

NEVADA IRRIGATION DISTRICT
STANDARD SPECIFICATIONS
FOR
TREATED WATER SYSTEM

Preface

The Developer must comply with the District's "Regulations Relating to Water Service" and the "Development Standards for Treated Water System". Those Standards include Developer Requirements and these Standard Specifications.

The Developer is responsible for preparation of the plans and specifications, to which these Standards must be added. These Standards contain only Special Conditions and Technical Provisions to cover most system extensions. The Developer is also responsible for preparation of the remaining contract documents such as Bid Forms and General Conditions and any Special Conditions or Technical Provisions required for the project that are not included in these Standards.

These Standard Specifications are for use by Developers and their Engineers for expansion of the District's treated water system and may not be put to private use without prior written approval.

These Standard Specifications may not be altered, qualified, or superseded without prior written approval.

The Developer is responsible for overseeing and directing the Developer's engineer and contractor. The Developer shall not rely upon the District or its employees to act as an agent or protectorate of the Developer.

NOTE

The Specifications begin with Section 10. Sections 1 through 9 have been left blank intentionally. Other sections have been left blank to allow for development of additional standards.

Appendix C to these Standards contains a cover memorandum for each section outlining the revisions over the Standards adopted in 1994.

These Specifications do not include a section for clearing and grubbing. Minimum provisions governing this work are contained in the Developer Requirements. It remains the responsibility of the Developer and his engineer to include provisions for clearing and grubbing.

SECTION 10

SPECIAL CONDITIONS FOR DEVELOPER

Preface

These Special Conditions contain the minimum District requirements necessary to govern the activities of the Developer's contractor while performing work on any facilities covered by a Conveyance Agreement.

The Developer, through the project engineer, is responsible for adding any provisions necessary to tailor the Special Conditions to a specific project.

10-1 General

These Special Conditions supplement the requirements contained in the Technical Provisions of these Specifications and shall be deemed as a part of the Specifications. These Special Conditions shall govern over the General Conditions and the drawings.

10-2 Control of Work

10-2.01 Permits, Agreements, and Licenses

The Contractor shall comply with all the requirements of the permits, agreements, and licenses including, but not limited to, encroachment permits, stream alteration agreements, and timber harvest plans.

10-2.02 Construction Staking

The Developer, his engineer, or Contractor will establish on the ground, pipe centerline by staking angle points, beginning of curves, ends of curves, and at approximately 50-foot intervals in remaining areas. In addition, pipeline invert elevation cut stakes will be established at the same intervals in those areas shown on the plans as requiring vertical control in accordance with the Vertical Alignment as specified for Water Mains elsewhere in these specifications. In addition to pipe centerline stakes, construction staking for lines and grades of other facilities will be provided and shall be used and adhered to by the Contractor.

10-2.03 Use of Water from District System

If District water is required for construction purposes, the Contractor shall make application for Tank Water at the District's Main Office in Grass Valley and shall comply with all rules and regulations governing such service.

The District reserves the right to temporarily discontinue the drafting of construction water at a given location at any time. No compensation will be due the Contractor for costs incurred from such discontinuance.

The Contractor shall make all arrangements and supply all pumps, hoses, fittings, or other related items for drawing water and/or conveying water for construction or testing purposes.

10-2.04 Inclement Weather Shutdown

In the event the Contractor is ordered, either by the County under the requirements of the Encroachment Permit, or by the District Engineer, to suspend work due to inclement weather, the Contractor shall secure all areas of operation in a manner so as to facilitate public convenience, eliminate public safety hazards, and so as not to allow, cause, or create substantial erosion or loss of silt, mud, or rocks from the work areas. Such measures shall be maintained until no longer required.

10-3 Control of Materials

10-3.01 Materials Furnished by District

There are no materials to be furnished by the District.

10-3.02 Pipeline Material

Two types of pipeline material are acceptable for water mains 4" and larger: Ductile Iron (DIP) and Polyvinyl Chloride (PVC). Water mains 2" in size will not normally be allowed. The type of pipeline material, size, class, rating, and schedule allowed shall be as shown on the plans. The type of pipeline material specified on the plans shall be used throughout the work.

The pipe materials used for assembling other appurtenances such as air release valves, blowoff valves, services, and pressure reducing and pump stations, shall be as shown on the plans and as designated elsewhere in these Specifications.

10-3.03 Polyethylene Encasement for Ductile Iron Pipe

Ductile iron pipe shall be furnished with an 8-mil polyethylene encasement, all as described for Water Mains elsewhere in these specifications, and conforming to AWWA C105, unless non-corrosive soils are found from the tests and observations described in AWWA C105 Appendix A. The tests and observations shall be made by certified soils testing laboratory or by the Ductile Iron Pipe Research Association, and a report shall be filed with the District Engineer. Testing shall be done at not more than 300-foot intervals. Shorter intervals shall be used when required by the District Engineer or the testing laboratory. Soil resistivity shall be measured using the soil-box method with an Ohm resistance meter. Soil samples shall be taken from pipe depth after subgrade has been completed. The four-pin method shall not be used unless approved by the District Engineer. The District Engineer shall only approve the four-pin method in cases where drilling equipment cannot be used to obtain soil samples. If the four-pin method is allowed, the Barn's layer-resistance method shall be used as described in the Peabody "Corrosion Control Handbook" published by the National Society of Corrosion Engineers. Regardless of testing method, soil samples shall also be tested for pH, oxidation-reduction (Redox), sulfides, and moisture content. The report shall also contain a description of the soils and evaluation of potential stray direct currents.

10-4 Submittals

10-4.01 General

Descriptive submittals shall be furnished for the items listed below and in accordance with the legend set forth below, or as required by other sections of these specifications. Omission of an

item from this tabulation does not relieve the Contractor from the responsibility of submitting the required items.

LEGEND

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|---|--------------------------------|---|------------------------------------|
| A | Catalog Data | I | Design Calculations |
| B | Shop Drawings | J | Shipping Tags & Labels |
| C | Laying diagram (if required) | K | Application Instructions |
| D | Sample of Material | L | Operating Instructions |
| E | Load Slips | M | Affidavits of Compliance |
| F | Mix Design | N | Torque data or calcs (if required) |
| G | Trenching Permit (if required) | P | Written description of method |
| H | Shoring Plan (if required) | | |

Item

Type of Submittal

Section 12: Water Mains

Pipeline Material	AC
Fittings	A
Mechanical Couplings	A
Restrained Joints	A
Sand	DE
Gravel	DE
Permeable Backfill	DE
Asphalt Paving	E
Sand-Cement Slurry	E
Permeable Backfill	D

Section 13: Water Main Taps

Saddles	A
Sleeves	A
Hole Cutters	A
Wet Tap Machines	L
Sleeves Over 150 psi	M

Section 14: Main Line Valve Assemblies

Valves	AN
Valve Box, Lid and Extension	A
Valve Operator Shaft Extension	A or B

Section 15: Air Valve Assemblies

Air Release Valve	A
Shutoff Valve	A
Valve box, lid, and ext. (non-traffic)	A
Valve box and lid (traffic)	AM

Section 16: Blowoff Valve Assemblies

Blowoff Valve	A
Valve Box, Lid, and Extensions	A
Valve Operator Shaft Extension	A or B

Section 17: Fire Hydrants

Fire Hydrants	A
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<u>Item</u>	<u>Type of Submittal</u>
<u>Section 19: Service Assemblies – 2" and Smaller</u>	
Service Line Material	A
Compression Fittings	AM
Branch Fitting	A
Meter Valve	AM
Meter Box, Lid, and Slab (nontraffic)	A
Meter Box and Lid (traffic)	AM
<u>Section 27: Concrete Work</u>	
Concrete	FE
Course Aggregate	D
Fine Aggregate	D
Admixtures	A
Reinforcing Supports	A
Expansion Joint Filler	A
Waterstop	A
Floor Hardener	A
Curing Aids	A
Bonding Agent	A
Nonshrink Grout	A
Epoxy Anchors	A
Reinforcing Steel	AB
Welded Wire Fabric	A
Form Work	ABP
<u>Section 28: Shoring</u>	
Shoring	GHI
<u>Section 29: Seeding and Mulching</u>	
Seed	JE
Fertilizer	AKE
Stabilizing Emulsion	AKE
Straw	DE

10-5 Prosecution and Progress

10-5.01 Sequence of Work

Each section in the Technical Provisions of this Contract may include a sequence of work. The Contractor shall comply with such provisions.

10-5.02 Connections to District's System

The Contractor shall make all connections to the District's existing treated water system, as shown on the plans, and all materials and workmanship shall conform to Water Mains or Water Main Taps as described elsewhere in these specifications. The District will, upon written request by the Contractor, mark on the surface the approximate location of existing District pipelines. The Contractor shall expose the pipelines using caution not to cause damage.

10-5.03 Scheduled Water Service Outages

Work under this Contract will require scheduled water outages for making connections to the District's existing system.

The Contractor shall make a written request 14 days in advance of the day he wants the outage. Prior to making such a request, all materials necessary to complete the tie-in work shall be on site and the water main shall have passed all required pressure, leakage, and bacteriological tests. This requires the existing water main be exposed and all necessary information for ordering materials field verified. This facilities verification shall be done in the presence of the District Engineer.

Only District personnel shall operate the District's system.

10-5.04 Concrete Quality Testing

The type, method and frequency of concrete quality tests shall be as described for Concrete Work under Testing. In addition, the Contractor may at any time, and at his own expense, perform additional testing for the purpose of quality control and shall not depend on any testing by the Developer for such purposes. The Contractor shall, at his own expense, perform any tests necessary to acquire the strength of the concrete for the purpose of, and shall be solely responsible for, form removal and safety of the structure.

Concrete finishing shall conform to the general classifications as described for Concrete Work in the Technical Provisions of this Contract, or as shown on the plans.