be held responsible for the payment of damages to any persons or property resulting from the Consultant's activities or the activities of any person or persons for which the Consultant is otherwise responsible nor shall it limit the Consultant's indemnification liabilities as provided in Section 5.3.

In the event the Consultant subcontracts any portion of the work in compliance with Section 4.5 of this Agreement, the contract between the Consultant and such subcontractor shall require the subcontractor to maintain the same policies of insurance that the Consultant is required to maintain pursuant to Section 5.1, and such certificates and endorsements shall be provided to CRA.

5.3 Indemnification.

To the full extent permitted by law, Consultant agrees to indemnify, defend and hold harmless the CRA, its officers, employees and agents ("Indemnified Parties") against, and will hold and save them and each of them harmless from, any and all actions, either judicial, administrative, arbitration or regulatory claims, damages to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities whether actual or threatened (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising out of or in connection with the negligent performance of the work, operations or activities provided herein of Consultant, its officers, employees, agents, subcontractors, or invitees, or any individual or entity for which Consultant is legally liable ("indemnors"), or arising from Consultant's reckless or willful misconduct, or arising from Consultant's or indemnors' negligent performance of or failure to perform any term, provision, covenant or condition of this Agreement, and in connection therewith:

(a) Consultant will defend any action or actions filed in connection with any of said claims or liabilities and will pay all costs and expenses, including legal costs and attorneys' fees incurred in connection therewith;

(b) Consultant will promptly pay any judgment rendered against the CRA, its officers, agents or employees for any such claims or liabilities arising out of or in connection with the negligent performance of or failure to perform such work, operations or activities of Consultant hereunder; and Consultant agrees to save and hold the CRA, its officers, agents, and employees harmless therefrom;

(c) In the event the CRA, its officers, agents or employees is made a party to any action or proceeding filed or prosecuted against Consultant for such damages or other claims

arising out of or in connection with the negligent performance of or failure to perform the work, operation or activities of Consultant hereunder, Consultant agrees to pay to the CRA, its officers, agents or employees, any and all costs and expenses incurred by the CRA, its officers, agents or employees in such action or proceeding, including but not limited to, legal costs and attorneys' fees.

Consultant shall incorporate similar, indemnity agreements with its subcontractors and if it fails to do so Consultant shall be fully responsible to indemnify City hereunder therefore, and failure of CRA to monitor compliance with these provisions shall not be a waiver hereof. This indemnification includes claims or liabilities arising from any negligent or wrongful act, error or omission, or reckless or willful misconduct of Consultant in the performance of professional services hereunder. The provisions of this Section do not apply to claims or liabilities occurring as a result of CRA's sole negligence or willful acts or omissions, but, to the fullest extent permitted by law, shall apply to claims and liabilities resulting in part from CRA's negligence, except that design professionals' indemnity hereunder shall be limited to claims and liabilities arising out of the negligence, recklessness or willful misconduct of the design professional. The indemnity obligation shall be binding on successors and assigns of Consultant and shall survive termination of this Agreement.

5.4 Sufficiency of Insurer.

Insurance required by this Agreement shall be satisfactory only if issued by companies qualified to do business in California, rated "A" or better in the most recent edition of Best Rating Guide, The Key Rating Guide or in the Federal Register, and only if they are of a financial category Class VII or better, unless such requirements are waived by the Executive Director due to unique circumstances. If this Agreement continues for more than 3 years duration, or in the event the Executive Director determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the City, the Consultant agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the Executive Director.

ARTICLE 6. RECORDS, REPORTS, AND RELEASE OF INFORMATION

6.1 Records.

Consultant shall keep, and require subcontractors to keep, such ledgers books of accounts, invoices, vouchers, canceled checks, reports, studies or other documents relating to the disbursements charged to City and services performed hereunder (the "books and records"), as shall be necessary to perform the services required by this Agreement and enable the Contract Officer to evaluate the performance of such services. Any and all such documents shall be maintained in accordance with generally accepted accounting principles and shall be complete and detailed. The Contract Officer shall have full and free access to such books and records at all times during normal business hours of CRA, including the right to inspect, copy, audit and make records and transcripts from such records. Such records shall be maintained for a period of 3 years following completion of the services hereunder, and the CRA shall have access to such

records in the event any audit is required. In the event of dissolution of Consultant's business, custody of the books and records may be given to CRA, and access shall be provided by Consultant's successor in interest.

6.2 Reports.

Consultant shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the services required by this Agreement as the Contract Officer shall require. Consultant hereby acknowledges that the City is greatly concerned about the cost of work and services to be performed pursuant to this Agreement. For this reason, Consultant agrees that if Consultant becomes aware of any facts, circumstances, techniques, or events that may or will materially increase or decrease the cost of the work or services contemplated herein or, if Consultant is providing design services, the cost of the project being designed, Consultant shall promptly notify the Contract Officer of said fact, circumstance, technique or event and the estimated increased or decreased cost related thereto and, if Consultant is providing design services, the estimated increased or decreased cost estimate for the project being designed.

6.3 Ownership of Documents.

All drawings, specifications, maps, designs, photographs, studies, surveys, data, notes, computer files, reports, records, documents and other materials (the "documents and materials") prepared by Consultant, its employees, subcontractors and agents in the performance of this Agreement shall be the property of CRA and shall be delivered to CRA upon request of the Contract Officer or upon the termination of this Agreement, and Consultant shall have no claim for further employment or additional compensation as a result of the exercise by CRA of its full rights of ownership use, reuse, or assignment of the documents and materials hereunder. Any use, reuse or assignment of such completed documents for other projects and/or use of uncompleted documents without specific written authorization by the Consultant will be at the CRA's sole risk and without liability to Consultant, and Consultant's guarantee and warranties shall not extend to such use, reuse or assignment. Consultant may retain copies of such documents for its own use. Consultant shall have the right to use the concepts embodied therein. All subcontractors shall provide for assignment to CRA of any documents or materials prepared by them, and in the event Consultant fails to secure such assignment, Consultant shall indemnify CRA for all damages resulting therefrom.

6.4 Confidentiality and Release of Information.

(a) All information gained or work product produced by Consultant in performance of this Agreement shall be considered confidential, unless such information is in the public domain or already known to Consultant. Consultant shall not release or disclose any such information or work product to persons or entities other than CRA without prior written authorization from the Contract Officer.

(b) Consultant, its officers, employees, agents or subcontractors, shall not, without prior written authorization from the Contract Officer or unless requested by the CRA Attorney, voluntarily provide documents, declarations, letters of support, testimony at depositions, response to interrogatories or other information concerning the work performed under this Agreement. Response to a subpoena or court order shall not be considered "voluntary" provided Consultant gives CRA notice of such court order or subpoena.

(c) If Consultant, or any officer, employee, agent or subcontractor of Consultant, provides any information or work product in violation of this Agreement, then CRA shall have the right to reimbursement and indemnity from Consultant for any damages, costs and fees, including attorneys' fees, caused by or incurred as a result of Consultant's conduct.

(d) Consultant shall promptly notify CRA should Consultant, its officers, employees, agents or subcontractors be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions or other discovery request, court order or subpoena from any party regarding this Agreement and the work performed there under. CRA retains the right, but has no obligation, to represent Consultant or be present at any deposition, hearing or similar proceeding. Consultant agrees to cooperate fully with CRA and to provide City with the opportunity to review any response to discovery requests provided by Consultant. However, this right to review any such response does not imply or mean the right by CRA to control, direct, or rewrite said response.

ARTICLE 7. ENFORCEMENT OF AGREEMENT AND TERMINATION

7.1 California Law.

This Agreement shall be interpreted, construed and governed both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Riverside, State of California, or any other appropriate court in such county, and Consultant covenants and agrees to submit to the personal jurisdiction of such court in the event of such action. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Central District of California, in Riverside.

7.2 Disputes; Default.

In the event that Consultant is in default under the terms of this Agreement, the CRA shall not have any obligation or duty to continue compensating Consultant for any work performed after the date of default. Instead, the CRA may give notice to Consultant of the default and the reasons for the default. The notice shall include the timeframe in which Consultant may cure the default. This timeframe is presumptively thirty (30) days, but may be extended, though not reduced, if circumstances warrant. During the period of time that Consultant is in default, the CRA shall hold all invoices and shall proceed with payment on the invoices only when the default is cured. In the alternative, the CRA may, in its sole discretion, elect to pay some or all of the outstanding invoices during the period of default. If Consultant does not cure the default, the CRA may take necessary steps to terminate this Agreement under this Article. Any failure on the part of the CRA to give notice of the Consultant's default shall not be deemed to result in a waiver of the CRA's legal rights or any rights arising out of any provision of this Agreement.

7.3 Retention of Funds.

Consultant hereby authorizes CRA to deduct from any amount payable to Consultant (whether or not arising out of this Agreement) (i) any amounts the payment of which may be in dispute hereunder or which are necessary to compensate CRA for any losses, costs, liabilities, or damages suffered by CRA, and (ii) all amounts for which CRA may be liable to third parties, by reason of Consultant's acts or omissions in performing or failing to perform Consultant's

obligation under this Agreement. In the event that any claim is made by a third party, the amount or validity of which is disputed by Consultant, or any indebtedness shall exist which shall appear to be the basis for a claim of lien, CRA may withhold from any payment due, without liability for interest because of such withholding, an amount sufficient to cover such claim. The failure of CRA to exercise such right to deduct or to withhold shall not, however, affect the obligations of the Consultant to insure, indemnify, and protect CRA as elsewhere provided herein.

7.4 Waiver.

Waiver by any party to this Agreement of any term, condition, or covenant of this Agreement shall not constitute a waiver of any other term, condition, or covenant. Waiver by any party of any breach of the provisions of this Agreement shall not constitute a waiver of any other provision or a waiver of any subsequent breach or violation of any provision of this Agreement. Acceptance by CRA of any work or services by Consultant shall not constitute a waiver of any of the provisions of this Agreement. No delay or omission in the exercise of any right or remedy by a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

7.5 Rights and Remedies are Cumulative.

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

7.6 Legal Action.

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant shall file a statutory claim pursuant to Government Code Sections 905 et seq. and 910 et. seq., in order to pursue a legal action under this Agreement.

7.7 Termination Prior to Expiration of Term.

This Section shall govern any termination of this Contract except as specifically provided in the following Section for termination for cause. The CRA reserves the right to terminate this Contract at any time, with or without cause, upon thirty (30) days' written notice to Consultant, except that where termination is due to the fault of the Consultant, the period of notice may be such shorter time as may be determined by the Contract Officer. In addition, the Consultant reserves the right to terminate this Contract at any time, with or without cause, upon sixty (60) days' written notice to CRA, except that where termination is due to the fault of the CRA, the period of notice may be such shorter time as the Consultant may determine. Upon receipt of any notice of termination, Consultant shall immediately cease all services hereunder except such as may be specifically approved by the Contract Officer. Except where the Consultant has initiated termination, the Consultant shall be entitled to compensation for all services rendered prior to the

effective date of the notice of termination and for any services authorized by the Contract Officer thereafter in accordance with the Schedule of Compensation or such as may be approved by the Contract Officer, except as provided in Section 7.3. In the event the Consultant has initiated termination, the Consultant shall be entitled to compensation only for the reasonable value of the work product actually produced hereunder. In the event of termination without cause pursuant to this Section, the terminating party need not provide the non-terminating party with the opportunity to cure pursuant to Section 7.2.

7.8 Termination for Default of Consultant.

If termination is due to the failure of the Consultant to fulfill its obligations under this Agreement, CRA may, after compliance with the provisions of Section 7.2, take over the work and prosecute the same to completion by contract or otherwise, and the Consultant shall be liable to the extent that the total cost for completion of the services required hereunder exceeds the compensation herein stipulated (provided that the CRA shall use reasonable efforts to mitigate such damages), and CRA may withhold any payments to the Consultant for the purpose of set-off or partial payment of the amounts owed the CRA as previously stated.

7.9 Attorneys' Fees.

If either party to this Agreement is required to initiate or defend or made a party to any action or proceeding in any way connected with this Agreement, the prevailing party in such action or proceeding, in addition to any other relief which may be granted, whether legal or equitable, shall be entitled to reasonable attorney's fees. Attorney's fees shall include attorney's fees on any appeal, and in addition a party entitled to attorney's fees shall be entitled to all other reasonable costs for investigating such action, taking depositions and discovery and all other necessary costs the court allows which are incurred in such litigation. All such fees shall be deemed to have accrued on commencement of such action and shall be enforceable whether or not such action is prosecuted to judgment.

ARTICLE 8. CRA OFFICERS AND EMPLOYEES: NON-DISCRIMINATION

8.1 Non-liability of CRA Officers and Employees.

No officer or employee of the CRA shall be personally liable to the Consultant, or any successor in interest, in the event of any default or breach by the CRA or for any amount which may become due to the Consultant or to its successor, or for breach of any obligation of the terms of this Agreement.

8.2 Conflict of Interest.

Consultant covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, which would conflict in any manner with the interests of CRA or which would in any way hinder Consultant's performance of services under this Agreement. Consultant further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor without the express written consent of the Contract Officer. Consultant agrees to at all times avoid conflicts of interest or the appearance of any conflicts of interest with the interests of CRA in the performance of this Agreement.

No officer or employee of the CRA shall have any financial interest, direct or indirect, in this Agreement nor shall any such officer or employee participate in any decision relating to the Agreement which effects his financial interest or the financial interest of any corporation, partnership or association in which he is, directly or indirectly, interested, in violation of any State statute or regulation. The Consultant warrants that it has not paid or given and will not pay or give any third party any money or other consideration for obtaining this Agreement.

8.3 Covenant Against Discrimination.

Consultant covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, sex, gender, sexual orientation, marital status, national origin, ancestry, or other protected class in the performance of this Agreement. Consultant shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, creed, religion, sex, marital status, national origin, ancestry, or other protected class.

8.4 Unauthorized Aliens.

Consultant hereby promises and agrees to comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C.A. §§ 1101, et seq., as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should Consultant so employ such unauthorized aliens for the performance of work and/or services covered by this Agreement, and should the any liability or sanctions be imposed against CRA for such use of unauthorized aliens, Consultant hereby agrees to and shall reimburse CRA for the cost of all such liabilities or sanctions imposed, together with any and all costs, including attorneys' fees, incurred by CRA.

ARTICLE 9. MISCELLANEOUS PROVISIONS

9.1 Notices.

Any notice, demand, request, document, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by prepaid, first-class mail, in the case of the CRA, to the Executive Director and to the attention of the Contract Officer, Carson Reclamation Authority c/o City of Carson 701 E Carson Street, Carson, California 90745 and in the case of the Consultant, to the person at the address designated on the execution page of this Agreement. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated at the time personally delivered or in seventy-two (72) hours from the time of mailing if mailed as provided in this Section.

9.2 Interpretation.

The terms of this Agreement shall be construed in accordance with the meaning of the language used and shall not be construed for or against either party by reason of the authorship of this Agreement or any other rule of construction which might otherwise apply.

9.3 Counterparts.

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and such counterparts shall constitute one and the same instrument.

9.4 Integration; Amendment.

This Agreement including the attachments hereto is the entire, complete and exclusive expression of the understanding of the parties. It is understood that there are no oral agreements between the parties hereto affecting this Agreement and this Agreement supersedes and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the parties, and none shall be used to interpret this Agreement. No amendment to or modification of this Agreement shall be valid unless made in writing and approved by the Consultant and by the City Council. The parties agree that this requirement for written modifications cannot be waived and that any attempted waiver shall be void.

9.5 Severability.

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by a valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement which are hereby declared as severable and shall be interpreted to carry out the intent of the parties hereunder unless the invalid provision is so material that its invalidity deprives either party of the basic benefit of their bargain or renders this Agreement meaningless.

9.6 Corporate Authority.

The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provisions of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound. This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the parties.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year first-above written.

CRA:
CARSON RECLAMATION AUTHORITY

Albert Robles, Chairman

ATTEST:

Authority Secretary

APPROVED AS TO FORM:
ALESHIRE & WYNDER, LLP

Sunny K. Soltani, Authority Counsel

CONSULTANT:
CUMMINGS CURLEY AND
ASSOCIATES, INC.

By: _____
Name:
Title:

By: _____
Name:
Title:

Address: _____

Two signatures are required if a corporation.

NOTE: CONSULTANT'S SIGNATURES SHALL BE DULY NOTARIZED, AND APPROPRIATE ATTESTATIONS SHALL BE INCLUDED AS MAY BE REQUIRED BY THE BYLAWS, ARTICLES OF INCORPORATION, OR OTHER RULES OR REGULATIONS APPLICABLE TO CONSULTANT'S BUSINESS ENTITY.

20

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER		DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL		_____
<input type="checkbox"/> CORPORATE OFFICER		TITLE OR TYPE OF DOCUMENT
_____	TITLE(S)	
<input type="checkbox"/> PARTNER(S)	<input type="checkbox"/> LIMITED	_____
	<input type="checkbox"/> GENERAL	NUMBER OF PAGES
<input type="checkbox"/> ATTORNEY-IN-FACT		
<input type="checkbox"/> TRUSTEE(S)		_____
<input type="checkbox"/> GUARDIAN/CONSERVATOR		DATE OF DOCUMENT
<input type="checkbox"/> OTHER _____		

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

SIGNER(S) OTHER THAN NAMED ABOVE

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

On _____, 201_ before me, _____, personally appeared _____, proved to me on the basis of satisfactory evidence to be the person(s) whose names(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature: _____

OPTIONAL

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

CAPACITY CLAIMED BY SIGNER	DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> CORPORATE OFFICER _____ TITLE(S)	_____ TITLE OR TYPE OF DOCUMENT
<input type="checkbox"/> PARTNER(S) <input type="checkbox"/> LIMITED <input type="checkbox"/> GENERAL	_____ NUMBER OF PAGES
<input type="checkbox"/> ATTORNEY-IN-FACT <input type="checkbox"/> TRUSTEE(S) <input type="checkbox"/> GUARDIAN/CONSERVATOR <input type="checkbox"/> OTHER _____	_____ DATE OF DOCUMENT

SIGNER IS REPRESENTING:
(NAME OF PERSON(S) OR ENTITY(IES))

_____ SIGNER(S) OTHER THAN NAMED ABOVE

EXHIBIT "A"

SCOPE OF SERVICES

I. Consultant may perform the following Services:

Description
<p>405 PERIMETER AND TORRANCE LATERAL SIDE PERIMETER LOWER SLOPES ASSUMING 1,000 LF OF LANDSCAPER AREA ON BOTH. REMAINDER TO BE STABILIZED WITHOUT LANDSCAPE (DESIGN PACKAGE A) DESIGN DEVELOPMENT OF PERMANENT LANDSCAPE AND IRRIGATION CONSTRUCTION DOCUMENTS FOR LOWER SLOPE SURFACE PERMANENT PLANTING AND IRRIGATION DTSC, CAL WATER, WEST BASIN AND LOS ANGELES COUNTY HEALTH PLAN CHECK PROCESSING FOR 405 PERIMETER LOWER SLOPE SURFACE PLANTING AND IRRIGATION MEETINGS FOR COORDINATION, SITE REVIEW, DTSC COMPLIANCE AND BUY-IN, STAKE HOLDER PRESENTATIONS (3)</p>
<p>405 PERIMETER UPPER SLOPES AND TORRANCE LATERAL SIDE PERIMETER (DESIGN PACKAGE F) REVIEW OF CURRENT PLANS OF INTERIM IRRIGATION FOR UPPER SLOPES DESIGN DEVELOPMENT OF PERMANENT IRRIGATION FOR UPPER SLOPES DESIGN DEVELOPMENT OF PERMANENT LANDSCAPE FOR UPPER SLOPES CONSTRUCTION DOCUMENTS PERMANENT IRRIGATION FOR UPPER SLOPES CONSTRUCTION DOCUMENTS FOR PERMANENT LANDSCAPE FOR UPPER SLOPES DTSC, CAL WATER, WEST BASIN AND LOS ANGELES COUNTY HEALTH PLAN CHECK PROCESSING FOR 405 PERIMETER UPPER SLOPES MEETINGS FOR COORDINATION, SITE REVIEW, DTSC COMPLIANCE AND BUY-IN, STAKE HOLDER PRESENTATIONS (3)</p>
<p>TREATED GROUNDWATER (DESIGN PACKAGE G) DESIGN DEVELOPMENT TO IMPLEMENT USE OF TREATED GROUNDWATER FOR SITE IRRIGATION IN ADDITION TO USE OF PURCHASED RECYCLED WATER. MEETINGS FOR COORDINATION, SITE REVIEW, DTSC COMPLIANCE AND BUY-IN, STAKE HOLDER PRESENTATIONS (3)</p>

EXHIBIT "B"

**SPECIAL REQUIREMENTS
(Superseding Contract Boilerplate)**

None.

EXHIBIT "C"

SCHEDULE OF COMPENSATION

Description	Total
405 PERIMETER AND TORRANCE LATERAL SIDE PERIMETER LOWER SLOPES ASSUMING 1,000 LF OF LANDSCAPER AREA ON BOTH. REMAINDER TO BE STABILIZED WITHOUT LANDSCAPE (DESIGN PACKAGE A)	
DESIGN DEVELOPMENT OF PERMANENT LANDSCAPE AND IRRIGATION	4,000.00
CONSTRUCTION DOCUMENTS FOR LOWER SLOPE SURFACE PERMANENT PLANTING AND IRRIGATION	6,270.00
DTSC, CAL WATER, WEST BASIN AND LOS ANGELES COUNTY HEALTH PLAN CHECK PROCESSING FOR 405 PERIMETER LOWER SLOPE SURFACE PLANTING AND IRRIGATION	1,650.00
MEETINGS FOR COORDINATION, SITE REVIEW, DTSC COMPLIANCE AND BUY-IN, STAKE HOLDER PRESENTATIONS (3)	2,475.00
405 PERIMETER UPPER SLOPES AND TORRANCE LATERAL SIDE PERIMETER (DESIGN PACKAGE F)	
REVIEW OF CURRENT PLANS OF INTERIM IRRIGATION FOR UPPER SLOPES	3,800.00
DESIGN DEVELOPMENT OF PERMANENT IRRIGATION FOR UPPER SLOPES	7,500.00
DESIGN DEVELOPMENT OF PERMANENT LANDSCAPE FOR UPPER SLOPES	4,000.00
CONSTRUCTION DOCUMENTS PERMANENT IRRIGATION FOR UPPER SLOPES	8,500.00
CONSTRUCTION DOCUMENTS FOR PERMANENT LANDSCAPE FOR UPPER SLOPES	4,500.00
DTSC, CAL WATER, WEST BASIN AND LOS ANGELES COUNTY HEALTH PLAN CHECK PROCESSING FOR 405 PERIMETER UPPER SLOPES	3,300.00
MEETINGS FOR COORDINATION, SITE REVIEW, DTSC COMPLIANCE AND BUY-IN, STAKE HOLDER PRESENTATIONS (3)	2,474.00
TREATED GROUNDWATER (DESIGN PACKAGE G)	
DESIGN DEVELOPMENT TO IMPLEMENT USE OF TREATED GROUNDWATER FOR SITE IRRIGATION IN ADDITION TO USE OF PURCHASED RECYCLED WATER.	4,950.00
MEETINGS FOR COORDINATION, SITE REVIEW, DTSC COMPLIANCE AND BUY-IN, STAKE HOLDER PRESENTATIONS (3)	1,650.00
Total	\$55,069.00

THIS IS A SUMMARY OF FEES OUTLINED IN THE ABOVE REFERENCED PROPOSAL SUBMITTED BY CUMMINGS CURLEY AND ASSOCIATES. FOR COMPLETE SCOPE OF SERVICES AND TERMS AND CONDITIONS PROPOSED, REFER TO THE REFERENCED DOCUMENT.

EXHIBIT "D"

SCHEDULE OF PERFORMANCE

I. Consultant shall make reasonable efforts to perform the following Services in accordance with the following schedule:

	<u>Time to Perform</u>	<u>Deadline</u> <u>Date</u>
Landscape Svs	1 YEAR	06/30/2017

II. Consultant shall deliver the following tangible work products to the City by the following dates.

A. None

III. The Contract Officer may approve extensions for performance of the services in accordance with Section 3.2.



File #: 2016-651, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

ANNUAL STATEMENT OF INVESTMENT POLICY

I. SUMMARY

In accordance with the requirements of the California Government code The Statement of Investment Policy shall be reviewed and adopted annually by the Reclamation Authority. If there are needed changes within the annual period, the policy can be presented to the governing body for review and approval of said changes. The Statement of Investment policy is in conformance with California government code section 53600, 6305 and the provisions provided the Bond Indenture

II. RECOMMENDATION

APPROVE and ADOPT the amended Statement of Investment Policy

III. ALTERNATIVES

TAKE another action the Council deems appropriate.

IV. BACKGROUND

The statement of investment policy establish the policies for the prudent investment of funds and provide guidelines for suitable investments. It is the policy of the Reclamation Authority to invest funds not required for immediate day-to-day operations in safe and liquid investments having a market-average rate of return (or better), while conforming to all state statues governing the investment of public funds. The investment policies and practices are based upon Federal, State, and local law and prudent money management. The following are changes made to the Carson Reclamation Authority Investment Policy: Local Agency Investment Pool increased limit of investments to \$65million (Pg. 6 section VI); SIPC- Securities Investment Protection Corporation was added as a requirement for

securities brokers doing business with the Reclamation Authority (Pg. 8); Bond Indenture requirements (Pg. 9 section IX); Clarification of required maturity dates for CD investments (Pg. 6 Section 3).

V. FISCAL IMPACT

None

VI. EXHIBITS

Exhibit No. 1 - Statement of Investment Policy Carson Reclamation Authority. (pgs. 3 - 9)

Prepared by: Monica Cooper, Reclamation Authority Treasurer

CARSON RECLAMATION AUTHORITY

STATEMENT OF INVESTMENT POLICY

I. Introduction

This policy was developed to formalize the CRA Treasurer's intent to implement prudent investment practices and to serve the public's best interest in regard to investment management, fiscal operations and accountability. Revisions to this policy shall be executed when needed through compliance to federal or state mandates and annual review and adoption at a regular meeting by the Carson Reclamation Authority legislative body.

II. Policy Statement

The Carson Reclamation Authority, hereafter referred to as "CRA", through the adoption of this policy shall invest public funds in a manner that will provide maximum security of the principal invested while meeting the cash flow needs of the CRA. There is a subordinate emphasis on providing the highest yield (return) on the principal. Further, the CRA will conform to all applicable Federal, State, and City statutes governing the investment of public funds.

III. Maintain The Public Trust

All participants in the investment process shall act as custodians of the public trust. Investment officials shall recognize that the investment portfolio is subject to public review and evaluation. The overall program shall be designed and managed with a degree of professionalism that is worthy of the public trust.

IV. Delegation of Authority

The CRA Treasurer is the designated investment officer of the CRA and is responsible for investment management decision and activities. The CRA Treasurer shall designate a staff person as a liaison/deputy in the event circumstances require timely action and the CRA Treasurer is not present. No deputy/liaison may engage in an investment transaction except as provided under the terms of the policy and procedures established by the CRA Treasurer and approved by the Carson Reclamation Authority legislative body.

V. Investment Philosophy

The standard of prudence to be used in the investment function shall be the "prudent person" standard and shall be applied in the context of managing the overall portfolio. The CRA will implement a "buy and hold" strategy. The CRA will hold its investments until maturity, unless there is a compelling reason to liquidate the investment prior to maturity.

The CRA will not engage in speculative securities which profit from favorable changes in market prices. “Investments shall be made with judgment and care which persons of prudence, discretion and intelligence would exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived. In consideration of an investment, the safety of the capital as well as income is part of the “prudent person” approach. Investment officers acting in accordance with the investment policy and exercising due diligence shall be relieved of personal responsibility for an individual security’s credit risk or market price changes, provided deviations from expectations are reported in a timely fashion and appropriate action is taken to control adverse developments.

VI. Scope

The scope of this investment policy applies to all financial assets and funds held by the CRA. The CRA Treasurer is authorized to invest the CRA’s funds as prescribe by California Government Code section 53600 and 6505.

VII. Objectives

The investment policy and practices of the CRA Treasurer for the Carson Reclamation Authority are based upon State law and prudent money management. The primary objectives of this policy are in priority order:

SAFETY OF PRINCIPAL: Safety of principal is the foremost objective of the CRA. The investment of funds shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. To achieve this goal, diversification is required in the portfolio’s composition. The investment portfolio will be diversified to avoid unreasonable and avoidable risks regarding specific security types and individual financial institutions. With diversification, failure of any one institution would not unduly harm the CRA’s cash flow.

LIQUIDITY: CRA investments must be easily sold with minimal risk of loss of principal or interest. Therefore, the CRA’s investment portfolio will remain sufficiently liquid to enable the CRA to meet operating requirements which might be reasonably anticipated.

YIELD: Return on investment becomes a consideration after the basic requirements of investment safety and liquidity are achieved. The CRA’s investment portfolio shall be designed with the objective of attaining a benchmark rate of return throughout budgetary and economic cycles commensurate with the CRA’s investment risk constraints and the cash flow of the portfolio. The CRA’s investment portfolio is designed to operate on a “buy and hold” premise; due to the safety, liquidity and yield priorities, the basis to be used as a benchmark will be the one-year Treasury bill.

VIII. Authorize Investments

It is the policy of the CRA to diversify its investment portfolio. Invested funds shall be diversified to minimize the risk of loss resulting from over concentration of assets in a specific maturity, specific issuer, or specific class of securities. As part of the Treasurer's diversification strategy, investments will be matched with anticipated cash flow requirements. Matching maturities with cash flow dates will reduce the need to sell securities prior to maturity, thus reducing market risk. The CRA will not invest in securities maturing more than 5 year from the date of purchase.

Investment of CRA funds is governed by the California Government Code Sections 53600 and 6505.5. Within the context of the limitations, the following investments are authorized as further limited herein:

1. United States Treasury Bills 100% Maximum
United States Treasury Bill, Notes and Bonds, or those for which the full faith and credit of the United States are pledged for payment of principal and interest. This investment is both safe and liquid. There is no percentage limitation of the funds that can be invested in this category.

2. Federal Government Obligations 100% Maximum
The CRA may invest in federally sponsored agency securities including obligations issued by the Government National Mortgage Association (GNMA), the Federal Farm Credit Bank System (FFCB), the Federal Home Loan Bank Board (FHLB), the Federal Home Loan Mortgage Corporation (FHLMC), the Student Loan Mortgage Administration (SLMA), and the Federal National Mortgage Association (FNMA)). The "prudent investor" rule shall apply for a single agency name, as U.S. Government backing is implied rather than guaranteed. There is no percentage limitation of the funds that can be invested in this category.

3. Certificate of Deposits (CD) 100% Maximum

The CRA may invest in Certificates of deposit (including those of the Trustee, its parent and its affiliates) secured at all times by federal securities or by collateral that may be used by a national bank for purposes of satisfying its obligations to collateralize pursuant to federal law. Certificate of Deposits shall not have a maturity greater than one year from the date of investment.

The CRA may invest in Certificates of deposit, savings accounts, or money market deposit (including those of the Trustee and its affiliates) but only to the extent that the amount being invested in such certificates of deposit, savings accounts, deposit accounts or money market deposits are fully insured by FDIC.

All investments in time deposits must be issued by a financial institution whose performance has been reliable and whose safety rating meets the standards established by the CRA Treasurer. The CSA Treasurer will periodically monitor the operating performance of all financial institutions holding CRA time deposits.

4. Banker's Acceptances 10% Maximum

The CRA may invest in Bills of exchange or time drafts drawn on and accepted by a commercial bank, otherwise known as banker's acceptances. Banker's acceptances purchased may not exceed seven days to maturity or thirty percent of the market value of the funds and shall be in compliance with Government Code Section 53601(g).

5. Commercial Paper 15% Maximum

The CRA may invest in Commercial Paper ranked "P1" by Moody's Investor Services or "A-1+" by Standard and Poor's and issued by a domestic corporation having assets in excess of \$500,000,000 and having an "AA" or better rating on its long term debentures, if any, as provided by Moody's or Standard and Poor's. Purchases of eligible commercial paper may not exceed fifteen (15%) of the market value of the CRA funds nor represent more than ten (10%) from any single issuing corporation. The term to maturity may not exceed seven days.

6. Local Agency Investment Fund \$65 Million Per Account

The CRA may invest in the Local Agency Investment Fund (LAIF) as established by the State Treasurer of California for the benefit of local agencies up to the maximum permitted by State law which is \$50 million per account.

7. Money Market Mutual Funds

20% Maximum

The CRA may invest in shares of beneficial interest issued by diversified management companies that are money market funds registered with the Securities and Exchange Commission under the federal Investment Company Act of 1940 (15 U.S.C. Sec. 80a-1 et seq.). To be eligible, all funds must be in accordance with the requirements of California Government Code Section 53601 and must comply with other self-imposed restrictions specific in this Investment Policy. However, no more than 10% of the surplus funds may be invested in shares of beneficial interest in any one mutual fund. The fund must have a minimum rating of AAA or AA1 by Moody's and AAA or AA+ by S&P. Money Market Mutual Funds will be made in accordance with California Government Code Section 53601(k) (l).

Bond Indenture

- IX. CRA funds shall be invested pursuant to the instructions provided by the bond indenture. Should the bond indenture conflict with this policy, then such investments shall be made in accordance with the bond indenture.

X. Unauthorized Investments

Investments not listed in this investment policy are unauthorized. Any State of California legislative action that further restricts allowable maturities, investment types or percentage allocations, will be incorporated into the CRA Investment Policy and supersedes any and all previous applicable language.

XI. Safekeeping and Custody

All security transactions, entered into by the CRA shall be conducted on a delivery-versus-payment (DVP) basis. A third party custodian designated by the CRA Treasurer shall hold all required securities. The third party custodian shall be required to issue a safekeeping receipt to the CRA listing the specific instrument, rate, maturity and other pertinent information.

XII. Authorized Financial Dealers and Institutions

CRA shall transact business with financial institutions authorized to provide investment services in the State of California. To further ensure that investments are purchased only through well established, financially sound institutions, A list will be maintained of approved security broker/dealers selected by credit worthiness, adequate capitalization, and an agreement to abide by the conditions set forth in the CRA's Investment Policy.

All financial institutions and broker/dealers who desire to become qualified bidders for investment transactions will be given a copy of the CRA Investment Policy, and in turn must supply the CRA Treasurer with the following:

- Current audited financial statements
- A copy of the latest FDIC Call Report or FHLBB Report, as appropriate
- Proof FINRA (Financial Industry Regulatory Authority) certification and good standing
- Proof of State or Federal registration or charter, as appropriate
- Completed broker/dealer questionnaire
- Certification of having read CRA's investment policy
- Depository contract
- Must be a member of the SIPC

An annual review of the financial condition and registrations of qualified bidders will be conducted by the Treasurer.

XIII. Internal Control

The CRA Treasurer shall establish appropriate procedures designed to provide proper control over investments and deposits. On an annual basis these controls will be reviewed in conjunction with the annual audit of the CRA. This review will assure compliance with policies and procedures.

XIV. Ethics and Conflicts of Interest

The CRA Treasurer and Deputy City Treasurer shall avoid any transaction that might impair public confidence in the CRA's ability to govern and manage the investment of public funds in an effective manner. The CRA Treasurer, Deputy City Treasurer or any other official charged with the responsibility of making investment decisions shall have no vested interest in any investment being made involving public funds of the CRA, and shall gain no financial benefit from such investment decisions. All participants in the CRA's investment process shall seek to act responsibly as custodians of the public trust and shall immediately disclose to the Carson Reclamation Authority legislative body any material financial interests in financial institutions that conduct business within their jurisdiction as well as any large personal financial/investment positions that could be related to the performance of the CRA.

XV. Performance Standards

The investment portfolio shall be designed with the objective of obtaining a rate of return throughout budgetary and economic cycles, commensurate with the investment risk constraints and the cash flow needs.

XVI. Reporting

The CRA Treasurer shall render monthly investment reports to the Carson Reclamation Authority legislative body. In addition, the Statement of Investment Policy will be provided annually at the beginning of each fiscal year.

The monthly investment reports shall include:

- The Face/Par, Cost and Market value of the investment
- The classification of the investment
- The name of the institution or entity
- The rate of interest
- The maturity date
- Percentage of the investment portfolio represented by each investment category.

XVII. Investment Policy Review

The investment policy shall be reviewed at least annually to ensure its consistency with the overall objectives of SAFETY, LIQUIDITY and YEILD and its relevance to current law, financial and economic trends and to meet the needs of the Carson Reclamation Authority. The CRA's investment policy shall be adopted by minute resolution by the Carson Reclamation Authority. This policy shall be reviewed annually by the Carson Reclamation Authority legislative body.



File #: 2016-662, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

APPROVAL OF WORK ORDER REQUESTS FROM TETRA TECH BY THE CARSON RECLAMATION AUTHORITY, REPLACING PREVIOUSLY APPROVED CHANGE ORDERS AND AUTHORIZING ADDITIONAL TASKS

I. SUMMARY

These work orders requested by Tetra Tech replace several Change Orders that have been approved by the Carson Reclamation Authority (“CRA” or “Authority”) since July, 2015, and establish the work program for the remediation and infrastructure on the 157-acre site through the end of the fiscal year. In January, 2016 the CRA approved a series of “Work Orders” which replaced existing Change Orders for contracting and billing purposes. Several previously approved change orders remain in place, and there were Work Order requests for new tasks as well. These items are recommended for approval.

II. RECOMMENDATION

APPROVE Work Order Request to approve Work Orders 29, 30, 31, 32, 33, 36, 37, 38, and 39, listed and described below, which have been reviewed and approved by the CRA’s project manager and the environmental consultant.

III. ALTERNATIVES

TAKE another action the Reclamation Authority deems appropriate.

IV. BACKGROUND

Pursuant to Sections 4.a. and 4.b. and Section 8 of a Settlement, Release and Indemnity Agreement (“Agreement”) by and between the City of Carson (“City”), the Carson Reclamation Authority (“Authority”), the Successor Agency to the Carson Redevelopment Agency (“Successor Agency”), and Carson Marketplace, LLC, a Delaware limited liability corporation (“CM”), “Assignment and Assumption of Obligations” and “Remediation Work”, the Authority assumed the obligation to continue the remediation of the 157-acre project

site under a Fixed Price Operations and Maintenance Environmental Assurance Agreement (“EAA”) dated December 31, 2007 with Tetra Tech, Inc.

The contract issued under the original EAA with Carson Marketplace is the baseline scope of work. Direct remediation construction costs under the original EAA are paid through a Trust Account held with Wells Fargo Bank. Work beyond the original scope is considered a “Change Order” and subject to the review and approval of the CRA Board. The CRA’s Change Order approval process commenced after it took title to the Property on May 18, 2015. Since October, 2015, Change Orders have been referred to as Work Orders, as they generally reflect new scopes of work.

The following Work Order Requests are recommended for approval:

Work Order #	Description	Requested Amount
29	Weed Abatement - Summer 2016.	\$63,306
30	Design for the Completion of the Perimeter Road	169,500
31	Site Security and Site Maintenance - 6 months beginning July 01, 2016	290,168
32	Continue to Evaluate Outlet Mall plan Evaluation and assistance with the Outlet plan	102,355
33	Watering of the Prescriptive Cover - 6 months beginning July 01, 2016 Watering prescriptive cover	84,329
36	Annual Storage Yard Maintenance - 6 months beginning July 01, 2016 Storage yard maintenance	25,496
37	LFGETS System OM&M for Cells A3 & A5 - 6 months beginning July 01, 2016 Landfill gas OM&M	411,140
38	Project Management - 6 months beginning July 01, 2016 Project Management	543,445
39	Continue CRA-AIG Negotiations Support of efforts with AIG	20,000
	TOTAL	\$1,709,739

Work Order requests 34 and 35 have not been submitted to the CRA yet. The descriptions of the Work Order requests are as follows:

Work Order 29. Due to the extension of the project schedule, a Work Order is required to reimburse Tetra Tech for conducting weed abatement at the site per City of Carson and County of LA Fire Department requirements. This task has been carried out every year since 2007. During summer months between April and August, the weeds dry up and become a fire hazard. The City of Carson and the LACFD require that the dry weeds are removed to mitigate potential fire hazard. The weed abatement will be done one time during beginning of summer between May 1 and June 30, 2016. The weed abatement will need to be done again between July 1 and Aug 15, 2016 to take care of the weeds that grow back and also take care of the areas that were not tall or dry enough earlier in the

year.

Work Order 30. More effort is needed to maintain the perimeter roads, slopes and the utilities along the perimeter of the site. The original scope of work and systems must be completed along the perimeter areas to keep the integrity of the slopes and the integrity of the utilities that are already completed. The original scope was to protect the slopes and landfill clay cap with landscaping and irrigation, but that never happened. The perimeter roads were designed so the water is drained off into the adjacent Torrance Lateral channel. However, this drainage system was not constructed, which results in ponding and unwanted runoff. This has allowed water to get into the utility systems, leading to expensive maintenance problems. TT and staff agreed to have TT revisit and redesign as needed these perimeter systems, and to propose a scope of work for completion of the perimeter systems as originally intended. Tetra Tech will start working on a design approach to complete the perimeter systems once this WO is approved.

Work Order 31. This is a Work Order to reimburse Tetra Tech for continuing all site security and maintenance, as well as general dust suppression through December 31, 2016. Tetra Tech's previous approved Work Order 21, which included this work through June 30, 2016 will soon be complete, and Tetra Tech needs additional funding to continue with the site maintenance, dust control and site security. It is understood that the project will be on hold until a new development plan is finalized and approved by the CRA and DTSC.

Work Order 32. CRA staff asked Tetra Tech to submit a work order for evaluating a new outlet mall conceptual site plan dated 9-15-15. Work Order 18 for the evaluation of this plan was approved and the evaluation is being performed under this approved WO. However, the preparation of the evaluation report that lists the likely construction impacts and associated cost estimates, and to review and provide input to the development of a schedule continues and is a larger scope than originally anticipated. The plan is still being analyzed and developed by the CRA and its potential partners. Hence, Tetra Tech submitted this new WO 32 to continue with the evaluation of the evolving conceptual mall development site plan, analyzing the latest proposed layout of the mall development plan, and reviewing and providing input to a development schedule. The evaluation has been preliminary in nature because none of the required site design parameters/details and grading have yet been provided to Tetra Tech. More plan detail is being developed by the CRA's potential developers, and Tetra Tech's evaluation will be updated as information is provided to Tetra Tech. If the CRA decides to proceed with the plan, further evaluation beyond the scope of this Work Order will be needed to reflect actual design parameters, including but not limited to, items such as building slab outline, finish grades, utilities, surface drainage, foundation design, and import fill requirements. Tetra Tech will not provide design services under this work order, but will evaluate the design parameters provided by CRA and its potential development partner for constructability and cost impacts.

Work Order 33. This Work Order is for continued watering of the clay cover cap installed on the perimeter slopes as required. The extension has further delayed the installation of the landscaping and irrigation system along the perimeter of the site. The clay cover installed on the perimeter slopes is vulnerable to desiccation which tends to damage the

prescriptive cover in these areas. This could result in the emission of landfill gas and the need to repair the cover. DTSC has required that the perimeter slopes be watered to keep the clay cover moist. Tetra Tech's previous WO-22 through June 30, 2016 will be completed and needs additional funding to continue with the watering of the slopes. Tetra Tech submitted this WO-33 for additional 6 months of watering the slopes starting July 1, 2016.

Work Order 36. This Work Order is to reimburse Tetra Tech for the continued maintenance of the materials storage yard and covers 6 months commencing July 31, 2016. Tetra Tech's previous WO-23 for 01-01-2016 through 06-30-16 will soon be completed. DTSC is requesting that all of the polyethylene landfill remediation materials in inventory at the Site's storage yard be properly protected during the extension of the project schedule. These materials include over \$3 million of LLDPE liner, geotextile, HDPE piping and fittings, which are susceptible to damage if exposed to UV rays of the sunlight and the elements for an extended period of time. These materials have been covered and protected since they were purchased, as far back as 2009. At the time they were purchased, it was anticipated that the materials would have been installed by 2011.

Work Order 37. This Work Order 37 (WO-37) is for the operations, maintenance and monitoring (OM&M) of the landfill gas extraction and treatment system (LFGETS) for Cells 3 and 5 for approximately 6 months from July 01, 2016 to December 31, 2016 and consistent with the directives of DTSC and permits issued by the South Coast Air Quality Management District (SCAQMD). After December 31, 2016, the OM&M of the LFGETS must continue, as per the requirements of the SCAQMD permits and the DTSC, and a new work order or contract with the CRA will be required to continue the OM&M.

Tetra Tech has an insurance policy with AIG that was originally intended to pay for the OM&M of the LFGETS. Tetra Tech and Carson Marketplace LLC collaborated in engaging with AIG in 2012 and 2013 to obtain a coverage determination letter with respect to the payment of the OM&M of the LFGETS, given Carson Marketplace's delay in the project schedule. AIG's letter of March 13, 2013 determined that they will not pay for the costs of the OM&M of the LFGETS prior to the commencement of the Fixed Price Operations and Maintenance Environmental Assurance Agreement ("O&M EAA"). The commencement of the O&M EAA coincides with the DTSC's approval of the Health Risk Assessment ("HRA") signifying that all remedial systems are fully installed and operational across the Site and that the Site is suitable for occupancy. The commencement of the O&M EAA was originally scheduled to occur on August 8, 2011. Due to Carson Marketplace's (previous Owner's) delay in the project schedule and the continued work by the CRA in creating a final development plan, the commencement of the O&M EAA might not occur for several years.

Tetra Tech's cost for developing that request and negotiating with AIG is handled under separate WOs, consistent with the Letter Agreement. This work order would allow the CRA to pay Tetra Tech's LFG OM&M costs under the terms of the Fixed Price Design and Construction Environmental Assurance Agreement (D&C EAA).

Work Order 38. This Work Order is for additional and continued project management time and related expenses for 6 months of Project Management (PM) costs beginning July 01, 2016. Tetra Tech's costs and reimbursement payments for this PM work through June 30,

2016 are covered under WO-25 and this work order will soon be complete. The scope for this PM work order request includes providing administration and management staff, site office, invoicing support and other support services outlined in the attached Scope of Work to keep in compliance with the regulatory requirements of the City of Carson, State of California, County of Los Angeles, State Water Resources Control Board, Southern California Air Quality Management District and the Department of Toxic Substances Control. The budget in this Work Order includes task management oversight efforts for the other approved work orders.

Work Order 39. This Work Order-39 (WO-39) provides additional funding to reimburse Tetra Tech for labor and other costs in cooperating with CRA in responding to and negotiating with AIG's requests for more information, as a result from requesting AIG coverage regarding the current LFG OM&M and other related costs. This WO request conforms with the Letter Agreement dated May 8, 2015 between the Carson Reclamation Authority, Carson Holdings LLC and Tetra Tech. Per the Letter Agreement, Tetra Tech was authorized to spend up to \$20,000 for cooperating with CRA in developing a request for AIG coverage, and in responding to associated follow up questions from AIG. This initial work was performed under a separate Change Order COR-214 and the budget and expenditure requirements (up to \$20,000) for Tetra Tech were completed. Tetra Tech requested additional funding and WO-26 was approved by the CRA. This budget is also expended and Tetra Tech requests additional funding to continue and complete the negotiations with AIG. Tetra Tech discussed this with the CRA and was directed by the CRA to submit request for additional funding of \$20,000. The approval of Work Order-39 will effectively increase the budget in the Letter Agreement to \$50,000, while still maintaining all the other terms and conditions of the Letter Agreement.

V. FISCAL IMPACT

These Work Orders are for the period from July 31, 2016 to December 31, 2016 and are budgeted in the 2016-2017 CRA budget.

VI. EXHIBITS

None.

Prepared by: John S. Raymond, CRA Executive Director



File #: 2016-663, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Discussion

SUBJECT:

CARSON RECLAMATION AUTHORITY MONTHLY INVESTMENT REPORT

I. SUMMARY

The responsibility of investing idle funds is that of the Reclamation Authority Treasurer. According to the Reclamation Authority Bond Indenture, idle funds can only be invested in specific securities as outlined, which include U.S. Government Treasury Notes, U.S. Government Agencies and Certificates of Deposit. Currently Reclamation Authority idle funds are distributed between these types of securities.

For review, the Carson Reclamation Authority Investment Portfolio detailing assets held in compliance with the Reclamation Authority Investment Policy and Bond Indenture.

II. RECOMMENDATION

Receive and File

III. ALTERNATIVES

None

IV. BACKGROUND

The Carson Reclamation Authority Investment report is provided to the legislative body to keep them abreast of the Reclamation Authority idle Funds. This report is provided monthly to enhance transparency and accountability of Reclamation Authority Bond Funds. Also during this session responses provided to address concerns raised by the former treasurer of Carson.

V. FISCAL IMPACT

None

VI. EXHIBITS

1. FORTHCOMING: Carson Reclamation Authority Investment Portfolio May 2016 and Responses to questions pg. 1-2 Carson Reclamation Authority Portfolio Chart pg. 3

Prepared by: Monica Cooper - Reclamation Authority Treasurer



File #: 2016-458, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Consent

SUBJECT:

CONSIDER APPROVAL OF A MEMORANDUM OF UNDERSTANDING BY AND BETWEEN THE CARSON RECLAMATION AUTHORITY AND WEST BASIN MUNICIPAL WATER DISTRICT FOR RECLAIMED WATER AT THE 157 ACRE AUTHORITY-OWNED SITE

I. SUMMARY

The Carson Reclamation Authority (Authority) is currently working on the environmental remediation of its property formerly known as the Cal-Compact Landfill (Site). As part of the remediation the Authority through its contractor, Tetra Tech, is responsible for irrigation and dust control. Currently, the site uses potable water for these purposes, but the Authority would like to use reclaimed water for its irrigation needs at the Site.

Because of the nature of the Site - as a landfill under remediation, and with 24-hour-a-day limitations on access (fencing), in order to set up the use of reclaimed water the Authority must enter into a Memorandum of Understanding (MOU) with West Basin Municipal Water District (Water District).

II. RECOMMENDATION

TAKE the following actions:

1. APPROVE the Memorandum of Understanding by and between the Carson Reclamation Authority and West Basin Municipal Water District.
2. AUTHORIZE the Chairman to execute the Memorandum of Understanding following approval as to form by Authority Counsel.

III. ALTERNATIVES

TAKE another action the Authority Board deems appropriate.

IV. BACKGROUND

Since the remediation of the Site commenced in 2008, potable water has been used for irrigation and dust control. Since the advent of the historic drought, the owner of the Site (now the Authority) has considered such a use problematic, given the volume of water used every day. As a construction site, particularly as a landfill, dust control is required to ensure fugitive dust does not leave the Site and affect neighboring uses. In addition, one of the requirements of the Remedial Action Plan (RAP) is keeping the prescriptive clay cover - the layer of clay and dirt that protects the landfill from the elements - moist, to guard against cracking and the intrusion of air into the landfill pile or the emission of methane from the pile. The use of reclaimed water at the site was not possible until the installation of a reclaimed water line up Main Street by the Water District, earlier this year.

In order to tap in to the use of the water, an MOU between the Water District and the Authority (Exhibit No. 1) is required to establish operational protocols for the use of recycled water at the Site. The MOU would describe the use of recycled water under current Site conditions as well as the future ownership of the recycled water pipeline. This MOU is a little out of the ordinary because of the Authority's contract with Tetra Tech, the remediation contractor, plus the fact that the site is fully secured, providing limited public access, making it potentially problematic for the District to enter the property to repair or service lines.

The pipeline has already been installed onto the Site but has not been activated. The area where the pipeline exists is not under active remediation, but is installed in what will eventually become a city street; however, the street will not be developed until the Site is completely remediated.

The temporary operational protocol for use of recycled water will be as follows:

- Recycled water is to be used only for construction/remediation purposes such as compaction, dust control, and maintaining hydro-seeded plants that act as dust control. These are the only approved uses of recycled water on the Site at this time.
- The Authority agrees to keep the Water District and Cal Water involved in all discussions regarding future use of recycled water on the Site and irrigation/recycled water needs associated with any usage other than those currently approved by the Los Angeles County Department of Public Health (LACDPH).
- When Site remediation and development is completed, ownership of the pipeline will be transferred to the Water District.
- In the event of any breakage or leaking of the water line, the Authority will contact the Water District and/or California Water Service (Cal Water) to respond to the issue.
- The Authority will determine the level of soil contamination present in the area where work needs to be done. Currently, the area where the pipeline exists is not under

active remediation and no soil contamination is expected. However, the Authority must confirm prior to any work being conducted.

- If any soil contamination or other environmental concern is identified, the Authority will assign a qualified response team to provide the needed repair or perform any other needed work, so that Cal Water or the Water District can conduct its repairs to the pipeline.
- Any costs associated with management of contaminated soils or environmental work will be the responsibility of the Authority.

Execution of the MOU, which will be in substantially the form of Exhibit No. 1 attached hereto, will memorialize the temporary operational protocol to allow for service of recycled water for the purposes approved by the LACDPH.

V. FISCAL IMPACT

None.

VI. EXHIBITS

1. Memorandum of Understanding. (pgs.4-185)

Prepared by: Amelia Soto, Project Manager

**Memorandum of Understanding
by and between
West Basin Municipal Water District and the Carson Reclamation Authority
for Operation and Maintenance, and Future Ownership
of Existing Recycled Water Pipelines**

This Memorandum of Understanding for Operation and Maintenance of Existing Recycled Water Pipelines ("**MOU**") is dated (*month, day*) 2016 ("**Effective Date**") and is by and between West Basin Municipal Water District ("**West Basin**") and the Carson Reclamation Authority, a joint powers authority comprised of Communities Facilities Districts Nos. 2012-1 and 2012-2, with the City of Carson and the Carson Housing Authority as additional members ("**CRA**" or "**Site Owner**"). West Basin and CRA shall be the signatories to this MOU and shall hereinafter collectively be referred to as the "**Parties.**"

The Parties are each local agencies or non-profit organizations.

It is in the best interests of the Parties to identify potential issues and design a temporary operational protocol for the operation and maintenance of existing recycled water pipelines and delivering recycled water as approved by Los Angeles County Department of Public Health ("**LACDPH**").

The Parties therefore agree as follows:

SECTION 1. PURPOSES AND GOALS

A recycled water pipeline exists in an alignment that enters a real property site owned by CRA, located at 20400 Main Street, in the City of Carson, County of Los Angeles, and State of California ("Property Site," as detailed in Exhibit "**A**"). Portions of the Property Site are currently undergoing environmental remediation by CRA. The Parties desire to identify potential issues and design a temporary operation protocol for the operation and maintenance of existing recycled water pipelines, until such time that the Property Site is fully remediated, the Property Site is dedicated as a public right of way, and the ownership of the existing recycled water pipeline is transferred to West Basin. Until such time, the MOU shall identify the responsibilities of, and tasks to be performed by, West Basin and CRA.

**SECTION 2. RESPONSIBILITIES OF AND TASKS TO BE PERFORMED BY WEST
BASIN AND CRA**

2.1 Responsibilities of and tasks to be performed by West Basin.

2.1.1 Maintenance of recycled pipeline upstream of property line of Property Site (Exhibit "**B**");

West Basin is and shall continue to be responsible for any existing pipeline "upstream" of the Property Site, as identified in Exhibit "**B**."

2.1.2 Visual site inspections:

Per the approval of recycled water use on the Property Site by West Basin and the LACDPH, West Basin shall conduct periodic inspections of construction/ dust control operations including truck and tank identification as required by LACDPH as well as annual visual inspections of the site and use of recycled water as required by the Title 22 permit held by West Basin for the Property Site.

2.2 Responsibilities of and tasks to be performed by CRA.

2.2.1 Routine operations and maintenance:

CRA shall provide West Basin reasonable access to the Property Site for routine operations requirements and visual site inspections.

2.2.2 Event of breakage or leakage:

- (a) CRA, as the Site Owner, will contact West Basin immediately to notify West Basin of any known breakage or leakage.
- (b) CRA shall provide West Basin with access to any and all portions of the Site Property for the purpose of assessing any breakage or leakage.
- (c) CRA shall obtain approval from West Basin regarding the type and extent of repairs required to return the recycled water pipeline back to West Basin Standards. West Basin Standards will be defined as West Basin Standard Specifications for Recycled Water Pipeline Construction, as identified in Exhibit "C", and American Water Works Association industry standards for recycled pipeline. Any unapproved piping modification or repair will result in interruption or disconnection of the recycled water service to the Property Site.
- (d) CRA shall be responsible for any and all repairs required to return the recycled water pipeline to West Basin Standards.

2.2.3 Costs associated with the repair of any breakage or leakage:

CRA, as Site Owner, shall be responsible for any and all costs associated with the recycled water pipeline, including repairing any breakage or

leakage, the management of contaminated soil or any environmental work required or recommended for the purposes of preparing the location for repair of any recycled water pipelines.

2.2.4 The use of recycled water by CRA.

- (a) CRA shall only use recycled water for construction and remediation purposes, including compaction, dust control, and maintaining hydro-seeded plants that act as dust control, as currently approved by LACDPH.
- (b) CRA shall notify and coordinate with West Basin on any and all negotiations, discussions and permitting processes regarding future use of recycled water on the Property Site, including new uses, such as irrigation and additional recycled water needs associated with usage other than those currently approved by LACDPH.
- (c) CRA acknowledges that the site plans for the Property Site, approved by LACDPH, were only valid for one year, and have expired as of 10/18/2013. CRA shall resubmit the site plans for new approvals as required. CRA acknowledges that any unapproved use will result in interruption or disconnection of the recycled water service to the Property Site.

SECTION 3. GENERAL PROVISIONS

3.1 Term: This MOU will become effective on approval of the Parties and will expire three (3) years from the date of the complete execution of this MOU.

3.2 Construction of Terms: This MOU is for the sole benefit of the Parties and does not grant rights to any non-party or impose obligations on a Party in favor of any non-party.

3.3 Good Faith: Each Party shall use reasonable efforts and work in good faith for the expeditious completion of the purposes and goals of this MOU and the satisfactory performance of its terms.

3.4 Governing Law: This MOU is made under and will be governed by the laws of the State of California.

3.5 Termination: This MOU may be terminated by mutual written agreement. Any Party may terminate its participation in this MOU upon 60 days' written notice to the remaining Parties.

3.6 Severability: The provisions of this MOU are severable, and the invalidity, illegality or unenforceability of any provision of this MOU will not affect the validity or enforceability of any other provisions. If any provision of this MOU is found to be invalid, illegal, or unenforceable, the Parties shall endeavor to modify that clause in a manner which gives effect to the intent of the Parties in entering into this MOU.

3.7 Amendments: This MOU may be amended or modified only by written mutual consent of the Parties.

3.8 Notice:

3.8.1 Any correspondence, communication or contact concerning this MOU must be directed to the Parties at the name and address listed herein.

3.8.2 Notice will be deemed as given upon personal delivery, receipt of e-mail, receipt of fax confirmation, or five days after deposit in U.S. Mail, first-class postage, prepaid, and addressed as set forth above.

The Parties are signing this Memorandum of Understanding as of the dates opposite their respective signatures.

Exhibit "A"

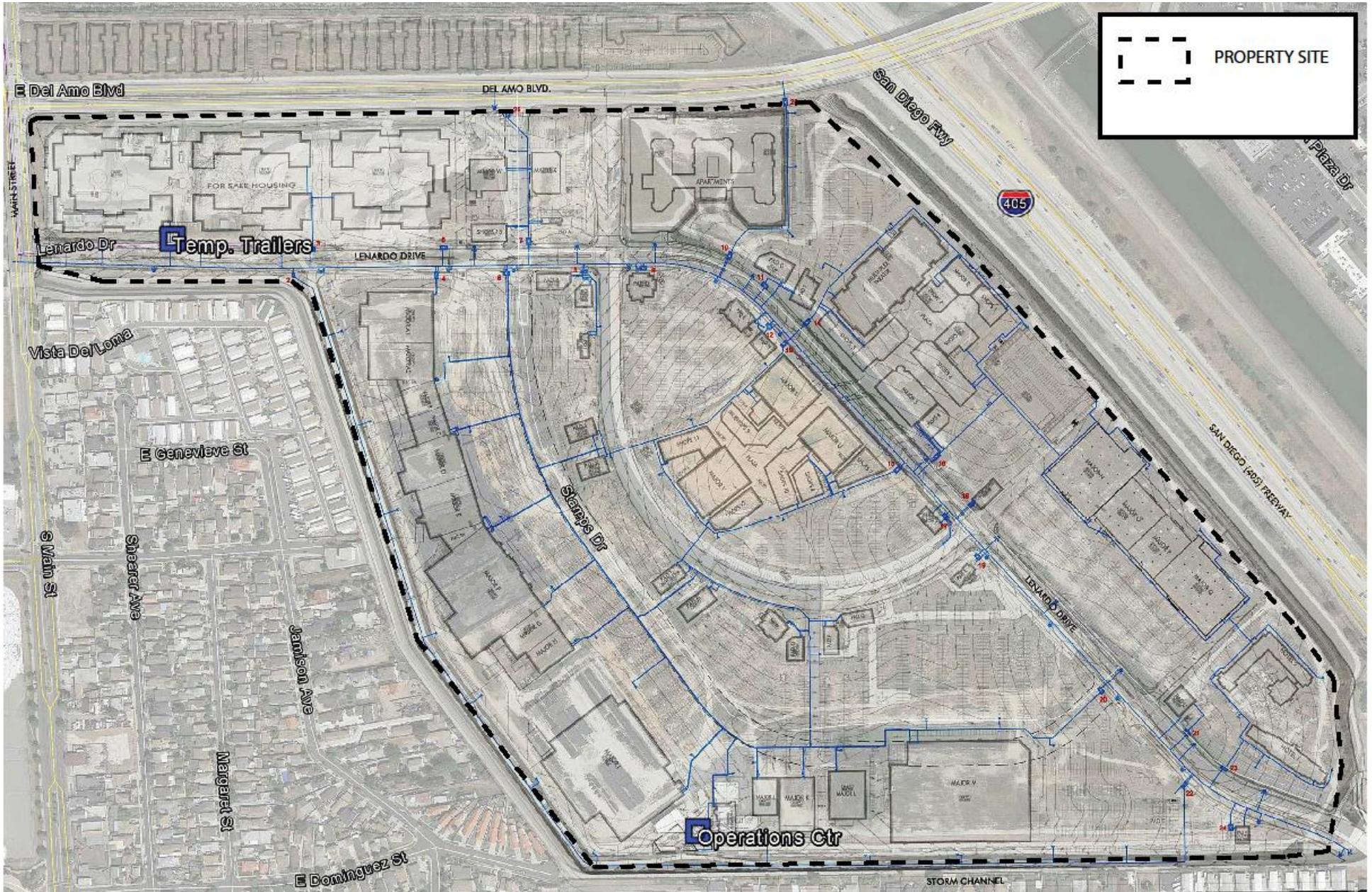


Exhibit "B"

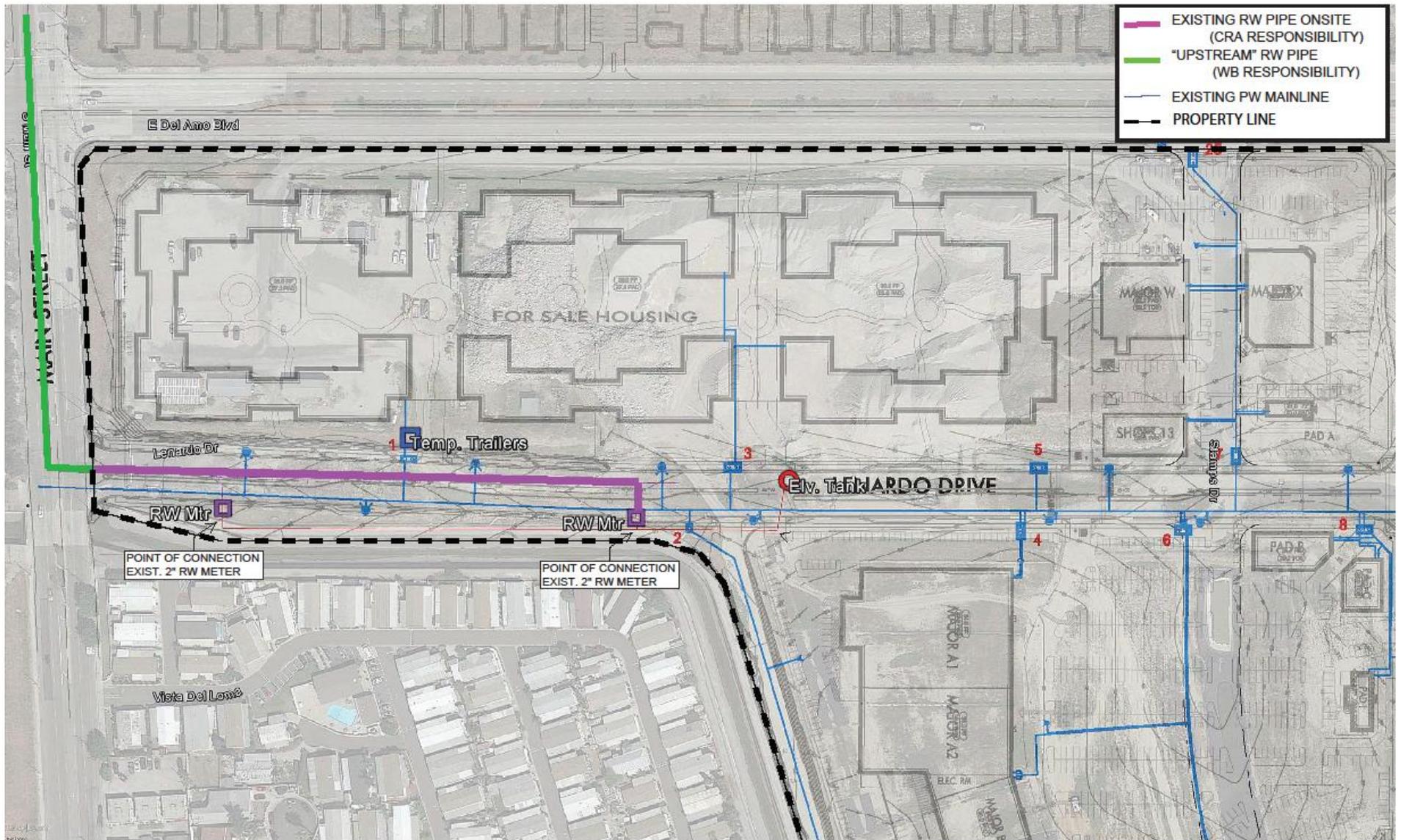
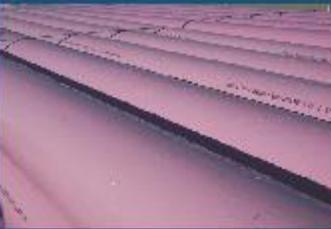


Exhibit “C”

West Basin Municipal Water District



Standard Specifications for Recycled Water Pipeline Construction



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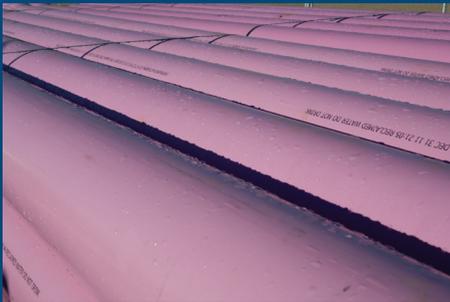


July 2010

West Basin Municipal Water District



Standard Specifications for Recycled Water Pipeline Construction



www.westbasin.org

July 2010



WEST BASIN MUNICIPAL WATER DISTRICT

STANDARD SPECIFICATIONS AND STANDARD DRAWINGS FOR RECYCLED WATER FACILITIES

TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION	i
DEFINITIONS	i
ABBREVIATIONS	vi
PART I DESIGN CRITERIA FOR RECYCLED WATER FACILITIES	I-1
Section A General Design Criteria	I-1
A-1 IMPROVEMENT PLANS	I-1
A-1.1 Drawings	I-1
A-1.2 Signatures	I-2
A-1.3 Submittals	I-3
A-2 SEPARATION BETWEEN WATERLINES AND SEWER LINES	I-3
A-2.1 Horizontal Separation	I-3
A-2.2 Vertical Separation	I-3
Section B Design Criteria for Off-Site Recycled Water Facilities	I-4
B-1 GENERAL RECYCLED WATER SYSTEM CRITERIA	I-4
B-1.1 Standard Requirements	I-4
B-1.2 Calculations Required	I-4
B-1.3 Design System Demands	I-4
B-1.4 Design System Pressures	I-4
B-1.5 Improvement Plans	I-5
B-2 RECYCLED WATER MAINS	I-6
B-2.1 Sizes of Mains	I-6
B-2.2 Types and Class of Pipe	I-6
B-2.3 Minimum Depth to Top of Recycled Water Main	I-7
B-2.4 Standard Location	I-7
B-3 VALVES	I-7
B-3.1 Types of Valves	I-7
B-3.2 Location of Valves	I-7
B-3.3 Blow-offs and Air and Vacuum Valves	I-8
B-4 SERVICES	I-8

TABLE OF CONTENTS

	<u>PAGE</u>	
B-5	PUMP STATIONS AND PRESSURE REDUCING STATIONS	I-8
B-6	RECYCLED WATER IDENTIFICATION	I-8
B-7	STRUCTURAL DESIGN FOR DUCTILE IRON PIPE	I-8
B-8	STRUCTURAL DESIGN FOR PRETENSIONED CONCRETE CYLINDER PIPE	I-10
B-9	STRUCTURAL DESIGN FOR STEEL PIPE	I-10
B-10	TRENCH EXCAVATION AND BACKFILL	I-14
B-11	THRUST RESTRAINT	I-15
B-12	ACCESS MANWAYS	I-15
B-13	PIPELINE LAYOUT	I-15
B-14	EASEMENTS AND RIGHTS-OF-WAY	I-16
B-15	CORROSION PROTECTION	I-17
B-16	GEOTECHNICAL INVESTIGATIONS	I-17
B-17	CONTAMINATED SOILS SURVEYS	I-20
B-18	ROADWAY AND MAJOR UTILITY UNDERCROSSINGS TO BE DESIGNED BY DESIGN/BUILD TEAM	I-20
B-19	POTHOLING EXISTING UTILITIES	I-21
B-20	HYDRAULIC ANALYSIS	I-22
B-21	PERMITTING	I-22
PART II	STANDARD SPECIFICATIONS	II-1
PREFACE		II-1
PART 2	CONSTRUCTION MATERIALS	2-1
SECTION 200 - ROCK MATERIALS		2-1
200-2	UNTREATED BASE MATERIALS	2-1
200-2.1	General	2-1
SECTION 201 - CONCRETE, MORTAR AND RELATED MATERIALS		2-1
201-1	PORTLAND CEMENT CONCRETE	2-1
201-1.1	Requirements	2-1
201-1.2	Materials	2-1
201-1.2.1	Portland Cement	2-1
201-1.4	Mixing	2-1
201-1.4.4	Hand Mixing	2-1
201-1.6	Prepackaged Unmixed Concrete	2-2

TABLE OF CONTENTS

	<u>PAGE</u>
201-5 CEMENT MORTAR	2-2
201-5.1 General	2-2
 SECTION 203 - BITUMINOUS MATERIALS	 2-2
203-6 ASPHALT CONCRETE	2-2
203-6.1 General	2-2
 SECTION 207 - PIPE	 2-2
207-9 CAST IRON AND DUCTILE IRON PIPE	2-3
207-9.1 General	2-2
207-9.2 Cast Iron and Ductile Iron Pipe for Water and Other Liquids	2-3
207-9.2.1 General	2-3
207-9.2.2 Pipe Joints	2-3
207-9.2.3 Fittings	2-3
207-9.2.4 Lining and Coating	2-3
207-9.2.5 Inspection and Certification	2-3
207-9.2.6 Polyethylene Encasement For External Corrosion Protection	2-3
207-10 STEEL PIPE	2-3
207-10.1 General	2-3
207-10.2.2 Design Criteria	2-3
207-10.2.7 Special Sections	2-3
207-10.2.8 Welding	2-4
207-20 POLYVINYL CHLORIDE PRESSURE PIPE (PVC)	2-4
207-20.1 General	2-4
207-20.2 Material Requirements	2-4
207-20.3 Joints	2-4
207-20.4 Conformance Requirements	2-4
207-20.5 Fittings	2-4
207-20.6 Service Saddles	2-5
207-20.7 Installation	2-5
207-20.8 Chlorinated Polyvinyl Chloride Pressure Pipe, Solvent-Welded	2-6
207-20.9 Recycled Water Pipe	2-6
207-21 PIPE APPURTENANCES	2-6
207-21.1 General	2-6
207-21.2 Main Line Valves	2-6
207-21.2.1 General	2-6
207-21.2.2 Resilient-Seat Gate Valves	2-6
207-21.2.3 Butterfly Valves	2-7
207-21.2.4 Check Valves	2-8
207-21.3 Main Line Pipe Fittings	2-9

TABLE OF CONTENTS

	<u>PAGE</u>
207-21.3.1 General	2-9
207-21.3.2 Flexible Couplings	2-9
207-21.3.3 Flanges	2-10
207-21.4 Bolts and Studs for Flanged Fittings	2-11
207-21.5 Copper Pipe and Fittings	2-11
207-21.6 Brass Pipe, Nipples, and Fittings	2-11
207-21.7 Bronze Appurtenances	2-11
207-21.8 Bronze Flanges	2-12
207-21.9 Insulating Bushings and Unions	2-12
207-21.10 Small Steel Pipe	2-12
207-21.11 Steel Pipe Casing	2-12
207-21.12 Precast Concrete Vaults	2-13
207-20.13 Precast Concrete Manholes	2-13
207-21.14 Thrust Blocks and Anchor Blocks	2-14
207-21.15 Coating and Polyethylene Encasement	2-14
207-21.16 Tracer Wire for Non-Metallic Pipelines	2-14
207-21.17 Recycled Water Identification	2-14
SECTION 210 - PAINT AND PROTECTIVE COATINGS	2-16
210-1 PAINT	2-16
210-1.5 Paint Systems	2-16
210-1.8 Paint and Protective Coating (Recycled Water)	2-17
SECTION 215 - CORROSION CONTROL	2-18
215-1 General	2-18
215-2 Materials	2-18
215-2.1 Magnesium Anodes	2-18
215-2.2 Wire and Cable	2-19
215-2.3 Insulating Flange Kits	2-21
215-2.4 Insulating Flange Coating (Buried Flanges Only)	2-21
215-2.5 At Grade Test Stations	2-22
215-2.6 Alumino-Thermic Weld Kit	2-23
215-2.7 Elastomeric Weld Caps	2-23
215-2.8 Weld Coating	2-23
215-2.9 Plastic Warning Tape	2-23
PART 3 CONSTRUCTION METHODS	3-1
SECTION 300 - EARTHWORK	3-1

TABLE OF CONTENTS

	<u>PAGE</u>	
300-1	CLEARING AND GRUBBING	3-1
300-1.3	Removal and Disposal of Materials	3-1
300-1.3.2	Requirements	3-1
300-4	UNCLASSIFIED FILL	3-1
300-4.7	Compacting	3-1
SECTION 301 - TREATED SOILS, SUBGRADE PREPARATION, AND PLACEMENT OF BASE MATERIALS		3-2
301-1	SUBGRADE PREPARATION	3-2
301-1.2	Preparation of Subgrade	3-2
SECTION 302 - ROADWAY SURFACING		3-2
302-5	ASPHALT CONCRETE PAVEMENT	3-2
302-5.1	General	3-2
302-5.3	Prime Coat	3-2
SECTION 306 - UNDERGROUND CONDUIT CONSTRUCTION		3-3
306-1	OPEN TRENCH OPERATIONS	3-3
306-1.1	Trench Excavation	3-3
3306-1.1.1	General	3-3
306-1.1.2	Maximum Length of Open Trench	3-3
306-1.1.3	Maximum and Minimum Width of Trench	3-3
306-1.1.5	Removal and Replacement of Surface Improvements	3-4
306-1.2	Installation of Pipe	3-4
306-1.2.1	Bedding	3-4
306-1.2.2	Pipe Laying	3-5
306-1.2.6	Field Jointing of Cast Iron Pipe	3-5
306-1.2.13	Installation of Plastic Pipe and Fittings	3-5
306-1.2.14	Flexible Coupling (All Pipe)	3-5
306-1.3	Backfill and Densification	3-6
306-1.3.1	General	3-6
306-1.3.2	Mechanically Compacted Backfill	3-7
306-1.3.3	Water Densified Backfill	3-7
306-1.3.4	Compaction Requirements	3-7
306-1.4	Testing Pipelines	3-8
306-1.4.1	General	3-8
306-1.4.5	Water Pressure Test	3-8
306-8	RECYCLED WATER PIPELINE INSTALLATION	3-10
306-8.1	General	3-10

TABLE OF CONTENTS

	<u>PAGE</u>	
306-8.2	Connection to Existing Recycled Water Lines	3-10
306-8.2.1	General	3-10
306-8.2.2	Topping Sleeves and Valves	3-11
306-8.3	Valve Installations	3-11
306-8.3.1	General	3-11
306-8.3.2	Valve Box Installations	3-12
306-8.4	Blow-off Assemblies	3-12
306-8.4.1	General	3-12
306-8.5	Combination Air Released and Vacuum Valve Assembly	3-13
306-8.5.1	General	3-13
306-8.6	Service Installations	3-13
306-8.7	Precast Vaults, Manholes and Meter Boxes Installations	3-14
306-8.8	Concrete for Thrust Blocks, Anchors and Pipe Cradles	3-15
306-8.8.1	General	3-15
306-8.9	Flushing and Disinfection	3-15
306-8.9.1	General	3-15
306-8.9.2	Flushing	3-16
306-8.9.3	Chlorination	3-16
306-8.10	Recycled Water Identification	3-18
SECTION 310 - PAINTING		3-19
310-1	GENERAL	3-19
310-1.5	Painting Schedule	3-19
310-6	PROTECTIVE COATINGS (FERROUS METALS)	3-20
310-6.1	General	3-20
310-6.2	Surface Preparation	3-20
310-6.3	Interior of Ferrous Surfaces	3-20
310-6.4	Buried Exterior of Ferrous Surfaces	3-20
310-6.4.1	Field Coat	3-20
310-6.4.2	Polyethylene Encasement	3-20
310-7	WATERPROOFING (CONCRETE)	3-20
310-7.1	General	3-21
310-7.2	Surface Preparation	3-21
310-7.3	Application	3-21
310-7.4	Backfilling	3-22
SECTION 313 - CATHODIC PROTECTION		3-23
313-1	General	3-23
313-2	Bare Anodes (Multiple Ingots)	3-23
313-2.1	Ingot Inspection	3-23
313-2.2	Connection Inspection	3-23
313-2.3	Assembly	3-23

TABLE OF CONTENTS

	<u>PAGE</u>	
313-2.4	Location	3-23
313-2.5	Handling	3-24
313-2.6	Anode Hole Size and Depth	3-24
313-2.7	Backfill Slurry Preparation	3-24
313-2.8	Anode Hole Backfill	3-24
313-3	Wire and Cable	3-24
313-3.1	Anode Lead Wire	3-24
313-3.2	Pipe Lead Wires	3-25
313-3.3	Bond Wires	3-25
313-3.4	Lead Wire Attachment	3-25
313-4	Wire Trenching and Backfilling	3-25
313-4.1	Trenching	3-25
313-4.2	Wire Backfilling	3-25
313-4.3	Plastic Warning Tape	3-25
313-4.4	Damaged Wire	3-25
313-5	Insulating Flange Kits	3-26
313-5.1	Flange Kits	3-26
313-5.2	Alignment	3-26
313-5.3	Bolt Tightening	3-26
313-6	External Insulating Flange Coating (Buried Flanges Only)	3-26
313-6.1	Primer	3-26
313-6.2	Wax-Tape	3-27
313-6.3	Outer Covering	3-27
313-7	At-Grade Test Station	3-27
313-7.1	Location	3-27
313-7.2	Native Soil	3-27
313-7.3	Concrete Pad	3-27
313-7.4	Brass Tags	3-27
313-8	Wire to Pipe Connections	3-27
313-8.1	Preparation of Wire and Cable	3-28
313-8.2	Preparation of Metal	3-28
313-8.3	Wire Position	3-28
313-8.4	Testing of All Completed Welds	3-28
313-8.5	Coating of All Completed Welds	3-28
SECTION 314 - TESTING AND INSPECTION		3-29
314-1	Responsibility for Testing	3-29
314-2	Test Leads and Bond Wire Welds	3-29
314-2.1	Test Method	3-29
314-2.2	Notification	3-29
314-2.3	Report	3-29
314-3	Test Lead Trenching and Backfill	3-29

TABLE OF CONTENTS

	<u>PAGE</u>	
314-3.1	Inspection Method	3-29
314-3.2	Notification	3-29
314-3.3	Report	3-29
314-4	Insulator Testing	3-30
314-4.1	Test Method	3-30
314-4.2	Acceptance	3-30
314-4.3	Notification for Inspection	3-30
314-4.4	Report	3-30
314-5	Continuity Testing	3-30
314-5.1	Resistance Technique	3-30
314-5.2	Alternate Techniques	3-31
314-5.3	Acceptance	3-31
314-5.4	Notification for Testing	3-31
314-5.5	Report	3-31
314-6	External Coating at Insulators	3-31
314-6.1	Test Method	3-31
314-6.2	Notification	3-32
314-6.3	Report	3-32
314-7	Corrosion Test Stations	3-32
314-7.1	Inspection Method	3-32
314-7.2	Notification	3-32
 SECTION 314 - TESTING AND INSPECTION (Cont'd.)		
314-7.3	Report	3-32
314-8	Anode Performance	3-32
314-8.1	Installation Inspection	3-32
314-8.2	Anode Test Method	3-32
314-8.3	System Performance Test Method	3-32
314-8.4	Notification	3-33
314-8.5	Report	3-33
314-9	Compliance with Specifications	3-33
314-9.1	Deficiencies	3-33
 SECTION 00700 STANDARD SPECIFICATIONS		 3-35
 STANDARD DRAWINGS		 APPENDIX

INTRODUCTION

In April 1989, the West Basin Municipal Water District, in conjunction with the Metropolitan Water District of Southern California, began to study the feasibility and implementation of a recycled water system.

It is the District' intent to provide recycled water service and to standardize wherever possible the design and construction of the facilities. Therefore, this manual has been prepared to formulate the general procedures and requirements to serve these purposes. These design criteria and standards are to be used in conjunction with the "Standard Specifications for Public Works Construction," (latest edition) to identify and provide the formal guidelines and requirements for obtaining recycled water service from the District and for the design and construction of the District' facilities.

DEFINITIONS

Whenever the following terms, or pronouns used in their place, occur in these Design Criteria and Standards, or in any documents that these Design Criteria and Standards govern, the intent and meaning shall be interpreted as follows:

Acceptance, Final Acceptance - The formal action by the Board accepting the work as being complete.

Agency – The West Basin Municipal Water District

Applicant - An owner, his developer, builder, engineer, or other authorized representative who applies as the owner's official agent to the District for recycled water service.

ASTM - The American Society for Testing and Materials. All references to the specifications of the ASTM are understood to refer to the current specifications as revised or amended at the date of construction.

Attorney - The District's General Counsel.

AWWA - The American Water Works Association. All references to the specifications of the AWWA are understood to refer to the current specifications as revised or amended at the date of construction.

Board - The Board of Directors of the West Basin Municipal Water District

Calendar Day - Any day including legal holidays, Saturdays and Sundays

Contaminated Soil - Soil which contains hazardous materials as defined in Title 22, Division 4, Chapter 30 of the California Code of Regulations, or materials

deemed unacceptable to use as 'clean fill' material by the California Department of Toxic Substance Control or California Regional Water Quality Control Board, Los Angeles Region.

Contractor - The person, firm, or corporation entering into contract with the owner or developer for the performance of work required under said contract and the District's ordinances, rules, regulations, and specifications.

Contract Time - Number of calendar days stated in the Contract for the completion of the Work.

Contract Completion Date - The date on which the District accepts the work as being complete.

Contract Documents - The complete contract includes all of the documents set forth herein, to wit:

- Bid Bond
- Payment Bond
- Performance Bond
- Executed Change Orders, if any
- Notice of Award
- Notice to Proceed
- Notice Inviting Sealed Proposals (Bid)
- Information for Bidders
- Proposal or Bid Form
- Workers' Compensation Insurance Agreement
- Certificates of Insurance
- Specifications
- Standard Drawings
- Addenda Issued Prior to Bid Opening

County - The County of Los Angeles, State of California

Design Consultant - The engineer or architect designated by the Owner to have design control over the Work or a specified portion of the Work, acting either directly or through duly authorized representatives. Such representatives shall act within the scope of the particular duties delegated to them.

Direct - Action of the District by which the Contractor is ordered to perform or refrain from performing work under the Contract.

District - The West Basin Municipal Water District, its authorized employees and agents.

Domestic Water (Potable Water) - That water which is pure and wholesome, does not endanger the lives or health of human beings, and conforms to the latest edition of the United States Public Health Service Drinking Water Standards, the California Safe Drinking Water Act, or other applicable standards.

Engineer - The Engineer of the West Basin Municipal Water District or their authorized agent.

Field Directive - Written documentation of the actions of the District in directing the Contractor. Also referred to as a Directive.

Field Order - A written instruction given to the Contractor authorizing work that is a change to the scope of work carried out on a time and material basis.

Float - Float or "total float" shall be defined as provided in the Associated General Contractors of America "CPM in Construction, A Manual for General Contractors".

Furnish - To deliver to the job site or other specified location any item, equipment, or material.

General Manager - An individual designated by the West Basin Municipal Water District as the chief executive officer and agent for the District.

Holidays - Legal holidays designated by the District or specifically identified in the Contract.

Inspector - A duly authorized representative of the District with the authority to require work to be accomplished in accordance with the contract plans and specifications.

Install - Placing, erecting, or constructing any item, equipment, or material.

Liquidated Damages - The amount prescribed in the Contract Documents, to be paid to the District or to be deducted from any payments due or to become due the Contractor for each day's delay in completing the whole or any specified portion of the Work beyond the time allowed in the specifications.

Off-site Facilities - Designates or relates to recycled water facilities up to and including the water meters. All off-site recycled water facilities will be owned, operated, and maintained by the District upon Acceptance by the District of the dedicated facilities.

On-site Facilities - Designates or relates to recycled water facilities downstream of the water meters. All on-site recycled water facilities will be owned, operated,

and maintained by the Owner, unless otherwise specified.

Owner or District - The West Basin Municipal Water District. The Owner is referred to throughout the contract documents as if singular in number and masculine in gender. The term "Owner" means the Owner or his authorized representative.

Owner's Representative - The person designated in writing by the Owner to act as its agent on specified matters relating to this Contract.

Plans - The plans, working drawings, detail drawings, profiles, typical cross sections, general cross sections, and supplemental drawings or reproductions thereof, approved by the Engineer, which show locations, character, dimensions or details of the work.

Provide - Furnish and install, complete in place.

Punch List - List of incomplete items of work and of items of work which are not in conformance with the Contract.

Recycled Water - A combination of treated wastewater and intercepted surface and subsurface stream flow, supplemented by other waters, including domestic (potable) water. The pipeline distribution system is similar to domestic water construction and operation.

Record Drawings - Drawings which show the facilities including all revisions to the original plans.

Service - The furnishing of recycled water to an Owner through a metered connection to the on-site facilities.

Sewer - A pipe or conduit used to convey liquid waste.

Standard Specifications - The "Standard Specifications for Public Works Construction" (Green Book), latest edition, which are the District's reference specifications to be used in conjunction with these "Design Criteria and Standard Specifications and Standard Drawings."

State - The State of California

Sub-subcontractor - A sub-subcontractor is a person or entity who has a direct or indirect contract with a subcontractor to perform any of the Work at the Site. The term sub-subcontractor means a sub-subcontractor or an authorized representative thereof.

Substantial Completion - Substantial Completion is the stage in the progress of

the Work when the Work is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

Supplemental Standard Specifications -- Includes modifications to Standard Specifications.

Supplier - Any person, firm, corporation, or organization who supplies materials or equipment for the Work, including that fabricated to a special design, and may also be a Subcontractor or a Sub-subcontractor.

Terms - The terms "acceptable," "accepted," "adequate," "approved," "directed," "necessary," "or equal," "proper," "required" and "specified" mean acceptable, accepted, adequate, approved, directed, necessary, or equal, proper, required or specified by or in the opinion of the District.

Time of Completion - Time allowed for completion of contract computed in calendar days.

Will - Actions entered into by the Contractor or the District as a covenant with the other party to do or to perform the action.

Work - The improvements proposed to be constructed or done pursuant to a legal agreement and consistent with these Design Criteria and Standards, including the furnishing of all labor and materials.

Working Day - Any day, other than a holiday, Saturday or Sunday, on which the Contractor may proceed with regular work on the current controlling operation as determined by the District toward the completion of the Contract. A working day is equivalent to 1.45 calendar days.

ABBREVIATIONS

List of General Abbreviations

A	Area
AASHTO	American Association of State Highway and Transportation Officials
AB	Anchor Bolt/Aggregate Base
ABAN	Abandoned
ABC	Asphalt Base Course
ABT	About
AC	Acre/Asphaltic Concrete
ACI	American Concrete Institute
ACP	Asbestos-Cement Pipe
ADDL	Additional
AHD	Ahead
AI	The Asphalt Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AL	Aluminum
ALIGN	Alignment
ALTN	Alternate
ANCH	Anchor
ANG	Angle
ANSI	American National Standards Institute
APPROX	Approximate
APWA	American Public Works Association
ARCH	Architecture/Architectural
AREA	American Railway Engineering Association
ARV	Air-Release Valve
ARVV	Air-Release/Vacuum Valve Abbreviation Term
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASPH	Asphalt
ASSY	Assembly
ASTM	American Society of Testing and Materials
AVE	Avenue
AVG	Average
AWG	American Wire Gauge
AWS	American Welding Society
AWWA	American Water Works Association
BC	Beginning of Curve
BCR	Begin Curb Return
BEG	Begin
BETW	Between

BF	Blind Flange
BK	Back
BL	Base Line
BLDG	Building
BLK	Block
BM	Bench Mark/Beam
BO	Blowoff
BOCA	Building Officials Code Administration International, Inc.
BOT	Bottom
BRG	Bearing
BUR CBL	Buried Cable
BV	Butterfly Valve
BVC	Begin Vertical Curve
BW	Block Wall

C	Conduit
CAB	Crushed Aggregate Base
CALTRANS	California Department of Transportation
CAP	Capacity
CATV	Cable Television
CB	Catch Basin
C-C	Center-to-Center
CCB	Concrete Block
CCP	Concrete Cylinder Pipe
CD	Cross Drain
CEM	Cement
CF	Cubic Feet/Curb Face
CFH	Cubic Feet Per Hour Abbreviation Term
CFM	Cubic Feet Per Minute
CFS	Cubic Feet Per Second
C & G	Curb and Gutter
CHG	Change
CHKD PL	Checkered Plate
CI	Cast Iron
CIP	Cast in Place/Cast-Iron Pipe
CISP	Cast Iron Soil Pipe
CISPI	Cast-Iron Soil Pipe Institute
CJ	Construction Joint
CL	Centerline/Class/Clearance
CLR	Clear
CMC	Cement-Mortar Coated or Coating
CML	Cement-Mortar Lined or Lining
CMLCSP	Cement-Mortar Lined and Coated Steel Pipe
CMP	Corrugated Metal Pipe
CMPA	Corrugated Metal Pipe Arch
CMU	Concrete Masonry Unit

CO	Cleanout/Conduit Only
COL	Column
COMPL	Complete
CONC	Concrete
CONN	Connection
CONST	Construct or Construction
CONT	Continuous
CONTR	Contractor
COORD	Coordinate/Coordinated
COP	Copper
COR	Corner
CPLG	Coupling
CRES	Corrosion Resistant Steel
CRSI	Concrete Reinforcing Steel Institute
CS	Carbon Steel/Commercial Standard
CSP	Corrugated Steel Pipe
CT	Center Top
CTG	Coating
CTR	Center
CTV	Cable Television
CULV	Culvert
CU YD,	CY Cubic Yard
CYL	Cylinder
D	Degree of Curvature
DB	Direct Buried
DBL	Double
DEPT	Department
DET	Detail/Detour
DI	Drop Inlet/Ductile Iron Abbreviation Term
DIA	Diameter
DIM	Dimension
DIMJ	Ductile-Iron Mechanical Joint
DIP	Ductile-Iron Pipe
DIPRA	Ductile-Iron Pipe Research Association
DISCH	Discharge
DIST	Distance
DMH	Drop Manhole
DN	Down
DR	Drain/Door
DWG	Drawing
DWY	Driveway
E	East
EA	Each
EC	End of Curve

ECC	Eccentric
ECR	End of Curb Return
ED	External Distance
EE	Each End
EF	Each Face
EFF	Efficiency
EFL	Effluent
EGL	Energy Grade Line
EL	Elevation
E/L	Easement Line
ELEC	Electric
ELEV	Elevation
ELP	Elliptical
ENC	Encasement
ENCL	Enclosure
EOP	Edge of Pavement
EOS	Equivalent Opening Size
EP	Edge of Pavement
EPA	Environmental Protection Agency (Federal)
EQ	Equation
EQL	Equal
ESMT	Easement
EST	Estimate or Estimated
ETC	And so Forth
EVC	End Vertical Curve
EW	Each Way
EXC	Excavate or Excavation
EXP	Expansion
EXST	Existing
EXT	Exterior/Extension Abbreviation Term
F	Fahrenheit/Floor
FAB	Fabricate
FCO	Floor Cleanout
FCV	Flow Control Valve
FD	Floor Drain
FE	Flanged End
FF	Finished Floor/Flat Face
FG	Finished Grade
FHY	Fire Hydrant
F&I	Furnish and Install
FIG	Figure
FIN	Final
FIT	Fitting
FL	Floor/Flow Line
FLG	Flange

FM	Force Main/Factory Mutual
FNSH	Finish
FPC	Flexible Pipe Coupling
FPM	Feet Per Minute
FPS	Feet Per Second
FPT	Female Pipe Thread
FS	Finished Surface/Federal Specifications
FT	Feet or Foot
FTG	Footing
FUT	Future
FWY	Freeway
G	Gas
GA	Gauge
GAL	Gallon
GALV	Galvanized
GB	Grade Break
GDR	Guard Rail
GE	Grooved End
GENL	General
GM	Gas Main
GND	Ground
GPD	Gallons Per Day
GPM	Gallons Per Minute
GR	Grade
GRTG	Grating
GSKT	Gasket
GUT	Gutter
GV	Gate Valve Abbreviation Term
HARN	Harness
HB	Hose Bibb
HD	Heavy Duty
HDPE	High Density Polyethylene
HGL	Hydraulic Grade Line
HGT	Height
HORIZ	Horizontal
HP	High Pressure
HPT	High Point
HR	Hour/Handrail
HS	High Strength
HV	Hose Valve
HVY	Heavy
HW	Headwall
HWL	High Water Level
HWY	Highway

HYDR	Hydraulic
I	Intersection Angle Officials
ID	Inside Diameter
IE	Invert Elevation
IN	Inches
INCL	Include
INL	Inlet
INS	Insulating
INSTL	Install or Installation
INTR	Interior/Intersection
INV	Invert
IP	Iron Pipe
IPS	Iron Pipe Size
IPT	Iron Pipe Thread
IRR	Irrigation
JCT	Junction
IN	Join
JT	Joint
KIPS	Thousands of Pounds Abbreviation Term
L	Length of Curve/Long/Left
LATL	Lateral
LB	Pound
LF	Linear Foot
LG	Long
LOC	Location/Locate
LP	Light Pole
LPT	Low Point
LR	Long Radius
LS	Lift Station
LT	Left/Light
LWL	Low Water Level
MATL	Material
MAX	Maximum
MB	Machine Bolt
MECH	Mechanical
MFR	Manufacturer
MG	Million Gallons/Milligram
MGD	Million Gallons Per Day
MH	Manhole
MI	Malleable Iron/Mile
MIL	Military Specifications

MIN	Minimum
MISC	Miscellaneous
MJ	Mechanical Joint
MOD	Modification
MON	Monument
MPT	Male Pipe Thread
MSL	Mean Sea Level
MSS	Manufacturer's Standardization Society
N	North
NA	Not Applicable
NBFU	National Board of Fire Underwriters
N & C	Nail and Cap
NC	Normally Closed
NE	Northeast
NIC	Not in Contract
NIP	Nipple
NO	Number/Normally Open
NOM	Nominal Abbreviation Term
NPT	National Pipe Taper
NRS	Nonrising Stern
NTS	Not to Scale
NW	Northwest
NWL	Normal Water Level
OA	Overall
OC	On Center
OD	Outside Diameter
OE	Or Equal
OF	Outside Face
OPNG	Opening
OPP	Opposite
ORIG	Original
OSHA	Occupational Safety and Health Administration
OVFL	Overflow
P	Pole
PC	Point of Curvature
PCA	Portland Cement Association
PCC	Point of Compound Curvature/Portland Cement Concrete
PE	Plain End/Polyethylene/Professional Engineer
PI	Point of Intersection
PKWY	Parkway
PL	Plate/Property Line
PLF	Pounds Per Lineal Foot
POB	Point of Beginning

POC	Point of Connection
POJ	Push-On Joint
PP	Power Pole/Polypropylene
PRC	Point of Reverse Curve
PRESS	Pressure
PRL	Parallel
PROV	Provisions
PRPSD	Proposed
PRVC	Point of Reverse Vertical Curve
PSI	Pounds Per Square Inch
PSIG	Pounds Per Square Inch Gauge
PSF	Pounds Per Square Foot
PT	Point of Tangency
PV	Plug Valve
PVC	Polyvinyl Chloride Abbreviation Term
PVMT	Pavement
Q	Flow Rate
QTY	Quantity
R	Right/Radius
RC	Reinforced Concrete
RCP	Reinforced Concrete Pipe
RCPA	Reinforced Concrete Pipe Arch
RD	Road
ROC	Reduce
RDCR	Reducer
REF	Reference
REINF	Reinforce or Reinforced
RELOC	Relocated
REQ	Required/Requirement
REQD	Required
RF	Raised Face
RND	Round
RJ	Restrained Joint
RPM	Revolutions Per Minute
RR	Railroad
RST	Reinforcing Steel
RT	Right
RW	Recycled Water
R/W	Right-of-Way
S	South/Slope in Feet Per Foot/Sewer
SAN	Sanitary
SCHED	Schedule
SO	Storm Drain

SDG	Siding
SDWK	Sidewalk
SE	Southeast
SECT	Section
SF	Square Feet
SGL	Single
SH	Sheet/Sheeting
SIM	Similar
SLP	Slope
SLV	Sleeve
SOL	Solenoid
SOV	Solenoid-Operated Valve Abbreviation Term
SP	Steel Pipe
SPCG	Spacing
SPEC	Specification
SPLC	Splice
SPRT	Support
SQ	Square
SQ FT	Square Feet
SR	Short Radius
SS	Sanitary Sewer
SSPC	Steel Structures Painting Council
SST	Stainless Steel
ST	Street
STA	Station
STD	Standard
STK	Stake
STL	Steel
STR	Straight
STRL	Structural
STRUCT	Structure
SURF	Surface
SW	Southwest
SYMM	Symmetrical
SYS	System
T	Tangent Length of Curve/Telephone
TAN	Tangent
TB	Top of Bank
T & B	Top and Bottom
TBG	Tubing
TBM	Temporary Bench Mark
TC	Top of Curb
TDH	Total Dynamic Head
TEL	Telephone
TEMP	Temperature/Temporary

THB	Thrust Block
THD	Thread or Threaded
THH	Thrust Harness
THK	Thick
T/O	Top of
TOC	Top of Concrete
TOS	Top of Slab
TOT	Total
TP	Telephone Pole
TV	Television
TYP	Typical Abbreviation Term
UBC	Uniform Building Code
UD	Underdrain
UG	Underground
UL	Underwriters' Laboratories, Inc.
UNO	Unless Noted Otherwise
UTC	Underground Telephone Cable
V	Vent/Valve/Volt
VC	Vertical Curve
VCP	Vitrified Clay Pipe
VEL	Velocity
VERT	Vertical
VOL	Volume
VPC	Vertical Point of Curve
VPI	Vertical Point of Intersection
VPT	Vertical Point of Tangency
W	West/Wide/Water
W/	With
WL	Waterline
WLD	Welded
WM	Water Meter
W/O	Without
WSE	Water Surface Elevation
WT	Weight
WTR	Water
WWF	Welded Wire Fabric
WWM	Woven Wire Mesh
YD	Yard
YR	Year
YS	Yield Strength

PART I
DESIGN CRITERIA
FOR
RECYCLED WATER FACILITIES

SECTION A

GENERAL DESIGN CRITERIA

A-1 IMPROVEMENT PLANS

Improvement plans shall be prepared and submitted to the Engineer for approval and signature for all recycled water facilities to be constructed by the District or by the Applicant and dedicated to the District for operation and maintenance. All improvements shall be designed and constructed in accordance with these Design Criteria and Standards. For tract developments, the recycled water facilities may be shown on the improvement plans, which are to be approved by the City or County.

The general requirements for the preparation of the improvement plans are outlined below.

A-1.1 Drawings

- a. Drawings shall be on standard (22" x 34") sheets with sheet number, title, revisions, and signature blocks.
- b. Improvement plans shall be prepared in ink on mylar with electronic format available in Auto CAD (latest version).
- c. Title sheets shall have an index or key map clearly indicating the sheet numbers issued.
- d. The following shall be clearly shown on the drawings, preferably on the Title Sheet:
 - (1) Project bench mark(s) and basis of bearings; and
 - (2) Detailed quantity estimates and standard notes, categorized by domestic water, sewer and recycled water facilities (see Subsection B-1.5).

- e. Improvement plans for tracts or other developments shall have a separate small scale map showing the overall layout of recycled water facilities if improvement plans contain three or more separate sheets of drawings.
- f. The following scales shall be used on all drawings, unless otherwise approved or specified by the Engineer:
 - (1) Plan and Profile sheets:
 - Horizontal: 1" = 40 feet
 - Vertical: 1" = 4 feet (1" = 8 feet or as appropriate for steep grades)
 - (2) Details: As appropriate to clearly indicate the required details.
- g. Profiles shall be shown on the top of the sheets.
- h. All facilities to be operated and maintained by the District shall be located within public rights-of-way or recorded easements, which shall be clearly shown on the improvement plans.
- i. The drawings shall show on plan and profile the position of all other known or proposed underground facilities.
- j. Record drawings shall be prepared upon completing the construction of the improvements. The record drawings shall be submitted to the District within 30 days of completion of construction of recycled water facilities.

A-1.2 Signatures

- a. Unless otherwise specified or approved by the Engineer, each sheet of plans submitted for the Engineer's approval shall be signed by the civil engineer responsible for that design, except that a sheet of complex grading, structural, mechanical, or electrical plans shall be signed by the professional engineer responsible for that design.
- b. Civil and other professional engineers signing plans to be submitted for the Engineer's approval shall be registered with the State of California. The Engineers signing the plans shall also affix their seal to the drawings near their signature.
- c. Plan revisions subsequent to the Engineer's approval shall be legibly identified and resigned per the requirements of Subsection A-1.2 "a" and "b" above, prior to resubmittal for the Engineer's approval.

A-1.3 Submittals

- a. Recycled water calculations complete in accordance with the requirements of Section B, shall accompany plans submitted for checking, unless this requirement is specifically waived by the Engineer.
- b. Plans submitted for approval shall be accompanied by a letter of transmittal addressed to the Engineer.
- c. Plans shall be checked for consistency, accuracy, drafting, and conformance with the District's Standards and these Design Criteria prior to submission for the Engineer's approval. If plans have obviously not been checked by the submitting Engineer, they will be returned unapproved by the Engineer.
- d. Check prints shall accompany revised plans, which are resubmitted for approval. Resubmitted plans shall be accompanied by a letter of transmittal addressed to the Engineer.
- e. Geotechnical and corrosion investigation reports, unless specifically waived by the engineer.

A-2 SEPARATION BETWEEN WATERLINES AND SEWER LINES

A-2.1 Horizontal Separation

State and County Health Department regulations require a 10-foot-minimum separation between domestic water, sewer, and recycled water mains. However, in special situations where there is no alternative but to install the mains with less than the required separation, special construction will be required as shown on the District's Standard Drawing No. RW-18.

A-2.2 Vertical Separation

Normally, domestic water, sewer, and recycled water mains shall be located vertically from the street surface in order of the higher quality, i.e., domestic water shall be above recycled water and recycled water shall be above sewer.

Whenever a crossing must occur where a recycled water main or sewer main passes within 1 foot vertically of a domestic water main, or where a sewer main passes within 1 foot vertically of a recycled water main, special construction will be required as shown on the District's Standard Drawing No. RW-18.

If a sewer or recycled water main is above a domestic water main, or if a sewer main is above a recycled water main, the special construction shall extend a sufficient distance on both sides of the crossing to provide a minimum of 10 feet of horizontal clearance. If a sewer or a recycled water main is located below a domestic water main, or if a sewer is located below a recycled water main and there is less than the required 1-foot vertical clearance between the mains, the special construction shall extend a sufficient distance on both sides of the crossing to provide 4 feet of horizontal clearance. The special construction criteria shown on the District's Standard Drawing No. RW-18 shall apply to

those house laterals that cross above a pressure water or recycled water main, however, not to those house laterals that cross below a pressure water or recycled water main.

SECTION B

DESIGN CRITERIA FOR OFF-SITE RECYCLED WATER FACILITIES

B-1 GENERAL RECYCLED WATER SYSTEM CRITERIA

B-1.1 Standard Requirements

The design and construction of all recycled water system facilities to be operated and maintained by the District shall be in accordance with these Design Criteria and Standards, the District's "Regulations for Recycled Water Facilities," as well as the guidelines and requirements of the State and County health departments and the State Water Quality Control Board.

No fire hydrants or service connections other than recycled water services shall be connected to the recycled water system.

B-1.2 Calculations Required

Substantiating engineering calculations for demands, pressures, and structural designs shall accompany plan submittals to the Engineer.

B-1.3 Design System Demands

In general, the design of the recycled water system facilities shall be based on the water demands, pressures, and system elements as outlined in these Design Criteria and Standards. Unless otherwise approved by the Engineer, the off-site recycled water system facilities shall be designed to deliver peak flows of 20 gpm per acre for flat landscape areas, and 15 gpm per acre for slope areas, to be irrigated by the on-site recycled irrigation systems, which they will supply. All demand estimations shall be submitted to the Engineer for approval.

B-1.4 Design System Pressures

The off-site recycled water system facilities shall be designed to operate at a minimum pressure of 55 psi at the meter. Unless otherwise approved by the Engineer, proposal insecure requirements shall be submitted to the Engineer for approval

B-1.5 Improvement Plans

Improvement plans for off-site recycled water system facilities shall be prepared in accordance with the requirements of Subsection E-1 and shall include the following:

- a. Profiles of recycled water mains 6 inches in diameter and larger.
- b. Detailed quantity estimates indicating linear footage of pipe by size, class, and type; number of valves by size, class, and type; number of water services by size; number of blow-offs and air and vacuum valve assemblies; linear footage of concrete encasements (if applicable); and any other appurtenances that should be identified for quantity purposes.
- c. Standard recycled water system notes, including but not limited to, the following:
 - (1) The recycled water system, as shown on these plans, shall be constructed by the Owner/Developer in accordance with the West Basin Municipal Water District Standards for recycled water construction. The Contractor shall have a copy of these standards, as well as a copy of the project plans and specifications, on the job at all times.
 - (2) The applicant shall furnish the District with recorded easements for all portions of the recycled water system outside the public right-of-way.
 - (3) The District shall be furnished with four copies of approved construction plans prior to the start of construction.
 - (4) The District Inspector shall be notified at least 3 working days prior to the start of construction and any subsequent required inspection.
 - (5) A preconstruction conference with representatives from all affected agencies and the Contractor shall be held on the job-site at least 48 hours prior to the start of construction.
 - (6) The Contractor shall obtain all City and/or County permits prior to the start of construction.
 - (7) Recycled water mains shall be staked for line and grade or shall be installed subsequent to the installation of the curbs but prior to paving of the streets. The minimum cover over recycled water mains shall be 42 inches below pavement finished grade or otherwise, it shall be encased in concrete. At no time shall there be less than 42 inches of cover from top of pipe to existing ground during construction, unless approved by the District.
 - (8) No valve shall be located within a gutter or other concrete drainage device.
 - (9) All flanged connections shall be coated with two coats of ten mils each of "3M" EC-244, or approved equal after installation, including nuts, bolts, and flanges.

- (10) No facility is to be backfilled until inspected by the District.
- (11) Shut down of existing recycled waterlines to facilitate connection to existing facilities shall be coordinated with the District Inspector. No connections shall be made to the District's existing recycled water system until the new facilities have been successfully tested and disinfected. All connections to the District's recycled water system shall be made in the presence of the District Inspector.
- (12) All recycled water services shall be installed per the District's Standard Drawings.
- (13) The recycled water system shall be chlorinated, disinfected, and pressure tested in accordance with the District's Standards.
- (14) All recycled water piping, including service lines, attached appurtenances, and connections shall be installed with recycled water identification tape and/or tags in accordance with the District's "Design Criteria, Standard Specifications, and Standard Drawings."
- (15) All recycled water facilities included in this work shall be installed in accordance with the District's "Regulations for Recycled Water Facilities."

B-2 RECYCLED WATER MAINS

B-2.1 Sizes of Mains

The normal minimum size transmission main shall be 8 inches in diameter. The normal minimum size distribution main shall be 6 inches in diameter. No 10-inch or 14-inch diameter mains will be allowed without specific approval of the Engineer. For distribution mains, the maximum allowable design velocity shall be 7 feet per second.

All water mains 6 inches in diameter and larger shall have a profile shown on the improvement plans.

B-2.2 Types and Class of Pipe

Unless otherwise specified or approved by the Engineer, all recycled water mains shall be PVC pipe meeting AWWA C900 or C905 standards, ductile iron pipe, Class 50 minimum, or mortar lined and coated steel pipe, Class 150 minimum, ductile iron pipe shall be encased in a loose polyethylene encasement in accordance with AWWA C105 standards, unless otherwise approved by the Engineering. Cathodic protection and/or test stations shall be provided on ductile iron and steel pipe, as required. Proposed material shall be submitted to the Engineer for approval.

B-2.3 Minimum Depth to Top of Recycled Water Main

The top of recycled water mains shall be a minimum of 42 inches below street pavement or finished grade, or otherwise, the main shall be encased in concrete, unless otherwise approved by the Engineering. At no time shall there be less than 42 inches of cover from top of pipe to existing ground during construction.

B-2.4 Standard Location

Recycled water mains shall normally be located between domestic water mains and sewer mains as shown on the District's Standard Drawings, and shall conform to the separation requirements of Subsection A-2.

B-3 VALVES

B-3.1 Type of Valves

All main line recycled water valves shall be butterfly valves or resilient seat gate valves, unless otherwise specified or approved by the Engineer. Other valves shall be as specified in the District's Standard Specifications and Standard Drawings.

B-3.2 Location of Valves

There shall be at least two control valves at the three-way intersection of any recycled water mains; at least three control valves at the four-way intersection of any recycled water mains; and four control valves at any four-way intersection of major distribution mains. The control valves at all intersections, as described herein, shall be flanged to the main line tee or cross, unless otherwise approved by the Engineer. Unless specifically approved by the Engineer, the maximum allowable spacing for intermediate valves on transmission mains is 2,000 feet. All intermediate main line valves should be located on the prolongation of a property line wherever possible.

Where recycled water mains are located within an easement outside of paved streets, a valve shall be located at each end of the easement within the street section.

In no event shall any valve be installed within a gutter or other concrete drainage device.

Valve stem tops having over 48 inches of cover shall be provided with an approved extension.

The final determination of the locations of all valves shall be subject to the approval of the Engineer.

B-3.3 Blow-offs and Air and Vacuum Valves

Blow-offs shall be installed at the end of all mains where either the flow velocity or the slope of the main could cause sediment to settle at the end of the main. A blow off valve shall be installed as near a catch basin as possible to flush the line. Blow-offs shall normally be installed at all low points in recycled water transmission mains and at any other location specified by the Engineer to assure the capability of complete flushing of a main. Combination Air and Vacuum Valves shall be installed at all high points in mains larger than 6 inches in diameter.

B-4 SERVICES

Recycled water services shall be installed in accordance with the District's Standard Specifications and Standard Drawings, and the following requirements:

- a. All service lines (2 inches and less) shall be copper, unless otherwise approved by the Engineer.
- b. The minimum service line size to the meter shall be 1 inch in diameter.
- c. Special designs are required to be submitted for approval of the Engineer for services to which the District's Standards are not applicable.
- d. No water services shall be located within a driveway area or at any other location which is not easily accessible to the District at all times.

B-5 PUMP STATIONS AND PRESSURE REDUCING STATIONS

All pump stations and pressure reducing stations shall be special designs, subject to the approval of the Engineer.

B-6 RECYCLED WATER IDENTIFICATION

All piping in the recycled water system, including service lines, attached appurtenances, and connections shall either be colored purple, Pantone 512, and embossed or be integrally stamped/marked "CAUTION: RECLAIMED/RECYCLED WATER, DO NOT DRINK" or be installed with a purple identification tape, or a purple polyethylene vinyl wrap, color to be Pantone 512 as indicated in the District's Standard Drawings.

The District also requires warning tags to be installed on all appurtenances in vaults, such as, but not limited to, air release valves, blowoffs, and meters.

B-7 STRUCTURAL DESIGN FOR DUCTILE IRON PIPE

Design of ductile iron pipe (DIP) shall follow the latest edition of *American Standard ANSI/AWWA C150/A21.90 titled, "Thickness Design of Ductile Iron Pipe"*, except as follows:

B-7.1 General AWWA C150 Procedure

a. Internal Pressure

The internal pressures, static and operation, transient (surge), and field test pressures shall be provided by the District.

b. Other Pressure

Other design criteria shall be as follows:

- (1) Maximum size of DIP shall be 54 inches in diameter.
- (2) Minimum class of DIP shall be Class 200 consistent with the District's existing installed pipe.
- (3) Maximum ring deflection of 3 degrees and ring bending stress is limited to 48,000 psi.
- (4) Earth load is based on the prism load concept for all pipe 24 inches and greater in diameter for the condition of the five trench types shown in the Standard Details.
- (5) Live loads are based on a single AASHTO H-20 truck with 16,000-pound wheel load and an impact factor of 1.5 at all depths and railroad loading.

B-7.2 Non-Restrained Joint Types

- a. Push-on joints are the standard bell and spigot or mechanical joints with the confined rubber gasket as described in the latest revision of ANSI/AWWA C111/A21.11.
- b. Flexible couplings can combine two plain end pipes for either ductile iron or steel pipe. This type of coupling is generally used for 24-inch-diameter pipe and smaller. Refer to AWWA M11 for sleeve type couplings.
- c. Mechanical joints shall conform to ANSI/AWWA C111/A21.11. All follower glands shall be ductile iron only.

B-7.3 Restrained Joint Types

- a. All flanges shall be ductile iron and shall conform to the latest revision of ANSI/AWWA C115/A21.15 and shall be minimum Class 150 flanges.
- b. Grooved couplings shall be manufactured according to ANSI/AWWA c606 and shall be a minimum wall thickness of Class 53 (old specification for Class 50 to 56).

- c. Flexible couplings shall have thrust harnesses welded on the DIP at the factory.
- d. Push-on joints meeting ANSI/AWWA C110 and ANSI/AWWA C111 shall be restrained by the use of a retainer ring or other type not employing set screws, multiple-acting wedges or field-welded retainers. The type of restrained push-on joint to be used shall be included with the bid proposal. Mega-lugs for small diameter pipes, less than 12 inches in diameter, and TR-Flex for large diameters are acceptable types.

B-7.4 Fittings

Fittings shall conform to the following ANSI/AWWA standards:

- a. CI10/A21.10-93- Ductile-iron and Gray-Iron Fittings, 3 Inches through 48 Inches (75 mm through 1200 mm), for Water and Other Liquids.
- b. C153/A21.53-94 - Ductile-Iron Compact Fittings, 3 Inches through 24 Inches (76 mm through 610 mm) and 24 Inches through 64 Inches (1400 mm through 1600 ram), for Water Service.
- c. ASME/ANSI B16.1 - Cast Iron Pipe Flanges and Flanged Pipe. (All non-standard fittings not covered by C110 and C153 should be gray-iron according to B16.1.)

B-7.5 Bonding

All joints shall be bonded according to the District's corrosion control standards.

B-7.6 Joint Deflection

Deflection of gasketed joints should be limited to 75 percent of the manufacturer's recommendations

B-8 STRUCTURAL DESIGN FOR PRETENSIONED CONCRETE CYLINDER PIPE

The use of pretensioned concrete cylinder pipe is not permitted.

B-9 STRUCTURAL DESIGN FOR STEEL PIPE

The design of welded steel pipe to determine wall thickness is based on AWWA M11 "Steel Pipe - A Guide for Design and Installation", latest edition, and shall satisfy the following requirement

B-9.1 Internal Pressure

The internal pressures, static and operating, transient (surge), and field test pressures shall be provided by the District. The minimum design pressure for all pipe diameters

shall be 200 psi. Steel cylinders shall have a wall thickness not less than 10 gage (0.135 inches or 3.43 mm) for all pipe diameters.

B-9.2 Maximum Allowable Hoop Stress

Maximum allowable hoop stresses for cement-lined and mortar- or dielectrically-coated steel pipe shall conform to the requirements of Table 1.

Table 1. Maximum Allowable Hoop Stress for Welded Steel Pipe			
Working Pressure		Test Pressure	
Mortar Coating	Dielectric Coating	Mortar Coating	Dielectric Coating
50% of yield (16,500 psi maximum)	50% of yield (21,000 psi maximum)	62.5% of yield (22,000 psi maximum)	66.7% of yield (28,000 psi maximum)

B-9.3 Longitudinal Force Due to Effect of Poisson's Ratio

The maximum allowable longitudinal stress shall not exceed the hoop stress x Poisson's Ratio (PR), where PR is assumed to be 0.303.

B-9.4 Design for Combined Stress

Calculate the combined stress using the Hencky-Mises theory. Do not exceed the maximum combined stress for welded steel pipe as follows:

Working Pressure, Mortar or Dielectric Coating: 50% of yield (21,000 psi maximum)

Test Pressure, Mortar or Dielectric Coating: 66.7% of yield (28,000 psi maximum)

B-9.5 External Combined Earth and Live Loads

- a. Live loads are based on a single AASHTO H-20 truck with a 16,000-pound wheel load and an impact factor of 1.5 at all depths^S and railroad loading per Boussinesq equation.
- b. Live loads are based on a single AASHTO H-20 truck with a 16,000-pound wheel load and an impact factor of 1.5 at all depths and railroad loading.
- c. Lag factor shall be 1.5.
- d. Allowable deflection of the pipe wall shall not exceed the following:
 - (1) Mortar-lined and mortar coated = 1.5% of diameter
 - (2) Mortar-lined and dielectrically-coated = 2.25% of diameter
- e. Design for buoyancy forces where groundwater or surface water exist

B-9.6 Lifting and Handling

- a. The minimum thickness for handling shall be determined by the following formula:

Thickness = Pipe Outside Diameter (Inches)/240 or 0.135 inches, whichever is greater.

- b. Install interior stull to maintain pipe roundness during shipping and handling.

B-9.7 Thermal Stresses

Design the pipeline for thermal stresses based on a 40-degree delta between maximum and minimum temperatures. During construction of welded joint pipe, install a slip joint a maximum of every 400 feet. Once the remainder of the pipe between slip joints has been welded, the slip joint shall be field welded in the morning when temperatures are lowest.

B-9.8 Grade of Steel

All steel plate used in the manufacturing of steel pipe, shall be fine-grained or vessel quality steel.

B-9.9. Fittings and Specials

Fittings and specials for steel pipe are covered in AWWA C208. The Contractor or his supplier shall design additional reinforcement such as crotch plates, etc.

B-9.10 Joint Types.

- a. Butt Welded: Use where resistance to high pressure and maximum tensile strength must be developed in the pipe or where failure of the joint is intolerable such as in casings under railroads and freeways.
- b. Butt Strap Welded: Use where a closure section is needed.
- c. Lap Welded: Use where joints are not subjected to large tensile stresses and where pressures are less than 300 psi. All lap welds must be made on the straight barrel of the pipe and not at areas of the bell where the metal has been cold-worked during expansion in accordance with AWWA C206. Double lap welds shall be used where the pipe carries a thrust load from bends, valves, and fittings.

- d. Confined Rubber Gasket: Rolled joints may be used for 30-inch-diameter and smaller pipe and where the wall thickness is less than \sim , 1, inch.
- e. Carnegie: May be used on all pipe diameters. Carnegie spigot and sized bell ring is suggested when the thickness of the steel cylinder is $\frac{3}{16}$ inch and greater. The bell ring thickness should be the same as the steel cylinder. If the cylinder wall thickness exceeds $\frac{3}{8}$ inch, use Carnegie M3818 and connect to the pipe cylinder by lap joint with double fillet welding. When the steel wall thickness does exceed $\frac{5}{16}$ inch, Carnegie spigot and expanded bell is recommended.
- f. Flexible Couplings: Use to join plain end pipes. Minimum pipe wall thickness shall be $\frac{3}{8}$ inch where flexible coupling is used. Thrust ties are required if the coupling must carry thrust across the joint.
- g. Flanges: Flanges shall be a minimum of Class 150 and conform to ANSI B16.1 and B16.5, AWWA C207, Class E.
- h. Grooved Couplings: Grooved couplings shall conform to AWWA C606, Type B, C, or D. Pipe walls near grooved ends should be thickened to at least $\frac{3}{8}$ inches.

B-9.11 Joint Deflection

- a. Beveled Joints: Beveled joints shall not exceed 5 degrees.
- b. Gasket Joints: Deflection of gasket joints should be limited to 75% of the manufacturer's recommendation.
- c. Bonding: All joints shall be bonded either by welding or by the use of bond straps as shown in the District's corrosion control standards.

B-9.12 Buckling

Refer to AWWA M11, latest edition. In addition, the D/t ratio for steel pipes in casings shall not exceed 140. With directional drilling methods, the maximum value of D/t is 50 or less.

B-9.13 Vacuum

Above-ground pipelines shall have a minimum D/t of 125. Consult AWWA C950 Committee Report for latest information regarding vacuum design of buried steel transmission pipelines.

B-10 TRENCH EXCAVATION AND BACKFILL

B-10.1 Location and Types of Backfill and Pipe Zone Material

The Standard Details provide specific requirements for the limits of backfill and pipe zone material in areas within paved streets, unlandscaped areas, where trench settlement must be kept to a minimum, areas within Los Angeles County Department of Public Works rights-of-way, and access roads within the Flood Control District's rights-of-way. Concrete slurry may be specified in lieu of a portion of the pipe zone material as shown on the Standard Detail. The Standard Specifications define the acceptable quality of the various types of backfill and pipe zone material and the requirements for installation and compaction.

B-10.2 Trench Widths

The trench should be as wide as necessary for proper installation and compaction of backfill and pipe zone material and provide adequate room to meet safety requirements for workers. The minimum and maximum clearance between the pipe wall and trench wall varies depending on the size of the pipe and is defined on the Standard Details. Note that the trench width could be reduced horizontally if a slurry material such as controlled low strength material (CLSM) is used in lieu of the pipe zone material.

B-10.3 Shoring/Sloping of Trench

The Contractor is responsible for sloping or shoring the trench in accordance with all Federal, State, and local requirements.

B-10.4 Surface Restoration

All surface restoration shall be in accordance with the Standard Details, Standard Specifications, and the specific requirements of permitting agencies.

B-10.5 Special Conditions

The District will notify the Contractor of any special conditions identified during the preliminary design phase. The Contractor shall review all permit requirements and identify any special conditions required by the permitting agencies.

B-10.6 Groundwater and Surface Water Control

Methods to control groundwater and surface water shall be the responsibility of the Contractor. Control methods must meet the requirements of the permitting agencies and must be installed and operated such that no damage is done to adjacent buildings and other facilities.

B-11 THRUST RESTRAINT

Carrying the thrust through the pipe joints (restrained joints) shall be used in all streets and where installation of other utilities is required for all pipe larger than 12 inches in diameter. Thrust blocks and collars can be used for 12-inch-diameter and smaller pipe where the thrust blocks or collars will not interfere with existing or future utilities.

B-11.1 Restrained Joints

The length of pipe to be restrained shall be determined by the method recommended by the Ductile Iron Pipe Research Association (DIPRA) and also by AWWA M11. The most restrictive of the two methods shall be used. Calculation of the restrained joint length shall consider the soil types, pipe zone backfill, groundwater conditions, type of pipe coatings, and other issues. The designer shall obtain the appropriate soil and groundwater conditions from the geotechnical report provided by the District or supplemented by additional geotechnical investigations as specified for each project.

B-11.2 Thrust Blocks and Thrust Collars

The District desires to minimize the use of thrust blocks. Consult the District on the use of thrust blocks.

B-12 ACCESS MANWAYS

Access manways shall be provided every 2,000 feet in accordance with the Standard Detail RW40.

B-13 PIPELINE LAYOUT

B-13.1 Minimum Cover

Meet the requirements of Subsection B-2.3.

B-13.2 Minimum Radii for Vertical and Horizontal Curve

Horizontal and vertical bends with gasketed joints may be used provided that the maximum deflection is the smaller of 2 degrees or 75 percent of the manufacturer's recommendation.

B-13.3 Mitered Bends

Where bends exceed 75 percent of the manufacturer's recommendation, mitered bends may be used. Mitered bends shall not exceed 5 percent.

B-13-4 Deflection of Joints

Maximum deflection shall not exceed 2 degrees or 75 percent of the manufacturer's recommendation.

B-13-5 Use of Standard Bends or Short Lengths of Pipe

Where joint deflection or beveled or mitered joints do not accommodate horizontal or vertical curves, use shorter pipe lengths or standard fabricated bends.

B-13-6 Location and Size of Services

Services shall be provided at the location specified by the water purveyor. Meters for one-, one-and-one-half-, and two-inch recycled water services shall be provided and installed by the purveyor. Meters for three- and four-inch recycled water services shall be provided by the purveyor but installed by the Contractor.

B-13-7 Horizontal and Vertical Separation from Existing Utilities

Meet the requirements of Section A-2.

B-14 EASEMENTS AND RIGHTS-OF-WAY

Permanent easements for the pipeline should be a minimum of 10 feet wide. Construction easements should be a minimum of 50 feet wide, where feasible. Acquisition of temporary and permanent easements will be the responsibility of the District based on the specific easement requirements for each project. Construction lay-down or staging areas will be the responsibility of the Contractor.

B-15 CORROSION PROTECTION

The level of corrosion protection required will be directed by the District on a project-by-project basis and identified in each bid package.

B-16 GEOTECHNICAL INVESTIGATIONS

When required by the bid documents to perform geotechnical work for the project, the Contractor shall submit to the agency a final geotechnical investigation report conducted by an Engineer suitably licensed to practice geotechnical engineering. The report shall provide recommendations for the satisfactory design, construction, and performance of the project.

B-16.1 Field Investigation

The Contractor shall perform sufficient subsurface exploration to supplement the existing information. The Contractor shall use any or all of the information provided in the bid package, at its own risk. The spacing of exploration shall be based on the review of existing information to provide adequate coverage to facilitate the design and construction. A minimum of one boring shall be performed at either end of all proposed bore-and-jack or microtunneling locations. The depth of these explorations shall be at the discretion of the geotechnical engineer; however, shall be of sufficient depth to provide information necessary for design and construction. Soil samples shall be collected at frequent intervals to facilitate adequate laboratory testing. All explorations shall be logged by a geotechnical engineer or under the direct supervision of the geotechnical engineer. All explorations, sampling, and logging of explorations shall be in accordance with applicable ASTM standards.

The Contractor shall perform additional investigation to determine the extent of areas of known contaminants (that were identified in the bid package) that may impact the project. The Contractor shall prepare a health and safety plan for all work done for this purpose. Adequate soil and groundwater samples shall be collected and tested to identify the type and amount of contaminants in this area. All soil cuttings from these areas shall be collected in drums and disposed of accordingly. All activities within the potentially contaminated areas shall be performed in accordance with applicable local, state, and federal standards and the requirements of the health and safety plan. If the Contractor encounters contaminants outside of the zones identified in the bid package, the Contractor shall stop work and contact the Owner immediately for further instructions.

The Contractor is responsible for obtaining all necessary permits for field investigation. Where deemed necessary by the permitting agencies, the

Contractor shall employ appropriate traffic control measures.

Backfilling of all explorations shall be in accordance with the provisions of applicable local, state, or federal laws. As a minimum, exploratory holes that extend below the groundwater table and within potentially contaminated zones, shall be backfilled with bentonite grout to the entire depth. All exploratory holes that do not penetrate to the groundwater table and outside the potentially contaminated zones shall be backfilled with soil cuttings. The upper five feet of these holes shall be backfilled with bentonite grout.

B-16.2 Laboratory Testing

The Contractor is responsible for performing the necessary tests to determine design soil parameters. The test shall be performed to supplement the existing information provided in the bid package. The tests performed shall include, but are not limited to, the determination of the following properties:

Moisture Content
Dry Density
Cohesion
Angle of Internal Friction Grain Size Distribution Atterberg Limits
Corrosivity
Expansion Potential Consolidation Characteristics

All tests shall be performed in accordance with applicable ASTM and/or Caltrans Test Methods. Soil and groundwater samples shall be tested to identify the type and amount of contaminants present in the subsurface.

B-16.3 Engineering Analyses

Based on the current and previous investigation, the Contractor shall provide the following:

Site Condition

Evaluate the subsurface soil conditions, determine the soil parameters required for design, and determine collapse and expansion potential of soils.

Evaluate suitability of the subsurface soil for support of structure foundation and pipelines. Provide recommendations for over-excavation of unsuitable materials, and replacement with suitable soils.

Evaluate the impacts of groundwater conditions on design and

construction.

Evaluate the stability of proposed excavations (both temporary and permanent) and provide recommendations for the design of shoring (braced or un-braced).

Identify nearby existing structures and utilities that will be impacted by the construction. Provide recommendations for protection of these structures and utilities.

Provide recommendations for preparation for subgrade for structures.

Structures

Provide recommendations for foundation design. These should include, foundation type, allowable bearing capacity, and settlement of foundations.

Specify structure backfill requirement around structure foundations and behind retaining structures.

Provide lateral earth pressure recommendations for retaining structures.

Pipeline and Appurtenant Structure

Provide backfill requirements around pipelines.

Provide recommendations of constrained soil modulus for native and backfill material at the appropriate overburden pressure.

Provide allowable friction resistance and/or net passive resistance for anchor and thrust blocks.

Check suitability of excavated material for bedding and backfill of trenches.

Corrosion

Provide sulfate concentrations in soil and recommendations for type of cement.

Evaluate the corrosivity of metals in contact with the soils based on the results of pH, resistivity, and chlorides. Provide recommendations for appropriate gauge thickness and/or coating for metals to account for the estimated corrosion potential.

Seismic

Evaluate the regional geology and engineering seismology.

Discuss the impacts of known active and potentially active faults on the project site. Provide recommendations for design seismic acceleration. Discuss potential for liquefaction, seismically-induced settlement, and the impact to the proposed, development. Provide necessary mitigative measures.

Contaminated Soils

Report the observed extent, type, and amounts of contaminated soils and groundwater within the proposed alignment.

B-16.4 Geotechnical Report

The Contractor shall document findings and recommendations in an adequately illustrated report and submit to the Owner for review and acceptance.

B-17 CONTAMINATED SOILS SURVEYS

A Phase I Site Assessment will be provided by the District that will include a search of available records and contact with appropriate agencies.

B-18 ROADWAY AND MAJOR UTILITY UNDERCROSSINGS TO BE DESIGNED BY DESIGN/BUILD TEAM

B-18.1 Type of Crossing

For the purpose of this section, bore and jack methods imply a conventional shield or auger-boring operation in conjunction with pipe jacking. Microtunneling methods will be distinguished by full-face control whereby the casing is inserted into an area excavated by an earth pressure balance tunneling machine to provide complete control, at all times, of groundwater inflow and soil infiltration at the face of the excavation and in the annular space between the lining system and the tail of the machine.

B-18.2 Size of Casing

The minimum size of casing shall be adequate to permit insertion of the carrier pipe and grouting the annular space between the casing and the

carrier pipe for the full length of the tunneled crossing, but not less than the diameter shown on Standard Details RW21, 22A, 22B, or 22C for carrier pipe up to 16 inches inside diameter and 5 inches plus the outside diameter of the bell of the carrier pipe for carrier pipe over 16 inches in diameter.

B-18.3 Support of Pipe Within Casing

Carrier pipe supports shall be as shown on Standard Details RW21, 22A, 22B, or 22C. A minimum of two sets of skids shall be provided for each length of pipe.

Runners shall be made of ultra-high molecular weight polymer with high abrasion resistance and a low coefficient of friction. Runners shall be supported by risers made of Type 304 stainless steel or heat-fused plastic-coated steel. The supports shall be welded to the shell.

The height of the supports and runners combined shall be sufficient to keep the carrier pipe bell at least 2 inches from the casing pipe wall at all times.

B-18.4 Length and Wall Thickness of Casing

The minimum length of a cased crossing shall meet the requirements of the permitting agency, but shall not be less than the length of the crossing plus 10 feet. The length of the crossing shall be the distance between projected fill lines at the top of the pipe or the distance between the outside edges of a pipe or structure or group of pipes or structures to be crossed by trenchless construction methods.

The minimum wall thickness shall be as required by the permitting agency, but shall not be less than shown on Standard Details RW21, 22A, 22B, or 22C for casing pipe diameters up to and including 28 inches and 1/2 -inch wall thickness for casing pipe diameters over 28 inches.

B-18.5 Cathodic Protection

The level of cathodic protection required will be directed by the District on a project-by-project basis and identified in each bid package.

B-19 POTHOLING EXISTING UTILITIES

No potholing will be performed prior to award of each contract. Existing utilities will be investigated, including depth to facilities, by the District and all utility information will be made available during bidding.

After award of bid, pothole existing utilities to verify utility information when the recycled water pipeline alignment crosses over or under other major utilities. Any small-diameter, shallow utilities can be easily relocated if a conflict in alignment is indicated. Larger diameter pipes or structures are not so easily relocated. Coordinate all potholing activities with Underground Service Alert and the owner of the facility prior to digging near their structures. Schedule soft-dig techniques for the potholing. Some utility owners require that their own staff or contractor perform potholing on their facilities. Provide survey information for x,y coordinate and depth from top of ground to top of pipe for each pothole location. Verify material and diameter of pipe being potholed. Obtain all state, county, and local permits for potholing activities prior to performing the work.

B-20 HYDRAULIC ANALYSIS

All hydraulic analyses will be performed by the District. District will provide pipe sizes, pipe flows, and operating pressures to Contractor.

B-21 PERMITTING

B-21.1 District-Obtained Permits

The District will obtain all permits, as needed for each project, from environmental agencies, Caltrans, County Flood Control District, Southern California Edison, Los Angeles Department of Water and Power, Metropolitan Water District of Southern California, railroads, County Sanitation District of Los Angeles County, State of California OSHA Mining and Tunneling Division, and other permits that would cover multiple project areas. Whenever possible, a copy of the standard permit requirements for these agencies will be provided when the actual permit is not available to include in the Bid Package.

B-21.2 Design/Build-Obtained Permits

The Design/Build Contractor will be responsible for all local county or city construction activity permits, State Water Resources Control Board, General Construction Activity Storm Water Permit, all double encroachment permits with Caltrans, and an excavation permit from the State of California Division of Occupational Safety and Health.

PART II
STANDARD SPECIFICATIONS

PREFACE

The District has adopted as its Standard Specifications for recycled water facilities the "Standard Specifications for Public Works Construction," latest edition (Green Book), as modified herein. Each section in Part II, Standard Specifications, is presented in the same number sequence as that contained in the "Standard Specifications for Public Works Construction," 2006 Edition. Each sentence, paragraph or section is intended to delete, replace, amend or supplement the corresponding section in the Green Book.

PART 2

CONSTRUCTION MATERIALS

SECTION 200 - ROCK MATERIALS

200-2 UNTREATED BASE MATERIALS

200-2.1 General. The first sentence of the second paragraph of Subsection 200-2.1 is hereby amended as follows:

When base material without further qualifications is specified, the Contractor shall supply crushed aggregate base with gradation requirements as specified by the Engineer. The aggregate base shall have a minimum R-value of 80, a minimum sand equivalent of 50, and a minimum durability index of 40.

SECTION 201 - CONCRETE, MORTAR, AND RELATED MATERIALS

201-1 PORTLAND CEMENT CONCRETE

201-1.1 Requirements.

201-1.2 Materials.

(1) Portland Cement.

The first sentence of the first paragraph of Subsection 201-1.2 is hereby amended as follows:

All cement to be used or furnished including in precast products, shall be either Type II or Type V, conforming to ASTM C150.

201-1.4 Mixing

201-1.4.4 Hand Mixing

Subsection 201-1.4.4 is hereby amended as follows:

Hand mixed concrete shall not be allowed.

201-1.6 Prepackaged Unmixed Concrete

Subsection 201-1.6 is hereby added to the Standard Specifications as follows:

Prepackaged unmixed concrete will be allowed for main installations 12 inches and smaller provided that all requirements of Subsection 201-1 of the Standard Specifications are met.

201-5 CEMENT MORTAR

201-5.1 General. The first sentence of the fourth paragraph of Subsection 201-5.1 is hereby amended as follows:

Cement mortar shall be used within 30 minutes after mixing with water and shall show no visible signs of setting prior to use.

SECTION 203 - BITUMINOUS MATERIALS

203-6 ASPHALT CONCRETE

203-6.1 General. The second paragraph in Subsection 203-6.1 is amended as follows:

Unless otherwise superseded by other jurisdictional agency, or permit requirements, asphalt concrete shall be close and grade CI-AR-4000 for pavement base course and DI-AR-4000 for final course conforming to the requirements in this section.

SECTION 207 - PIPE

207-9 CAST IRON AND DUCTILE IRON PIPE

207-9.1 General. Recycled water shall be considered similar to potable water and recycled water supply pipelines and distribution systems will be designed accordingly using ductile iron pipe. Ductile iron pipe and fittings shall be designed in accordance with ANSI A21.5 (AWWA C150).

207-9.2 Cast Iron and Ductile Iron Pipe for Water and Other Liquids

207-9.2.1 General. All ductile iron pipes shall be thickness Class 50 for plain end pipe and thickness Class 53 for flanged or grooved end pipe.

207-9.2.2 Pipe Joints. Unless otherwise called out on the plans, a "push-on" type joint shall be used. Where restrained joints are called for a TR-FLEX, joint or equivalent shall be used. The restrained joint shall be a boltless restrained push-on joint design and shall contain a positive axial locking restrained system and be capable of deflection after assembly.

207-9.2.3 Fittings. All fittings shall be ductile iron fittings. Compact body fittings will be permitted for all sizes through 12-inch. All fittings shall be made with "push-on" joints designed for use with the type of pipe to be joined, unless otherwise noted.

207-9.2.4 Lining and Coating. All cement shall be Type II unless otherwise specified.

207-9.2.5 Inspection and Certification. All required test reports and certificates of compliance shall be provided prior to shipment of pipe.

207-9.2.6 Polyethylene Encasement for External Corrosion Protection

Unless otherwise called out on the plans, all ductile-iron and cast-iron pipes, fittings, valves, and appurtenances buried underground shall be protected with polyethylene encasement, a minimum of 8-mil thick, in accordance with the requirements of ANSI A21.5 (AWWA C105), Installation Method A, using polyethylene tube for straight pipe and flat sheets for fittings and at valves and other appurtenances.

The polyethylene encasement shall be taped and secured with general purpose polyethylene adhesive tape 2 inches thick. The tape shall be Scotch Wrap 50, Polyken 900, Pluoflex No. 340, Protecto Wrap No. 200, or approved equal.

207-10 STEEL PIPE

207-10.1 General. Steel pipe shall be cement mortar lined and coated in accordance with the requirements of AWWA C205. Joints shall be restrained and calculations submitted for record.

207-10.2.2 Design Criteria. Minimum design pressure for all pipe diameter shall be 150 psi. Steel cylinders shall have a wall thickness of not less than 10 gage (0.135 inch or 3.43 mm) for all pipe diameters.

207-10.2.7 Special Sections. Access manholes shall be provided on steel pipe 24-inches in diameter and larger. The access manhole shall be 20-inches in diameter, located at the top of the pipe and spaced approximately 2000 feet apart along the pipe. Outlet shall extend 12-inches above the pipe and provided with a blind flange and 2 lifting hooks.

207-10.2.8 Welding. Field hand welding shall be done by certified welders in accordance with the latest edition of AWWA C206.

Section 207 is hereby supplemented by adding Subsection 207-20 Polyvinyl Chloride Pressure Pipe (PVC) as follows:

207-20 POLYVINYL CHLORIDE PRESSURE PIPE (PVC)

207-20.1 General. These specifications apply to polyvinyl chloride pressure pipe (PVC) for the transmission and distribution of recycled water under pressure. PVC pipe shall be of the size, type, pressure, or class shown on the plans. PVC pipe 4-12 inches or less shall comply with AWWA C900, Class 200 (meeting the requirements of DR14). PVC pipe larger than 12 inches shall comply with AWWA C905, Class 235 (meeting the requirements of DR18).

207-20.2 Material Requirements. Material used to produce the pipe shall be made from Class 12454-A or B rigid polyvinyl chloride compounds, as outlined in ASTM D1784, with an established hydrostatic design basis (HDB) equal to or greater than 4,000 psi for water at 73.4 degrees Fahrenheit (23 degrees Celsius).

207-20.3 Joints. Joints for PVC pressure pipe shall be pipe integral bell and spigot joints with elastomeric gaskets. Elastomeric gaskets shall comply with the requirements of ASTM F477. All pipe shall have home mark on the spigot end to indicate proper penetration when the joint is made.

207-20.4 Conformance Requirements. All PVC pressure pipe shall be manufactured in strict accordance with the latest revisions of AWWA C900 or C905 and the applicable ASTM standards listed therein. The manufacturer shall furnish an affidavit that all delivered materials comply with the requirements of AWWA C900 or C905 and these specifications.

207-20.5 Fittings. All fittings for PVC pressure pipe shall be ductile-iron and shall be in accordance with the latest revisions of AWWA C110 or C153, and in accordance with Subsection 207-9. Fittings shall be lined and coated as specified in Subsection 207-9.24. All fittings shall be thrust-blocked and anchored in accordance with the Standard Drawings. Bell size shall be for Class 200 cast-iron equivalent PVC pressure pipe, including the rubber-ring retaining groove.

207-20.6 Service Saddles. All service connections to PVC pressure pipe water main shall be constructed with bronze service saddles with CC threads for receiving a bronze corporation stop in accordance with Standard Drawings. Service saddles for PVC pressure pipe shall be manufactured to provide full support around the circumference of the pipe and have a minimum width of 2

inches along the axis of the pipe in order to provide full bearing and prevent distortion of the pipe when the saddle is made tight.

207-20.7 Installation. PVC pressure pipe shall be installed in accordance with AWWA C900 or C905, as last revised. Pipe bedding shall provide uniform longitudinal support under the pipe, in accordance with the Standard Drawings. All pipe embedment material shall have a minimum sand equivalent (SE) of 30. Initial backfill material shall be worked under the sides of the pipe to provide satisfactory haunching and be hand tamped to 90-percent minimum relative compaction. Embedment material placed from the pipe spring-line to 12 inches above the pipe shall also have a minimum SE of 30 and may be compacted concurrently with the backfill. After placement and compaction of the backfill in the pipe zone, the balance of backfill materials may be machine placed. The material shall contain no large stones, rocks, or foreign debris larger than 4 inches in any direction. Proper compaction procedures shall be exercised to provide required densities.

207-20.8 Chlorinated Polyvinyl Chloride Pressure Pipe, Solvent-Welded

PVC Pipe 3-inches or less shall be made from all new rigid unplasticized chlorinated polyvinyl chloride, Class 23447-B, and shall be Schedule 80 conforming to ASTM F 441, with solvent-welded fittings of the same material as the pipe.

207-20.9 Recycled Water Pipe

All PVC recycled water pipe shall be purple colored PVC pipe meeting the above specifications. All such piping shall be purple with black or white stenciling. The stenciling shall appear on both sides of the pipe with the marking "CAUTION, RECYCLED WATER, DO NOT DRINK" in 5/8-inch letters repeated every 12 inches.

As an alternative to purple pipe, PVC recycled water pipe could be installed with a purple identification tape per RW14.

Section 207 is hereby supplemented by adding Subsection 207-21 Pipe Appurtenances as follows:

207-21 PIPE APPURTENANCES

207-21.1 General. Unless otherwise specified, all pipe appurtenances shall comply with the specifications herein and the appropriate Standard Drawings of the West Basin Municipal Water District.

207-21.2 Main Line Valves

207-21.2.1 General. Valves shall be iron-body, non-rising stem, butterfly or resilient seat type. All valves shall open by turning the wrench nut counterclockwise.

All valves shall be equipped with O-ring stem seals and shall have flanged ends or the type of ends, as shown on the plans.

All valves installed at fittings shall be flanged. All valves shall be provided with a stem extension if depth of valve nut exceeds 4 feet. All valve extensions shall be centered in the valve well by use of a guide and shall operate freely without binding after installation.

207-21.2.2 Resilient-Seat Gate Valves. Resilient-seated gate valves shall conform to the latest revision of AWWA C509 and the following:

1. Resilient-seated gate valves shall be iron bodied with all internal working parts (excluding gate) made of bronze containing not more than 2 percent aluminum or more than 7 percent zinc. Valve stems shall be cast or forged from bronze having a tensile strength of not less than 60,000 psi, a yield point of not less than 30,000 psi, and an elongation of not less than 10 percent in 2 inches.
2. Resilient-seated gate valves shall have non-rising stems, two O-rings sealed above the thrust collar, with a 2-inch square operating nut, opening counterclockwise, and shall be designed for 200 psi working water pressure.
3. All gates shall be encapsulated in Bona-S rubber or nitrile elastomer.
4. Resilient-seated gate valves shall have sizes and type of ends as shown on the Plans or Standard Drawings.
5. Resilient-seated gate valve suppliers shall furnish the District with an affidavit of compliance to AWWA C-509.
6. Resilient-seated gate valves shall have their internal surface epoxy coated, except stainless steel, and rubber surface with epoxy applied by the manufacturer of the valve.

Resilient seat gate valves shall be manufactured by one of the following or an approved equal:

- a. Clow RW
- b. American Darling CRS 80

207-21.2.3 Butterfly Valves. Butterfly valves shall conform to the latest revision of AWWA C-504 and the following:

1. Butterfly valves and operators shall be Class 150B constructed for direct burial and have flanged ends, unless otherwise specified.
2. Butterfly valves shall be furnished with operators of the traveling nut or worm gear type, self-locking in any position, and sealed, gasketed, and lubricated to withstand a submersion in water to 10 psi. The valve shall open by counterclockwise rotation of a 2-inch square AWWA operating nut.
3. The operator shall be capable of meeting the torque requirements for opening and closing the valve against:

- a. 150 psi upstream and 0 psi downstream; and
 - b. Maximum flow rate of 12 FPS, normal flow rate of 6 FPS, and shall be provided with AWWA stops capable of absorbing up to 250 foot-pounds of input torque without damage to the valve or operator.
4. Butterfly valves shall have seats applied to the body and have a stainless steel, Monel, Ni-chrome, or bronze seat surface. All internal mountings or working parts shall be stainless steel.

Butterfly valves shall have the shaft's O-ring sealed or Chevron packing. The shaft shall not be exposed between the valve body and the operator.

5. Butterfly valves shall be furnished with records of tests specified in AWWA C-504, Section 2.3 and Section 5. All valves shall be furnished with certified drawings and parts lists of the valve and operator. An affidavit of compliance to AWWA C-504 shall be furnished for all valves.
6. Butterfly valves shall have their internal surfaces epoxy coated, except stainless steel, and rubber surfaces with a minimum of eight mils of Keysite 740 or approved equal. All epoxy lining shall be applied by the manufacturer.
7. The minimum interior port diameter of the valve shall be 1 inch smaller than the nominal diameter of the equivalent pipe.

Butterfly valves shall be manufactured by one of the following or an approved equal:

- a. Kennedy
- b. Pratt
- c. B.I.F.
- d. Crispin K-Flo

207-21.2.4 Check Valves. Unless otherwise specified, check valves 2½ inches and larger shall conform to the following:

1. Check valves shall be swing type, iron bodied with flanged ends fitted with outside spring and lever.
2. Check valves shall be designed for 150 psi working pressure and a 300 psi test pressure, unless otherwise specified.

3. Check valves shall be functional in both vertical and horizontal position.
4. Check valves shall be fully bronzed mounted and have a stainless steel hinge pin. The disc shall be rubber faced with a bronze seat ring.
5. Check valves 2½ inches through 12 inches shall be furnished with conventional packing.

Check valves shall be manufactured by one of the following or an approved equal:

- | | |
|------------|-------------|
| a. Mueller | A-2602-6-02 |
| b. Clow | F-5340 |

207-21.3 Main Line Pipe Fittings

207-21.3.1 General. All fittings shall have a minimum pressure rating of 150 psi or Class 250 as required for the installation and shall be manufactured per ANSI/AWWA C110/A21.10-82.

1. Joint Type - Push-on per ANSI/AWWA C110/A21.10-82, unless otherwise specified.
2. Coating - Bituminous coating 1 mil thickness minimum.
3. Lining - Cement-mortar lining per ANSI/AWWA C104/A21.4-85.
4. Certification of Conformance and copies of all test reports.

207-21.3.2 Flexible Couplings. Unless otherwise specified, flexible couplings shall conform to the following:

1. Each coupling shall consist of one steel middle ring, two steel followers, gaskets, and sufficient numbers of steel bolts to compress the gasket without distorting the followers.
2. The thickness of the middle ring shall be such that the stress in the steel shall not exceed 50 percent of the yield point when subjected to the hydrostatic test pressure of the pipeline. The middle ring thickness

shall not be less than the thickness of the pipe jointed.

3. Middle rings shall be cold expanded a minimum of 1-percent increase in diameter to test the weld and the size of the proper dimension.
4. The middle rings shall be coated with Keysite 740 or District approved coating to a minimum dry film thickness of 10 mils. Follower rings shall be coated with a compatible shop coat for field coating.
5. Bolts shall be 5/8-inch diameter carriage bolts with hexagon nuts. The steel shall have a minimum yield strength of 40,000 psi.
6. Buried couplings shall be coated with fusion bonded epoxy and provided with Type 316 stainless steel bolts and nuts.
7. Flexible couplings shall be manufactured by one of the following or all approved equal:
 - a. Baker
 - b. Dresser
 - c. Smith-Blair
 - d. Ford

207-21.3.3 Flanges. Unless otherwise specified, flanges shall conform to the following:

1. Flanges for ductile-iron pipe and fittings shall comply with ANSI B16.1, "Cast Iron Pipe Flanges and Flanged Fittings, Class 125." Flanges for ductile-iron pipe shall be the "screwed-on" type in accordance with AWWA C115. Flanges shall be integrally cast with the fittings.
2. Steel flange size 4 inches through 24 inches shall comply with AWWA C-207, 150 psi primary service rating.
3. Flange sizes 4 inches through 96 inches shall be furnished in the steel slip-on welding pattern.
4. Flanges shall be faced smooth or may have a serrated finish of approximately 32 serrations per inch, approximately 1/64 inch deep. Serrations may be spiral or concentric.
5. Plate or blind flanges shall have all flange faces machined flat and shall be center drilled and tapped 1-inch I.P.T., 4-inch through 10-inch; 2-inch I.P.T. 12-inch and larger; and furnished with a standard square head pipe plug.

7. Final machining on the contact faces of all flanges shall be done prior to being welded to the full length adjacent steel plate section. Flange faces shall be checked with a straight edge and shall be perpendicular to the pipeline. All warped flanges will be returned to the pipe company for adjustment. Contractor to be responsible for all additional expenses and delays.
8. Where gaskets are to be furnished, they shall be 1/16 inch minimum thickness, cloth inserted rubber, full-face gaskets meeting Federal Specification HH-P-151.

Unless otherwise specified, insulation gaskets shall conform to Section 215 of these specifications.

207-21.4 Bolts and Studs for Flanged Fittings. Bolts and studs for above-ground installation shall be cadmium plated and shall conform to ASTM A 307, Grade B. Bolts and nuts shall be heavy hexagon series. Between 1/4 inch and 3/8 inch shall project through the nut when drawn tight. Bolts for underground installations shall be Type 316 stainless steel unless otherwise called for on the plans. All buried bolts including valve body bolts, shall be coated with two coats of 10 mils each of "3M" EC-244 or approved equal after installation.

207-21.5 Copper Pipe and Fittings. When copper pipe is to be furnished, the pipe shall conform to ASTM B-88 for seamless copper water tube. Piping located aboveground or suspended with vaults shall be Type L. Buried piping shall be Type L.

Soldered joints in copper pipe and fittings shall be made with silver solder using approved solder-joint fitting. The surfaces to be soldered shall be thoroughly cleaned and flux applied before soldering.

When brass or bronze fittings with threaded, copper flare or sweat weld (solder) ends are shown on the Plans or Standard Drawings, the fittings shall conform to AWWA C-800. Fittings shall be furnished by Mueller, Jones, Hays, Ford, or District approved equal.

207-21.6 Brass Pipe, Nipples, and Fittings. Short threaded nipples, brass pipe, and fittings shall conform to ASTM B43, regular wall thickness. Threads shall conform to ANSI B2.1.

207-21.7 Bronze Appurtenances. All items specified herein shall be manufactured of bronze conforming to ASTM B62.

All service saddle bodies shall be manufactured of bronze and shall be tapped for a C.C. thread. The seal with the pipe shall be effected with either a rubber gasket or an O-ring. All service saddles shall be a double-strap type. The straps (or bails) shall be flat and shall be manufactured of Everdur or Silnic bronze.

Corporation stops shall be manufactured of bronze. The inlet fitting shall be a male C.C. thread and the outlet connection shall be a flared copper connection. Angle meter stops shall be manufactured of bronze. The inlet connection shall be a flared copper connection and the outlet fittings shall be a meter flange, or meter coupling. The inlet and outlet shall form an angle of 90 degrees on a vertical plane through the centerline of the meter stop. A rectangular lug and lock wing shall be provided on the top of the fitting to operate the shutoff mechanism. Ball (meter) valves shall be manufactured of bronze. It shall have a lever-type turn handle with the inlet being a meter flange or a meter coupling and the outlet female iron pipe.

207-21.8 Bronze Flanges. Bronze flanges shall conform to ANSI B16.24, Class 125 of CI 150, to match the connecting flange. Use solder end companion flanges. When both aboveground adjoining flanges are bronze, use bronze bolts and nuts. Bolts shall conform to ASTM F468, Grade C65100 or C63000. Nuts shall conform to ASTM F 467, Grade C65100 or C63000. When only one of the aboveground adjoining flanges is bronze, use Type 316 stainless-steel bolts and nuts. Connect to buried ferrous flanges with flange insulation kits. Bolts used in flange insulation kits shall conform to ASTM B193, Grade B7. Nuts shall comply with ASTM A194, Grade 24. If the adjoining buried flange is bronze, use bronze bolts and nuts without a flange insulation kit.

207-21.9 Insulating Bushings and Unions. Pipe or fittings made of non-ferrous metals shall be isolated from ferrous metals by nylon insulating pipe bushings, unions, or couplings as manufactured by Pipeline Coating and Engineering Company, Smith Blair, Pipe Seal and Insulator Company, or approved equal.

207-21.10 Small Steel Pipe. Unless otherwise shown, galvanized steel pipe and black steel pipe in sizes 6 inches in diameter and smaller shall conform to the requirements of the "Specifications for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Ordinary Uses" (ASTM A120), and shall be standard weight unless otherwise shown. Galvanized steel pipe shall be wrapped with PVC tape, one half lap. Fittings shall be of galvanized malleable iron, unless otherwise shown.

207-21.11 Steel Pipe Casing. Steel casing pipe shall be new and shall be butt-welded steel sheets conforming to ASTM A-570 Grade 30 or of steel plate conforming to ASTM A-233, Grade C. Minimum diameter and thickness shall be as shown on the Standard Drawings. The Contractor may select a greater diameter or wall thickness as convenient for the method of work and loadings involved or as required by the agency having jurisdiction over the road or railroad

crossing. Casing sections shall be joined by full circumferential butt welding in the field. Prepare ends of casings for welding by providing ½-inch by 45-degree chamfer on outside edges. The annular space between the casing and carrier pipe shall be filled with air blown sand. All carrier pipe passing under railroads or freeways shall be restrained. DIP carrier pipe shall have restrained joints while PVC carrier pipe shall be restrained with EBAA Iron Series 1500 retainers or approved equal.

207-21.12 Precast Concrete Vaults. Precast concrete vaults shall comply with ASTM C858, except as modified herein. Design loads shall consist of dead load, live load, impact, and in addition, loads due to water table and any other loads that may be imposed upon the structure. Live loads shall be for HS20 per AASHTO standard specifications for highway bridges. Design wheel load shall be 16 kips. All vaults located within roadways or driveways shall have traffic covers. Vaults in all other locations shall have parkway covers.

Vault frames and covers shall be fabricated steel and shall be fabricated with supports to resist deflection. Frames and covers shall be galvanized. All covers shall be hinged and have spring or torsion bar assists. All covers shall be equipped with a hold-open mechanism and with bolt-down or locking devices. Contractor shall be responsible to place covers so that the cover is flush with surrounding surface, unless otherwise specified and shall make all necessary adjustments so that the cover meets these requirements. All mortar joints in precast concrete vault sections shall be made watertight. The joint sealing compound shall be permanently adhesive flexible plastic material complying in every detail to Federal Specification SS-S-00210 (GSA-FSS) dated July 25, 1965.

All voids or openings in the vault walls around pipes shall be filled with 3,000 psi concrete or mortar, using an approved epoxy for bonding concrete surfaces.

207-21.13 Precast Concrete Manholes. Precast concrete manholes shall comply with ASTM C478, except that the wall thickness shall be 6 inches minimum, 4 foot minimum diameter. The minimum allowable steel shall be hoops of No. 4 wire cast into each unit. Street-type manhole frames and covers shall be made of cast iron conforming to ASTM A48, Class 30. Castings shall be smooth, clean, and free from blisters, blowholes, and shrinkage. Frames and covers shall be heavy duty, traffic type, 36-inches clear opening. The cover shall seat firmly into the frame without rocking. Grind or otherwise finish each cover so that it will fit in its frame without rocking. Match markers sets of frames and covers prior to shipping. Covers for manholes shall have the word "WBMWD RECYCLED WATER" cast thereon in 3-inch high letters, 1/4-inch thickness and 1/4-inch deep. Do not apply any other lettering. Before leaving the foundry, clean castings and subject them to a hammer inspection. Then dip casting twice in a preparation of asphalt or coal tar and oil applied at a temperature or not less than

290 degrees F, nor more than 310 degrees F. Concrete used in manholes and pouring the manhole base shall be Class A per Section 201.

207-21.14 Thrust Blocks and Anchor Blocks. Concrete thrust and anchor blocks shall be installed at the location and in accordance with the positions and dimensions as shown on the Standard Drawings. The District may direct any change in direction, location, or dimension for field conditions or soil conditions that may arise.

207-21.15 Coating and Polyethylene Encasement. All exposed buried ferrous metal appurtenances in contact with soil or ground water, including pipe, flanges, nuts, bolts and valves, etc., shall be coated with two coats of 10 mils each of "3M" EC-244 protective coating, or approved equal. All ductile iron pipe, fittings and valves (including cast-iron valves) shall be encased with a minimum thickness of 8 mils polyethylene sheeting in accordance with ANSI A21.5 (AWWA C105).

207-21.16 Tracer Wire for Non-Metallic Pipelines. Copper tracer wire shall be installed with all non-metallic pipelines, centered and just above the top or crown of the pipe for the purpose of providing a continuous signal path for electronic pipe locators used to determine pipe alignment after installation. The copper wire shall be No. 12 Cu. with HMWPE insulation. The wire shall be electrically continuous throughout the entire piping system including adjacent service line assemblies. At service lines, the wire shall be extended up the pipe and secured by a cable lug under the top nut of one set of bolts. At cul-de-sacs, the wire shall be placed in the same trench with the last long side service lateral and extended into the meter box. All splices shall be wrapped with PVC tape and the wire shall be tied to the pipe at 10-foot intervals with plastic adhesive tape. Tracer wire shall be extended to surfaces as shown on standard drawings. The Contractor shall provide the District with results of electrical continuity test.

207-21.17 Recycled Water Identification. All piping in the recycled water system, including service lines, attached appurtenances, and connections shall be installed with identification tape, as well as warning tags and labels. All recycled water piping, valves, and fittings aboveground or in vaults shall be painted purple in color (Color Code Pantone 512). Black or white stenciling shall appear on both sides of the pipe with the marking "CAUTION - RECYCLED WATER, DO NOT DRINK" in 5/8-inch letters repeated every 3 feet.

All buried piping shall either be colored purple, Pantone 522, and embossed or be integrally stamped/marked " CAUTION - RECYCLED WATER, DO NOT DRINK" or be installed with a purple identification tape, or a purple polyethylene vinyl wrap, color to be Pantone 512. The warning shall be stain red/marked on

opposite sides of the pipe and repeated every 12 inches. Purple identification tape shall be an inert plastic film specifically formulated for prolonged underground use. Identification tape shall be prepared with black or white printing on a purple field having the words "CAUTION - RECYCLED WATER, DO NOT DRINK" in 1-inch high letters. The minimum thickness shall be 4 mils and the overall width of the tape shall be at least equal to the diameter of a pipe but not less than 3 inches, however, not more than 12 inches. Identification tape shall be as manufactured by T. Christy Enterprises, Inc., or approved equal.

The District requires warning tags to be installed on all appurtenances in vaults or aboveground, such as, but not limited to, air release valves, blowoffs, and meters. Warning tags shall be weatherproof plastic, 3-inch by 4-inch, with purple background and black or white lettering stating "CAUTION: RECYCLED WATER - DO NOT DRINK" on one side and "PRECAUCION: AGUA IMPURA - NO TOMAR" on the other side. Tags shall be attached to each device with a nylon tie wrap. Warning tags shall be as manufactured by T. Christy Enterprises, Inc., or approved equal.

All valve boxes for recycled water facilities shall have the inscription "RW - WBMWD" on the valve box cover.

All storage and pumping facilities shall be identified by signs containing the words "CAUTION: RECYCLED WATER - DO NOT DRINK" and contain the universal symbol for do not drink. The signs shall have a purple background, Pantone 572, with high-contrast color lettering. An adequate number of signs in English and other primary languages spoken in the area shall also be posted on the surrounding fence and at the entrance of each facility.

SECTION 210 - PAINT AND PROTECTIVE COATINGS

210-1 PAINT

210-1.5 Paint Systems

Subsection 210-1.5 is hereby supplemented as follows:

For metal surfaces, primer for galvanized surfaces shall be two coats each of Sherwin-Williams "Galvanized Iron Primer," or approved equal. Primer for ungalvanized surfaces shall be two coats each of Sherwin-Williams "Kromik Metal Primer," or approved equal. If no furnish paint is to be applied (only where specified), apply two additional coats of the above primers to give a finished dry film thickness of 10.0 mils minimum. Finish paint shall be Sherwin-Williams "Metalastic II," or approved equal. Finished coating thickness shall be 6.0 mils minimum, dry film thickness. Color shall be Pantone 512. Color chips of all finish paints to be used must be submitted to District prior to commencing work.

Piping, valves, and fittings in vaults or exposed to the atmosphere shall be field epoxy coated with a minimum total dry film thickness of 13 mils in accordance with AWWA C-210, except as modified herein. Surface shall be prepared in accordance with SSPC SP-10. The prime coat shall consist of a self-curing, two-component, inorganic zinc-rich coating recommended by the manufacturer for over coating with a high-built epoxy finish coat. Minimum zinc content shall be 14 pounds per gallon. Apply to a minimum thickness of 3 mils. Prime coat shall be Tremec N90E92, Porter 311 Zinc-Lock, Ameron Dimetcote 9, or approved equal. The intermediate and finish coat shall be a high-built epoxy having a minimum volume solids of 60 percent. The intermediate and finish coat shall have a minimum thickness of 5 mils each coat. The intermediate and finish coat shall be Tremec Series 20, Porter 7510, Koppers Hi-Guard, Ameron 385 or approved equal.

Concrete Vaults and Manholes

The interior and exterior of concrete vaults and manholes shall be coated with crystalline waterproofing. Crystalline waterproofing shall be cementitious coating containing components which will diffuse into the concrete by water, react with free lime, and create an impervious, waterproof, calcified barrier in the substrate; Technical requirements are as follows:

1. Permeability at 2.6×10^{-8} cm/sec (2 coats) minimum per Army COE CRD-C 48-55 or CRD-6 48-73.
2. Compatibility; shall produce no degradation of substrate.

210-1.8 Paint and Protective Coating (Recycled Water):

It is desired that above ground or exposed facilities be color coded to differentiate recycled water facilities from potable water or wastewater facilities as follows:

Valve Box Covers	Two Coats Purple (Pantone 512)
Air Valves and Piping	Two Coats Purple (Pantone 512)
Blow-offs/Covers	Two Coats Purple (Pantone 512)
Corrosion Test Station Covers	Two Coats Purple (Pantone 512)

SECTION 215 - CORROSION CONTROL

215-1 General. This specification covers pipeline corrosion control and monitoring requirements for the metallic pipelines installed in the District. Items covered in this specification include the installation of: corrosion test stations (pipeline and casings), insulating flange kits, continuity bonds, and sacrificial anodes. Additionally, this specification includes testing and inspection requirements for all corrosion control facilities.

215-2 Materials. Materials and equipment furnished under this section of the specifications shall be the standard product of manufacturers regularly engaged in the manufacturing of such products and shall be the manufacturer's latest standard design that complies with specification requirements. All materials and equipment shall bear evidence of U.L. approval when U.L. standards exist.

215-2.1 Magnesium Anodes. Magnesium anodes shall be the high potential alloy with a theoretical energy capacity of 1000 ampere-hours per pound and have a minimum useful output of 500 ampere-hours per pound. Anodes shall be pre-packaged in a special backfill or bare as directed in the design drawings.

1. Chemical Composition (High Potential)

Aluminum	0.01 percent (max)
Manganese	0.5 to 1.3 percent
Zinc	0.002 percent (max)
Copper	0.02 percent (max)
Nickel	0.001 percent (max)
Iron	0.03 percent (max)
Other	0.05 percent each (max)
	0.3 percent total (max)
Magnesium	Remainder

2. Size and Weight

Anodes shall be 48 pound magnesium ingots with a trapezoidal cross section. Ingot size shall be approximately 6" x 5" by 32" long.

3. Anode Construction

Anodes shall be cast magnesium with a galvanized steel core rod. Recess one end of the anode to provide access to the rod for connection of the lead wire. Silver braze the lead wire to the rod, make the connection mechanically secure before brazing. Insulate the connection to a 600 volt rating by filling the recess with epoxy and covering any exposed bare steel core or wire with heat shrinkable tubing. The insulating tubing

shall extend over the lead wire insulation by not less than one-half inch.

4. Pre-Packaged Magnesium Anodes

Pre-packaged anodes shall be provided by the supplier completely encased and centered within a cloth bag in a special low resistivity backfill mix with the following composition:

Gypsum	75%
Powdered Bentonite	20%
Anhydrous Sodium Sulfate	5%

Backfill shall be firmly packed around the anode such that the ingot is approximately in the center of the backfill and surrounded by at least 2-inches of backfill material. The resistivity of the backfill shall be no greater than 50 ohm-cm when tested wet in a soil box with no extraordinary means of compaction.

5. Bare Magnesium Anodes

Bare magnesium anode ingots can be used at clustered anode installations. Bare anodes must be backfilled with a slurry backfill of the same composition as the backfill supplied with pre-packaged anodes. The slurry shall be prepared and installed as directed below.

215-2.2 Wire and Cable

All cable and wire shall be insulated, single conductor, stranded, copper suitable for direct burial in corrosive soil and water with HMWPE or THWN insulation as indicated on the drawings conforming to U.L. 83 unless otherwise specified. All wire lengths shall be sufficient to reach from its origin to the test box (or destination) without a splice.

1. Anode Lead Wire

No. 12 AWG stranded copper wire with THWN insulation (color white) and of suitable length to reach from the anode to the test box without a splice.

2. Cathode (Pipe) Lead Wire

No. 8 AWG with black HMWPE insulation as indicated on the drawings.

3. Test Lead Wire

No. 2 or No. 8 AWG with black HMWPE insulation as shown in the drawings.

4. Bond Wires

No. 2 AWG stranded copper with black HMWPE insulation.

5. Casing Leads

No. 12 AWG stranded copper wire with THWN or THW insulation (color +yellow).

215-2.3. Insulating Flange Kits

1. Gasket

Full faced, Type "E" phenolic material with rectangular nitrile or Viton O-ring seal for operation between 20°F and 150°F. Use PSI Linebacker gasket or equivalent. Gaskets shall be suitable for the temperature and pressure rating of the piping system in which they are installed.

2. Insulating Sleeves

1/32-inch thick tube, full length, laminated glass material as per NEMA LI-1 G10 for operation between 20°F and 150°F. For installation at threaded valve flanges, the sleeves shall be half length.

3. Insulating Washers

1/8-inch thick laminated glass material as per NEMA LI-1 G10 for operation at ambient temperatures to be placed directly adjacent to the flange face.

4. Steel Washers

1/8-inch thick cadmium plated steel to be placed between the bolt head or nut and the insulating washer.

215-2.4 Insulating Flange Coating (Buried Flanges Only)

1. Standard

Materials shall be per NACE Standard RP0375-94.

2. Primer

The flange and bolt surfaces shall be prime coated with a blend of petrolatum, plasticizer, inert fillers and corrosion inhibitor having a paste-like consistency. The primer shall be Trenton Wax-Tape Primer, Central STACprime or equivalent.

3. Wax Tape

Flange covering material shall be a synthetic felt tape, saturated with a blend of petrolatum, plasticizers, and corrosion inhibitors that is easily formable over irregular surfaces. A compatible petrolatum filler should be used to smooth over irregular surfaces. The Wax-Tape shall be Trenton #1 Wax-Tape, Central STACwrap or equivalent.

4. Outer Covering

The primed and wax-tape wrapped flange shall be wrapped with a plastic tape covering consisting of three (3) layers of 50 gauge or 10 mil, polyvinylidene chloride or PVC, high cling membranes wound together as a single sheet. The outer covering shall be Trenton Poly-Ply, Central STACguard or equivalent.

215-2.5 At-Grade Test Stations

1. Test Box

At-grade test boxes shall be round, pre-cast concrete with dimensions of 13-1/2" O.D. by 8" I.D. by 12" high, similar to Brooks type 1 RT with a cast iron supporting ring and lid and shall have sufficient strength to support vehicular traffic. The lid shall be 10" O.D. and cast with the legend "CP Test" using letters not less than 1-1/2 inches high. The test boxes shall be installed flush with grade.

2. Identification Tags

All test leads shall be identified in each test box with 1-1/2" diameter by 1/16" brass tags. The tags shall be die stamped with "WBMWD", size & service as indicated in the drawings. The tags shall be securely attached to the test leads with uninsulated No. 14 or 16 copper wire.

3. Shunts

Anode test boxes shall have 0.01 ohm shunts rated at 6 amperes, similar to the Holloway Type RS, and accurate to plus or minus one percent. Shunts shall be attached to anode and cathode lead wires with split bolt connectors as shown in the drawings. (Note that anode leads are left disconnected until system activation by the Owner. See Part 3 Execution.)

4. Split Bolt Connector

Split bolt connectors shall be UL 486 copper or brass and sized to accommodate the lead wire and shunt being used.

5. Plastic Tape

Vinyl plastic electrical tape shall be 8.5 mils thick, 3/4 inch wide.

6. Electrical Insulation Putty

Electrical insulation putty shall be 125 mils thick, 1-1/2 inches wide.

7. Concrete Pad

Test boxes mounted in un-paved areas shall have a 24" square by 4" thick concrete pad constructed of ASTM C94 Ready-Mix concrete.

215-2.6 Alumino-Thermic Weld Kit. Cable-to-metal connections shall be made by the alumino-thermic welding process. Weld charge size, alloy and mold size shall be as specified by the manufacturer of the weld kit, and illustrated on drawings. The Contractor shall insure that the correct charges are used.

215-2.7 Elastomeric Weld Caps. Alumino-thermic welds shall be sealed with a pre-fabricated plastic cap filled with formable mastic compound on a base of elastomeric tape. Weld caps shall be Royston Handy Cap 2 or equivalent.

215-2.8 Weld Coating. All alumino-thermic welds shall be coated with a cold-applied fast-drying mastic consisting of bituminous resin and solvents per Mil. Spec MIL-C-18480B. The minimum coating thickness shall be 25 mils (0.025 inch).

215.2.9 Plastic Warning Tape. Plastic warning tape for buried test leads shall be a minimum of four (4) mils thick and six-inches (6) wide, inert plastic film designed for prolonged use underground. The tape shall have the words, "CAUTION: Cathodic Protection Cable Below," or similar, clearly visible in repeating patterns along its entire length.

PART 3

CONSTRUCTION METHODS

SECTION 300 - EARTHWORK

300-1 CLEARING AND GRUBBING

300-1.3 Removal and Disposal of Materials

300-1.3.2 Requirements

Paragraph (a) Bituminous Pavement of Subsection 300-1.3.2 is amended as follows:

Bituminous pavement shall be removed to clean, straight lines. Prior to removal of existing surfacing, pavement cuts shall be made in accordance with Plans and as specified herein. All pavement cuts shall be neat and straight along both sides of the trench of excavation and parallel to its alignment. Where large irregular surfaces are removed, such trimming or cutting shall be parallel to the roadway centerline or with angles to the same.

After backfilling and compaction, final pavement cuts shall be made by saw cutting (unless permit requirements supersede), to a minimum depth of 2 inches at the location shown in the appropriate trench pavement sections.

300-4 UNCLASSIFIED FILL

300-4.7 Compacting

The second paragraph of Section 300-4.7 is hereby amended to read as follows:

Each layer of earth fill shall be placed in 8-inch lifts and compacted to obtain a relative compaction of not less than 90 percent as determined by ASTM D-1557, latest revision, or as specified by the Soils Engineer.

SECTION 301 - TREATED SOILS, SUBGRADE PREPARATION, AND PLACEMENT OF BASE MATERIALS

301-1 SUBGRADE PREPARATION

301-1.2 Preparation of Sub-grade

Subsection 301-1.2 is supplemented as follows:

After the sub-base has been prepared, a weed killer shall be applied to the entire sub-base surface. Weed killer shall be Poly-Bor-Chlorate as manufactured by Coast Borax Company, Borascu concentrated type as manufactured by Pacific Coast Borax Company, or equal. The weed killer shall be applied according the manufacturer's published instructions.

301-1.3 Relative Compaction

Amend as follows:

Unless otherwise superseded by other jurisdictional agency, permit requirements, or Special Provisions requirements, sub-base shall be compacted to not less than the minimum relative density shown on the applicable trench pavement sections on the Plans or the Standard Drawings, or per the local jurisdictional agency requirements.

SECTION 302 - ROADWAY SURFACING

302-5 ASPHALT CONCRETE PAVEMENT

302-5.1 General

Subsection 302-5.1 is supplemented as follows:

Unless otherwise superseded by other jurisdictional agency, permit or Special Provisions requirements, the minimum asphalt concrete pavement thickness shall be 3 inches placed upon an 8-inch aggregate base. The asphalt concrete shall be placed in two courses, a base course and a final course. The base course shall be constructed 2 inches in thickness to within 1 inch of the existing surface. The final course shall be a minimum 1 inch in thickness over the trench or as directed by the Engineer.

The final course of the asphalt concrete pavement shall be fog sealed with an asphalt emulsion after compaction. The asphalt emulsion shall be Type SS-1h applied at a rate of 0.25 gallons per square yard, in accordance with Subsection 203-3.

302-5.3 Prime Coat

Subsection 302-5.3 is amended as follows:

A prime coat consisting of SC-250 liquid asphalt shall be applied at a rate of 0.25 gallons per square yard. Grade SC-70 liquid asphalt may be used when approved by the Engineer.

SECTION 306 - UNDERGROUND CONDUIT CONSTRUCTION

306-1 OPEN TRENCH OPERATIONS

306-1.1 Trench Excavation

306-1.1.1 General

The third paragraph of Subsection 306-1.1.1 is hereby amended as follows:

Excavation is all unclassified and shall include the removal of all water and materials of whatever nature encountered, including rock and all other obstructions of any nature that would interfere with the proper execution and completion of the work. Removal of groundwater to a level below the structure subgrade is required.

306-1.1.2 Maximum Length of Open Trench

The first paragraph of Subsection 306-1.1.2 is amended as follows:

The maximum length of open trench shall be limited to that length that will permit pipe installation, compacted backfilling, and placement of temporary pavement at the end of each working day. Plating will be allowed only at the join points for the next day's work.

306-1.1.3 Maximum and Minimum Width of Trench

Subsection 306-1.1.3 is hereby supplemented as follows:

For recycled water pipelines, the overall trench width for pipes with diameters of 12 inches or less shall not be more than 16 inches nor less than 12 inches wider than the outside diameter of the pipe barrel (pipe O.D.) to be laid, therein, measured at a point 12 inches above the top of the pipe, exclusive of branches. Excavating and trenching shall be true to line so that the pipe is centered within the trench and a clear space of not more than 8 inches nor less than 6 inches in width is provided on each side of the pipe O.D.

For recycled water pipelines, the overall trench width for pipes with diameters of 14 inches or greater shall not be more than 24 inches nor less than 16 inches wider than the outside diameter of the pipe barrel (pipe O.D.) to be laid, therein, measured at a point 12 inches above the top of the pipe, exclusive of branches. Excavating and trenching shall be true to line so that the pipe is centered within the trench and a clear space of not more than 12 inches nor less than 8 inches in width is provided on each side of the pipe O.D.

306-1.1.5 Removal and Replacement of Surface Improvements

For areas with 30 inches or less of asphalt remaining between the edge of the water line trench and the lip of the existing gutter, the existing asphalt shall be removed to the lip of the gutter.

306-1.2 Installation of Pipe

306-1.2.1 Bedding

The fourth and fifth sentences in Paragraph 3 in Subsection 306-1.2.1 are amended as follows:

Bedding shall be water densified by fitting or densified by hand or mechanical means prior to backfilling. The densification method shall provide a uniformly compacted embedment of the pipe.

The seventh paragraph in Subsection 306-1.2.1 is amended as follows:

Special bedding shall be provided for all recycled water pipelines, PVC and ductile iron pipe. Bedding shall extend 4 inches below bottom of DIP and 6 inches below PVC pipe. All pipes shall have a bedding with a SE of 30 minimum. Bedding shall be imported sand with 100 percent passing a 3/8-inch sieve and not more than 20 percent passing a 200-mesh sieve.

Crushed rock bedding shall be placed, when in the opinion of the District, the ground is insufficiently stable to support the pipe. 3/4-inch maximum crushed rock shall be used and shall be per Subsection 200-1.2. The required depth below the grade of the bottom of the pipe will be ordered by the District. The crushed rock bedding shall be carefully placed and sufficiently compacted by tamping so as to support without settlement of the pipe.

All soft, spongy, and unstable material with bottom of the trench shall be removed to a depth not exceeding 2 feet, and as determined by the District, replaced with crushed rock bedding (3/4-inch rock).

Cement slurry backfill, if required by the District, shall consist of the one sack (94 pounds) Type II Portland cement added per cubic yard of import sand, except within 6 inches of a buried flexible pipe coupling. In which case, use one-half sack (25 pounds) hydrated lime added per cubic yard of imported sand.

306-1.2.2 Pipe Laying

Subsection 306-1.2.2 is hereby supplemented as follows:

Unless otherwise specified, all pipe shall be transported, handled, and installed in strict accordance with the manufacturer's recommendations. Pipe laying shall also conform to the requirements of AWWA C905 and C900 for PVC pipe and C600 for ductile iron pipe.

306-1.2.6 Field Jointing of Cast Iron Pipe

Subsection 306-1.2.6 is hereby supplemented with the following:

Ductile iron pipe and ductile iron fittings shall be installed in accordance with the applicable sections of AWWA C600 and as specified herein. Under no circumstances shall pipe or accessories be dropped or dumped into the trench. Under no conditions shall cable, rope, or other devices used for lowering pipe or fittings be attached through the pipe or fittings interior. Combined deflections at rubber gasket or flexible coupling joints shall not exceed 2 degrees or that recommended by the manufacturer, if smaller. Fittings shall be supported independently of the pipe. Until thrust blocks and supports are poured, fittings shall be temporarily supported by placing wood skids under the bells so that the pipe is not subjected to the weight of the fitting. All nut and bolt threads shall be lubricated with oil and graphite, "No-Oxide Grease" or "Newer-Seize" prior to installation.

306-1.2.13 Installation of Plastic Pipe and Fittings

Subsection 306-1.2.13 is hereby supplemented with the following:

PVC pipe construction shall conform to AWWA Manual No. M23, "PVC Pipe - Design and Installation," and the manufacturer's installation guide. Combined deflections at PVC pipe joints with factory-assembled bell couplings shall not exceed 2 degrees or that recommended by the manufacturer, if smaller. All fittings and valves shall be supported so that the pipe is not subjected to the weight of those appurtenances.

306-1.2.14 Flexible Coupling (All Pipes)

Subsection 306-1.2.14 is hereby added as follows:

Flexible couplings shall be installed according to the following:

1. Clean each pipe end for a distance of 6 to 8 inches. Remove oil, dirt, loose scale, and rust so that the gaskets will seat on the pipe barrel to

- provide a positive seal. Wire brushes or non-oily rags may be used, depending on the condition of pipe ends.
2. Slip the follower rings over the pipe ends and slide them back over the cleaned area.
 3. Wipe the gaskets clean, immerse them in soapy water or approved gasket lubricant, and slide them over the pipe ends.
 4. Clean the coupling middle ring, paying particular attention to flare on the ends where the gasket will seat. Slip the middle ring entirely over one end of the pipe.
 5. Position the end of the pipe to be joined to the other pipe such that a ½-inch gap is maintained between pipes. Center the coupling middle ring over the gap.
 6. Lubricate the pipe and the flares of the middle ring with soapy water or gasket lubricant. Slide the gaskets and followers into place making sure the gaskets are pushed under the middle ring flare all the way around.
 7. Insert the bolts. Nuts should be run on with the rounded or chamfered edge toward the follower ring.
 8. Wrenching should be done progressively, drawing up the bolts on opposite sides a little at a time and returning to retighten until all bolts have a uniform tightness. During wrenching it is advisable to strike the follower rings with a hammer occasionally to make sure they are seating properly.

Torque application shall be in accordance with the manufacturer's recommendations.

306-1.3 Backfill and Densification

306-1.3.1 General

The seventh paragraph of Subsection 306-1.3.1 is hereby deleted and replaced with the following:

Rocks greater than 4 inches in any dimension will not be permitted in backfill placed between 1 foot above the top of any pipe or box and the bottom of pavement sub grade.

306-1.3.2 Mechanically Compacted Backfill

The first paragraph of Subsection 306-1.3.2 is hereby supplemented with the following:

..., except under the following situation;

Recycled Waterline Trenches - Where densities are required which cannot be attained by water densified backfill in accordance with Section 306-1.3.3, the Engineer may authorize the use of impact, free-fall or "stomping" equipment to supplement the densification of the backfill.

306-1.3.3 Water Densified Backfill

Subsection 306-1.3.3 is hereby amended as follows:

Water densification of backfill by means of flooding or jetting will not be allowed, except as permitted, in writing, by the District for designated areas. In areas where densified backfill is permitted, it shall be in accordance with the unamended Subsection 306-1.3.3 or as directed by the District.

306-1.3.4 Compaction Requirements

Subsection 306-1.3.4 is hereby amended as follows:

Delete: 1) 85-percent relative compaction:

Insert: 1) 90-percent relative compaction;

Except as specified otherwise, trench backfill shall be compacted to a minimum of 90-percent relative compaction. All pipe bedding shall be compacted to a minimum of 90-percent relative compaction.

306-1.4 Testing Pipelines

306-1.4.1 General

Subsection 306-1.4.1 is hereby supplemented as follows:

The testing requirements for recycled water pipelines shall be as indicated for water pipelines herein.

306-1.4.5 Water Pressure Test

Subsection 306-1.4.5 is hereby supplemented as follows:

C = 0.25 for DIP with push-on joints

C = 0.25 for PVC pipe with elastomeric gasket joints

It is responsibility of the Contractor to obtain all water for filling and testing and to remove excess water from the project area. The Contractor is responsible for any damages as a result of testing operations.

The Contractor shall have all flanged joints at valves or special fittings exposed for visual inspection during the pressure test. After the pipeline has successfully met the pressure and leakage test requirements, the pipeline and appurtenances shall remain filled and so maintained until accepted for use by the District.

All blow-offs, combination air valves, services and appurtenant facilities shall be tested with the main line pipe.

Before testing, the backfill material shall have been compacted to the required compaction to the ground surface. All concrete anchor and thrust blocks shall be allowed to cure sufficient time to develop adequate resistance to thrust developed during testing (minimum 3 days).

The Contractor takes all responsibility for locating leaks and repairing damage to the pipe bedding, backfill and pavement section resulting from leaks discovered during the pressure test or subsequent pipe failures.

All noticeable leaks shall be stopped regardless of the results of the test and all defective pipe, fittings, valves, and other accessories discovered in consequence of the test shall be removed and replaced. Repair clamps of any kind or type shall not be allowed.

The pump, pipe connection, measuring devices, gages and all other equipment,

labor and materials required for performing the leakage test shall be furnished by Contractor. The District may, however, use District's measuring device in place of Contractor's equipment. In case of a difference in the measured leakage rate between the measuring devices, the District's measured leakage shall govern.

The test pressure shall be applied by means of a pump connected to the pipeline in a manner approved by the District.

The pressure test shall be maintained on the test section not less than 4 hours. The Contractor may at his convenience conduct a preliminary pressure test at any time prior to the District's pressure test. The results of the preliminary test will not be considered by the District.

The test pressure shall be the pipe class plus 10 percent as measured at the lowest elevation of the water main under test or as directed by the Engineer. No water pipeline shall be tested at less than the pressure classification or designation of the pipe.

The test pressure shall be maintained for the duration of the test. Whenever test pressure falls an amount of 5 psi, it shall be restored and the test restarted.

The amount of pipeline footage to be tested at one time shall be determined by the District.

The leakage test shall be held concurrently with the pressure test.

Each section of the water main to be tested shall be slowly filled with water from the nearest source by means approved by the District. The pipelines shall be filled with water and placed under a light pressure for at least 24 hours before the pressure test.

All air shall be vented from all high spots in the pipeline before making any pressure test. If hydrants or other outlets are not available, taps shall be made at the high points to expel the air by the Contractor at his own expense. These taps shall be capped after testing.

All valves shall be tested for leak-proof tightness after the mainline pressure test with the test pressure on one side of the valve and atmospheric pressure on the other side.

306-8 RECYCLED WATER PIPELINE INSTALLATION

306-8.1 General

Pipe shall be installed and jointed in accordance with AWWA Standard C600 for ductile iron pipeline and AWWA C900 and C905 for PVC pipeline with the manufacturer's recommendations and with approved tools and facilities. Pipe shall not be dropped into trench. Care shall be taken to prevent damage to pipe couplings and gaskets. Pipe joints shall not be deflected either vertically or horizontally beyond the limits specified by the manufacturer. Wood blocking under the pipe in lieu of earth mounds shall not be permitted.

306-8.2 Connection to Existing Recycled Water Lines

306-8.2.1 General

All connections shall be made only in the presence of the District, and no connection work shall proceed until the District has given notice to proceed. The Contractor shall furnish all pipe, materials, equipment, and labor required to make the connection, as well as assist the District in alleviating any hardships occurred during the shutdown for connections. Standby equipment or materials may be required by the District. The District may postpone or reschedule any shutdown operation if, for any reason, the District believes that the Contractor is improperly prepared with competent personnel, equipment, or materials to proceed with the connection work. If progress is inadequate during the connection operations to complete the connection in the time specified, the District shall order necessary corrective measures. All costs for corrective measures shall be paid by the Contractor. The District will operate all existing valves. The Contractor shall dewater existing mains, as required, with presence of the District. The Contractor shall be aware that existing valves (if present) may leak and that the installation of connections may be made under wet conditions. All valves, existing and newly installed, shall be readily accessible at all times to the District for emergency operation.

Contractor shall notify the District a minimum of 10 working days prior to the date of connection. The Contractor shall be responsible for determining in advance the grade, station, and offset of the existing pipelines prior to laying the last 100 feet of the new pipeline. The Contractor, upon approval from the District, shall make necessary cut-to-fit changes, adjusting line and grade as necessary. Where the changes create a high or low point in the pipeline profile, a standard combination air release or blow-off assembly shall be installed if directed by the District. In no event shall the new pipelines be connected to existing facilities until the new pipelines have been successfully pressure tested and disinfected.

306-8.2.2 Tapping Sleeves and Valves

Tapping valves shall conform to all requirements for gate valves and the additional requirements listed herein. One end of the tapping valve shall have slotted bolt holes to fit all standard tapping machines. Seat rings shall be oversized to permit the use of full-size cutters. Tapping sleeves shall be cast iron or steel and shall be mechanical joint. All steel tapping sleeves shall be epoxy coated. Gaskets shall be Buna-N rubber with a wide cross section. All bolts, nuts, and washers shall be Type 316 stainless steel, unless otherwise specified. The tapping sleeve shall be installed in accordance with manufacturer's instructions and to the satisfaction of the District. The pipe barrel shall be thoroughly cleaned with a wire brush to provide a smooth, hard surface for the sleeve. The sleeve shall be pressure tested in the presence of the District prior to tapping. Thrust blocks shall be provided at the tapping sleeve. Proposed tapping sleeves and valves shall be submitted to the Engineer for approval.

306-8.3 Valve Installations

306-8.3.1 General

1. The Contractor shall install the valves at the locations shown on the plans and on Standard Drawings.
2. The plans shall indicate the station, size, type, and end condition of all main line valves. The Standard Drawings shall indicate such information for appurtenant installations.
3. Valves shall be installed in a level position with the operating stem vertical, except where shown on the plans.
4. Butterfly valves operators shall be located on the left-hand side of the valve when standing on the flanged end of the valve (at the tee or cross) and looking through the valve toward the pipe end. Otherwise, the operator shall be installed on the sheet centerline side of the pipeline.
5. The Contractor shall coat all buried belts with two coats of "3M" Brand EC 244, or an approved equal. Wrap buried valves with 8-mil polyethylene wrap per AWWA C105.
6. Valves shall be stabilized and supported separately from the pipeline, as shown on the plans or on the Standard Drawings.
7. Main line and appurtenant valves shall be tested for leak-proof tightness after the main line pressure test, at the test pressure.

8. The Contractor shall install valve boxes at all valve locations, except where shown otherwise on the plans.
9. Valve location ties shall be made by the Contractor and shall be measured from the valve to two locations. One set of plans shall be marked with the tie locations and dimensions and submitted to the District upon completion of the work.
10. Tie locations shall be a chiseled "X" on the curb or a white 4-inch by 4-inch witness post set at the property line, or as required by the District.

306-8.3.2 Valve Box Installations

1. The Contractor shall install valve box cap and rim, sleeves, and valve operator extensions of the type indicated in the Standard Drawings at each valve location shown on the plans in accordance with the Standard Drawings.
2. Operator extensions and sleeves shall be centered and set plumb over the valve operator nut.
3. Operator extensions, where required, shall be fitted with and AWWA 2-inch square operating nut and a tapered socket end for the valve operating nut.
4. Operator extension shaft, nut, socket, and centering guide shall be painted with one coat of zinc chromate primer after fabrication.
5. The valve box caps shall be set flush with finished pavement surface.
6. The valve box cap shall be painted with two coats of purple.

306-8.4 Blow-off Assemblies

306-8.4.1 General

1. The Contractor shall install blow-off installations at the location shown on the plans in accordance with Standard Drawings.
2. The plans shall indicate the outlet station, size, direction, and location of the outlet.
3. The piping between the outlet valve and the riser shall be at a continuous

downgrade of not less than 1/4 inch per foot.

4. Where blow-offs are placed in sidewalk areas, the sidewalk shall be saw cut and removed to the nearest score line. The cover shall be set to sidewalk grade and the sidewalk replaced.
5. Where blow-offs are placed in unpaved areas, the cover and rim shall be set at the existing ground surface or as directed by the District.

306-8.5 Combination Air Release and Vacuum Valve Assembly

306-8.5.1 General

1. The Contractor shall install combination air release and vacuum valve assembly installations at the location shown on the plans in accordance with Standard Drawings.
2. The plans shall indicate the outlet station, size, direction, and location of the combination air valve assembly.
3. The piping between the outlet valve and the ell on the air valve riser shall be at a continuous up grade of 1/4 inch per foot.
4. The long axis of the valve shall be set parallel to the street.
5. The exposed vent pipe and guard posts, where used, shall be painted.
6. The number and position of guard posts, when required, will be shown on the plans or standard drawings.
7. The tap for the combination air valve shall be made in a level section of the pipe no closer than 18 inches to a bell, coupling, joint, or fitting.

306-8.6 Service Installations

1. The Contractor shall install recycled water services at the locations shown on the plans in accordance with Standard Drawings.
2. The plans shall indicate the water service station, size, direction, and location of the meter box.
3. The Contractor may open cut or bore service laterals as approved by

the District.

4. Splicing of copper pipe for 1-inch services is not allowed.

306-8.7 Precast Vaults, Manholes and Meter Boxes Installations

1. The Contractor shall install precast vaults and manholes at the locations shown on the plans or Standard Drawings.
2. The plan or standard drawing shall indicate the station, location, and size of the installation.
3. Reinforcement steel shall be Grade 40 or Grade 60 billet steel conforming to ASTM A-615 and shall be deformed according to ASTM A-305.
4. Concrete for vaults or manholes shall use Type II cement, and shall develop a minimum strength of 3,250 psi at 28 days in conformance to ASTM C-150. All coarse and fine aggregate shall conform to ASTM C-33.
5. Concrete for vault and manhole footings shall be Type II 450-C-2000, and poured against undisturbed or well-compacted soil to the dimensions shown on the plan or Standard Drawing.
6. Manholes
 - A. Fill joints between precast sections with dry pack crystalline waterproofing plus an outside gun grade elastomeric sealant. The entire manhole shall be waterproof. After backfilling is completed and dewatering is stopped the Contractor shall check for any leakage. All leakage shall be repaired by the Contractor.
 - B. Set each precast concrete manhole unit plumb on a bed of drypack crystalline to make a watertight joint at least 1-inch thick with the concrete base or with the preceding unit. Point the inside joint and wipe off the excess sealant. Secure the manhole frame to the grade ring with grout and cement mortar fillet. Backfill and compact and replace pavement.
 - C. Assemble units so that the cover conforms to the elevation determined by the manhole location as follows:
 - (1) In paved areas: Top of cover shall be flush with paving surface.
 - (2) In Shoulder Areas: Top of cover shall be flush with existing

surface where it is in traveled way of shoulder and 0.1 foot above existing surface where outside limits of traveled way but not in the existing roadside ditch.

- D. Backfill and compact around the manholes per Section 300 and pipe specification Section 306.
- 7. Coat interior and exterior of manholes and vaults with crystalline waterproofing per Section 210. The interior surface of the walls and roof shall be coated white. The exterior walls shall be coated gray.

306-8.8 Concrete for Thrust Blocks, Anchors and Pipe Cradles

306-8.8.1 General

1. Concrete thrust blocks, anchors, or pipe cradles shall be poured at the locations and with the dimensions shown on the Standard Drawings.
2. Portland Cement concrete Type II 450-C-2000 shall be poured against undisturbed soil and shall make positive contact with the pipe with a minimum thickness of 12 inches.
3. Sand bags may be used to provide form works for thrust blocks or anchors unless otherwise specified.
4. Concrete shall be placed such that bell ends of fittings shall be available for repairs. Concrete placed over joints shall be removed.
5. Reinforcing steel exposed directly to the soil shall be coated with Koppers Co. Bitumastic No. 505 Hot tar, or approved equal.

306-8.9 Flushing and Disinfection

306-8.9.1 General

Prior to acceptance of the lines by the District, the Contractor shall furnish all labor, equipment, material, and water for the proper cleaning and disinfection of the pipelines. Disinfection shall be accomplished by chlorination of the pipelines and appurtenances after passing the pressure and leakage tests. AWWA specification No. C651, Disinfecting Water Mains, and the following specific requirements shall govern such disinfection procedures.

All flushing and disinfection shall be made in the presence of the District. The Contractor shall notify the District not less than 24 hours in advance of the actual

time of flushing so that the District may observe the procedure.

When the pressure test, leakage test, chlorination or bacteriological test fail to meet the requirement of the specifications, the Contractor shall make necessary repairs, replacements or repetition of procedures to conform to the specified requirements at his own expense.

306-8.9.2 Flushing

The new mains shall be flushed prior to chlorination or as directed by the District. The flushing velocity to be obtained for pipes shall not be less than 2 feet per second.

The Contractor shall make all arrangements as necessary to provide the required flow to obtain the minimum velocity. The Contractor shall take due precaution in providing for adequate drainage from the site.

It is the responsibility of the Contractor to remove the flushing water or the chlorinated water from the project area. The Contractor is responsible for any damage as a result of flushing operations.

306-8.9.3 Chlorination

Disinfection shall be done after the pressure and leakage tests have been performed and accepted.

Chlorine used for disinfection must be liquid chlorine. (Gas at atmospheric pressure). When liquid chlorine is used, the method of application and precautions outlined in Section 5.2, 5.3, 6.1, and 6.2 of AWWA C-651 shall be followed, except as may be modified by the District. Chlorine shall be applied by the continuous feed method as outlined in Section 5.2 of AWWA C-651, except as may be modified by the District.

A chlorinating gas-water solution shall be injected into the pipeline at the beginning of the test section through a chlorination outlet, blow-off, or air valve by the means of a gas solution feeder chlorinator in combination with a booster pump, thus insuring treatment of the entire line. The gas-water solution shall be fed slowly into the new line to produce an initial minimum dosage of 50 ppm and a residual of not less than 25 ppm in all water within the pipeline after a 24-hour period.

During chlorination the combination air valves will be removed and the riser pipe capped after being filled with chlorinated water. Before reinstalling, the air valves will be sterilized with a 5 percent hypochlorite disinfecting solution. The air valves are to be reinstalled after chlorination, but prior to the bacteriological test.

Water used to convey the chlorine solution throughout the water main shall be obtained from the existing distribution system. The rate of flow shall be so controlled that water will flow slowly into the undisinfected main during the application of chlorine.

The end of the main being chlorinated shall be kept open and running during the application of chlorine and until the desired concentration is reached, after which each fire hydrant, or any other connection to the water main shall be individually opened and flushed with the chlorine solution. After the water main and all appurtenances thereto have been loaded with chlorine to the proper concentration, the water source, chlorine feeder and all other openings to the water main shall be closed. The initial minimum concentration shall not be less than 50 milligrams per liter of chlorine.

The chlorine content of the water shall be tested by the District, and if found to be less than 25 milligrams per liter after 24 hours contact, the water main and appurtenances shall be rechlorinated and held for another 24-hour period. No chlorination shall be started unless it can be completed by 1 p.m. on a Thursday.

During the period of chlorination, all main line valves and blow-off valves shall be operated to insure that the discs and seats are fully open to chlorinated water.

Upon approval of the chlorine residual at 24 hours by the District, the chlorine solution shall be flushed from the water main through each fire hydrant and blow-off. Flushing shall continue until the chlorine residual is not more than 5/10th (0.5) milligrams per liter as determined by the District.

In no case shall chlorine solution be over 5/10th (0.5) milligrams per liter be held in the main or appurtenances for more than 5 days from the initial injection to the final flushing.

Following chlorination, all treated water shall be flushed from the line until the chlorine residual is less than 1.2 ppm.

Placing the required number of calcium hypochlorite tablets to the top of each pipe section during the laying process will also be considered adequate chlorination. After chlorination, the water shall be flushed from the line at its extremities until the replacement tests are equal chemically and bacteriologically to those of the permanent source of supply. Samples of water for the specified bacteriologic test shall be taken from each end of the main. For mains over 2,500 feet in length, additional samples shall be taken at intermediate points in such a manner that at least one sample is taken for each 2,500 feet of main.

306-8.10 Recycled Water Identification

Recycled Water Identification tape shall be installed 12-inches above the pipe longitudinally and shall be centered. The identification tape shall be installed continuously for the entire length of the pipe and identification at no more than 5-foot intervals.

SECTION 310 - PAINTING

310-1 General.

310-1.5 Painting Schedule

	<u>Item</u>	<u>Color</u>	<u>No. of Coats</u>
1.	Valve Box Covers	(Primer) Purple	1 2
2.	Air Valve/Blow-Off Valves	(Primer) Purple	1 2
3.	Vault Covers (Top)	Primer Purple	1 2
4.	Air Valve Covers	Primer Purple	1 2
5.	Piping and Valves (in vault)	Primer Purple	1 2
6.	Guard Posts	Safety Yellow	2

310-6 PROTECTIVE COATINGS (FERROUS METALS)

Subsection 310-6 is hereby added to Section 310 as follows:

310-6.1 General. The Contractor shall furnish all material, labor, and equipment necessary to line and coat all piping, valves, fittings, pipe hangers, and other ferrous metal surfaces not shop lined and coated.

310-6.2 Surface Preparation. All ferrous surfaces to receive protective coatings shall be sandblasted to commercial standards per Subsection 310-2.5 of the Standard Specifications prior to the application of coatings. All surface irregularities such as weld spatter, sharp corners, rough welds, etc., shall be ground smooth. All surfaces shall be completely free of grease, oil and other foreign material.

310-6.3 Interior of Ferrous Surfaces. The interior surfaces of iron pipe and fittings shall be cement lined in accordance with the latest revised edition of AWWA C-104.

310-6.4 Buried Exterior of Ferrous Surfaces

310-6.4.1 Field Coat. All buried ferrous metal fittings and joints (valves, couplings, flanges, etc.) in contact with the soil shall be coated with two coats of 10 mils each of "3M" EC-244 protective coating or approved equal.

310-6.4.2 Polyethylene Encasement. All ductile iron pipe, fittings, and valves shall be encased with a minimum thickness of 8-mil polyethylene sheeting in accordance with ANSI A21.5 (AWWA C105).

Subsection 3-10.7 is hereby added to Section 310 as follows:

310-7 WATERPROOFING (CONCRETE)

310-7.1 General. The Contractor shall furnish all material, labor and equipment necessary to waterproof the interior and exterior of all manholes and vaults.

310-7.2 Surface Preparation

1. Do not treat concrete surfaces with chemical hardeners or curing agents prior to the application of waterproofing.
2. Examine surfaces to be waterproofed for form tie holes and structural defects, such as honeycombing, rock pockets, faulty construction joints, cracks, etc. Repair these areas in accordance with Section 303.
3. Concrete surfaces shall have an open capillary system to provide tooth

and suction and shall be clean, free from scale, form oil, laitance, curing compounds, and any other foreign matter. Lightly sandblast, water blast, or acid etch with muriatic acid (15% to 20%) to provide a clean absorbent surface. Saturate surfaces to be acid etched with water prior to application of acid. Vertical surfaces may have a sacked finish. Do not apply a slurry coat of water materials to horizontal concrete deck surfaces which are less than 20 hours old.

4. Use light sandblasting or etching to remove the surface glaze of dense or steel troweled concrete.
5. Abrasive clean and wash construction joints.

310-7.2 Application

1. After completing repairs, apply a tow-coat system to the concrete surfaces to be treated, apply after curing and finishes are complete. Application of waterproofing and any paint top coatings shall conform to the manufacturer's recommended application procedures.
2. The Contractor shall have the manufacturer's representative advise and /or supervise the waterproofing application in person.
3. Apply crystalline waterproofing material to concrete which has been thoroughly saturated with clean water. Moisten surfaces to be treated prior to application. Remove free water prior to application of waterproofing material.
4. Apply crystalline waterproofing to:
 - A. Interior walls and roof of concrete vaults and manholes. Exterior walls of concrete vaults and manholes.
 - B. Points of precast concrete manholes as shown on the plans.
 - C. The interior surfaces shall have a white color and the exterior a grey color.
5. Apply second coat when the first coat has reached an initial set. Use light water spray on surfaces to be coated if rapid drying occurs.

310-7.3 Backfilling

1. Do not backfill against structures for at least seven days after application of waterproofing.

2. Prior to backfilling, check treated surfaces for newly developed cracks. Repair cracks and cure surface for 48 hours before backfilling. Do not backfill with dry material until after complete cure of coating.

Subsection 313 is hereby added as follows:

SECTION 313 - CATHODIC PROTECTION

313-1 General

Cathodic protection installation shall conform to NACE Publication RP0169-92 Recommended Practice, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems" and ANSI C2.

313-2 Bare Anodes (Multiple Ingots)

313-2.1 Ingot Inspection

Each magnesium anode shall be inspected to insure that there are no surface cracks over 1/16" thick. Thinner cracks or fissures are normal. Anodes with greater than 1/16" thick cracks over 6" long shall be rejected.

313-2.2 Connection Inspection

All lead wires shall be inspected to insure that the lead wire is securely connected to the anode core and that no damage has occurred to the lead wire or its insulation. Anode lead wire to anode connection failures shall require replacement of the complete anode and lead wire assembly.

313-2.3 Assembly

Bare anodes are required at each multiple anode site. The magnesium ingots shall be placed side-by-side at the bottom of a 16" diameter augured hole. The long dimension of the ingots shall be vertical. The anodes shall be placed such that they will be fully surrounded by the slurry backfill. The ingots may touch each other.

313-2.4. Location

Anodes are to be installed in augured holes placed just off of the pipeline as indicated in the drawings and at the locations called out on the corrosion test station list in the drawings. The perpendicular distance from the pipe to the anode centerline may, and should, be adjusted up to 10 feet if there are no conflicts with other utilities. Anode positions along the pipe can be adjusted slightly to avoid interference with existing structures. Alternate anode positions, adjusted horizontally more than 10 feet must be approved by the Engineer and recorded on the as-built drawings.

313-2.5 Handling

Care shall be taken to insure that the anode ingot is never lifted, supported, transported or handled by the lead wire. All anodes shall be lowered into the hole using a removable sling or a rope.

313-2.6 Anode Hole Size and Depth

Anode hole shall be 16" (minimum) diameter. The depth of the hole shall be 12 feet minimum, as measured from finish grade to the bottom, or such that the bottom of the anode is 6 feet below pipe invert depth.

313-2.7 Backfill Slurry Preparation

The backfill material shall be mixed in batches with water. Add only enough water to allow the slurry to flow around and conform to the shape of the anode. The slurry shall have the consistency of a thick, but pourable, paste. It is important not to use excessive water.

313-2.8 Anode Hole Backfill

Once the anodes are in the hole they shall be lifted or spaced off the bottom at least 3" such that the backfill slurry can completely surround them. Slowly pour the slurry backfill into the hole such that it completely surrounds the anodes and that there are no voids. The slurry shall cover the top of the anodes by at least 3 inches. After the anode is covered with backfill the remainder of the hole shall be filled with native, rock-free soil. The soil shall be tamped and compacted in 18 inch lifts taking care not to damage the anode lead wire.

313-3 Wire and Cable

All buried wires shall be installed, without splices, in a trench with a minimum depth of 24 inches. All wires shall terminate in a test box and shall have 18 inches of slack coiled at the attachment point and in the test box.

313-3.1 Anode Lead Wire

One or two anode lead wires shall be connected to one end of a shunt with a split-bolt connector as shown in the drawings. Split bolts shall be wrapped with insulating putty and electrical tape.

313-3.2 Pipe Lead Wires

Pipe lead wires shall terminate unconnected in a test box. Connections to anodes, via the shunts, shall be made by the WBMWD representative when the system is activated. The Contractor shall provide a split-bolt connector (left unwrapped in the test box) for this purpose.

313-3.3 Bond Wires

Two (2) bond wires are required across all non-insulating mechanical joints such as: valves, flanges, couplings and fittings. A third bond wire from the pipe to the valve or coupling is required at buried valves or couplings. Bond wires shall be as short as possible.

313-3.4. Lead Wire Attachment

Test and bond wire leads shall be attached to the pipe using the alumino-thermic weld process as shown in the sketches and as described below.

313-4 Wire Trenching and Backfilling

313-4.1 Trenching

All buried lead wires shall be installed without splices in a trench with a minimum depth of 24 inches.

313-4.2 Wire Backfilling

The bottom of the finished trench shall be sand or stone-free earth. Lead wire shall be centered in the bottom of the trench, covered and tamped in 6 inch layers of stone free earth. Soil compaction shall be as specified in Section 02223. Do not stretch or kink the conductor. Do not place roots, wood scraps, organic matter or refuse in the backfill.

313-4.3 Plastic Warning Tape

Plastic warning tape shall be installed in all wire trenches approximately 12 inches below finished grade.

313-4.4 Damaged Wire

Care shall be taken when installing wire and backfilling the trench so that the insulation is not stretched or kinked and that the conductor is not broken, cut or bruised. If wire insulation is damaged during installation, it shall be rejected and

replaced completely at the Contractor's expense. All rejected wire shall be removed from the job site at the close of each work day.

313-5 Insulating Flange Kits

313-5.1 Flange Kits

Insulating kits shall be installed as shown on standard drawings and as recommended by the manufacturer. Moisture, soil, or other foreign matter must be carefully prevented from contacting any portion of the mating surfaces prior to installing insulator gaskets. If moisture, soil, or other foreign matter contacts any portion of these surfaces, the entire joint shall be disassembled, cleaned with a suitable solvent and dried prior to reassembly.

313-5.2 Alignment

Alignment pins shall be used to properly align the flange and gasket.

313-5.3 Bolt Tightening

The manufacturer's recommended bolt tightening sequence shall be followed. Bolt insulating sleeves shall be centered within the insulation washers so that the insulating sleeve is not compressed and damaged.

313-6 External Insulating Flange Coating (Buried Flanges Only)

All buried insulating flanges shall be coated with petrolatum tape in accordance with NACE RP0375 and as follows. NACE RP0375 shall govern.

313-6.1 Primer

Flange surfaces must be cleaned of all dirt, dust and loose rust or mill scale by wire brush and by wiping with a clean cloth. The surface shall be dry. Apply primer by hand or brush. A generous coating of primer shall be applied to all surfaces and worked into all crevices. Additional primer shall be applied around bolts, nuts and in threads, and shall completely cover all exposed surfaces and fill all voids. The primer should overlap the pipe coating by a minimum of 3 inches.

313-6.2 Wax-Tape

The petrolatum wax-tape can be applied immediately after primer application. Short lengths of tape shall be cut and carefully molded around each individual bolt, nut and stud-end. After all bolts are covered the tape shall be

circumferentially wrapped over the flange with sufficient tension and pressure to provide continuous adhesion without stretching the tape. The tape shall be formed by hand into all voids and spaces. There shall be no gaps or air spaces under the tape. The tape shall be applied with at least a 55% overlap. The wax-tape system shall have a minimum thickness of 50 mils over smooth surfaces and 100 mils over sharp projections such as bolts and nuts.

313-6.3 Outer Covering

The clear plastic outer covering shall be applied by hand such that the material conforms and adheres to the wax-tape surface. Two layers of plastic outer wrapping shall be applied.

313-7 At-Grade Test Stations

313-7.1 Location

At-grade test boxes shall be located at the side of the road just behind the curve and opposite the test wire connection point. In un-paved areas test boxes shall be located directly over the pipe.

313-7.2 Native Soil

Native soil shall be accessible inside all test boxes. The test boxes shall not be filled with sand, gravel, rocks, concrete or any other foreign material. Plastic risers used to protect the test wires during construction shall be removed.

313-7.3 Concrete Pad

A 24" square by 4" deep concrete pad is required around each at-grade test station that is not located in a paved area.

313-7.4 Brass Tags

All leads in test boxes shall be identified with brass tags as shown in the standard drawings. The tags shall be securely attached to the lead with a bare No. 14 or 16 copper wire and die stamped with the characters as shown in the standard drawings.

313-8 Wire to Pipe Connections

All connections of copper wires to the cathode/structure shall be made by the alumino-thermic weld method as shown in the standard drawings.

313-8.1 Preparation of Wire and Cable

Use a cutter to prevent deforming cable ends. Do not deform cable. Clean oily or greasy cable with a rapid-drying solvent which leaves no residue. Remove only enough insulation from the cable to allow the thermite weld connection to be made.

313-8.2 Preparation of Metal

Remove all coating, dirt, grime and grease from the metal structure at weld locations by wire brushing and/or use of suitable safe solvents. Clean the structure to a bright, shiny surface free of all serious pits and flaws by using a file. The area of the structure where the attachment is to be made must be absolutely dry.

313-8.3 Wire Position

The wire is to be held at a 30 degree angle to the surface when welding. Only one wire shall be attached with each weld.

313-8.4 Testing of All Completed Welds

As soon as the weld has cooled, the weld shall be tested by the Contractor for strength by striking a sharp blow with a two pound hammer while pulling firmly on the wire. All unsound welds shall be rewelded and retested. All weld slag shall be removed from the weld with a wire brush.

313-8.5 Coating of All Completed Welds

Assure that the area to be coated is thoroughly wire brushed, clean and completely dry. Apply a preformed elastomeric weld cap to all direct buried welds in accordance with the manufacturers recommendations. Apply a generous bituminous mastic coating material over the weld (and weld cap) and to all exposed areas. This coating shall overlap the pipe coating a minimum of three inches. Allow sufficient time to dry before backfilling.

SECTION 314 - TESTING AND INSPECTION

314-1 Responsibility for Testing

All testing and inspection shall be the responsibility of the Contractor. The Engineer shall be notified before all testing. The Engineer, at his discretion shall be present during all testing. Test reports, prepared by the Contractor, shall be required as indicated below.

314-2 Test Leads and Bond Wire Welds

314-2.1 Test Method

All completed wire connection welds shall be tested for strength by striking the weld with at least two sharp blows with a two pound hammer while pulling firmly on the wire. Welds failing this test shall be re-welded and re-tested. Wire welds shall be spot tested by the Engineer. After backfilling pipe all test lead pairs shall be tested using a standard ohmmeter for broken welds. The resistance shall not exceed 150% of the total wire resistance as determined from published wire data.

314-2.2 Notification

Contractor shall notify the Engineer of Inspector one day in advance of each day test or bond wires are to be installed.

314-2.3 Report

No report required.

314-3 Test Lead Trenching and Backfill

314-3.1 Inspection Method

The depth, trench bottom padding and backfill material shall be measured and inspected.

314-3.2 Notification

Contractor shall notify the Engineer of Inspector one day in advance of each day wire trenches are to be backfilled.

314-3.3 Report

No report required.

314-4 Insulator Testing

314-4.1 Test Method

Insulating flange kits shall be tested prior to coating the flange and backfilling in the presence of the Contractor. The assembled flange shall be tested with an insulator testing device (i.e., Gas Electronics Model 601 Insulation Checker) specifically designed for this purpose. The testing shall be done by a qualified Corrosion Engineer or a technician determined by the Engineer to be trained and qualified in the technique of testing dielectric insulators.

314-4.2 Acceptance

The installation shall be considered complete when the test results indicate that no shorts or partial shorts are present. The Contractor shall assist the Engineer in finding partial shorts or shorted bolts. All disassembly and re-assembly necessary to gain the acceptance of the Engineer shall be done at the Contractor's expense.

314-4.3 Notification for Inspection

The Contractor shall notify the Engineer at least 5 days in advance of the completion of insulator installations.

314-4.4 Report

Contractor shall submit a report identifying each insulator tested by size and station number and confirming acceptance. The Engineer, present at the time of the testing shall be identified by name.

314-5 Continuity Testing

314-5.1 Resistance Technique

Continuity tests shall be conducted by the Contractor under the direct supervision of a Qualified Corrosion Engineer. Pipeline continuity tests shall consist of measuring the linear resistance of individual pipe sections between two adjoining test stations (2 wire minimum) such that the entire line is tested. The resistance of the pipe section is measured by applying a known DC current through the section and measuring the IR drop. Current can be applied through the pipe using any DC source such as a battery. The IR drop shall be measured at least three different current values. Instruments used shall be sufficiently sensitive to measure a resistance equal to plus or minus 5% of the calculated resistance of the pipe section.

314-5.2 Alternate Techniques

Alternate continuity test methods may be submitted by the Contractor. Alternate methods and criterion for acceptance must be fully described in writing and examples of successful pipeline continuity testing cited with reference names and telephone numbers.

314-5.3 Acceptance

The continuity of the pipeline shall be considered acceptable if the actual resistance measured as described above is equal to or less than 130% of the calculated pipe section resistance. The calculated resistance shall include cylinder resistance, bond clip or wire resistance, and fringing resistance at bonded pipe joints. If the actual resistance is greater than 130% of the calculated value the Contractor shall, at his own expense, locate the open joint or joints, make all necessary corrections and retest until the resistance is less than this criterion.

314-5.4 Notification for Testing

The Contractor shall notify the Engineer at least 5 days in advance of the completion of each pipeline sub-reach (including all joint bonding and installation of test stations) and in advance of road paving operations.

314-5.5 Report

The Corrosion Engineer, retained by the Contractor, shall submit a report which includes all continuity test data, resistance calculations and conclusions for each section of pipe tested. The report must be accepted by the Engineer before the Work is considered complete.

314-6 External Coating at Insulators

314-6.1 Test Method

The Contractor, in the presence of the Engineer, shall inspect the completed flange coating for compliance with these specifications. No insulators shall be backfilled before they are inspected.

314-6.2 Notification

The Contractor shall notify the Engineer at least five days in advance of backfilling all coated insulating flanges.

314-6.3 Report

The Contractor's report confirming insulator acceptance shall also confirm that all buried insulators were coated according to these specifications and examined by the Engineer.

314-7 Corrosion Test Stations

314-7.1 Inspection Method

Each test station shall be visually inspected for compliance with these specifications and local codes and standards. The Engineer shall verify that each lead wire is properly identified with a securely attached brass tag.

314-7.2 Notification

The Contractor shall notify the Engineer when all test stations are complete and ready for testing.

314-7.3 Report

No report required.

314-8 Anode Performance

314-8.1 Installation Inspection

The Engineer shall observe the installation of anodes at his discretion and verify anode location, depth, lead wire condition and proper soaking procedures.

314-8.2 Anode Test Method

A qualified corrosion engineer, retained by the Contractor, shall measure the open circuit potential of each anode with a high impedance voltmeter and a copper/copper sulfate reference cell. The open circuit potential shall be within 50 millivolts of the manufacturer's stated value. The corrosion engineer shall also measure and record the anode current at each anode bed after the system is activated.

314-8.3 System Performance Test Method

All tests shall be conducted by a qualified corrosion engineer. Prior to connecting the anodes to the pipe the pipe-to-soil potential (unprotected) shall be measured at each test station and at several sites over the pipe (at least 100 feet from anode beds) using a wire reel to maintain connection to the pipe. After all

anodes are connected an identical pipe-to-soil potential survey shall be taken and recorded.

314-8.4 Notification

The Contractor shall notify the Engineer at least 5 days prior to the installation of anodes and 5 days prior to the system activation and survey.

314-8.5 Report

The corrosion engineer shall submit a report which includes all test data, conclusions, discussion of system performance and recommendations for modifications and monitoring as required.

314-9 Compliance with Specifications

314-9.1 Deficiencies

Any deficiencies or omissions in materials or workmanship found by these tests shall be rectified by the Contractor at his expense. Deficiencies shall include but are not limited to: unconnected or broken test or anode leads; shallow wire trenches; improper or un-clean wire trench backfill; inadequate wire trench padding; lack of 18" slack wire on each test lead at each connection point and in each test box; shorted or partially insulators; inadequate insulator coating; failure to notify the Engineer in sufficient time to test buried insulators; high metallic pipeline resistance; zero current anodes; and improperly mounted test boxes.

SECTION 00700

STANDARD SPECIFICATIONS

WEST BASIN MUNICIPAL WATER DISTRICT

The work to be done under this Contract requires the completion of all work in accordance with the Bidding and Contract Requirements herein, and the current edition of the following Standard Specifications, as modified herein.

The Standard Specifications for this project are defined as the Standard Specifications for Public Works Construction, the 1997 Edition (Green Book) including all supplements, as written and promulgated by the Joint Cooperative Committee of the Southern California Chapter of the Associated General Contractors of California. Copies of these Standard Specifications are available from the publisher, Building News Incorporated, 3055 Overland Avenue, Los Angeles, California 90034, telephone 213/202-7775.

Refer to the Section 00800 for Supplemental Standard Specifications.

The Standard Specifications set forth above will control the Bidding and Contract Requirements, construction materials, and construction methods for this Contract except as amended by the plans, Supplemental Standard Specifications or other contract documents.

The District and its Representatives are not responsible for job site safety. The District and its Representatives will not direct, supervise or lay out the work of the contractor or any subcontractor.

The District and its Representatives shall be responsible for their activity and that of their employees on the site. This shall not be construed to relieve the general contractor, or any subcontractor of their obligation to maintain a safe job site. Neither the professional activities nor the presence of The District or its employees and Consultants shall be understood to control the operations of others, nor shall it be construed to be an acceptance of the responsibility for job site safety.

The contractor shall, in writing, acknowledge responsibility for the job site safety and acknowledges that the District and its Representatives will not have such responsibility and that if the District and its Representatives are sued by one of the contractor or subcontractor's employees, or anyone else, that the contractor will indemnify, defend, and hold the District and its Representatives harmless of any and all such claims.

WEST BASIN MUNICIPAL WATER DISTRICT

STANDARD DRAWINGS

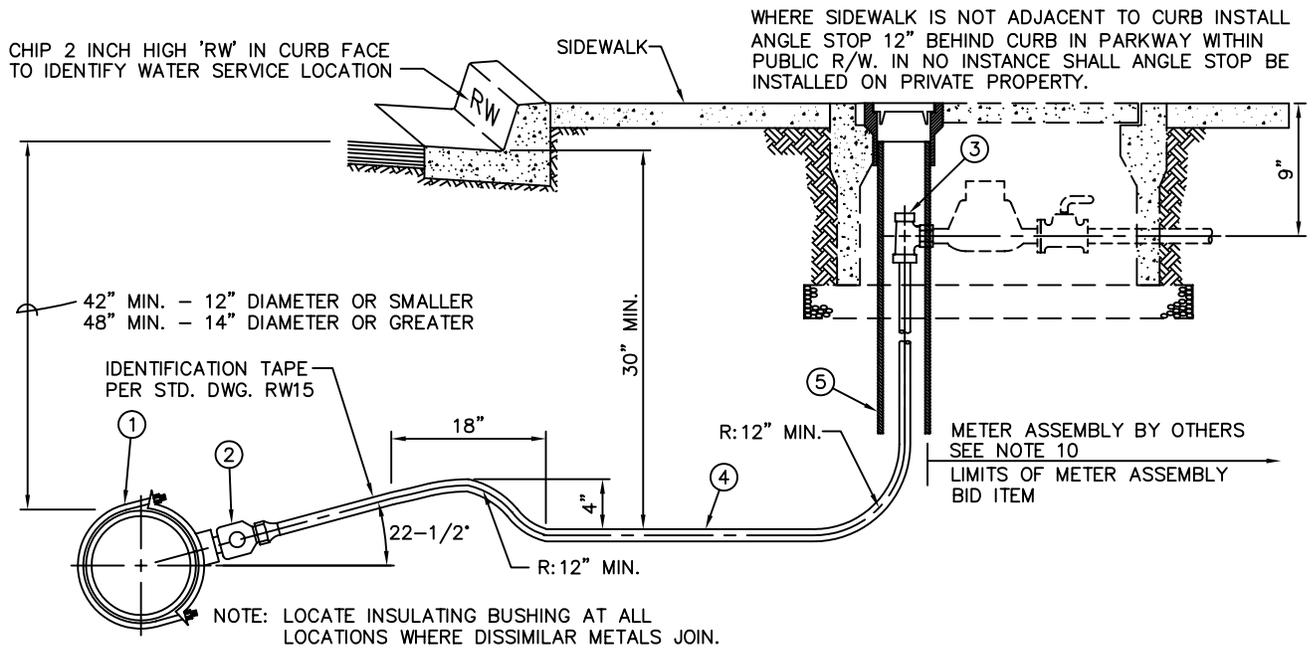
TABLE OF CONTENTS

<u>Drawing No.</u>	<u>Description</u>
RW1	1-Inch Recycled Water Service
RW2	1-1/2-Inch Recycled Water Service
RW3	2-Inch Recycled Water Service
RW4	3 and 4-Inch Recycled Water Service
RW5	6, 8 and 10-Inch Recycled Water Service
RW6	Tapping of PVC or DIP Mains
RW7	Valve, Valve Box and Cover
RW8	Valve Stem Extension
RW9	1-Inch and 2-Inch Combination Air Release and Vacuum Valve Assembly
RW10	3-Inch and 4-Inch Combination Air Release and Vacuum Valve Assembly
RW11	3-Inch and 4-Inch Air Valve Cover
RW12	Dead End with Temporary 2-Inch Blow-off
RW13	4-Inch Blow-off
RW14	Retaining Wall Detail
RW15	Recycled Water Pipe Identification
RW16	Warning Tags and Identification Tape
RW17	Pipe Trenching and Bedding
RW18	Trench and Paving Section
RW19	Typical Thrust Blocks
RW20	Steel Casing Pipe
RW21	Criteria for the Separation of Water Mains from Recycled Water Mains
RW22	Double Check and Reduced Pressure Backflow Assembly
RW23	Blanket Protection for Pipes
RW24	Concrete Saddle for Existing Pipes Crossed under New Pipe
RW25	Concrete Encasement
RW26	Guard Post
RW27	Sign Post
RW28	Marker Post
RW29	Pipe Support and Dimension Table
RW30	Wall Penetration Seal
RW31	Gasket Joint
RW32	Carnegie Welded Joint
RW33	Lap Welded Slip Joint

TABLE OF CONTENTS

<u>Drawing No.</u>	<u>Description</u>
RW34	Butt Weld
RW35	Butt Strap Joint for Pipes 24-Inches and Larger
RW36	Weld Lead Outlet
RW37	4 to 30-Inch Outlet Detail
RW38	Typical Handhole
RW39	Buried Access Manway
RW40	2-Inch Outlet Detail
RW41	Final Connection Detail
RW42	Pipeline Curves
RW43	Pipe Plug Detail
RW44	Insulating Flange
RW45	Typical Thrust Tie and Lug for Steel Pipe
RW46	Thrust Rod and Lug Plate Schedule for RW45
RW47	Standard Recycled Water System Notes

<u>Drawing No.</u>	<u>Description</u>
CP1	Buried Mechanical Joint Bonding Detail (Steel or Ductile Iron Pipe)
CP2	Pipe Joint Bonding Detail
CP3	At-Grade Test Box
CP4	Above-Grade Insulating Flange
CP5	Buried Insulating Test Station Detail
CP6	Buried Insulating Flange Kit Detail
CP7	Buried Insulating Flange Wiring Diagram
CP8	Two-Wire Test Station
CP9	Four-Wire Casing Test Station
CP10	Alumino-Thermic Weld Detail
CP11	Pre-Packaged Magnesium Sacrificial Anode
CP12	Dual Magnesium Anode Detail
CP13	Anode Installation detail Type "A"
CP14	Anode Installation detail Type "B"
CP15	Anode Installation detail Type "C"
CP16	Anode Installation detail Type "D"
CP17	Anode Installation detail Type "E"
CP18	Anode Installation detail Type "F"
CP19	Anode Installation detail Type "G"



CONSTRUCTION ITEMS / MATERIALS LIST			
ITEM NO.	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	SERVICE SADDLE WITH CC THR'D. FOR: POLYVINYL-CHLORIDE PIPE (PVC) DUCTILE-IRON PIPE (D.I.P.)	MUELLER JAMES JONES MUELLER FORD	H-13000 SERIES J-996 DR 2A SERIES F-202B
②	1" BRONZE CORPORATION STOP, INSULATING BUSHING	MUELLER JAMES JONES	H-15000 J-1930
③	1" BRONZE ANGLE BALL METER VALVE WITH LOCKWING	FORD MUELLER JAMES JONES	BA 23-444W B-24255 J-1964W
④	1" COPPER TUBING	---	TYPE "K" SOFT
⑤	VALVE BOX AND COVER PER STANDARD DRAWING RW7	---	---

NOTE:

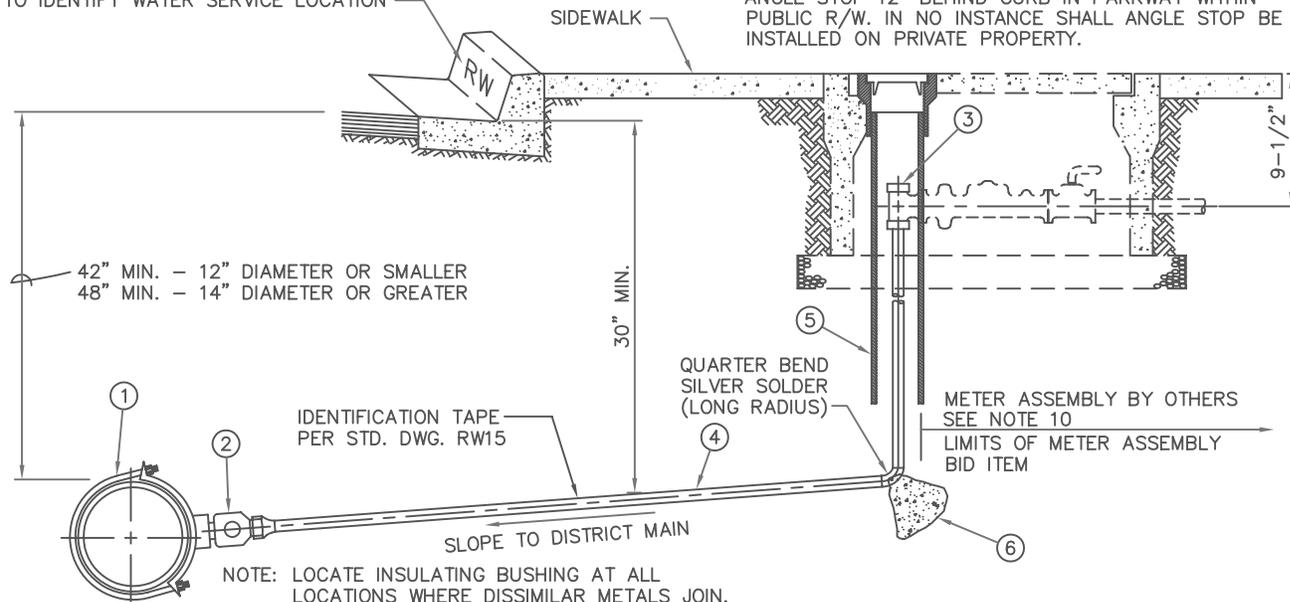
- DOUBLE STRAP SERVICE SADDLE FOR ALL MAINS.
- INSTALL CORPORATION STOP WITH KEY SIDEWAYS, IN OPEN POSITION (FOR HOT TAP).
- THE CORPORATION STOP TAP WILL BE MADE AS SPECIFIED BY THE PIPE MANUFACTURER. ALL DRY TAPS WILL BE MADE USING MACHINE GUIDE OR PILOT TAP.
- THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
- NO TAP TO MAIN SHALL BE WITHIN 24" OF VALVE, COUPLING, JOINT, OR FITTING.
- NO SPLICES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 60 FEET, IN WHICH CASE A SILVER SOLDER COUPLING SHALL BE USED.
- SERVICE TERMINATION POINT SHALL NOT BE PLACED IN DRIVEWAYS.
- WARNING TAG SHALL BE PLACED ON THE METER.
- TRENCH BACKFILL SHALL BE ONE SACK SLURRY (100-E-100) AS REQUIRED BY LOCAL JURISDICTIONAL AGENCY/CITY, UNLESS OTHERWISE SHOWN.
- METER BOX AND ASSEMBLY TO BE FURNISHED AND INSTALLED BY PURVEYOR.
- ALL SWEAT FITTINGS SHALL BE ASSEMBLED WITH SILVER SOLDER.
- FINAL LOCATION OF METER ASSEMBLY SHALL BE CONFIRMED WITH THE DISTRICT AND THE PURVEYOR PRIOR TO CONSTRUCTION.

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REVISION	DRAWN	APP'D.	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	STANDARD DRAWING RW1
MARCH 2010					
APPROVED				1-INCH RECYCLED WATER SERVICE	
DISTRICT ENGINEER		RCE	DATE		

CHIP 2 INCH HIGH 'RW' IN CURB FACE TO IDENTIFY WATER SERVICE LOCATION

WHERE SIDEWALK IS NOT ADJACENT TO CURB INSTALL ANGLE STOP 12" BEHIND CURB IN PARKWAY WITHIN PUBLIC R/W. IN NO INSTANCE SHALL ANGLE STOP BE INSTALLED ON PRIVATE PROPERTY.



NOTE: LOCATE INSULATING BUSHING AT ALL LOCATIONS WHERE DISSIMILAR METALS JOIN.

CONSTRUCTION ITEMS / MATERIALS LIST

ITEM NO.	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	SERVICE SADDLE WITH CC THR'D. FOR: POLYVINYL-CHLORIDE PIPE (PVC) DUCTILE-IRON PIPE (D.I.P.)	MUELLER JAMES JONES MUELLER FORD	H-13000 SERIES J-996 DR 2A SERIES F-202B
②	1-1/2" BRONZE CORPORATION STOP, INSULATING BUSHING	MUELLER JAMES JONES	H-15000 J-1930
③	1-1/2" BRONZE ANGLE BALL METER VALVE WITH LOCKWING	FORD MUELLER JAMES JONES	FV23-777W B-24286 J-1973W
④	1-1/2" COPPER TUBING	---	TYPE "K" SOFT
⑤	VALVE BOX AND COVER PER STANDARD DRAWING RW7	---	---
⑥	THRUST BLOCK - 0.7 CU. FT.	---	---

NOTE:

- DOUBLE STRAP SERVICE SADDLE FOR ALL MAINS.
- INSTALL CORPORATION STOP WITH KEY SIDEWAYS, IN OPEN POSITION (FOR HOT TAP).
- THE CORPORATION STOP TAP WILL BE MADE AS SPECIFIED BY THE PIPE MANUFACTURER. ALL DRY TAPS WILL BE MADE USING MACHINE GUIDE OR PILOT TAP.
- THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
- NO TAP TO MAIN SHALL BE WITHIN 24" OF VALVE, COUPLING, JOINT, OR FITTING.
- NO SPLICES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 60 FEET, IN WHICH CASE A SILVER SOLDER COUPLING SHALL BE USED.
- SERVICE TERMINATION POINT SHALL NOT BE PLACED IN DRIVEWAYS.
- WARNING TAG SHALL BE PLACED ON THE METER.
- TRENCH BACKFILL SHALL BE ONE SACK SLURRY (100-E-100) AS REQUIRED BY LOCAL JURISDICTIONAL AGENCY/CITY, UNLESS OTHERWISE SHOWN.
- METER BOX AND ASSEMBLY TO BE FURNISHED AND INSTALLED BY PURVEYOR.
- ALL SWEAT FITTINGS SHALL BE ASSEMBLED WITH SILVER SOLDER.
- FINAL LOCATION OF METER ASSEMBLY SHALL BE CONFIRMED WITH THE DISTRICT AND THE PURVEYOR PRIOR TO CONSTRUCTION.

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REVISION	DRAWN	APP'D.	DATE
MARCH 2010			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

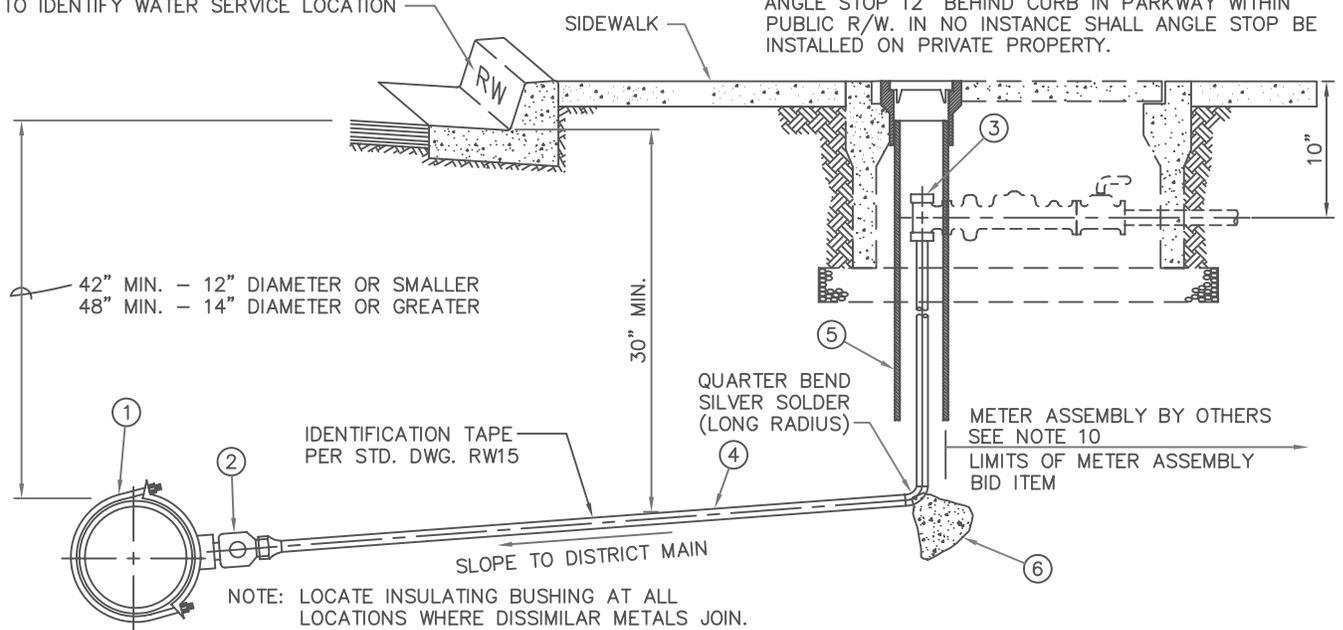
WEST BASIN MUNICIPAL WATER DISTRICT

1-1/2-INCH RECYCLED WATER SERVICE

STANDARD
DRAWING
RW2

CHIP 2 INCH HIGH 'RW' IN CURB FACE TO IDENTIFY WATER SERVICE LOCATION

WHERE SIDEWALK IS NOT ADJACENT TO CURB INSTALL ANGLE STOP 12" BEHIND CURB IN PARKWAY WITHIN PUBLIC R/W. IN NO INSTANCE SHALL ANGLE STOP BE INSTALLED ON PRIVATE PROPERTY.



NOTE: LOCATE INSULATING BUSHING AT ALL LOCATIONS WHERE DISSIMILAR METALS JOIN.

CONSTRUCTION ITEMS / MATERIALS LIST

ITEM NO.	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	SERVICE SADDLE WITH CC THR'D. FOR: POLYVINYL-CHLORIDE PIPE (PVC) DUCTILE-IRON PIPE (D.I.P.)	MUELLER JAMES JONES MUELLER FORD	H-13000 SERIES J-996 DR 2A SERIES F-202B
②	2" BRONZE CORPORATION STOP, INSULATING BUSHING	MUELLER JAMES JONES	H-15000 J-1930
③	2" BRONZE ANGLE BALL METER VALVE WITH LOCKWING	FORD MUELLER JAMES JONES	FV23-777W B-24286 J-1973W
④	2" COPPER TUBING	---	TYPE "K" SOFT
⑤	VALVE BOX AND COVER PER STANDARD DRAWING RW7	---	---
⑥	THRUST BLOCK - 0.7 CU. FT.	---	---

NOTE:

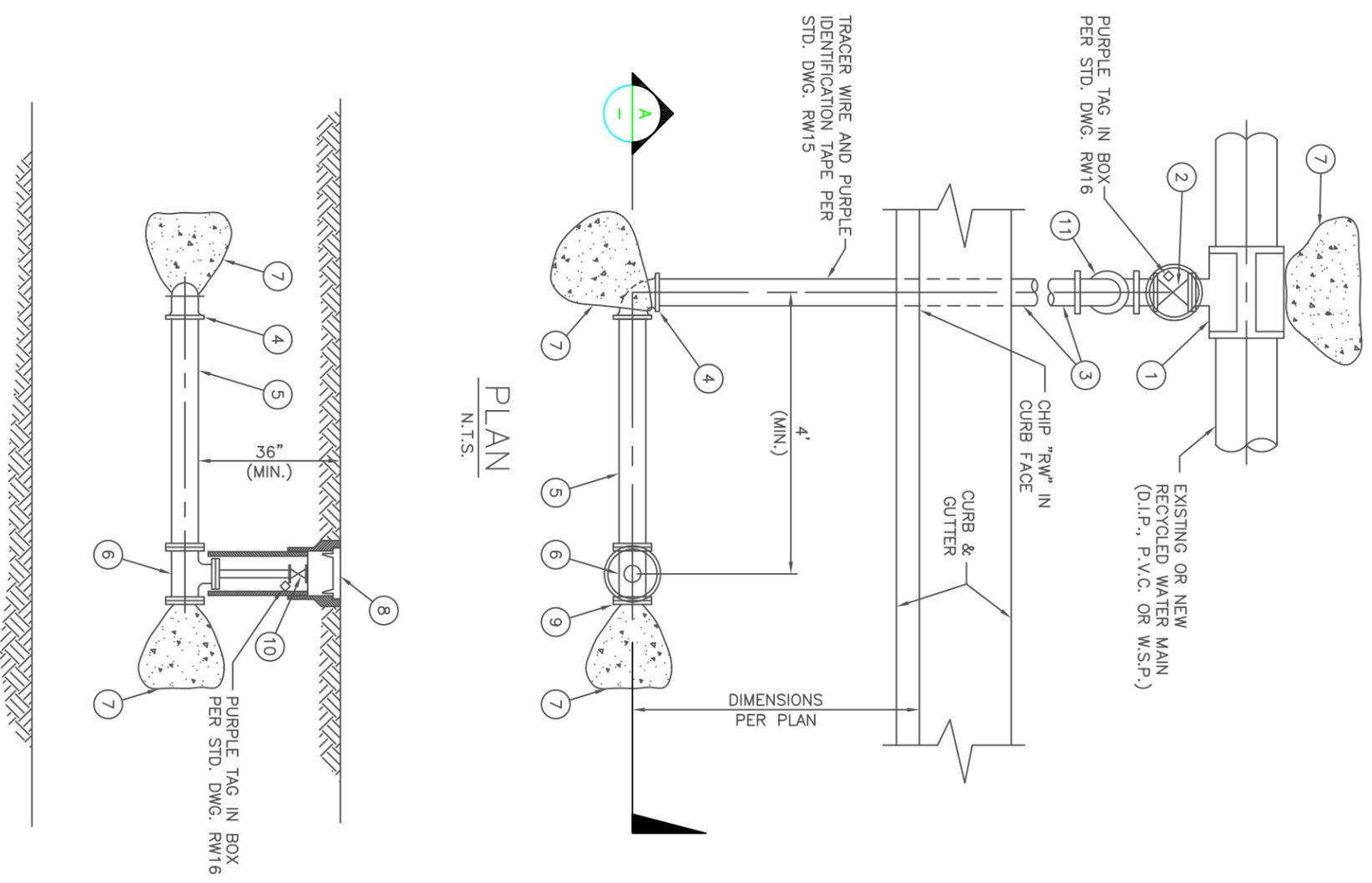
- DOUBLE STRAP SERVICE SADDLE FOR ALL MAINS.
- INSTALL CORPORATION STOP WITH KEY SIDEWAYS, IN OPEN POSITION (FOR HOT TAP).
- THE CORPORATION STOP TAP WILL BE MADE AS SPECIFIED BY THE PIPE MANUFACTURER. ALL DRY TAPS WILL BE MADE USING MACHINE GUIDE OR PILOT TAP.
- THE WATER SERVICE SHALL EXTEND PERPENDICULAR TO THE CENTERLINE OF THE STREET FROM THE WATER MAIN TO THE METER STOP EXCEPT IN CUL-DE-SAC ENDS, WHERE NON-PERPENDICULAR INSTALLATION IS ALLOWED.
- NO TAP TO MAIN SHALL BE WITHIN 24" OF VALVE, COUPLING, JOINT, OR FITTING.
- NO SPLICES WILL BE PERMITTED BETWEEN CORPORATION STOP AND ANGLE METER STOP EXCEPT WHEN SERVICE RUN EXCEEDS 60 FEET, IN WHICH CASE A SILVER SOLDER COUPLING SHALL BE USED.
- SERVICE TERMINATION POINT SHALL NOT BE PLACED IN DRIVEWAYS.
- WARNING TAG SHALL BE PLACED ON THE METER.
- TRENCH BACKFILL SHALL BE ONE SACK SLURRY (100-E-100) AS REQUIRED BY LOCAL JURISDICTIONAL AGENCY/CITY, UNLESS OTHERWISE SHOWN.
- METER BOX AND ASSEMBLY TO BE FURNISHED AND INSTALLED BY PURVEYOR.
- ALL SWEAT FITTINGS SHALL BE ASSEMBLED WITH SILVER SOLDER.
- FINAL LOCATION OF METER ASSEMBLY SHALL BE CONFIRMED WITH THE DISTRICT AND THE PURVEYOR PRIOR TO CONSTRUCTION.

REVISION	DRAWN	APP'D.	DATE
MARCH 2010			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

2-INCH RECYCLED WATER SERVICE

STANDARD
DRAWING
RW3

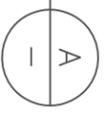


- NOTES:**
1. WHERE SIDEWALK IS NOT ADJACENT TO CURB SET TOP OF VALVE BOX ADJACENT TO AND AT CURB ELEVATION. PRECISE LOCATION TO BE ESTABLISHED AND APPROVED BY THE DISTRICT. VAULT COVER TO BE SET TO CONFORM TO PARKWAY GRADE.
 2. EASEMENTS MUST BE PROVIDED IF INSTALLATION IS ON PRIVATE PROPERTY.
 3. FOR METERS IN SLOPES, SEE STANDARD DRAWING RW14.
 4. PROVIDE NECESSARY FITTINGS AND THRUST BLOCKS TO CONSTRUCT SERVICE LINE TO CORRECT ELEVATION AT METER VAULT.
 5. TWO (2) WARNING TAGS SHALL BE PLACED IN THE RECYCLED WATER METER FACILITY.
 6. MARK CURB FACE WITH "RW" IN 2-INCH HIGH LETTERS AS PER STANDARD DRAWING RW1.
 7. EXTEND TRACER WIRE TO VALVE AND METER BOX.
 8. LOCATE INSULATING KITS AT ALL LOCATIONS WHERE DISSIMILAR METALS JOIN.
 9. METER AND BOX ASSEMBLY TO BE FURNISHED AND INSTALLED BY PURVEYOR.
 10. ALL PIPE, FITTINGS, VALVES AND APPURTENANCES SHALL BE PER STANDARD SPECIFICATIONS OR AS SPECIFIED OTHERWISE.
 11. RESTRAINED JOINTS ON DUCTILE IRON PIPING ARE AN ACCEPTABLE ALTERNATIVE TO THRUST BLOCKS, SUBJECT TO APPROVAL BY THE DISTRICT.

CONSTRUCTION ITEMS / MATERIALS LIST

ITEM NO.	SIZE AND DESCRIPTION
1	MAIN SIZE x METER SIZE TAPPING SLEEVE PER STD. DRAWING RW6. SUBSTITUTE DIP TEE OR WELDED STEEL TEE ON NEW INSTALLATION.
2	4-INCH VALVE (FLG. x M.J.), VALVE BOX AND COVER PER STANDARD DRAWING RW7.
3	METER SIZE - DUCTILE IRON PIPE OR CLASS 200 PVC PIPE (LENGTH AS REQUIRED) PER STANDARD SPECIFICATIONS.
4	METER SIZE - DUCTILE IRON 90° BEND (M.J.).
5	METER SIZE - DUCTILE IRON SPOOL (FLG. x P.E.) (LENGTH AS REQUIRED).
6	PIPE SIZE DUCTILE IRON TEE (FLG.), 2 1/2-INCH TAPPED BLIND FLANGE, 2 1/2-INCH x 2-INCH NYLON REDUCING BUSHING AND 2-INCH BRASS PIPE NIPPLE.
7	THRUST BLOCK PER STANDARD DRAWING RW19.
8	VALVE BOX AND COVER PER STANDARD DRAWING RW7.
9	BLIND FLANGE
10	2-INCH BRASS BALL VALVE AND 2-INCH BRASS/PVC THREADED PLUG.
11	INSTALL FITTINGS AS NECESSARY TO RAISE SERVICE ELEVATION TO MINIMUM DEPTH.

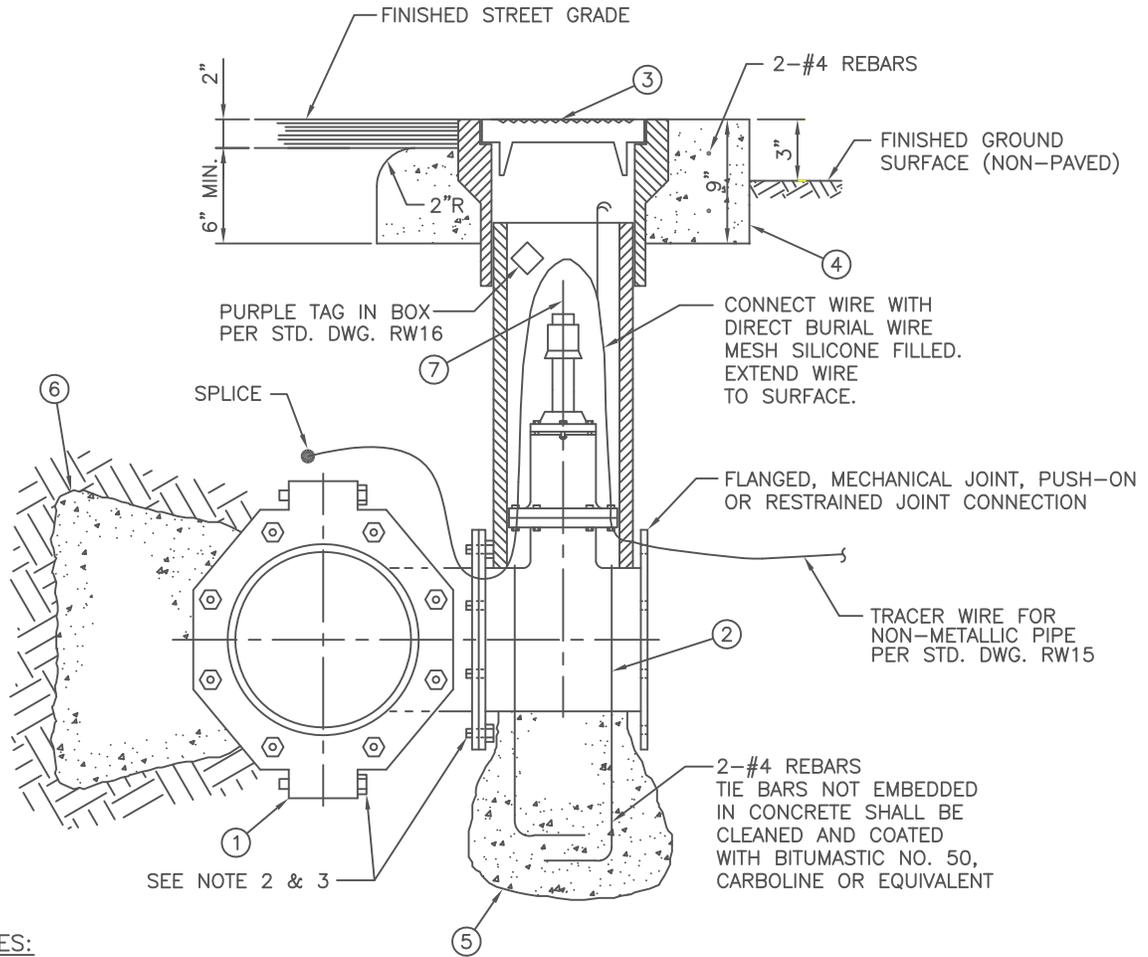
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REVISION	DRAWN	APP'D.	DATE
JUNE 2003			
APPROVED			
DISTRICT ENGINEER	RCE		DATE

WEST BASIN MUNICIPAL WATER DISTRICT
6-, 8-, AND 10-INCH
RECYCLED WATER SERVICE

STANDARD
DRAWING
RW5



NOTES:

1. PROVIDE VALVE STEM EXTENSION IF DEPTH TO VALVE NUT EXCEEDS 4 FEET.
2. ALL CONTRACTOR PROVIDED BURIED BOLTS SHALL BE 316 STAINLESS STEEL AND COATED WITH CARBOLINE BITUMASTIC NO. 50.
3. CONTRACTOR TO PROVIDE DOUBLE NUTS ON ALL SLEEVE BOLTS (316 SS), WITH NON-GREASE LUBRICATION.
4. TAP ON EXISTING MAIN SHALL BE ONE SIZE LESS, AND MIN. OF 5 FT. FROM COLLAR OR SERVICE.
5. ANCHOR BLOCK REQUIRED AT ALL TIMES. ANCHOR BLOCK SHALL BE TRENCH WIDTH PLUS TWO PIPE DIAMETERS WIDE AND SHALL EXTEND VALVE SIZE PLUS SIX INCHES BELOW BOTTOM OF TRENCH.

CONSTRUCTION ITEMS / MATERIALS LIST		
ITEM NO.	SIZE AND DESCRIPTION	MANUFACTURER
① ②	TAPPING SLEEVE AND VALVE PER STANDARD SPECIFICATIONS	MUELLER, CLOW OR APPROVED EQUAL
③	VALVE BOX & COVER PER STANDARD DRAWING RW7	-----
④	CONCRETE RING PER STANDARD DRAWING RW7	-----
⑤	ANCHOR BLOCK PER STANDARD DRAWING RW19 (SEE NOTE 5)	-----
⑥	THRUST BLOCK PER STANDARD DRAWING RW19	-----
⑦	VALVE STEM EXTENSION PER STANDARD DRAWING RW8 (SEE NOTE 1)	-----

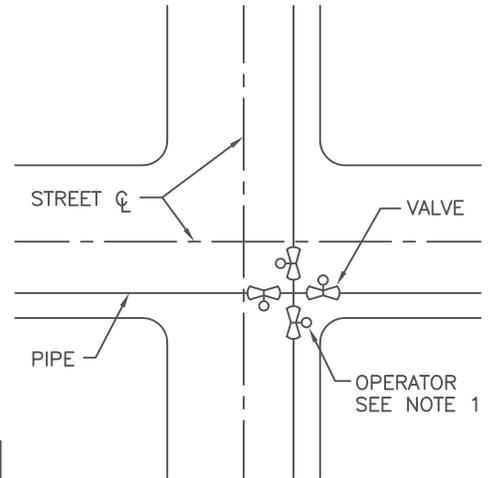
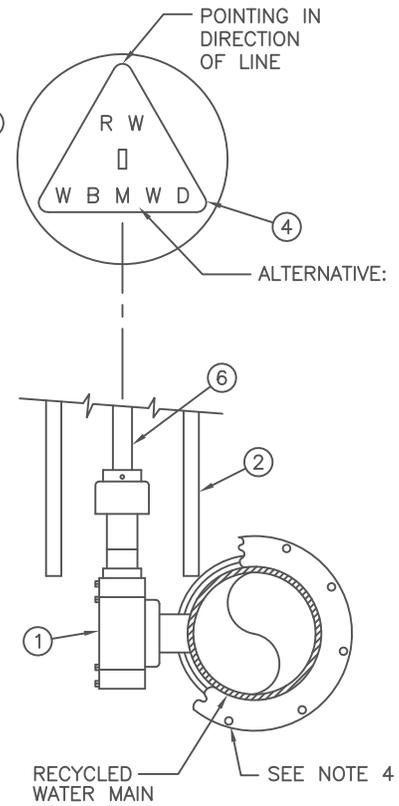
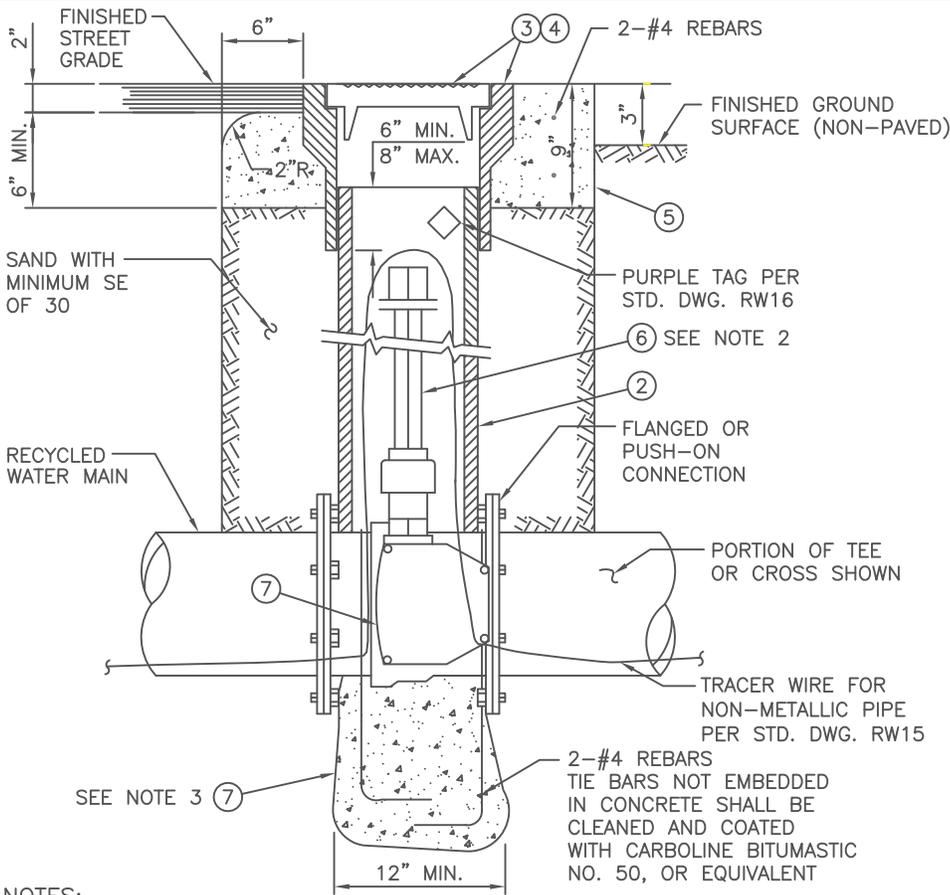
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DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

TAPPING OF PVC OR DIP MAINS

STANDARD
DRAWING
RW6

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BUTTERFLY VALVE OPERATOR POSITIONS

NOTES:

1. BUTTERFLY VALVE OPERATORS SHALL BE LOCATED ON THE LEFT HAND SIDE OF THE VALVE WHEN STANDING ON THE FLANGED END OF THE VALVE (AT THE TEE OR CROSS) AND LOOKING THROUGH THE VALVE TOWARD THE PIPE END. AT STREET INTERSECTIONS WHERE VALVE BOX LOCATION MAY INTERFERE WITH PROPOSED CONCRETE CROSS GUTTER, PIPELINE SHALL BE MOVED AWAY FROM STANDARD LOCATION AS REQUIRED PER DETAIL HEREON.
2. PROVIDE VALVE STEM EXTENSION IF DEPTH TO VALVE NUT EXCEEDS 4 FEET.
3. ANCHOR BLOCK REQUIRED AT ALL TIMES. ANCHOR BLOCK SHALL BE TRENCH WIDTH PLUS TWO PIPE DIAMETERS WIDE AND SHALL EXTEND VALVE SIZE PLUS SIX INCHES BELOW BOTTOM OF TRENCH.
4. ALL CONTRACTOR PROVIDED BURIED BOLTS SHALL BE 316 STAINLESS STEEL AND COATED WITH CARBOLINE BITUMASTIC NO. 50 OR EQUIVALENT.

CONSTRUCTION ITEMS / MATERIALS LIST			
ITEM NO.	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	BUTTERFLY VALVE OR RESILIENT WEDGE GATE VALVE PER STD. SPECIFICATIONS	----	----
②	8" PVC SDR35 PIPE	----	----
③ ④	10 1/4" BODY AND COVER (BOX LID)	BROOKS	4-TT
⑤	CONCRETE RING, CLASS 560-C-3250	----	----
⑥	VALVE STEM EXTENSION PER STANDARD DRAWING RW8 (SEE NOTE 2)	----	----
⑦	ANCHOR BLOCK PER STANDARD DRAWING RW19 (SEE NOTE 3)	----	----

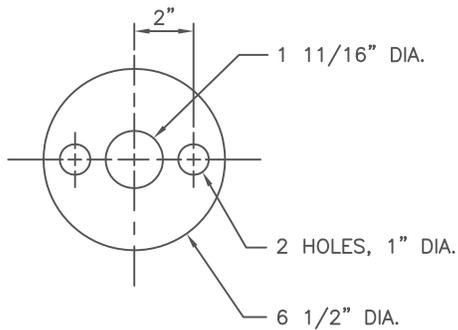
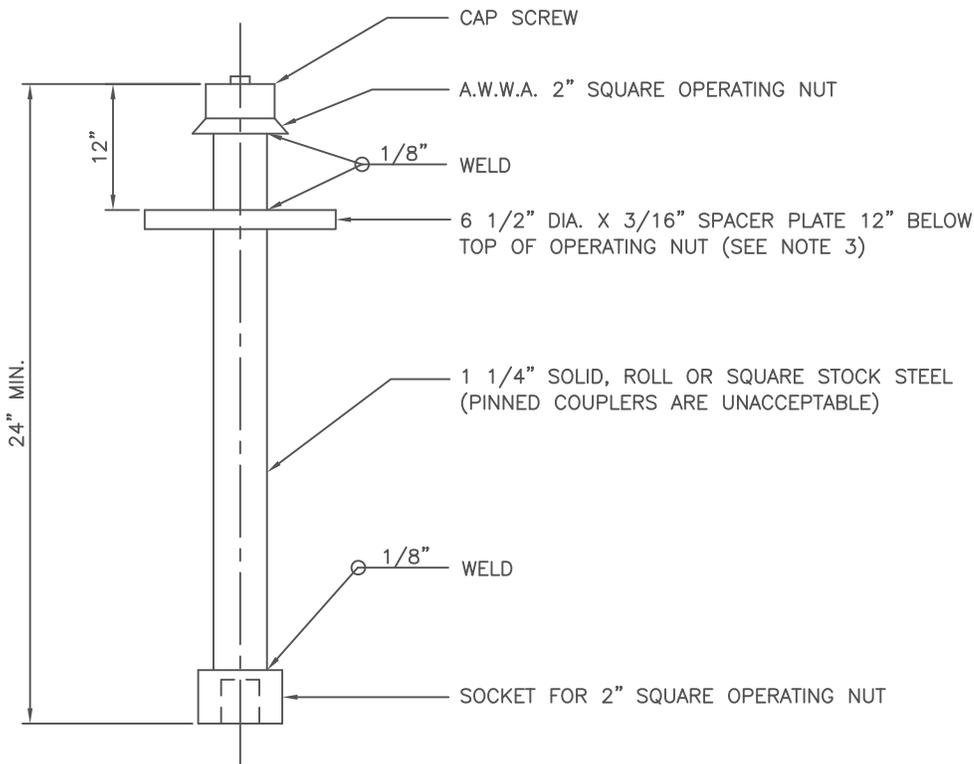
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APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

VALVE, VALVE BOX, AND COVER

STANDARD DRAWING
RW7

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SPACER PLATE
PLAN

NOTES:

1. PROVIDE VALVE STEM EXTENSION WHEN DEPTH TO OPERATING NUT EXCEEDS 48" (FABRICATE EXTENSION TO FIELD MEASUREMENT - SEE NOTE 2).
2. NO VALVE STEM EXTENSION SHALL BE LESS THAN 2 FEET IN LENGTH. TERMINATE EXTENSION 24" TO 36" FROM FINISHED GRADE.
3. PROVIDE ADDITIONAL SPACER PLATE WHEN DISTANCE TO BOTTOM SOCKET EXCEEDS 5 FEET.
4. HOT DIP GALVANIZE EXTENSION AFTER FABRICATION.

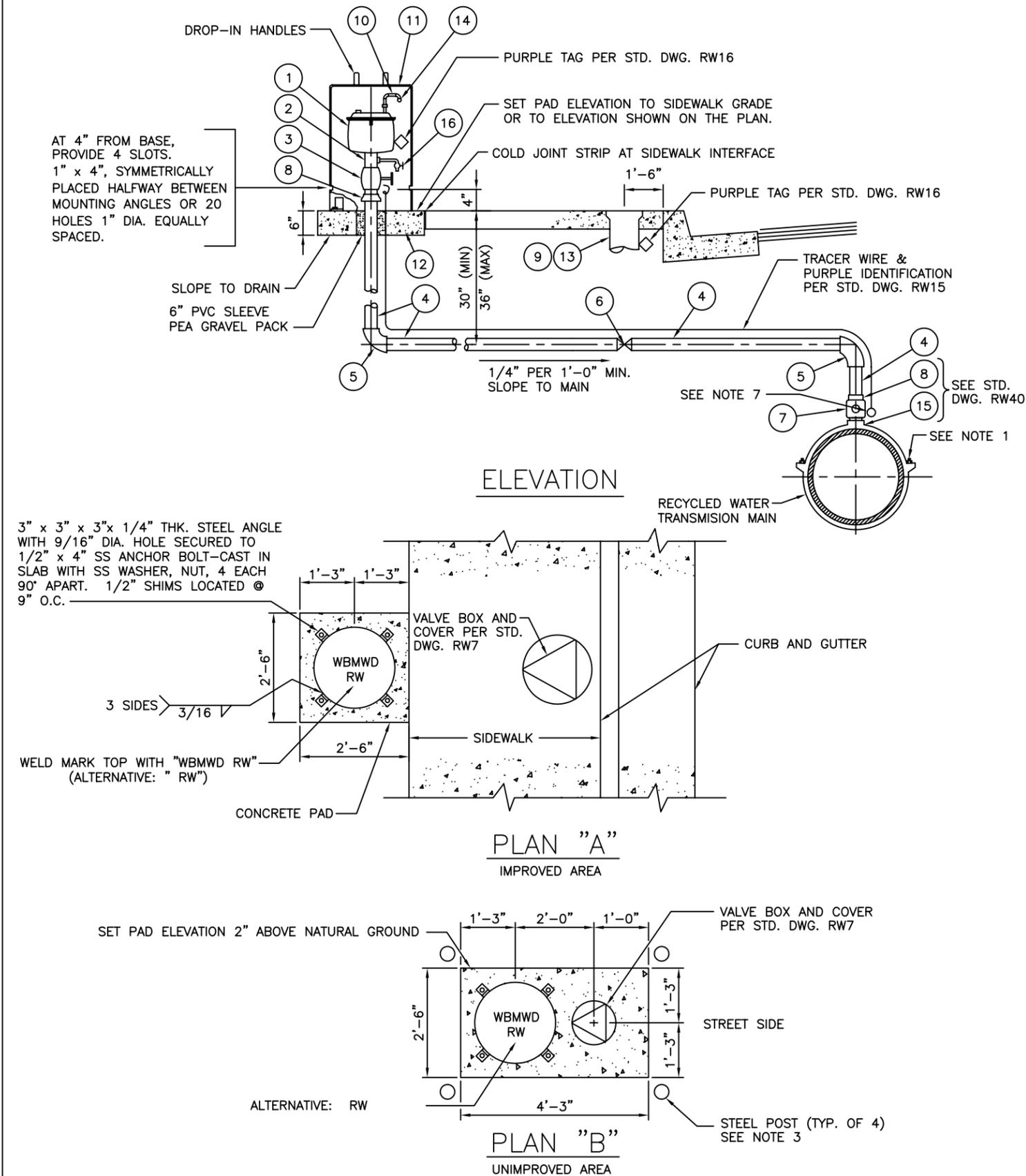
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JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

VALVE STEM EXTENSION

STANDARD
DETAIL
RW8

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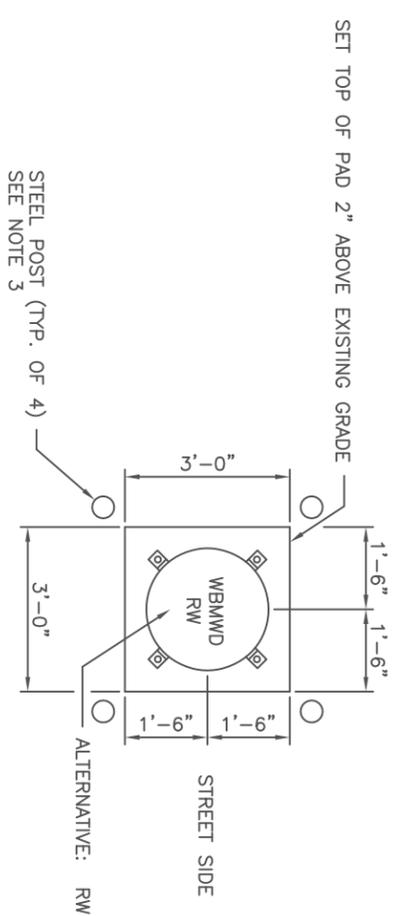
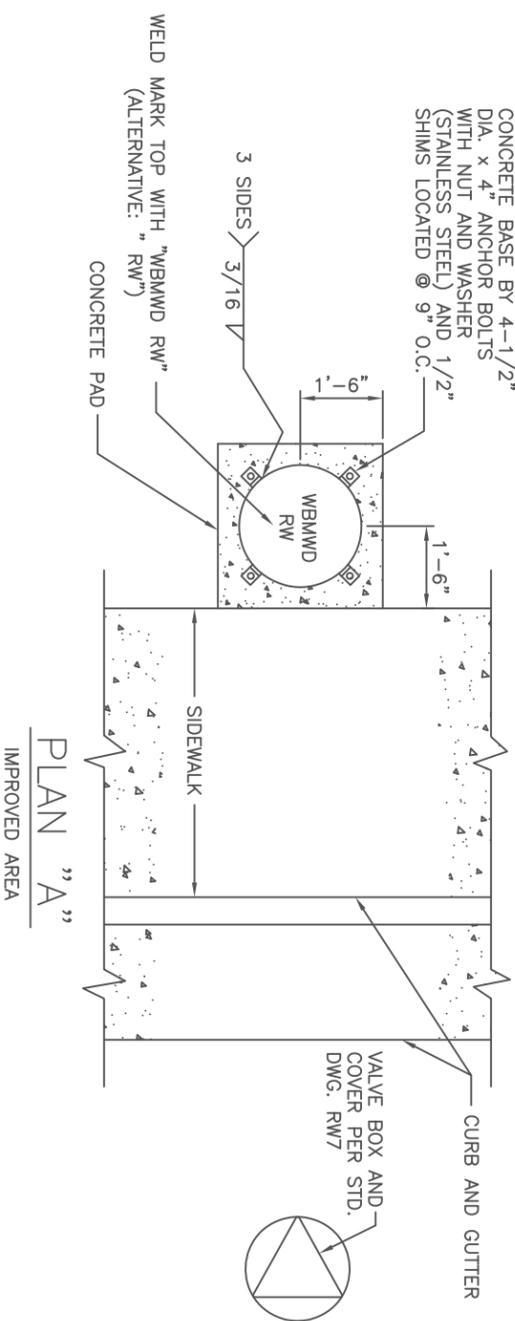
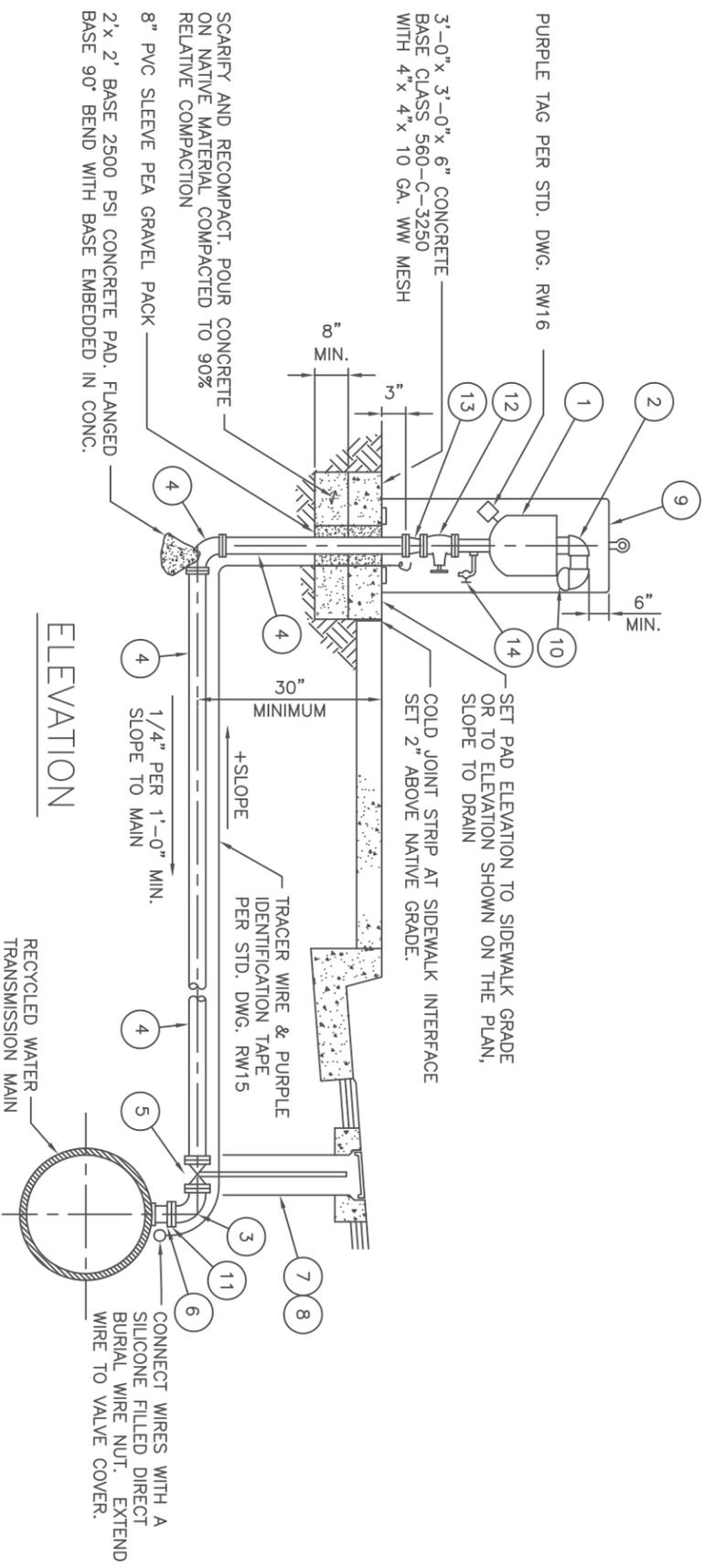


CONSTRUCTION ITEMS / MATERIALS LIST			
ITEM NO.	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR STD. REF.
1	1" (2") COMBINATION AIR RELEASE & VACUUM VALVE PER STANDARD SPECIFICATIONS	APCO CRISPIN VALMATIC	143C (1"), 145C (2") UL10 (1"), UL20 (2") 201C (1"), 202C (2")
2	1" (2") BRONZE/RED BRASS NIPPLE	----	----
3	1" (2") BRONZE BALL VALVE	JAMES JONES FORD	J-1923 (1") J-1923 (2") B41-444 W/HB-34 (1") B41-777 W/HB-67S (2")
4	1" (2") COPPER TUBING, LENGTH AND ALIGNMENT SHOWN ON PLANS	----	TYPE "K" SOFT
5	1" (2") 90° LONG RADIUS SILVER SOLDER SWEAT ELBOW, TYP.	----	----
6	1" (2") BRONZE BALL VALVE	JAMES JONES FORD	J-1949 (1") J-1949 (2") B44-444 (1") B44-777 (2")
7	1" (2") BRONZE CORPORATION STOP	MUELLER JAMES JONES	H-15000 J-1930
8	1" (2") BRONZE COUPLING - COPPER TO I.P. THREAD	----	----
9	VALVE BOX AND COVER PER STANDARD DRAWING RW8	----	----
10	1" (2") GALVANIZED DISCHARGE NIPPLE (2-90° ELL, 3 NIPPLES) (90° ELL REQUIRES SCREEN)	----	----
11	VALVE COVER, (SEE NOTE 6)	----	----
12	30" SQUARE CONCRETE PAD, CLASS 560-C-3250	----	----
13	VALVE STEM EXTENSION (SEE NOTE 2)	----	----
14	SS SCREEN OVER INLET/OUTLET W/ SS BAND	----	----
15	INSTALL INSULATING BUSHING OR "D.E" COUPLING AT ALL LOCATIONS WHERE DISSIMILAR METALS JOIN.	----	----
16	SAMPLING PORT ; INSTALL 1/2" CL 125 CAST BRONZE 90° STREET ELL AND BRASS CLOSE NIPPLE, 1/2" BRONZE ANGLE VALVE (0-300 PSI) AND 3/4" MALE NATIONAL HOSE THREAD x 1/2" MALE IPT BRASS HOSE NIPPLE.	----	----

NOTES:

- ALL BURIED BOLTS SHALL BE 316 STAINLESS STEEL AND COATED WITH CARBOLINE BITUMASTIC NO. 50.
- PROVIDE VALVE STEM EXTENSION TO WITHIN 24 INCHES OF FINISHED SURFACE PER STANDARD DRAWING RW8.
- IN AREAS WHERE NO CURB OR BERM EXISTS, OR WHERE THERE IS ONLY ROLLED CURB AND GUTTER, INSTALL ONE (1) GUARD POST PER STANDARD DRAWING RW28 AT EACH CORNER OF CONCRETE PAD.
- FOR A/V ASSEMBLIES IN SLOPES, SEE STANDARD DRAWING RW14.
- PAINT VALVE AND PIPING WITH ONE COAT PRIMER AND TWO COATS OF FINISH PAINT PER THE STANDARD SPECIFICATIONS. COLOR SHALL BE APPROVED BY THE DISTRICT.
- 18" DIA. x 30" HIGH x 3/16" THICK GALVANIZED STEEL ENCLOSURE WITH DROP IN 1/4" LIFTING HANDLES. 3/8" THICK STEEL PLATE WELDED TO TOP OF STEEL TUBE ENCLOSURE. DOUBLE DIP GALVANIZED AFTER FABRICATION. PROVIDE 6" MINIMUM CLEARANCE ABOVE DISCHARGE PIPING.
- FOR PVC TRANSMISSION MAIN, CONNECT TRACER WIRES FROM MAIN AND A/V VALVE WITH A SILICONE FILLED DIRECT BURIAL WIRE NUT AT CORP STOP. FOR METALLIC TRANSMISSION MAIN, CONNECT A/V VALVE TRACER WIRE DIRECTLY TO PIPE WITH WELD. EXTEND TRACER WIRE TO VALVE BOX AND COVER.

REVISION	DRAWN	APP'D.	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
MARCH 2010				1" AND 2" COMBINATION AIR RELEASE AND VACUUM VALVE ASSEMBLY	
APPROVED				STANDARD DRAWING	
DISTRICT ENGINEER RCE DATE				RW9	



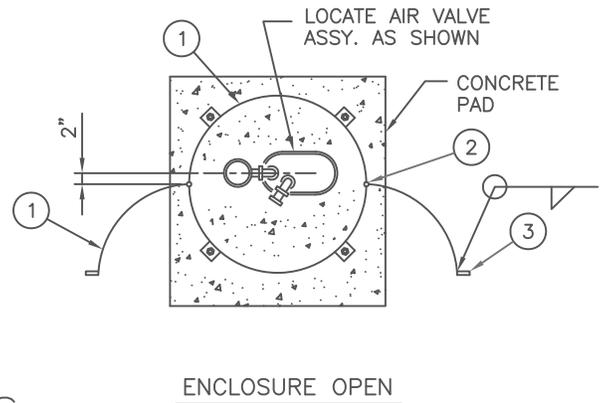
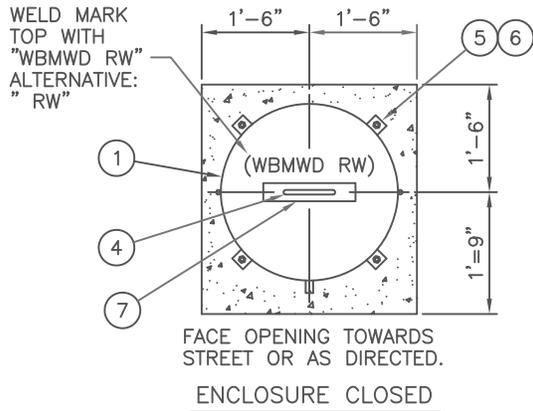
CONSTRUCTION ITEMS / MATERIALS LIST	
ITEM NO.	SIZE AND DESCRIPTION
1	3" OR 4" COMBINATION AIR RELEASE AND VACUUM VALVE, PER STANDARD SPECIFICATIONS
2	3" OR 4" GALVANIZED DISCHARGE NIPPLE (2 - 90° ELL, 3 NIPPLES AND UNION)
3	4" DI 90° ELBOW (FLGxFLG) (LONG RADIUS)
4	4" D.I. PIPE WITH RESTRAINED JOINTS BY FLG. OR MEGALUG BY EBBA IRON (FLG. x FLG.), LENGTH AS SHOWN ON PLANS
5	4" FLANGED RESILIENT WEDGE GATE VALVE
6	4" x MAIN SIZE OUTLET (FLG) PER STANDARD DRAWING RW37
7	VALVE BOX AND COVER ASSEMBLY PER STANDARD DRAWING RW7
8	VALVE STEM EXTENSION (SEE NOTE 2)
9	VALVE COVER, PER STANDARD DRAWING RW11
10	SS SCREEN OVER INLET/OUTLET W/ SS BAND, OR EQUAL
11	INSULATING FLANGE PER STANDARD DRAWING RW44
12	3" OR 4" FLANGED RESILIENT WEDGE GATE VALVE
13	4" x 3" FLANGED REDUCER (AS REQUIRED)
14	SAMPLING PORT : INSTALL 1/2" CL 125 CAST BRONZE 90° STREET ELL AND BRASS CLOSE NIPPLE, 1/2" BRONZE ANGLE VALVE (0-300 PSI) AND 3/4" MALE NATIONAL HOSE THREAD x 1/2" MALE IPT BRASS HOSE NIPPLE.

NOTES:

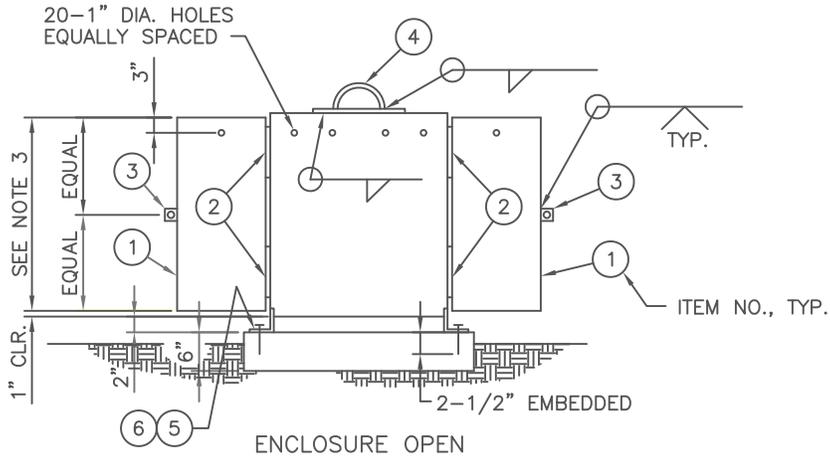
1. ALL BURIED BOLTS SHALL BE 316 STAINLESS STEEL AND COATED WITH CARBOLINE BITUMASTIC NO. 50.
2. PROVIDE VALVE STEM EXTENSION TO WITHIN 24 INCHES OF FINISHED SURFACE PER STANDARD DRAWING RW8.
3. IN AREAS WHERE NO CURB OR BERM EXISTS, OR WHERE THERE IS ONLY ROLLED CURB AND GUTTER, INSTALL ONE (1) GUARD POST PER STANDARD DRAWING RW26 AT EACH CORNER OF CONCRETE PAD.
4. FOR A/V ASSEMBLIES IN SLOPES, SEE STANDARD DRAWING RW14.
5. PAINT VALVE AND PIPING WITH ONE COAT PRIMER AND TWO COATS OF FINISH PAINT PER SPECIFICATIONS.
6. PROVIDE CEMENT SLURRY BACKFILL (100-E-100) IN PIPE ZONE.

REVISION	DRAWN	APP'D.	DATE	WEST BASIN MUNICIPAL WATER DISTRICT 3-INCH AND 4-INCH COMBINATION AIR RELEASE AND VACUUM VALVE ASSEMBLY	STANDARD DRAWING RW10
JUNE 2003					
APPROVED					
DISTRICT ENGINEER RCE				DATE	

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PLANS



ELEVATION

NOTE:

1. DOUBLE DIP GALVANIZED COVER ASSEMBLY AFTER FABRICATION AND PAINT PER THE STANDARD SPECIFICATIONS. COLOR TO BE APPROVED BY THE DISTRICT.
2. CONTRACTOR SHALL VERIFY VALVE DIMENSIONS PRIOR TO FABRICATIONS.
3. HEIGHT OF COVER SHALL BE AS NECESSARY TO PROVIDE 6" MIN. CLEARANCE FROM TOP OF VALVE ASSEMBLY.

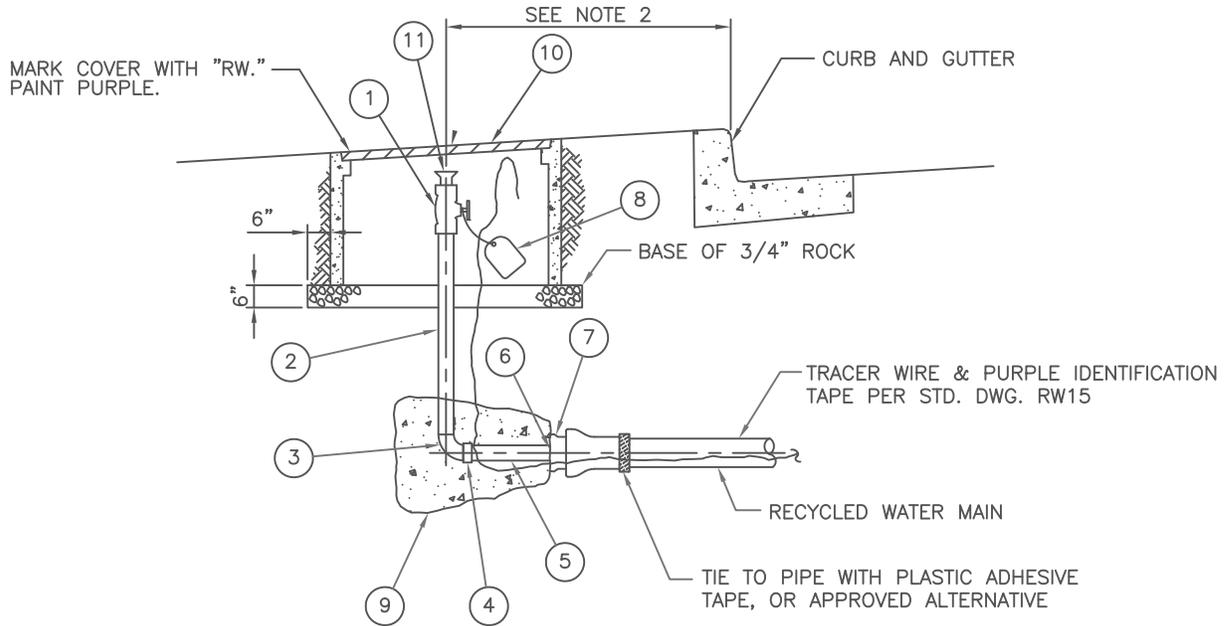
CONSTRUCTION ITEMS / MATERIALS LIST	
ITEM NO.	SIZE AND DESCRIPTION
①	24" DIA. (3" VALVE) OR 30" DIA. (4" VALVE) x 3/16" THICK STEEL PIPE (CUT AS SHOWN). FOR HEIGHT SEE NOTE 3 ABOVE.
②	4"x 4" HEAVY DUTY SS BLANK SURFACE HINGE WITH SS PINS, TYP. OF 4
③	1-1/2"x 1-1/2"x 1/4" STL. ANGLE, 2" LONG W/ 5/8" HOLE, TYP. OF 2
④	1/2" DIA. STEEL LIFTING EYE WITH 2" RADIUS
⑤	3"x 3"x 1/4" STL. ANGLE, 3" LONG W/ 9/16" HOLE, TYP. OF 4 @ 90° O.C. SYMMETRICALLY PLACED AT BASE
⑥	1/2" DIA. SS CAST IN PLACE ANCHOR BOLTS, TYP. OF 4 USE SS WASHERS AND NUTS
⑦	1/4"x 2"x 12" STEEL PLATE, WELD TO TOP OF HALF PLATE WITH 1" LAP

REVISION	DRAWN	APP'D.	DATE
JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

**3-INCH AND 4-INCH
AIR VALVE COVER**

STANDARD
DRAWING
RW11



NOTE:

1. WHEN BLOW OFF VALVE IS PLACED BEHIND CURB USE BROOKS 66T OR EISEL 6T METER BOX WITH STEEL LID OR APPROVED EQUAL. WHEN BLOW OFF VALVE IS PLACED IN STREET USE 24" PRECAST CONCRETE MANHOLE WITH ALHAMBRA A-1254B COVER OR APPROVED EQUAL.
2. EXACT LOCATION OF BLOWOFF TO BE AS PROVIDED ON CONSTRUCTION PLANS AND AS APPROVED BY THE DISTRICT.

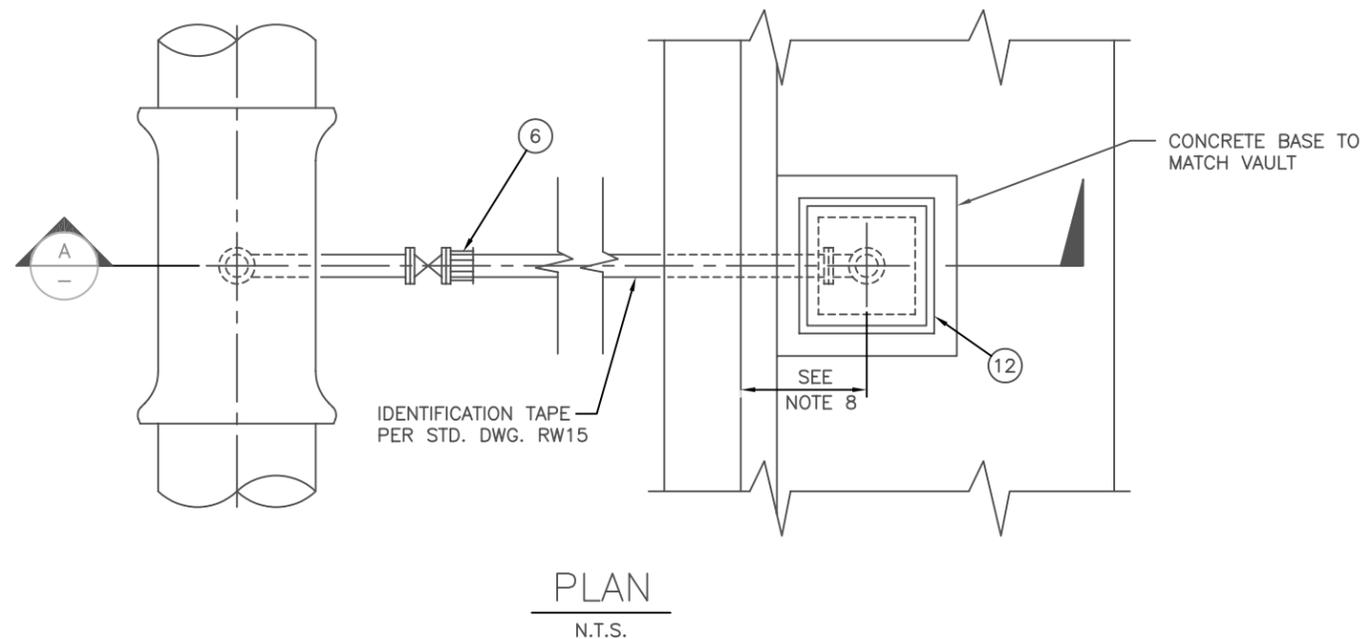
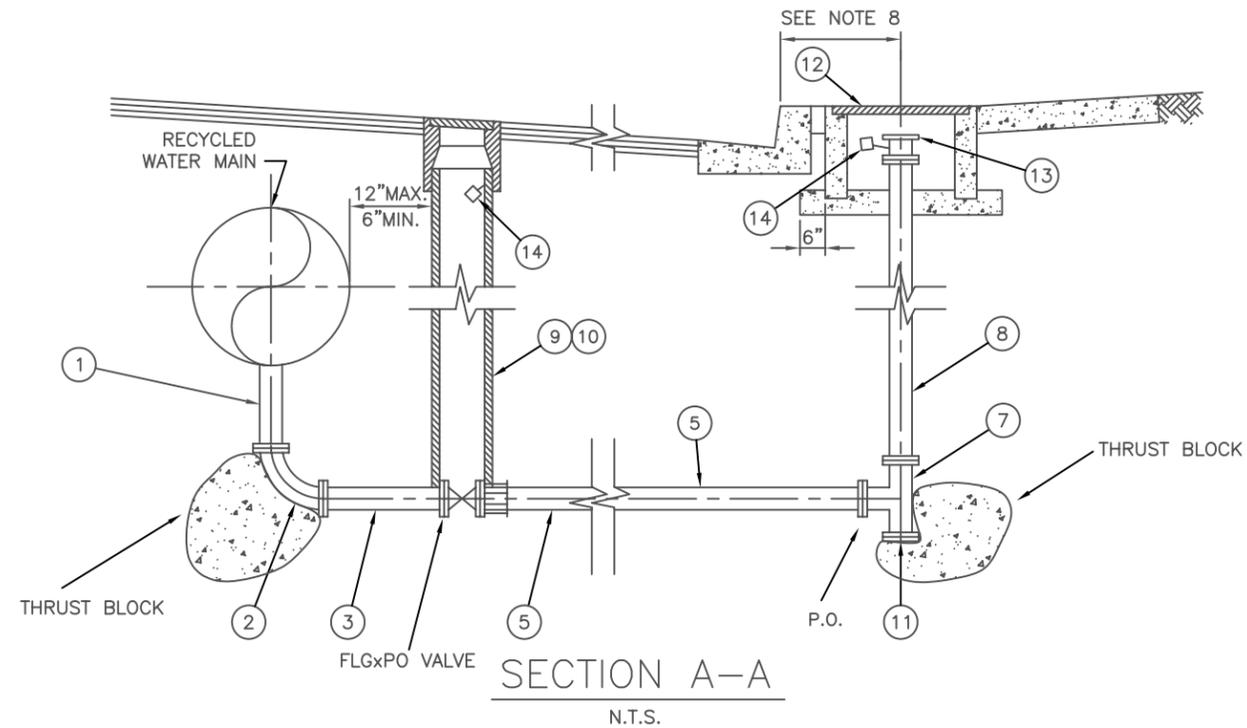
CONSTRUCTION ITEMS / MATERIALS LIST			
ITEM NO.	SIZE AND DESCRIPTION	MANUFACTURER	MFR. CAT. NO. OR SPEC.
①	2" BRONZE BALL VALVE	MUELLER FORD	B-25174 B-21-777
②	2" COPPER TUBING	----	TYPE "K" SOFT
③	2" COPPER 90° ELBOW S.J. x S.J. (LONG RADIUS)	----	----
④	2" BRONZE COUPLING - COPPER TO IP THREAD	----	----
⑤	2" BRASS NIPPLE, IP, THREAD x IP THREAD	----	----
⑥	RIGID PVC REDUCING BUSHING (2-1/2" x 2")	----	----
⑦	DUCTILE IRON PLUG, PIPE SIZE x 2-1/2" IP. THREAD TAP	----	----
⑧	WARNING TAG PER STANDARD DRAWING RW16	----	----
⑨	THRUST BLOCK, PER STANDARD DRAWING RW19	----	----
⑩	PRECAST CONCRETE VAULT WITH COVER (SEE NOTE 1)	----	----
⑪	2" COPPER/PVC THREADED PLUG	----	----

REVISION	DRAWN	APP'D.	DATE
JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

DEAD END WITH TEMPORARY
2-INCH BLOW OFF

STANDARD
DRAWING
RW12



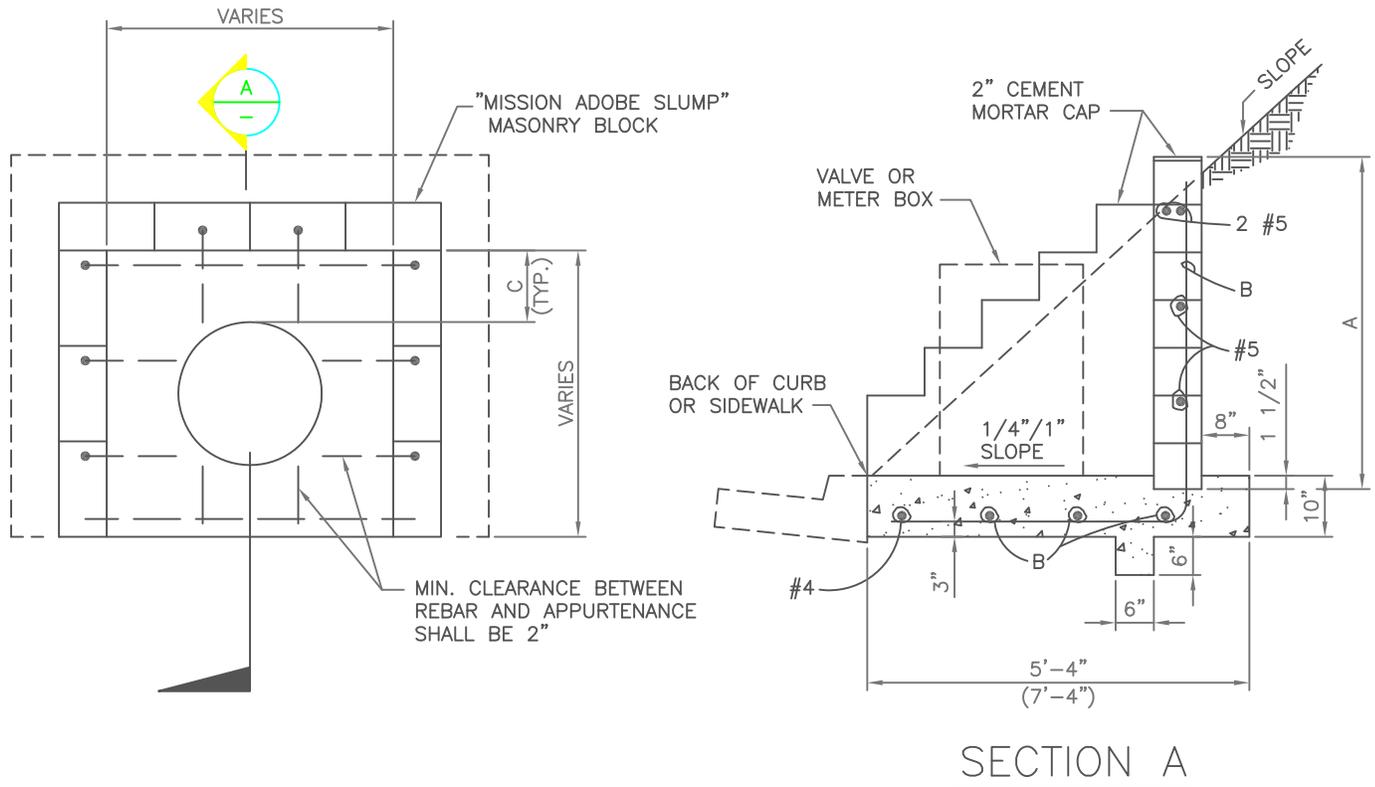
CONSTRUCTION ITEMS / MATERIALS LIST	
ITEM NO.	SIZE AND DESCRIPTION
①	MAIN SIZE X 4" TEE (FLG).
②	4" DI 90° ELBOW (FLG x FLG) (LONG RADIUS).
③	4" DI SPOOL (FLG x FLG) (LENGTH AS REQUIRED).
④	4" FLANGED RESILIENT WEDGE GATE VALVE (FLG x P.O.) VALVE WITH JOINT RESTRAINT.
⑤	4" DI SPOOL (P.O. X P.O.) (LENGTH AS REQUIRED).
⑥	4" COUPLING SLEEVE.
⑦	4" DI TEE (FLG x FLG).
⑧	4" DI PIPE (FLG x FLG) (LENGTH AS REQUIRED).
⑨	VALVE BOX ASSEMBLY, PER RW7.
⑩	VALVE STEM EXTENSION (SEE NOTE 2).
⑪	4" BLIND FLANGE (FLG X FLG X P.O.) TEE WITH JOINT RESTRAINT.
⑫	PRECAST CONCRETE VAULT WITH COVER (SEE NOTE 1 AND NOTE 9)
⑬	4" BLIND FLANGE WITH 3" THREADED TAP, 3" x 2 1/2" REDUCING INSULATING BUSHING, BRASS HOSE ADAPTER (POTTER ROMA 2830 OR APPROVED EQUAL) AND 2 1/2" BRASS FIRE NOZZLE WITH CAP AND CHAIN.
⑭	WARNING TAG PER STANDARD DRAWING RW16.

NOTES:

1. WHEN BLOWOFF VALVE IS PLACED BEHIND CURB USE BROOKS 66T OR EISEL 6T METER BOX WITH STEEL LID OR APPROVED EQUAL. WHEN BLOWOFF VALVE IS PLACED IN STREET USE 24" PRECAST CONCRETE MANHOLE WITH ALHAMBRA A-1254B COVER OR APPROVED EQUAL.
2. PROVIDE VALVE STEM EXTENSION IF DEPTH TO VALVE NUT EXCEEDS 4 FEET, PER STANDARD DRAWING RW8.
3. DUCTILE IRON PIPING AND FITTINGS SHALL BE FLANGED.
4. VAULT COVER TO BE SET TO CONFORM TO PARKWAY GRADE.
5. COVER SHALL BE MARKED "WBMWD RW" AND PAINTED PURPLE.
6. WARNING TAG SHALL BE INSTALLED WITHIN THE VAULT.
7. BACKFILL CLASS SHALL BE 2 SACK CEMENT SLURRY.
8. EXACT LOCATION OF BLOWOFF TO BE AS PROVIDED ON CONSTRUCTION PLANS AND AS APPROVED BY THE DISTRICT.
9. IN AREAS WHERE NO CURB OR BERM EXISTS, OR WHERE THERE IS ONLY ROLLED CURB AND GUTTER, INSTALL TRAFFIC RATED BOX AND COVER.

REVISION	DRAWN	APP'D.	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	STANDARD DETAIL
MARCH 2010					
APPROVED					
DISTRICT ENGINEER		RCE	DATE		

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A	3'-4"	4'-0"	4'-8"
B	#4@16"	#4@16"	#5@16"
C	2' MIN. CLEARANCE TYP.		

TO BE CONSTRUCTED WITH AIR/VAC, BLOW OFF, METER OR TEST STATION WHEN A SLOPE EXISTS AT THE LOCATION OF THESE APPURTENANCES.

NOTES:

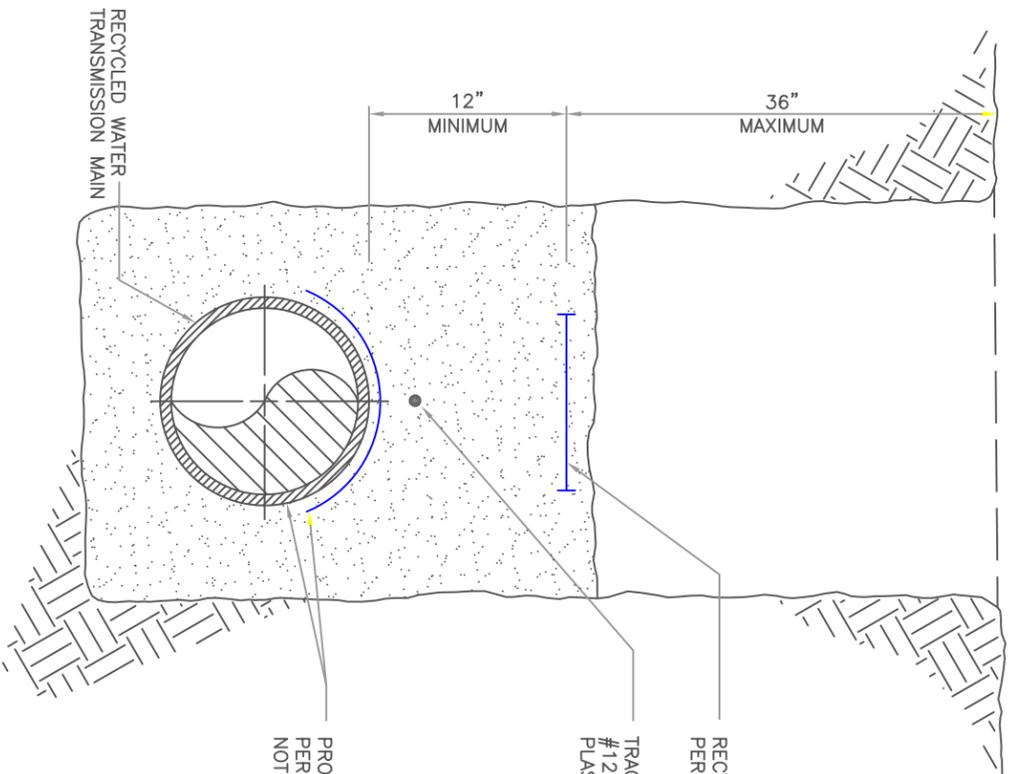
- MASONRY BLOCK SHALL BE 8"x 8"x 16" UNITS CONFORMING TO ASTM C-90 CLASS S AND CONCRETE MASONRY ASSOC. STANDARDS.
- MORTAR AND GROUT SHALL MATCH BLOCKWORK AND BE IN CONFORMANCE WITH SECTION. 202-2 OF THE STANDARD SPECIFICATIONS.
- FILL ALL CELLS WITH GROUT.
- OMIT MORTAR FROM FIRST COURSE ABOVE FINISHED GRADE AT 32" CENTERS.
- CONCRETE SHALL BE CLASS 560-C-3250.

REVISION	DRAWN	APP'D.	DATE
JUNE 2003			
APPROVED			
DISTRICT ENGINEER	RCE	DATE	

WEST BASIN MUNICIPAL WATER DISTRICT

RETAINING WALL DETAIL

STANDARD
DRAWING
RW14



RECYCLED WATER PIPE WARNING TAPE
PER STANDARD DRAWING RW16

TRACER WIRE FOR NON-METALLIC PIPE
#12 CU. HMWPE. SECURE TO PIPE WITH
PLASTIC ADHESIVE TAPE EVERY 10 FEET.

PROVIDE RECYCLED WATER PIPE IDENTIFICATION
PER THE STANDARD SPECIFICATIONS AND
NOTES HEREON

NOTES:
ALL RECYCLED WATER PIPELINES, INCLUDING SERVICE LINES AND ATTACHED APPURTENANCES
SHALL BE PROVIDED WITH IDENTIFICATION PER ONE OF THE FOLLOWING ALTERNATIVES:

PVC PIPE ALTERNATIVE:

1. PIPE SHALL BE COLORED PURPLE AND INTEGRALLY STAMPED/MARKED WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" PRINTED IN 5/8" BLACK LETTERING ON OPPOSITE SIDES OF THE PIPE.
2. AS AN OPTION TO PURPLE PIPE, PURPLE COLORED POLYETHYLENE IDENTIFICATION TAPE WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" MAY BE ATTACHED TO THE TOP OF PIPE PER STANDARD DRAWING RW16.
3. AS AN OPTION TO EITHER OF THE ABOVE ALTERNATIVES, PURPLE COLORED POLYETHYLENE WRAP WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" MAY BE USED TO ENCASE THE PIPE PER STANDARD DRAWING RW16.

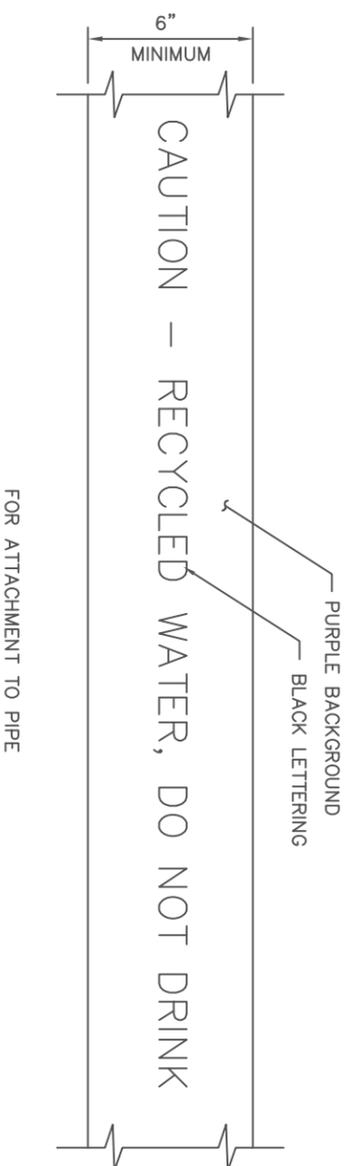
DUCTILE IRON PIPE ALTERNATIVE:

1. PURPLE COLORED POLYETHYLENE IDENTIFICATION TAPE WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" SHALL BE ATTACHED TO THE TOP OF PIPE PER STANDARD DRAWING RW16.
2. AS AN OPTION TO THE ABOVE ALTERNATIVE, PURPLE COLORED POLYETHYLENE WRAP WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" MAY BE USED TO ENCASE THE PIPE PER STANDARD DRAWING RW16. PURPLE POLYETHYLENE ENCASEMENT SHALL BE USED AS THE SECOND LAYER OF ENCASEMENT REQUIRED FOR DUCTILE IRON PIPE CONSTRUCTION PER THE STANDARD SPECIFICATIONS.

STEEL PIPE ALTERNATIVE:

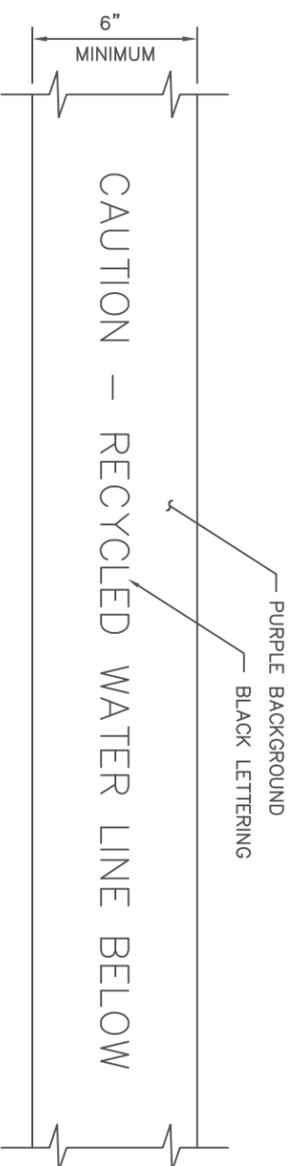
1. PURPLE COLORED POLYETHYLENE IDENTIFICATION TAPE WITH CONTINUOUS WORDING "CAUTION: RECYCLED WATER, DO NOT DRINK" SHALL BE ATTACHED TO THE TOP OF PIPE PER STANDARD DRAWING RW16.

REVISION	DRAWN	APP'D.	DATE		
JUNE 2003					
APPROVED				WEST BASIN MUNICIPAL WATER DISTRICT	
DISTRICT ENGINEER RCE					
				RECYCLED WATER PIPE IDENTIFICATION	
				STANDARD DRAWING RW15	



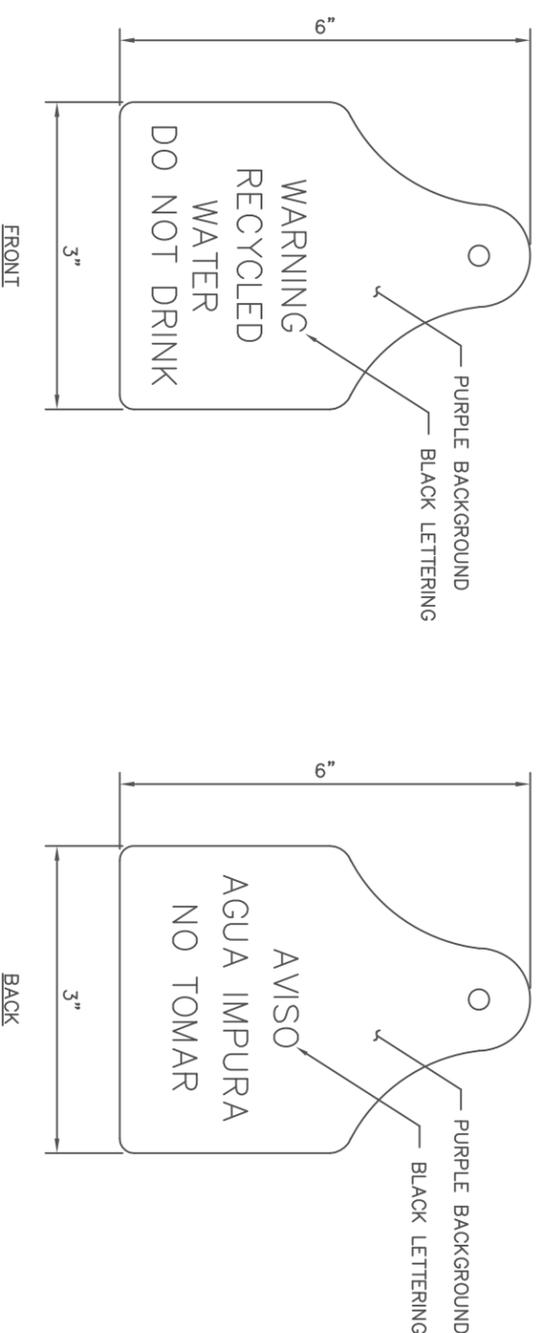
RECYCLED WATER PIPE IDENTIFICATION TAPE

N.T.S.



RECYCLED WATER PIPE WARNING TAPE

N.T.S.



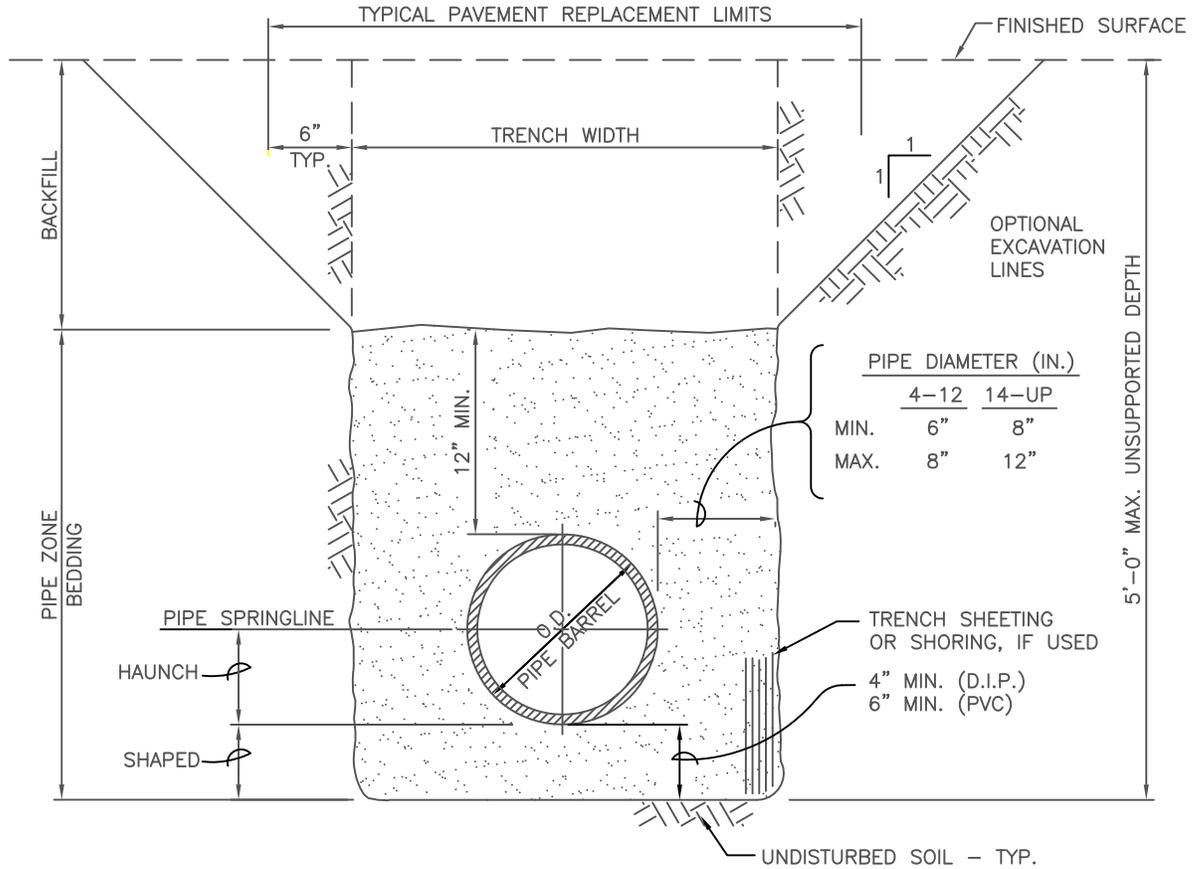
RECYCLED WATER WARNING TAGS

N.T.S.

- NOTES:
1. RECYCLED WATER WARNING TAGS SHALL CONSIST OF WEATHERPROOF PLASTIC, 3-INCH BY 4-INCH, WITH PURPLE BACKGROUND AND BLACK LETTERING. WARNING TAGS SHALL BE ATTACHED TO EACH RECYCLED WATER DEVICE WITH A NYLON TIE WRAP.
 2. RECYCLED WATER IDENTIFICATION TAPE SHALL CONSIST OF A MINIMUM 4 MIL. POLYETHYLENE WITH METALLIC BACKING, WITH PURPLE BACKGROUND AND BLACK LETTERING. TAPE WIDTH SHALL BE 6-INCHES FOR PIPE 6-INCH AND SMALLER AND 12-INCHES FOR PIPE 8-INCH AND LARGER. LETTERING SHALL BE 2-INCHES HIGH AND THE MESSAGE SHALL REPEAT EVERY 36-INCHES. IDENTIFICATION TAPE SHALL BE FASTENED TO THE PIPE WITH PLASTIC ADHESIVE TAPE BANNED AROUND THE PIPE AT NO MORE THAN 5-FOOT INTERVALS, OR AS APPROVED THE DISTRICT.
 3. PURPLE COLORED POLYETHYLENE ENCASUREMENT WITH A MINIMUM THICKNESS OF 8 MILS MAY BE SUBSTITUTED FOR IDENTIFICATION TAPE SPECIFIED IN NOTE 2 ABOVE. MESSAGE SHALL CONTAIN 1-INCH HIGH LETTERING REPEATING EVERY 24-INCHES.
 4. RECYCLED WATER WARNING TAPE MEETING THE SAME SPECIFICATIONS AS NOTE 2 ABOVE SHALL BE BURIED ABOVE THE PIPE ZONE BEDDING A MINIMUM OF 12-INCHES ABOVE THE PIPE.
 5. WARNING TAGS, IDENTIFICATION/WARNING TAPE AND POLYETHYLENE ENCASUREMENT SHALL BE AS MANUFACTURED BY T. CHRISTY ENTERPRISES, TERRA TAPE (DIVISION OF REEF INDUSTRIES) OR APPROVED EQUAL.
 6. RECYCLED WATER PIPELINES LOCATED IN NON-PAVED AREAS OUTSIDE STREET RIGHT-OF-WAY SHALL ALSO BE IDENTIFIED WITH MARKER POSTS PER STD. DWG. RW28.
 7. PURPLE COLOR SHALL BE PANTONE 512.

REVISION	DRAWN	APP'D.	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
JUNE 2003				WARNING TAGS AND IDENTIFICATION TAPE	
APPROVED					
DISTRICT ENGINEER RCE				DATE	STANDARD DRAWING RW16

REPLACE PAVED SURFACE AND BASE PER RW18 OR JURISDICTIONAL REQUIREMENTS AND PERMITS (WHICHEVER IS MORE STRINGENT).



NOTE:

1. SHOULD LARGE GRAVEL OR COBBLES BE ENCOUNTERED AT THE TRENCH BOTTOM, THEY SHALL BE REMOVED AND REPLACED WITH GRANULAR MATERIAL WHICH SHALL BE COMPACTED TO PROVIDE UNIFORM SUPPORT AND A FIRM FOUNDATION.
2. IF EXCESSIVELY WET, SOFT, SPONGY, UNSTABLE, OR SIMILARLY UNSUITABLE MATERIAL IS ENCOUNTERED AT THE TRENCH BOTTOM, IT SHALL BE REMOVED AND REPLACED BY CRUSHED ROCK OR GRAVEL OF SUFFICIENT THICKNESS TO FORM A FIRM FOUNDATION.
3. WHERE WET, UNSTABLE OR RUNNING SOIL IS ENCOUNTERED, SOLID SHEETING IS REQUIRED FOR ALL VERTICAL TRENCH WALLS.
4. TRENCH SHEETING OR SHORING SHALL BE A MINIMUM OF 6 INCHES FROM THE PIPE BARREL AT SPRINGLINE.
5. VERTICAL TRENCH WALLS
 - a) FOR DEPTHS UP TO 5'-0", NO TRENCH SUPPORT IS REQUIRED UNLESS UNSTABLE OR RUNNING SOIL IS ENCOUNTERED.
 - b) FOR DEPTHS EXCEEDING 5'-0", SHEETING, SHORING OR OTHER EQUIVALENT BRACING SHALL BE PROVIDED IN ACCORDANCE WITH THE CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS (CAL/OSHA) CODE OF REGULATIONS TITLE 8, SUB CHAPTER 4 "CONSTRUCTION SAFETY ORDERS".
6. OPTIONAL COMBINATION OF VERTICAL AND SLOPING TRENCH WALLS
 - a) TRENCH DEPTHS EXCEEDING 5'-0" SHALL HAVE VERTICAL WALLS IN PIPE ZONE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
 - b) FOR TRENCHES WITH COMBINED WALLS AND ANY DEPTH EXCEEDING 3'-6", THE CONTRACTOR SHALL PROTECT IN ACCORDANCE WITH THE CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS (CAL/OSHA) CODE OF REGULATIONS TITLE 8, SUB CHAPTER 4 "CONSTRUCTION SAFETY ORDERS".
7. BEDDING SHALL BE PER STANDARD SPECIFICATIONS, EXCEPT THAT
 - a) ALL PIPE SHALL HAVE A BEDDING WITH AN SE OF 30 MINIMUM.
 - b) SE OF 30 AND HAUNCH BEDDING SHALL BE HAND TAMPED TO 90% RELATIVE COMPACTION MIN. FOR PVC AND ALL OTHER FLEXIBLE PIPE INSTALLATIONS, WHEREUPON BEDDING ABOVE SPRINGLINE SHALL BE COMPACTED CONCURRENTLY WITH THE BACKFILL.

REVISION	DRAWN	APP'D.	DATE
JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

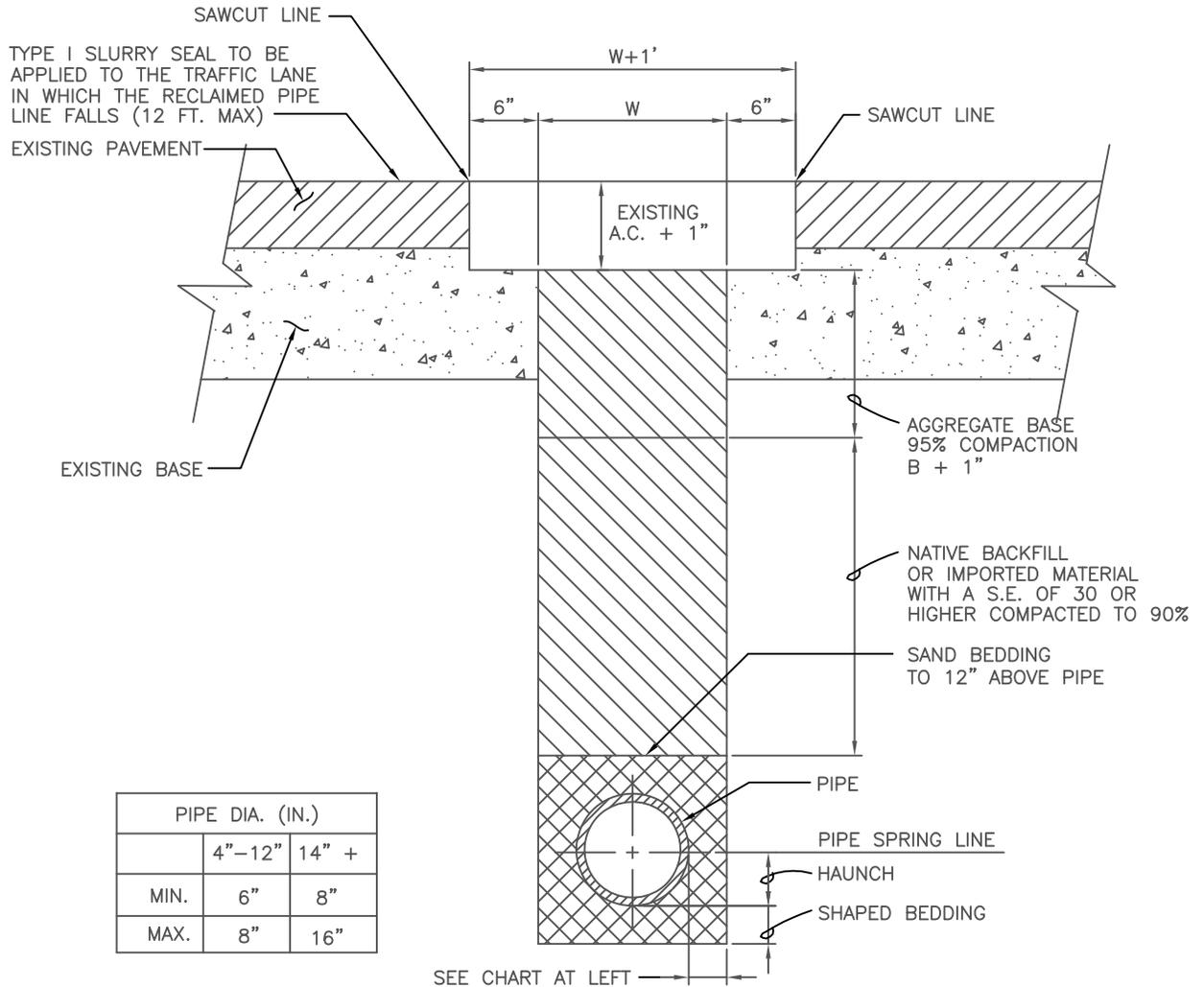
WEST BASIN MUNICIPAL WATER DISTRICT

PIPE TRENCHING AND BEDDING

STANDARD
DRAWING

RW17

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PIPE DIA. (IN.)	
	4"-12" 14" +
MIN.	6" 8"
MAX.	8" 16"

SEE CHART AT LEFT

NOTE:

1. NATIVE BACKFILL OR IMPORTED MATERIAL WITH A S.E. OF 30 OR HIGHER, FOR BACKFILL TO BE COMPACTED 90% THE CRUSHED AGGREGATE BASE MATERIAL SHALL BE COMPACTED TO 95%
2. PAVEMENT AND BASE REPLACEMENT THICKNESS SHALL BE 1-INCH MORE THAN EXISTING, UNLESS OTHERWISE NOTED. MINIMUM AC AND BASE REQUIREMENTS ARE 3" AC OVER 6" AB. IF JURISDICTIONAL AGENCY'S PERMIT OR STANDARDS ARE MORE STRINGENT, THEN THE JURISDICTIONAL AGENCY'S PERMIT OR STANDARDS SHALL GOVERN (AT NO ADDITIONAL COST TO WBMWD).
3. BEDDING SHALL BE PER STANDARD SPECIFICATIONS EXCEPT:
 - A: ALL PIPES SHALL HAVE A SAND BEDDING.
 - B: SAND BEDDING UP TO THE HAUNCH SHALL BE HAND TAMPED TO 90% RELATIVE COMPACTION MINIMUM FOR PVC AND ALL OTHER FLEXIBLE INSTALLATIONS WHEREUPON BEDDING ABOVE SPRINGLINE SHALL BE COMPACTED CONCURRENTLY WITH THE BACKFILL.
4. FOR TRENCHES TRAVERSING A MAJOR STREET AT 90° AND/OR IN INTERSECTIONS OF MAJOR STREETS. JET PIPE ZONE AND SLURRY FROM TOP OF PIPE ZONE TO SUBBASE WITH ONE SACK SAND SLURRY.
5. ALL TRAFFIC SIGNAL LOOPS, TRAFFIC DOTS, TRAFFIC LINES, PEDESTRIAN LINES, AND OTHER PAINTED MARKINGS ARE TO BE REPLACED BY THE CONTRACTOR.
6. EXISTING PAVING MAY BE MECHANICALLY GROUND DOWN A MINIMUM OF 1 1/2" BY AN ADDITIONAL 12" WIDTH. THE PERMANENT PAVING SHALL THAN BE EXTENDED AS AN OVERLAY INTO THIS AREA. ALL EXISTING PAVEMENT EDGES ARE TO BE TACK COATED BEFORE APPLICATION OF PERMANENT PAVEMENT. IF THERE IS LESS THAN 2" OF PAVEMENT AFTER GRINDING, THAN THE GROUND AREA SHALL BE REMOVED BY SAW CUTTING AND PERMANENT PAVEMENT PLACED.

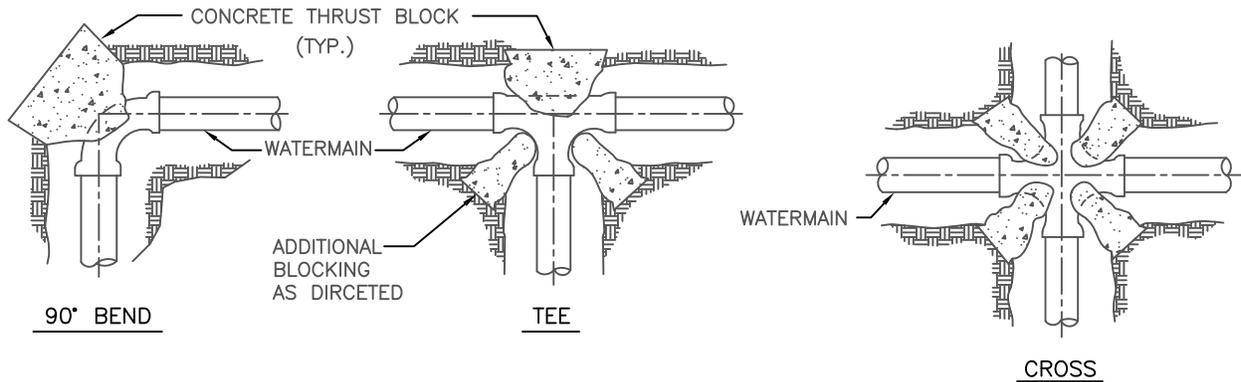
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JUNE 2003			
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WEST BASIN MUNICIPAL WATER DISTRICT

TRENCH AND PAVING SECTION

STANDARD
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RW18

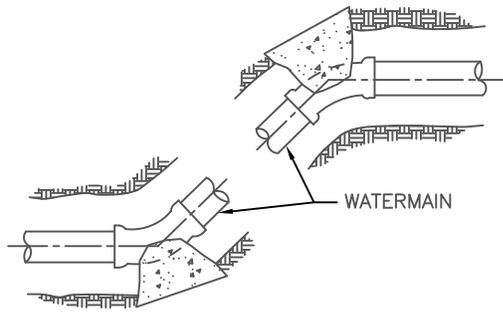
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90° BEND

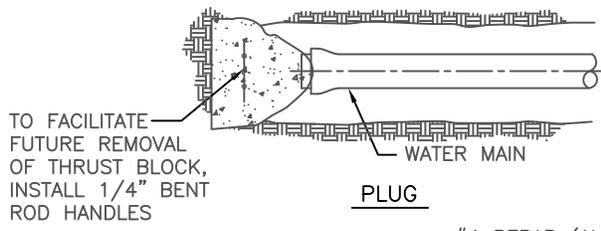
TEE

CROSS



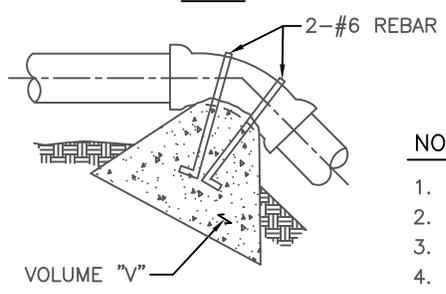
BEND

VERTICAL BEND



PLUG

TO FACILITATE FUTURE REMOVAL OF THRUST BLOCK, INSTALL 1/4" BENT ROD HANDLES



REDUCER

CONCRETE THRUST BLOCK (EXTEND 12" BELOW TRENCH BOTTOM & 6" ABOVE TOP OF PIPE)

NOTES:

1. ALL CONCRETE FOR THRUST BLOCK TO BE CLASS 560-C-3250.
2. CONCRETE TO BE KEPT CLEAR OF ALL PIPE, NUTS, BOLTS, AND ENDS OF FITTINGS.
3. ALL BEARING AREAS TO BE AGAINST UNDISTURBED SOIL.
4. BEARING AREAS ARE BASED ON A TEST OF 200 PSI AND SOIL BEARING CAPACITY OF 2000 PSF. THE RATIO OF WIDTH TO HEIGHT CANNOT EXCEED 1 1/2.
5. DISTRICT'S FIELD REPRESENTATIVE MAY INCREASE THE SIZE OF THRUST BLOCK, IF IN HIS OPINION, THE SOIL BEARING VALUE IS LESS THAN THE ASSUMED VALUE.
6. TIE BARS NOT EMBEDDED IN CONCRETE SHALL BE CLEANED AND COATED WITH BITUMASTIC NO. 50 OR EQUIVALENT.
7. THRUST BLOCK ON CROSSES SHALL ONLY BE USED WHEN THERE IS A STUB-OUT ON ONE OR MORE SIDES.
8. PROVIDE POLYETHYLENE (8 MIL MIN) BETWEEN FITTING AND CONCRETE.

PIPE SIZE	HORIZONTAL/VERTICAL ANCHOR AND THRUST BLOCK								
	90°		45°		22 1/2°		11 1/4°		TEE/PLUG
	"A"	"V"	"A"	"V"	"A"	"V"	"A"	"V"	"A"
3"/4"	3	1.4	2	1.0	2	.5	1	.3	2
6"	6	2.9	3	2.0	2	1.1	1	.6	4
8"	10	5	5	3.5	3	1.9	1.5	1.0	7
10"	16	7.5	8	5.3	5	2.9	2.5	1.5	12
12"	21	10.6	12	7.5	6	4.0	3	2.1	16
14"	30	14.2	16	10	8	5.4	4	2.8	21
16"	38	18.3	21	13	10	7	5	3.6	27

"A" DESIGNATES AREA IN SQ. FT. OF HORIZONTAL THRUST BLOCK.

"V" DESIGNATES VOLUME IN C.Y. OF VERTICAL ANCHOR BLOCK.

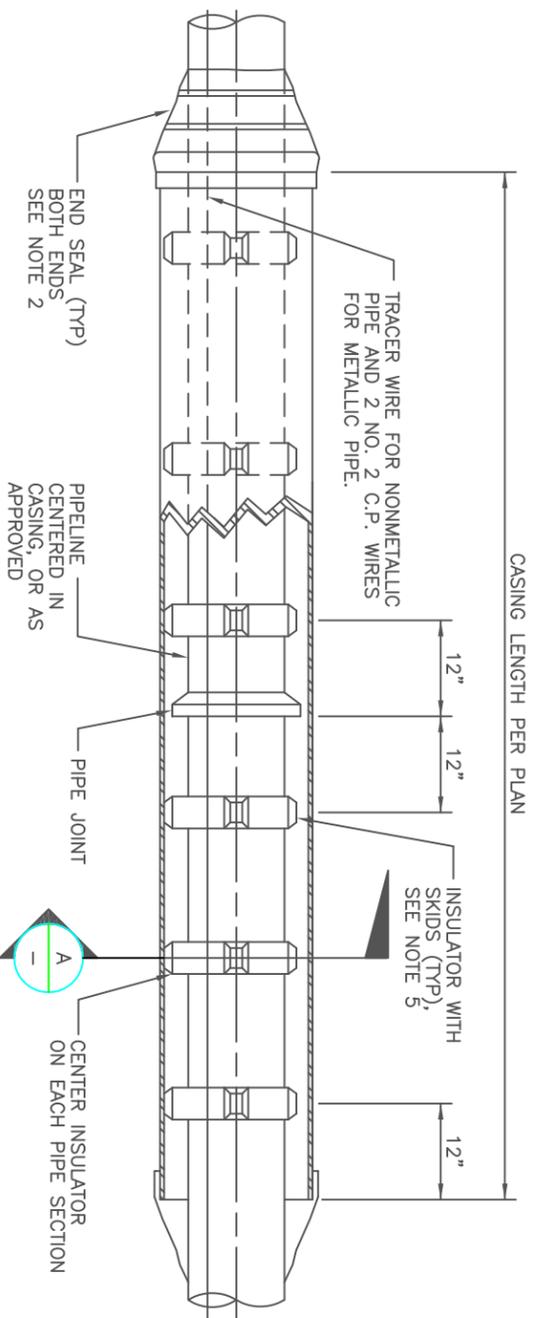
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JUNE 2003			
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WEST BASIN MUNICIPAL WATER DISTRICT

TYPICAL THRUST BLOCKS

STANDARD DRAWING

RW19

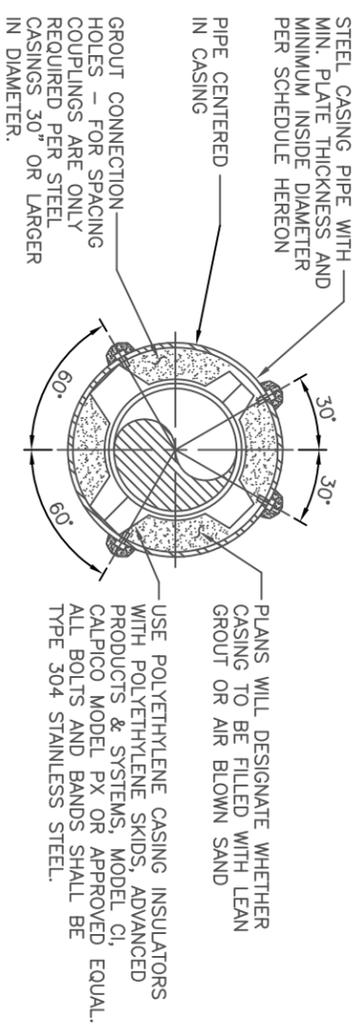
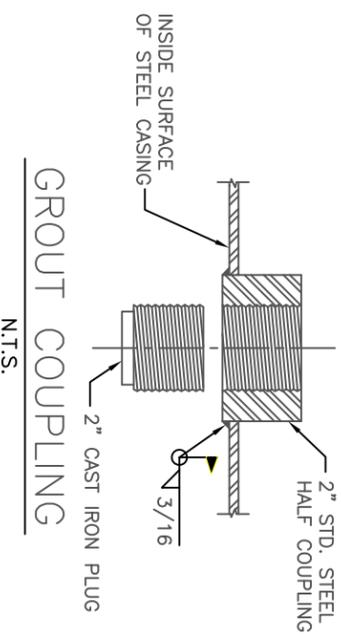


CARRIER PIPE SIZE (I.D.)	STEEL CASING PIPE MIN. SIZE (O.D.)	MIN. WALL THK.
4"	12 3/4"	3/8"
6"	16"	3/8"
8"	18"	3/8"
10"	20"	3/8"
12"	24"	3/8"
14"	26"	3/8"
16"	28"	3/8"

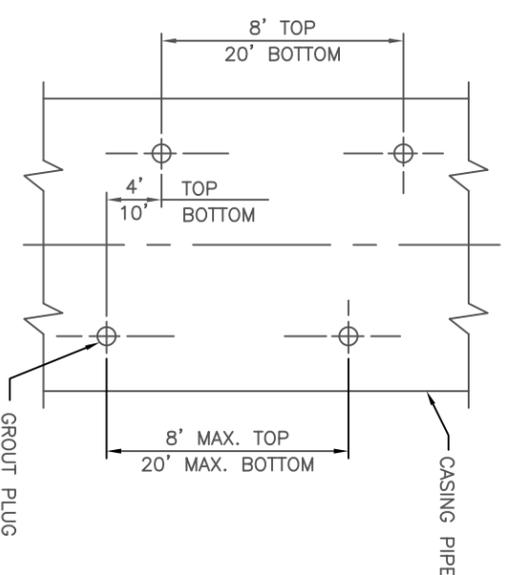
CASING FOR OTHER TYPE SIZES SUBJECT TO APPROVAL OF DISTRICT

NOTES:

1. ALL STEEL CASING PIPE JOINTS SHALL BE WELDED FULL CIRCUMFERENCE.
2. PERIPHERY OF CASING TO BE PRESSURE GROUDED. CONTRACTOR SHALL AVOID "FLOATING" PIPE DURING GROUING.
3. WATER MAIN PIPE TO BE PRESSURE TESTED PER STANDARD SPECIFICATIONS PRIOR TO FILLING CASING PIPE WITH GROUT OR SAND.
4. CASING SHALL BE INSTALLED BY THE BORE, JACK AND/OR TUNNEL METHOD.
5. SPACING BETWEEN THE CASING INSULATORS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS EXCEPT THAT THERE SHALL BE AT LEAST 3 CASING INSULATORS PER PIPE SECTION, ONE 12" FROM EACH JOINT AND ONE CENTERED. ADDITIONALLY, ONE INSULATOR SHALL BE INSTALLED 12" FROM EACH END OF THE CASING.
6. BOTH ENDS OF THE CASING BETWEEN THE CASING AND CARRIER PIPE SHALL BE SEALED WATERTIGHT USING AN END SEAL MANUFACTURED BY ADVANCED PRODUCTS & SYSTEMS, INC., CALPICO OR APPROVED EQUAL. BANDS SHALL BE TYPE 304 STAINLESS STEEL.
7. PLACE RECYCLED WATER IDENTIFICATION TAPE ON PIPE PRIOR TO STRAPPING ON SKIDS.
8. CONTRACTOR SHALL FURNISH ALL NECESSARY THRUST RESTRAINT DEVICES.
9. ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE PERMITTING AGENCY.



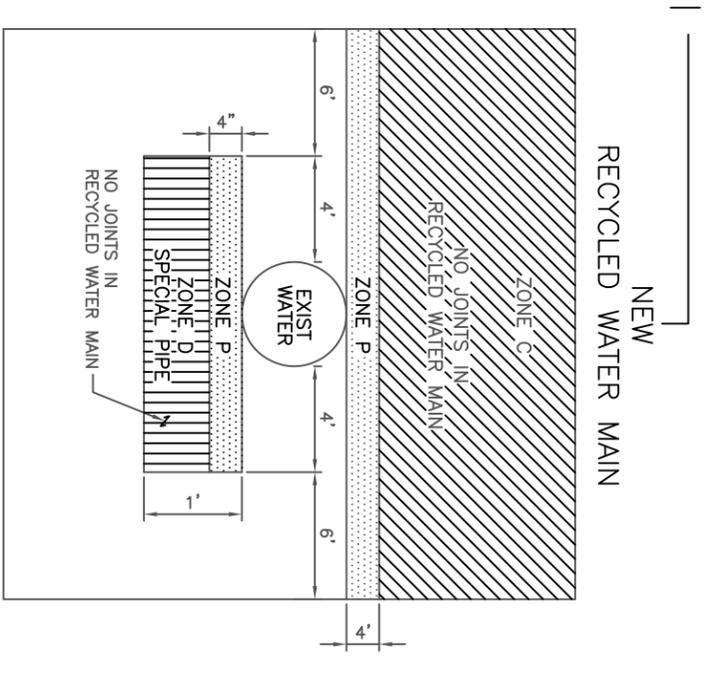
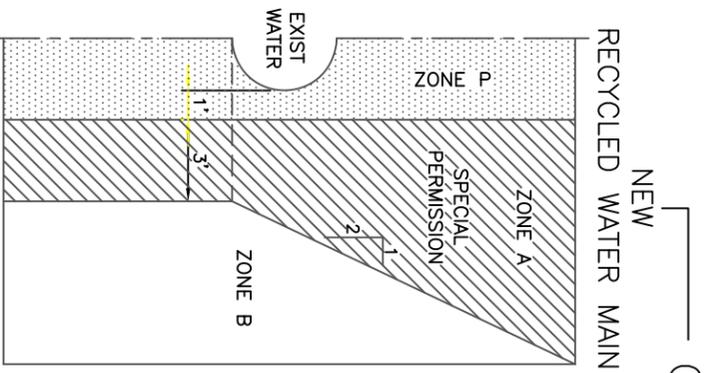
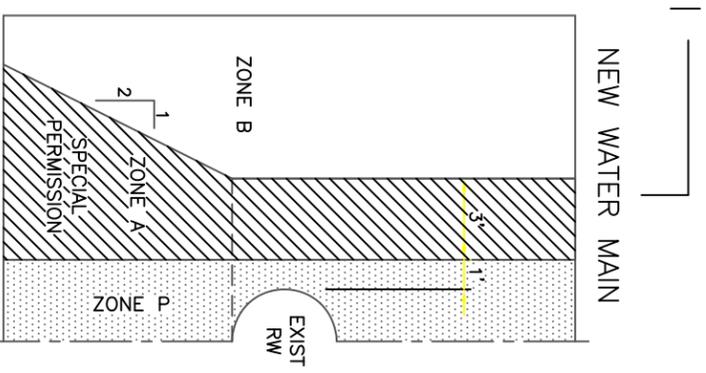
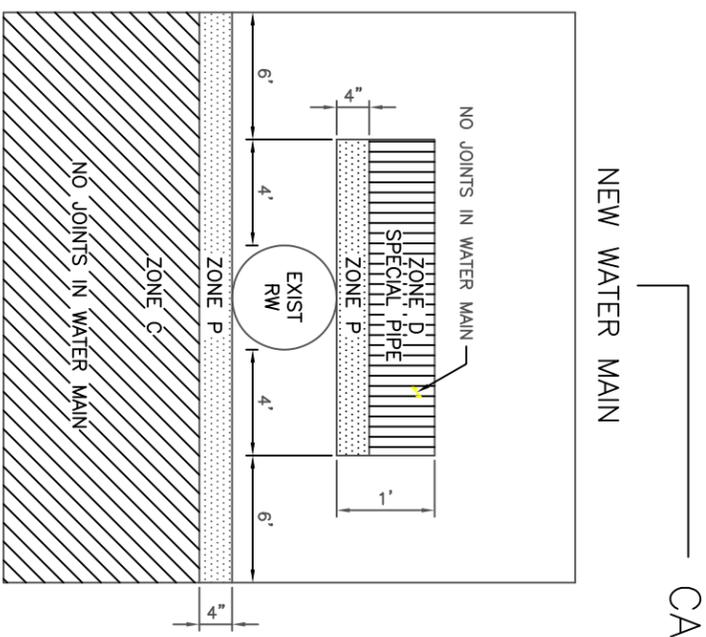
SECTION A-A



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JUNE 2003			
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DISTRICT ENGINEER	RCE		DATE

WEST BASIN MUNICIPAL WATER DISTRICT
STEEL CASING PIPE

STANDARD DRAWING
RW20



CROSSINGS

PARALLEL CONSTRUCTION

CROSSINGS

CASE II

CASE I

CONSTRUCTION REQUIREMENTS FOR DOMESTIC WATER MAINS

CONSTRUCTION REQUIREMENTS FOR RECYCLED WATER MAINS

- ZONE**
- A— SPECIAL PERMISSION REQUIRED. DO NOT LOCATE ANY PARALLEL WATER MAIN IN THIS AREA WITHOUT DISTRICT AND STATE HEALTH DEPARTMENT APPROVAL.
 - B— NOT APPLICABLE
 - C— IF THE SEWER OR RECYCLED WATER MAIN DOES NOT MEET THE REQUIREMENTS OF CASE I, ZONE C THE WATER MAIN SHALL BE CONSTRUCTED AS DESCRIBED FOR ZONE B ABOVE, WITH THE EXCEPTION THAT THE WATER MAIN SHALL CONTAIN NO JOINTS IN ZONE C.
 - D— IF THE SEWER OR RECYCLED WATER MAIN DOES NOT MEET THE REQUIREMENTS OF CASE I, ZONE D THE WATER MAIN SHALL ALSO BE CONSTRUCTED AS DESCRIBED FOR ZONE B ABOVE, WITH THE EXCEPTION THAT THE WATER MAIN SHALL CONTAIN NO JOINTS IN ZONE D.
 - P— PROHIBITED ZONE: NO DOMESTIC WATER MAINS SECTION 64630 (e) (2) CALIFORNIA ADMINISTRATIVE CODE, TITLE 22.

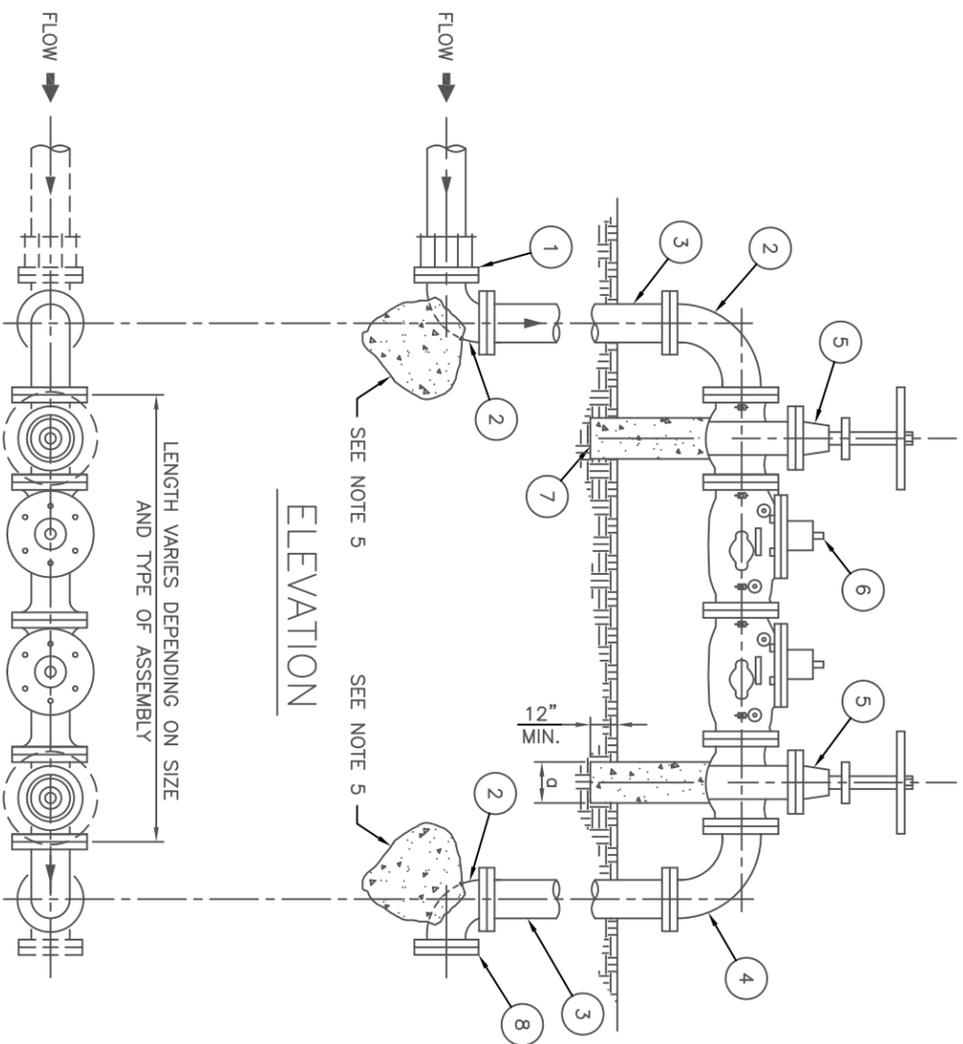
- ZONE**
- A— SPECIAL PERMISSION REQUIRED. DO NOT LOCATE ANY PARALLEL SEWER OR RECYCLED WATER MAIN IN THIS AREA WITHOUT DISTRICT ENGINEER AND STATE HEALTH DEPARTMENT APPROVAL.
 - B— NOT APPLICABLE
 - C— DIP POLYETHYLENE LINED WITH MECHANICAL JOINTS, A CONTINUOUS SECTION OF C900 PVC PIPE CLASS 200 CENTERED OVER THE PIPE BEING CROSSED, OR ANY SEWER PIPE IN A 1/4" THICK CONTINUOUS STEEL CASING WITH ANNUAL SPACE PRESSURE GROUTED FOR SEWER LINES; FOR RECYCLED WATER MAINS USE ANY OF THE REQUIREMENTS DESCRIBED FOR CASE II, ZONE C.
 - D— A CONTINUOUS SECTION OF DIP POLYETHYLENE LINED WITH PUSH-ON TYPE RUBBER RING JOINTS, A CONTINUOUS SECTION OF C900 PVC PIPE CLASS 200 CENTERED ON THE PIPE BEING CROSSED, ANY SEWER PIPE IN A 1/4" THICK CONTINUOUS STEEL CASING WITH ANNUAL SPACE PRESSURE GROUTED OR ANY SEWER PIPE SEPARATED BY A 10'x 10'x 4" THICK REINFORCED CONCRETE; FOR RECYCLED WATER MAINS USE ANY OF THE REQUIREMENTS DESCRIBED FOR CASE II, ZONE D.
 - P— PROHIBITED ZONE: NO SEWERS OR RECYCLED WATER MAINS; SECTION 64630 (e) (2) CALIFORNIA ADMINISTRATIVE CODE, TITLE 22.

NOTES:

1. THE DESIGN AND INSTALLATION OF SEWER FORCE MAINS REQUIRE SPECIAL DISTRICT REVIEW AND APPROVAL.
 2. THE DESIGN OF ALL WATER AND RECYCLED MAINS 24-INCH IN DIAMETER AND LARGER SHALL BE REVIEWED AND APPROVED BY THE STATE HEALTH DEPARTMENT PRIOR TO CONSTRUCTION.
- REF. SOURCE: "GUIDANCE CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES", STATE OF CALIFORNIA, DEPARTMENT OF HEALTH SERVICES, DATED APRIL 14, 2003.

REVISION	DRAWN	APP'D.	DATE
JUNE 2003			
APPROVED			
DISTRICT ENGINEER RCE			DATE

WEST BASIN MUNICIPAL WATER DISTRICT
CRITERIA FOR THE SEPARATION OF WATER MAINS FROM RECYCLED WATER MAINS
STANDARD DRAWING RW21



ELEVATION

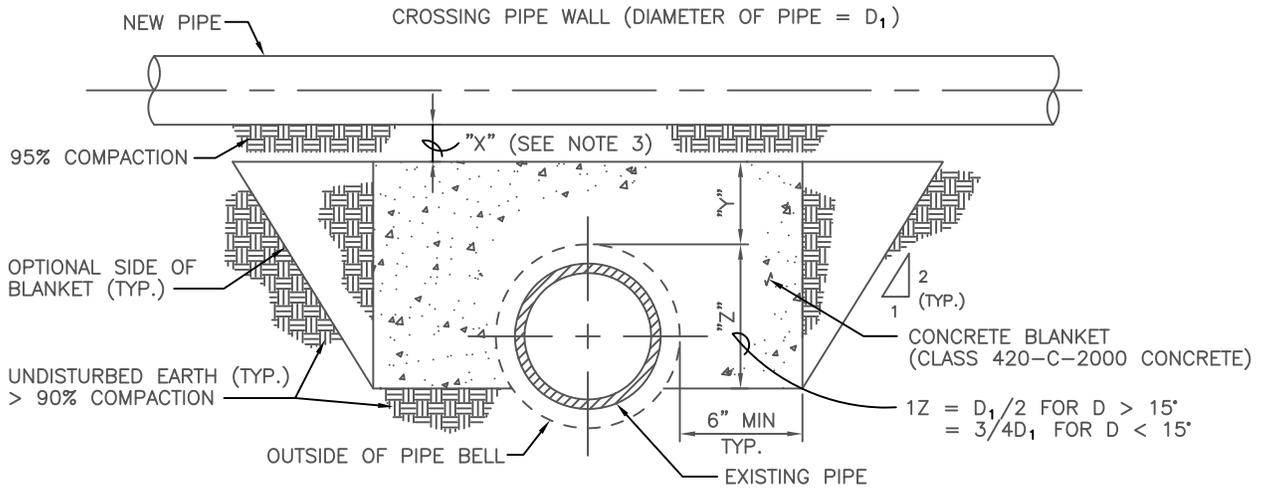
PLAN

CONSTRUCTION ITEMS/MATERIALS LIST	
ITEM NO.	SIZE AND DESCRIPTION
1	FLANGE COUPLING ADAPTER
2	90° DI ELL FLG X FLG
3	DIP SPOOL FLG X FLG
4	90° DI ELL FLG X FLG
5	U.S.C.-APPROVED SHUT-OFF VALVES. SEE GENERAL NOTE 1.
6	APPROVED DOUBLE CHECK OR REDUCED PRESSURE DEVICE (SIZE DEPENDS UPON REQUIREMENT)
7	REINFORCED CONCRETE SUPPORT a) THICK - PIPE SIZE (MINIMUM 6") b) WIDTH - PIPE SIZE + 18" c) BURY - MINIMUM 12" (OR AS DIRECTED BY INSPECTOR BECAUSE OF UNSTABLE GROUND) d) REINFORCING BARS - #4 BARS @ 6" O.C. EACH WAY (2 BARS MIN. VERTICAL)
8	BLIND FLANGE

NOTES:

- ALL UNITS MUST BE IN THE LATEST EDITION OF THE LIST OF APPROVED BACKFLOW PREVENTION DEVICES AS SUPPLIED BY THE "FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH" BY THE U.S.C. SCHOOL OF ENGINEERING.
- NOTIFY DISTRICT PRIOR TO INSTALLATION OF UNIT.
- INSTALLATION SHALL COMPLY WITH THE LATEST PLUMBING CODES AND APPLICABLE LOCAL AGENCY REQUIREMENTS.
- UPON COMPLETION OF THE INSTALLATION OF THE DEVICE, A TEST SHALL BE PERFORMED AND A CERTIFICATE OF ADEQUACY AND OPERATIONAL COMPLIANCE SHALL BE FURNISHED TO DISTRICT. THE TEST SHALL BE PERFORMED BY A TESTING AGENCY APPROVED BY THE DISTRICT.
- THRUST BLOCKS SHALL BE SIZED PER RW19.
- FOR "DISTRICT'S RECOMMENDED STANDARDS" SEE LOCAL PURVEYOR FOR SPECIFIC REQUIREMENTS.
- ALL BACKFLOW DEVICES SHALL BE USC APPROVED.

REVISION	DRAWN	APP'D.	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
JUNE 2003				DOUBLE CHECK & REDUCED PRESSURE BACKFLOW ASSEMBLY	
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DISTRICT ENGINEER RCE				DATE	STANDARD DRAWING RW22

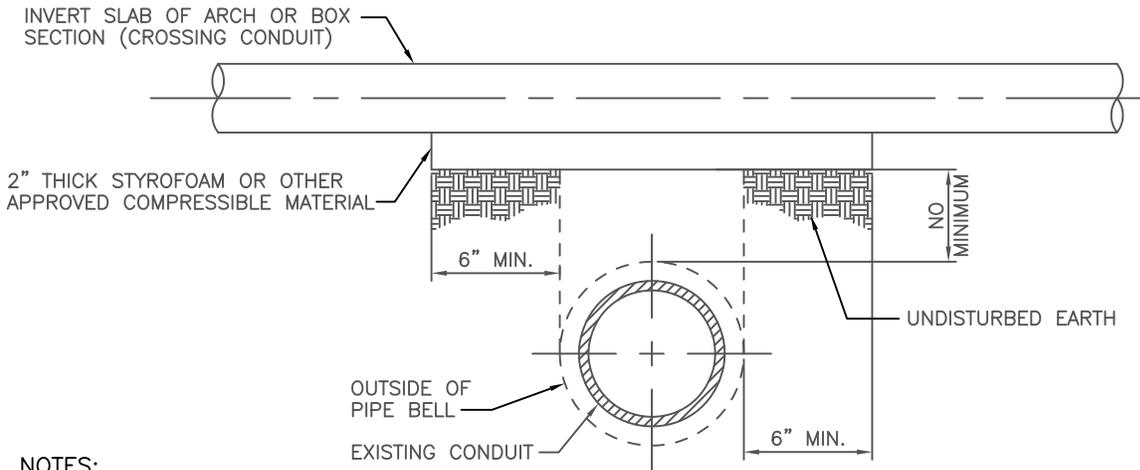


CONCRETE BLANKET

(FOR EXISTING PIPES CROSSED OVER BY A NEW PIPE)

NOTES:

1. CONCRETE BLANKET IS REQUIRED WHEN THE CLEARANCE BETWEEN THE TOP OF THE EXISTING PIPE AND THE BOTTOM OF THE CROSSING PIPE IS LESS THAN 18".
2. "Y" = D/6 (6" MIN.) WHERE THE CLEARANCE BETWEEN THE TOP OF THE EXISTING PIPE AND THE BOTTOM OF CROSSING PIPE IS LESS THAN "Y". THE CONCRETE SHALL BE PLACED BETWEEN THE PIPES AND AROUND THE SIDES OF THE CROSSING PIPE UP TO A LEVEL EQUAL TO "Y" ABOVE THE EXISTING PIPE, OR AS REQUIRED BY NOTE 3 BELOW, WHICHEVER IS HIGHER.
3. "X" = D/12 MINIMUM TO PROVIDE BEDDING MATERIAL FOR THE CROSSING CONDUIT. WHEN "X" < D/12, SEE RW24.
4. THE BLANKET SHALL EXTEND LONGITUDINALLY TO THE FIRST JOINT BEYOND THE TRENCH EXCAVATION AT EACH END OF THE BLANKET, EXCEPT THAT THE BLANKET NEED NOT BE EXTENDED MORE THAN 4 FEET BEYOND THE TRENCH.
5. WHENEVER A PIPE BELL IS ENCOUNTERED WITHIN THE LIMITS OF THE BLANKET, ALL DIMENSIONS SHALL REFER TO THE BELL.



NOTES:

1. COMPRESSIBLE BLANKET IS REQUIRED WHEN THE CLEARANCE BETWEEN THE TOP OF THE EXISTING PIPE AND THE BOTTOM OF THE CROSSING CONDUIT (BOX OR ARCH) IS LESS THAN 18".
2. THE BLANKET SHALL EXTEND LONGITUDINALLY FOR THE FULL CROSSING CONDUIT TRENCH WIDTH.

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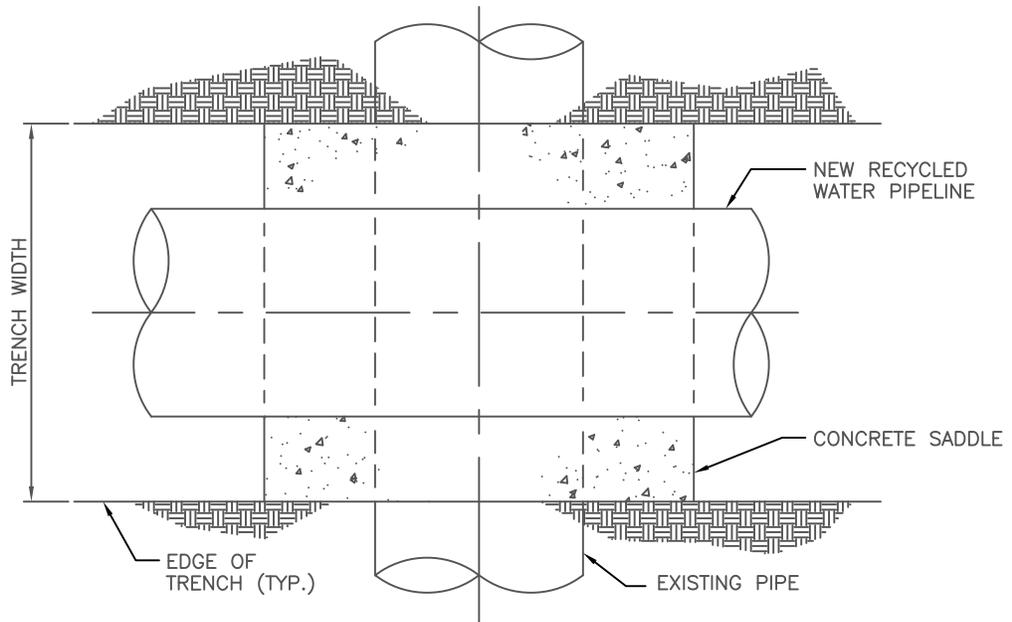
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JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

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BLANKET PROTECTION FOR PIPES

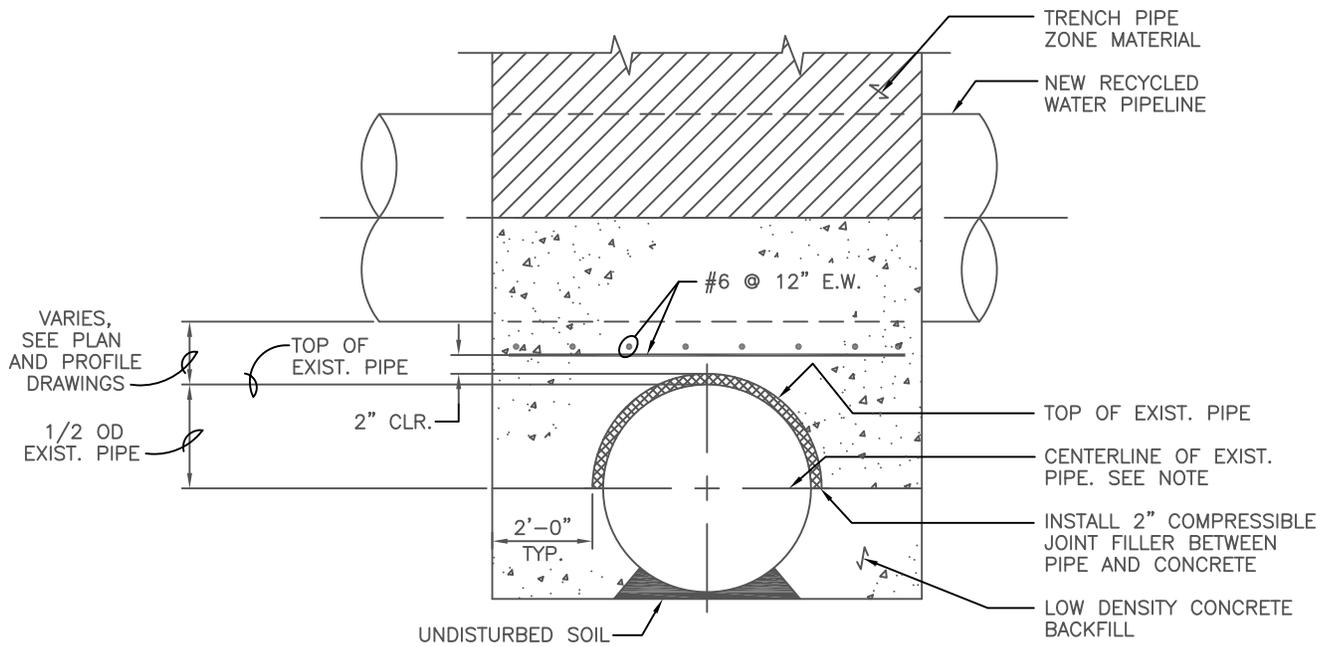
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PLAN

N.T.S.



ELEVATION

N.T.S.

NOTE:
EXISTING PIPE MAY BE FRAGILE. USE EXTREME CAUTION WHEN REMOVING SOIL FROM EXTERIOR OF EXISTING PIPE TO AVOID DAMAGE.

REVISION	DRAWN	APP'D.	DATE
JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

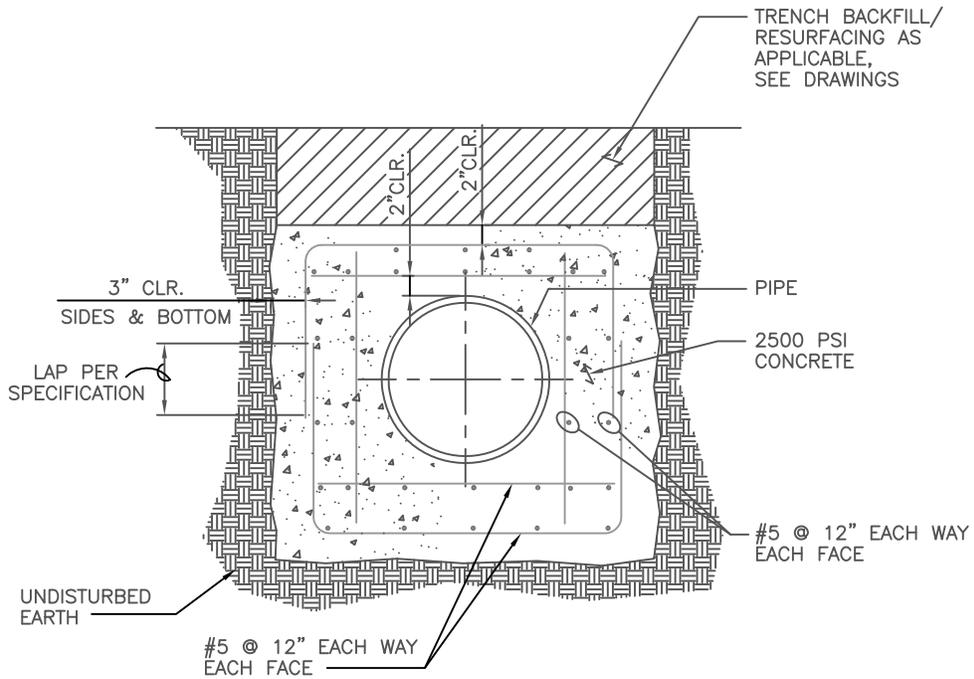
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CONCRETE SADDLE FOR EXISTING
PIPES CROSSED UNDER NEW PIPE

STANDARD
DRAWING

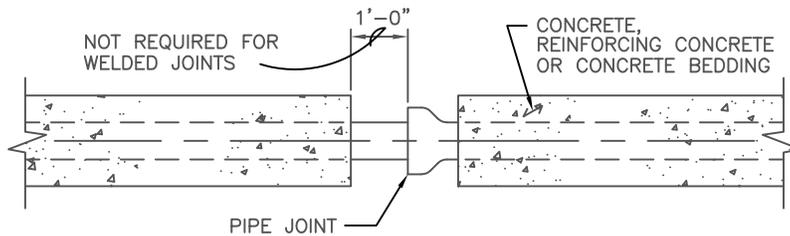
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NOTES:

1. SEE STANDARD DRAWING RW17 FOR TRENCH WIDTH.
2. TEMPORARY SUPPORTS SHALL BE USED TO SUPPORT PIPE WHEN PLACING CONCRETE. TO AVOID FUTURE CONCENTRATED LOADS, SUPPORTS SHALL BE REMOVED OR SHALL BE SHAPED TIMBERS WITH 1/2-INCH EXPANSION JOINT MATERIAL PADDING.



JOINT DETAIL

N.T.S.

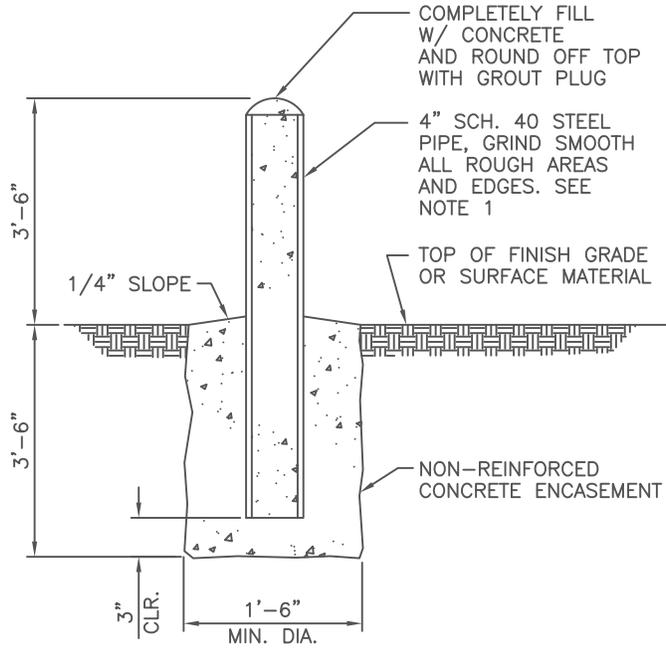
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JUNE 2003			
APPROVED			
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WEST BASIN MUNICIPAL WATER DISTRICT

CONCRETE ENCASEMENT

STANDARD
DRAWING
RW25

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NOTES:

1. PAINT WITH TWO COATS SCHOOL BUS YELLOW WITH SPECIFIED COATING AND STENCIL WITH 2" HIGH BLACK LETTERS THE STATION OF THE PIPELINE STRUCTURE.

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JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

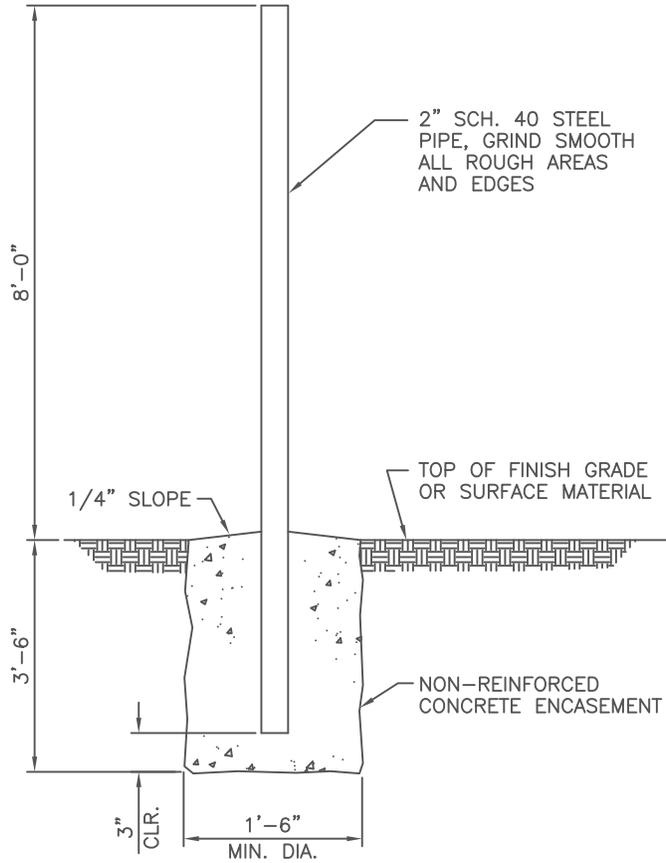
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GUARD POST

STANDARD DRAWING

RW26

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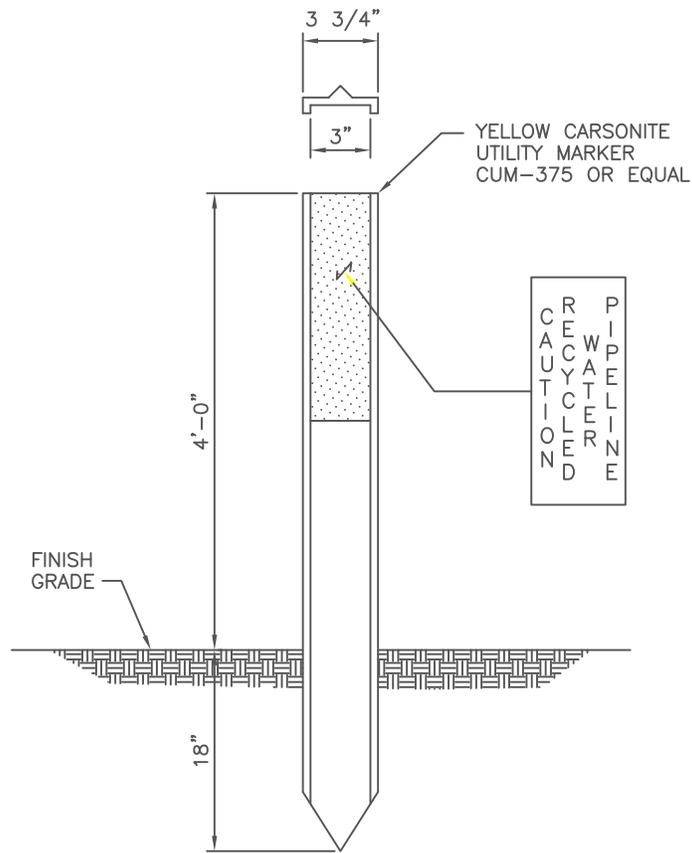


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JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

SIGN POST

STANDARD
DRAWING
RW27



NOTES:

1. LOCATE MARKER POST AT EVERY HORIZONTAL ANGLE POINT, EACH BC AB EC OF HORIZONTAL CURVES, AND AT A MAXIMUM SPACING OF EVERY 300 FEET BETWEEN ANGLE POINTS AND CURVE POINTS.
2. THE ENGINEER SHALL DETERMINE WHICH SIDE AND EXACT LOCATION OF EACH MARKER POST.
3. USE ONLY OUTSIDE STREET RIGHTS-OF WAY.

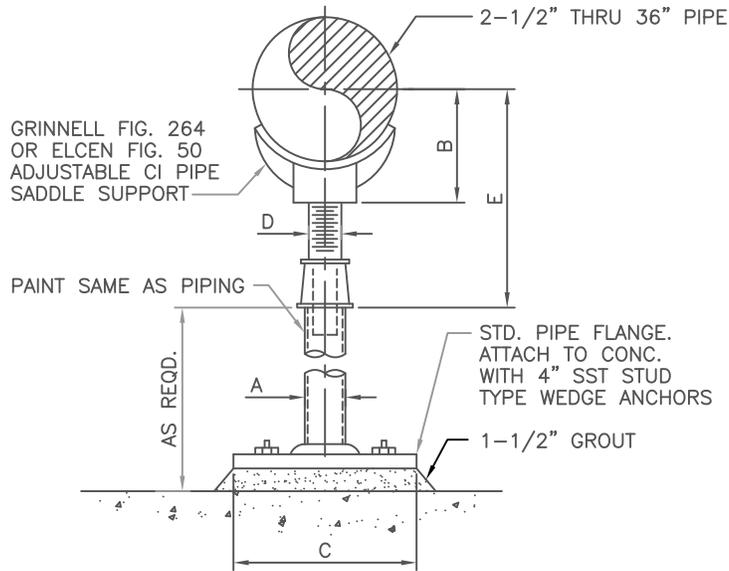
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JUNE 2003			
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

MARKER POST

STANDARD
DRAWING
RW28

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NOTES:

1. PROVIDE HALF ROUND RIGID INSULATION AND INSULATION PROTECTION SHIELD. SIMILAR TO GRINNELL FIGURE 167 OR ELCEN FIGURE 219, WHERE PIPING IS INSULATED.
2. PROVIDE NEOPRENE WAFFLE ISOLATION PAD, SIMILAR TO MASON TYPE "W" OR KORFUND KORPAD 40, UNDER SUPPORT FOOT WHEN PIPING IS ISOLATED OR SUPPORT IS ADJACENT TO MECHANICAL EQUIPMENT.
3. FOR BASE HEIGHT AND FLANGE DIMENSIONS, SEE TABLE BELOW.

DIMENSION TABLE						
PIPE SIZE	A	B	C	D	E	
					MIN.	MAX.
2-1/2"	2-1/2"	3-1/2"	9"	1-1/2"	8"	13"
3"	2-1/2"	3-3/4"	9"	1-1/2"	8-1/4"	13-1/4"
3-1/2"	2-1/2"	4"	9"	1-1/2"	8-1/2"	13-1/2"
4"	3"	4-1/4"	9"	2-1/2"	9-1/4"	14"
5"	3"	4-7/8"	9"	2-1/2"	10"	14-3/4"
6"	3"	5-1/2"	9"	2-1/2"	10-1/2"	15-1/4"
8"	3"	6-7/8"	9"	2-1/2"	11-3/4"	16-1/2"
10"	3"	8-1/2"	9"	2-1/2"	13-1/2"	18-1/4"
12"	3"	9-15/16"	9"	2-1/2"	15"	19-3/4"
14"	4"	10-15/16"	11"	3"	16-1/4"	20-3/4"
16"	4"	12-3/8"	11"	3"	17-3/4"	22-1/4"
18"	6"	13-7/8"	13-1/2"	3-1/2"	19-1/2"	24"
20"	6"	15-3/8"	13-1/2"	3-1/2"	21"	25-1/2"
24"	6"	17-15/16"	13-1/2"	4"	23-3/4"	28-1/4"
30"	6"	21-5/16"	13-1/2"	4"	27"	31-1/2"
32"	6"	22-1/2"	13-1/2"	4"	28-1/4"	32-3/4"
36"	6"	24-1/2"	13-1/2"	4"	30-1/4"	34-3/4"

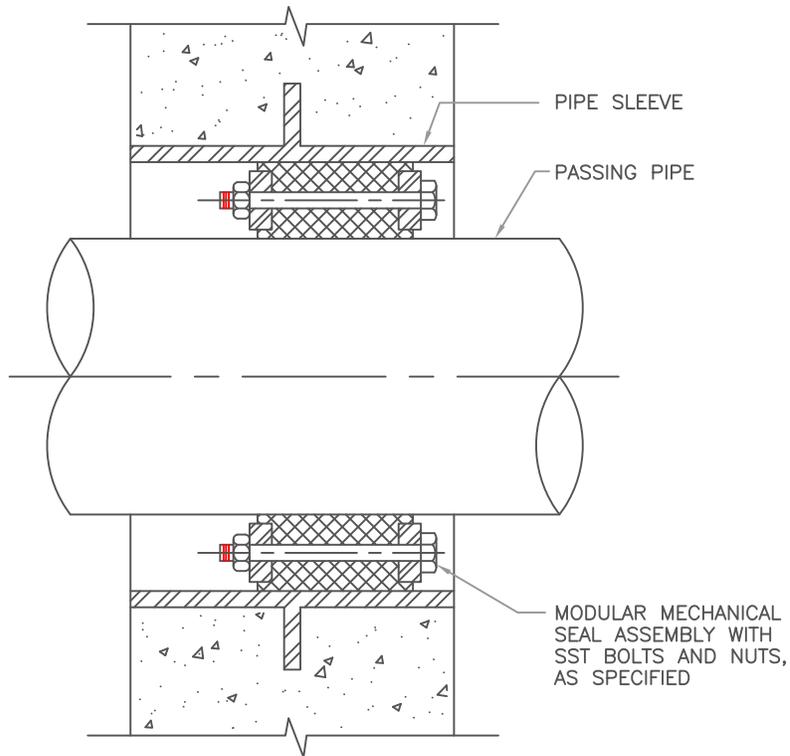
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WEST BASIN MUNICIPAL WATER DISTRICT

**PIPE SUPPORT
AND DIMENSION TABLE**

STANDARD
DRAWING
RW29

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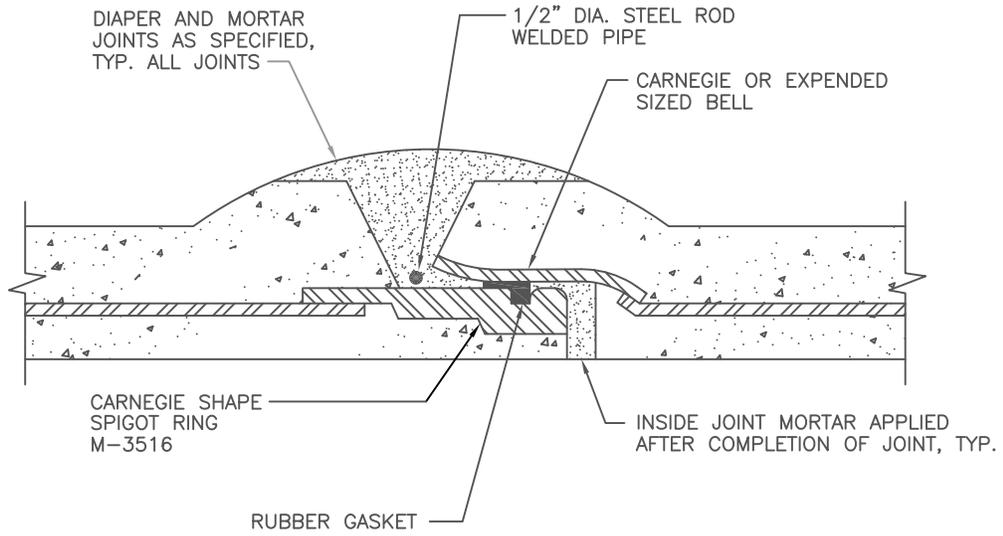
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WEST BASIN MUNICIPAL WATER DISTRICT

WALL PENETRATION SEAL

STANDARD
DRAWING
RW30

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NOTE:

SECTION TAKEN AT PIPE SPRINGLINE.

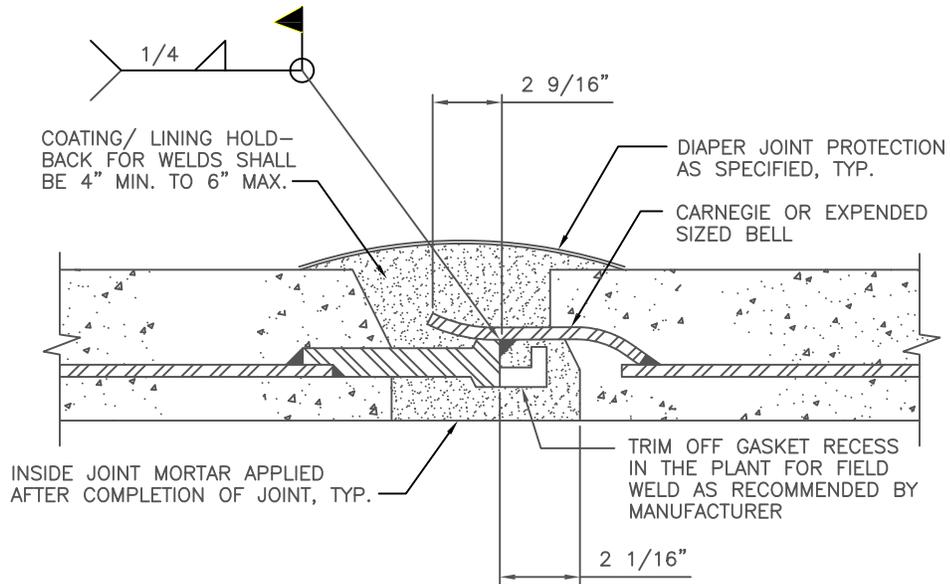
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WEST BASIN MUNICIPAL WATER DISTRICT

GASKET JOINT

STANDARD
DRAWING
RW31

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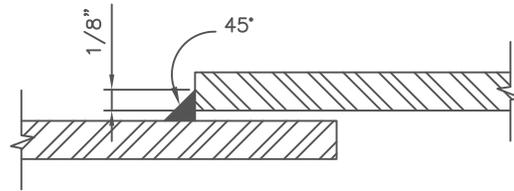


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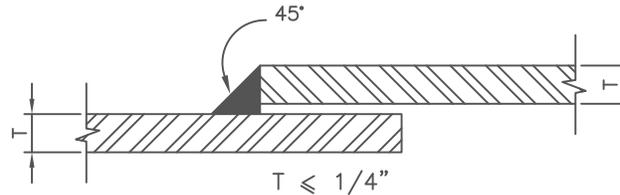
WEST BASIN MUNICIPAL WATER DISTRICT

CARNEGIE WELDED JOINT

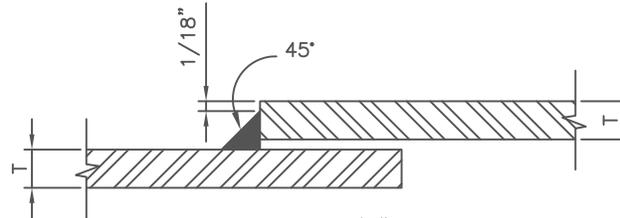
STANDARD
DRAWING
RW32



SEAL WELD



$T \leq 1/4"$



$T > 1/4"$

PRIMARY WELD

BOTH PRIMARY ($T=1/16"$) AND SEAL WELDS ARE REQ'D PRIMARY WELD MAY BE EITHER INSIDE OR OUTSIDE

MORTAR JOINT AS SPECIFIED, TYP.

DIAPER JOINT PROTECTION AS SPECIFIED, TYP.

TAP FOR AIR/SOAP SOLUTION TEST, SEE NOTE

3" MIN. BELL DEPTH FOR LAP JOINT AND 5 1/2" MIN. BELL DEPTH FOR SLIP JOINT, WITH 1" MIN. SEPARATION BETWEEN TOE OF WELD AND POINT OF TANGENCY OF BELL RADIUS

HOLD BACK 4" MIN. AND 6" MAX. FROM WELD, TYP.

MORTAR FILL AS SPECIFIED, TYP.

1 1/2" MAX. STAB DEPTH FOR LAP JOINT AND 4" MAX. STAB DEPTH FOR SLIP JOINT

NOTE:

CONTRACTOR SHALL CONDUCT AN AIR/SOAP SOLUTION LEAK TEST AT 20 PSI AIR PRESSURE. IF LEAKS ARE DETECTED, REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS. PLUG HOLES AT COMPLETION OF TESTS AND COAT AS SHOWN.

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JUNE 2003			
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DISTRICT ENGINEER		RCE	DATE

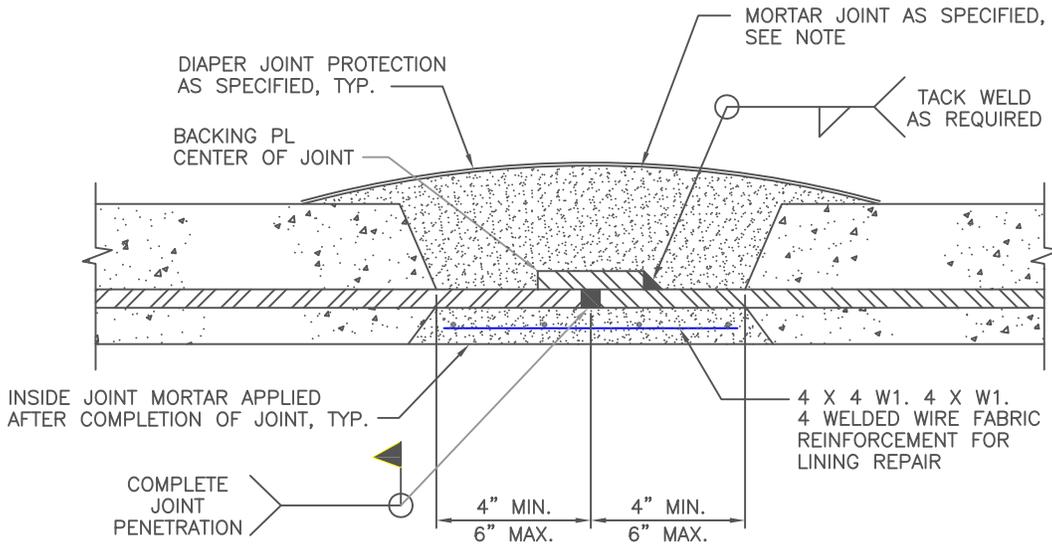
WEST BASIN MUNICIPAL WATER DISTRICT

LAP WELD SLIP JOINT

STANDARD DRAWING

RW33

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NOTE:

AT OVERCROSSING THE COATING REPAIR SHALL BE PAINT AS SHOWN OR SPECIFIED.

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JUNE 2003			
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DISTRICT ENGINEER		RCE	DATE

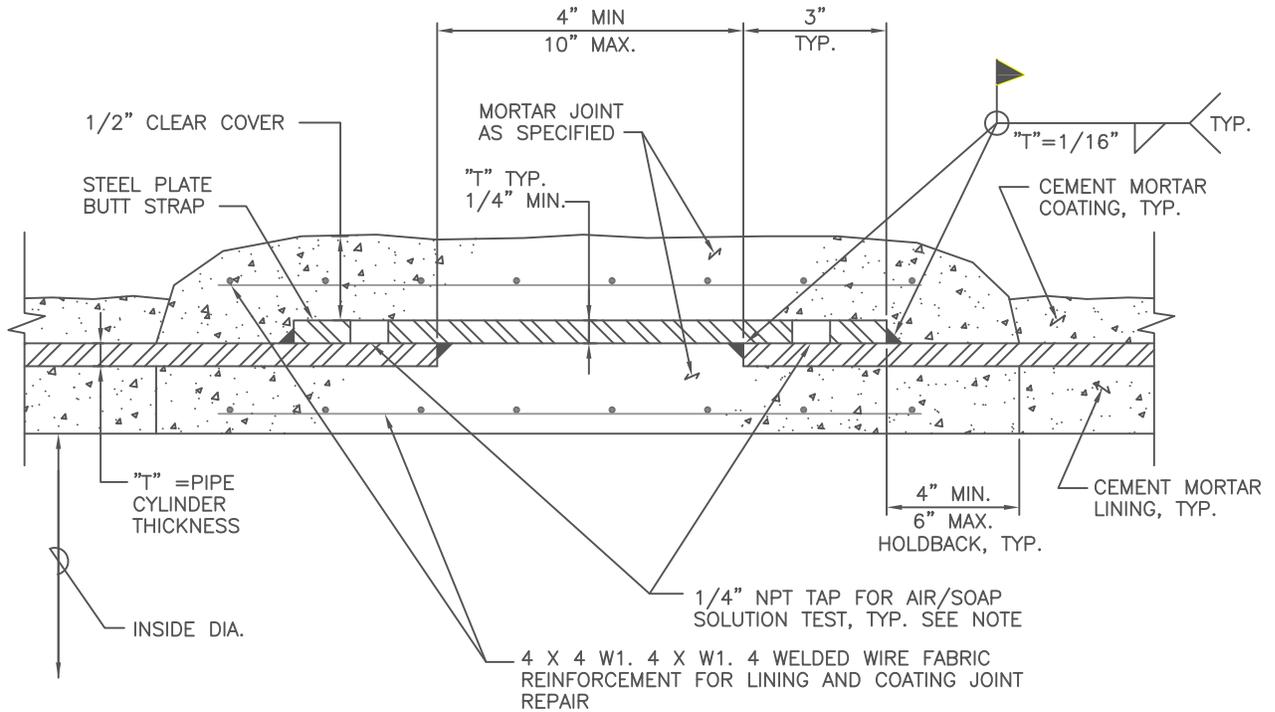
WEST BASIN MUNICIPAL WATER DISTRICT

BUTT WELD

STANDARD DRAWING

RW34

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NOTE:

CONTRACTOR SHALL CONDUCT AN AIR/SOAP SOLUTION LEAK TEST AT 20 PSI AIR PRESSURE. IF LEAKS ARE DETECTED, REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS. PLUG HOLES AT COMPLETION OF TESTS AND COAT WITH BRASS PLUG OR WELD.

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JUNE 2003			
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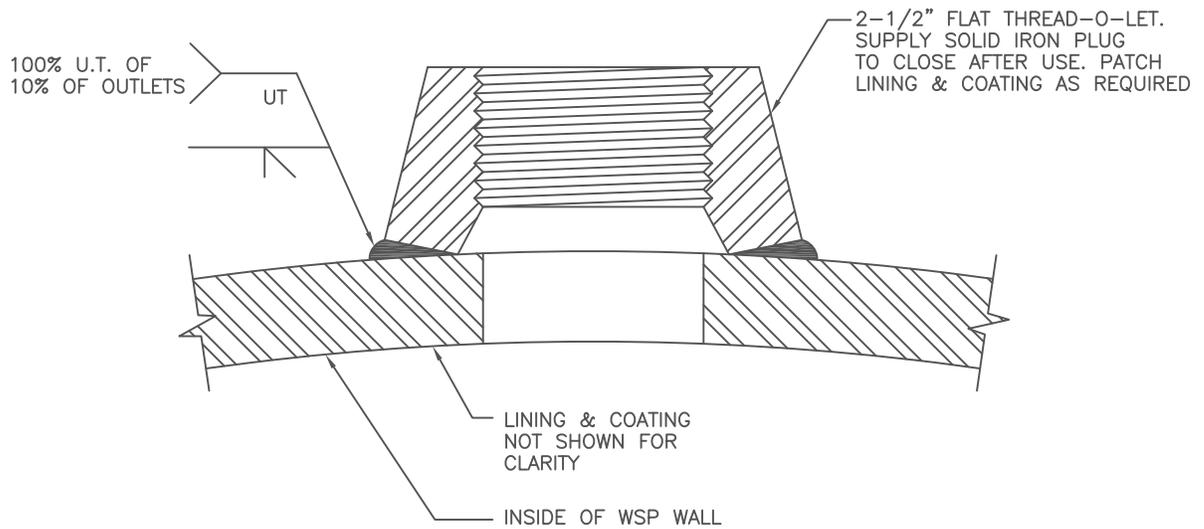
WEST BASIN MUNICIPAL WATER DISTRICT

BUTT STRAP JOINT FOR PIPES 24-INCHES AND LARGER

STANDARD DRAWING

RW35

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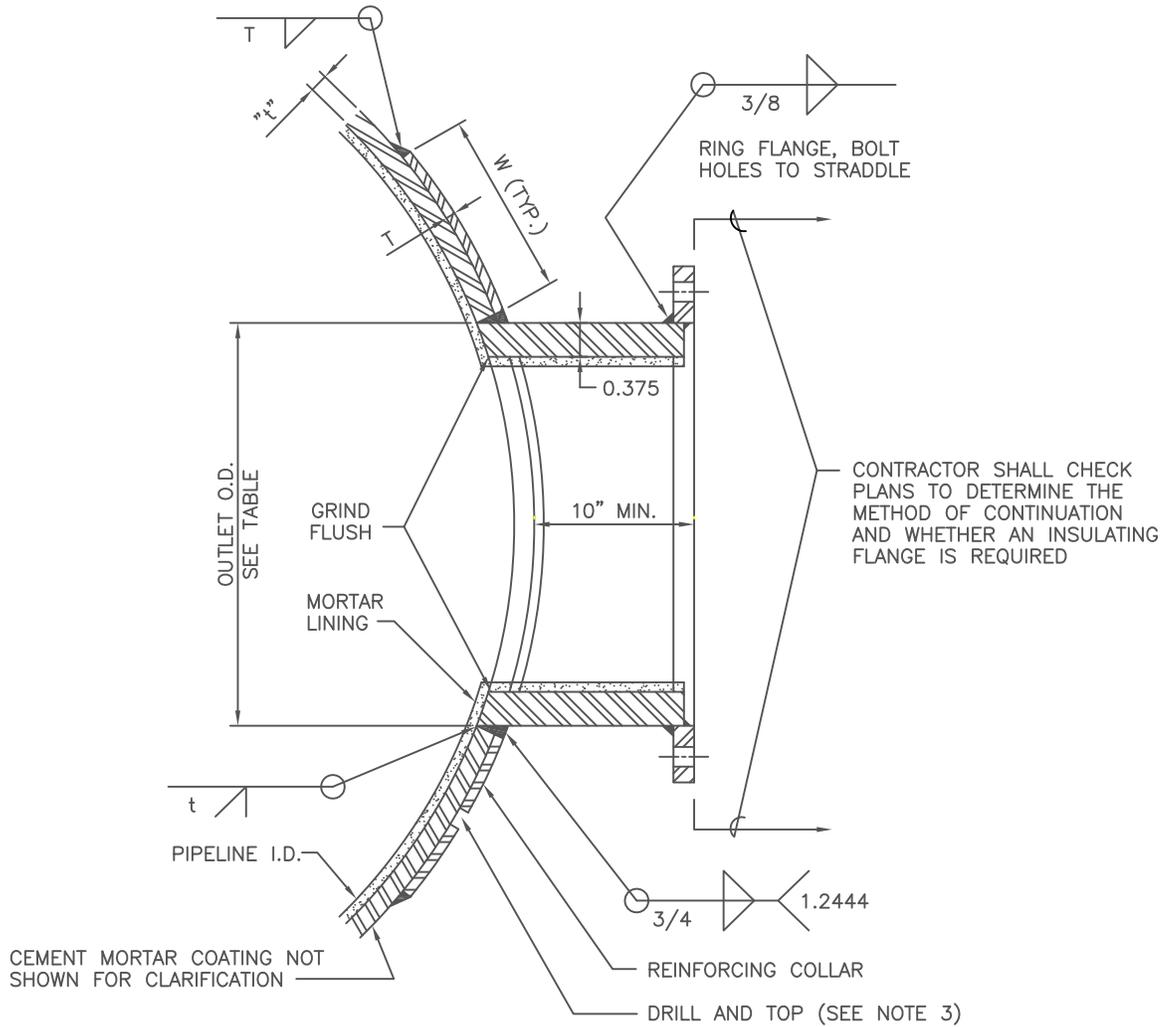
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WEST BASIN MUNICIPAL WATER DISTRICT

WELD LEAD OUTLET

STANDARD
DRAWING

RW36



NOTES:

1. COAT ALL EXPOSED SURFACES ACCORDING TO SPECIFICATION FOR PAINTING.
2. "t" INDICATES THE THICKNESS OF THE STEEL PIPE AT THE STATION WHERE USED.
3. PIPELINE MANUFACTURER SHALL PERFORM THE FOLLOWING COLLAR LEAK TEST PROCEDURES:
 - a) DRILL AND TAP 1/4" NPT HOLE BEFORE WELDING.
 - b) CONDUCT AN AIR/SOAP SOLUTION LEAK TEST AT 20 PSI AIR PRESSURE.
 - c) IF LEAKS ARE DETECTED REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS.
 - d) PLUG HOLE ON COMPLETION OF TESTS AND COAT AS SPECIFIED.

OUTLET NOMINAL SIZE (IN)	OUTLET O.D. (IN)	COLLAR THICKNESS T (IN)	WIDTH W (IN)
4	4-1/2	1/4	3
6	6-5/8	1/4	3
8	8-5/8	1/4	3
10	10-3/4	1/4	4
12	12-3/4	1/4	5
14	14	1/4	6
16	16	1/4	7
18	18	1/4	7
20	20	3/8	7
24	24	3/8	8
30	30	3/8	10

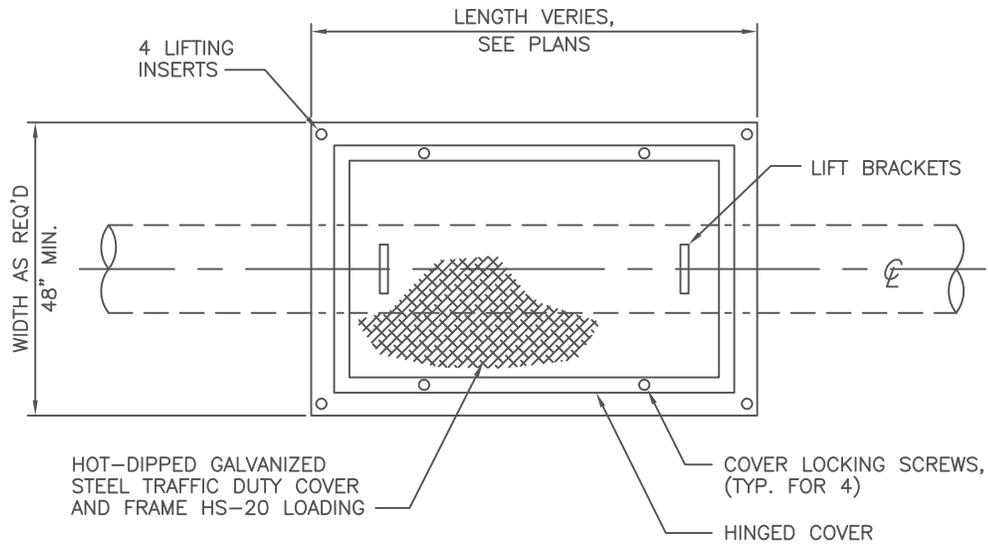
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DISTRICT ENGINEER		RCE	DATE

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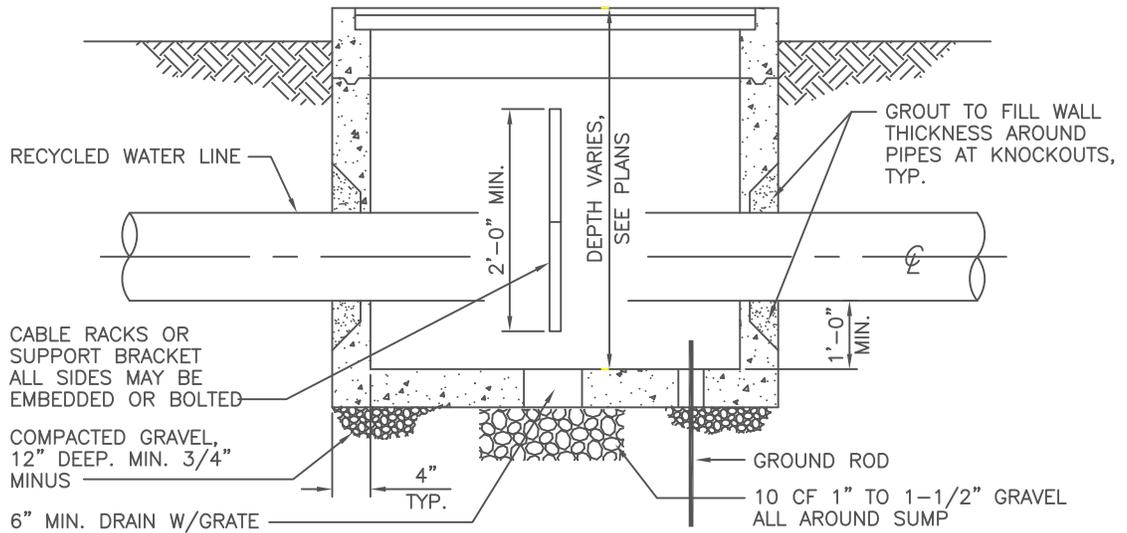
4- TO 30-INCH OUTLET DETAIL

STANDARD
DRAWING
RW37

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PLAN
N.T.S.



SECTION
N.T.S.

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DISTRICT ENGINEER		RCE	DATE

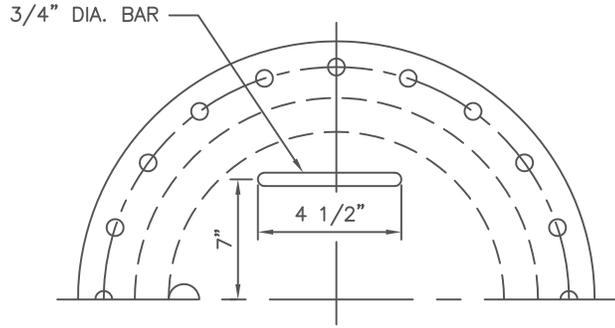
WEST BASIN MUNICIPAL WATER DISTRICT

TYPICAL HANDHOLE

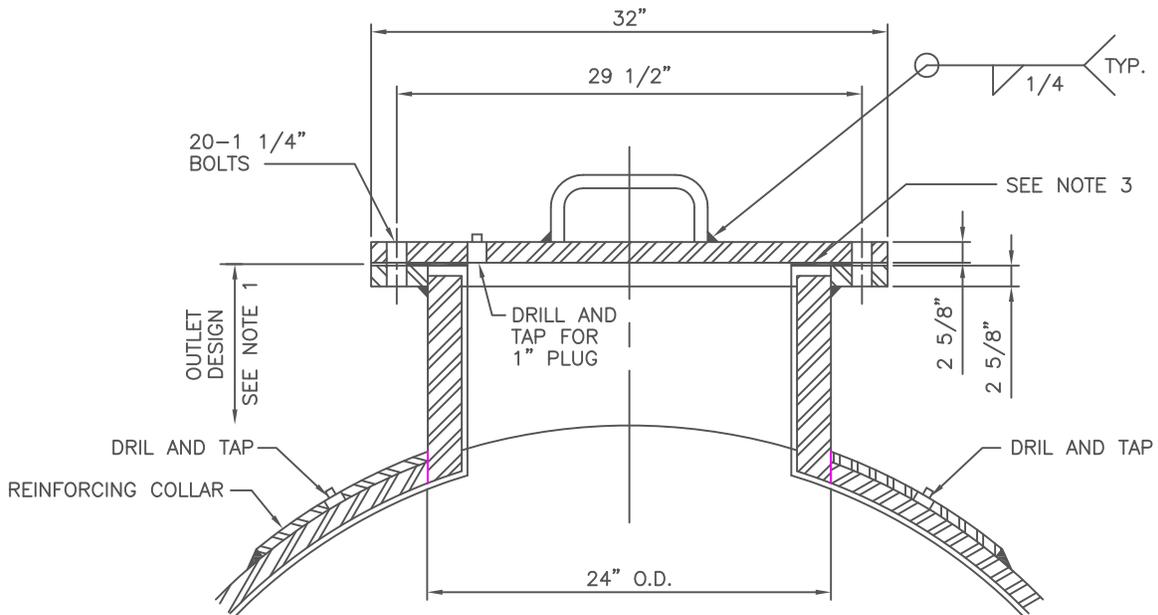
STANDARD
DRAWING

RW38

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HALF PLAN



SECTION

NOTES:

1. FABRICATE OUTLET PER RW38.
2. COAT PER SPECIFICATIONS FOR PAINTING.
3. FULL FACE 1/8" CLOTH-INSERTED RUBBER SHEET PACKING GASKET.

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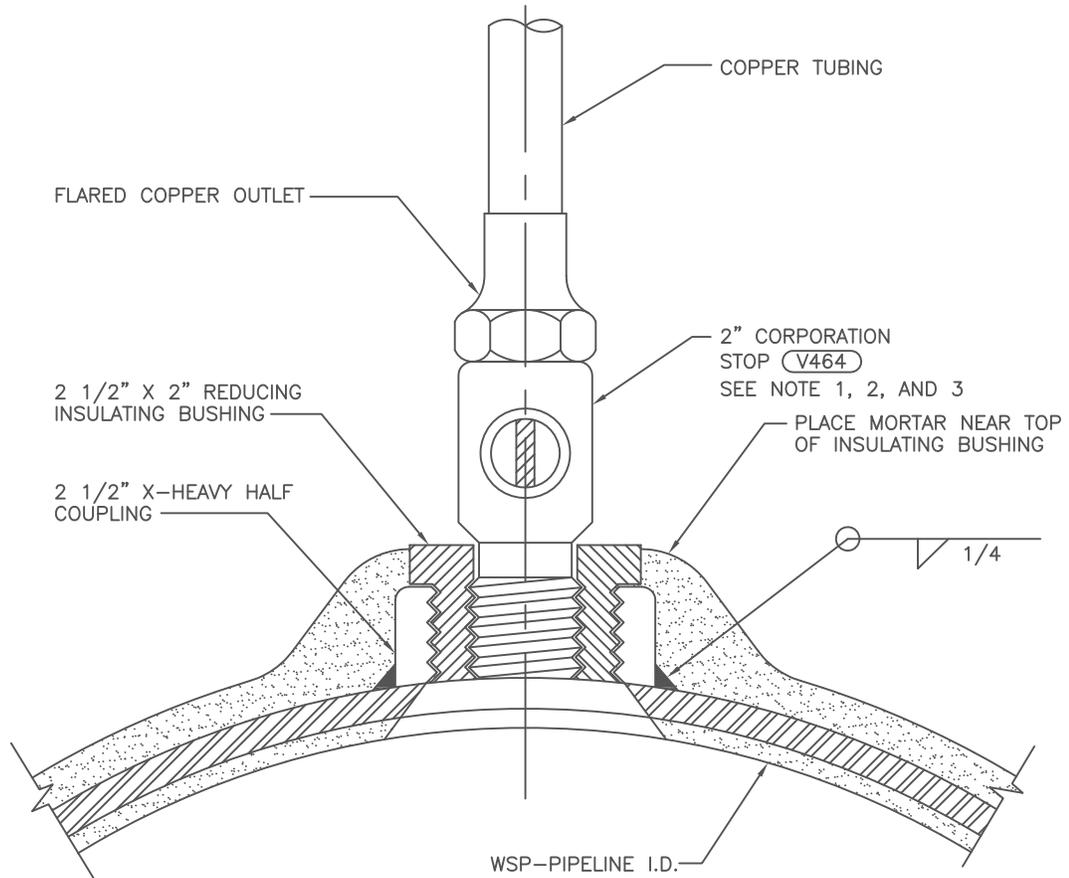
WEST BASIN MUNICIPAL WATER DISTRICT

BURIED ACCESS MANWAY

STANDARD
DRAWING

RW39

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NOTES:

1. THE CONTRACTOR SHALL USE THE NECESSARY BRONZE NIPPLE LENGTH AND COUPLERS TO LOCATE 2" CORPORATION STOP A MINIMUM OF 6" OUTSIDE OF ANY CONCRETE ENCASEMENT.
2. LEAVE CORPORATION STOP OPEN.
3. REPLACE (V464) WITH A 2" (V300) FOR OUTLETS INSIDE VALVE VAULT AND INSTALL A 2" PVC THREADED PIPE CAP.

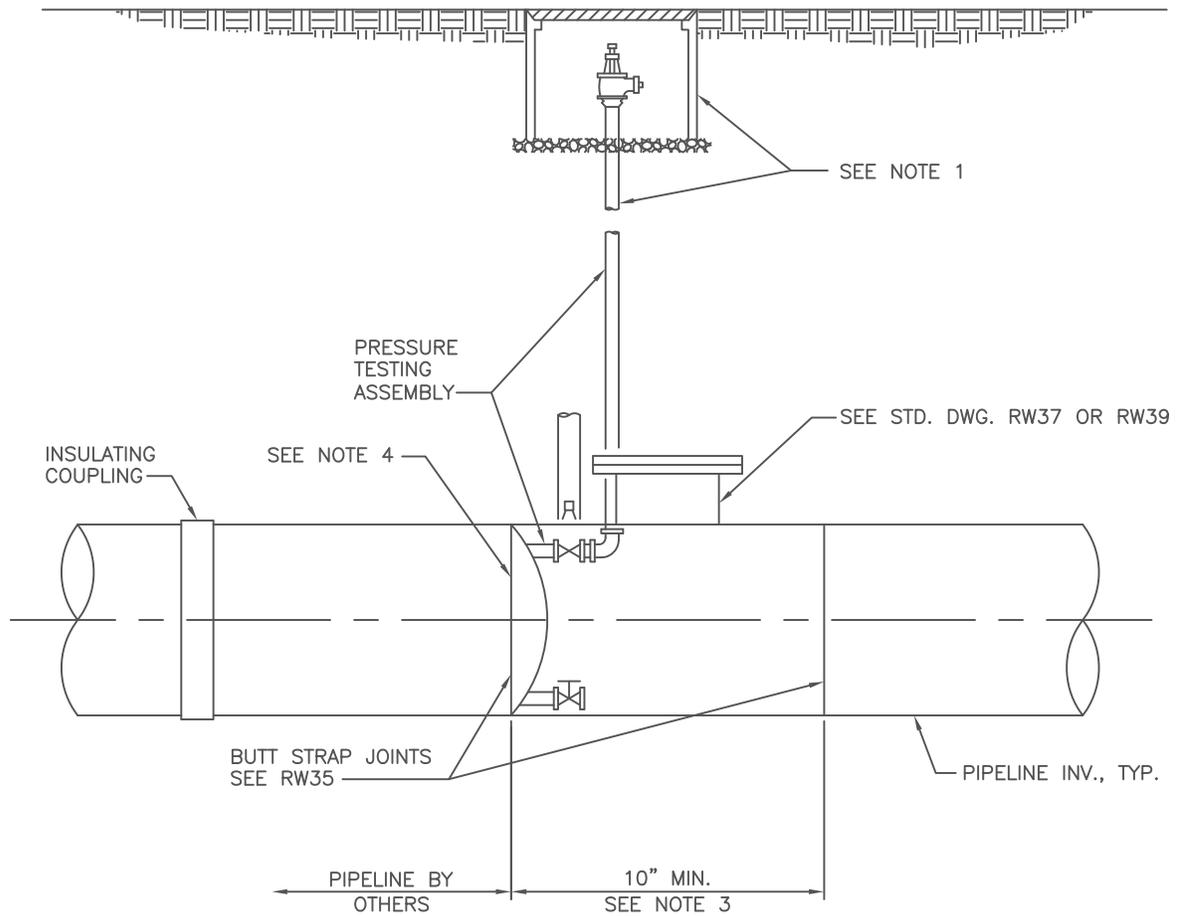
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JUNE 2003			
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DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

2-INCH OUTLET DETAIL

STANDARD
DRAWING
RW40

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NOTES:

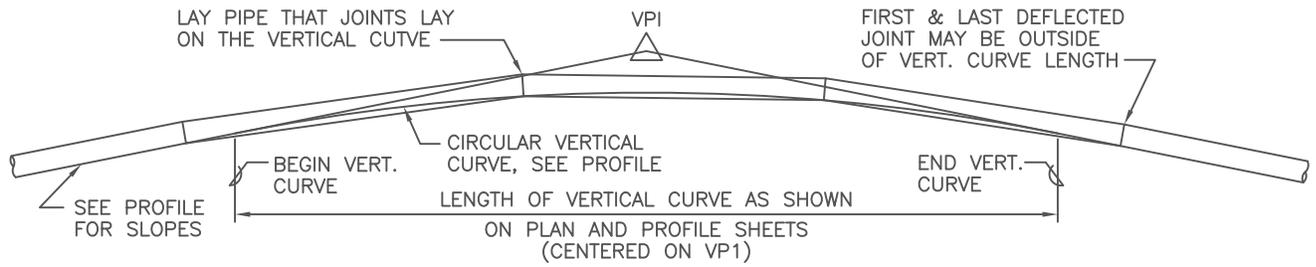
1. CONTRACTOR MAY USE THE EXISTING PRESSURE TESTING ASSEMBLY FOR PRESSURE TESTING THE MAIN TRANSMISSION PIPELINE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING CONNECTION DIMENSIONS AND ALL OTHER COORDINATION REQUIRED WITH THE OTHER PIPELINE CONTRACTOR.
3. PE X PE CML&C WSP CLOSURE SPOOL WITH 24" BURIED ACCESS MANWAY. LENGTH TO BE DETERMINED IN THE FIELD.
4. CONTRACTOR SHALL REMOVE PRESSURE TESTING ASSEMBLY AND FIELD CUT DISHED HEAD AS SHOWN.

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JUNE 2003			
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DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

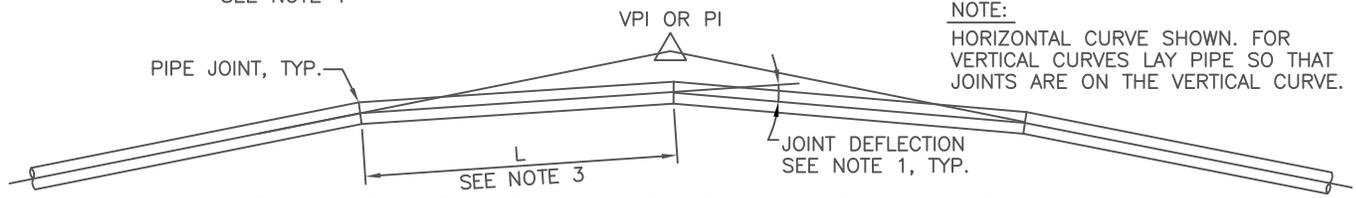
FINAL CONNECTION DETAIL

STANDARD
DRAWING
RW41

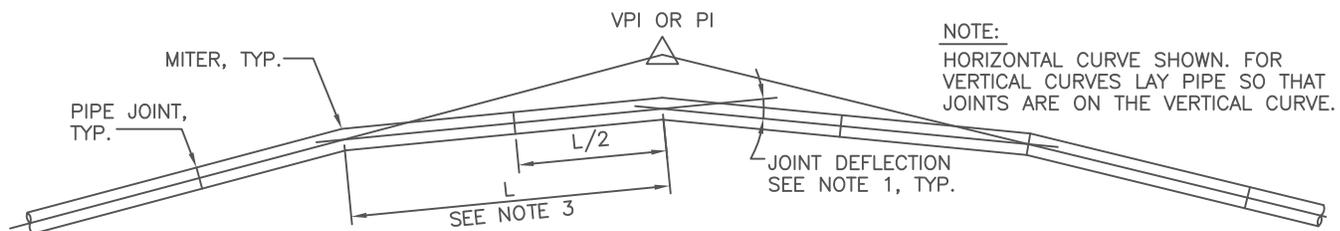


TYPICAL VERTICAL CURVE (VC) UP OR DOWN

SEE NOTE 1



DEFLECTED JOINT OR BEVELED END TYPE



MITERED TYPE

NOTES:

1. WHERE CURVES CANNOT BE INSTALLED BY JOINT DEFLECTIONS OF STANDARD PIPE LENGTH, THE CONTRACTOR MAY SELECT FROM THE FOLLOWING OPTIONS:
 - a) USE SHORTER PIPE LENGTHS (SEE NOTE 3) AND THE ALLOWABLE JOINT DEFLECTION (SEE NOTES 4a & 4b).
 - b) USE SPECIAL BEVELED ENDS OR MITERED PIPE LENGTHS (SEE NOTE 4c).
2. DEFLECTION OF VERTICAL CURVES:

CURVE DOWN

CURVE UP
3. THE DISTANCE BETWEEN JOINTS OR MITERS SHALL BE:
 - a) FOR VERTICAL CURVES UP-10 FT. MIN. & 10 FT. MAX.
 - b) FOR VERTICAL CURVES DOWN FROM DEFLECTED POINTS - 10 FT. MIN. & 40 FT. MAX.
 - c) FOR VERTICAL CURVES DOWN FROM BEVELED END OR SINGLE MITERED PIPE SECTION - 30 FT. MIN. & 40 FT. MAX.
 - d) FOR HORIZONTAL CURVES - 10 FT. MIN. & 40 FT. MAX.
4. THE MAXIMUM ALLOWABLE JOINT DEFLECTIONS FOR CURVES SHALL BE:
 - a) FOR WSP CURVES FROM DEFLECTED JOINTS. THE JOINT DEFLECTIONS SHALL BE NO MORE THAN 75 PERCENT OF THE MAXIMUM ALLOWABLE AS RECOMMENDED BY THE PIPE MANUFACTURER.
 - b) FOR DIP CURVES FROM DEFLECTED JOINT. THE MAXIMUM DEFLECTED ANGLE SHALL BE 5.0 DEGREES OR 75 PERCENT OF THE MANUFACTURER'S RECOMMENDED JOINT DEFLECTION, WHICHEVER IS LESS.
 - c) FOR CURVES FROM BEVELED JOINTS OR SINGLE MITERED PIPE SECTIONS, THE PIPE BEVELS OR MITERS SHALL BE MORE THAN 5.0 DEGREES.
5. ALL ELEMENTAL ANGLES AND LENGTHS SHALL BE EQUAL IN A BEND.
6. CURVES DO NOT REQUIRE SPECIAL BEDDING OR BACKFILL. USE STANDARD TRENCH BACKFILL AS SPECIFIED.
7. FOR COMBINATION VERTICAL AND HORIZONTAL CURVES THE REQUIREMENTS FOR BOTH CONDITIONS SHALL BE COMBINED.

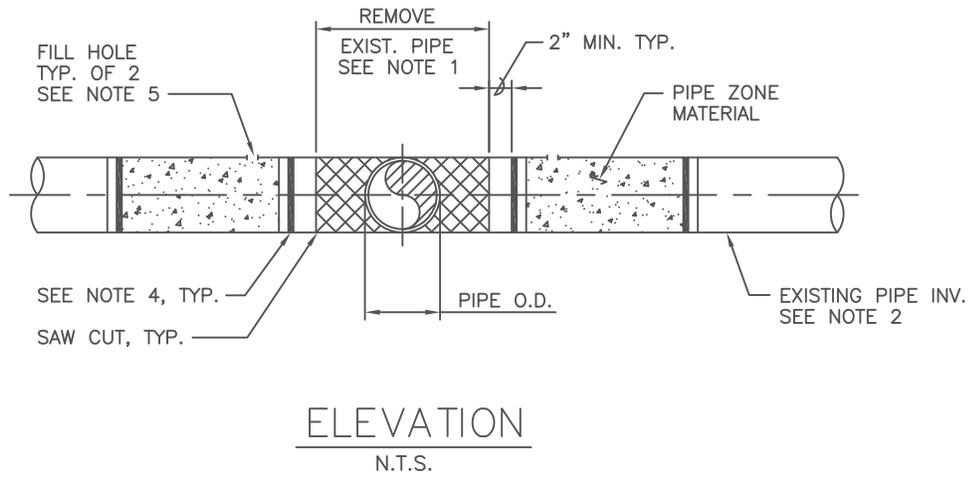
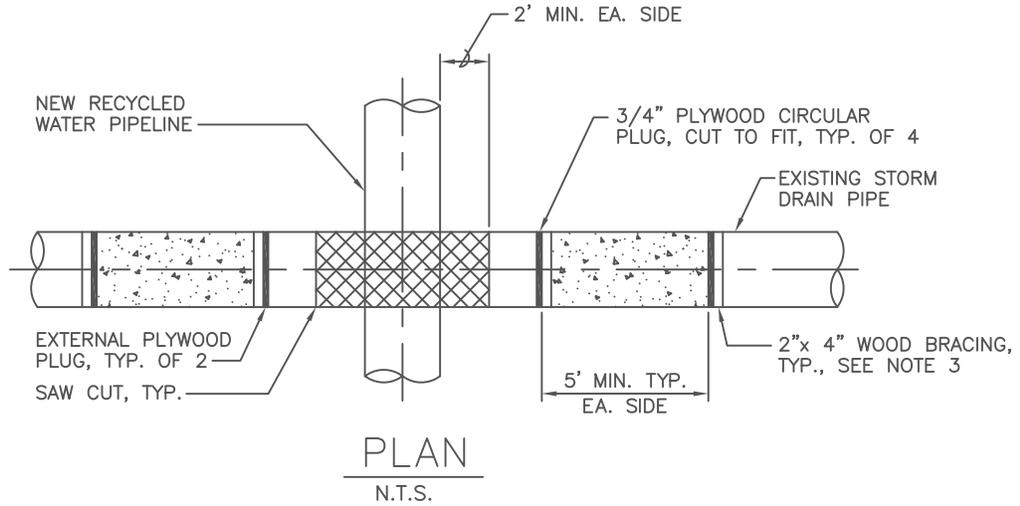
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PIPELINE CURVES

STANDARD
DRAWING
RW42

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NOTES:

1. CONTRACTOR SHALL REMOVE THE SECTION OF EXISTING STORM DRAIN PIPE AS SHOWN ABOVE AND CLEAN BOTH ENDS AS REQUIRED FOR THE PLUGS.
2. THE ACTUAL INVERTS OF THE EXISTING PIPE AND THE NEW MAIN PIPELINE BY BE DIFFERENT THAN SHOWN.
3. THE CONTRACTOR SHALL PROVIDE ADEQUATE WOOD BRACING WITH WEDGES AS REQUIRED TO WITHSTAND THE CONTROL DENSITY FILL FORCE. AT THE CONTRACTORS OPTION, A DIFFERENT BRACED PLUG SYSTEM MAY BE SUBMITTED FOR REVIEW.
4. THE EXTERNAL PLYWOOD PLUGS SHALL BE BACKFILLED TO THE CROWN OF EXISTING PIPE PRIOR FILLING WITH CDF.
5. THE CONTRACTOR SHALL DRILL TWO FILL HOLES AS REQUIRED AT THE TOP OF EACH EXISTING PIPE. THE EXISTING PIPE SECTION SHALL BE FILLED WITH CDF UNTIL IT COMES OUT OF THE HOLES.

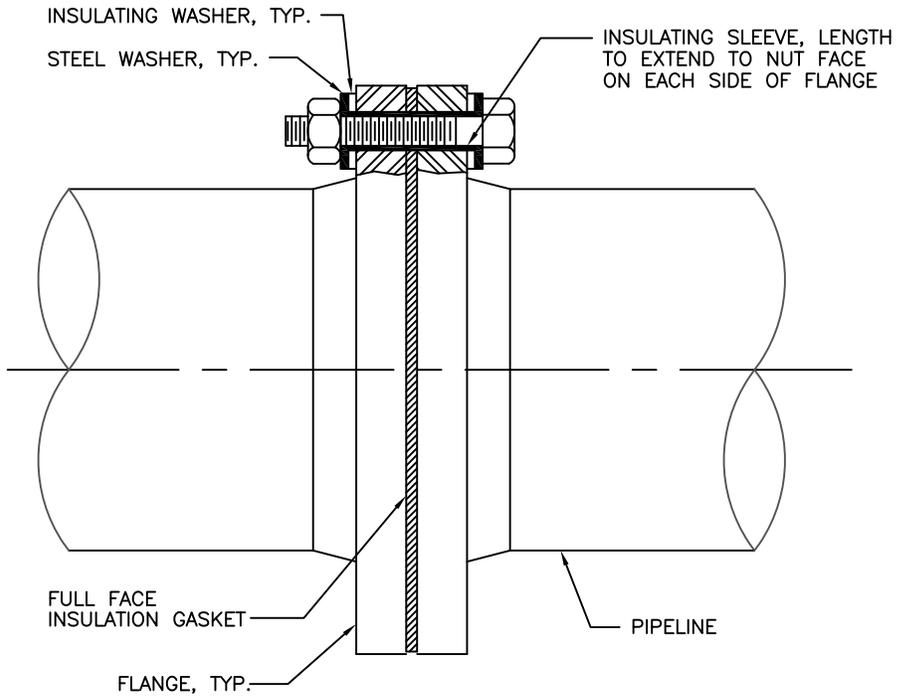
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WEST BASIN MUNICIPAL WATER DISTRICT

PIPE PLUG DETAIL

STANDARD
DRAWING
RW43

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NOTES:

1. ABOVE GRADE INSULATING FLANGE INSTALLATION SHOWN.
2. FOR BURIED OR SUBMERGED SERVICE, DELETE INSULATING WASHER ON PROTECTED SIDE OF INSULATING FLANGE.
3. AFTER ASSEMBLY, TEST FOR INSULATION AND APPLY PROTECTIVE COATING AS SPECIFIED.

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JUNE 2003			
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DISTRICT ENGINEER		RCE	DATE

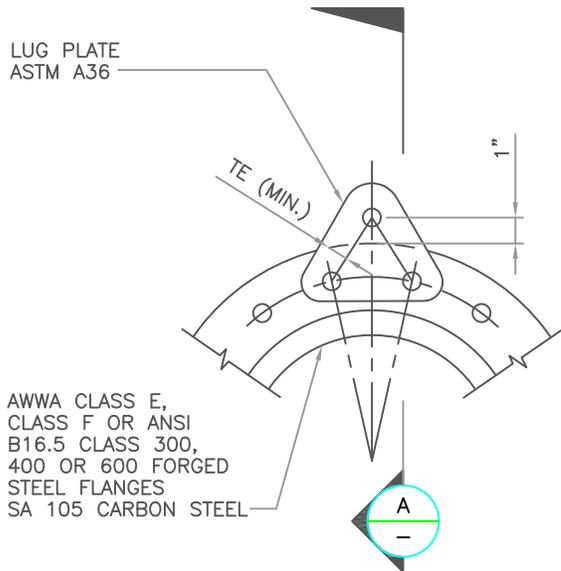
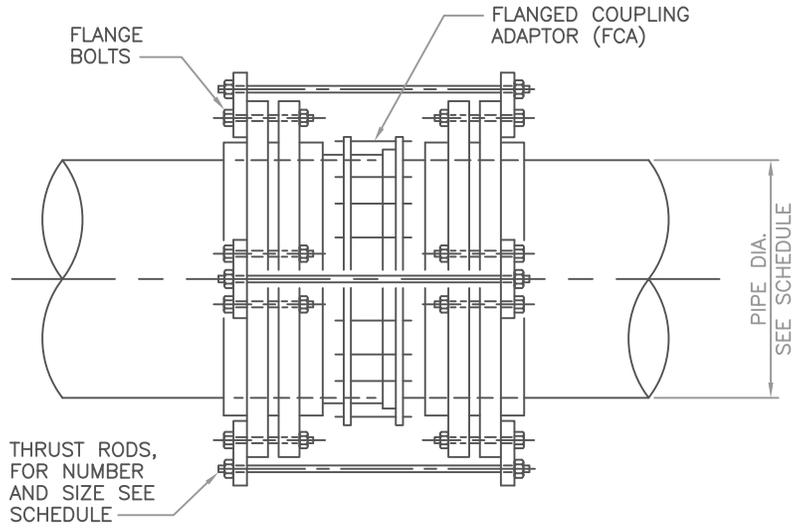
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INSULATING FLANGE

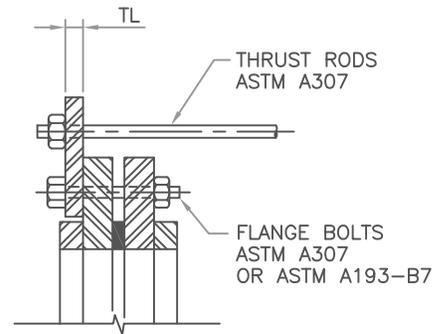
STANDARD
DRAWING

RW44

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FRONT ELEVATION



SECTION A-A

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WEST BASIN MUNICIPAL WATER DISTRICT

TYPICAL THRUST TIE AND LUG FOR STEEL PIPE

STANDARD DRAWING

RW45

THRUST ROD AND LUG PLATE SCHEDULE
FOR RW45

PIPE DIA. (IN.)	TEST PRESSURE (PSI)	THRUST RODS (NO.-DIA. INCHES)	RING FLARE CLASS	RING FLARE THICKNESS (IN.)	RING FLANGE BOLTS			LUG PLATE (IN.)	
					NO.	DIA. (IN.)	MATL.	TL	TE
6	100	2-5/8 f	AWWA CL E	STANDARD	8	3/4	A307	1/2	1-1/8
	150	2-5/8 f	AWWA CL E	STANDARD	8	3/4	A193-B7	1/2	1-1/8
	225	2-5/8 f	AWWA CL E	STANDARD	8	3/4	A193-B7	5/8	1-1/8
	375	6-5/8 f	ANSI CL 300	STANDARD	12	3/4	A193-B7	5/8	1
8	100	2-5/8 f	AWWA CL E	STANDARD	8	3/4	A307	1/2	1-1/4
	150	2-5/8 f	AWWA CL E	STANDARD	8	3/4	A193-B7	5/8	1-1/4
	225	4-5/8 f	AWWA CL E	STANDARD	8	3/4	A193-B7	5/8	1-1/4
	375	6-5/8 f	ANSI CL 300	STANDARD	12	7/8	A193-B7	3/4	1-1/8
10	100	2-5/8 f	AWWA CL E	STANDARD	12	7/8	A307	5/8	1-3/8
	150	3-5/8 f	AWWA CL E	STANDARD	12	7/8	A193-B7	3/4	1-3/8
	225	6-5/8 f	AWWA CL E	STANDARD	12	7/8	A307	5/8	1-3/8
	375	8-5/8 f	ANSI CL 300	STANDARD	16	1	A307	1	1-1/2
12	100	2-7/8 f	AWWA CL E	STANDARD	12	7/8	A193-B7	3/4	1-1/8
	150	3-5/8 f	AWWA CL E	STANDARD	12	7/8	A193-B7	3/4	1-1/8
	225	6-3/4 f	AWWA CL E	STANDARD	12	7/8	A193-B7	5/8	1-1/8
	375	8-3/4 f	ANSI CL 400	STANDARD	16	1-1/4	A307	3/4	1-5/8
14	100	2-7/8 f	AWWA CL E	STANDARD	12	1	A193-B7	3/4	1-3/8
	150	4-3/4 f	AWWA CL E	STANDARD	12	1	A307	3/4	1-3/8
	225	10-5/8 f	ANSI CL 300	STANDARD	20	1-1/8	A307	5/8	1-1/2
	375	10-7/8 f	ANSI CL 400	STANDARD	20	1-1/4	A307	3/4	1-9/16
16	100	4-3/4 f	AWWA CL E	STANDARD	16	1	A307	5/8	1-3/8
	150	8-5/8 f	AWWA CL E	STANDARD	16	1	A307	5/8	1-3/8
	225	8-3/4 f	AWWA CL E	STANDARD	16	1	A193-B7	3/4	1-3/8
	375	8-7/8 f	ANSI CL 400	STANDARD	20	1-3/8	A193-B7	3/4	1-3/4
18	100	4-3/4 f	AWWA CL E	STANDARD	16	1-1/8	A307	3/4	1-1/2
	150	8-3/4 f	AWWA CL E	STANDARD	16	1-1/8	A307	5/8	1-1/2
	225	8-7/8 f	AWWA CL E	STANDARD	16	1-1/8	A307	3/4	1-1/2
	375	10-1 f	ANSI CL 400	STANDARD	20	1-5/8	A307	7/8	2-1/8
24	100	4-1 f	AWWA CL E	STANDARD	20	1-1/4	A307	7/8	1-5/8
	150	10-3/4 f	AWWA CL E	STANDARD	20	1-1/4	A307	3/4	1-5/8
	225	10-1 f	AWWA CL E	STANDARD	20	1-1/4	A307	7/8	1-5/8
	375	12-1-3/16 f	ANSI CL 600	STANDARD	24	1-7/8	A307	1	2-3/8
30	100	7-1 f	AWWA CL E	STANDARD	28	1-1/4	A307	7/8	1-5/8
	150	14-7/8 f	AWWA CL E	STANDARD	28	1-1/4	A307	3/4	1-5/8
	225	14-1-1/8 f	AWWA CL F	3-1/4	28	1-3/4	A307	7/8	2-1/4
	375	14-1-3/8 f	AWWA CL F	4-1/4	28	1-3/4	A307	1-1/8	2-1/4
36	100	8-1-1/8 f	AWWA CL E	STANDARD	32	1-1/2	A307	7/8	2
	150	16-7/8 f	AWWA CL E	STANDARD	32	1-1/2	A307	3/4	2
	225	16-1-1/2 f	AWWA CL F	3-3/4	32	2	A307	7/8	2-5/8
	375	16-1-1/2 f	AWWA CL F	5	32	2	A307	1-1/8	2-5/8
42	100	12-1 f	AWWA CL E	STANDARD	36	1-1/2	A307	7/8	2
	150	18-1 f	AWWA CL E	STANDARD	36	1-1/2	A307	7/8	2
	225	18-1-1/4 f	AWWA CL F	4-1/4	36	2	A307	1	2-5/8

NOTES:

TE - DISTANCE FROM EDGE OF LUG PLATE TO CENTERLINE OF BOLT HOLE.

TL - THICKNESS OF LUG PLATE.

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DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

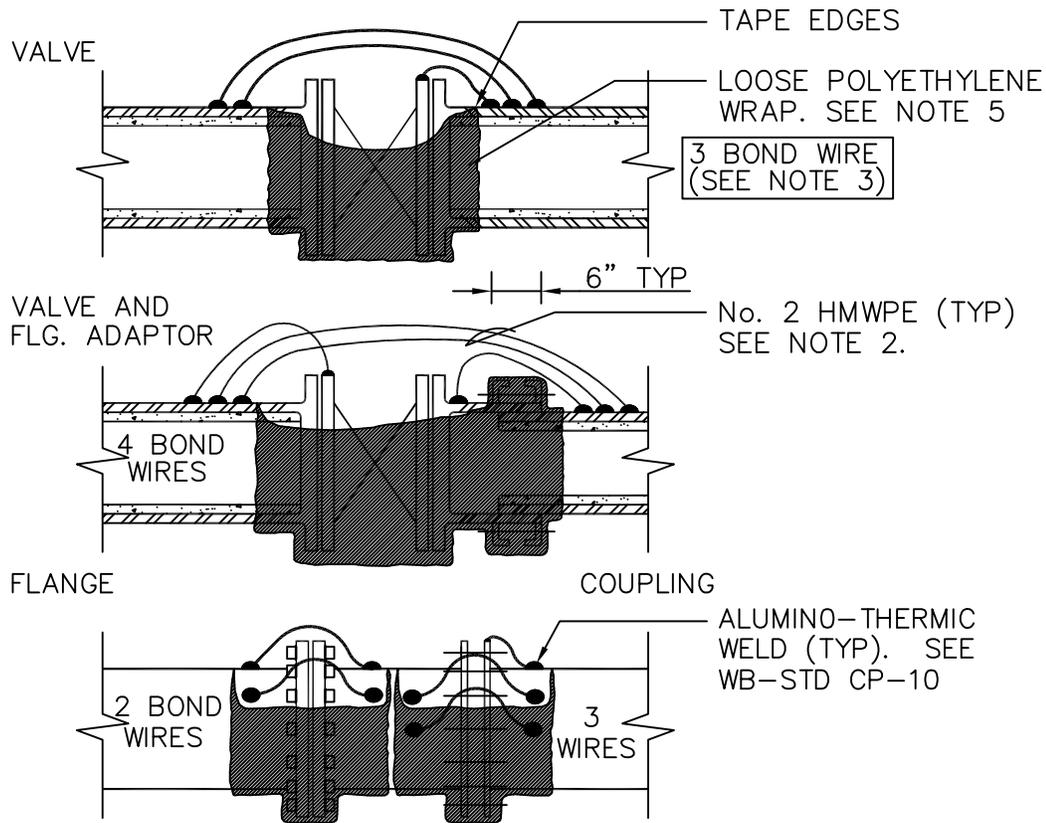
THRUST ROD AND LUG PLATE
SCHEDULE FOR RW45

STANDARD
DRAWING
RW46

RECYCLED WATER NOTES

1. STATIONS SHOWN ARE ALONG THE CENTERLINE OF THE PIPELINE.
2. ELEVATIONS SHOWN ON PIPELINE PROFILE APPLY TO INVERT OF PIPE OR INVERTS AT POINTS OF INTERSECTION OF SLOPE CHANGES.
3. THE CONTRACTOR SHALL ADD FITTINGS AS REQUIRED TO AVOID EXISTING UTILITIES ENCOUNTERED. ANY CHANGE IN PROFILE SHALL BE APPROVED BY THE ENGINEER.
4. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT 1-800-227-2600 AT LEAST 48 HOURS PRIOR TO STARTING WORK.
5. THE CONTRACTING OFFICER REPRESENTATIVE INSPECTOR SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION OR ANY INSPECTION.
6. USE THRUST BLOCKS AT ALL LOCATIONS INDICATED ON THE PLANS AS REQUIRED.
7. ALL WORK IS TO BE DONE PER "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (GREEN BOOK) LATEST EDITION, AND THE DISTRICT'S STANDARD SPECIFICATIONS AND DRAWINGS UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS AND THE STANDARD SPECIFICATIONS ON THE JOB AT ALL TIMES.
8. THE TOP OF RECYCLED WATER MAINS SHALL BE A MINIMUM OF 42-INCHES BELOW STREET PAVEMENT OR FINISHED GRADE FOR 12-INCH AND SMALL DIAMETER PIPELINES AND 48-INCHES FOR PIPELINES LARGER THAN 12-INCHES. IF THE MINIMUM COVER CAN NOT BE MET, THE PIPELINE SHALL BE ENCASED IN CONCRETE. AT NO TIME SHALL THERE BE LESS THAN 36-INCHES OF COVER FROM TOP OF PIPE TO EXISTING GROUND DURING CONSTRUCTION.
9. ALL CONCRETE SHALL BE CLASS 560-C-3250 AND CONCRETE WORK SHALL BE PER PLANS AND SPECIFICATIONS UNLESS OTHERWISE INDICATED.
10. THE CONTRACTOR SHALL SUBMIT A SHORING PLAN PREPARED BY A REGISTERED CIVIL ENGINEER AS REQUIRED PER SEC. 7-10.4.1 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," LATEST EDITION.
11. PIPELINES SHALL BE FIELD PRESSURE-TESTED IN ACCORDANCE WITH SEC. 306-1.4.5 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," LATEST EDITION, TO THE MINIMUM TEST PRESSURE INDICATED BELOW OR AS INDICATED ON THE PLANS:
 PIPE CLASS MINIMUM TEST PRESSURE
 200 250 PSI
12. CONTRACTOR SHALL MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN AND SANITARY CONDITION AT ALL TIMES. STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND NUISANCE BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY CLEAN-UP OF ADJACENT STREETS AFFECTED BY HIS CONSTRUCTION.
13. ALL SURPLUS MATERIAL REMOVED, INCLUDING EXCAVATED MATERIALS, WHICH ARE NOT SUITABLE FOR USE IN THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AWAY FROM THE JOB SITE IN A MANNER AND AT LOCATION ACCEPTABLE TO ALL COGNIZANT AGENCIES.
14. THE CONTRACTOR SHALL POTHOLE AND LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO THE PREPARATION OF SHOP DRAWINGS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL BE LIABLE FOR ANY ADDITIONAL COST REQUIRED IN THE EVENT THAT HE HAS NOT CORRECTLY LOCATED THE EXISTING UTILITIES.
15. ALL BURIED BOLTS AND NUTS SHALL BE TYPE 316 STAINLESS STEEL AND COATED IN ACCORDANCE WITH THE SPECIFICATIONS.
16. THE CONTRACTOR SHALL CONFINE ALL OF HIS ACTIVITIES TO THE AREAS WITHIN THE EXISTING AND PROPOSED STREET RIGHT-OF-WAY AND DISTRICT'S PROPERTY OR EASEMENTS SHOWN ON THESE PLANS UNLESS HE OBTAINS WRITTEN CONSENT FROM THE PROPERTY OWNER.
17. CONTRACTOR SHALL REPLACE ALL SURVEY MONUMENTS DISTURBED DURING CONSTRUCTION.
18. THE CONTRACTOR SHALL PROTECT IN PLACE EXISTING SEWER, GAS, WATER LATERALS AND OTHER UTILITIES OR REPLACE IN KIND. LOCATIONS OF EXISTING UTILITIES AND SUB-STRUCTURES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATIONS, ELEVATIONS, AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION IN THE AREA OF THE SPECIFIC SUB-STRUCTURE.
19. ALL BURIED VALVES SHALL BE PROVIDED WITH RISERS, VALVE BOXES, AND COVERS PER DISTRICT STANDARD SPECIFICATIONS AND STANDARD DRAWINGS.
20. SHUTDOWN OF EXISTING LINES TO FACILITATE CONNECTION TO EXISTING FACILITIES SHALL BE COORDINATED WITH THE CONTRACTING OFFICER REPRESENTATIVE AND THE DISTRICT.
21. CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POINTS OF CONNECTION PRIOR TO SUBMITTING PIPE FABRICATION DRAWINGS.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES, PAVEMENT, CURB, TRAFFIC STRIPING AND MARKINGS, TRAFFIC DETECTOR LOOPS, STRUCTURES, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS AS A RESULT OF HIS OPERATIONS, AND WILL BE REQUIRED TO REPAIR OR REPLACE SAME TO THE SATISFACTION OF, AND AS DIRECTED BY, THE CONTRACTING OFFICER REPRESENTATIVE OR IMPACTED UTILITY COMPANY.
23. ALL CONSTRUCTION SURVEYS FOR THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR AT HIS EXPENSE. SURVEY POINTS DESTROYED AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR FAILURE TO PROVIDE PROPER PROTECTION, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
24. THE CONTRACTOR IS TO MAINTAIN AND PROVIDE THE DISTRICT WITH A "RECORD" SET OF AS-BUILT DRAWINGS AT THE COMPLETION OF ALL WORK PER THE PLANS AND SPECIFICATIONS.
25. ALL TRAFFIC SIGNAL CONDUITS AND LOOPS HAVE NOT BEEN SHOWN ON THESE PLANS. CONTRACTOR SHALL DETERMINE LOCATION OF ALL IMPACTED FACILITIES AND REPLACE ALL TRAFFIC SIGNAL CONDUITS AND LOOPS DAMAGED OR REMOVED DURING CONSTRUCTION.
26. EXISTING OVERHEAD SOUTHERN CALIFORNIA EDISON POWER LINES AND OVERHEAD STREET LIGHT POWER LINES LINES HAVE NOT BEEN SHOWN ON PLANS. CONTRACTOR SHALL IDENTIFY AND PROTECT ALL EXISTING OVERHEAD AND BELOW GRADE UTILITIES.
27. POTHOLE DATA PROVIDED IS FOR DESIGN PURPOSES AND IS SHOWN AS APPROXIMATE ELEVATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL UTILITY LOCATIONS.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND ACQUIRING STAGING OR MATERIAL STOCK PILE AREAS, SUBJECT TO APPROVAL OF THE DISTRICT.

REVISION	DRAWN	APP'D.	DATE	WEST BASIN MUNICIPAL WATER DISTRICT
JUNE 2003				
APPROVED				STANDARD RECYCLED WATER SYSTEM NOTES
DISTRICT ENGINEER			RCE	DATE
				STANDARD DRAWING
				RW47

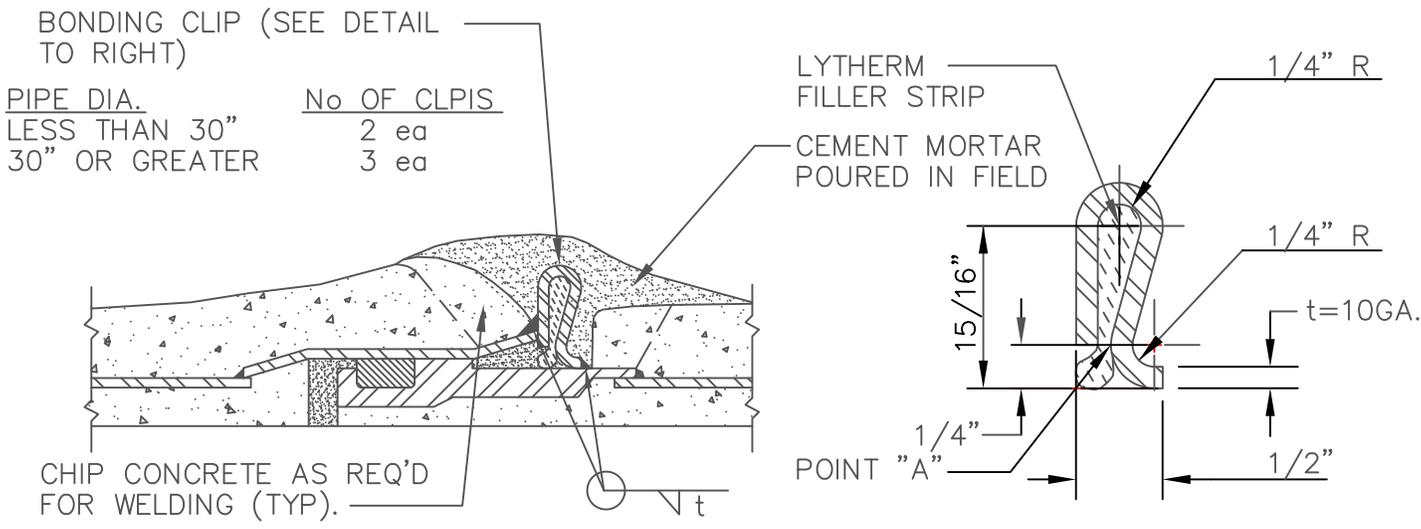


NOTES:

1. BOND WIRE SIZE SHALL BE No. 2 AWG WITH HMWPE INSULATION UNLESS OTHERWISE SPECIFIED.
2. NUMBER OF BOND WIRES THAT COMPLETELY SPAN THE FITTING SHALL BE:

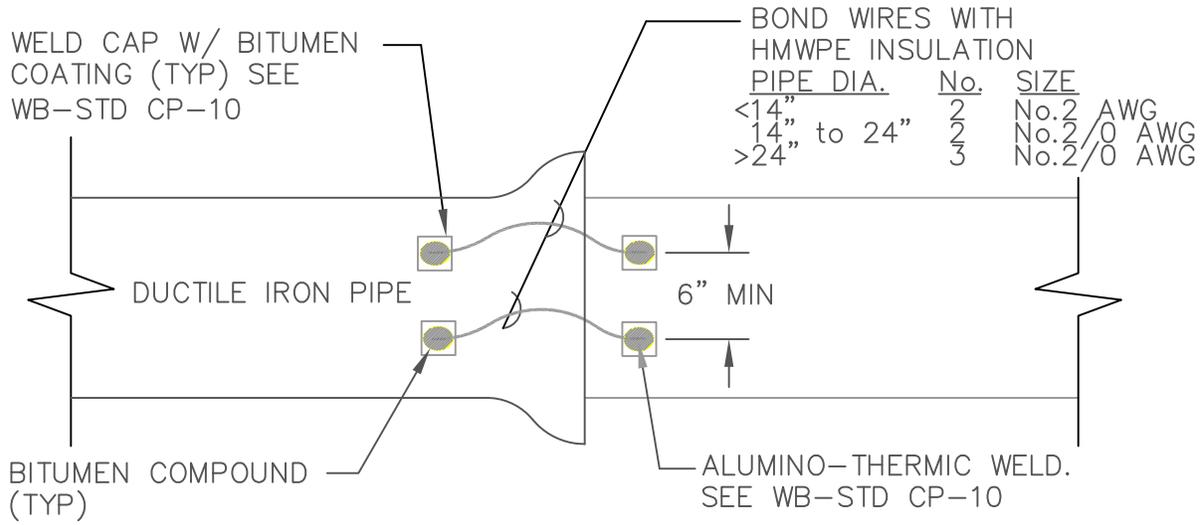
PIPE SIZE	No. WIRES
LESS THAN 30"	2
30" OR GREATER	3
3. ONE ADDITIONAL WIRE REQUIRED AT IN-LINE VALVE, COUPLING OR ADAPTOR AS SHOWN.
4. BOND WIRES SHALL BE AS SHORT AS POSSIBLE. LAY WIRE AGAINST PIPE AND FITTING WITHOUT BRIDGING OVER FLANGE OR COUPLING.
5. ALL BURIED VALVES, FLANGES (NON-INSULATING), COUPLINGS AND OTHER NON-MORTAR COATED FITTINGS SHALL BE DOUBLE WRAPPED IN 8 MIL. POLYETHYLENE SHEET. THE POLYETHYLENE SHEET SHALL BE LOOSELY WRAPPED OVER BOND WIRES SUCH THAT IT DOES NOT BRIDGE AND TEAR ACROSS IRREGULAR SURFACES FROM SOIL PRESSURE. OVERLAP PIPE COATING 6-INCHES AND SECURELY TAPE EDGE OF PLASTIC TO PIPE.
6. ALUMINO-THERMIC WELDS SHALL BE 6-INCHES APART MINIMUM. INSTALL AND TEST ALUMINO-THERMIC WELDS PER WB STANDARD DETAIL CP-10.
7. DO NOT INSTALL BOND WIRES ACROSS INSULATING JOINTS.

REVISIONS	DRAWN	APP'D	DATE	WEST BASIN MUNICIPAL WATER DISTRICT		
ORIGINAL	DPH	EAD	3/95	BURIED MECHANICAL JOINT BONDING DETAIL (STEEL OR DUCTILE IRON PIPE)		
REVISION 1			6/03			STANDARD DRAWING NUMBER
APPROVED						CP-1
DISTRICT ENGINEER	RCE	DATE				



- NOTES:
1. BONDING CLIPS (STEEL PIPE ONLY) SHALL BE LOCATED AT THE SPRING-LINE OF THE PIPE. WHERE 3 CLIPS ARE REQUIRED STRADDLE SPRINGLINE WITH 2 CLIPS ON ONE SIDE. PLACE CLIPS NO CLOSER THAN 6" APART.
 2. BONDING CLIPS SHALL BE MADE OF 10GA./ASTM A366 STEEL WITH A CUT LENGTH OF 2-1/2 INCHES AND WIDTH OF 1-1/4 INCHES.
 3. LYTHERM FILLER STRIP SHALL BE 1 INCH x 1-1/2 INCH WIDE TO OVERLAP SIDES OF CLIP. CONTRACTOR SHALL CRIMP BONDING CLIP OVER FILLER AT PT. "A" TO COMPRESS FILLER.

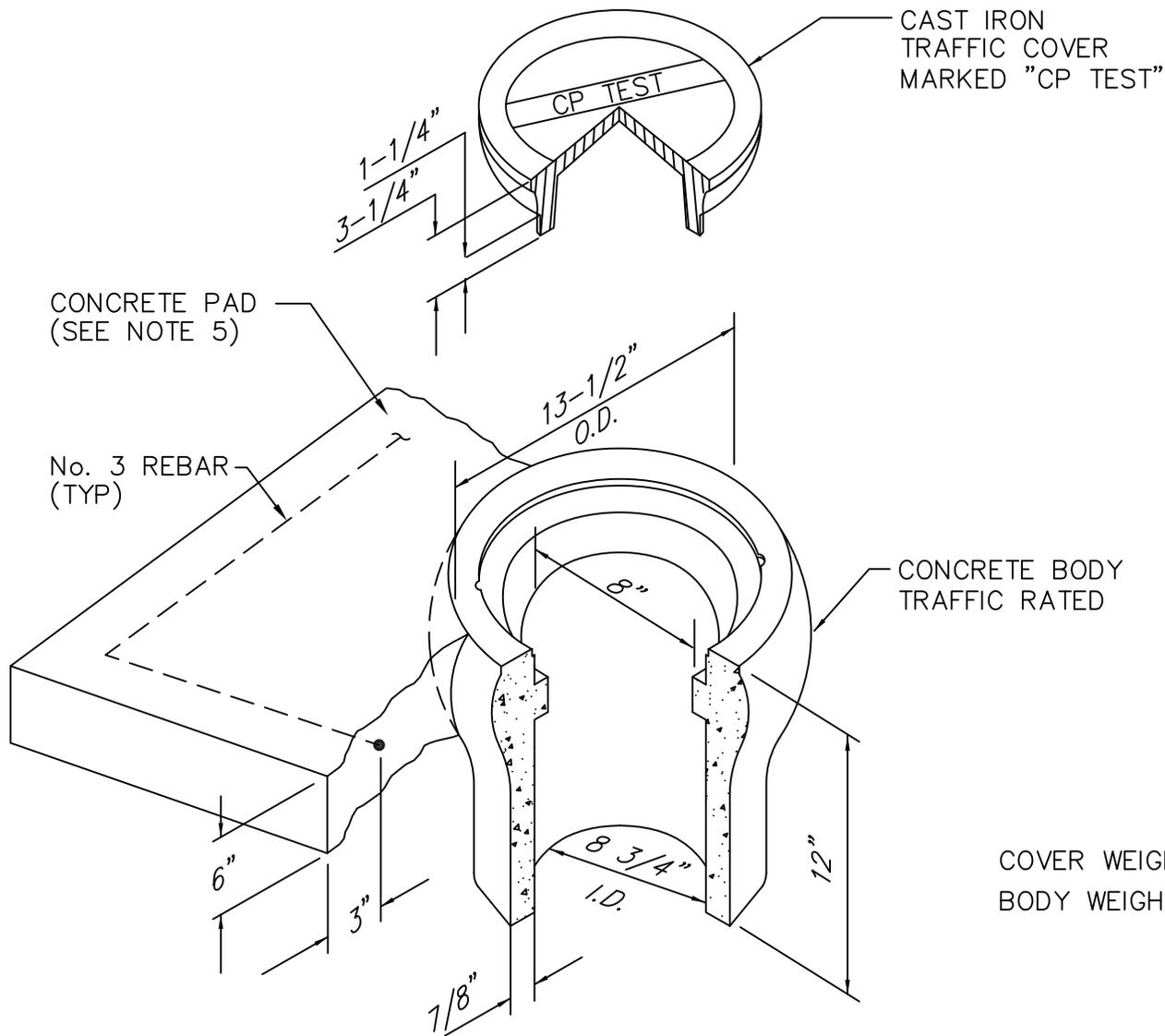
STEEL PIPE



- NOTES:
1. DO NOT PLACE ALUMINO-THERMIC WELD ON PIPE BELL.
 2. BOND WIRES SHALL BE MINIMUM LENGTH.

DUCTILE IRON PIPE

<table border="1"> <tr> <th>REVISIONS</th> <th>DRAWN</th> <th>APP'D</th> <th>DATE</th> </tr> <tr> <td>ORIGINAL</td> <td>DPH</td> <td>EAD</td> <td>3/95</td> </tr> <tr> <td>REVISION 1</td> <td></td> <td></td> <td>6/03</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>				REVISIONS	DRAWN	APP'D	DATE	ORIGINAL	DPH	EAD	3/95	REVISION 1			6/03					WEST BASIN MUNICIPAL WATER DISTRICT		STANDARD DRAWING NUMBER CP-2
REVISIONS	DRAWN	APP'D	DATE																			
ORIGINAL	DPH	EAD	3/95																			
REVISION 1			6/03																			
APPROVED _____ DISTRICT ENGINEER RCE DATE				PIPE JOINT BONDING DETAIL																		



NOTES:

1. CONCRETE BODY, TRAFFIC RATED – BROOKS 1-RT OR EQUAL.
2. ALL WIRES SHALL HAVE 18" MIN. SLACK IN BOX.
3. BOTTOM OF TEST BOX SHALL BE NATIVE SOIL. DO NOT PLACE ROCK, GRAVEL OR SAND IN TEST BOX.
4. TEST BOX TO BE LOCATED BEHIND THE CURB, JUST OFF PAVED ROADWAY OR DIRECTLY OVER PIPE IN UNPAVED AREAS OR IN PARKING LOTS (DO NOT PLACE IN PARKING SPACES). TEST BOX ELEVATION SHALL BE APPROVED BY OWNER PRIOR TO INSTALLATION.
5. PROVIDE 2' x 2' x 6" THICK REINFORCED CONCRETE PAD AROUND TEST BOXES AT UNPAVED SITES. CONCRETE PAD SHALL BE LEVEL AND SURFACE SHALL FLUSH WITH TRAFFIC BOX.

REVISIONS	DRAWN	APP'D	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
ORIGINAL	DPH	EAD	3/95	AT-GRADE TEST BOX	
REVISION 1			6/03		
APPROVED				STANDARD DRAWING NUMBER	CP-3
DISTRICT ENGINEER					
RCE				DATE	

INSULATING SLEEVE
(FULL WIDTH OF MATED
FLANGES - SEE NOTES)

STEEL NUT
(2 EA. TYP.)

STEEL WASHER
(BOTH ENDS OF STUD)

INSULATING WASHER
(BOTH ENDS OF STUD)

STEEL THREADED STUD

INSULATING WASHER

STEEL WASHER

INSULATING GASKET

SEE DETAIL "A"

GASKET
INSUL WASHER
STL WASHER
STL NUT

10 MIL (MIN.) DRY FILM
HIGH SOLIDS EPOXY.
SEE NOTE 6 AND 7

DETAIL A

NOTES:

1. USE HALF WIDTH SLEEVES AT THREADED FLANGE BOLTS. (I.E. AT BFV BONNET)
2. INSULATING MATERIALS:
 - GASKET - TYPE "E" FULLFACED PHENOLIC WITH RECTANGULAR NITRILE OR VITON O-RING SEAL. (PSI LINEBACKER OR EQUAL).
 - SLEEVE -1/32-INCH THICK, FULL LENGTH TUBE, LAMINATED G-10 GLASS.
 - WASHER-1/8-INCH THICK LAMINATED G10 GLASS SHEET.
3. ALIGN FLANGE PROPERLY AND FOLLOW GASKET MANUFACTURER BOLT TIGHTENING SEQUENCE INSTRUCTIONS.
4. DO NOT PAINT OUTER SURFACE OF FLANGE WITH METALLIC PIGMENTED OR CONDUCTIVE PAINTS.
5. TEST MATED FLANGE WITH GAS ELECTRONICS MODEL 601 INSULATION CHECKER (OR EQUIVALENT) PRIOR TO ACCEPTANCE.
6. APPLY 10 MIL (MIN.) DRY FILM OF HIGH-SOLIDS EPOXY TO PIPE INTERIOR SURFACE EXTENDING A MINIMUM OF 12-INCHES ON EACH SIDE OF GASKET.
7. AS AN ALTERNATIVE, A PREFABRICATED INSULATING JOINT, SUCH AS ELECTROSTOP OR EQUAL, MAY BE USED FOR INSULATION REQUIREMENT.

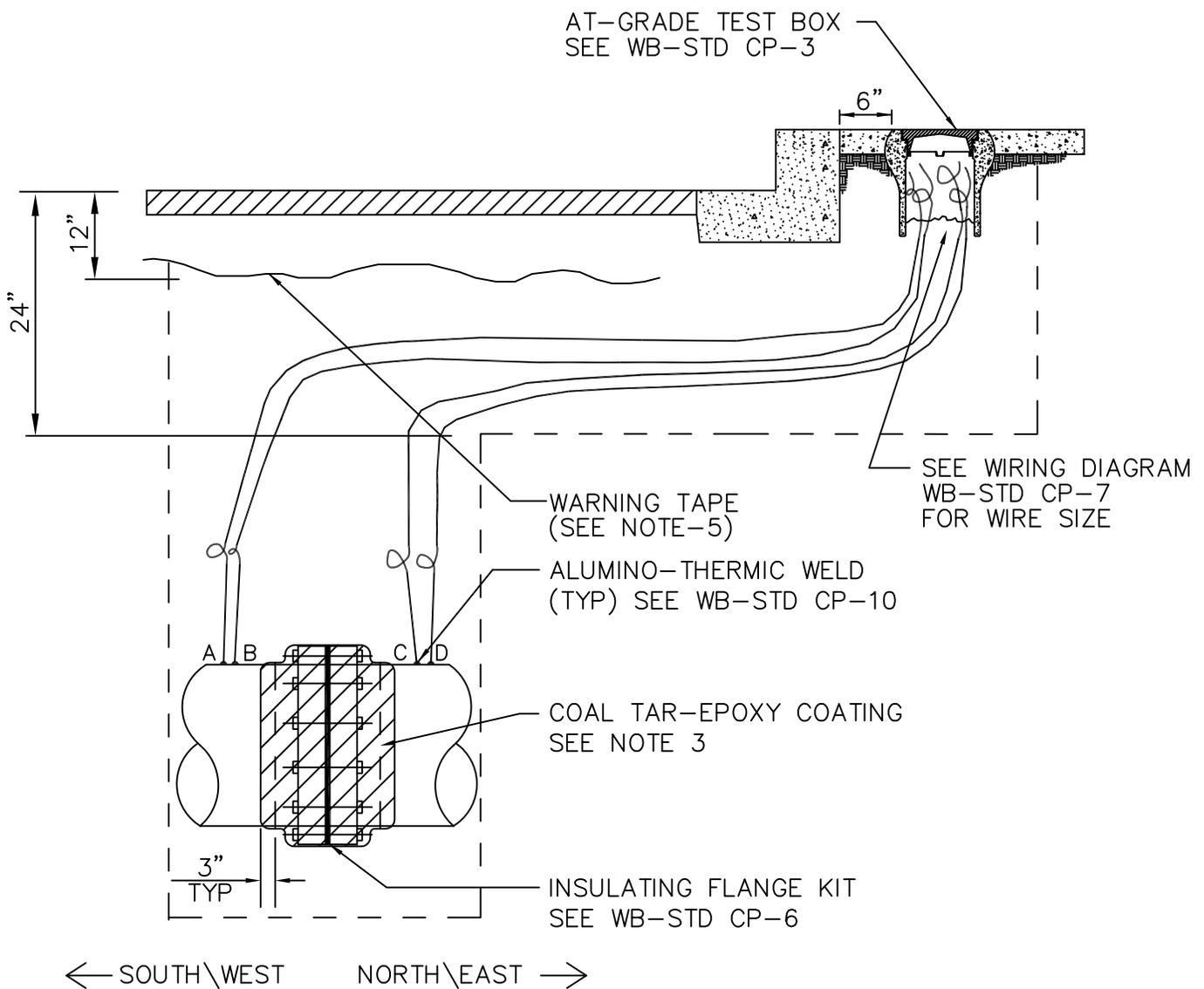
REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
EDIT TYPO	DPH	EAD	10/95
REVISION 1			6/03
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

ABOVE-GRADE
INSULATING FLANGE

STANDARD
DRAWING
NUMBER

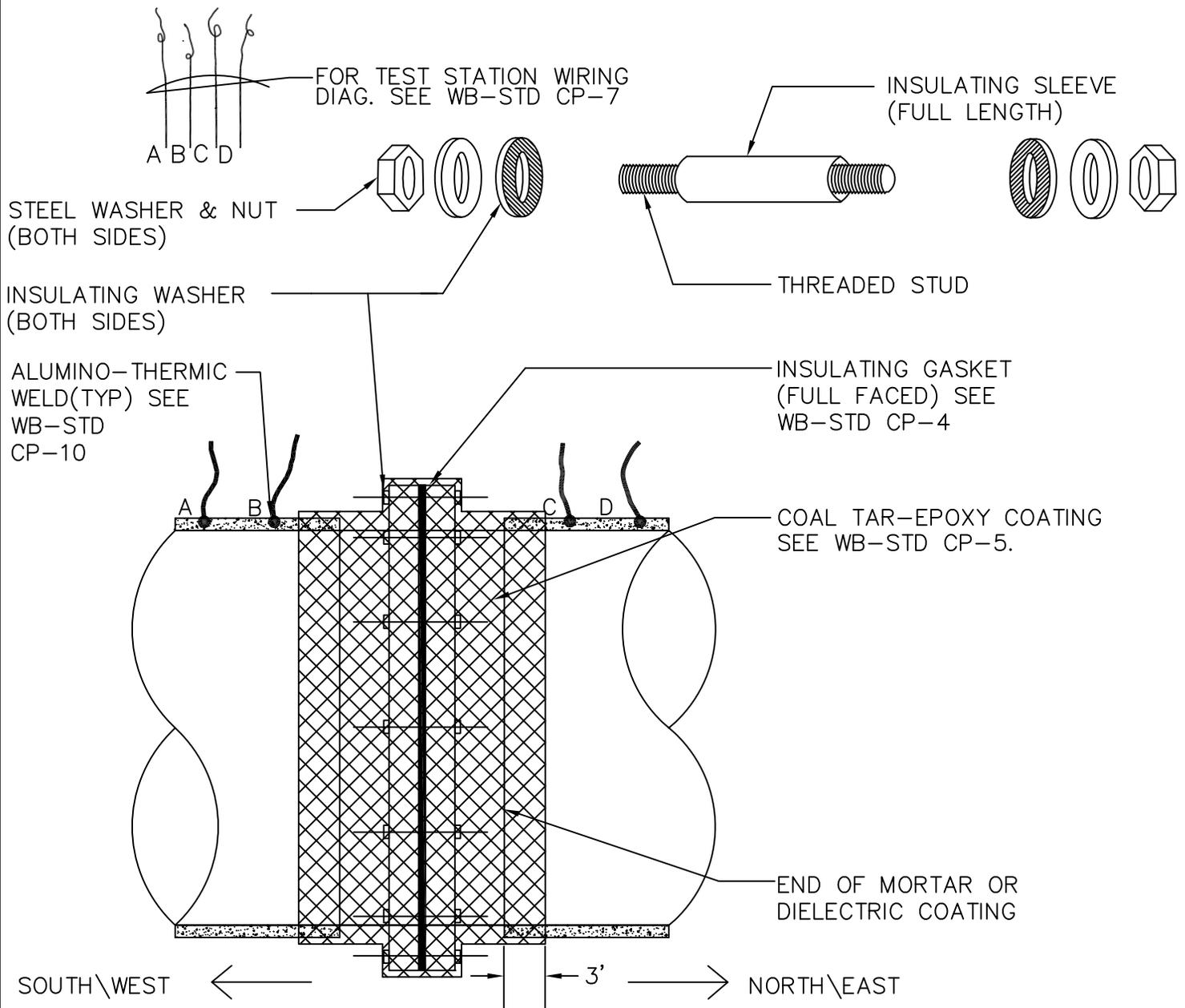
CP-4



- NOTES:
1. PROVIDE 18" SLACK WIRE LOOP IN EACH WIRE AT PIPE WELD AND IN TEST BOX.
 2. WIRE TRENCH SHALL BE 24-INCHES DEEP (MIN). PLACE 3 INCHES OF SAND OR DG BEDDING IN TRENCH BEFORE PLACING WIRES. COVER WIRES WITH 6 INCHES OF SAND OR DG. COMPACT WIRE TRENCH FILL PER WB-STD RW-17.
 3. BRUSH OR SPRAY APPLY COAL TAR-EPOXY TO A TOTAL DRY FILM THICKNESS OF 16 MILS. ALL FLANGE SURFACES SHALL BE WIRE BRUSH CLEANED BEFORE COATING IS APPLIED.
 4. INSULATOR MUST BE TESTED PER WB-STD CP-6 PRIOR TO BACKFILL AND APPLICATION OF COAL TAR-EPOXY.
 5. USE 6" WIDE, 4 MIL THICK, INERT PLASTIC TAPE PRINTED WITH "CAUTION: CATHODIC PROTECTION CABLE BELOW".

REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
REVISION 1			6/03
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT	
<p>BURIED INSULATING FLANGE TEST STATION DETAIL</p>	<p>STANDARD DRAWING NUMBER</p> <p>CP-5</p>

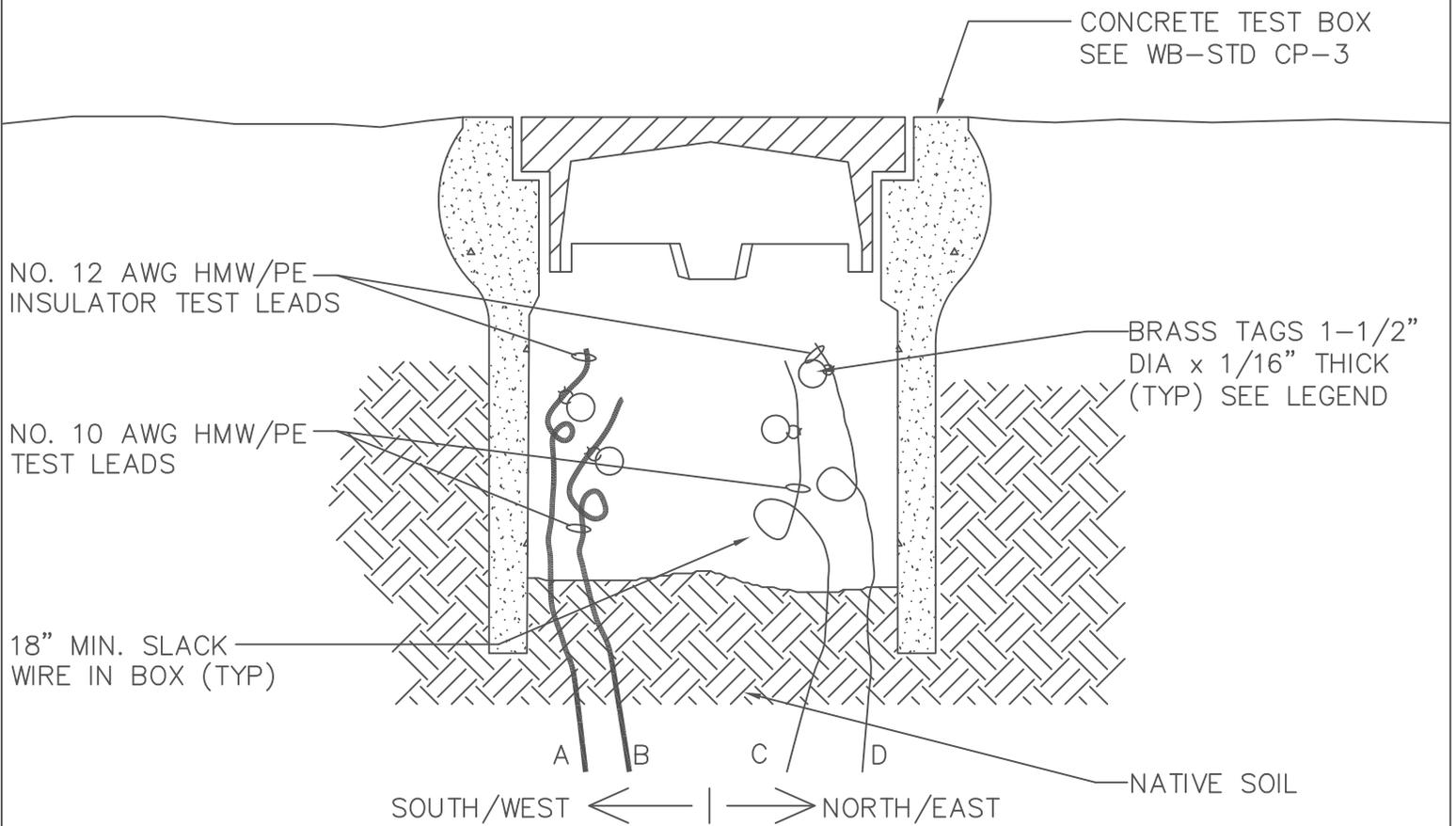


NOTES:

1. SIMILAR FOR INSULATING FLANGE KITS AT BURIED VALVE. INSTALL INSULATION KITS ON BOTH FLANGES & COAT ENTIRE VALVE WITH COAL TAR-EPOXY.
2. INSULATING MATERIALS:
 - GASKET - TYPE "E" PHENOLIC WITH RECTANGULAR O-RING.
 - SLEEVE - G10 LAMINATED GLASS
 - WASHER - G10 LAMINATED GLASS
3. TESTING REQUIREMENTS: PRIOR TO APPLICATION OF COAL TAR-EPOXY TEST ASSEMBLED FLANGE WITH INSULATOR TESTER (GAS ELECTRONICS MODEL 601). MUST READ 100% INSULATION. IF PARTIAL SHORT INDICATED, TEST EACH BOLT AND REPAIR SLEEVES AS NECESSARY. RETEST BEFORE APPLYING COAL TAR-EPOXY AND BACKFILL.

REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
REVISION 1			6/03
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT	
BURIED INSULATING FLANGE KIT DETAIL	STANDARD DRAWING NUMBER CP-6



BRASS TAG LEGEND

<u>WIRE</u>	<u>SIZE</u>	<u>COLOR</u>	<u>ID STAMP</u>
A	No. 12	YELLOW	"WBMWD, SIZE, RW, SO. OR WT."
B	No. 10	BLACK	"WBMWD, SIZE, RW, SO. OR WT."
C	No. 10	BLACK	"WBMWD, SIZE, RW, NO. OR ET."
D	No. 12	YELLOW	"WBMWD, SIZE, RW, NO. OR ET."

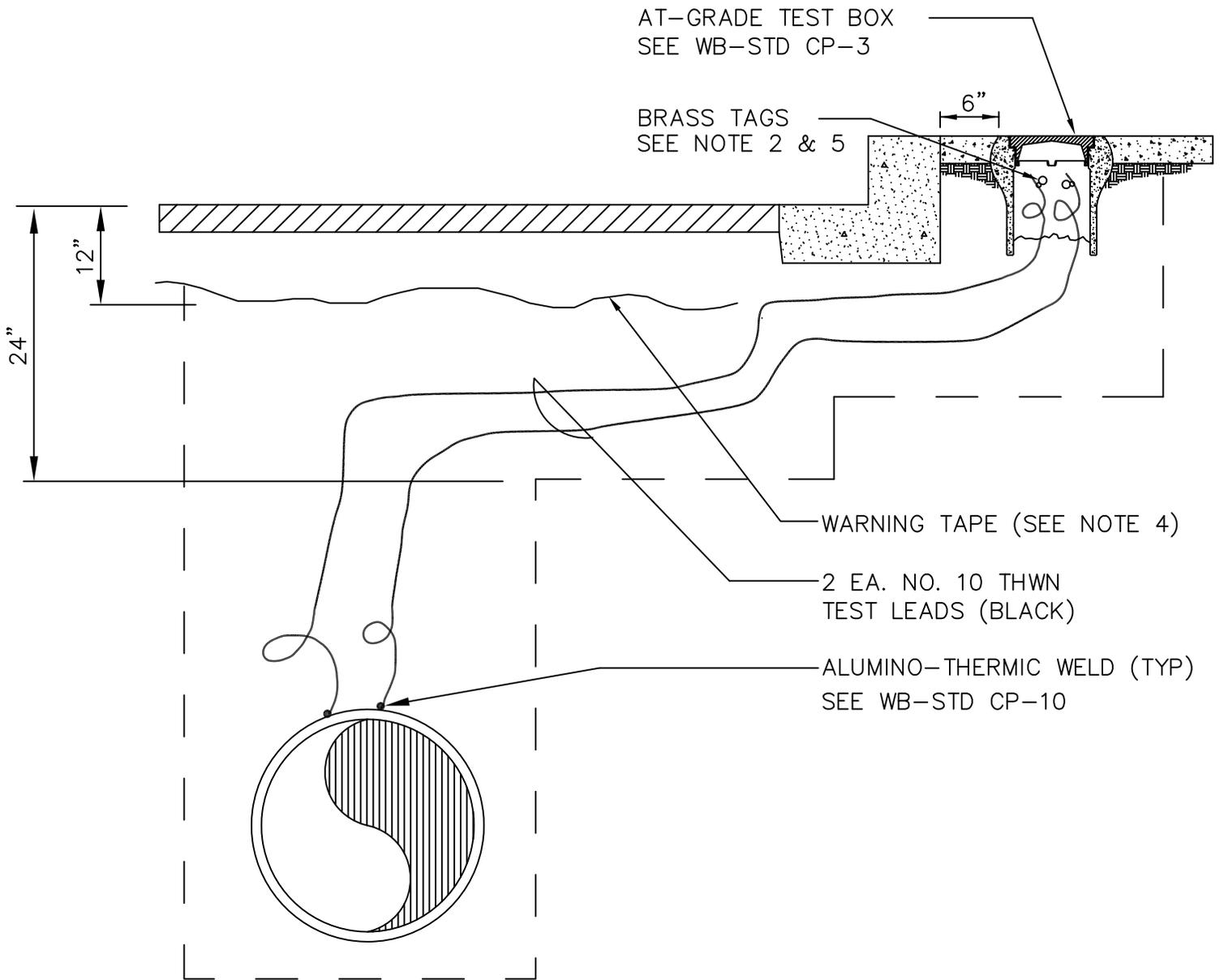
EXAMPLE: "WBMWD, 42" RW-ET"

NOTES:

1. SEE WB-STD CP-3 FOR TEST BOX INSTALLATION REQUIREMENTS.
2. ALLOW ENOUGH SLACK IN EACH WIRE TO EXTEND 18 INCHES ABOVE TOP OF BOX.
3. SECURELY ATTACH BRASS TAGS TO TEST LEADS WITH BARE NO. 14 COPPER WIRE.
4. ID TAG SHALL BE FIRMLY STAMPED WITH 1/4-INCH HIGH CHARACTERS.

REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
REVISION 1			6/03
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT	
BURIED INSULATING FLANGE WIRING DIAGRAM	
STANDARD DRAWING NUMBER	CP-7

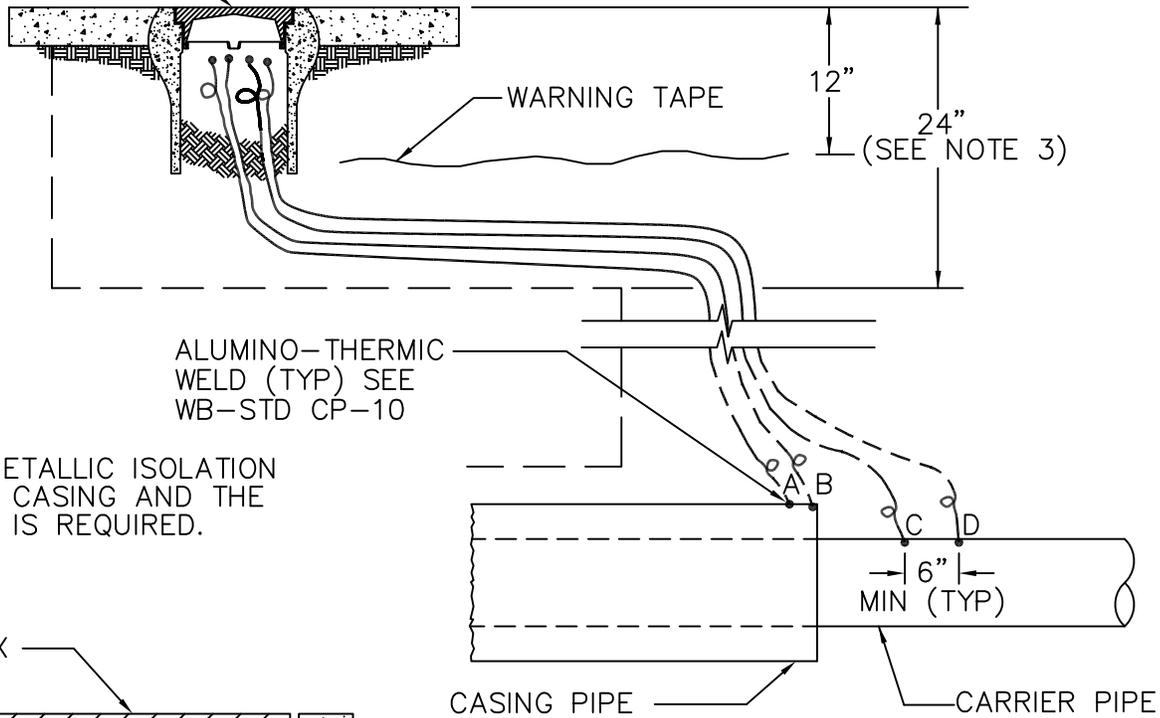


NOTE:

1. PROVIDE 18" SLACK WIRE AT WELD AND COILED IN TEST BOX.
2. FIRMLY STAMP BRASS TAGS (1-1/2" DIA BY 1/16" THICK) "WBMWD, SIZE AND SERVICE" (EXAMPLE: WBMWD, 42"RW), USE 1/4" HIGH CHARACTERS.
3. WIRE TRENCH SHALL BE 24-INCHES DEEP (MIN). PLACE 3-INCHES OF SAND OR DG BEDDING IN TRENCH BEFORE PLACING WIRES. COVER WIRES WITH 6-INCHES OF SAND OR DG. COMPACT WIRE TRENCH FILL PER WB-STD RW-17.
4. USE 6" WIDE, 4 MIL THICK INERT PLASTIC TAPE PRINTED WITH "CAUTION: CATHODIC PROTECTION CABLE BELOW".
5. SECURELY ATTACH BRASS TAGS WITH NO. 14 BARE COPPER WIRE.
6. SEE WB-STD CP-3 FOR TEST BOX LOCATION.

REVISIONS	DRAWN	APP'D	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
ORIGINAL	DPH	EAD	3/95	2-WIRE TEST STATION	
REVISION 1			6/03		
APPROVED				STANDARD DRAWING NUMBER CP-8	
DISTRICT ENGINEER RCE DATE					

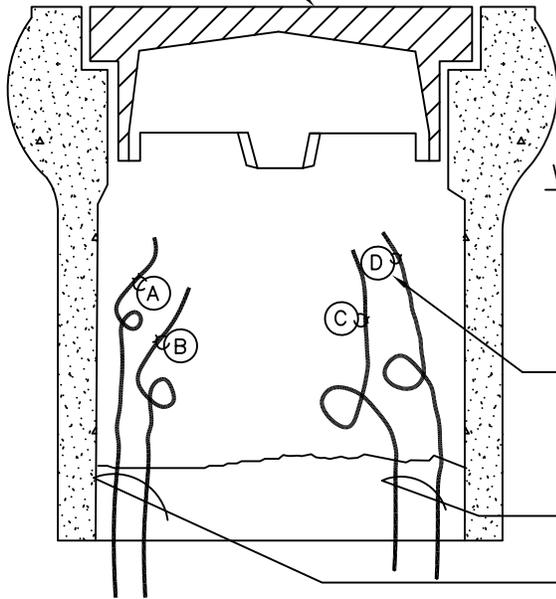
AT-GRADE TEST BOX SEE WB-STD CP-3



ALUMINO-THERMIC WELD (TYP) SEE WB-STD CP-10

NOTE: ELECTRICAL/METALLIC ISOLATION BETWEEN THE CASING AND THE CARRIER PIPE IS REQUIRED.

AT-GRADE TEST BOX SEE WB-STD CP-3



BRASS TAG LEGEND

WIRE	SIZE	COLOR	ID STAMP
A	No. 12	YELLOW	CASING
B	No. 10	YELLOW	CASING
C	No. 10	BLACK	WBMWD. SIZE, RW
D	No. 12	BLACK	WBMWD. SIZE, RW

BRASS TAGS (TYP) SEE LEGEND AND NOTE 5.

2-NO. 10 THWN TEST LEADS (BLACK)

2-NO. 12 THWN (YELLOW) CASING LEADS

NOTES:

1. ELECTRICAL\METALLIC INSULATION BETWEEN THE CASING AND THE CARRIER PIPE IS REQUIRED. SEE WB-STD RW-19.
2. PROVIDE 18" SLACK LOOP IN EACH WIRE AT PIPE WELD AND IN TEST BOX.
3. WIRE TRENCH SHALL BE 24-INCHES DEEP (MIN). PLACE 3-INCHES OF SAND OR DG. BEDDING IN TRENCH BEFORE PLACING WIRES. COVER WIRES WITH 6-INCHES OF SAND OR DG. COMPACT WIRE TRENCH FILL PER WB-STD RW-17.
4. USE 6" WIDE, 4 MIL THICK INERT PLASTIC TAPE PRINTED WITH "CAUTION: CATHODIC PROTECTION CABLE BELOW".
5. USE 1-1/2" DIA BY 1/16" THICK BRASS TAGS WITH 1/4" HIGH CHARACTERS.

REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
REVISION 1			6/03
APPROVED			
DISTRICT ENGINEER		RCE	DATE

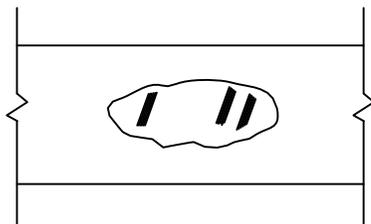
WEST BASIN MUNICIPAL WATER DISTRICT

4-WIRE CASING TEST STATION

STANDARD DRAWING NUMBER

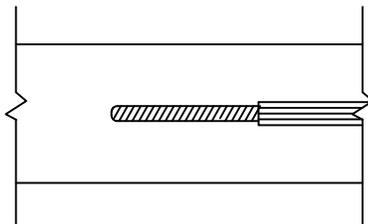
CP-9

STEP 1



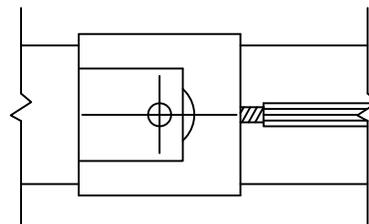
FILE SURFACE TO BRIGHT METAL AND CLEAN

STEP 2



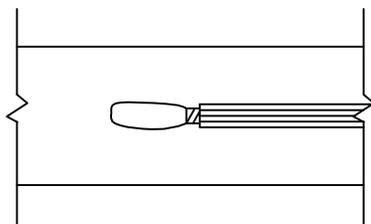
STRIP INSULATION FROM WIRE

STEP 3



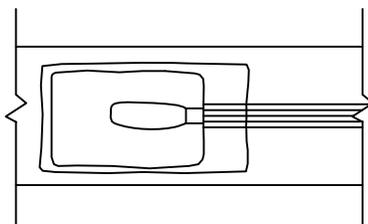
HOLD WELDER FIRMLY WITH OPENING AWAY FROM OPERATOR AND IGNITE STARTING POWDER

STEP 4



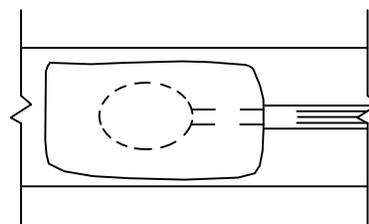
REMOVE SLAG FROM CONNECTION

STEP 5

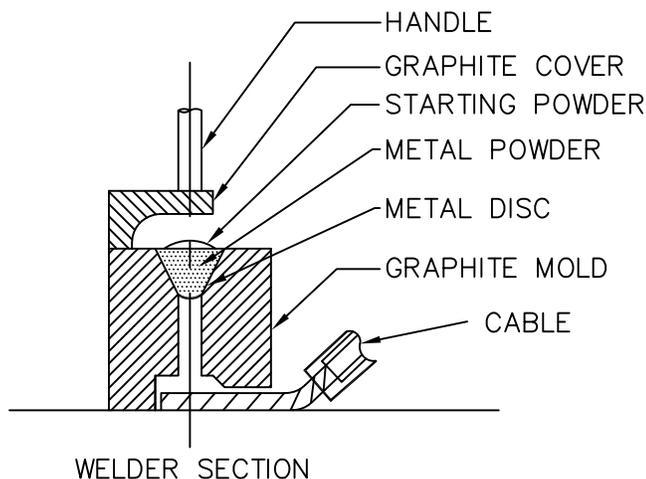


COVER CONNECTION WITH A ELASTOMERIC WELD CAP

STEP 6



COAT AREA PLUS 3 INCHES WITH BITUMEN PATCH MORTAR

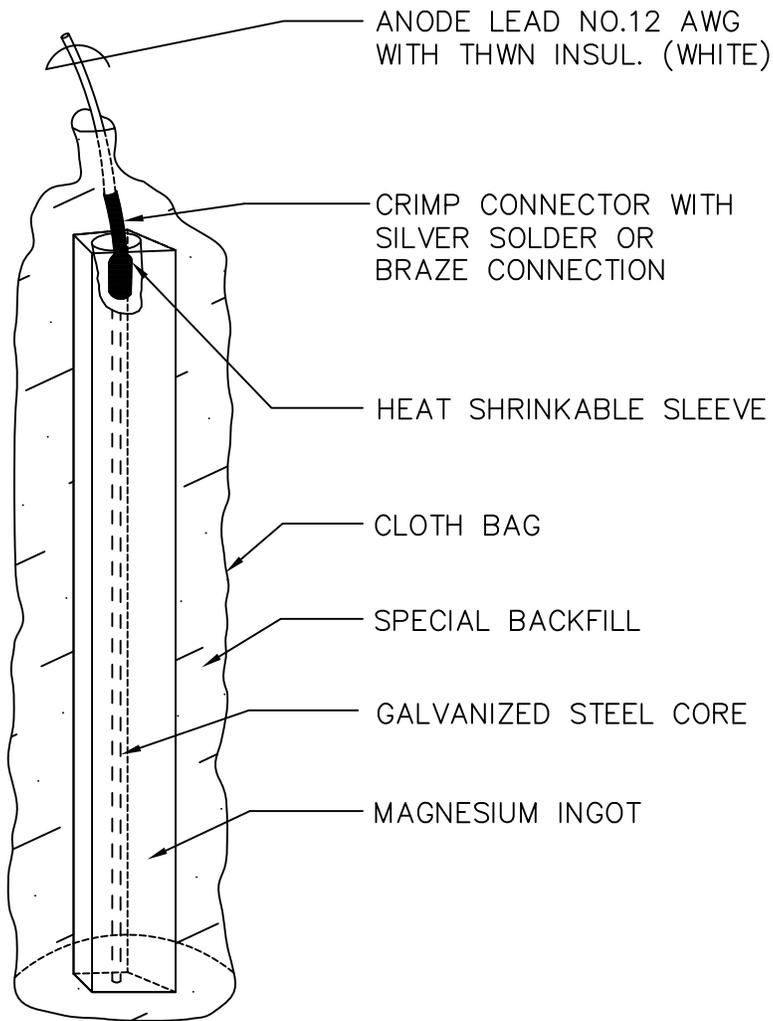


WELDER SECTION

NOTES:

1. WELDER SHOWN IS FOR HORIZONTAL SURFACES. FOR VERTICAL SURFACES SIDE WELDER IS REQUIRED.
2. ALL WIRE WELDS SHALL BE 6 INCHES APART, MINIMUM.
3. STANDARD WELD CARTRIDGES SHALL BE USED FOR DUCTILE IRON AND STEEL SURFACE. FOR CAST IRON USE XF-19 ALLOY OR EQUIVALENT.
4. COVER WELD WITH ELASTOMERIC WELD CAP. USE ROYSTON HANDY CAP OR PHILLIPPS THERMITE WELD CAP.
5. APPLY GENEROUS COAT OF BITUMEN OVER WELD CAP AND WELD AREA OVERLAPPING PIPE COATING BY 3 INCHES. USE KOPPERS BIT 50 OR EQUAL.
6. PATCH MORTAR COATING WITH QUICK SETTING MORTAR.
7. AFTER COOLING, HAMMER TEST THE WELD TO ENSURE SOUNDNESS.

REVISIONS	DRAWN	APP'D	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
ORIGINAL	DPH	EAD	3/95		
REVISION 1			6/03	ALUMINO-THERMIC WELD DETAIL	
APPROVED				STANDARD DRAWING NUMBER	
DISTRICT ENGINEER RCE DATE					
				CP-10	



MAGNESIUM ANODE
HIGH POTENTIAL ALLOY
COMPOSITION

Element	Weight %
Al	0.01% MAX
Mn	0.5 to 1.30%
Si	0.05% MAX
Cu	0.02% MAX
Ni	0.001% MAX
Fe	0.03% Max
Other	0.05% EACH or 0.30% MAX
Mg	Remainder

SPECIAL BACKFILL COMPOSITION

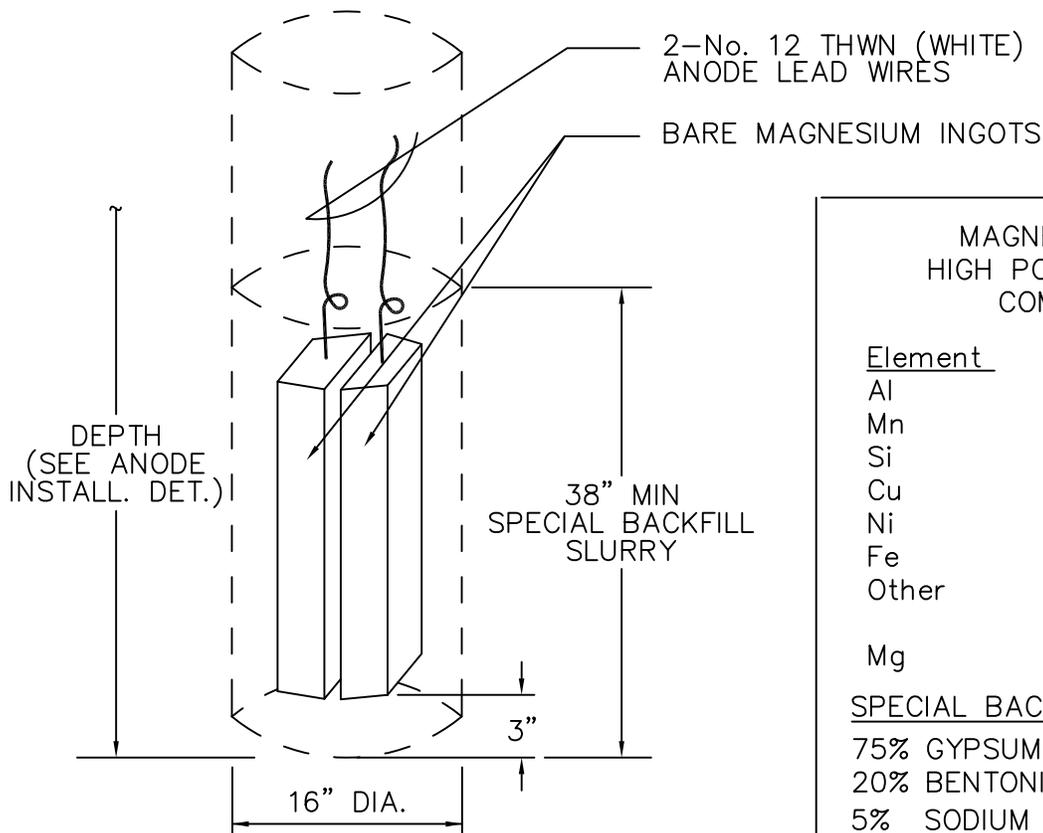
75% GYPSUM
20% BENTONITE
5% SODIUM SULFATE

INGOT WEIGHT: 48 LBS.
INGOT SIZE: 6" x 5" x 38"
TOTAL PKG WT: 105 LBS.
OPEN CIRCUIT POTL: 1.6 to 1.7 V
vs. Cu/CuSO4

NOTES:

1. WIRE CONNECTION (CRIMP AND BRAZE) SHALL BE MADE BY ANODE SUPPLIER.
2. CONTRACTOR TO SPECIFY LEAD WIRE LENGTH TO ALLOW INSTALLATION WITHOUT SPLICES.
3. DO NOT LOWER ANODE IN HOLE WITH LEAD WIRE. USE SLING.
4. TEST INSTALLED ANODE WITH VOLTMETER AND Cu/CuSO4 REFERENCE CELL TO VERIFY PROPER OPEN CIRCUIT POTENTIAL.
5. FOLLOWING INSTALLATION OF ANODE IN HOLE, FLOOD ANODE ENTIRELY. BACKFILLING OF ANODE HOLE SHALL BE DONE AFTER SATISFACTORY SOAKING OF ANODE HAS OCCURED.

REVISIONS	DRAWN	APP'D	DATE	WEST BASIN MUNICIPAL WATER DISTRICT		
ORIGINAL	DPH	EAD	3/95	PRE-PACKAGED MAGNESIUM SACRIFICIAL ANODE		
REVISION 1			6/03			STANDARD DRAWING NUMBER
						CP-11
APPROVED						
DISTRICT ENGINEER				RCE	DATE	



MAGNESIUM ANODE
HIGH POTENTIAL ALLOY
COMPOSITION

Element	Weight %
Al	0.01% MAX
Mn	0.5 to 1.30%
Si	0.05% MAX
Cu	0.02% MAX
Ni	0.001% MAX
Fe	0.03% Max
Other	0.05% EACH or 0.30% MAX
Mg	Remainder

SPECIAL BACKFILL COMPOSITION

75% GYPSUM
20% BENTONITE
5% SODIUM SULFATE

INGOT WEIGHT: 48 LBS.
INGOT SIZE: 6" x 5" x 38"
TOTAL PKG WT: 105 LBS.
OPEN CIRCUIT POTL: 1.6 to 1.7 V
vs. Cu/CuSO4

NOTES:

1. CENTER MAGNESIUM INGOT SIDE-BY-SIDE AT THE BOTTOM OF AUGURED HOLE WITH LONG DIMENSION VERTICAL. THE INGOTS MAY TOUCH EACH OTHER.
2. NEVER LIFT, HANDLE OR TRANSPORT ANODE BY THE LEAD WIRE. LOWER INTO HOLE WITH A REMOVABLE SLING OR ROPE.
3. MIX SPECIAL BACKFILL WITH WATER IN BATCHES. ADD ONLY ENOUGH WATER TO FORM A THICK, BUT POURABLE, PASTE. BACKFILL SLURRY SHALL FLOW AROUND AND CONFORM TO THE SHAPE OF THE ANODE. DO NOT USE EXCESSIVE WATER.
4. LIFT OR SPACE INGOT OFF THE BOTTOM OF HOLE 3 INCHES. SLOWLY POUR THE SLURRY BACKFILL TO SURROUND INGOTS WITHOUT VOIDS. COVER THE TOP OF THE ANODES BY 3 INCHES. FILL REMAINDER OF HOLE WITH NATIVE, ROCK-FREE SOIL (NOT SAND). TAMP AND COMPACT IN 18 INCH LIFTS.
5. SEE WB-STD CP-11 FOR ANODE LEAD WIRE CONNECTION REQUIREMENTS.

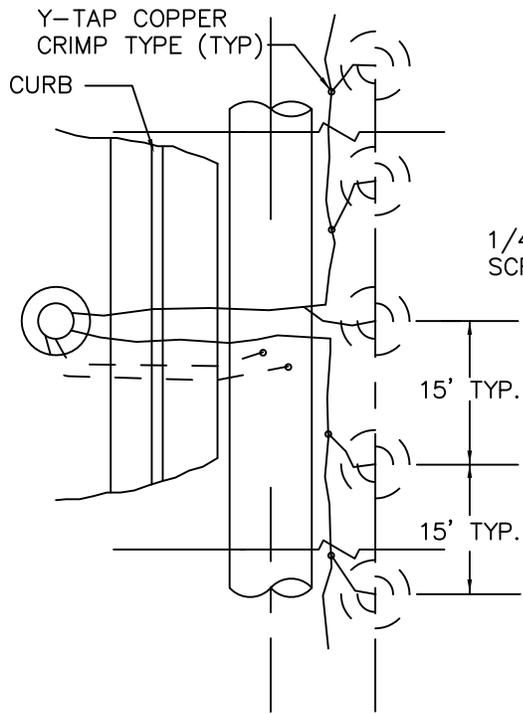
REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
REVISION 1			6/03
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

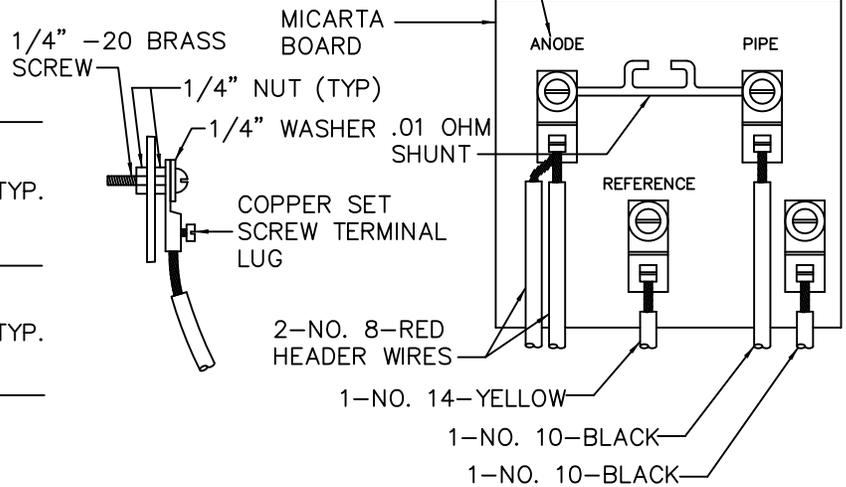
DUAL MAGNESIUM ANODE DETAIL

STANDARD
DRAWING
NUMBER

CP-12

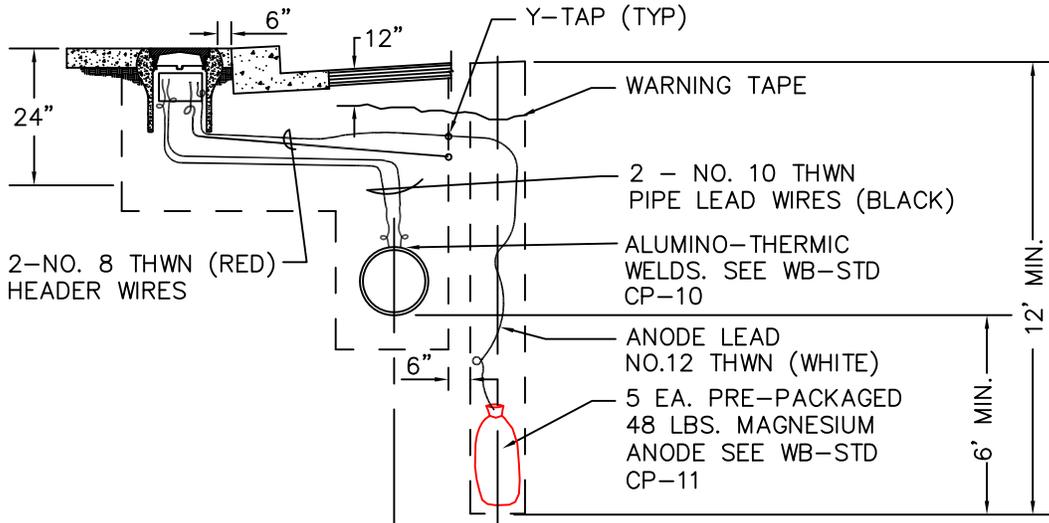


ENGRAVE MICARTA BOARD
W/ ENGRAVING MACHINE TO
READ AS SHOWN (MIN. LETTER
HEIGHT 3/16" MIN. DEPTH 1/16"



SIDE VIEW

FRONT VIEW



NOTES:

1. ANODE POSITION SHOWN ILLUSTRATES MINIMUM ANODE\PIPE HORIZONTAL SEPARATION WHICH IS NECESSARY WHEN ADJACENT UTILITIES ARE CLOSE BY. WHERE THERE IS NO INTERFERENCE, INCREASE HORIZONTAL SEPARATION AS MUCH AS POSSIBLE UP TO 8 FEET. ANODES CAN BE ON EITHER SIDE OF PIPE.
2. PLACE ANODES IN 12" DIAMETER AUGURED HOLES. HOLE BOTTOM SHALL BE AT LEAST 6 FEET FROM PIPE INVERT BUT NO LESS THAN 12 FEET DEEP. SEPARATION OF 6 FEET CAN BE OBTAINED BY GREATER HOLE DEPTH OR BY POSITIONING ANODES FURTHER AWAY FROM THE PIPE.
3. SEE PLAN & PROFILE DRAWINGS FOR POSITION OF ANODE BED ALONG THE ALIGNMENT.

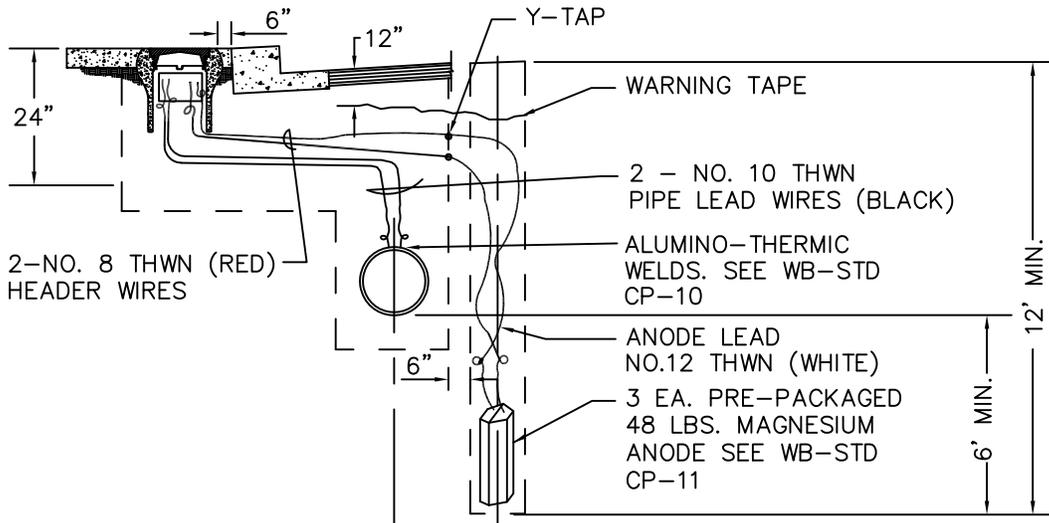
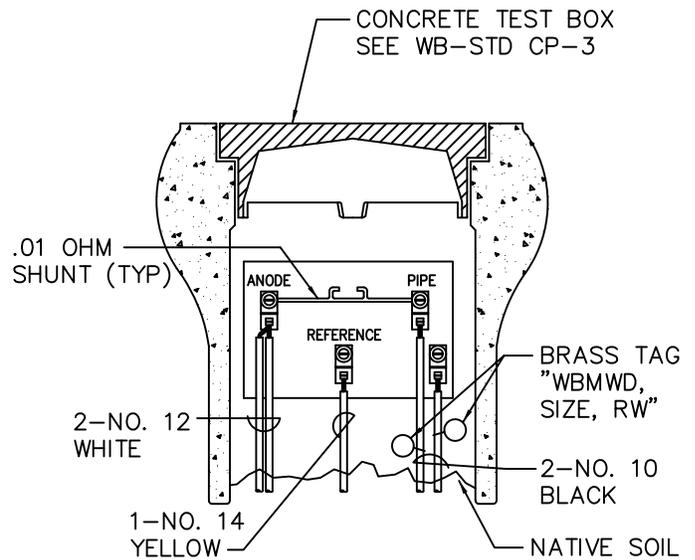
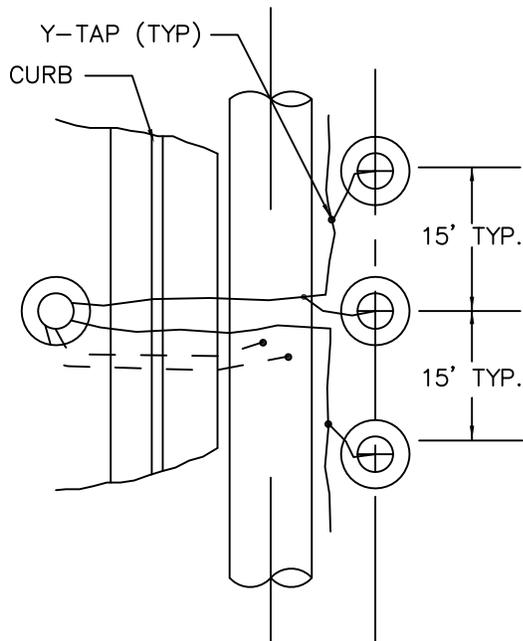
REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
REVISION 1			6/03
APPROVED			
DISTRICT ENGINEER	RCE	DATE	

WEST BASIN MUNICIPAL WATER DISTRICT

ANODE INSTALLATION DETAIL
TYPE "A"

STANDARD
DRAWING
NUMBER

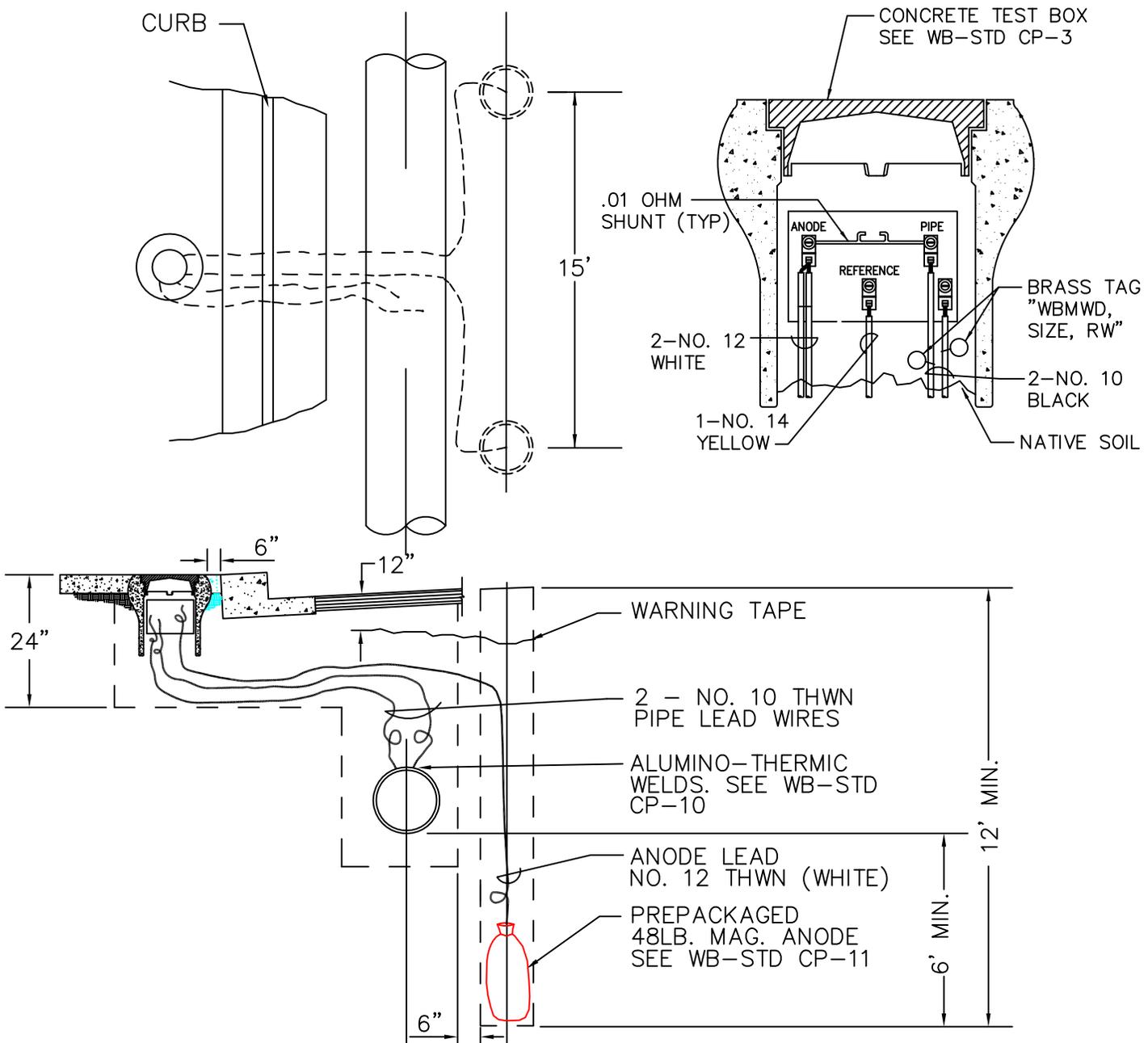
CP-13



NOTES:

1. ANODE POSITION SHOWN ILLUSTRATES MINIMUM ANODE\PIPE HORIZONTAL SEPARATION WHICH IS NECESSARY WHEN ADJACENT UTILITIES ARE CLOSE BY. WHERE THERE IS NO INTERFERENCE, INCREASE HORIZONTAL SEPARATION AS MUCH AS POSSIBLE UP TO 8 FEET. ANODES CAN BE ON EITHER SIDE OF PIPE.
2. PLACE ANODES IN 16" DIAMETER AUGURED HOLES. HOLE BOTTOM SHALL BE AT LEAST 6 FEET FROM PIPE INVERT BUT NO LESS THAN 12 FEET DEEP. SEPARATION OF 6 FEET CAN BE OBTAINED BY GREATER HOLE DEPTH OR BY POSITIONING ANODES FURTHER AWAY FROM THE PIPE.
3. SEE PLAN & PROFILE DRAWINGS FOR POSITION OF ANODE BED ALONG THE ALIGNMENT.

REVISIONS	DRAWN	APP'D	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
ORIGINAL	DPH	EAD	3/95	<p style="font-size: 1.2em; margin: 0;">ANODE INSTALLATION DETAIL TYPE "B"</p>	
REVISION 1			6/03		
APPROVED				STANDARD DRAWING NUMBER	CP-14
	DISTRICT ENGINEER	RCE	DATE		



NOTES:

1. ANODE POSITION SHOWN ILLUSTRATES MINIMUM ANODE\PIPE HORIZONTAL SEPARATION WHICH IS NECESSARY WHEN ADJACENT UTILITIES ARE CLOSE BY. WHERE THERE IS NO INTERFERENCE INCREASE HORIZONTAL SEPARATION AS MUCH AS POSSIBLE UP TO 8 FEET. ANODES CAN BE ON EITHER SIDE OF PIPE.
2. PLACE ANODE IN 16" DIAMETER AUGURED HOLES. HOLE BOTTOM SHALL BE AT LEAST 6 FEET FROM PIPE INVERT BUT NO LESS THAN 12 FEET DEEP. SEPARATION OF 6 FEET CAN BE OBTAINED BY GREATER HOLE DEPTH OR BY POSITIONING ANODES FURTHER AWAY FROM THE PIPE.
3. SEE PLAN & PROFILE DRAWINGS FOR POSITION OF ANODE BED ALONG THE ALIGNMENT.

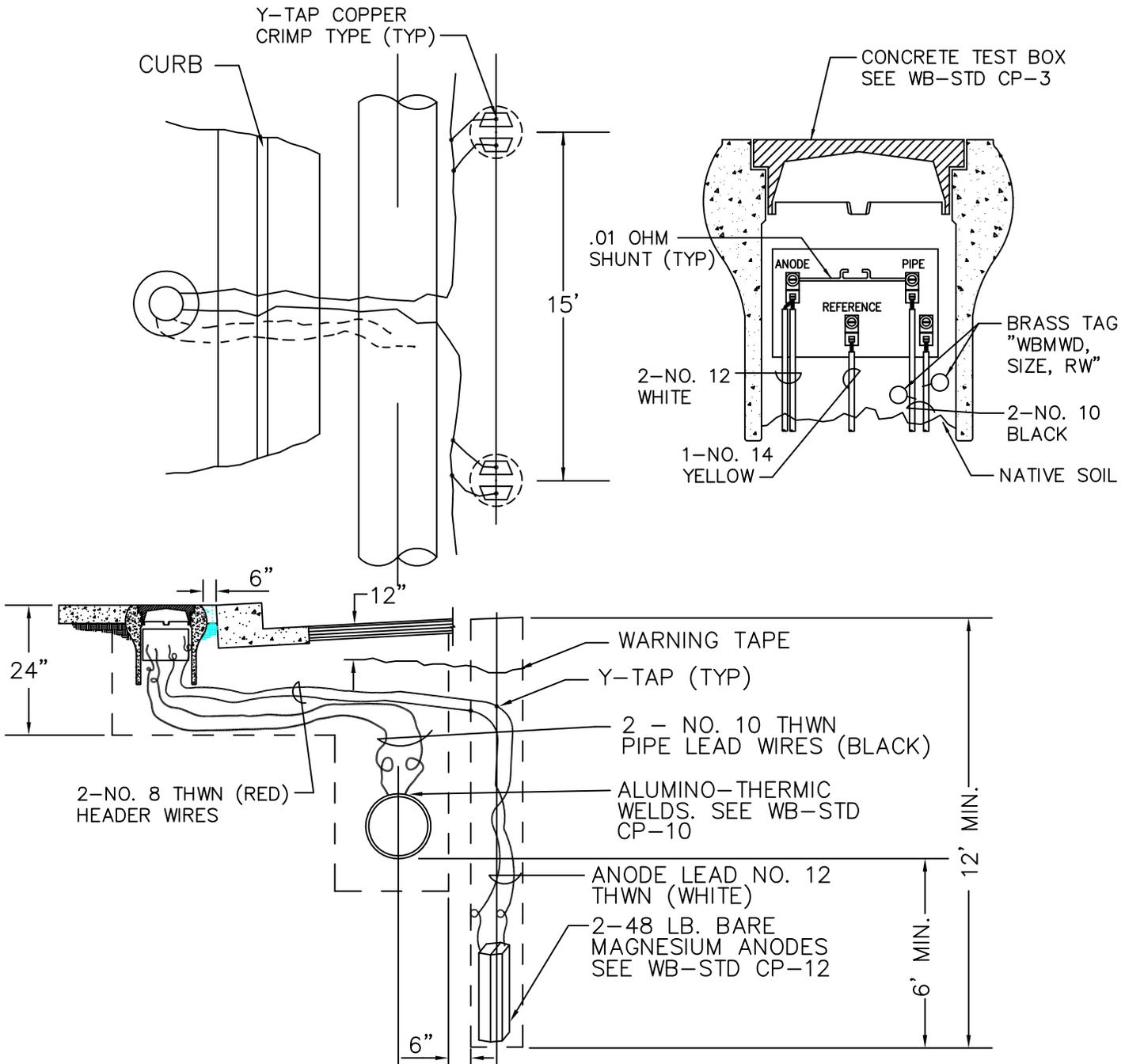
REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
EDIT TYPO	DPH	EAD	8/95
REVISION 1			6/03
APPROVED			
_____ DISTRICT ENGINEER RCE DATE			

WEST BASIN MUNICIPAL WATER DISTRICT

**ANODE INSTALLATION DETAIL
TYPE "C"**

STANDARD
DRAWING
NUMBER

CP-15



NOTES:

1. ANODE POSITION SHOWN ILLUSTRATES MINIMUM ANODE\PIPE HORIZONTAL SEPARATION WHICH IS NECESSARY WHEN ADJACENT UTILITIES ARE CLOSE BY. WHERE THERE IS NO INTERFERENCE INCREASE HORIZONTAL SEPARATION AS MUCH AS POSSIBLE UP TO 8 FEET. ANODES CAN BE ON EITHER SIDE OF PIPE.
2. PLACE ANODE IN 16" DIAMETER AUGURED HOLES. HOLE BOTTOM SHALL BE AT LEAST 6 FEET FROM PIPE INVERT BUT NO LESS THAN 12 FEET DEEP. SEPARATION OF 6 FEET CAN BE OBTAINED BY GREATER HOLE DEPTH OR BY POSITIONING ANODES FURTHER AWAY FROM THE PIPE.
3. SEE PLAN & PROFILE DRAWINGS FOR POSITION OF ANODE BED ALONG THE ALIGNMENT.

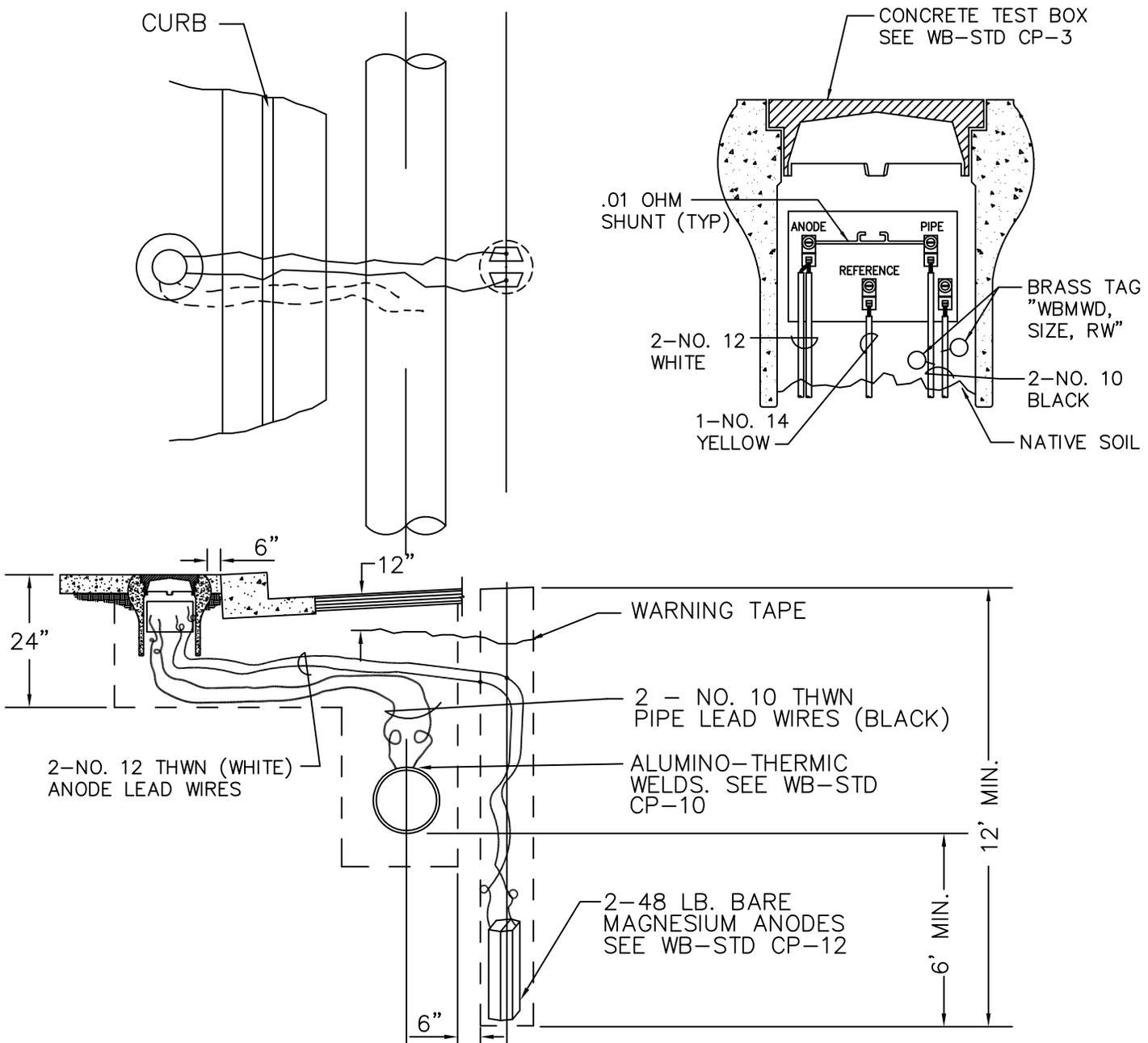
REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
EDIT TYPO	DPH	EAD	8/95
REVISION 1			6/03
APPROVED			
DISTRICT ENGINEER		RCE	DATE

WEST BASIN MUNICIPAL WATER DISTRICT

**ANODE INSTALLATION DETAIL
TYPE "D"**

STANDARD
DRAWING
NUMBER

CP-16



NOTES:

1. ANODE POSITION SHOWN ILLUSTRATES MINIMUM ANODE\PIPE HORIZONTAL SEPARATION WHICH IS NECESSARY WHEN ADJACENT UTILITIES ARE CLOSE BY. WHERE THERE IS NO INTERFERENCE INCREASE HORIZONTAL SEPARATION AS MUCH AS POSSIBLE UP TO 8 FEET. ANODES CAN BE ON EITHER SIDE OF PIPE.
2. PLACE ANODE IN 16" DIAMETER AUGURED HOLES. HOLE BOTTOM SHALL BE AT LEAST 6 FEET FROM PIPE INVERT BUT NO LESS THAN 12 FEET DEEP. SEPARATION OF 6 FEET CAN BE OBTAINED BY GREATER HOLE DEPTH OR BY POSITIONING ANODES FURTHER AWAY FROM THE PIPE.
3. SEE PLAN & PROFILE DRAWINGS FOR POSITION OF ANODE BED ALONG THE ALIGNMENT.

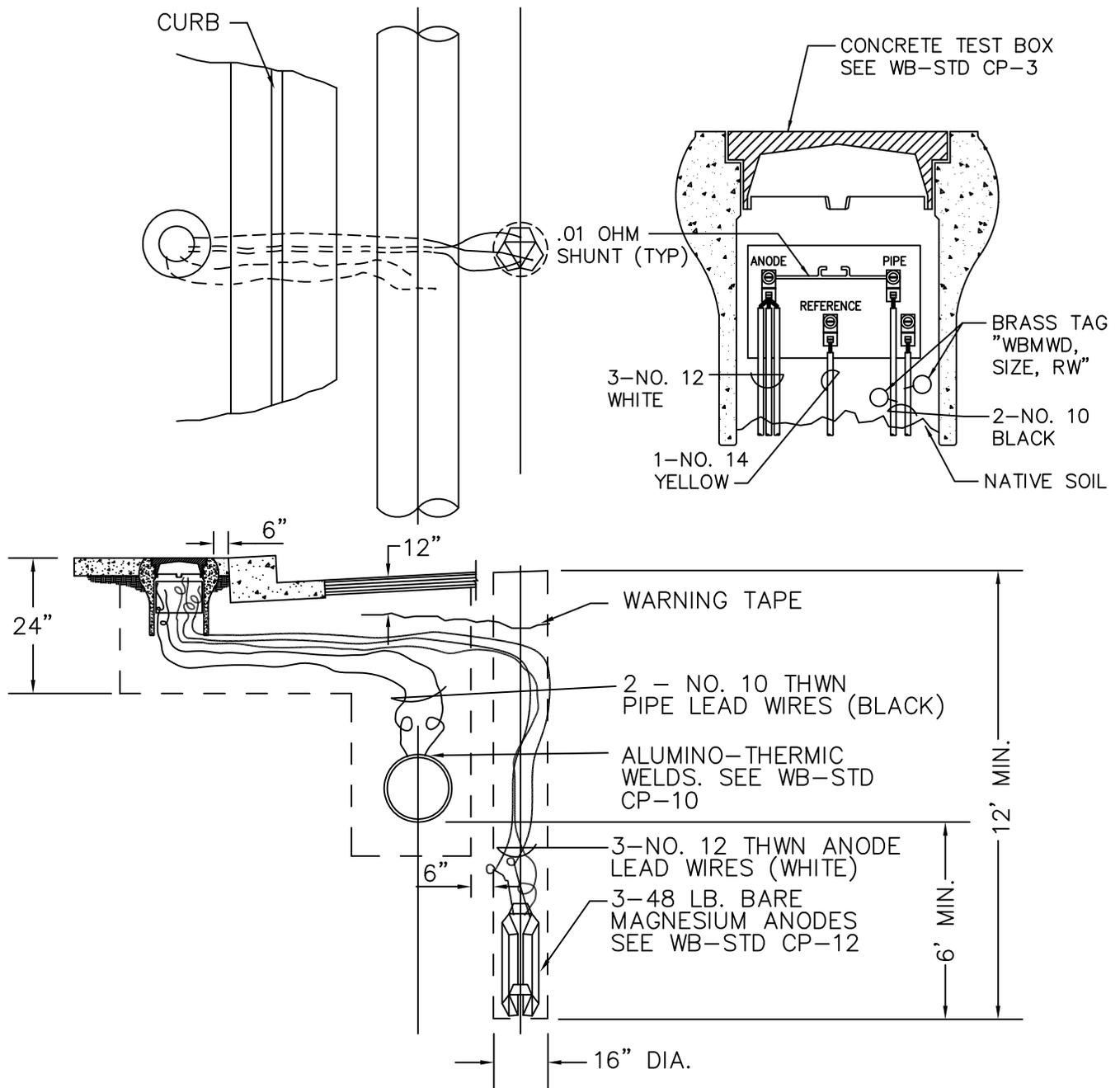
REVISIONS	DRAWN	APP'D	DATE
ORIGINAL	DPH	EAD	3/95
EDIT TYPO	DPH	EAD	8/95
REVISION 1			6/03
APPROVED			
_____ DISTRICT ENGINEER RCE DATE			

WEST BASIN MUNICIPAL WATER DISTRICT

**ANODE INSTALLATION DETAIL
TYPE "E"**

STANDARD
DRAWING
NUMBER

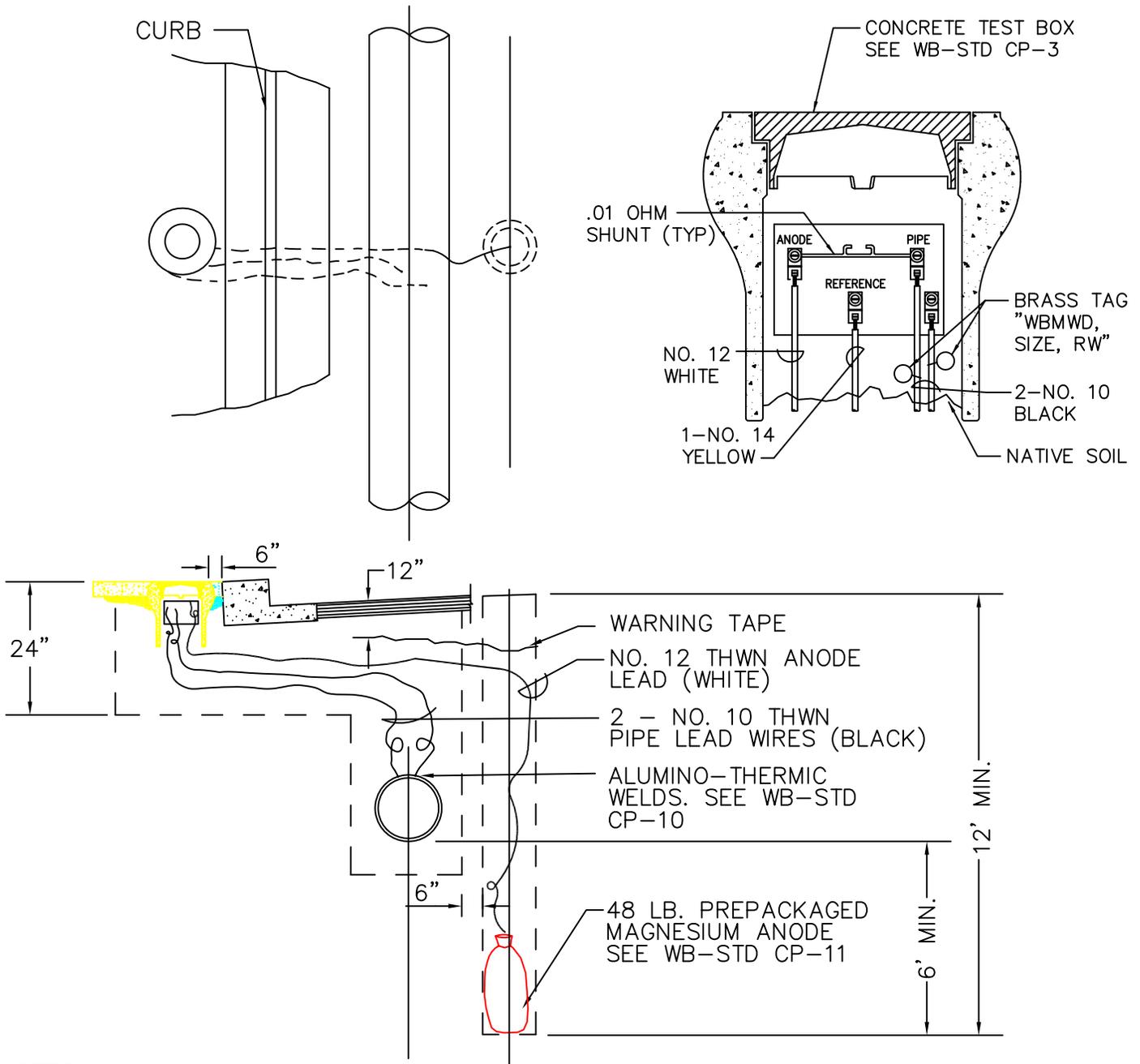
CP-17



NOTES:

1. ANODE POSITION SHOWN ILLUSTRATES MINIMUM ANODE\PIPE HORIZONTAL SEPARATION WHICH IS NECESSARY WHEN ADJACENT UTILITIES ARE CLOSE BY. WHERE THERE IS NO INTERFERENCE INCREASE HORIZONTAL SEPARATION AS MUCH AS POSSIBLE UP TO 8 FEET. ANODES CAN BE ON EITHER SIDE OF PIPE.
2. PLACE ANODES IN 16" DIAMETER AUGURED HOLES. HOLE BOTTOM SHALL BE AT LEAST 6 FEET FROM PIPE INVERT BUT NO LESS THAN 12 FEET DEEP. SEPARATION OF 6 FEET CAN BE OBTAINED BY GREATER HOLE DEPTH OR BY POSITIONING ANODES FURTHER AWAY FROM THE PIPE.
3. SEE PLAN & PROFILE DRAWINGS FOR POSITION OF ANODE BED ALONG THE ALIGNMENT.

REVISIONS	DRAWN	APP'D	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
ORIGINAL	DPH	EAD	3/95	STANDARD DRAWING NUMBER	
REVISION 1			6/03		
APPROVED				ANODE INSTALLATION DETAIL TYPE "F"	
DISTRICT ENGINEER RCE DATE					
				CP-18	



NOTES:

1. ANODE POSITION SHOWN ILLUSTRATES MINIMUM ANODE\PIPE HORIZONTAL SEPARATION WHICH IS NECESSARY WHEN ADJACENT UTILITIES ARE CLOSE BY. WHERE THERE IS NO INTERFERENCE INCREASE HORIZONTAL SEPARATION AS MUCH AS POSSIBLE UP TO 8 FEET. ANODES CAN BE ON EITHER SIDE OF PIPE.
2. PLACE ANODE IN 16" DIAMETER AUGURED HOLES. HOLE BOTTOM SHALL BE AT LEAST 6 FEET FROM PIPE INVERT BUT NO LESS THAN 12 FEET DEEP. SEPARATION OF 6 FEET CAN BE OBTAINED BY GREATER HOLE DEPTH OR BY POSITIONING ANODES FURTHER AWAY FROM THE PIPE.
3. SEE PLAN & PROFILE DRAWINGS FOR POSITION OF ANODE BED ALONG THE ALIGNMENT.

REVISIONS	DRAWN	APP'D	DATE	WEST BASIN MUNICIPAL WATER DISTRICT	
ORIGINAL	DPH	EAD	3/95	ANODE INSTALLATION DETAIL TYPE "G"	
EDIT TYPO	DPH	EAD	8/95		
REVISION 1			6/03		
APPROVED					
DISTRICT ENGINEER			RCE	DATE	CP-19



File #: 2016-595, Version: 1

Report to Carson Reclamation Authority

Wednesday, June 08, 2016

Discussion

SUBJECT:

**ADOPTION OF FY 2016/17 BUDGET OF THE CARSON RECLAMATION AUTHORITY,
RESOLUTION NO. 16-09 CRJPA**

I. SUMMARY

The Joint Powers Agreement that authorized the formation of the Carson Reclamation Authority (CRA) on February 17, 2015 calls for the adoption of an annual budget by no less than 2/3 vote of the Board of Directors. This report transmits the FY 2016/17 proposed budget of the Authority as delineated in the schedule attached as Exhibit No. 2. This schedule includes expenditure items required to undertake the activities involved in the remediation of the former Cal-Compact landfill, and the potential for the development of the property. Approval of the budget is requested by adopting Resolution No. 16-09-CRJPA attached to this report as Exhibit No. 1.

II. RECOMMENDATION

WAIVE further reading and ADOPT RESOLUTION No. 16-09-CRJPA, "A RESOLUTION OF THE CARSON RECLAMATION AUTHORITY ADOPTING THE FY 2016/17 BUDGET AND APPROVING APPROPRIATIONS FOR THE 2016/17 FISCAL YEAR."

III. ALTERNATIVES

1. MODIFY the proposed budget and APPROVE the budget as modified.
2. TAKE another action that may be deemed appropriate.

IV. BACKGROUND

On January 20, 2015, the governing boards of the Carson Housing Authority and the Community Facilities Districts each approved an agreement for the formation of the Carson Reclamation Joint Powers Authority (CRJPA) for the purpose of overseeing and facilitating the remediation of contaminated properties in the City of Carson and for the maintenance and potential development of same. The Carson Reclamation Authority was formed pursuant to the Joint Powers Agreement dated February 17, 2015, which was then amended on March 17, 2015.

In accordance with the powers of the CRJPA, the Authority received ownership of a 157-acre property, a former landfill under remediation, through a Transfer Agreement from Carson Holdings, LLC on May 18, 2015. As owner of the property, the CRJPA:

- (1) Assumed all obligations of the former owner, Carson Marketplace, LLC, (CM) with respect to the remediation work and the completion of the remediation work.
- (2) Assumed all of CM's rights and obligations under the Environmental Assurance Agreement (EAA) Trust Agreement or the Remediation Escrow, and the related fixed price design and construction EAA with Tetra Tech;
- (3) Assumed CM's rights to any inventories, equipment and material related to the remediation process;
- (4) Assumed CM's rights and obligations under the Snyder Langston Agreement and the CALReUse grant.

The Joint Powers Agreement provides under Article II - Purpose and Powers, Section 2.03 - Specific Powers, Subsection (a) - Annual Budget, that the CRA Board shall adopt an annual budget for the ensuing fiscal year by approval of not less than 2/3 of the Board Members.

On July 7, 2015, staff presented the \$8,769,080 fiscal year 2015/16 budget of the CRA which was crafted in accordance with the agreement entered into by the CRA with different entities, and other applicable governing documents. All the revenues and expenditures contemplated in the JPA formation and other documents were taken into account when the budget was prepared. The CRA Board approved with a 5/0 vote the said budget or the appropriation for expenditures for this current fiscal year 2015/16.

Fiscal Year 2015/16 Financial Profile

As projected, the CRA received \$50.590 million bond proceeds with the issuance by the Successor Agency to the Carson Redevelopment Agency of the

Subordinated Tax Allocation Refunding Bonds, Series 2015B (Taxable). The CRA will also receive from the Carson Successor Agency (CSA) the proceeds of the sale of the properties of the CSA estimated at \$6.7 million. Under consideration is the payment of about \$5.4 million by the Carson Holdings, LLC, as reimbursement of the carry costs to operate and maintain the 157-acre site up until May 4, 2016.

Out of the \$64,200,655 that the CRA expects to receive in FY 2015/16, it is projected that

\$8,853,380 will be expended, leaving an estimated fund balance of \$55,347,275 at June 30, 2016.

Fiscal Year 2016/17 Budget Proposal

In this fiscal year, the funds are being used to continue the remediation of the site and will remain to be the case for FY 2016/17. For the upcoming fiscal year, the CRA Board is being asked to approve the spending plan which is proposed to focus on financing the ongoing maintenance of the site including the continuation of the following activities, mainly to be conducted by Tetra Tech:

- Perimeter air monitoring and monitoring around operations center area;
- Dust control, site security and site wide general housekeeping and maintenance;
- Pumping water from ponds around the site;
- Inspection by a qualified storm water practitioner of the storm water pollution prevention plan;
- Implementation of increased security measures including additional daily security related inspections/monitoring of the perimeter fence;
- Full time startup since March 10, 2015, and operation and maintenance of the groundwater extraction and treatment system (GETS);
- Full time operation and maintenance (O & M) of the landfill gas collection and control system (GCCS); official startup of the O & M activities for the GCCS was on July 7, 2015.
- Grading the concrete crushing area in Cell 1 and establishment of a containment area for the staging of heavy equipment;
- Importing fill for liner grade and stockpile in Cell 4 at about 30,000 cubic yards;
- Repair of the protective covers in the storage yard as needs arise.

Staff is proposing to allocate \$4.8 million for the ongoing activities and non-recurring activities. The CRA will also need to pay an estimated premium of \$2.0 million for the \$100 million pollution liability insurance coverage for the upcoming year, and remit to the Department of Toxic Substance Control (DTSC) an estimated \$185,000 for regulatory oversight costs. The pollution liability policy must be renewed by September 29, 2016. The amount and term could be different from the current policy of \$100 million and ten years, at least during the construction period.

Based on new work orders from Tetra Tech, as well as new contracts being recommended by Staff for approval, the work of the CRA will also begin to focus on vetting development

plans, negotiating development agreements, and planning for the “master developer” activities for the site. These include:

- Design and permitting of the fill-in of “Lenardo Depression.”
- Revisiting overall landscaping and irrigation design
- Dry utilities (electricity, gas) design and permitting through utility companies
- Design of structural pile systems
- Design of final grading plan and geotechnical analysis
- Developing an overall liability policy for all insurance needs
- Design and cost analysis of on-site and off-site public improvements

The proposed budget for FY 2016/17 also factors in administration costs and the costs of services of environmental, project management, geotechnical, and other experts in remediation work. The remaining balance of the \$251,000 received from Carson Holdings, LLC are also budgeted to assist in the implementation of the alternative property development plan and its relationship to surrounding land uses and sites.

Exhibit No. 2 delineates the sources and uses of the projected available funds of the Carson Reclamation Authority for fiscal year 2016/17. It must be noted that the only source of revenues for the year is the investment earnings on the funds on hand and that is projected to be \$331,544. The proposed appropriation for expenditures is \$7,746,502. Based on those assumptions, the fund balance of the CRA is projected to be \$47,932,316 at the end of fiscal year 2016/17.

Once the new development plan for the site is firmed up, this spending plan will have to be revised to align with new cost of the design and construction activities at which time, staff will seek CRA Board approval.

V. FISCAL IMPACT

The FY 2016/17 proposed budget establishes the financing plan for the Authority and allows for the appropriation of the funds.

VI. EXHIBITS

1. Resolution No. 16-09-CRJPA pertaining to CRA budget adoption. (pgs. 5-6)
2. FY 2016/17 Proposed CRA Budget Details. (pgs. 7-9)

Prepared by: Trini H. Catbagan, Controller

RESOLUTION NO. 16-09-CRJPA

A RESOLUTION OF THE CARSON RECLAMATION JOINT POWERS AUTHORITY ADOPTING THE FISCAL YEAR 2016/17 BUDGET AND APPROVING APPROPRIATIONS FOR THE 2016/17 FISCAL YEAR.

WHEREAS, on January 20, 2015, the governing Boards of the Housing Authority and Carson Community Facilities Districts Nos. 2012-1 and 2012-2 ("CFDs") approved each Board's authority to enter into an agreement for the formation of this Carson Reclamation Joint Powers Authority (CRJPA) for the purpose of overseeing, and facilitating the remediation of contaminated properties in the City of Carson; this was achieved pursuant to the Joint Exercise of Powers Act, commencing with section 6500 *et seq.* of the Government Code; and

WHEREAS, the Carson Reclamation Joint Powers Authority will facilitate and fund the environmental study, investigation, remediation and reclamation of any and all contaminated properties in the City, or the acquisition and subsequent reclamation of contaminated properties. These powers include any improvements on property related to environmental clean-up and any negotiations or processing of property reclamation required in connection with the California Department of Toxic Substances Control ("DTSC") or any other State or Federal environmental agency. The Authority's powers may extend beyond mere property remediation to development planning and implementation; and

WHEREAS, the Joint Powers Agreement provides under Article II, Section 2.03, Subsection (a) that the representatives of the Carson Reclamation Joint Powers Authority Board shall adopt an annual budget for the ensuing fiscal year by approval of the representatives of not less than 2/3 of the Board; and

WHEREAS, the Executive Director has prepared and submitted to the Carson Reclamation Joint Powers Authority a proposed budget for Fiscal Year 2016/17; and

WHEREAS, the Carson Reclamation Joint Powers Authority has reviewed the proposed FY 2016/17 budget; and

WHEREAS, the Carson Reclamation Joint Powers Authority has determined that it is necessary for the efficient management of the Authority that certain sums be appropriated to the various activities of the Authority.

[MORE]

NOW, THEREFORE, THE CARSON RECLAMATION JOINT POWERS AUTHORITY DOES HEREBY RESOLVE, FIND, DETERMINE AND ORDER AS FOLLOWS:

Section 1. The budget for the Carson Reclamation Joint Powers Authority for the fiscal year beginning July 1, 2016 and ending June 30, 2017, is hereby adopted. Said budget being the proposed budget as reviewed and amended in open study session before the Carson Reclamation Joint Powers Authority, a copy of which is on file in the Authority Secretary's Office.

Section 2. The sums of money therein set forth are hereby appropriated to the respective accounts and funds for expenditure during Fiscal Year 2016/17 for each of the several items set forth in the proposed budget, as adopted.

Section 3. The sum of \$ 7,746,502 is hereby appropriated to the funds of the Carson Reclamation Joint Powers Authority for expenditure during Fiscal Year 2016/17.

Section 4. The Executive Director is hereby instructed to have copies hereof duplicated and distributed to all departments, officials and interested parties as soon as convenient.

Section 5. The Authority Secretary shall certify to the adoption of this resolution and shall keep a copy of this resolution attached to the budget for Fiscal Year 2016/17 on file and effective as of July 1, 2016, the same shall be in force and effect.

PASSED, APPROVED AND ADOPTED this 8th day of June, 2016.

Authority Chairman

ATTEST:

Authority Secretary

APPROVED AS TO FORM:

Authority Attorney

**CARSON RECLAMATION AUTHORITY
PROPOSED BUDGET
FISCAL YEAR 2016/17**

<u>DESCRIPTION</u>		ADOPTED BUDGET FY 2015/16	AMENDED BUDGET FY 2015/16	ACTUAL/EST Act Thru 4/2016 FY 2015/16	PROPOSED BUDGET FY 2016/17
PROJECTED REVENUES	Received				
Interest Income on Investments		\$ -	\$ 35,000	\$ 35,000	\$ 332,084
Section 1.5 of DTO - Alternative Use	5/21/2015	250,000	250,000	250,000	-
Section 3.3 of DTO - Consideration for Option	5/21/2015	1,000	1,000	1,000	-
Section 2 of DTO From teams for 3 months Carry Costs	6/2/2015	1,200,000	1,200,000	1,200,000	-
\$50.5 million from Bonds	8/24/2015	50,500,000	50,590,000	50,590,000	-
Proceeds from Sales of CSA Properties		-	6,665,151	6,665,151	-
Reimbursement of Cost of Bond Issuances		-	280,000	280,000	-
Reimbursement of Carry Cost		-	5,179,504	5,179,504	-
TOTAL PROJECTED REVENUES		\$ 51,951,000	\$ 64,200,655	\$ 64,200,655	\$ 332,084
ESTIMATED EXPENDITURES	Reference				
Project Management	CO 104/COR 200/WO 25	\$ 918,135	\$ 941,565	\$ 941,565	850,000
Site Security and Site Maintenance	CO 103/COR 203/WO 21	720,394	908,822	718,415	600,000
Annual Storage Yard Maintenance	CO 77/COR 205/WO 23	54,215	39,487	35,129	50,000
Quarterly Soil Gas Monitoring	CO 78/COR 206	82,500	45,557	45,557	60,000
Watering Prescriptive Clay Cover	CO 97/COR 204/WO 22	180,869	154,499	133,556	65,000
SWPPP (Stormwater Pollution Prevention Plan)	CO 105/COR 209/WO 27	992,284	1,093,836	989,868	800,000
Perimeter Air Monitoring	CO 101/COR 201/WO 19	640,121	554,502	552,740	475,000
Vector Control	CO 102/COR 202/WO 20	150,587	99,216	65,874	65,000
Break-in Repair and Related Costs Denied by Insurance	CPP 210	10,001	10,001	10,001	-
Miscellaneous	COR-TBD	107,350	34,283	-	-
Reclaimed Water Use for Dust Suppression	COR 213	-	21,477	21,456	20,000
CRA Support with AIG	COR 214/26	-	30,000	28,151	20,000
Concrete Crushing for SWPPP	COR 215/WO 15	-	173,011	173,011	100,000
Evaluate New Conceptual Mall Development Plan	COR 218/WO18	-	105,313	104,470	30,000
Import of Fill & Stockpiling	WO 16	-	330,062	263,547	750,000

**CARSON RECLAMATION AUTHORITY
PROPOSED BUDGET
FISCAL YEAR 2016/17**

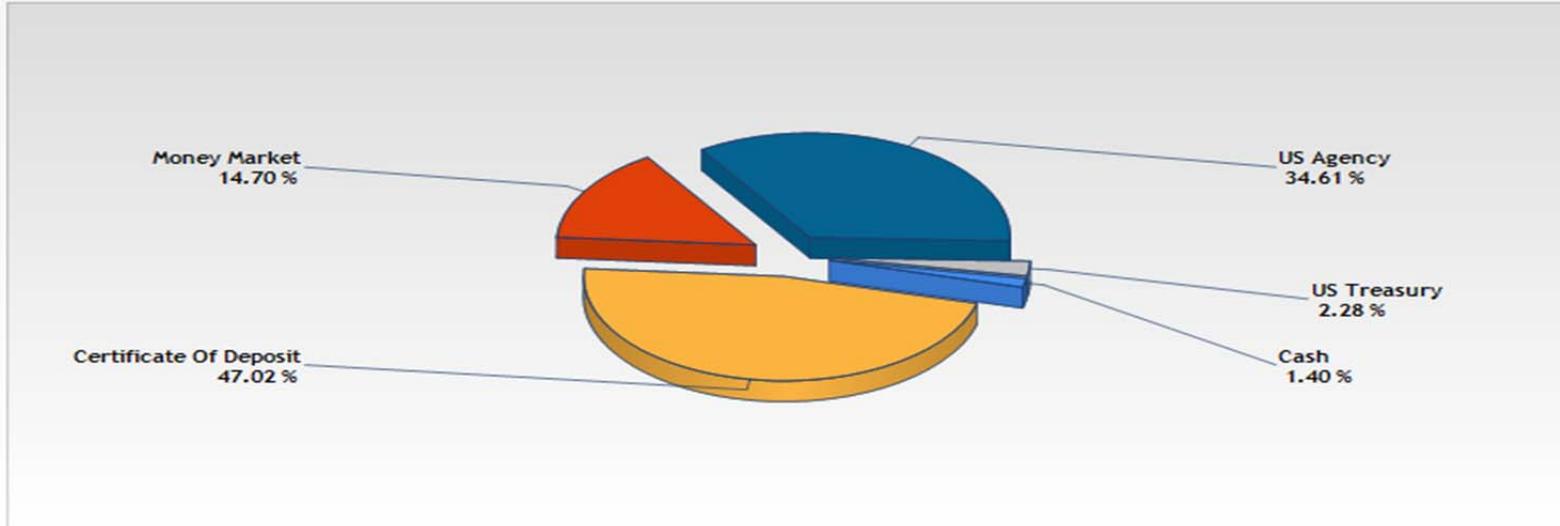
<u>DESCRIPTION</u>		ADOPTED BUDGET FY 2015/16	AMENDED BUDGET FY 2015/16	ACTUAL/EST Act Thru 4/2016 FY 2015/16	PROPOSED BUDGET FY 2016/17
Support and Coordinate Design for Lenardo Backfill	WO 28	-	104,396	22,320	75,000
Cost Estimate to Start LFG System per DTSC (April 2015)	COR 82	-	10,566	10,566	-
Redesign LFG System for Cells A3 and A5 (April 2015)	COR 83	-	41,342	41,342	-
Closure of Windows in the Liner and Waterproofing of Vaults	CO 107/COR 207	47,535	47,535	47,450	48,000
Construction Management for the LFG Collection System	COR 208	146,489	90,727	90,727	100,000
AQMD Alternative Compliance Plan For The LFGETS	CO 211	-	43,113	43,113	44,000
Interim Air Intrusion Controls	WO 17	-	53,455	18,038	40,000
LFG System O&M (Cells 3 & 5 Only)	COR 212/WO 24	650,000	640,724	652,185	600,000
Subtotal		\$ 4,700,480	\$ 5,573,488	\$ 5,009,080	\$ 4,792,000
Administration					
City Reimbursement/Staff		20,000	-	-	-
Deposit to the EAA Trust Account by 8/30/15 per LetterAgrmt		1,358,000	1,358,000	1,358,000	-
Reimbursement to Cardinal for Carry Costs (4/1/15-5/8/15)		524,600	-	-	-
Reimbursement to Cardinal for Carry Costs (5/9/15-8/15/15)		1,200,000	1,200,000	1,200,000	-
Payment to CPCFA for Event of Default		-	-	-	-
Administrative Reimbursement Agreement (Staff, Supplies)		-	100,000	98,592	100,000
Subtotal		\$ 3,102,600	\$ 2,658,000	\$ 2,656,592	\$ 100,000
Professional Services					
Civil Engineer (RBF-Baker)		70,000	160,000	38,000	-
Traffic Engineer		25,000	-	-	-
Project Management/KCF		100,000	22,500	25,145	45,000
Project Management/SEG		180,000	240,000	240,000	240,000
Environmental Review /SCS		300,000	300,000	200,870	180,000
PARLL Insurance Special Counsel-Greenberg Traurig		-	177,875	177,875	-
Geotechnical/Soil Engineer		20,000	-	-	25,000
Other Consultants		20,000	-	-	-
Department of Toxic Substance Control		-	182,114	178,805	185,000
Subtotal		\$ 715,000	\$ 1,082,489	\$ 860,695	\$ 675,000

**CARSON RECLAMATION AUTHORITY
PROPOSED BUDGET
FISCAL YEAR 2016/17**

<u>DESCRIPTION</u>	ADOPTED BUDGET FY 2015/16	AMENDED BUDGET FY 2015/16	ACTUAL/EST Act Thru 4/2016 FY 2015/16	PROPOSED BUDGET FY 2016/17
Other Costs				
Vasquez & Company/WNDE-Audit Services	-	6,500	6,500	11,980
JLT Specialty Insurance/Other Insurance	-	169,000	169,000	55,000
Pollution Liability Insurance	-	-	-	2,000,000
State Water Resource Board	-	5,113	5,113	5,500
Aqua Backflow & Chorination-Inspection	-	551	551	1,000
CDW Government-Printer	-	871	871	-
Subtotal	\$ -	\$ 182,035	\$ 182,034	\$ 2,073,480
Alternative Use-Plan C	\$ 251,000	\$ -	\$ -	\$ -
Placeworks	-	34,989	34,989	
Kosmont	-	34,989	34,989	
Retail Data Analysis	-	50,000	50,000	
Branding Research	-	25,000	25,000	
Dry Utility Consultant	-	-	-	25,000
AD Consultant	-	-	-	25,000
Landscape Architect	-	-	-	25,000
Other Consultants				31,022
Subtotal	\$ 251,000	\$ 144,978	\$ 144,978	\$ 106,022
TOTAL ESTIMATED EXPENDITURES	\$ 8,769,080	\$ 9,640,990	\$ 8,853,380	\$ 7,746,502
PROJECTED FUND BALANCE, BEGINNING	-		-	55,347,275
PROJECTED FUND BALANCE, ENDING	\$ 43,181,920	\$ 54,559,665	\$ 55,347,275	\$ 47,932,856

Carson Reclamation Authority Investment Portfolio as of May 31, 2016

Portfolio Holdings Distribution by Security Sector



Security Sector	Face Amount/Shares	% of Portfolio
Cash	611,308.09	1.40
Certificate Of Deposit	20,595,000.00	47.02
Money Market	6,436,827.53	14.70
US Agency	15,158,000.00	34.61
US Treasury	1,000,000.00	2.28
Total / Average	43,801,135.62	100



**City of Carson
Reclamation Authority Investment Report
As of May 31, 2016**

Description	Security Sector	CUSIP/Ticker	Face Amount/Shares	Cost Value	Market Value	Coupon Rate	YTM @ Cost	% of Portfolio
Beal Bank 0.65 12/7/2016	Certificate Of Deposit	07370WXH4	250,000.00	250,000.00	250,210.00	0.650	0.650	0.57
Berkshire Bank FDIC 0.6 12/23/2016	Certificate Of Deposit	084601FP3	200,000.00	200,000.00	200,120.00	0.600	0.600	0.46
BNY Cash Reserve Account Cash	Cash	MM9588	611,308.09	611,308.09	611,308.09	0.020	0.020	1.40
Cadence Bank NA Starkville MS Birmingham 0.55 7/29	Certificate Of Deposit	12738RCS1	250,000.00	250,000.00	250,077.50	0.550	0.550	0.57
Dallas Capital Bank National 0.5 10/17/2016	Certificate Of Deposit	234553AB1	245,000.00	245,000.00	245,075.95	0.500	0.500	0.56
East West Bank 1.1 4/4/2017	CD	0178863769	2,000,000.00	2,000,000.00	2,000,000.00	1.100	1.100	4.57



Description	Security Sector	CUSIP/Ticker	Face Amount/Shares	Cost Value	Market Value	Coupon Rate	YTM @ Cost	% of Portfolio
East/West Bank 1.1 4/14/2017	Certificate Of Deposit	0178333070	2,000,000.00	2,000,000.00	2,000,000.00	1.100	1.100	4.57
East/West Bank 1.1 4/14/2017	Certificate Of Deposit	0178738461	2,000,000.00	2,000,000.00	2,000,000.00	1.100	1.100	4.57
East/West Bank 1.1 5/25/2017	Certificate Of Deposit	178013804	1,000,000.00	1,000,000.00	1,000,000.00	1.100	1.100	2.28
East/West Bank 1.1 5/26/2017	Certificate Of Deposit	178835532	1,000,000.00	1,000,000.00	1,000,000.00	1.100	1.100	2.28
East/West Bank MM	Money Market	MM8114	2,926,079.78	2,926,079.78	2,926,079.78	0.350	0.350	6.68
FFCB 5.7 7/3/2017	US Agency	31331L3B2	193,000.00	204,584.52	203,283.04	5.700	0.603	0.44
FHLB 0.691 9/8/2017	US Agency	3133XMCL3	165,000.00	165,000.00	173,314.35	0.691	0.691	0.38
FHLB 0.71 3/28/2017	US Agency	3130A7LN3	300,000.00	300,016.24	300,084.00	0.710	0.654	0.68



Description	Security Sector	CUSIP/Ticker	Face Amount/Shares	Cost Value	Market Value	Coupon Rate	YTM @ Cost	% of Portfolio
FHLB 0.71 4/20/2017	US Agency	3130A7N350	1,000,000.00	1,000,000.00	999,630.00	0.710	0.710	2.28
FHLB 0.75 8/17/2017	US Agency	3130A62S5	1,000,000.00	999,960.00	999,280.00	0.750	0.753	2.28
FHLB 0.875 3/19/2018	US Agency	3130A7CX1	500,000.00	500,452.39	499,410.00	0.875	0.826	1.14
FHLB 0.9 1/26/2018	US Agency	3130A7SQ9	500,000.00	500,000.00	499,745.00	0.900	0.900	1.14
FHLB 1 6/21/2017	US Agency	313379DD8	500,000.00	502,666.50	500,980.00	1.000	0.533	1.14
FHLB 1.03 10/27/2018	US Agency	3130A7VL6	1,000,000.00	1,000,000.00	999,220.00	1.030	1.030	2.28
FHLB 1.12 12/6/2017	US Agency	3130A0F21A	500,000.00	500,497.15	501,610.00	1.120	1.057	1.14
FHLB 3.25 3/9/2018	US Agency	313372SN5	300,000.00	310,770.47	312,156.00	3.250	1.295	0.68
FHLMC 0.85 7/28/2017	US Agency	3134G8HW2(B)	1,000,000.00	1,000,000.00	998,450.00	0.850	0.850	2.28
FHLMC 0.875 10/27/2017	US Agency	3134GC9EA1	500,000.00	500,000.00	500,095.00	0.875	0.875	1.14
FHLMC 0.875 11/17/2017	US Agency	3134G9CG0	500,000.00	499,925.00	500,250.00	0.875	0.884	1.14



Description	Security Sector	CUSIP/Ticker	Face Amount/Shares	Cost Value	Market Value	Coupon Rate	YTM @ Cost	% of Portfolio
FHLMC 1 9/8/2017	US Agency	3134G7TB7	1,000,000.00	1,000,060.00	1,000,130.00	1.000	0.995	2.28
FHLMC 1.05 4/26/2018	US Agency	3134G9AF4	2,000,000.00	1,999,500.00	1,995,800.00	1.050	1.063	4.57
FHLMC 1.15 5/18/2018	US Agency	3134G9ES2	1,000,000.00	1,000,000.00	1,000,190.00	1.150	1.150	2.28
FHLMC 1.15 5/25/2018	US Agency	3134G6Y31	200,000.00	200,360.00	200,110.00	1.150	1.062	0.46
FHLMC 5.55 8/23/2017	US Agency	3137EAAY5	500,000.00	532,443.62	527,900.00	5.550	0.616	1.14
FHLMC Step 5/25/2021-16	US Agency	3134G9JP3A	1,000,000.00	1,000,000.00	998,130.00	1.000	2.330	2.28
Financing Corporation 9.8 11/30/2017	US Agency	317705AC5	500,000.00	570,625.00	565,940.00	9.800	2.532	1.14
FNMA 5 2/13/2017	US Agency	31359M4D2	1,000,000.00	1,036,570.51	1,029,820.00	5.000	0.386	2.28
GE Capital Retail Bank 1.85 4/27/2017	Certificate Of Deposit	36157QCJ4	250,000.00	250,000.00	251,890.00	1.850	1.850	0.57
Mizuho Bank 0.5 9/30/2016	CD	60688MSQ8	200,000.00	200,000.00	199,872.00	0.500	0.500	0.46



Description	Security Sector	CUSIP/Ticker	Face Amount/Shares	Cost Value	Market Value	Coupon Rate	YTM @ Cost	% of Portfolio
Preferred Bank 0.5 6/14/2016	Certificate Of Deposit	306223	1,000,000.00	1,000,000.00	1,000,000.00	0.500	0.500	2.28
Preferred Bank 0.5 6/14/2016	Certificate Of Deposit	306222	2,000,000.00	2,000,000.00	2,000,000.00	0.500	0.500	4.57
Preferred 0.75 9/14/2016	CD	306217	1,000,000.00	1,000,000.00	1,000,000.00	0.750	0.750	2.28
Preferred Bank 0.75 9/14/2016	Certificate Of Deposit	306221	1,000,000.00	1,000,000.00	1,000,000.00	0.750	0.750	2.28
Preferred Bank 0.75 9/14/2016	Certificate Of Deposit	306218	1,000,000.00	1,000,000.00	1,000,000.00	0.750	0.750	2.28
Preferred Bank 0.75 9/14/2016	Certificate Of Deposit	306220	1,000,000.00	1,000,000.00	1,000,000.00	0.750	0.750	2.28
Preferred Bank 0.75 9/14/2016	Certificate Of Deposit	306219	1,000,000.00	1,000,000.00	1,000,000.00	0.750	0.750	2.28
Preferred Bank 0.8 11/12/2016	Certificate Of Deposit	306202	1,000,000.00	1,000,000.00	1,000,000.00	0.800	0.800	2.28



Description	Security Sector	CUSIP/Ticker	Face Amount/Shares	Cost Value	Market Value	Coupon Rate	YTM @ Cost	% of Portfolio
Preferred Bank 0.8 11/12/2016	Certificate Of Deposit	306203	1,000,000.00	1,000,000.00	1,000,000.00	0.800	0.800	2.28
Preferred Bank 0.8 8/12/2016	Certificate Of Deposit	306170	1,000,000.00	1,000,000.00	1,000,000.00	0.800	0.800	2.28
Preferred Bank MM	M Market	MM2075	3,510,747.75	3,510,747.75	3,510,747.75	0.500	0.500	8.02
Santander Bank NA3/2/2017	CD	80280JLW9	200,000.00	200,000.00	200,281.20	0.750	0.750	0.46
T-Note 2.75 5/31/2017	US Treasury	912828NG1	1,000,000.00	1,024,690.62	1,019,730.00	2.750	1.095	2.28
Total / Average			43,801,135.62	43,991,257.64	43,970,919.66	1.141	0.846	100

Response to the CRA governing body in regard to the former City Treasurer's concerns regarding the investment portfolio discussed during May 2016 CRA monthly meeting.

1. **Issue:** Market Values are not being reported accurately
Response: The values reflected under "market value" are provided by both the Bank of New York- Investment Custodian and Issuer of the investment each month via valuation report. Some of the investment values fluctuate monthly while others remain the same through maturity. An example of securities that remain the same throughout the month are those from "Preferred Bank Certificate of Deposit (CD)" and "East West Bank Certificate of Deposit (CD)" An example of our most recent statement of investment values is reflected in (Exhibit 1).
2. **Issue:** Purchasing Certificates of Deposit (CD's) at the FDIC \$250K max is not a standard practice and by doing so jeopardize interest accruing should the bank fail. Additionally, the market value of the securities is at risk of loss should they exceed \$250K in value.
Response: There is no prohibition in the government code, Investment Policy or Bond Indenture regarding the purchase of CDs in the amount of \$250K FDIC limit. This practice is common among many Municipalities; two examples include the city of El Segundo and Inglewood (see Exhibit #2). All payments of interest due on CDs are sent to the city when due and are not added to the investment. There is no risk of loss should these securities increase in value in excess of the \$250K FDIC limit. The CRA is only entitled to the original amount invested (\$250K) should the bank fail, even if the value was higher at the time of a bank failure. The CRA is entitled to "market value" when an investment is sold before the maturity date.
3. **Issue:** Securities with a maturity date beyond 1 year is in violation of the CRA policy.
Response: The 1 year rule applies only to Certificates of Deposit (CDs) and all CDs are in compliance. The Bond Indenture is specific in this regard. The Investment policy was clarified to reflect the difference.
4. **Issue:** The "GE Capital" company was taken over by Savony and the name of the investment is now incorrect. Also the interest rate is incorrect because of the age of the investment
Response: According to the issuer of this investment the investment name has not changed nor has the company which issued it (GE Capital). GE Capital currently issues new securities using the GE Capital name. Additionally, the interest rate of 1.85% is the current rate for this investment as reflected by the issuer on the current investment statement (see Exhibit #1).
5. **Issue:** Investment Portfolio Rate of return is overstated
Response: Due to system upgrades with the investment portfolio software the "Coupon Rate" column (which are the actual interest rates being paid by the issuer) was labeled as the "YTM @Cost" column. To avoid any future confusion both the Coupon Rate and YTM @Cost will be included in the investment portfolio (see Investment Portfolio May 2015).

