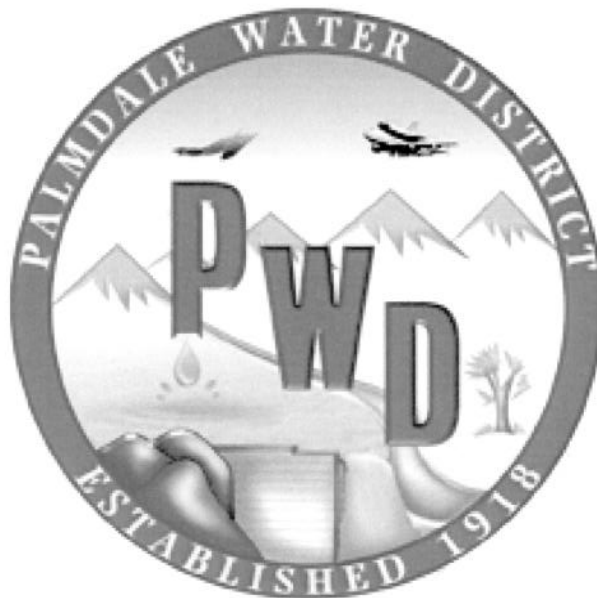


# **PALMDALE WATER DISTRICT**

## **STANDARD SPECIFICATIONS FOR WATER DISTRIBUTION SYSTEM CONSTRUCTION**



**JULY, 2008**

PALMDALE WATER DISTRICT  
2029 EAST AVENUE Q, PALMDALE, CA 93550  
661-947-4111  
[www.palmdalewater.org](http://www.palmdalewater.org)

## TABLE OF CONTENTS

	<u>PAGE NO.</u>
<u>SECTION 1 - GENERAL PROVISIONS</u>	
1-01 General	1-01
1-02 Supplementary Specifications	1-01
1-03 Definition of Terms	1-01, 1-02, 1-03, 1-04
1-04 Abbreviations	1-04
1-05 Inspection of Work	1-04, 1-05
1-06 Plans Submitted by Private Engineers	1-05, 1-06, 1-07
1-07 Easement Document Requirements	1-07, 1-08
1-08 Compliance with Laws and Regulations	1-08
1-09 Protection of Persons and Property	1-08, 1-09
1-10 Public Notice	1-09
1-11 Materials and Workmanship	1-10
1-12 Project Clean-up	1-11
1-13 Guarantee	1-11
1-14 Final Completion	1-11, 1-12
1-15 Equal Opportunity	1-12, 1-13
1-16 Trench Shoring and Sheet piling	1-13, 1-14
1-17 Preservation of Monuments	1-14
1-18 Dust Control	1-14
1-19 Sanitation	1-14
1-20 Shop Drawings	1-14, 1-15
1-21 Contract Bonds	1-15
<u>SECTION 2 - PIPELINE MATERIALS</u>	
2-01 General	2-01
2-02 Scope	2-01
2-03 Cement Mortar Lined and Coated Steel Pipe	2-01, 2-02
2-04 Ductile Iron Pipe	2-02, 2-03, 2-04
2-05 Polyvinyl Chloride (PVC) Pipe	2-04, 2-05, 2-06
<u>SECTION 3 - VALVES, FIRE HYDRANTS, AND APPURTENANCES</u>	
3-01 Gate Valves	3-01
3-02 Check Valves	3-01
3-03 Plug Valves	3-01, 3-02
3-04 Butterfly Valves	3-02
3-05 Combination Air and Vacuum Valve Assemblies and Blow-off Assemblies	3-02, 3-03
3-06 Fire Hydrant Assemblies	3-03, 3-04
3-07 Location of Appurtenances	3-04
3-08 Valve Boxes and Covers	3-04, 3-05, 3-06

## TABLE OF CONTENTS

	<u>PAGE NO.</u>
<u>SECTION 3 (continued):</u>	
3-09 Flexible Couplings	3-05
3-10 Compound Meters	3-05
3-11 Flange Insulation Kits	3-06
 <u>SECTION 4 - PIPELINE INSTALLATION</u>	
4-01 Scope	4-01
4-02 Shop Drawings	4-01
4-03 Control of Water	4-01
4-04 Excavation	4-01, 4-02
4-05 Location of Existing Facilities	4-02
4-06 Depth of Pipe	4-02
4-07 Changes in Line and Grade	4-02
4-08 Handling and Storing Materials	4-02, 4-03
4-09 Installing Pipe	4-03, 4-04, 4-05
4-10 Foundation Rock	4-06
4-11 Protective Coatings	4-06
4-12 Shop Painting	4-06
4-13 Anchor and Thrust Blocks	4-06
4-14 Hydrostatic Tests	4-06, 4-07, 4-08
4-15 Disinfection of Water Mains and Services	4-08, 4-09
4-16 Water	4-09
4-17 Excavation of Pipeline Trench	4-09, 4-10
4-18 Valves	4-10
4-19 Fire Hydrants	4-10, 4-11
4-20 Connections to Existing Water Lines	4-11
4-21 Hot Tapping of Existing Water Lines	4-11, 4-12
 <u>SECTION 5 - SERVICE LINES</u>	
5-01 Location of Service Lines	5-01, 5-02
5-02 Corporation Stops and Angle Stops	5-02
5-03 Copper Tubing	5-02
5-04 Fittings	5-02
5-05 Connections to Asbestos-Cement Mains	5-02
5-06 Connections to Cement Mortar Lined and Coated Steel Mains	5-02
5-07 Connections to Polyvinyl Chloride (PVC)	5-03
5-08 Connections to Ductile Iron Mains	5-03
5-09 Water Meters	5-03

## TABLE OF CONTENTS

	<u>PAGE NO.</u>
<u>SECTION 5 (continued):</u>	
5-10 Pressure Regulators	5-03
5-11 Cross Connection Protection	5-03
 <u>STANDARD DRAWINGS</u>	
Typical Service Connection (3/4" and 1")	W-1
Typical Service Connection (1-1/2" and 2")	W-1A
6 x 4 x 2-1/2 Fire Hydrant (for Steel and AC Pipe)	W-2
6 x 4 x 2-1/2 Fire Hydrant (for Ductile Iron Pipe or PVC C-900 Pipe)	W-2A
Parallel Fire Hydrant (for Steel and AC Pipe)	W-3
Parallel Fire Hydrant (for Ductile Iron Pipe or PVC C-900 Pipe)	W-3A
Concrete Thrust Blocks and Anchor Rods	W-4
Typical Valve Box Installation (Improved or Unimproved Roads)	W-5
2" Temporary Blow-Off Assembly (Behind Curb in Parkway)	W-6
2" Temporary Blow-Off Assembly (In the Street)	W-6A
4" Blow-Off Assembly	W-7
Installation of Identification Wire (P.V.C. C-900 Pipe)	W-8
Typical Rubber Gasket Joint and Lap-Welded Slip Joint, for Steel Pipe	W-9
Criteria for the Separation of Water Main and Sanitary Sewers	W-10
Sump Detail for Meter Vaults (to be Located per Approved Plan)	W-12
Typical Barricades Detail	W-14
Typical Temporary Barricades Detail for Fire Hydrants	W-15
Typical 1" Through 2" Combination Air and Vacuum and Release Valve	W-16
Bacteriological Test Station (Test Station Behind Sidewalk)	W-17
Bacteriological Test Station (Test Station for No Sidewalk or Sidewalk Wider than 5')	W-17A
Standard Tee Restraint (for PVC-C900 Pipe)	W-18
Standard Bend Restraint (for PVC-C900 Pipe)	W-19
Standard Dead End Restraint (for PVC C-900 Pipe)	W-20
Standard Tee Restraint (for Ductile Iron Pipe)	W-21
Standard Bend Restraint (for Ductile Iron Pipe)	W-22
Standard Dead End Restraint (for Ductile Iron Pipe)	W-23
Reduced Pressure Detector Assembly	W-24
Typical C.P. Test Station	W-25

## SECTION 1

### GENERAL PROVISIONS

#### 1-01 General.

These specifications are to be used to establish standards of work, materials, and construction procedures for improvements to the water system of the Palmdale Water District. These specifications are intended to establish general requirements and technical standards for all pipeline work within the District. Interpretation, if any, is subject to District discretion.

#### 1-02. Supplementary Specifications.

Wherever reference is made within these documents to certain standard specifications, the reference shall be construed to mean the standards, with all subsequent amendments, changes, or additions as thereafter adopted and published that are in effect at the date of approval of the plans and specifications. Standard specifications and documents referenced herein and their abbreviations include, without limitation, the following:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AI	The Asphalt Institute
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute (formerly USASI, USAS, ASA)
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
MIL	Military Specification (leading symbol)
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration, U.S. Dept. of Labor
SSPC	Steel Structures Painting Council State
Spec.	California Standard Specifications, Department of Transportation, Division of Highways
UL	Underwriters' Laboratories, Inc.

#### 1-03. Definition of Terms.

Whenever in these specifications or other documents where these specifications govern and the following terms are used, they shall be defined as follows:

a) Acceptance.

Shall mean that the water system has received final completion as defined herein, the one (1) year guarantee period has passed, and all repairs necessary during the one (1) year guarantee period have been made to the satisfaction of the District.

b) Agreement.

The written Agreement between the District and the Applicant providing for the construction of the improvement by the Applicant or his Contractor.

c) Applicant.

Shall mean any property owner, firm, or corporation who makes application for District service or enters into an Agreement with the District.

d) Board.

The Board of Directors of the Palmdale Water District.

e) Contract.

A written Agreement executed by and between the Applicant and the Contractor covering the performance of the work.

f) Contractor.

The individual, partnership, association, corporation, entity (public or private), or combination thereof, who has entered into a Contract with the Applicant or into a Public Contract with the District for performance of the work pursuant to these specifications. Except as to Public Contracts, wherever reference is made to Contractor in the Specifications, such reference shall include the Contractor in his own capacity and in his capacity as authorized agent and representative of the Applicant. Accordingly, where the Specifications require the Contractor to perform certain acts, or hold the Contractor responsible for certain costs, expenses or liabilities, or the like, such requirements and responsibilities shall be equally applicable to and binding upon the Applicant.

g) District.

The Palmdale Water District.

h) Engineer.

A registered civil engineer appointed by the District acting either directly or through his properly authorized agent, engineers, assistants, inspectors, and superintendents, unless otherwise qualified.

- q) Public Contract Work.  
Work done pursuant to a Contract between the Contractor and the District.
- r) Private Engineer.  
A registered civil engineer employed by the Applicant.
- s) Approved, Directed, Satisfactory, Proper, Acceptable, Required, Necessary, and Or Equal.  
Shall be defined as considered approved, directed, satisfactory, proper, acceptable, required, necessary, or equal in the opinion of the District.

1-04. Abbreviations.

The abbreviations used in the plans and specifications are abbreviations the meanings of which are established by general usage through the industry and those defined in subsection 1-02 herein.

1-05. Inspection of Work.

The District will provide inspection for all work. The inspection fee will be determined in accordance with the "Palmdale Water District Rules and Regulations" and must be paid to the District before beginning construction activity.

Prior to beginning any construction operations, the developer shall give the District at least forty-eight (48) hours advance written notice of the name and contractor's license number of the contractor who will perform the work and a written request for a pre-job meeting with the location for same to be determined by District staff. The contractor shall notify the District's Engineering Manager forty-eight (48) hours in advance of any work to be done in order that inspection services may be provided.

All work shall be performed only with the approval of the District's authorized representative, and any work done in the absence of said District's authorized representative shall be subject to rejection. The Contractor shall give sufficient notice to the District's authorized representative in advance of backfilling or otherwise covering any part of the work so that the District's authorized representative may, if he wishes, observe such part of the work before it is concealed.

District inspection is available between 7:00 a.m. and 4:30 p.m., Monday through Friday, except District holidays. If the Contractor wishes to work on holidays, weekends, or at other hours than stated in this paragraph, the Developer shall submit a written request for said hours at least forty-eight (48) hours in advance and shall obtain the written permission of the District's Engineering Manager. The Developer shall bear the full cost of approved inspection outside of normal District working hours. Said costs will be billed to the developer and must be paid to the District on a monthly basis.



i) Final Completion.

Shall mean the water system is complete and active, street improvements are complete and required title insurance policies for easements, if any, are provided. The date of final completion shall initiate the beginning of the one-year guarantee period. See Section 1-14 for other requirements.

j) Fire System Activation Letter.

The letter informing Los Angeles County Fire Department that the water system and fire hydrants are available for protection. Two sets of as-built drawings must be submitted, easement documents must be recorded, and title insurance policies to said easements provided prior to issuance of letter. Also, pipe identification wires and compound meters shall be tested if included in the project.

k) Inspector - Owner's Representative.

The personal representative of the District acting through the District Engineer and/or District Manager.

l) Plans.

The official scale and full size approved detail drawings, or exact reproductions thereof, which show location, character, dimensions, elevations, and details of the work.

m) Specifications.

The STANDARD SPECIFICATIONS FOR WATER DISTRIBUTION SYSTEM CONSTRUCTION of the Palmdale Water District. Should job-specific specifications, approved by the District, conflict with these Specifications, the job-specific specifications shall govern.

n) Standard Drawings.

The Standard Drawings, a part of the STANDARD SPECIFICATIONS FOR WATER DISTRIBUTION SYSTEM CONSTRUCTION of the Palmdale Water District, unless otherwise qualified.

o) Work.

All labor, materials, equipment, transportation, supervision, or other facilities necessary to complete the improvement provided for in the Agreement of Public Contract.

p) Private Contract Work.

Work done pursuant to a Contract between the Contractor and the Applicant.



Inspection by the District will not in any way reduce the Developer's or Contractor's responsibility for the work.

All costs for re-testing and re-inspection which are necessitated by defective materials and/or workmanship shall be at the sole expense of the Contractor and or Applicant.

1-06. Plans Submitted by Private Engineers.

First submittal of water improvement plans shall include a letter for District file and record purposes which transmits the following described documents, drawings, and material:

- a) A Conceptual Plan showing how the project will be served;
- b) One (1) print of an approved tentative map;
- c) One (1) copy of the conditions of approval of said tentative tract map;
- d) Full name, address, and telephone number of the developer;
- e) Name, address, and telephone number of the tract engineer of record and the name of the project engineer representing the firm on the subject project;
- f) Two (2) prints of the tentative map on which the approved, preliminary water system, including required connections to sources of supply, are legibly shown;
- g) A plan check fee determined in accordance with the "Palmdale Water District Rules and Regulations";
- h) Copies of any other maps, plans, surveys, fire department requirements, improvements, and etc. that will help expedite the preliminary plan check and which will be required by Palmdale Water District prior to approving plans.

A complete set of plans shall include the following:

- 1) A cover sheet containing the following:
  - a) Benchmark;
  - b) General Notes;
  - c) One (1) inch equals Two-hundred (200) feet map showing lot lines, lot numbers, existing and proposed water mains, water main sizes, valves, fire hydrant locations, sheet numbers, and easements;
  - d) Vicinity Map;
  - e) List of Materials;
  - f) Name, address, and telephone number of Engineer and Developer; and
  - g) Approval and revision blocks.

- 2) Plan and profile sheets containing, but not limited to, the following:
- a) Horizontal scale of one (1) inch equals forty (40) feet;
  - b) Vertical scale of one (1) inch equals four (4) feet;
  - c) Locations of all existing utilities;
  - d) Existing and future surface profiles;
  - e) Approval and revision blocks;
  - f) North arrow;
  - g) Curb, gutter, and sidewalk;
  - h) Property lines, lot lines, and tract boundaries;
  - i) Complete dimensioning for entire right-of-way of subject street and adjoining streets;
  - j) Stationing, where applicable, relative to street centerline as shown on the corresponding street improvement plans for the project;
  - k) All proposed valves, fittings, and appurtenances;
  - l) Profile view showing all sewer and utility crossings, the proposed water main, valves, fittings, air/vacs, and transitions;
  - m) Details for transitions including all stationing, and elevations necessary to define pipe alignment and separation from other utilities or improvements;
  - n) Label and dimensioning for proposed water main.

District design criteria for new water system improvements include the following:

- 1) Water mains shall be ten (10) feet from curb of face, five (5) feet horizontal, and one (1) foot vertical separation from other utilities. For sewer, see Sheet W-10;
- 2) Project shall have two (2) points of connection/sources of supply;
- 3) All water mains must loop (no dead ends);
- 4) Valves shall be located at right-of-way and property line prolongations;
- 5) All easement lines shall be valved at both ends, have no service connections, and must be ductile iron pipe;
- 6) High points shall have air/vacuum release valves;
- 7) No fittings closer than six (6) feet from curb face;
- 8) All systems will require retaining glands with mechanical joints;
- 9) Fire hydrants to be located on the same side of the street as the main wherever possible. Blue dots to be placed six (6) inches from centerline toward fire hydrant.

Plans for private contract work shall be checked by the District and shall be approved by the District prior to starting work.

Plans submitted to the District for approval shall have thereon the name and registration number of the private engineer who prepared the plans or the name of the engineering firm and the name and registration number of the private engineer under whose direction the plans were prepared. Such plans shall be free of advertising, insignia, labels, emblems, seals, or other markings not relevant to the work. Plans are to be presented in a neat, concise, and professional condition.

Upon the approval of the plans, the original tracings and a predetermined number of sets of the plans must be returned to the District. Approval of plans by the District will not relieve the Applicant or private engineer of any responsibility because of errors in the plans either by commission or omission. Such errors, when brought to the attention of the private engineer by the District, shall be promptly remedied as herein provided.

After plans have been approved and filed, changes may be made in the plans only upon approval of the District. In order to obtain such approval, the private engineer shall first submit two sets of prints showing the proposed changes. After approval of changes, four prints of the approved revised plans shall be submitted to the District.

If construction operations are not started within twelve (12) months of the date of approval, the plans must be re-submitted for plan check prior to construction. The re-submitted plans will be checked for conformance with the criteria current at the time of re-submittal. The cost of rechecking plans will be paid by the developer as determined above.

The private engineer shall prepare "RECORD DRAWINGS" on prints of the latest revised plans showing clearly all changes in location and elevation of constructed improvement prior to the project being considered complete. These drawings shall show the configuration, manufacturer, and date of manufacture of all valves.

The private engineer shall submit the "RECORD DRAWINGS" to the District Manager for final inspection and approval. Upon receipt of such approval, the private engineer shall correct and deliver the "as-built" original tracings to the District's Engineering Manager not later than thirty (30) days after receipt of such approval.

1-07. Easement Document Requirements.

All easement documents are to be prepared and submitted on the District's approved format and provided along with plans submitted for plan check review.

Prior to the approval of water system plans, the easement documents must be approved as to form.

Grant deeds for easements are required to be executed by the grantor, re-submitted to the District, and have the Affidavit of Acceptance by the District attached to same prior to the tie-in of the water system.

All required easements will be recorded and a Title Insurance Policy for same in the minimum amount of \$25,000.00 provided to the District prior to issuance of the Fire System Activation Letter.

1-08. Compliance with Laws and Regulations.

The Contractor shall keep himself informed of all laws, ordinances, and regulations in any manner affecting those employed on the work, or the materials used in the work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. He shall at all times and at no expense to the District observe and comply with, and shall require all his agents, employees, contractors, and subcontractors to observe and comply with all such applicable laws, ordinances, regulations, orders, and decrees in effect or which may become effective before completion of the work.

Unless otherwise explicitly provided in these specifications, all permits and licenses required by other agencies necessary to the prosecution of the work shall be secured by the contractor.

1-09. Protection of Persons and Property.

The Contractor shall provide for the protection of all persons and property as herein specified. Attention is called to "General Industry Safety Orders" and "Construction Safety Orders" of the California State Department of Industrial Relations, Division of Industrial Safety, to which the Contractor is required by law to conform. He shall provide himself with copies of these rules and orders. To the extent applicable, the Contractor shall also comply with the provisions of the Safety and Health Regulations for construction promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and Safety Standards Act, as set forth in Title 29 C.F.R.

The Contractor shall take all necessary measures to protect the work and prevent accidents during the construction. He shall provide and maintain sufficient night lights, barricades, guards, temporary sidewalks, temporary bridges, danger signals, watchmen, and necessary appliances and safeguards to properly safeguard life and property. He shall also protect all excavations, equipment, and materials with barricades and danger signals so that the public will not be endangered.

The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to traffic, and he shall have under construction no greater amount of work than he can handle properly with due regard for the rights of the public. All traffic shall be permitted to pass through the work with as little delay and inconvenience as possible unless otherwise authorized by the County of Los Angeles, the City of Palmdale or Caltrans.

Convenience of abutting property owners shall be provided for as far as practicable. Convenient access to mailboxes, driveways, houses, and buildings adjoining the work, as well as fire hydrants, shall be maintained and temporary approaches to intersections shall be provided and kept in good condition. When a section of surfacing, pavement, or a structure has been completed, it shall be opened for use by traffic at the request of the District. In order that unnecessary delay to the traveling public may be avoided, the Contractor, when so ordered, shall provide competent flagmen whose sole duty shall consist of directing traffic either through or around the work.

Care should be taken to preserve and protect all public and private property and facilities in and around the work site. The Contractor shall be liable for the complete cost of repairing or replacing all such property and facilities damaged or destroyed during the progress of the work.

No valve or other control on the existing system shall be operated for any purpose by the Contractor unless said operation is under the direct supervision of District personnel. Any operation of District facilities without direct supervision of District personnel will be cause for the District to stop work on the project and will result in the issuance of an unauthorized use of water fine to the Contractor or Developer responsible. Any damage resulting from said operation will be repaired at the Contractor's expense. Otherwise the District will operate all valves, hydrants, blow-offs, and curb-stops on the existing system. The District Inspector and Facilities Manager shall be notified 48 hours prior to the construction of tie-ins to existing lines.

1-10. Public Notice.

a) Notice of Starting Work:

The Contractor shall provide and distribute to all occupants along the streets of the proposed work, printed notices 8-1/2 inches x 11 inches in size, with wording similar to that showing on the following page.

b) Notice of Temporary Shutdown:

Notice shall be given for temporary interruption of service to existing customers no later than twenty-four (24) hours prior to said interruption. Said note to be printed on 8-1/2 inches x 11 inches paper in a format to be approved by the District prior to distribution.

## NOTICE

WITHIN THE NEXT FEW DAYS, WORK WILL BE STARTED ON THE INSTALLATION OF A WATER SYSTEM IN YOUR STREET.

The work may cause some inconvenience but will be of permanent benefit.

We shall appreciate your cooperation in the following matters:

- 1) Please be alert when driving or walking in the construction area.
- 2) Tools, materials, and equipment are attractive to children. For the safety of children, please keep them away.
- 3) Please report all inconvenience to the Foreman on the job, or call the office at the number given below.

The work is being performed by:

(Insert firm name, superintendent's name, address, and telephone number in this space.)

We will endeavor to complete this work as rapidly as possible and with a minimum of inconvenience to you.

---

(signed) Name of Firm



1-11. Materials and Workmanship.

Unless otherwise specified, all materials incorporated in the work shall be new. Materials not otherwise designated by detailed specifications shall be of the best commercial quality, suitable for the purpose intended and approved by the District.

All workmanship shall be in conformance with the best trade practices. Particular attention shall be given to the appearance of exposed work. Any work or workmanship not conforming to the best practices shall be subject to rejection.

The District practices zero tolerance for graffiti, and it is the Contractor's responsibility to protect and maintain facilities are graffiti-free until acceptance.

1-12. Project Clean-Up.

An orderly job shall be maintained at all times. Tools, rubbish, and materials shall be picked up and stored in a workmanlike manner at all times. There shall be removed from the vicinity of the completed work all material, etc., used during construction. Surfaces shall be returned to a condition acceptable to the District. All excess material shall be disposed of as directed by the District or removed from the work site.

1-13. Guarantee.

All parts of the work shall be guaranteed against defective materials or workmanship and against settlement of backfill and any resulting damage to resurfacing for a period of one year from the date of final completion of the work.

The expiration of the one (1) year guarantee period does not limit the developer's liability for work which is done contrary to the plans and specifications. Any Performance Bond provided in accordance with Subsection 1-21 of these Specifications shall remain in full force and effect for the guarantee period.

When such defect or settlement is discovered requiring repairs to be made under this guarantee, all such repair work shall be done at no expense to the District within ten (10) days after written notice has been given by the District. Should the Contractor or Applicant fail to repair the work as directed within ten (10) days thereafter, the District may make the necessary repairs and charge the Developer or Applicant with the actual cost of all labor and materials required.

In the event such defect or settlement is discovered requiring immediate corrective action to be taken in the opinion of the District Manager, the District shall have the right to repair or replace same and to take whatever other action the District deems appropriate to correct same and to charge the Developer with the actual cost incurred by the District.

1-14. Final Completion.

As a necessary condition to, and prior to District recognition of final completion of the work, the Applicant shall submit in duplicate to the District:



- a) An itemized cost breakdown of the work including cost per foot, and total footage installed, for each size and type of pipe installed; cost per each and total number of fire hydrants installed; and cost per each and total number installed for each size of service lateral and meter installed.
- b) A bill of sale conveying, at no cost, to the District all facilities installed.
- c) All easement documents recorded and title insurance policies issued.
- d) A letter requesting a final walk-through or punch list and the completion of all items on said punch list.

1-15. Equal Opportunity.

During the performance of the public contract, the Contractor agrees as follows:

The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated, during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of any or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in a conspicuous place available to employees and applicants for employment, notices setting forth the provisions of this Equal Opportunity clause.

The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

The Contractor shall send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice advising the said labor union or worker's representative of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

When applicable to the project, the Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor.

- a) The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965 and by the rules,

regulations, and orders of the Secretary of Labor or pursuant thereto and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

b) In the event of the Contractor's noncompliance with the Equal Opportunity clause of this Section or with any of the said rules, regulations, or orders, the Contract may be canceled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further Government federally assisted construction contracts in accordance with procedure authorized in Executive Order No. 11246 of September 24, 1965 or by rule, regulation, or order of the Secretary of Labor, or as provided by law.

c) The Contractor will include this Equal Opportunity clause in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965 so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The Equal Opportunity requirements of Executive Order No. 11246 are not applicable to Federally assisted contracts:

- 1) Which do not exceed ten-thousand dollars (\$10,000);
- 2) Where work is to be performed entirely outside the United States and no recruitment of workers within the United States is involved; or
- 3) Which are specifically exempt by the Secretary of Labor.

1-16. Trench Shoring and Sheeting.

In the event the work will entail construction of any trench or trenches or excavation or excavations which will be five (5) feet or deeper and into which a person will be required to descend, prior to commencing such construction, the Contractor shall obtain a permit from the California Division of Industrial Safety pursuant to Section 6501 of the California Labor Code. Said permit shall be posted at the job site prior to opening of the excavation. A copy of said permit shall be provided to the District prior to the start of construction or excavation requiring same.

In addition, and with respect to Public Contract work involving a Public contract price in excess of twenty-five thousand dollars (\$25,000.00), if any such trenches or excavations will be entailed in the work, prior to commencing such construction, the Contractor shall also submit to the District for District approval a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. If such plan varies from the shoring system standards established in Title 8, Article 6, California Division of Industrial Safety Orders, the plan shall be prepared at Contractor's expense by a registered civil or structural engineer.

1-17. Preservation of Monuments.

All historical monuments, bench marks, survey marks, and stakes shall be preserved. If such monuments are damaged or destroyed during construction, they shall be repaired or replaced at no expense to the District.

1-18. Dust Control.

The work shall be conducted to provide control as follows:

a) No fuel shall be used nor shall any work be conducted which shall emit into the atmosphere any smoke, which is defined as equal to Ringelmann No. 2, or darker.

b) No work shall be conducted which will emit into the atmosphere any flying dust or dirt which is hazardous to humans or which might constitute a nuisance. Any dirt, dust, or mud that accumulates on streets is to be removed by the end of each work day.

1-19. Sanitation.

Temporary chemical toilet facilities shall be provided for the use of all workmen. Each toilet building shall be maintained in a sanitary condition at all times, and at the completion of the construction, shall be removed from the site. Pit-type privies shall not be used.

Pure, cool drinking water with individual drinking cups or a sanitary bubbler fountain shall be available at all times.

1-20. Shop Drawings.

The Contractor shall submit to the District four (4) copies of any shop and erection drawings required by the plans or specifications. The District will, within fifteen (15) days, return two copies to the Contractor marked "Disapproved", "Approved", or "Approved as Revised". In the last case, all revisions will be clearly shown on the returned copy, which shall be considered as an approved drawing, and only drawings or prints which are approved shall be used for manufacture.

Revisions shown on the shop drawings shall be considered as changes necessary to meet the requirements of the plans and specifications and shall not be taken as the basis of claims for extra charges. When delay is caused by the re-submission of shop drawings, Contractor shall not be entitled to any damages or extension of time on account of such delay. The corrections on prints marked "Approved as Revised" shall be made on the originals as soon as practicable and new prints submitted. District's approval shall be considered as applying only to the general arrangement, and such approval of the criticism of detail shall not relieve the Contractor from entire responsibility for correctness of details and dimensions. Contractor shall correct any misfits due to any errors in the drawings. Any fabrication or other work performed in advance of the receipt of approved shop drawings shall be done entirely at the Contractor's expense.

1-21. Contract Bonds.

a) Public Contracts. Simultaneously with the execution of the Agreement, the Applicant shall furnish to the District a bond insuring performance of and full payment for, the work pursuant to the Agreement, Contract, and Specifications in an amount equal to one hundred percent (100%) of the contract price and insuring performance of the guarantee set forth in Subsection 1-12 of the Specifications in an amount equal to fifty percent (50%) of the contract price. The bond shall be issued by a surety acceptable to the District and shall be released as to insuring such performance and payment of the work immediately upon acceptance of the work by the District and shall be released as to insuring such performance of the guarantee one (1) year after the District's acceptance of the work.

b) Other Contracts. The Contractor shall furnish to the County of Los Angeles or to the City of Palmdale any bonds specified in the approval document for the improvements issued by the applicable jurisdiction.

The District shall notify the appropriate agency upon final completion of the work to allow the agency to release construction bonds held to the extent the agency's policy dictates.

