ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1
NOVEMBER 1, 2024 – 1 YEAR

CONSTRUCTION SPECIFICATIONS: E-8-1
NOVEMBER 30, 2017

STANDARD SPECIFICATION DRAWINGS: E-9-1
2010

ARIZONA WATER COMPANY

GENERAL CONDITIONS OF CONTRACT: E-4-1

1 - YEAR WARRANTY

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SECTION 1.0 - DEFINITIONS

1.1 Addendum. Company's form E-3-11-7. A written instrument Company signs and issues before the Contractor submits its Bid to Company. An Addendum answers questions and clarifies the Work.

1.2 Authorization to Bill. Company's form E-3-25-1, attached to these General Conditions of Contract, and the procedures described in Section 11 of these General Conditions of Contract.

1.3 Bid. Contractor's offer to perform the Work in accordance with the terms of the Contract. Contractor submits a Bid by filling out and signing the Proposal/Contract and delivering it and all other required documents identified in the Invitation to Bid to the Company by the Bid Due Date shown on the Proposal/Contract and in compliance with the requirements set forth in the Invitation to Bid.

1.4 Change Order. Company's form E-3-22-3. A written instrument Company signs and issues to Contractor and which Contractor also signs. A Change Order describes a change in the Contract terms after Company signs the Proposal/Contract, including without limitation a change in the Work, an adjustment, if any, in the Contract Price, and a change, if any, of the Completion Date. Contractor may not issue Change Orders but may request that Company issue a Change Order by providing to Company a written request for Change Order that includes all the bases upon which Contractor believes a Change Order is required. Contractor must submit all requests for Change Orders in writing with detailed information about the requested change order, including the reason for the change order and line items for materials, labor, tax, and total cost. Company will have no obligation to pay any amount in addition to the Contract Price unless Company and Contractor both sign a Change Order issued by the Company that describes the adjustment to the Contract Price and any change to the Work before Contractor begins to perform Work under the Change Order. Contractor may not request, and Company will have no obligation to, extend the Completion Date and/or pay any addition to the Contract Price so long as Company responds to a request for a Change Order in a commercially reasonable time. Contractor will provide copies of all Change Orders to the appropriate Subcontractors.

1.5 Commencement Notice. Company's form E-3-18-2. Contractor will not begin to perform the Work, or any portion of the Work, until after Company sends a Commencement Notice signed by a Company Vice President or President to Contractor.

1.6 Company. Arizona Water Company.

1.7 Company's Authorized Representative. A person that the Company's President or Vice President designates in writing in the Commencement Notice, or in writing at a later date, to represent Company as set forth in this Contract. Company's Authorized Representative has no authority to speak or act for Company or to bind Company beyond the authority set forth in this Contract.

1.8 Company's Inspector. The person or persons the Company's Authorized Representative designates in writing to inspect the Work on behalf of Company and assist the Company and Company's Authorized Representative to enforce compliance with the requirements of the Contract.

1.9 Completion Date. The date by which Contractor must complete the Work and obtain Company's Notice of Final Acceptance of all of the Work as set forth in Section 8.5. The Completion Date may only be changed by a Change Order.

1.10 Contract. The complete agreement between Company and Contractor for Contractor to perform the Work, which is comprised only of those documents set forth in Section 2.0 of these General Conditions of Contract.

1.11 Contract Price. The total amount payable to Contractor, the estimated amount of which is shown on page 2 line 5 of the Proposal/Contract, for complete, timely, and acceptable performance of the Work as required in this Contract. Contractor warrants that the Contract Price included in its Bid is based on estimated labor and material quantities to be furnished and includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds and all other costs to perform the Work as described in the Contract. The Contract Price may be adjusted only by a Change Order.

1.12 Contractor. A person or entity that signs the Proposal/Contract and thereby agrees to perform the obligations of the Contract as an independent prime contractor.

1.13 Day. All references to a day in the Contract mean a calendar day unless otherwise specified. When the end of a period or a due date described in this Contract falls on a weekend or a holiday, then the end of such period or due date will be moved to the next business day.

1.14 Invitation to Bid. A letter, including the unfilled and unsigned Proposal/Contract, these General Conditions of Contract, the Specifications, and which may include other attachments such as the Plans which will be identified in the letter, from Company inviting a person or entity to submit a Bid to perform the Work as the Contractor. Contractor's submittal to Company of the Proposal/Contract, completed and signed by the Contractor, and all other information Company requires in the Invitation to Bid constitutes Contractor's Bid and offer to perform the Work pursuant to the terms of the Contract.

1.15 Notice of Final Acceptance. Company's form E-3-36-5.

1.16 Notice of Partial Acceptance. Company's form E-3-36-5a.

1.17 Party and Person. Company and Contractor are each a Party and are collectively the Parties. The term "person" includes natural persons and legal entities, including without limitation corporations, limited liability companies, and partnerships.

1.18 Plans. Graphic and pictorial depictions of the Work, generally including without limitation elevations, sections, details, schedules, and diagrams, and which show the design, location, and dimensions of the Work.

1.19 Project. The total construction, of which the Work may be the whole or a part and which may include construction by Company and/or by separate contractors.

1.20 Proposal/Contract. Company's forms E-3-11-5, E-3-11-6, and E-3-11-7.

1.21 Request For Information. A question or request from Contractor for information about the Project, the Work, or the Contract. Contractor may send requests for information at any time. Contractor must submit all Requests for Information to Company and Responses to Requests for Information from Company in writing. A Request for Information and the Response to such Request does not change the terms of the Contract and/or the Contractor's obligation to perform the Work pursuant to the terms of the Contract.

1.22 Shop Drawings. Drawings, diagrams, materials lists, schedules, and other data Contractor and/or Subcontractors, manufacturers, suppliers, and vendors prepare and which Contractor submits to Company to specifically describe or illustrate a portion of the Work.

1.23 Site. All locations where Contractor performs the Work or any portion of the Work.

1.24 Specifications. Company's Construction Specifications and Standard Specification Drawings, Forms E-8-1 and E-9-1, respectively. The Specifications contain among other things written requirements for materials, equipment, systems, standards, and workmanship for the Work.

1.25 Subcontractor. A person or entity in a contractual relationship with Contractor or with any other Subcontractor (a Sub-subcontractor) to perform a part of the Work.

1.26 Supplier. A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a contract with Contractor or with any Subcontractor to furnish materials, services, or equipment to be incorporated into the Work by Contractor or a Subcontractor.

1.27 Warranty Period. Unless stated otherwise in Special Conditions of Contract included with the Invitation to Bid, the period of 1 year following the date of Company's Notice of Final Acceptance.

1.28 Work. All materials, labor, equipment, and services Contractor provides, whether by itself or through Subcontractors and Suppliers and whether completed or partially completed, to fulfill Contractor's obligations under the Contract.

SECTION 2.0 – CONTRACT

2.1 Contract Components. The Contract consists only of the following documents:

a. The Proposal/Contract, when counter signed by Company's President, Vice President – Engineering, or Vice President – Operations and Contractor;

b. The General Conditions of Contract;

c. Special Conditions of Contract, if any, identified in the Proposal/Contract;

d. Plans, if any;

e. Company's Construction Specifications (Company Form E-8-1 et seq.) and standard Specification Drawings (Company Form E-9-1 et seq.);

f. The Commencement Notice;

g. All Addenda;

h. All Change Orders; and

i. All other documents Company identifies in the Proposal/Contract.

2.2 Contract Formation. The Contract is created and becomes enforceable only when a Company Vice President or President countersigns the Proposal/Contract after Contractor submits its Bid to Company.

2.3 Conflicts. For purposes of Contract interpretation, conflicts, if any, among the Contract documents will be resolved by applying the following order of priority:

a. Change Orders;

b. Proposal/Contract;

c. Special Conditions of Contract;

d. General Conditions of Contract;

e. Addenda;

f. Plans;

g. Construction Specifications (Company Form E-8-1 et seq.) and Standard Specification Drawings (Company Form E-9-1 et seq.); and

h. All other attachments Company identifies in writing in the Proposal/Contract.

2.4 Contractor Understands the Contract. Contractor represents and warrants that it carefully read the Invitation to Bid and all Contract documents, that it understands the Contract documents and terms, and had full and fair opportunity to submit Requests for Information to Company and to obtain the advice of counsel before signing the Proposal/Contract and submitting its Bid to perform the Work. If Contractor discovers any errors, omissions, or inconsistencies in the Contract, Contractor will immediately provide notice of such to Company. Contractor will be responsible for any increased costs caused by its failure to immediately provide such notice.

2.5 Compliance With The Contract. Contractor will perform the Work and provide all materials for the Project in strict compliance with the terms and requirements of the Contract. Company reserves the right to make changes in the Work, as it may deem appropriate, and any such change will be set forth in a Change Order.

2.6 Records and Documents. Contractor will maintain on the Site a complete copy of the Contract. Contractor will also maintain on the Site copies of all other written communications regarding the Contract and the Work. Contractor will maintain these items in good order and annotated to show changes made during the course of the Work. At all times during normal business hours, Contractor will make all such items available to Company's Authorized Representative for review and inspection. If Contractor's performance of the Work is terminated under Section 9.1(b), Contractor will immediately turn all such items over to Company. Upon completion of the Work, the Contractor will turn over to the Company complete copies of all such items.

2.7 Entire Agreement. The Contract contains the entire agreement between the Parties with respect to the Work and supersedes all prior negotiations, understandings, and agreements.

2.8 Amendment and Modification. This Contract may only be amended or modified by a Change Order or another writing signed by both Parties.

2.9 Invalidity and Severability. If any portion of this Contract is declared invalid, illegal, or otherwise unenforceable by a Court of competent jurisdiction, the remaining provisions will continue in full force and effect.

SECTION 3.0 – LICENSES, INSURANCE, PERMITS, AND OTHER PRELIMINARY MATTERS

3.1 Licenses. Contractor must possess and maintain a valid Arizona general contractor's license and all other required licenses at the time Contractor submits its Bid and at all times through the duration of the Contract, including the Warranty Period. Contractor will require and ensure from the time Contractor submits the Proposal/Contract through the duration of the Contract, including the Warranty Period, that each Subcontractor possesses and maintains a valid contractor's license from the State of Arizona for all Work Subcontractor performs.

3.2 Bonds.

a. Bid Bonds. Each person or entity that submits a Bid must with the Bid provide to the Company a bid bond in the amount of 10% of the proposed Contract Price included in the Bid. Each bid bond must be in a form and from a surety acceptable to Company. If any bond expires or if the surety on any bond becomes or is adjudicated bankrupt or insolvent, files a voluntary petition in bankruptcy, or is placed into receivership, or if the surety's right to do business in Arizona is terminated, Contractor must within 7 days substitute another bond and surety, both of which must be acceptable to Company. Contractor will immediately provide proof of any substitution to Company.

b. Performance and Payment Bonds. No later than one day before the pre-construction meeting required in Section 7.1, Contractor must obtain and provide to Company performance and payment bonds in the amount of 100% of the Contract Price, in a form and from a surety acceptable to Company. If any bond expires or if the surety on any bond becomes or is adjudicated bankrupt or insolvent, files a voluntary petition in bankruptcy, or is placed into receivership, or if the surety's right to do business in Arizona is terminated, Contractor must within 14 days substitute another bond and surety, both of which must be acceptable to Company. Contractor will immediately provide proof of any substitution to Company. No later than 7 days after Company and Contractor sign a change order that contains an upward adjustment to the Contract Price, Contractor must provide Company riders to the performance and payment bonds or new performance and payment bonds that increase the amounts of each of the performance and payment bonds to 100% of the new Contract Price.

3.3 Insurance. Contractor must obtain and maintain at all times, from the time Contractor submits the Proposal/Contract through the duration of the Contract, including the Warranty Period, insurance of no less than the following unencumbered minimum amounts:

WORKER'S COMPENSATION	In accordance with requirements of the laws of the State of Arizona.
EMPLOYERS' LIABILITY	Each accident $1,000,000/ $1,000,000 each employee/ $1,000,000 policy limit.
COMMERCIAL GENERAL LIABILITY (Including contractual liability covering death, bodily injury, and property damage)	Combined single limit of not less than $1,000,000 per occurrence, $2,000,000 General Aggregate.
AUTOMOTIVE LIABILITY (Including owned, non-owned and hired vehicles)	Combined single limit of not less than $1,000,000 per occurrence.
PRODUCTS – COMPLETED OPERATIONS	$2,000,000 General Aggregate.
COMMERCIAL EXCESS LIABILITY COVERAGE	$5,000,000 per occurrence.

Such insurance will name Company, its officers, agents, and employees as additional insureds and will apply on a primary and non-contributory basis. Such policies must be occurrence based policies, not claims made policies.

Company has the right to not consider or to reject Contractor's Bid if Contractor does not have insurance as described in this Section 3.3. Company may require Contractor to provide certificates of insurance or copies of policies of insurance to show that Contractor satisfies this requirement. Company will at all times have the right to require that Contractor purchase insurance from insurance companies satisfactory to Company. Prior to commencing the Work, Contractor must provide to Company certificates, and if Company requires, copies of policies of insurance evidencing that Contractor has purchased policies of insurance for each of the above coverages meeting the minimum amounts specified and that each policy is in good standing. Such certificates and policies must also provide that notice be given to Company at least 30 days prior to cancellation or material change in the form of such policies.

Contractor will require that each Subcontractor obtain and maintain at all times, from the time Subcontractor signs the contract with Contractor through the duration of the Contract, including the Warranty Period, insurance of the types and amounts this Section requires.

3.4 Permits and Approvals to Perform the Work. Unless otherwise stated in the Special Conditions of Contract, Contractor will obtain all licenses, temporary construction easements, permits, approvals, and other permissions necessary for Contractor to perform the Work required by local, state, and federal governments, including without limitation Approvals To Construct, right-of-way encroachment permits, 404 permits, and blasting permits. Contractor will not submit any applications for any such permits, approvals, and other permissions until it first obtains and incorporates into such applications Company's edits, comments, and other requirements. No later than one day before the pre-construction meeting required in Section 7.1, Contractor must provide written certification to Company's Authorized Representative that Contractor has obtained all permits that Contractor is responsible to obtain.

Contractor will also prepare and obtain any required approval for, and comply with, any dust control permits and Storm Water Pollution Prevention Plan, and Source Water Protection Plan and associated permits required for the Work.

Contractor will comply with all conditions and restrictions set forth in such permits, approvals, permissions, Storm Water Pollution Prevention Plans, and Source Water Protection Plans. Before beginning the Work, Contractor must provide notice to Company that it has obtained all such permits, approvals, permissions, and plans. Any delay in completing the Work that arises from Contractor's failure to timely prepare, obtain such permits, approvals, permissions, and plans, and comply with such, will be at Contractor's sole liability, risk, and expense and will not extend the Completion Date.

SECTION 4.0 – CONTRACTOR'S RESPONSIBILITIES

4.1 Contractor Understands the Work and Working Conditions. Contractor warrants and represents that it, by careful examination, inspected the Site and satisfied itself as to the nature, condition, and location of the Work, including without limitation the dimensions of the Site, water quality, soil conditions, surface and subsurface conditions, weather conditions Contractor might encounter, the character of the equipment and facilities needed, the presence of hazardous materials (whether identified in the Contract or not), and all other matters which can in any way affect the Work. Contractor compared and correlated all such conditions to and considered them in context of the Contract.

If Contractor believes there is a conflict between the Contract documents or a discrepancy between the Contract terms and the actual conditions of the Work, Contractor must immediately provide notice to Company's Authorized Representative. Absent receiving notice of Company's response from Company's Authorized Representative, Contractor will not perform any Work or make any adjustment except at its sole liability, risk, and expense and Company may require Contractor to remove and replace such unauthorized Work.

4.2 Contractor Oversight. Contractor will supervise and direct the Work using its best skill and attention. Unless the Contract gives specific instructions otherwise, Contractor is solely responsible for and has control over construction means, methods, techniques, sequences, and procedures, and for performing and/or coordinating all portions of the Work.

If the Contract gives specific instructions concerning any construction means, methods, techniques, sequences, and procedures, and Contractor determines that using or following any such means, methods, techniques, sequences, and procedures would be unsafe, Contractor must immediately provide notice to Company. Absent receiving notice of Company's response from Company's Authorized Representative or a Change Order, Contractor will not perform any Work or make any adjustment except at its sole liability, risk, and expense and Company may require Contractor to remove and replace such unauthorized Work.

4.3 Contractor's Foreman, Superintendent, and Employees. Contractor will provide adequate oversight of the Work by a competent foreman or superintendent who will be present on the Site at all times while the Work is in progress. Contractor's foreman or superintendent will be Contractor's representative at the Site and will give and receive communications on behalf of Contractor.

Contractor's foreman or superintendent will have full authority to act on behalf of Contractor, must be competent to the satisfaction of Company, and must be able to effectively communicate with Company's Authorized Representative and Company's Inspector. Contractor will not replace a foreman or superintendent without first providing notice to and obtaining notice of approval from Company. Upon notice from Company,

Contractor will replace its foreman or superintendent with a new foreman or superintendent acceptable to Company.

4.4 Order and Discipline. Contractor will at all times enforce strict discipline and good order among its employees and all Subcontractors and Suppliers and their employees. Contractor will not employ nor permit Subcontractors and Suppliers to employ unfit persons or persons not properly skilled in tasks assigned to them. Contractor is responsible for the acts and omissions of Contractor's agents and employees, Subcontractors and Suppliers and their agents and employees, and all other persons performing any portion of the Work.

4.5 Labor, Materials, Tools, Equipment, and Services. Contractor will provide and pay for all labor, materials, tools, equipment, and services, including utilities, necessary to perform and complete the Work. Contractor represents and warrants it included all such costs in its Bid. Contractor will furnish all labor, materials, tools, equipment, and services required to complete the Work in strict accordance with the terms of this Contract.

4.6 Protecting Persons and Property. At all times prior to Company providing Notice of Final Acceptance to Contractor that Company accepts the Work, Contractor is responsible for the safety of the Work and for prevention of any injury, harm, and damage to persons and property, both real and personal, by Contractor's and Subcontractors' performance of the Work and by Suppliers.

Contractor will comply with and give all notices required by applicable laws, statutes, ordinances, codes, rules, regulations, permits, and all lawful orders of public authorities bearing on the safety of persons or property or their protection from damage, injury, or loss. Contractor is solely responsible for and will erect and maintain, as required by existing conditions and any governmental authority having jurisdiction, reasonable barricades, and safeguards, including without limitation warning signs and traffic control.

4.7 Explosives and Blasting. The use of explosives or blasting agents ("Blast" or "Blasting") is controlled by law and regulations, including without limitation the Uniform Fire Code, which is generally administered by the fire department of the applicable local governmental authority. Contractor must obtain all permits, authorizations, or permissions required to Blast, including as required from the fire department, before Blasting. Contractor is solely responsible to determine what permits are required for Contractor to Blast. Before Blasting, Contractor must also provide to Company:

a. Notice to Company of its intent to Blast,

b. Copies of all permits, authorizations, or permissions required to Blast, and

c. Contractor's plan for Blasting for Company's review and approval before Blasting.

Contractor must strictly comply with all terms of each such permit, authorization, or permission, Contractor's plan, and all statutes, regulations, and orders that govern such Blasting. When Blasting, Contractor must exercise extreme caution and take any and all

actions necessary or required to protect the Work, all persons and property, whether on or off the Site, and the general public and public property from harm or damage.

Contractor is solely responsible for all Blasting and nothing in the Contract will not relieve the Contractor from its responsibilities for proper use and handling of explosives and blasting agents or for any and all injuries and damages resulting from their use. Contractor will transport, store, handle and use all explosives and blasting agents in compliance with all applicable laws, ordinances, regulations, orders, and the highest industry standards. Such laws, ordinances, regulations, orders, and industry standards may include, without limitation the AGC Manual of Accident Prevention in Construction, the Institute of Makers of Explosives, and the Occupational Safety and Health Administration Regulations (29 CFR 1926.1(U)). In addition, the Contractor must:

d. Exercise the utmost care not to endanger life or damage property,

e. Furnish and erect special signs to warn the public of Blasting. Such special signs must be located and maintained so as to be clearly evident to the public during all Blasting.

f. Notify each public utility company, having structures adjacent to the Work, of Contractor's intention to Blast. Such notice must be given sufficiently in advance to enable the companies to advise the Contractor of any precautions that should be taken to protect their structures from damage.

g. Make a survey of adjacent properties, before commencing Blasting, locating on drawings and by photographs all existing cracks and damages to structures. Contractor must provide to Company a copy of such drawings and photographs along with a written a report.

h. Blasting must be accomplished in such a manner that all nearby improvements and infrastructure will be safe from rocks and other projectiles. Contractor must use adequate blasting mats or other means of protection when Blasting in congested areas or close proximity to any improvements and infrastructure. Steel mats will not be allowed within 2,000 feet of power lines.

i. At the time of Blasting, Contractor must station employees or subcontractors at sufficient distance from the Blasting operation to flag down people and vehicles.

Company reserves the right to order the discontinuance of Blasting at any time.

4.8 Underground Facilities. Contractor is solely responsible to locate and mark all underground facilities before performing the Work and protecting and preserving all such underground facilities. Contractor will strictly comply with Arizona's "Blue Stake" law, A.R.S. 40-360.21 et. seq. Contractor will not, for purposes of performing the Work, use or rely on any blue stake reports or results or potholing reports or results Company provides

to Contractor. Such information, if provided by Company, is only intended to assist Contractor fulfill its obligations hereunder.

4.9 Traffic. Contractor will at all times conduct the Work so as to ensure the least possible obstruction to traffic and other inconvenience to Company, the general public, residents, and businesses.

4.10 Damage and Repairs. Contractor will promptly repair and remedy, at its sole cost and expense, all damage and loss to the Work or other property caused by Contractor, any Subcontractor or Supplier, anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.

4.11 Hazardous Materials. If while performing the Work Contractor encounters any hazardous materials or substances not identified in the Contract, Contractor will immediately provide notice to Company. Absent notice from Company to proceed or a Change Order, Contractor will not perform any Work or make any adjustment to the Work except at its sole liability, risk, and expense and Company may require Contractor to remove and/or replace such unauthorized Work.

4.12 Surveys and Survey Marks. Contractor will complete all surveys and property and survey staking required to perform the Work. Contractor will not use or rely on any surveys or property or survey staking Company performs to design and/or prepare and send out the Invitation to Bid. Before Company provides Contractor Notice of Final Acceptance of the Work, Contractor must preserve all benchmarks, property stakes, and survey stakes. If Contractor, Subcontractors or Suppliers, or their employees destroy or remove any benchmarks, property stakes, and/or survey stakes, Contractor must replace them at Contractor's sole cost and expense.

4.13 Risk of Loss. Contractor bears all risk of loss and damage to the Work before Contractor receives Company's Notice of Final Acceptance of the Work or Company takes final possession of the Work, whichever is later. Contractor will immediately make good any loss or damage, and in the event Contractor refuses or neglects to do so, Company may, or by the employment of some other person, make good any loss or damage and Contractor will pay all of Company's costs and expenses to do so.

4.14 Compliance with Laws. Contractor will make and keep itself fully informed of and in compliance with all local, state, and federal laws, ordinances, rules, regulations, standards, and orders that in any manner affect the Work and Contractor's performance of the Work. Contractor must perform the Work and ensure that all Subcontractors and Suppliers perform the Work, in compliance with all applicable laws, ordinances, rules, regulations, standards, and orders. If Contractor becomes aware that any Contract term conflicts with any law, ordinance, rule, regulation, standard, or order, Contractor must promptly provide notice to Company. If Contractor does not provide such notice to Company, or if Contractor performs any Work without written authorization or clarification from Company after providing such notice to Company, then Contractor does so at its sole liability, risk, and expense and Company may require Contractor to remove and/or replace

such unauthorized Work. Contractor will be solely responsible for all violations of any law, ordinance, rule, regulation, standard, or order in performance of the Work and for all fines, expenses, liabilities, and costs of any kind arising from all such violations. As provided for in Section 12.3 of these General Conditions of Contract, Contractor will defend and indemnify Company against all claims made or asserted by all third parties, including attorneys' fees and costs, arising out of or related to all violations of any law, ordinance, rule, regulation, standard, or order in performance of the Work and the terms of this Contract, regardless of whether it is alleged the claim, fine, expense, liability or cost was caused in part by the fault or negligence of Company.

4.15 Site Condition and Cleanliness. Contractor will keep the Site and surrounding areas neat, clean, and free from waste materials and rubbish. Contractor will store at the Site only those materials and equipment used in the Work. When materials and equipment are no longer required for the Work, Contractor will promptly remove such from the Site. Contractor is solely responsible to protect construction materials and equipment stored at the Site from weather, theft, and damage.

After completing the Work, Contractor at its sole cost and expense must promptly remove from the Site and from all surrounding areas, including both public and private property, all temporary structures, waste materials, and rubbish resulting from or arising out of the Work. In the event Contractor fails to do so, Company may remove same at Contractor's sole cost and expense.

4.16 Schedule For Performing the Work. Unless stated otherwise in the Contract or required by Company, Contractor will schedule and perform the Work only on Company's normal business days during Company's normal business hours. If Contractor must perform Work outside of Company's normal business days and normal business hours, Contractor may do so only after obtaining notice of approval from Company's Authorized Representative. Contractor will be solely responsible for all additional costs and expenses arising out of performing the Work outside of Company's normal business days and normal business hours, including without limitation Company's additional costs and expenses, including overtime. Contractor will be responsible for protecting the Site and the Work at all times.

4.17 Coordination. If the proper performance of Contractor's Work depends on construction or operations by Company or another contractor, Contractor will, prior to proceeding with the Work, promptly provide notice to Company of any discrepancies or deficiencies in such other construction or operations unsuitable for proper performance of Contractor's Work. If Contractor proceeds with the Work without receiving notice of authorization from Company, it will be at Contractor's sole liability, risk, and expense and Company may require Contractor to remove and/or replace such unauthorized Work.

4.18 Connection to Company's Existing Water System. Contractor will not make any connection to Company's existing water system until after the Work passes all inspections and tests required in Section 8 of these General Conditions of Contract and Company receives the Approval of Construction for the Work. Contractor must notify Company at least three days prior to the exact time it will make the connection so that Company's

Inspector will have sufficient time to locate valves and make all other necessary preliminary arrangements. Contractor may not make any connection to Company's existing water system unless Company's Inspector is physically present. Only Company personnel may operate existing valves.

4.19 Contractor Forbidden From Interfering With Company's Existing Water System. Contractor will not operate any valve or other control on Company's existing water system or handle or interfere with Company's existing water system in any way.

4.20 Interruptions of Service. Contractor will notify Company at least three days in advance of any planned interruption of water service to any Company water customers. Contractor will not proceed with any such interruption of water service absent Company's notice of approval. Contractor will provide notice to Company's customers of any such planned interruption in water service at least 24 hours in advance and will with such notice inform the customers the time the interruption will begin, the duration of the interruption, and the time Contractor expects to restore water service. Company will provide door hangers for Contractor to place on customer's doors.

4.21 Liens and Bond Claims. Contractor must timely pay for all labor and materials furnished to Contractor in the course of the Work and must promptly furnish evidence of such payments as Company requires. Contractor must pay when due all claims arising out of performance of the Work for which a lien may be filed either against the Site or any other personal property, real property, or leasehold interest of Company, or against payments due from Company to Contractor, or for which a claim may be made against any payment or performance bond, or both. To the fullest extent permitted by law, Contractor agrees that no liens or other claims in the nature of a lien against the personal property, real property, leasehold, or other interest of Company, against payment due from Company to Contractor, or against any payment or performance bond, will be filed or made in connection with the Work by any person who has supplied professional services, labor, materials, machinery, fixtures, tools, or equipment used in or in connection with the performance of this Contract, and Contractor agrees to remove or to cause to be removed (including by recordation of a statutory discharge of lien bond pursuant to ARS § 33-1004 if requested by Company) any such liens or claims within seven days upon receiving notice or obtaining actual knowledge of the existence of such liens or claim. In addition, Contractor agrees to defend, indemnify, and hold harmless Company from and against any and all such liens and claims pursuant to the terms, conditions, and requirements of Section 12.3, regardless of whether such liens or claims are alleged to have been caused in part by the fault or negligence of Company.

4.22 Equal Opportunity Employer. Contractor represents that it is an equal opportunity employer and that it does not discriminate against any Subcontractor, Supplier, employee, or applicant for employment based upon race, religion, color, national origin, handicap, ancestry, sexual orientation, sex, or age. Such non-discrimination includes without limitation all activities related to choosing Subcontractors and Suppliers, contracts, employment applications, initial employment, promotions, demotions, transfers, recruitment, lay-off, and termination.

4.23 Taxes and Fees.

a. Calculation of Taxes. Contractor is responsible to calculate and pay all contracting, sales, consumer, use, and other similar taxes for the Work. Contractor warrants that it included all such taxes in its Bid. If Contractor's calculation of such taxes is less than the amount required by law, Contractor is responsible to pay the difference. If Contractor's calculation of such taxes due is greater than the amount required by law, Company may withhold such amounts from final payment to the Contractor, or Contractor will refund such amounts to Company. Contractor warrants that it has included all such taxes in its Bid.

b. Fees. Contractor is responsible to contact all municipalities and other government agencies having jurisdictional authority over the Work to determine if they will charge the Contractor permit fees and other fees for the Work. Contractor warrants that it has included all such fees in its Bid.

c. Charges For Taxes. Contractor will not at the time of purchase charge the Company for any tax related to materials Contractor purchases to incorporate into the Project. Contractor will pay applicable transaction privilege taxes or contracting taxes ("Contracting Tax") and any other taxes on the Work after Contractor receives payment of the last Invoice from the Company. Contractor will not charge Company any Contracting Tax on the cost of materials incorporated into the Work which are exempt by Arizona Revised State. Contractor is solely responsible to calculate the Contracting Tax, is solely responsible for any underestimation of the amount of Contracting Tax due, and is solely responsible to pay any amount of Contracting Tax not included in Contractor's Bid. Contractor retains full liability and obligation to pay the Contracting Tax and will defend and indemnify the Company against any demand or obligation to pay the Contracting Tax. Company will have no obligation to pay any additional Contracting Tax to the Contractor other than the amounts shown on line 3, "Total Contracting Tax," of page 2 of the Proposal/Contract, except for any Contracting Tax arising out of a Change Order that Contractor could not have included in the Proposal/Contract.

SECTION 5.0 – SUBCONTRACTORS

5.1 Selection of Subcontractors. Contractor will select only licensed, qualified, competent, and experienced Subcontractors. Contractor warrants that all Subcontractors will have sufficient skill and experience to perform the portions of the Work Contractor assigns to them.

5.2 Company May Reject Subcontractors. With its Bid, Contractor will provide Company a list of all Subcontractors and Suppliers Contractor plans to utilize to perform any portion of the Work or to provide any materials or services for the Work. Contractor will not employ any Subcontractor or Supplier Company rejects.

5.3 Subcontractors Bound By the Contract. Contractor will require each Subcontractor to be bound to Contractor by all terms of the Contract, including without limitation these General Conditions of Contract, and to assume toward Contractor all the obligations and responsibilities which Contractor, by the Contract, assumes toward Company. Each subcontract agreement will preserve and protect all rights of Company set forth in the Contract with respect to the Work the Subcontractor will perform. Contractor will require each Subcontractor to enter into similar agreements with each Sub-subcontractor. Contractor will provide to each Subcontractor copies of the Contract prior to Subcontractor signing the subcontract agreement. Subcontractors will make copies of the Contract available to each Sub-subcontractor.

5.4 Assignment of Subcontractor Agreements. Contractor assigns each subcontract agreement to Company, provided that the assignment is only effective after Company's termination of the Contract pursuant to Section 9 and only for those subcontract agreements Company accepts by sending notice to Contractor and Subcontractor. Company may thereafter further assign the subcontract agreement to a successor contractor.

5.5 Change of Subcontractors. Contractor will not substitute or change any Subcontractor without prior notice to Company's Authorized Representative and notice of approval from Company's Authorized Representative.

5.6 Responsibility for Subcontractors. Contractor is solely responsible to ensure and will ensure that each Subcontractor properly performs the portions of the Work assigned to such Subcontractor in compliance with all terms and requirements of this Contract. Contractor will coordinate the activities of all Subcontractors. Contractor is responsible to Company for each Subcontractor's acts and omissions in connection with such performance. Contractor represents and warrants that all costs to ensure all Subcontractors' compliance with all terms and requirements of this Contract, including without limitation expert, inspection, and travel costs, are included in Contractor's Bid to perform the Work. Except as set forth in this Contract, including Sections 5.3 and 5.4, Company has no legal or contractual relationship with any Subcontractor, including but not limited to any third-party beneficiary rights.

SECTION 6.0 – COMPANY'S RIGHTS

6.1 Company's Right to Perform Construction and Award Separate Contracts. Separate from the Work, Company reserves the right to perform construction or other operations related to the Project with its own forces and to award separate contracts in connection with other portions of the Project.

6.2 Right to Remove. Company may remove from the Site and from any meeting provided for by this Contract any person disturbing the safety, creating a disturbance, interfering with the Work, or causing any other problem with the Work.

6.3 Right to Occupy and Operate Portions of the Work. Upon Notice of Partial Acceptance to Contractor, Company may occupy and use any separately functioning and useable portion of the Work. Company's use of any portion of the Work will not constitute Company's final acceptance of the Work, will not begin the Warranty Period for any portion of the Work, and will not excuse Contractor from any obligation under this Contract as to any portion of the Work.

SECTION 7.0 – SCHEDULE AND PROGRESS OF WORK

7.1 Pre-Construction Meeting. Contractor will schedule and conduct a pre-construction meeting before Contractor begins to perform the Work. Contractor will coordinate with Company to schedule and conduct the pre-construction meeting. The following individuals must attend the pre-construction meeting:

a. Contractor's representative, who is authorized to sign documents on behalf of Contractor;

b. Contractor's foreman or superintendent; and

c. Contractor's safety officer or other employee responsible for safety at the Site.

7.2 Schedule.

a. In addition to the performance and payment bonds required by Section 3.2(b), before the pre-construction meeting, Contractor will also provide to Company's Authorized Representative:

i. a detailed construction schedule, in Gantt chart form, that identifies all tasks to be performed from the date of the Commencement Notice through completion of the Work, including without limitation testing, training of Company employees, and final invoicing.

ii. a list of all materials to be used in the Work, which includes the manufacturer, part number, price and quantity included in this Proposal/Contract.

b. At least monthly after Company provides the Commencement Notice to Contractor, Contractor must submit to Company's Authorized Representative for review:

i. An updated detailed construction schedule, in Gantt chart form, that documents the progress of the Work;

ii. A schedule of Shop Drawing and sample submittals which lists each required submittal and the times for submitting, reviewing, and processing such submittal; and

iii. A schedule of costs and values for all portions of the Project, which includes quantities and prices of items that when added together equal the Contract Price and which subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments. Such prices will include an appropriate amount of overhead and profit applicable to each portion of the Project.

7.3 Priority of Work and Coordination with Company and Other Contractors. If Company has hired more than one Contractor to perform work on the Project or to perform work on another project on the same site, Company will have the sole right to direct and determine the order and timing of each Contractor's work to secure orderly completion of the Project. Contractor will cooperate with Company and other Contractors to coordinate the Work with Company and other Contractors hired by Company. Such cooperation will include without limitation reviewing and coordinating construction schedules. Contractor will make any revisions to its construction schedule Company deems necessary after such review and coordination.

7.4 Delays and Extension of the Completion Date. If Contractor becomes aware that it will not or may not be able to complete the Work by the Completion Date, Contractor must immediately provide notice to Company. Any request by Contractor for extension of the Completion Date must be in a written request for a Change Order and provided to Company no later than 48 hours after Contractor discovers the event giving rise to the delay and must include a calculation of the expected delay based on the information existing at the time. No extension of the Completion Date will be authorized or effective except as set forth in a Change Order signed by Company and Contractor.

SECTION 8.0 – INSPECTION, TESTING, AND REJECTION OR ACCEPTANCE

8.1 Inspection, Testing, and Access To The Work. Contractor will at all times cooperate with Company, Company's contractors, and consultants, and with any governmental authority having jurisdiction so that Company and such governmental authorities may conduct all inspections or tests of the Work they require. Contractor will at all times provide Company, Company representatives and contractors, testing agencies, and governmental agencies with jurisdiction access to observe, test, and inspect the Work. Contractor must provide proper and safe conditions for such access. If Contractor requests that Company inspect all or any portion of the Work, including a final inspection under Section 8.4, Contractor must coordinate the inspection with the Company and must request the inspection at least 24 hours before Contractor wishes the Company to perform the inspection.

8.2 Uncovering Work.

a. If, without notice of approval from Company, Contractor closes, covers, or otherwise conceals the Work or any portion thereof before it is observed, inspected, tested, or approved, Contractor must, if Company requests, uncover the Work for observation, inspection, and testing. Contractor must furnish all necessary labor and materials and bear all liability and expenses of such opening, uncovering, and

exposure of the Work and of satisfactory reconstruction of the Work, including compensating Company for all costs for additional professional services and internal costs. Company may issue a Change Order to deduct such amounts from the Contract Price.

b. If Contractor closes, covers, or otherwise conceals the Work or any portion thereof after receiving written approval from Company's Inspector and Company considers it necessary or advisable that such Work be opened, uncovered, or exposed, Contractor at Company's request, will open, uncover, and expose and make available for observation, inspection, or testing that portion of the Work. If Company finds such Work defective or not in compliance with the requirements of this Contract, Contractor will bear all liability, costs, and expenses for such opening, uncovering, and exposure.

8.3 Final Inspection.

a. Right-of-Way Inspection. Before Contractor performs its final inspection of the work as a whole, Contractor will schedule inspections with and obtain from all governmental agencies having jurisdiction approval of all Work performed in right-of-way.

b. Company final inspection. Contractor must request Company perform a final inspection of the Work as a whole before Company provides to Contractor notice of final acceptance of the Work. Contractor will coordinate with Company to schedule Company's final inspection of the Work. Contractor's request for a final inspection must be in writing.

8.4 Correcting Defective and Non-Conforming Work or Materials. Contractor will, at no additional cost to Company, remove, rebuild, and replace any Work Company or any governmental agencies having jurisdiction find defective or not in compliance with the requirements of this Contract or any permits or applicable governmental requirements. Company may remove, rebuild, and replace the same at Contractor's sole liability, cost, and expense..

8.5 Acceptance and Rejection. Only Company's Notice of Final Acceptance to Contractor will constitute Company's acceptance of the entire Work, or any part thereof. Company's Notice of Partial Acceptance will constitutes Company's acceptance of a portion of the Work. Company may reject all or a portion of the Work that is defective or that does not comply with the requirements of this Contract.

Company's acceptance of the Work is contingent on the Work passing all inspections and tests Company and/or any governmental authority having jurisdiction require and on successful operation of the Work as a whole. Before Company provides Notice of Final Acceptance of the Work, Contractor must complete all requirements of the Work contained in the Contract, including without limitation correcting all deficiencies Company identifies in its inspections, submit to Company all operation and maintenance manuals, and submit to Company all as-built drawings and all other record documents.

Company's final acceptance is also contingent on Company's receipt of all Approvals of Construction and proof that Contractor has complied with the requirements of licenses, temporary construction easements, permits, approvals, and other permissions necessary for Contractor to perform the Work required by local, state, and federal governments.

8.6 Contractor Not Relieved From Obligations. Neither Company's Notice of Final Acceptance of the Work nor inspections, tests, or approvals by Company, its representatives and contractors, or governmental agencies will relieve Contractor from any of its obligations to perform the Work in compliance with the Contract. Such acceptances, observations, inspections, and testing do not change or affect Contractor's continuing obligations under the Contract after Company's final acceptance of the Work, including without limitation the warranty obligations set forth in Section 12.

8.7 Contractor's Inspections. No inspections, tests, or approvals by Company, Company representatives and contractors, or governmental agencies will relieve Contractor of its responsibility to observe and inspect the Work to ensure its performance in compliance with the requirements of this Contract.

8.8 Payment For Required Testing. Whenever testing is required by any governmental agency or by the Company to assure conformance of the Contractor's work with the appropriate standard, it will be paid for as follows:

a. For testing required under permits obtained by the Company or testing specifically requested by the Company, the cost of the first test will be paid for by the Company. In the event of failure of the first test, the cost of all further testing associated with the failure will be paid by the Contractor.

b. For testing required under permits obtained by the Contractor, all costs will be paid by the Contractor. Testing of the pipeline for pressure and leakage will be included in the Contract price.

c. Notwithstanding Sections 8.8(a) and 8.8(b), for compaction testing specifically, Contractor will include the costs for all compaction testing in its Bid and Contractor will perform and pay for all compaction testing and will hire and pay for all geo-technical engineers or other experts to perform compaction testing.

SECTION 9.0 – SUSPENSION AND TERMINATION

9.1 Company's Right to Suspend and Terminate for Contractor's Breach. If Contractor breaches the Contract, Company, without prejudice to any of its other rights and remedies including without limitation those set forth in this Contract, may:

a. Temporarily suspend Contractor's performance and correct any deficiencies resulting from Contractor's breach if Contractor fails to cure any deficiencies within 48 hours of receiving notice from Company. If Company temporarily suspends Contractor's performance under this Section, Contractor will not be entitled to any

extension of time to the Completion Date. Any expenses Company incurs to correct any deficiencies resulting from Contractor's breach will be deducted from the Contract Price. If payments due to Contractor do not cover Company's expenses, Contractor must pay the difference to Company upon receipt of an invoice from Company.

b. Terminate Contractor's performance and complete the Work. If Company terminates Contractor's performance, Company may take over the Work and take possession of and utilize in completing the Work any materials on the Site. Contractor and its sureties will be liable to Company for all excess costs and expenses, including managerial and administrative costs, caused by, or arising out of Contractor's breach. Contractor will not be entitled to receive any further payment, if any is due, until the Work is completed or the job is canceled. If the unpaid balance of the Contract Price exceeds the costs and expenses to complete the Work, such excess will be paid to Contractor only after Company completes the Work. If such costs and expenses exceed the unpaid balance of the Contract Price, Contractor will upon receipt of an invoice from Company immediately pay the difference to Company.

Company's exercise of its rights under this Section will not waive any other right or remedy Company has against Contractor, including without limitation Company's right to liquidated damages under Section 10.4.

9.2 Company's Right to Suspend and Terminate Other Than For Contractor's Breach.

a. Company may at any time and for any reason suspend all or any portion of the Work. In such a case, Company and Contractor will negotiate and sign an appropriate Change Order to extend the Completion Date and compensate Contractor for costs and expenses related to the suspension.

b. Company may also for no fault of Contractor terminate the Contract at any time upon notice to Contractor specifying the termination date. In the event of termination, which is not the fault, in whole or in part, of Contractor, Company will pay to Contractor only such compensation, including reimbursable expenses, due for Work properly performed on the Project prior to the termination date and no further payments will be due from Company to Contractor.

SECTION 10.0 – DEFAULT AND DISPUTE RESOLUTION

10.1 Breach and Remedies. Any one or more of the following events will constitute a breach of Contract by Contractor:

a. Contractor becomes or is adjudicated bankrupt or insolvent, files a voluntary petition in bankruptcy, or is placed into receivership;

b. Contractor assigns this Contract without the prior written consent of Company;

c. Contractor fails to timely pay any Subcontractor or Supplier as applicable law requires; or

d. Contractor fails to comply with any of its obligations under this Contract.

Upon the occurrence of a breach by Contractor, Company may exercise any and all remedies available to it under the Contract and at law or in equity, including, but not limited to, specific performance. The remedies provided by this Contract and not exclusive and will in addition to all other rights and remedies available in law or equity and no action by Company will constitute a waiver of any other rights or remedies.

10.2 Venue and Governing Law. All disputes, claims, and controversies between the parties arising out of or related to this Contract, other than those matters which are subject to the Arizona Corporation Commission's jurisdiction, may only be brought in a court of competent jurisdiction in Maricopa County, Arizona. This Contract will be governed by and construed in accordance with the laws of the State of Arizona, without regard to its choice of laws' provisions.

10.3 Attorneys' Fees and Costs. In the event any claim, controversy, or legal action, including arbitration, arises under this Contract, the prevailing party or parties will be entitled to recover from the non-prevailing party or parties all reasonable attorneys' fees, costs, and expenses incurred by the prevailing party or parties.

10.4 Liquidated Damages. Contractor agrees that Company will suffer damages if Contractor fails to complete the Work by the Completion Date and that it will be extremely difficult to prove or estimate such damages and thus not feasible for Company to obtain an adequate remedy. For example, Company is unable to implement rate increases approved by the Corporation Commission or otherwise obtain a return on its investment for this Project until construction is fully completed. Company would continue to incur overhead expense and the costs associated with alternative infrastructure put in place to continue services despite the disruptions caused by this Project. Accordingly, Contractor agrees to pay liquidated damages as set forth in Table 10.4, taken from the Maricopa Association of Government ("MAG") form specifications, for each and every day the Work remains incomplete after the Completion Date.

TABLE 10.4
LIQUIDATED DAMAGES

Original Contract Amount	Daily Charges
$0 to $25,000	$210
$25,000 to $50,000	$250
$50,000 to $100,000	$280
$100,000 to $500,000	$430
$500,000 to $1,000,000	$570
$1,000,000 to $2,000,000	$710
$2,000,000 to $5,000,000	$1,070
$5,000,000 to $10,000,000	$1,420
Greater than $10,000,000	$1,780

If Company chooses not to withhold liquidated damages, such choice will not waive Company's right to assess liquidated damages against Contractor at a later date. If this Section 10.4 is later determined to be unenforceable, then Company will be entitled to recover its actual damages incurred as a result of Contractor's delays.

10.5 Claims by Contractor. Regardless of any disputes between the Parties, Contractor will at all times proceed diligently with prosecution of the Work. Contractor will provide written notice of a claim no later than seven days after the events giving rise to the claim were discovered. Such notice will reasonably describe the alleged damages incurred and give the most accurate estimate possible of the amounts of damages incurred. Failure by Contractor to deliver this notice or to provide this information within the time required will constitute a waiver of Contractor's rights with respect to such claim.

SECTION 11.0 – AUTHORIZATION TO BILL AND PAYMENT

11.1 Required Authorization to Bill Meeting with the Company Authorized Representative; Draft Invoice. No later than seven days after the end of every billing period, and before submitting any invoice to Company, whether for progress payments, final payment, release of retention, or otherwise, Contractor must schedule and conduct a meeting with the Company Authorized Representative to review and discuss the Work performed during the previous billing period. At this meeting, Contractor will present a draft billing ("Draft Invoice") to be discussed and revised until Contractor and Company have agreed upon the amount to be billed ("Invoice"). Contractor acknowledges a Draft Invoice for discussion and revision is not an authorized "billing" for purposes of compliance with ARS § 32-1181 et seq.

11.2 Invoices and Required Documentation. Contractor must submit to Company all Invoices using the American Institute of Architects standardized method of billing using forms G-702 and G-703, and in no other method except with prior authorization in writing by the Company Authorized Representative. Contractor must submit with each Invoice all

documentation Contractor possesses that supports the Invoice. Such documentation must include at a minimum the following:

a. Copies of all bills, receipts, and other statements for all costs and expenses Contractor incurred for all materials, labor, equipment, and services used to perform the Work or incorporated into the Work during the billing period;

b. Invoices and receipts for Subcontractors that performed any portion of the Work during the billing period, along with copies of all bills, receipts, and other statements for all costs and expenses the Subcontractors incurred for all materials, labor, equipment, and services used to perform the Work or incorporated into the Work during the billing period;

c. Lien waivers and releases from Contractor, all Subcontractors, and all Suppliers for all materials, labor, equipment, and services used to perform the Work or incorporated into the Work during the billing period. Specifically, Contractor will provide for the billing period of an Invoice a conditional lien waiver, using the Company's form, from itself and all subcontractors, sub-subcontractors, and suppliers furnishing labor, materials, equipment, or fixtures to the Work. Contractor will also provide for the prior month's paid Invoice an unconditional lien waiver, using the Company's form, from all subcontractors, sub-subcontractors, and suppliers furnishing labor, materials, equipment, or fixtures to the Work.

Company will pay the amount of an Invoice Company certifies and approves using the Company's Authorization to Bill process, less amounts described in this Section 11 and less the estimated cost of any paving required of Contractor. The Company will not pay Contractor for materials not actually incorporated into the Work, and the storage, protection, and handling of such materials will remain Contractor's responsibility, subject to Section 11.3. Amounts withheld for paving will be paid by Company within twenty days after inspection of permanent paving by Company and acceptance by governmental agencies having jurisdiction.

Contractor must send Invoices to Company by email at:

accountspayable@azwater.com

The email address above is the email address for the only persons designated by the Company for receipt for certification and approval of the Contractor's Invoices. Invoices sent to the Company in any other way will not be processed and Contractor will not charge Company any interest or late charges..

11.3 Progress Payments. If Company makes progress payments to Contractor, Company may elect to not include in progress payments costs for materials not yet incorporated into the Work. Company may choose to include in progress payments costs for materials previously delivered and securely stored at the Site or another location Company approves if Company has inspected and approved such materials and if Contractor provides to

Company bills of sale from vendors, invoices, lien waivers, and other proof that Contractor has purchased, paid for, and received the materials free and clear of liens, charges, security interests, or encumbrances and that the materials are covered by appropriate property insurance.

11.4 Retention. Company may withhold 10% of the Contract Price, including 10% of any progress payment, as retention. Company will have no obligation to pay the retention to Contractor until Company provides Notice of Final Acceptance of the Work to Contractor and Contractor complies with the requirements of Section 11.1 for release of retention.

11.5 Payment Not a Waiver. No payment or release of retention by Company will release Contractor from any liability or any obligation under this Contract.

11.6 Joint or Direct Checks. If Company has concerns about Contractor's ability to timely pay any Subcontractor or Supplier as applicable law requires, Company may make payments to Contractor by checks payable jointly to Contractor and Subcontractors and Suppliers, or any of them; or, when in the sole opinion of Company it is advisable, Company may make payments directly to Contractor's Subcontractors and Suppliers and any amount so paid will be deducted from the amounts owed to Contractor under this Contract.

11.7 Liens. If Contractor fails to timely pay any Subcontractor or Supplier as applicable law requires, Company will have the right to retain out of any payment to Contractor then due or thereafter to become due an amount sufficient to completely indemnify Company against liens or claims for which Company might become liable and which are chargeable to Contractor or any Subcontractor. If Company, in its sole discretion, determines that any such lien or claim is valid, Company may pay and discharge the same and deduct the amount so paid from any monies which may be or become due and payable to Contractor.

11.8 Accounting of Materials. With its last Invoice submitted to Company, Contractor will submit an itemized accounting to the Company of all materials incorporated into the Work, including all supporting original subcontractor and vendor invoices and satisfactory evidence of payment thereof.

11.9 Financial Records and Company's Right to Inspect and Audit. Contractor will upon reasonable notice make its financial records arising out of or related to the Contract and the Work available to Company for inspection and audit, scanning, copying, and/or reproduction during normal business hours. Either Company or its representatives may conduct such inspections and audits. Company or its representatives may conduct such inspections or audits throughout the term of this Contract and for a period of five years after final payment. Such audits and inspections may also include, without limitation, Company or its representatives counting employees at the Site, witnessing the distribution of payroll, verifying information and amounts through interviews and written communications with Contractor's employees, Subcontractors, suppliers, and vendors.

SECTION 12.0 – WARRANTY AND INDEMNITY

12.1 Warranty. Contractor warrants to Company for the duration of the Warranty Period that:

a. All materials and equipment furnished under the Contract will be good quality and new unless the Contract requires or permits otherwise;

b. All Work will conform to the requirements of the Contract and all applicable laws, rules, regulations, and standards; and

c. All materials, equipment, and Work will be free from defects and will not become defective.

All materials, equipment, and Work that do not conform to these requirements will be considered defective. If Company requires, Contractor will furnish satisfactory evidence as to the kind and quality of materials and equipment. Neither Company's partial nor complete occupancy of the Site nor Company's partial or final acceptance of the Work will relieve Contractor of any liability under this warranty. Other warranties may be detailed elsewhere in the Contract with specified coverages or time periods, but these will in no event negate or diminish the warranty detailed in this Section. In addition to the express warranties set forth in this Contract, Company retains all other warranties, express or implied, the law provides.

This warranty is in addition to any warranty the manufacturer or supplier of any materials or equipment provides. Contractor agrees to assign to Company at the time of Company's Notice of Final Acceptance any and all manufacturer's warranties relating to materials and equipment used in the Work, and further agrees to perform the Work in such manner so as to preserve any and all such manufacturer or supplier warranties. If necessary as a matter of law, Contractor will retain the right to enforce directly any such manufacturer or supplier warranties.

12.2 Warranty Work. During the Warranty Period, Contractor will correct any Work that does not comply with the requirements of this Contract, is defective, or becomes defective ("Warranty Work"). Warranty Work will, at Company's choice, include correction, removal, and replacement of the non-complying or defective Work and any damage the non-complying or defective Work caused to other parts of the Work and Company's system. Upon receipt of notice of the non-complying or defective Work from Company, Contractor will perform Warranty Work within seven days and during Company's normal business hours. If Company determines that the non-complying or defective Work has caused an emergency, Contractor will immediately perform the Warranty Work, or, if such emergency warrants, Company may remedy and mitigate such emergency and invoice Contractor for reimbursement. Contractor will immediately pay any such invoice.

Contractor acknowledges it included the cost for all Warranty Work and obligations in its Bid and the Contract Price and that neither Contractor nor any Subcontractor will be entitled to any additional compensation from Company for Warranty Work.

12.3 Indemnity. To the fullest extent permitted by law, Contractor and its respective successors and assigns will indemnify, protect, defend, and hold harmless Company, its officers, directors, employees, shareholders, representatives, affiliates, and agents (each, a "Company Indemnified Party") for, from, and against all claims, losses, damages, costs, and liabilities, regardless of the nature, type, or cause, including without limitation all claims for personal injury, loss, or damage to or destruction of property, the presence of hazardous materials or pollutants, penalties, fines, and judgments, associated investigative and administrative expenses, and defense costs, including but not limited to reasonable attorneys' fees, court costs, and costs of alternative dispute resolution, arising out of, related to, resulting from, or in connection with Contractor or any Subcontractor's performance, breach, or nonperformance of any covenant or obligation of this Contract, regardless of whether such claims, losses, damages, costs, and liabilities were caused or alleged to have been caused in part by the fault or negligence of a Company Indemnified Party.

Upon notice from Company and at no expense to Company, Contractor will defend Company with competent counsel reasonably acceptable to Company in all suits, legal actions, and other proceedings of any kind concerning all claims and liabilities described in this Section 12.3. Contractor's obligations pursuant to this paragraph will survive the expiration or termination of this Contract and will survive Company's partial and final acceptance of the Work.

Contractor's indemnity obligation will not be limited by any limitation on the amount or type of damages payable by Contractor or a Subcontractor under any workers' compensation acts, disability benefits acts, or other employee benefits acts.

SECTION 13.0 – MISCELLANEOUS PROVISIONS

13.1 Time is of the Essence. Time is of the essence for each and every provision of this Contract and each Party will diligently perform its obligations in a timely fashion in accordance with the provisions of the Contract.

13.2 Notice Provisions. All notices and other communications this Contract requires must be in writing and sent by certified mail, personal delivery, or overnight courier as follows:

To Arizona Water: ARIZONA WATER COMPANY
3805 North Black Canyon Highway
Phoenix, Arizona 85015-5351
Attention: President

To Contractor: At the address shown on the Proposal/Contract

A Party may change its address by giving notice of such change of address to the other Parties. Notice sent by certified mail will be deemed received five days after mailing. All other communications regarding this Contract may be by U.S. Mail, overnight courier, personal delivery, facsimile, or email.

13.3 No Execution in Counterparts. This Contract may not be signed in counterparts.

13.4 Succession. This Contract is binding upon and will inure to the benefit of the Parties and their successors and assigns. Each reference to Contractor in this Contract includes its successors and assigns. Contractor may not assign all or any part of its obligations, liabilities, rights, duties, or the satisfaction of any condition under this Contract to any party either expressly, impliedly, or by operation of law, including to any bankruptcy trustee or receiver, without Company's prior notice of approval. As conditions precedent to Company's notice of approval of any assignment:

a. Contractor must not be in breach or default under this Contract, and

b. Contractor must satisfy Company of the assignee's ability to fully perform hereunder, and

c. The assignee must assume all obligations of Contractor under this Contract.

Fulfillment of these terms alone will not obligate Company to agree to any assignment of this Contract.

13.5 Further Instruments. The Parties will sign any further instruments and perform any further act which may become reasonably necessary to carry out the terms of this Contract.

13.6 Waiver. No waiver hereunder, expressed, or implied, will imply any other waiver, at the same or subsequent time, whether of the same obligation or of any other obligation. No waiver hereunder will be deemed effective unless expressly set forth in writing.

13.7 Third-Party Beneficiaries. The terms and conditions of this Contract are for the benefit of the Parties and there are no intended third-party beneficiaries under this Contract other than the following:

a. An applicant for water service from Company whose real property will receive water service through the Work; and

b. A developer, home builder, person, or entity whose real property, development, or project will receive water service through the Work.

13.8 Drafter. Each Party will be considered the drafter of this Contract and this Contract will not be construed against either Party as the drafter thereof. Without limiting the generality of the terms of this Contract, the singular number includes the plural, the plural number includes the singular, the masculine and feminine genders are intended to be used interchangeably, and the term "person" includes both legal entities and natural persons.

13.9 Force Majeure. In this clause "Event of Force Majeure" means an event beyond the control or reasonable anticipation of Company or Contractor, which prevents one or both Parties from complying with any of their obligations under this Contract, including but not limited to:

a. Acts of God (such as, but not limited to, fires, explosions, earthquakes, drought, tidal waves, and floods);

b. War, hostilities (whether war be declared or not), invasion, act of foreign enemies, mobilization, requisition, or embargo;

c. Rebellion, revolution, insurrection, military or usurped power, or civil war;

d. Contamination by radioactivity from any nuclear fuel, nuclear waste, radio-active toxic explosive, hazardous properties of any explosive nuclear assembly or nuclear component of such assembly, or any other radio-active materials;

e. Riot, commotion, strikes, work stoppages, go slows, lock outs or disorder; or

f. Acts or threats of terrorism.

Government policies and other events that do not prevent Contractor from complying with its obligations under this Contract, but merely make compliance less profitable or unprofitable, are not Events of Force Majeure.

Neither Company nor Contractor will be considered in breach of this Contract to the extent that an Event of Force Majeure prevents them from performing their respective obligations. When an Event of Force Majeure prevents a Party from performing its obligations under this Contract, the affected Party will immediately give notice to the other Party of an Event of Force Majeure. Upon receipt of such notice, Company may terminate this Contract at any time and Contractor may terminate this Contract after 180 days. If a Party cancels this Contract pursuant to this paragraph, Company will be liable to pay Contractor pursuant to the terms of Section 11 and only for those portions of the Work completed before the non-affected Party receives the notice of an Event of Force Majeure. Contractor will not be entitled to additional compensation for an Event of Force Majeure.

ARIZONA WATER COMPANY AUTHORIZATION TO BILL	ATB NO.:	WA NO.:

CONTRACTOR:	PROJECT NAME:

COMPANY AND CONTRACTOR HAVE AGREED THAT CONTRACTOR MAY INVOICE COMPANY THE FOLLOWING AMOUNT FOR WORK COMPLETED DURING [Insert Time Period]:

Meeting Date: (Insert Name)

Contractor's Representative (Insert Name)

Company's Authorized Representative (Insert Name)

SPECIAL INSTRUCTIONS

TOTAL AMOUNT AUTHORIZED TO BILL:	$ -

cc: Accounts Payable

Account Codes	Dollar Amount
Total	0.00

By signing below, I certify I have reviewed and approved the work papers detailing this dollar amount.

Division's Authorized Representative Date

Engineerings's Representative Date

Engineering Management's Representative Date

ARIZONA WATER COMPANY

Payment Tracking Spreadsheet

Contractor: Project Description:	Contract Totals	Qty	Dollars	ATB No. 1 Month Year Quantity	 Total	Qty Amt Paid	Qty Amt Remain	Total Paid
Contract Line Items								
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
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	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -
	$ -	0		0	$ -	0	0	$ -

			Totals
TOTAL PAYMENT AUTHORIZED	$0.00	$ -	$ -
Retention		$ -	$ -
TOTAL EARNED		$ -	$ -

APPLICATION AND CERTIFICATION FOR PAYMENT

AIA DOCUMENT G702 PAGE ONE OF PAGES

TO GC: Arizona Water Company
PO Box 29006
Phoenix, AZ 86038-9906

PROJECT:
Address:

APPLICATION NO:

Distribution to:
☐ OWNER
☐ ARCHITECT
☐ CONTRACTOR
☐
☐

PERIOD TO:

FROM SUBCONTRACTOR:

PROJECT NO:

CONTRACT FOR:

CONTRACT DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM		$
2. Net change by Change Orders		$
3. CONTRACT SUM TO DATE (Line 1 ± 2)		$
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)		$
5. RETAINAGE:		
a. 10 % of Completed Work (Column D + E on G703)	$	
b. _____ % of Stored Material (Column F on G703)	$	
Total Retainage (Lines 5a + 5b or Total in Column I of G703)		$
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total)		$
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)		$
8. CURRENT PAYMENT DUE		$
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6)		$

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this Month		
TOTALS		
NET CHANGES by Change Order		

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

SUBCONTRACTOR:

By: _____ Date: _____

State of: County of: _____

Subscribed and sworn to before me this day of _____

Notary Public:
My Commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED . . . . . $ _____

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and onthe Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CONTINUATION SHEET *AIA DOCUMENT G703* PAGE OF PAGES

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing
Contractor's signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO:
APPLICATION DATE:
PERIOD TO:
PROJECT NO:

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED FROM PREVIOUS APPLICATION (D + E)	E WORK COMPLETED THIS PERIOD	F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	G % (G ÷ C)	H BALANCE (C - G)	I RETAINAGE (IF VARIABLE RATE)
1		$ -	$ -	$ -		$ -			$ -
2		$ -	$ -	$ -		$ -			$ -
3		$ -	$ -	$ -		$ -			$ -
4		$ -	$ -	$ -		$ -			$ -
5		$ -	$ -	$ -		$ -			$ -
6		$ -	$ -	$ -		$ -			$ -
7		$ -	$ -	$ -		$ -			$ -
8		$ -	$ -	$ -		$ -			$ -
9		$ -	$ -	$ -		$ -			$ -
10		$ -	$ -	$ -		$ -			$ -
	PLEASE BREAKDOWN THE TOTAL SCHEDULED VALUE (INCLUDING CHANGE ORDERS)								
	Total Labor:	$ -							
	Total Materials:	$ -							
	Total Tax:	$ -							
	Total Scheduled Value:	$ -							
	GRAND TOTALS	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	$ -

Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity

ARIZONA WATER COMPANY

CONSTRUCTION SPECIFICATIONS: E-8-1

ARIZONA WATER COMPANY

E-8-1

CONSTRUCTION SPECIFICATIONS FOR THE INSTALLATION OF WATER DISTRIBUTION SYSTEMS DUCTILE IRON

DEFINITIONS

A. Company. The words "Company" or "Arizona Water Company" mean Arizona Water Company, and where applicable, any division of Arizona Water Company, whose principal place of business is located at 3805 North Black Canyon Highway, Phoenix, Arizona 85015-5351 (Post Office Box 29006, Phoenix, Arizona 85038-9006).

B. Company's Authorized Representative. The words "Company's Authorized Representative" mean any officer of the Company, and any of the Company's Engineers, any Division Manager or Superintendent of the Company and/or such other person(s) designated in writing as the "Company's Authorized Representative" by the President or any Vice President of the Company.

C. Contractor. The word "Contractor" means either an individual or other entity employed to do the work as shown on the Construction Drawings and as specified herein.

D. Construction Drawings. The words "Construction Drawings" mean plans prepared by or on behalf of Arizona Water Company.

E. Contract. The word "Contract" means the written document titled "Proposal/Contract" when such document has been signed by an officer or other authorized representative of both the Contractor and the Company.

CONSTRUCTION SPECIFICATIONS
FOR THE INSTALLATION OF WATER DISTRIBUTION SYSTEMS
DUCTILE IRON

1. GENERAL

All work is to be completed in a safe, workmanlike manner and in accordance with these Construction Specifications; any deviation therefrom must be approved in writing by the Company.

Installations must conform with the requirements of all governmental regulating agencies and the cost of conforming to such regulations must be included in the unit bid prices. Examples of such regulations, without attempting to be inclusive, are:

a. Special compaction and paving for street crossing.
b. Shoring when required because of the trench depth.
c. Closing a trench in those areas where no open trench is allowed overnight.
d. Barricading and traffic control as required.

2. LOCATION MARKING

Alignment stakes as required in the opinion of the Company shall be furnished by the Company to the Contractor and shall be set by the Company at agreed upon intervals and offsets. Under normal circumstances these will reference the pipeline location five feet (5') into the right-of-way measured from property pins. Grade stakes will be provided only when the Construction Drawings show a pipeline depth other than covered in these Specifications. It is the responsibility of the Contractor to preserve all survey work.

3. TRENCH EXCAVATION

The trench location is to be determined by the Construction Drawings.

FOR 8-INCH OR SMALLER PIPE: The depth of the trench prior to pipe laying shall be such that the finished pipeline shall have between thirty-six inches (36") and forty-two inches (42") of cover unless otherwise specified on the Construction Drawings.

FOR 12-INCH AND LARGER PIPE: The depth of the trench prior to pipe laying shall be such that the finished pipeline shall have between forty-eight inches (48") and sixty inches (60") of cover unless otherwise specified on the Construction Drawings.

The width of the trench at and below the level at the top of the pipe shall be a minimum of twelve inches (12") plus the outside diameter of the pipe barrel and a maximum of twenty-four inches (24") plus the outside diameter of the pipe barrel.

The bottom of the trench shall be accurately graded to provide a uniform bearing for each length of pipe for the full length of the pipe. If the native material on the trench bottom can be reasonably dug by hand, bell holes shall be dug for the joints so that the joints in no way support the pipe. When native materials such as rock are encountered during

trenching that will not provide a uniform support for the pipe, the trench will be over-excavated an additional six inches (6") and suitable bedding material will be placed in the trench.

Bedding material will be placed by hand in four-inch (4") lifts and compacted to ensure uniform compaction and to eliminate any voids under the pipe. When the space between the pipe and trench bottom varies, this must be backfilled and compacted in four-inch (4") lifts to the mid-section of the pipe.

Whenever the trench is over-excavated for whatever reason, the trench bottom will be brought up to the correct depth at the Contractor's expense using either method (a) or (b) as follows:

a. A.B.C. material shall be used and compacted to a uniform density of not less than 80% of the maximum density as determined by AASHTO T-99 method A and T-191.

b. Native material 100% of which will pass through a one and one-half inch (1½") screen and at least 20% of which will pass through a number-8 screen shall be used and compacted to a uniform density of not less than 85% of the maximum density as determined by AASHTO T-99 method A and T-191.

4. MATERIALS TO BE PROVIDED BY CONTRACTOR

Unless otherwise specified on the Construction Drawings or in the Contract, the Contractor will supply all of the necessary materials which will become a permanent and integral part of the water distribution system, including concrete blocking, anchors, backfill material, paving material and supplies used during the prosecution of the work. All materials provided by the Contractor to construct the water distribution system must be NSF Standard 61 approved. All potable water pipes and fittings shall have NSF-PW seal. Construction materials used in the water system shall be lead free as defined at AAC R18-5-504 and R18-1-101. The Contractor will provide the following materials:

a. FIRE HYDRANTS: Mueller Super Centurion 250 Fire Hydrant, meets ANSI/AWWA C502 Standard, Model No. A-423, 5¼" main valve opening, three way, 6" Mechanical Joint Shoe, 1½" pentagon operating nut, color - yellow, drain open, open direction - left, 4' or 4'6" bury depending on application. For pumper and hose nozzle information see below.

(1) 1 - 4" Pumper Nozzle, NST and 2 – 2½" Hose Nozzles, NST. (These locations only: Ajo, Casa Grande, Coolidge and San Manuel.)

(2) 1 – 4½" Pumper Nozzle, NST and 2 – 2½ " Hose Nozzles, NST. (These locations only: Apache Junction, Arizona City, Lakeside, Oracle, Overgaard, Pinewood, Rimrock, Sedona, Sierra Vista, White Tank and Winkelman.)

(3) 1 – 4½" Pumper Nozzle, NST and 2 – 2½" Hose Nozzles, NPT (Bisbee only.)

(4) 1 - 3" Pumper Nozzle GA 6-350 (6 threads per inch, 3.50 pitch diameter) and 2 – 2½" Hose Nozzles, NPT (Miami only.)

(5) 1 – 3½" Pumper Nozzle GA 6-411 (6 threads per inch, 4.11 pitch diameter) and 2 – 2½" Hose Nozzle, NST (Superior only.)

b. FITTINGS: Manufactured by Tyler or Union. Crosses, Elbows, Tees, Cap, Reducer, Adapter, Plug, Blind Flange and Tapped Flange; Ductile Iron, Class 350, SSB, Cast Iron Cement Lined.

(1) Foster Adaptors for MJ, made by Infact Corporation: Available in size 4" to 16". Part No. 4" = 4FA-BC, 6" = 6FA-BC, 8" = 8FA-BC, 10" = 10FA-BC, 12" = 12FA-BC, 16" = 16FA-BC.

c. DETECTOR CHECK VALVE: Mueller/ Hersey EDC III, iron body, including 5/8" x ¾" Trim Kit. Trim Kit Part No.: 4" = 282080, 6" = 282082, 8" = 282085, 10" = 282496.

d. GATE VALVES: Mueller Resilient Wedge Gate Valves, meets AWWA C509 specification, 250 psig, Non-rising stem, Part No. A-2360 sizes 4" through 12" ; Part No. A-2361 sizes 14" through 36", low zinc stems, epoxy coated inside and outside to meet the NSF 61 rating. The bonnet and stuffing box shall have 304 stainless steel bolts/nuts.

e. TRACER WIRE and WARNING TAPE:

1. TRACER WIRE: Shall be direct bury AWG #14 solid copper wire, Color: Blue.

2. WARNING TAPE: Reef Industries, Standard Terra Tape in 3" widths. Color: Blue and imprinted 'Arizona Water Company'.

f. AIR RELEASE VALVE: Crispin Model AR10 with 1" NPT inlet and ½" NPT outlet, cast iron body and top flange; with a 5/64" orifice with stainless steel valve sealing faces and BUNA-N rubber.

g. PRESSURE RELIEF VALVE: Watts 174A, Model M, 2" inlet, 2" outlet, Bronze Body, 30lb. to 150lb. pressure range.

h. MEGA LUG: Mechanical Joint restraint made of ductile iron conforming to ASTM 536-80, 250 psi made by EBAA Iron, Inc., series 1100 or equal.

i. METER BOXES:

(1) Concrete Box with a steel regular lid, Number 1: Tucson specification.

(2) Concrete Box with a steel regular lid, Number 2, 3, and 4: Phoenix specification.

j. PIPE, COPPER: Type K soft copper in 60 or 100-foot coils, per ASTM B88.

k. PIPE, DUCTILE IRON: Ductile Iron Pipe, Cement Lined, Push-on, conform to current ANSI/AWWA Specification A21.51/C151, Pressure Class 350 (sizes 4" through 12"), Pressure Class 250 (sizes 14" through 20"), or Pressure Class 200 for 24" through 36" pipe. Vendors:
   (1) Pacific States Cast Iron Pipe Company
   (2) Griffin Pipe
   (3) United States Pipe and Foundry Company
   (4) American Ductile Iron Pipe
   (5) Clow Pipe (McWane, Inc.)

l. PIPE, PLASTIC: Plastic pipe, C-900 PVC per ANSI/AWWA C900, Class 235, sizes 4" through 12". NSF61 approved. Furnished in laying lengths of 20'. The barrel shall conform to the outside dimensions of steel pipe (IPS) or cast iron (CI) pipe equivalent and the wall thickness of dimension-ratio (DR) 18. The use of C-900 Plastic Pipe is only allowed in the Coolidge area of the Pinal Valley water system with prior written approval from the Company's Engineering Department.

m. POLYETHYLENE ENCASEMENT (Polywrap): For all pipeline and related fittings installed, EXCEPT for the Coolidge Division. Minimum 8 Mil. and installed per AWWA C105/A21.5-93 and ASTM A-674-89. Manufactured by the Pacific States Cast Iron Pipe Company. The wrapping tape shall be minimum 10 mil. vinyl tape. No duct tape shall be used.

n. COUPLING: Mueller, straight three part union, tested to meet ANSI/AWWA C800, H15403, conductive compression.

   Mueller, H15428, straight coupling, conductive compression by male iron pipe, tested to meet ANSI/AWWA C800 specification. Size: 2".

   Mueller, H15451, straight coupling, conductive compression by female iron pipe, tested to meet ANSI/AWWA C800 specification. Size: 2".

   Viking Johnson brand, sold by Mueller: MaxiFit Straight (2"-24"), MaxiFitXtra Straight (4"-8") or MaxiStep Transition, tested to meet AWWA/ANSI C.219-91 specifications – certified to ISO 9001:1994 / Smith – Blair Quantum.

o. STOP, ANGLE METER, BALL: Mueller, valve, B24258, conductive compression by meter swivel nut, tested to meet ANSI/AWWA C800, size 5/8 " x ¾" x ¾" for a ¾" service or size 1" for a 1" service.

   Mueller, valve, B24265, female pipe thread by meter swivel nut, tested to meet ANSI/AWWA C800, size 5/8" x ¾" x ¾" for a ¾" service or size 1" for a 1" service.

p. STOP, CORP: Mueller, ball valve, B25008, taper thread by conductive compression, tested to meet ANSI/AWWA C800 specification, sizes: ¾", 1" and 2".

   Mueller, ball valve, B25028, iron pipe thread by conductive compression, tested to meet ANSI/AWWA C800 specification. Sizes ¾", 1", and 2".

Mueller, 300 Ball Curb Valve, B-25122, taper thread by conductive compression, tested to meet ANSI/AWWA C800 specifications, size: 2". (2" service)

q. STOP, CURB: Oriseal valve, H10291, iron pipe thread by iron pipe thread, quarter turn check, brass, tested to 300 psi working pressure, tested to meet ANSI/AWWA C800 specification, size: 2".

Mueller, B20283, Mueller 300 ball curb valve, female iron pipe by female iron pipe, quarter turn check, tested to meet ANSI/AWWA C800 specification. Size: 2". (Blow-off E-9-8-1).

r. TAPPING SADDLE: Smith Blair, Cast Bronze ASTM-B584 85-5-5-5, double strap, iron pipe threads, Models 321 and 323. Washers are silicon bronze, ASTM-B36. Gaskets are grade 60 Buna N, or Mueller bronze double strap service saddle, BR 2 B series, cast bronze, ASTM-B585, 85-5-5-5, or H16084, 200 psig, meets ANSI/AWWA C800.

s. TAPPING SLEEVE: Mueller H304 Stainless Steel Tapping Sleeve, JCM 432 18-8 Type 304 Stainless Steel Tapping Sleeve, Romac "SST" Type 304 Stainless Steel Tapping Sleeve or CASCADE-style CST-EX stainless steel pressure-rated tapping sleeve.

t. TAPPING VALVE: Mueller Resilient Wedge tapping valve, Catalog Number T-2360-16, Class 125, sizes 4" through 12"; T-2361-16, Class 125, sizes 14" to 36" all with Type 304 stainless steel fasteners; bypass valves are required on 18" – 36" valves flange by mechanical joint per ANSI/AWWA C111, iron wedge, non-rising stem. Epoxy coated interior/exterior per ANSI/AWWA C550 for NSF 61 compliance. 250 PSI range for valves 4" to 12". 150 PSI range for valves 14" to 36".

u. U-BRANCH: Mueller, H15364, 1" male iron pipe by ¾" male iron pipe, tested to meet ANSI/AWWA C800 specification. Size: 1" x ¾" x 13½", straight line.

v. VALVE BOXES: Valve Box with Cover, adjustable, Tyler 562-A or equal, made of cast iron.

w. VAULTS: Utility Vault Company, Chandler, AZ.

(1) 4484-WA concrete vault with a 3660 aluminum double torsion door with a recessed padlock hasp, two - 18" x 24" center knockouts.

(2) 575-WA concrete vault with a 4874 aluminum double torsion door with a recessed padlock hasp, two - 18" x 24" center knock outs and adjustable frame.

(3) 612-5X-WA concrete vault with a 4874 aluminum double torsion door with a recessed padlock hasp, two - 18" x 24" center knockouts.

x. VALVE, METER: Mueller, B24265-1, Mueller 300 ball angle meter valve, female iron pipe by meter nut, quarter turn check, lock wing, tested to meet ANSI/AWWA C800 specification. Size: 1".

Mueller, B25170, Mueller 300 ball straight valve, conductive compression by female iron pipe, quarter turn check, lock wing, tested to meet ANSI/AWWA C800 specification. Size: 1".

y. YOKES, METER: Relocator type copper meter yoke with horizontal inlet and outlet and meter thread ends, B24118, with lock wing Mueller 300 angle ball valve, full port, sizes: 1" x 12", 5/8" x ¾" x 7", 5/8 x ¾" x 9".

Mueller, 2" copper meter yoke with horizontal inlet and outlet and female iron pipe threads, B2423-99000, with lock wing Mueller 300 ball angle meter valves on inlet and outlet risers. Raised 1" by-pass with lock wing Mueller 300 ball valve.

The Contractor also will be required to provide the following materials, the cost of which will be included in its unit bid price:

All material and concrete for thrust blocks, other anchors, reinforcing steel; all gravel, crushed stone, A.B.C., earth, sand, or screened material which may be required; all material for bracing and shoring trenches and for construction of forms; all barricades and traffic control equipment; all material for paving replacement and any water used for compaction of backfill.

5. INSTALLATION OF MATERIALS

All materials are to be installed in accordance with manufacturers recommendations unless otherwise directed by these Specifications.

All pipe, fittings and valves shall be laid true to the lines, grades and locations established by the Specifications and the Construction Drawings.

The ends and inside of the pipe shall be thoroughly cleaned and inspected for damage. No damaged materials shall be installed in the water distribution system.

Whenever the work ceases for any reason, all open pipeline ends shall be tightly plugged by the Contractor. Plugs shall be watertight and approved by the company.

Concrete thrust blocks of the sizes required by the plans and specifications are to be provided at all valves, changes in direction or size, or at any other point where an unbalanced thrust due to water pressure would exist. Thrust blocks are to be formed to prevent any concrete from spilling over or into a joint.

Trench curves as shown on the Construction Drawings may be made without fittings when using push on joint pipe up to twelve inches (12") in diameter, if the deflection of the pipe does not exceed five degrees (5□) or nineteen inches (19") per eighteen-foot (18') length of pipe. The minimum radius of such curves will be two hundred five feet (205').

Prior to construction, the appropriate agency(ies) will be notified as required by the permit(s).

It shall be the Contractor's responsibility to uncover all existing water lines being connected to, and to verify the location, depth and size of pipe before any construction begins.

Any construction performed without the knowledge of the duly authorized representative is liable for removal and replacement at the Contractor's expense.

All fire hydrants, frames, covers and valve boxes, etc. shall be adjusted to finished grade prior to the placing of the asphalt concrete surface course by the Contractor (where applicable).

Air release valves shall be installed at water system high points per Standard Detail E-9-8-2.

All water services shall be set a minimum of two feet (2') on the customer's property, preferably within the P.U.E. and not within right-of-way.

Unless otherwise specified on the construction drawings, all water mains shall be installed five feet (5') from the property line inside the right-of-way or easement.

Water valves shall be spaced not more than five hundred feet (500') in commercial districts and not more than eight hundred feet (800') in other districts. Variations may be required for transmission mains or special applications.

Installation of water line casing shall be per Standard Specification E-9-24-1.

Tracer Wire and Warning Tape are to be installed on all mains, tees, crosses, ells and fire hydrant laterals. They will not be installed on service lines. The tracer wire will be installed on the water main 45 degrees from the vertical centerline of the pipe and shall be taped to the fittings directly and on the main every 10 feet using a minimum 10 mil vinyl tape. The tracer wire shall be placed between the valve riser and box with a minimum of 12" of wire inside. The warning tape shall be installed a minimum of two feet below the surface, being measured from final grade, directly over the center of the pipe. Any splices in the tracer wire shall be joined using waterproof connectors. Any splices in the warning tape shall be joined using minimum 10 mil vinyl tape. The tracer wire shall be tested for continuity after backfill and compaction, but before paving. Any detected damages to the wire shall be repaired before paving will be allowed.

6. BACKFILL OF WATER MAIN TRENCHES

Backfill of any excavation shall conform to the requirements of any of the governmental agencies having jurisdiction over the location. If no governmental agency having such jurisdiction specifies backfill or compaction requirements, and no special requirements are shown on the Construction Drawings, the procedure set forth in this section will apply for water line trenches.

The bedding material above the pipe and backfill material shall be compacted to a minimum of 70% compaction within a utility easement and 80% compaction within a

right-of-way as determined by AASHTO T-99 method A and T-191. If water settling is used for compaction, it is the responsibility of the Contractor to prevent the pipe from floating.

The bedding material shall be either native material, 100% of which will pass through a one and one-half inch (1½") screen and at least 20% of which will pass through a number-8 screen, or imported material which conforms to M.A.G. specifications for A.B.C. or type-B select materials. Bedding material shall be used below and around the pipe and a minimum of twelve inches (12") above the pipe. Shade and bedding material to be mechanically compacted prior to remainder of trench back-fill.

The remainder of the trench shall be backfilled with native or imported material which shall be of sound earthen material free from broken concrete, wood, broken pavement, or other unsuitable substances. Except as otherwise specified, backfill may be material containing no pieces larger than six inches (6") in greatest dimension.

Where settlement occurs, additional backfill material shall be placed and compacted and the trench shall be brought to final grade.

7. HYDROSTATIC TESTING OF COMPLETED PIPELINES

Hydrostatic testing of water pipelines will be completed before the new system is connected into the existing water system so that all testing can be done against all new materials.

The completed section of water pipeline to be tested shall be slowly filled with water with care being taken to expel all air from the pipe. If necessary, the pipe will be tapped at high points to vent air.

The Contractor shall provide all equipment and labor necessary to accomplish this testing and the price shall be included in the unit prices. The Contractor shall notify the Company in advance of the testing so that the Company can schedule a duly authorized representative to be at the site during testing. The Contractor, at its own expense, shall make any necessary repairs to the system being tested in order to cause the section being tested to meet the test limits set below. The Contractor may request authorization of the Company to connect the new pipelines to the existing system prior to completion of pressure testing when, in the Company's sole opinion and judgment, conditions warrant such connection.

The Contractor shall assume all responsibility to complete pressure testing to Company's specifications after such connection, including, but not limited to, isolation of the new pipelines from the existing system, if necessary.

Connections prior to completion of pressure testing shall not be made unless prior Company authorization has been obtained, and any extra expenses resulting from such connections shall be the sole responsibility of the Contractor.

Leakage tests will be for a period of two hours at 200□ 5 psi at the point of lowest elevation; leakage may not exceed 0.1 gallons per hour per one thousand feet (1,000') of pipe per inch of diameter. If dry utilities are not installed, a second pressure test is required.

8. STERILIZATION AND FLUSHING OF COMPLETED WATER PIPELINES

Sterilization and flushing will conform to recommendations of Arizona State Department of Health Services Engineering Bulletin Number 8, latest edition, or any future Arizona Department of Environmental Quality bulletins. Contractor to follow all conditions of any discharge permit.

9. NO OTHER UTILITIES ALLOWED IN OR NEAR WATER PIPELINE TRENCHES

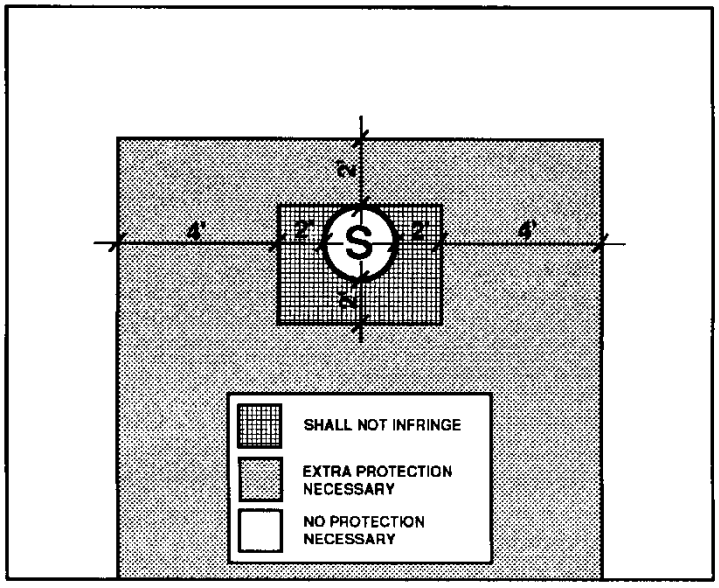
No other utility installations will be permitted in the water pipeline trench or within five feet (5') of the Company's water pipeline when running parallel to the water pipelines.

10. PROTECTION OF WATER MAINS NEAR SEWERS

In order to protect water mains from contamination by sewers, the installation of the water mains must conform to the following requirements:

a. Horizontal - When water lines and sewers are laid parallel with each other, the horizontal distance between them shall not be less than six feet (6'). Each line shall be laid on undisturbed or bedded material in a separate trench. Where conditions prevent the minimum horizontal separation set forth above, extra protection will be required. Extra protection shall consist of constructing the sewer main with mechanical joint ductile iron pipe or with slip-joint ductile iron pipe if joint restraint is provided, or encasing both the water main and sewer main in concrete. See Detail E-9-30-1 and E-9-30-2.

The Construction Drawings shall indicate the installation requirements. The drawings showing these exceptions shall have been approved by the appropriate state and/or county health department. Refer to the diagram below for clarification.



Under no circumstances will the horizontal separation between sewer mains and water mains be less than two feet (2'). All distances are to be measured from the outside of the sewer main to the outside of the water main.

b. Vertical - When a water main is parallel with or crosses a sewer main within two feet (2') above the sewer or greater than two feet (2') below the sewer, extra protection will be required. Extra protection shall consist of constructing the sewer main with mechanical joint ductile iron pipe or with slip-joint ductile iron pipe if joint restraint is provided, or encasing both the water main and sewer main in concrete. See Detail E-9-30-1 and E-9-30-2.

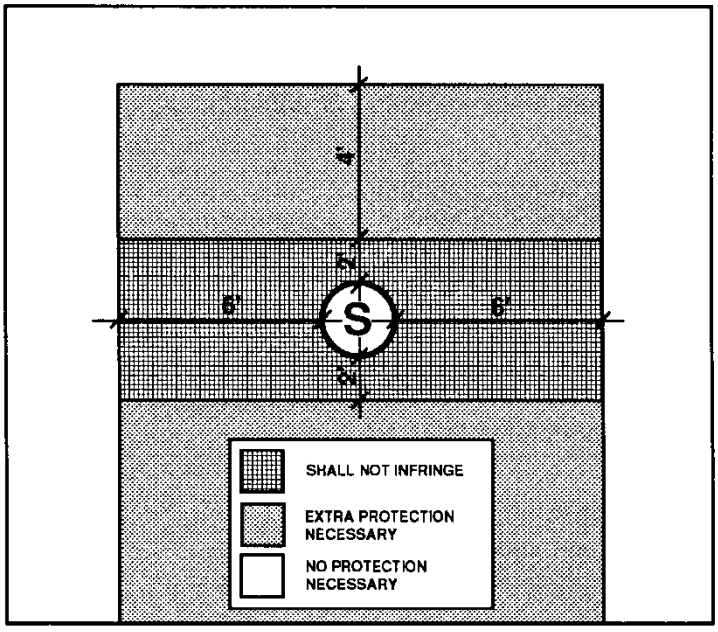
The Construction Drawings shall indicate the installation requirements. The drawings showing these exceptions shall have been approved by the appropriate state and/or county health department.

Under no circumstances will the vertical separation of a sewer main installed above a water main be less than two feet (2'). All distances are to be measured from the outside of the sewer main to the outside of the water main. Refer to the diagram above for clarification.

c. When unusual conditions such as, but not limited to, highway or bridge crossings prevent the water and sewer main separations required from being met, the appropriate state and/or county health department will review and may approve requests for authorization to use alternate construction techniques, materials and joints on a case-by-case basis.

d. No water pipe shall pass through or come into contact with any part of a sewer manhole. The minimum horizontal separation between water mains and manholes shall be six feet (6'), measured from the center of the manhole.

e. The minimum separation between force mains or pressure sewers and water mains shall be two feet (2') vertically and six feet (6') horizontally under all conditions. Where a sewer force main crosses above, or less than six feet (6') below, a water line, the sewer main shall be encased in at least six inches (6") of concrete for ten feet (10') on either side of the water main. Refer to the diagram below for clarification.



f. Sewer mains (gravity, pressure, force) shall be kept a minimum of fifty feet (50') from drinking water wells, unless the following conditions are met:

1. Water main pipe, pressure tested in place to 50 psi without excessive leakage, may be used for gravity sewers at distances greater than twenty feet (20') from drinking water wells.

2. Water main pipe, pressure tested in place to 150 psi without excessive leakage, may be used for pressure sewers and force mains at distances greater than twenty feet (20') from drinking water wells.

g. No septic tank/disposal field system shall be constructed within one hundred feet (100') of a drinking water well.

h. All distances are measured perpendicularly from the outside of the sewer main to the outside of the water main. These separation requirements do not apply to building, plumbing or individual house service connections.

i. Use Mechanical Joint ductile iron pipe with Megalug thrust restraints a minimum of ten (10') feet on each side of a sewer or storm drain crossing.

11. COMPACTION

When crossing existing water mains a minimum of 95% compaction is required to the bottom of existing mains.

Arizona Water Company requires that no slurry be permitted to contact existing cement/asbestos or ductile iron pipes, unless authorized by the company. Slurry may be poured in the bottom of the sewer trench stopping three inches (3") below the existing water main. The backfill used around the main should be AB in sufficient depth to prevent slurry from contacting existing main.

12. WATER MAIN MATERIAL SPECIFICATIONS

Ductile iron pipe (Push-on type) minimum class 350, cement lined and conform to AWWA C151.

All main line valves shall conform to AWWA C500 with a minimum working pressure of 200 psi.

All cast iron fittings to be cement lined in accordance with AWWA C104 and shall conform to AWWA C110 with a minimum working pressure of 250 psi. Except for the Coolidge System – See Note 4L.

Maximum joint deflection for 6" mechanical joint ductile iron pipe is seven degrees, seven minutes (7°, 7') or twenty-seven inches (27") per eighteen-foot (18') length pipe, for a maximum curve of one hundred forty-five feet (145').
Maximum joint deflection for 8" and 12" mechanical joint ductile iron pipe is five degrees, twenty-one minutes (5° 21') or twenty inches (20") per eighteen-foot (18') length pipe, for a maximum curve of one hundred ninety-five feet (195').

Maximum joint deflection for 6", 8" and 12" push-on joint ductile iron pipe is five degrees (5°) or nineteen inches (19") per eighteen-foot (18') length pipe for a maximum curve of two hundred five feet (205').

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, ARIZONA 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6878 • WWW.AZWATER.COM

October 19, 2010

Mr. Jim Ryan
Clow Valve Company
8121 N. 10th Avenue
Phoenix, Arizona 85021

Re: Clow Medallion Fire Hydrants and Resilient Wedge Gate Valves

Dear Mr. Ryan:

Thank you for your interest in working with Arizona Water Company (the "Company") to add Clow Medallion Fire Hydrants and Resilient Wedge Gate Valves to the Company's material and equipment specifications. Based on the Clow product information you provided and your field presentations to our operations and engineering staff, the Company is pleased to inform you that the following items are approved for use in the Company's water systems in Arizona.

Medallion Fire Hydrant:

- Model F-2545
  - 5¼" MVO
  - 4½" pumper
  - 2½" hose
  - Meets AWWA C-502 standard and approval by ULFM

Resilient Wedge Gate Valves:

- Model 2639 & 2640
  - Meets AWWA C-509 Full Body Cast Iron includes 304 SS Nuts, Bolts & Low Zinc Bronze Stem
  - Size range 2½" thru 12"
- Model 2638
  - Meets AWWA C-515 Reduced Wall Ductile Iron includes 304 SS Nuts, Bolts & Low Zinc Bronze Stem
  - Size range 14" thru 48"

We look forward to developing a long-term relationship with you and the Clow products. If I can be of any assistance, please call me.

Very truly yours,

Fredrick K. Schneider
Vice President – Engineering

lar

VIA EMAIL: JIM.RYAN@CLOWVALVE.COM

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, ARIZONA 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6878 • WWW.AZWATER.COM

November 24, 2010

Mr. Tony Geiger
US Pipe – Waterworks Marketing Consultants
34522 N. Scottsdale Road
Scottsdale, Arizona 85226

Re: US Pipe Sentinel Fire Hydrants and Resilient Wedge Gate Valves

Dear Mr. Geiger:

Thank you for your interest in working with Arizona Water Company (the "Company") to add US Pipe Sentinel Fire Hydrants and Resilient Wedge Gate Valves to the Company's material and equipment specifications. Based on the US Pipe product information you provided and your field presentations to our operations and engineering staff, the Company is pleased to inform you that the following items are approved for use in the Company's water systems in Arizona.

Sentinel Fire Hydrant:

- Model Sentinel 250
  - 5¼" MVO
  - 4½" pumper
  - 2½" hose
  - Meets AWWA C-502 standard and approval by ULFM

Resilient Wedge Gate Valves:

- Model US Pipe A-USP0
  - Meets AWWA C-509 Full Body Cast Iron includes 304 SS Nuts, Bolts & Low Zinc Bronze Stem
  - Size range 2" thru 12"
- Model US Pipe A-USP1
  - Meets AWWA C-515 Reduced Wall Ductile Iron includes 304 SS Nuts, Bolts & Low Zinc Bronze Stem
  - Size range 14" thru 48"

E-MAIL mail@azwater.com

We look forward to developing a long-term relationship with you and the US Pipe products. If I can be of any assistance, please call me.

Very truly yours,

Fredrick K. Schneider
Vice President – Engineering

afh

VIA EMAIL: TGEIGER4@COX.NET

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, AZ 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

February 21, 2012

Contractor

Re: Fitting Specifications

Dear Contractor:

Effective March 1, 2012, Arizona Water Company (the "Company") has changed its fitting specifications for Ductile Iron Fittings and Ductile Iron Flanged Fittings ("Fittings"). All Fittings purchased by the Company, on the Company's behalf or installed with the intent of being conveyed to the Company, must comply with the requirements noted below.

Previous Fitting Specifications:

Fittings

Manufactured by Tyler or Union, Crosses, Elbows, Tees, Cap Reducer, Adapter, Plug, Blind Flange and Tapped Flange: Ductile Iron, Class 350, SSB, and Cast Iron Cement Lined.

New Fitting Specification:

Ductile Iron Fittings (Push-On and Mechanical Joint)

Ductile Iron Push-On and Mechanical Joint ("MJ") fittings for water lines shall be made of ductile iron per ASTM A536 and be cast in the United States of America. Fittings shall have USA cast on the fitting to designate they are made in the United States. All fittings will be manufactured and tested in accordance with ANSI/AWWA C153/A21.53 for compact design and ANSI/AWWA C110/A21.10 for full body design. In accordance with ANSI/AWWA C104/A21.4 fittings 2" – 3" will be single thickness cement mortar lined and 4" – 64" will be cement mortar lined. Fittings will be Asphaltic seal coated on the exterior in accordance with ANSI/AWWA C104/A21.4. MJ fittings with flanged end(s) will match ANSI/AWWA C115/A21.15 and ANSI B16.1 class 125 flanges. All fittings shall be NSF-61 listed for use with potable water.

Ductile Iron Flanged Fittings

Ductile Iron flanged fittings for water lines shall be made of ductile iron per ASTM A536 and be cast in the United States of America. Fittings shall have USA cast on the fitting to designate they are made in the United States. All fittings will be manufactured and tested in accordance with ANSI/AWWA C110/A21.10 design. Flange ends will match ANSI/AWWA C115/A21.15 and ANSI B16.1 class 125 flanges. In accordance with ANSI/AWWA C104/A21.4 fittings 2" – 3" will be single thickness lined and 4" – 64" will be cement mortar lined. Fittings will be Asphaltic seal coated on the exterior in accordance with ANSI/AWWA C104/A21.4. All fittings shall be NSF-61 listed for use with potable water.

If you have any questions or require further information, please contact me at 602-240-6860.

Very truly yours,

Fredrick K. Schneider, PE
Vice President - Engineering
engineering@azwater.com

afh
Enclosure

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

November 28, 2016

Mr. David Shelton
Mueller Company
2557 N. Silverado
Mesa, AZ 85215

Re: Mueller Resilient Wedge Gate Valves

Dear Mr. Shelton:

Thank you for your interest in working with Arizona Water Company (the "Company") to add Mueller Full Body Ductile Iron Resilient Wedge Gate Valves to the Company's material and equipment specifications. Based on the Mueller Company's product information you provided to the Company, the Company is pleased to inform you that the following items are approved for use in the Company's water systems in Arizona.

Resilient Wedge Gate Valves:

- Model 2362 Full Body Ductile Iron Gate Valve
  - Complies with AWWA C-509 specifications
  - Gate valves must include 304 SS nuts, bolts and a low zinc bronze stem
  - Size range 2 ½" thru 12"

We look forward to continuing our long-term relationship with you and the Mueller products. If I can be of any assistance, please call me.

Very truly yours,

Fredrick K. Schneider
Vice President – Engineering

ajh

AJH

E-MAIL: engineering@azwater.com

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, AZ 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

June 15, 2017

Mr. Tony Geiger
US Pipe – Waterworks Marketing Consultants
34522 N. Scottsdale Road
Scottsdale, AZ 85226

Re: Resilient Wedge Gate Valves

Dear Mr. Geiger:

Thank you for your interest in working with Arizona Water Company (the "Company") to add US Full Body Ductile Iron Resilient Wedge Gate Valves to the Company's material and equipment specifications. Based on the US Pipe Company's product information you provided to the Company, the Company is pleased to inform you that the following items are approved for use in the Company's water systems in Arizona.

Resilient Wedge Gate Valves:

- Model USP2 Full Body Ductile Iron Gate Valve
  - Meets AWWA C-509 Full Body Cast Iron includes 304 SS Nuts, Bolts & Low Zinc Bronze Stem.
  - Size range 2" thru 12"

We look forward to continuing our long-term relationship with you and the US Pipe products. If I can be of any assistance, please call me.

Very truly yours,

Fredrick K. Schneider, P. E.
Vice President - Engineering
fschnedier@azwater.com

afh
Enclosure

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, AZ 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

January 25, 2018

Contractor

Re: Mechanical Joint Restraint

Dear Contractor:

Effective January 25, 2018, Arizona Water Company (the "Company") has changed its mechanical joint restraint specifications for MEGA LUG mechanical joint restraints. All mechanical joint restraints purchased by the Company, on the Company's behalf, or installed with the intent of being conveyed to the Company, must comply with the requirements noted below.

Previous Mechanical Joint Restraint Specification:

MEGA LUG: Mechanical joint restraint made of ductile iron conforming to ASTM 536-80, 250 psi made by EBAA Iron, Inc., series 1100 or equal.

New Mechanical Joint Restraint Specification:

Ductile Iron Mechanical Joint Restraints for water lines shall be made of ductile iron per ASTM A536 and be cast in the United States of America. Mechanical Joint Restraints shall have USA cast on the mechanical joint restraint to designate they are made in the United States. All mechanical joint restraints will be manufactured in accordance with ANSI/AWWA C110/A21.10. The mechanical joint restraints will have a minimum working pressure rating of 350 psi for pipe diameters ranging from 3-inch to 16-inch, and minimum 250 psi pressure rating for pipe diameters ranging from 18-inch to 48-inch. All mechanical joint restraints will have UL Certification for pipe diameters ranging from 3-inch to 24-inch and will have Factory Mutual Research Approval from 3-inch to 12-inch.

The following manufacturers are approved for the following pipe diameters:

Manufacturer	Product Name	Pipe Diameters
EBAA Iron	MEGA LUG Series 1100	3-inch to 48-inch
Star Pipe	Star Grip Series 3000	3-inch to 48-inch
Tyler Union	TUF Grip Series 1000	4-inch to 48-inch

Very truly yours,

Fredrick K. Schneider, P. E.
Vice President-Engineering

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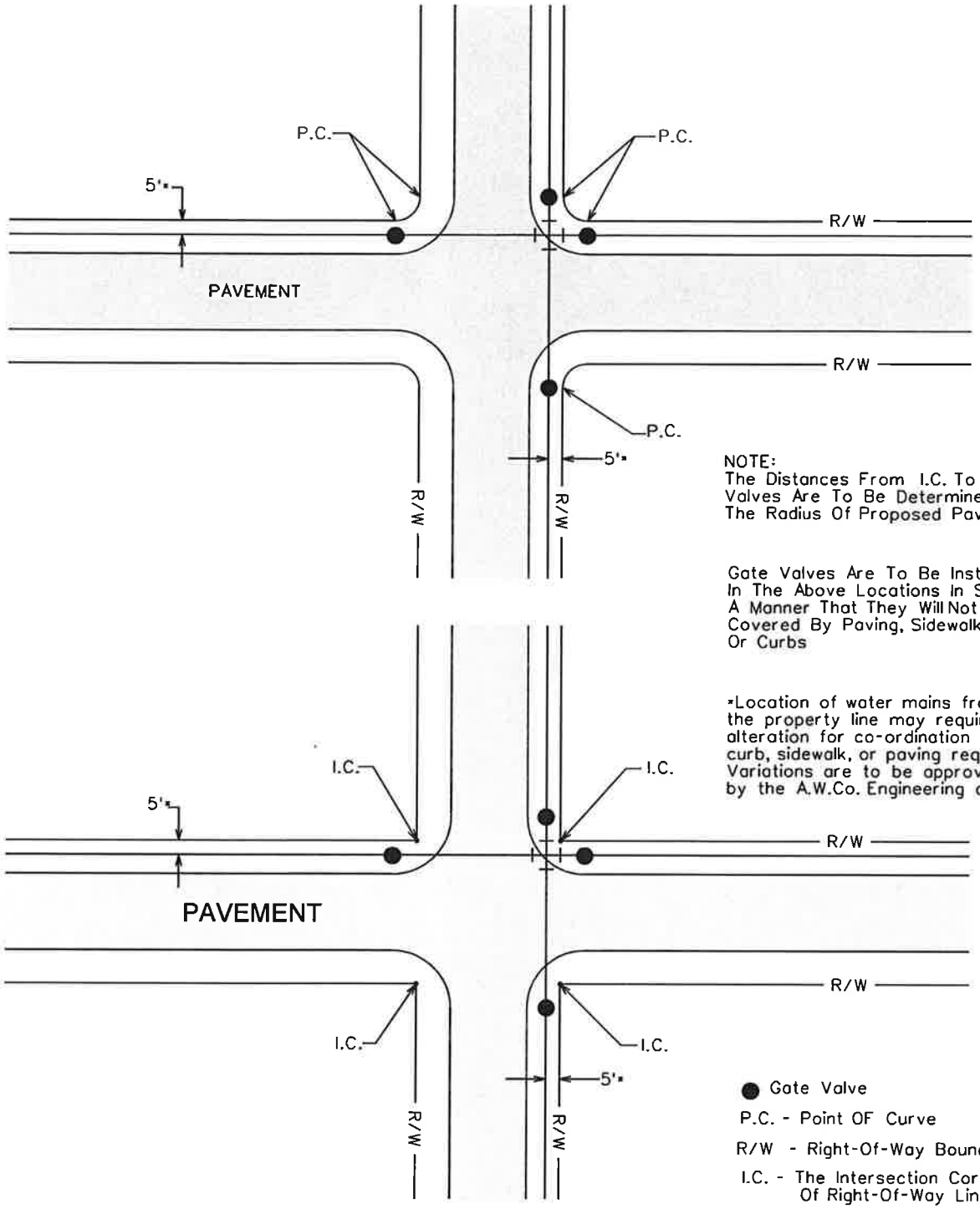
ARIZONA WATER COMPANY

STANDARD SPECIFICATION DRAWINGS: E-9-1

ARIZONA WATER COMPANY

STANDARD SPECIFICATION DRAWINGS

INDEX (E-9)



NOTE:
The Distances From I.C. To Gate Valves Are To Be Determined By The Radius Of Proposed Pavement.

Gate Valves Are To Be Installed In The Above Locations In Such A Manner That They Will Not Be Covered By Paving, Sidewalks, Or Curbs

*Location of water mains from the property line may require alteration for co-ordination with curb, sidewalk, or paving requirements. Variations are to be approved by the A.W.Co. Engineering dept.

● Gate Valve

P.C. - Point OF Curve

R/W - Right-Of-Way Boundary

I.C. - The Intersection Corner Of Right-Of-Way Lines

ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

TYPICAL GATE VALVE LOCATIONS

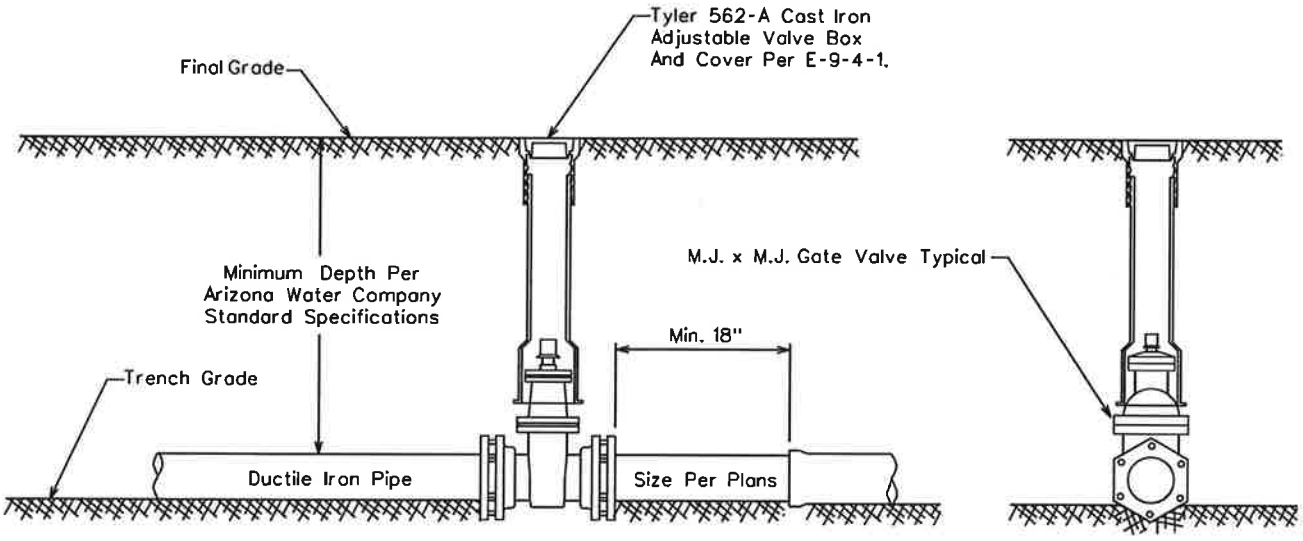
DRAWN BY:	APPROVED BY:	DATE:	△ 1/31/2001	E-9-1-1
CCO	M.W.	3/20/86		

FOR 6" THROUGH 12" GATE VALVES

Mueller Resiliant Wedge Gate Valves
Catalog Number A-2360-__
ANSI/AWWA C509 Compliant

FOR 14" THROUGH 16" GATE VALVES

Mueller Resiliant Wedge Gate Valves
Catalog Number A-2361-__
ANSI/AWWA C509 Compliant



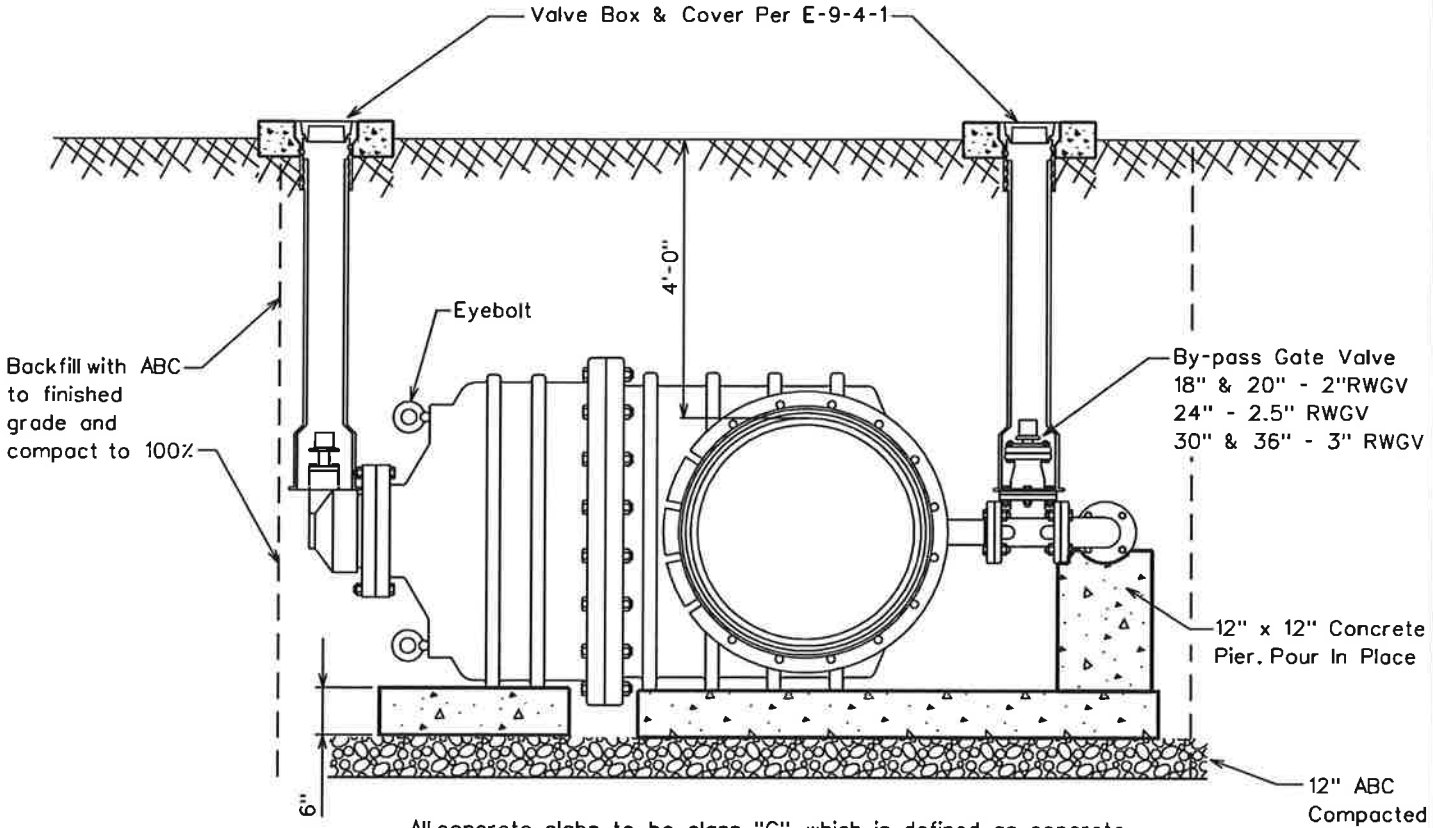
All Valves Installed On Pipe Five Feet (5') Deep And Greater Are To Be Installed With A Valve Operator Extension, Mueller Catalog No. A-26441.

ARIZONA WATER COMPANY

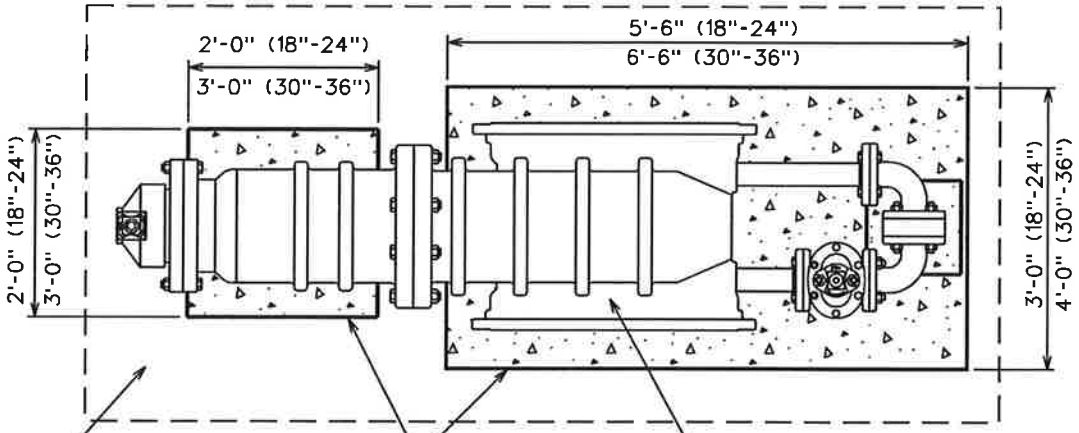
STANDARD SPECIFICATION
FOR THE INSTALLATION OF

TYPICAL VERTICAL GATE VALVES

DRAWN BY:	APPROVED BY:	DATE:	△ 08.23.2006	E-9-2-1
CB	MW	03.20.1986		



All concrete slabs to be class "C", which is defined as concrete whose minimum compressive strength at 14 days reaches 1600psi and at 28 days reaches 2000psi. per MAG Section 725, Table 725-1. Slabs to be formed and poured prior to valve installation.



All valves installed on pipe five feet and greater are to be installed with a valve operator extension Mueller catalog No.A-26441 The distance is measured from the top of the operating nut to final grade.

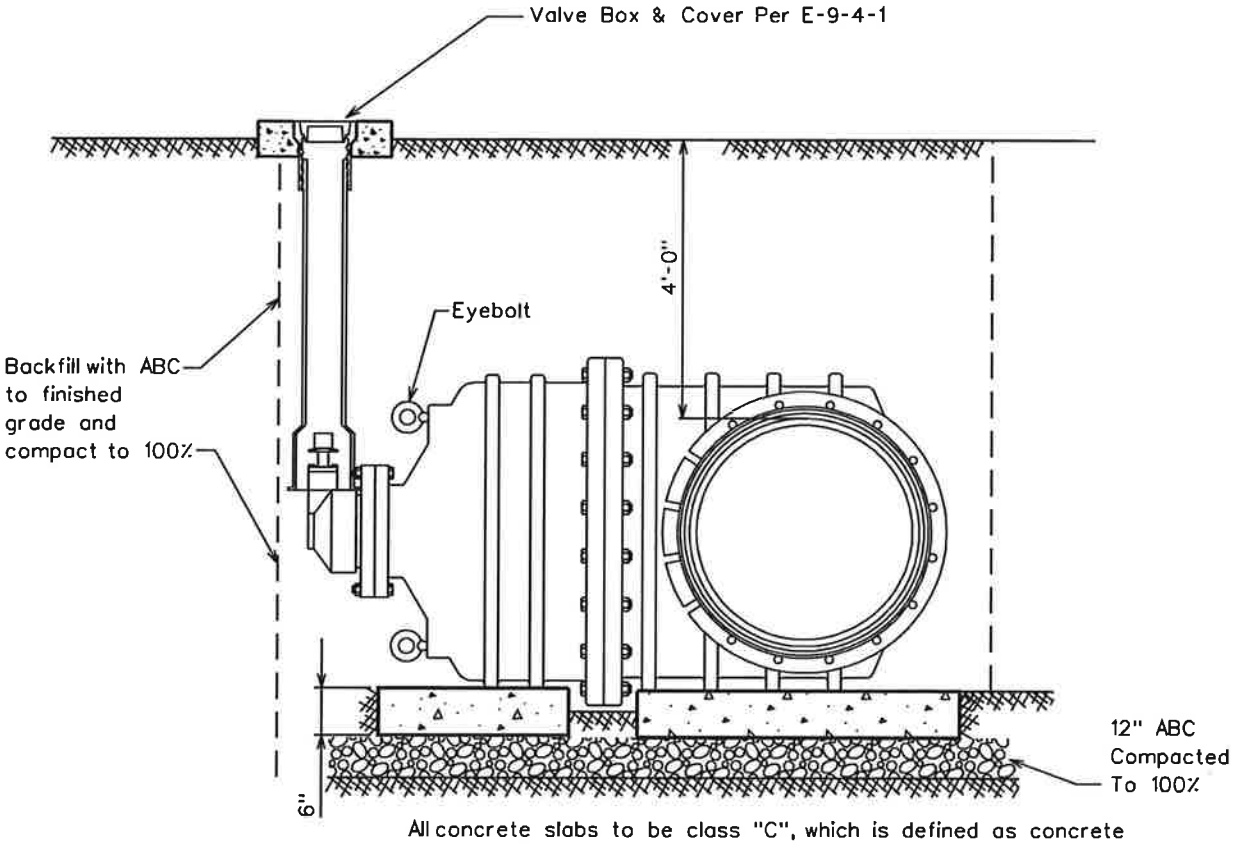
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

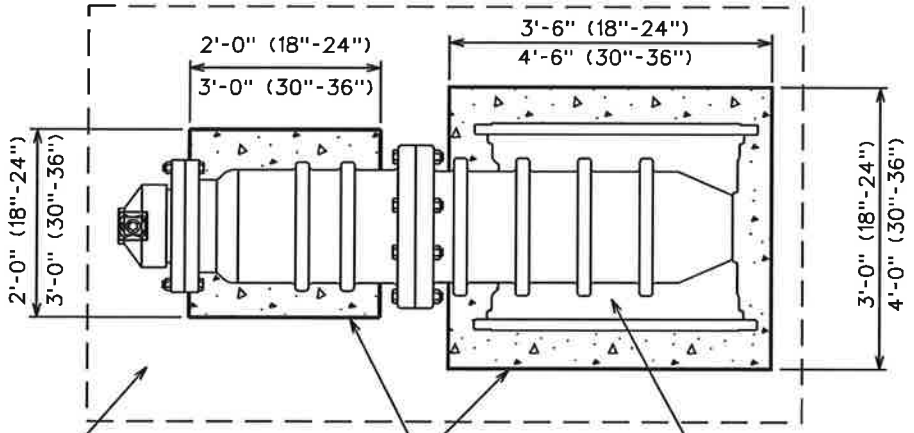
FOR THE INSTALLATION OF

INSTALLATION OF BEVEL GEARED HORIZONTAL GATE VALVES WITH BY-PASS FOR 18" AND LARGER VALVES

DRAWN BY:	APPROVED BY:	DATE:	△	
CB		12.07.2004		E-9-2-2



All concrete slabs to be class "C", which is defined as concrete whose minimum compressive strength at 14 days reaches 1600psi and at 28 days reaches 2000psi. per MAG Section 725, Table 725-1. Slabs to be formed and poured prior to valve installation.



All valves installed on pipe five feet and greater are to be installed with a valve operator extension Mueller catalog No.A-26441 The distance is measured from the top of the operating nut to final grade.

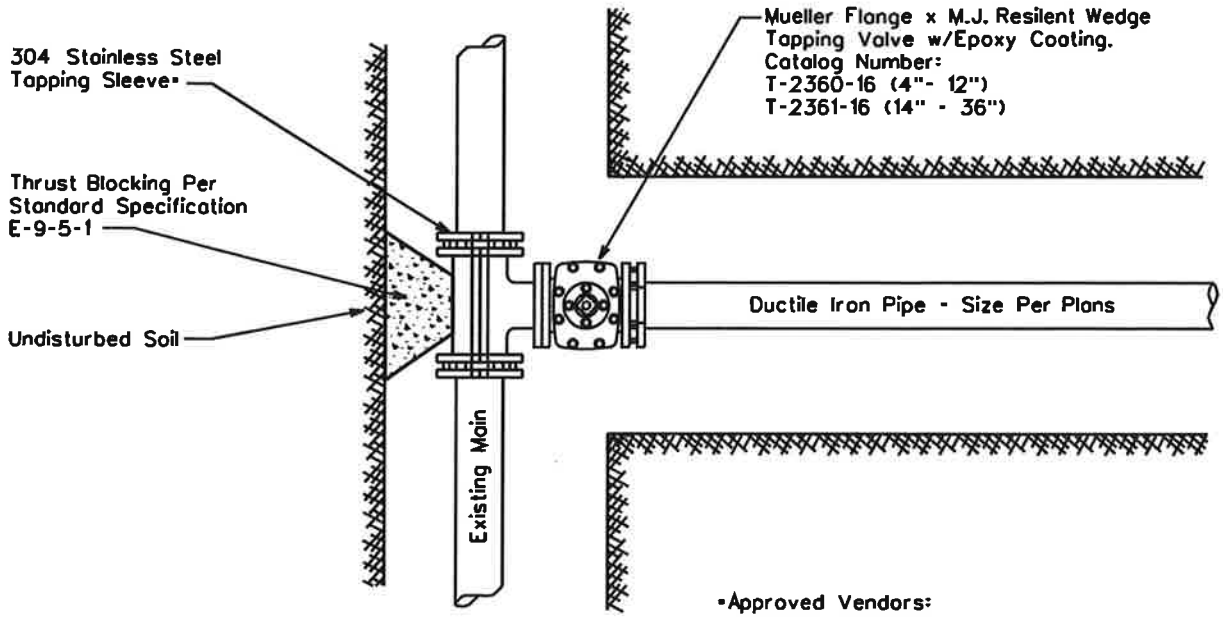
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

INSTALLATION OF BEVEL GEARED HORIZONTAL GATE VALVES WITHOUT A BY-PASS FOR 18" AND LARGER VALVES

DRAWN BY:	APPROVED BY:	DATE:	△ 5.13.2005	E-9-2-3
CB		12.07.2004		



NOTE:

1. All flanges, bolts, and nuts shall be kept free of concrete.
2. Air pressure test the tapping sleeve before the live tap is made.
3. Polywrap all new fittings

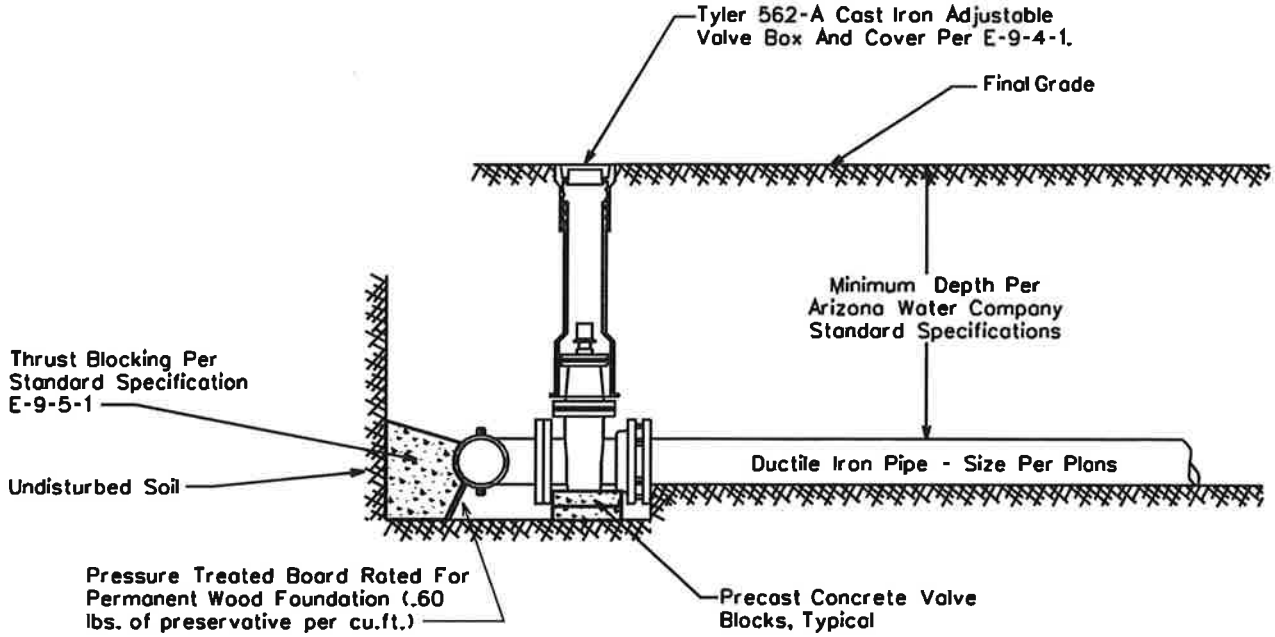
*Approved Vendors:

Mueller, Catalog No. H304, 304 Stainless Steel

JCM, Model 432, 304 Stainless Steel

Romac, 'SST', 304 Stainless Steel

Cascade, 'CST-EX', 304 Stainless Steel



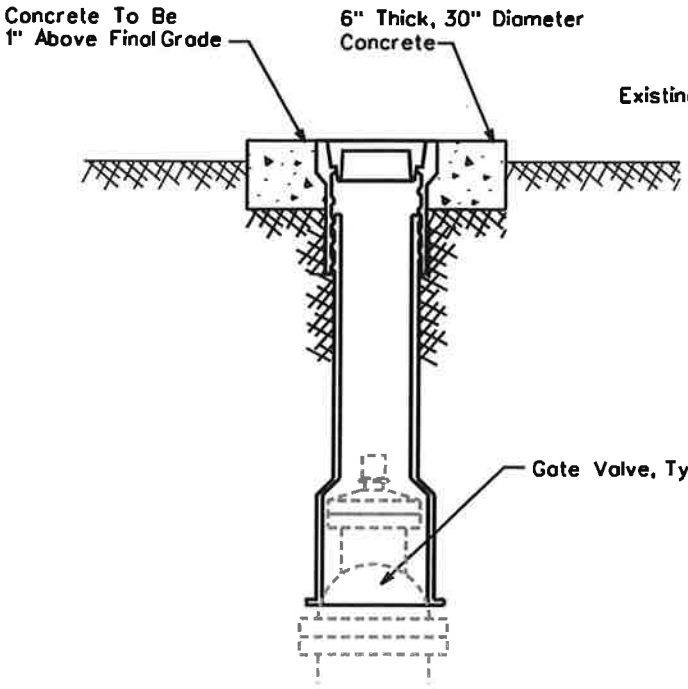
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

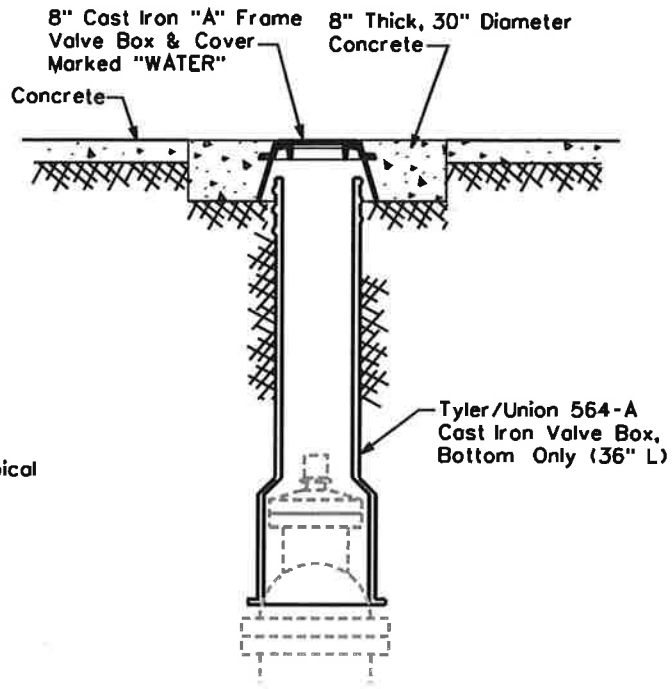
FOR THE INSTALLATION OF

TYPICAL TAPPING SLEEVE AND VALVE

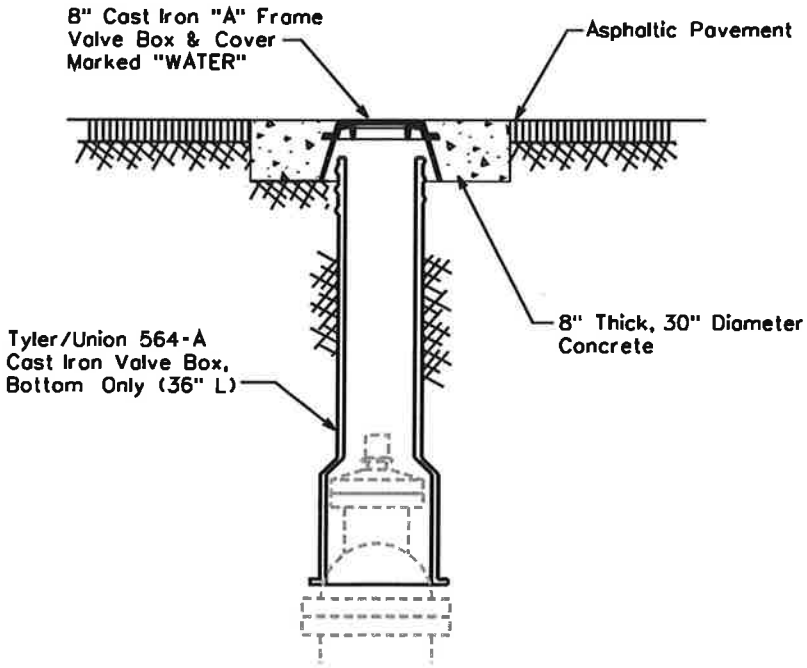
DRAWN BY:	APPROVED BY:	DATE:	△ 08.23.2006	E-9-3-1
CB	MW	03.20.1986		



NON-VEHICULAR VALVE BOX



CONCRETE VALVE BOX
For Areas Subject To Vehicular Traffic



ASPHALT VALVE BOX
For Areas Subject To Vehicular Traffic

NOTE:

1. The Valve Box Shall Be Adjusted To Finished Grade Prior To Placing Of Asphalt And/Or Concrete.
2. For Non-Traffic Areas Use Tyler/Union 562-A, Two-Piece, 6855 Series Or Equivalent Adjustable Cast Iron Valve Box And Cover. Valves 4" To 12"

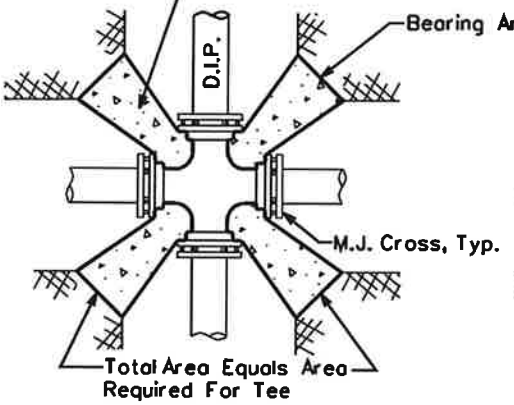
   For Traffic Areas, Use Tyler/Union 564-A Bottom Section Only With An 8" Cast Iron "A" Frame With Cover. Valves 4" To 12"
3. All Valves Installed Five Feet (5') Deep And Greater Are To Be Installed With A Valve Operator Extension, Mueller Catalog No. A-26441 And Shall Have A Debris Cap
4. Use Minimum Class 'C' Concrete which is defined as concrete whose minimum compressive strength at 14 days reaches 1600psi and at 28 days reaches 2000psi. per MAG Section 725, Table 725-1.

ARIZONA WATER COMPANY

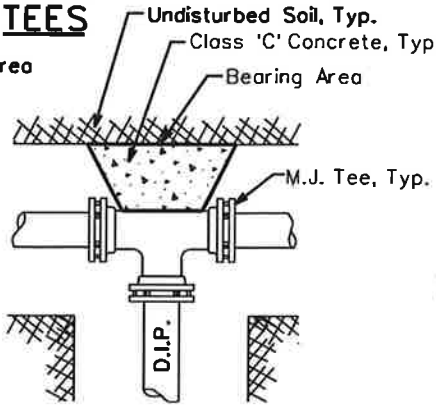
STANDARD SPECIFICATION
FOR THE INSTALLATION OF
TYPICAL VALVE SUBJECT TO NON-VEHICULAR AND VEHICULAR TRAFFIC

DRAWN BY:	APPROVED BY:	DATE:	△ 8.24.2006	E-9-4-1
CB	MW	03.20.1986		

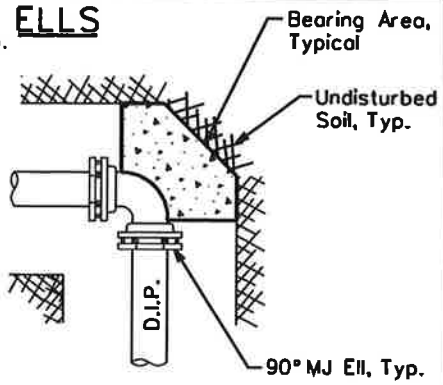
CROSSES

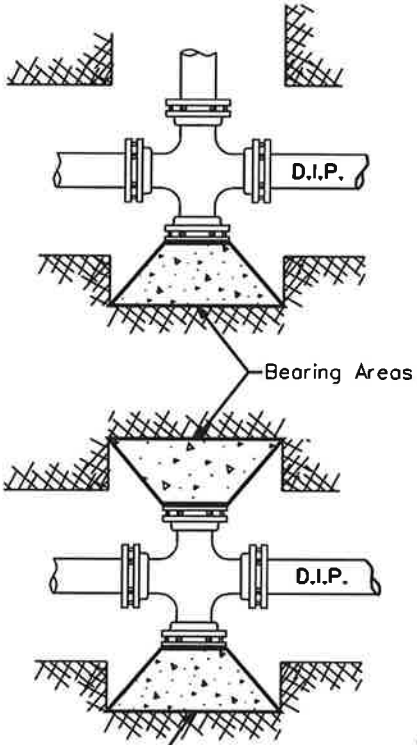


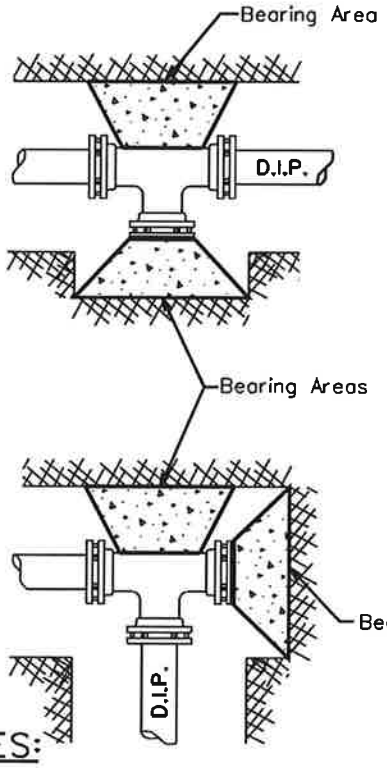
TEES

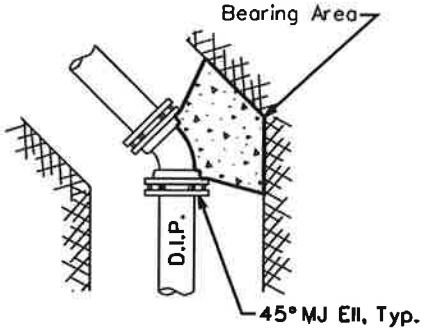


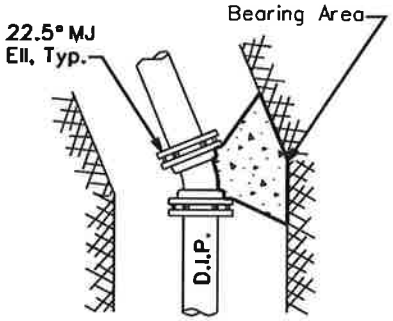
ELLS





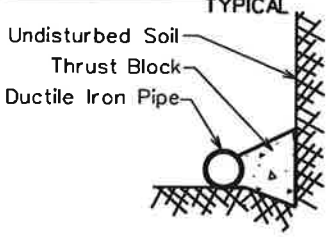






CROSS SECTION

TYPICAL



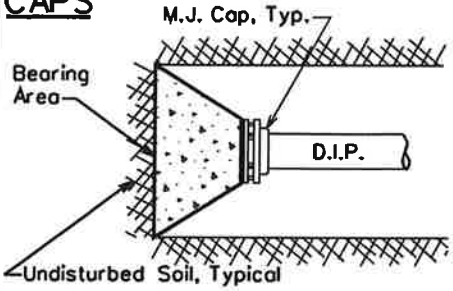
NOTES:

1. Use minimum Class 'C' concrete, which is defined as concrete whose minimum compressive strength at 14 days reaches 1600psi and at 28 days reaches 2000psi. per MAG Section 725, Table 725-1.
2. Thrust blocks are to bear on undisturbed earth with minimum bearing area as shown. If not undisturbed, areas will be increased as required.
3. Place the pressure treated form board in front of all plugs before pouring thrust blocks.
4. Form all non-bearing areas to prevent any concrete from entering any joint.
5. All flanges, bolts and nuts shall be kept free of concrete.
6. Center the bearing area on the pipe centerline and force line.
7. All pipe fittings to be wrapped with polyethylene pipe wrap prior to thrust block installation. (where applicable)

THRUST BLOCK SCHEDULE

PIPE SIZE	TEE, 45°, AND 22.5° ELLS, & PLUGS	90° ELLS
6" And Under	4 Sq.Ft.	6 Sq.Ft.
8"	6 Sq.Ft.	9 Sq.Ft.
12"	13 Sq.Ft.	20 Sq.Ft.
16"	23 Sq.Ft.	32 Sq.Ft.
18"And Larger	Calculated Per Project	

CAPS



STANDARD SPECIFICATION

FOR THE INSTALLATION OF

TYPICAL THRUST BLOCKING SCHEDULE

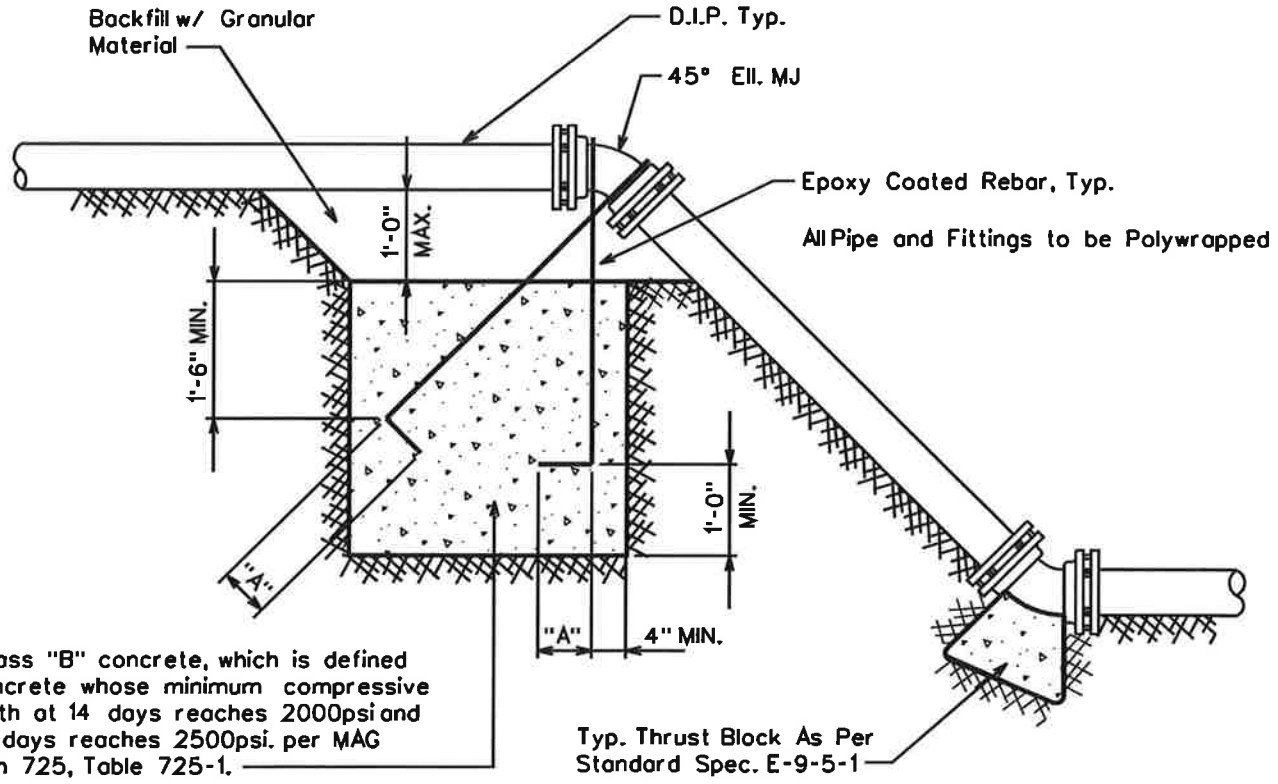
DRAWN BY:	APPROVED BY:	DATE:	△ 05.27.2005	E-9-5-1
CB	MW	03.20.1986		

NOTES

1. Bars In Conc. Thrust Block To Be Coated w/ 2 Coats Coal Tar Epoxy or by Other Approved Method.
2. Bars To Have 90° Hook @ Their Ends, As Per Table Below.

Pipe Size	Min. Bar Size	"A" Dimension (Hook)	* Min. Block Dimension (WxHxL)
6"	#6	6"	3'x3'x3'
8"	#6	9"	4'x3'x4'
12"	#8	9"	5'x4'x5'
16"	#9	12"	7'x6'x7'

* For 125 P.S.I. Working Pressure

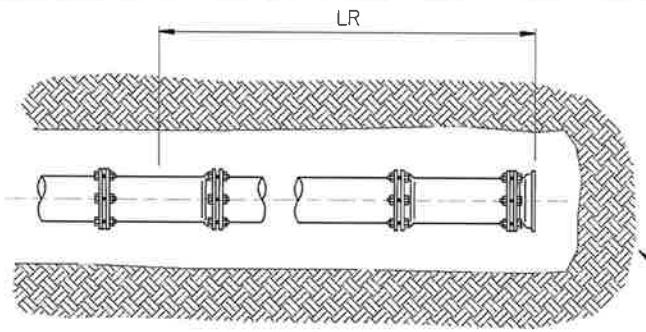


ARIZONA WATER COMPANY

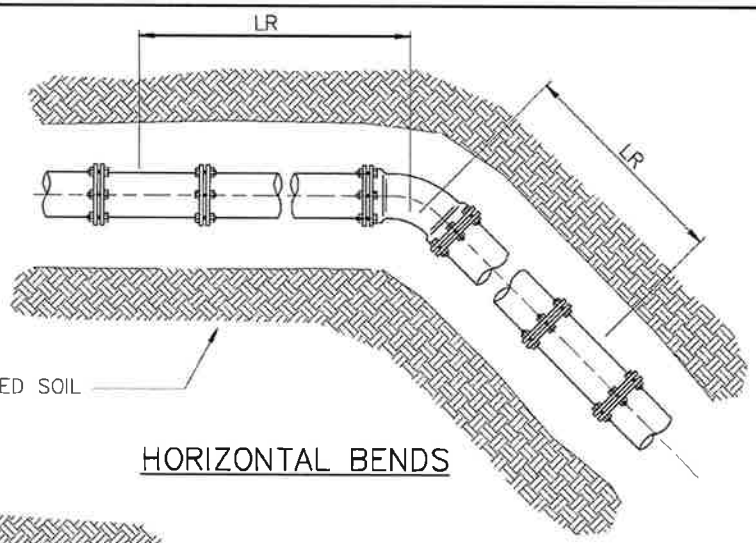
STANDARD SPECIFICATION
FOR THE INSTALLATION OF

THRUST BLOCK FOR VERTICAL BENDS

DRAWN BY:	APPROVED BY:	DATE:	△ 01.16.2007	E-9-5-2
JPK	MJW	7-5-96		



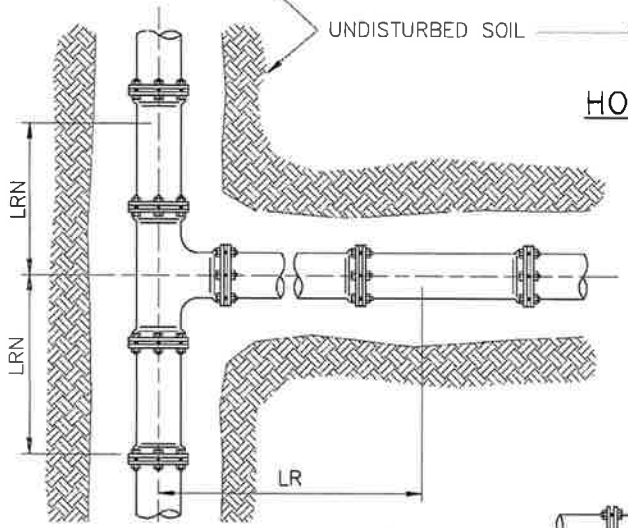
DEAD ENDS



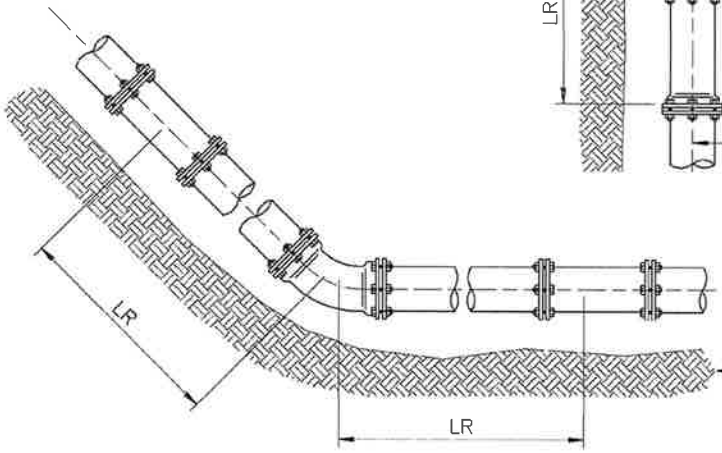
HORIZONTAL BENDS

UNDISTURBED SOIL

LRN = SHORTEST LENGTH OF PIPE RESTRAINED TO THE RUN OF THE TEE FITTING (BOTH SIDES OF TEE).

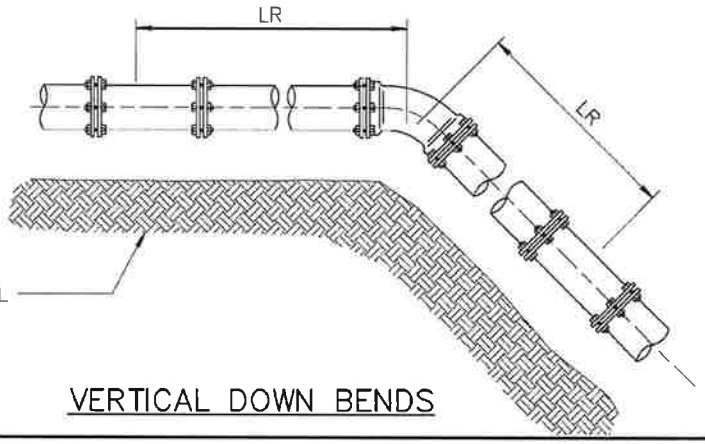


TEES



VERTICAL UP BEND

UNDISTURBED SOIL



VERTICAL DOWN BENDS

ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

JOINT RESTRAINT FOR NEW DUCTILE IRON AND C-900 PVC MAINS

DRAWN BY:	APPROVED BY:	DATE:	△	
CB	MW	01.16.2007		E-9-5-3-1

RESTRAINED LENGTHS, LR, FOR DUCTILE IRON PIPE

NOMINAL PIPE SIZE INCHES	HORIZONTAL BENDS			TEES		VERTICAL OFFSETS						DEAD ENDS
						90° BEND FITTINGS		45° BEND FITTINGS		22-1/2° BEND FITTINGS		
	90°	45°	22-1/2°	LRN=0'	LRN=10'	DOWN BEND	UP BEND	DOWN BEND	UP BEND	DOWN BEND	UP BEND	
4	18	7	4	30	8	31	18	13	7	6	3	31
6	25	10	5	43	20	44	25	18	10	9	5	44
8	32	13	6	56	34	58	32	24	13	11	6	58
10	38	16	8	68	45	69	38	29	16	14	8	69
12	45	19	9	80	57	81	45	34	19	16	9	81
14	51	21	10	91	68	92	51	38	21	18	10	92
16	57	24	11	103	79	104	57	43	24	21	11	104
18	62	26	12	113	90	115	62	48	26	23	12	115
20	68	28	14	125	100	126	68	52	28	25	14	126
24	79	33	16	145	121	147	79	61	33	29	16	147

RESTRAINED LENGTHS, LR, FOR DUCTILE IRON PIPE WITH POLYETHYLENE WRAP

NOMINAL PIPE SIZE INCHES	HORIZONTAL BENDS			TEES		VERTICAL OFFSETS						DEAD ENDS
						90° BEND FITTINGS		45° BEND FITTINGS		22-1/2° BEND FITTINGS		
	90°	45°	22-1/2°	LRN=0'	LRN=10'	DOWN BEND	UP BEND	DOWN BEND	UP BEND	DOWN BEND	UP BEND	
4	26	11	5	69	18	72	26	30	11	14	5	72
6	36	15	7	99	47	102	36	42	15	20	7	102
8	47	19	9	130	78	133	47	55	19	26	9	133
10	56	23	11	157	103	159	56	66	23	32	11	159
12	65	27	13	185	131	187	65	77	27	37	13	187
14	74	31	15	211	156	214	74	89	31	42	15	214
16	82	34	16	238	183	241	82	100	34	48	16	241
18	90	37	18	263	207	266	90	110	38	53	18	266
20	98	41	20	289	233	292	98	121	41	58	20	292
24	113	47	22	337	280	340	113	141	47	68	22	340

NOTES:

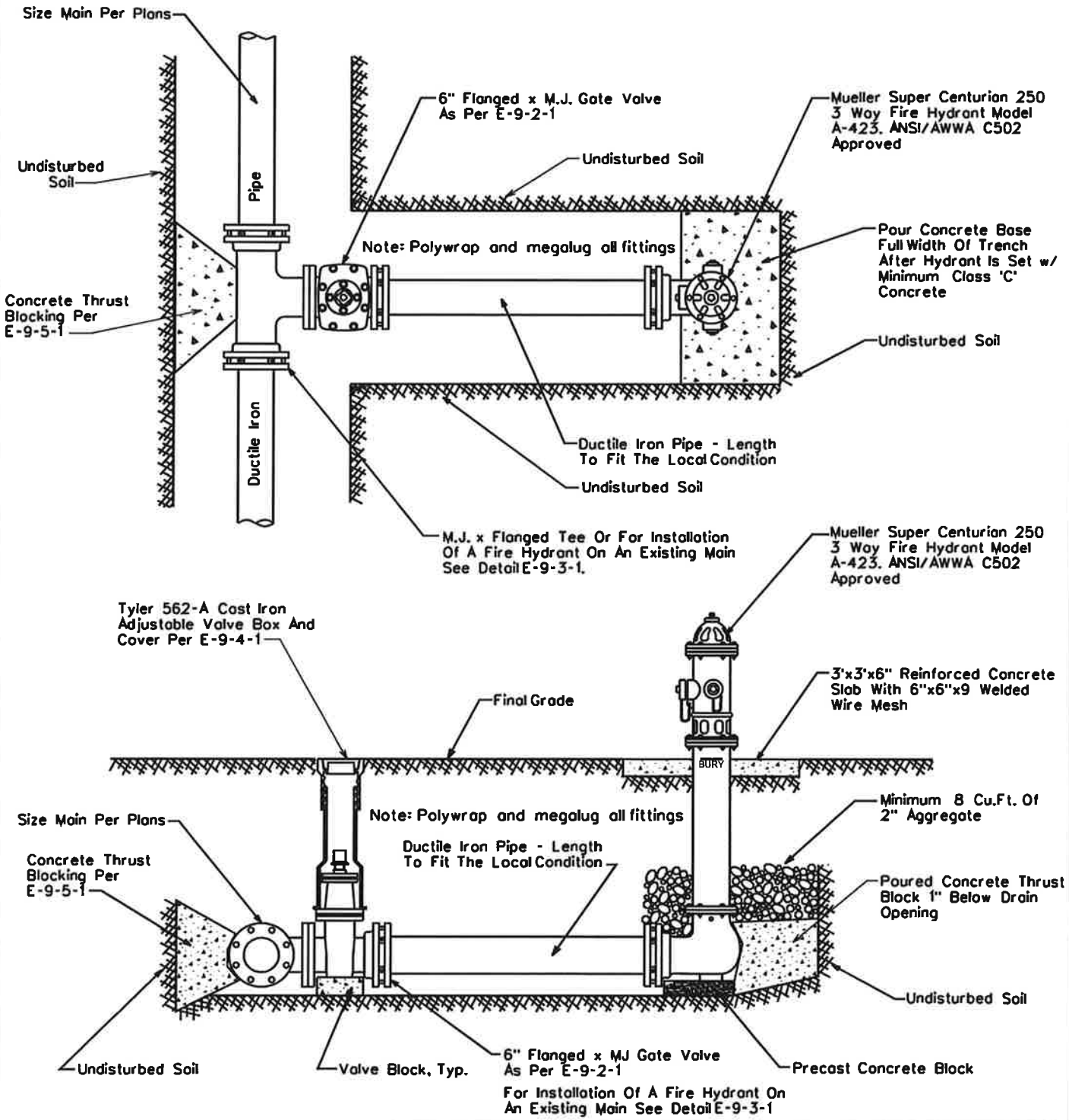
1. ALL JOINTS WITHIN THE SPECIFIED LENGTH LR MUST BE RESTRAINED. ALL LENGTHS ARE GIVEN IN FEET.
2. THE MAXIMUM TEST PRESSURE SHALL NOT EXCEED 200 PSI
3. THE MINIMUM DEPTH OF BURY SHALL BE 3' TO TOP OF PIPE.
4. RESTRAINED LENGTHS MAY BE REDUCED WHEN SUPPORTED BY ENGINEERING CALCULATIONS.

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

JOINT RESTRAINT FOR NEW DUCTILE IRON AND C-900 PVC MAINS

DRAWN BY:	APPROVED BY:	DATE:	△	
CB	MW	01.16.2007		E-9-5-3-2



NOTE: All Flanges, Bolts, Nuts and Drain Holes Shall Be Kept Free Of Concrete

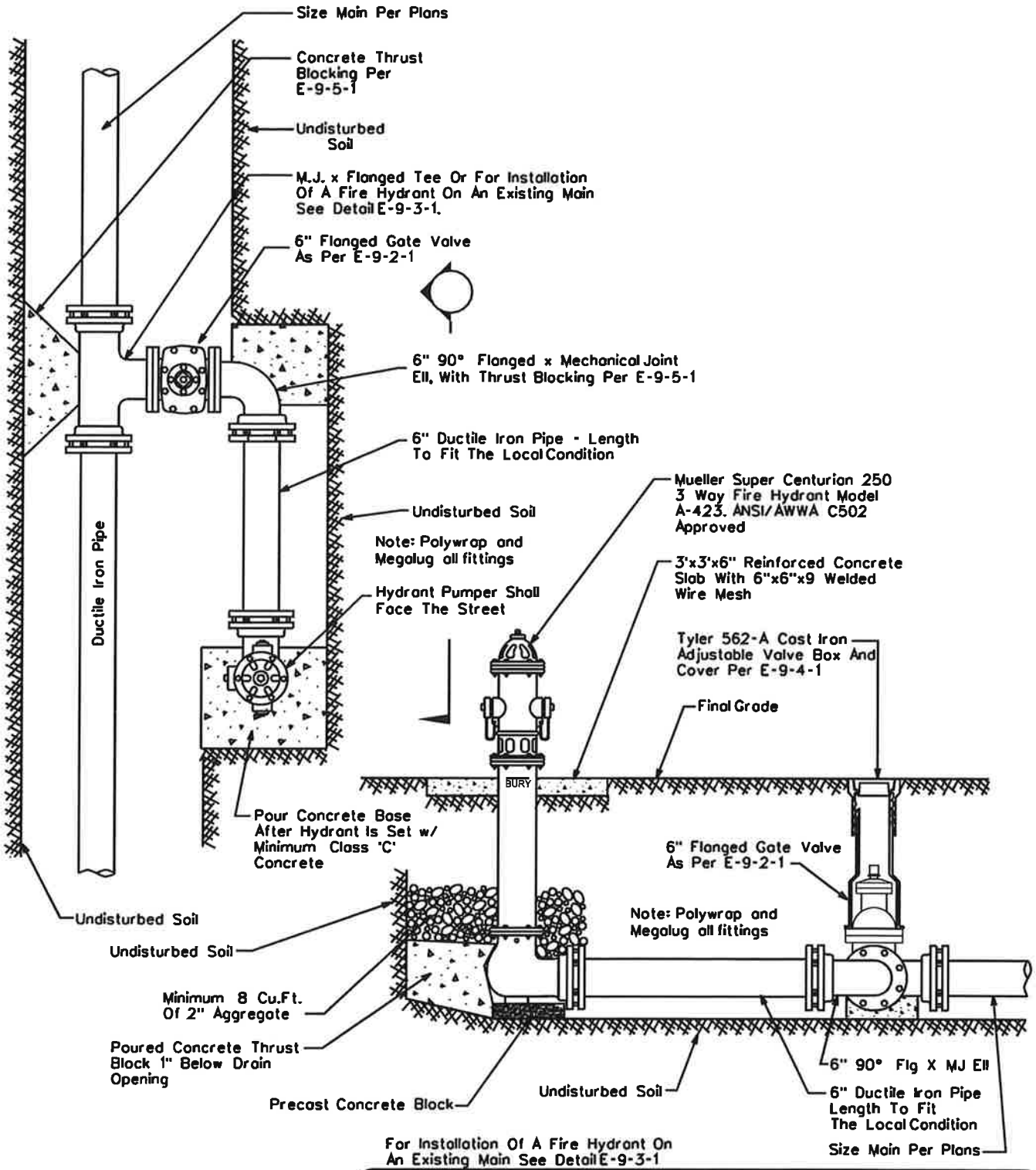
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

TYPICAL PERPENDICULAR FIRE HYDRANT

DRAWN BY:	APPROVED BY:	DATE:	△ 08.24.2006	E-9-6-1
CB	MW	1-28-91		



NOTE: All Flanges, Bolts, Nuts And Drain Holes Shall Be Kept Free Of Concrete.

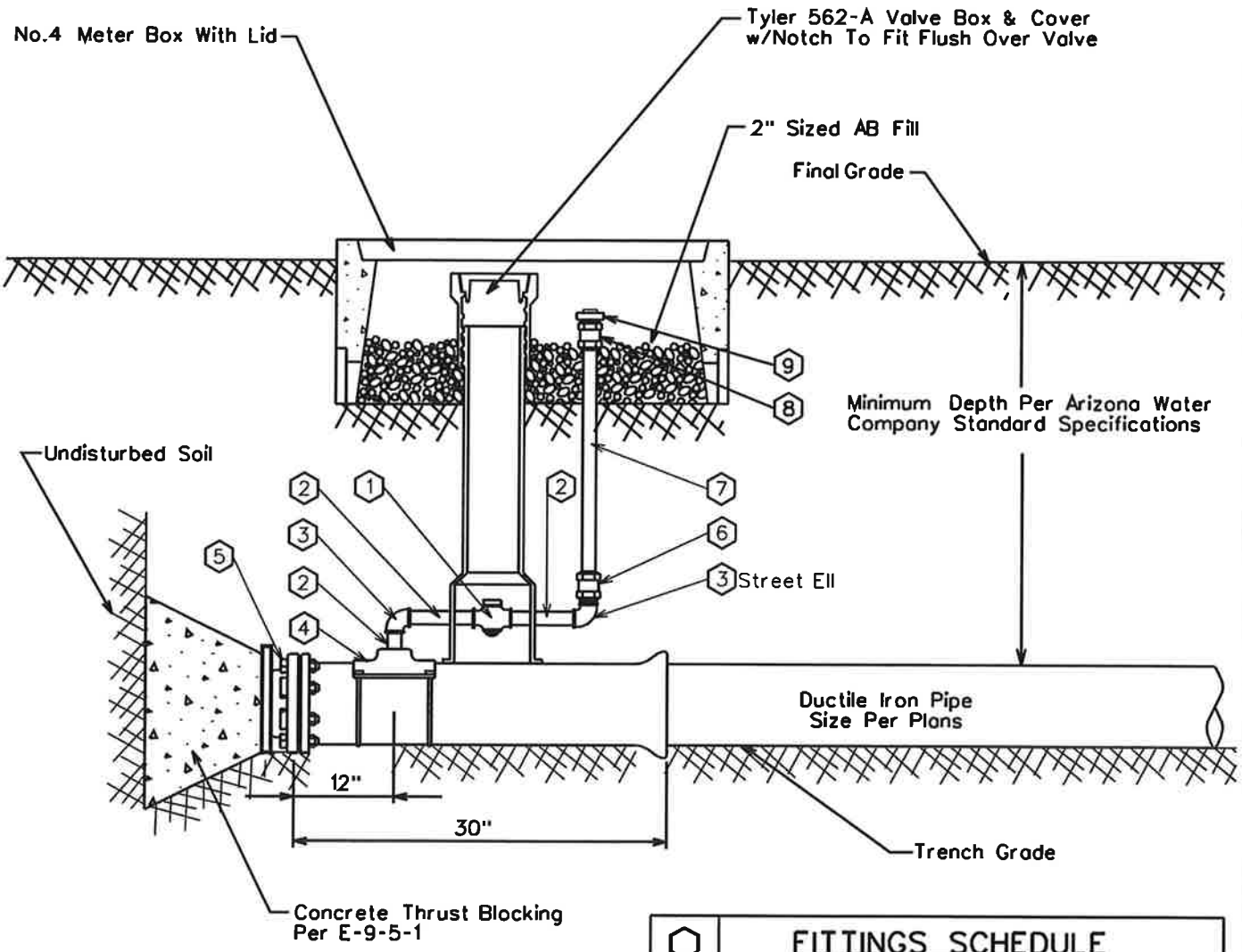
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

TYPICAL PARALLEL FIRE HYDRANT

DRAWN BY:	APPROVED BY:	DATE:	△ 08.24.2006	E-9-7-1
JW	MW	03.20.1986		



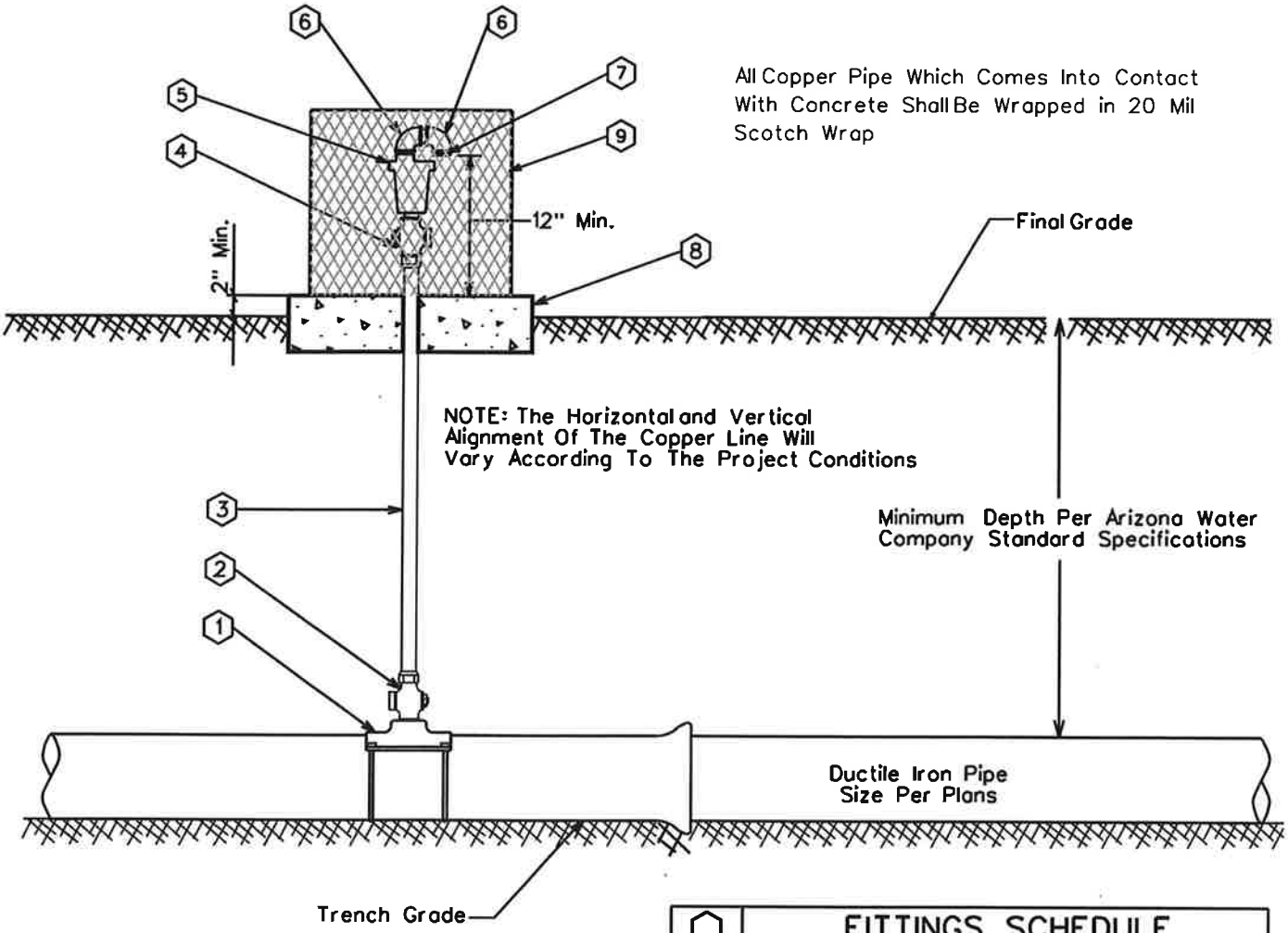
⬡	FITTINGS SCHEDULE
1.	2" Mueller 300 Ball Curb Valve B-20283 FIP x FIP W/ 2" Mueller Brass Square Wrench Nut Adapter B-20299
2.	2" Brass Nipple - Length To Fit Field Conditions
3.	2" Brass 90° Elbow, IPST
4.	Mueller Double Strap Bronze Service Saddle - BR2B
5.	M.J. Plug - Megalug Restraints May Be Required
6.	2" Straight Coupling CC x FIP H-15451
7.	2" Copper Pipe
8.	2" Straight Coupling CC x MIP H-15428
9.	2" Square Head Plug, MIP

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

2" BLOWOFF ASSEMBLY

DRAWN BY:	APPROVED BY:	DATE:	△ 03.21.2006	E-9-8-1
CB	MW	03.20.1986		



⬡	FITTINGS SCHEDULE
1.	Mueller BR2B Bronze Service Saddle - Double Strap
2.	1" Mueller B-25008 Taper x Comp. Ball Corp Stop
3.	1" Type 'K' Copper w/NO Splices - Field Fit
4.	1" Mueller B-25028 IP x Comp. Ball Corp Stop
5.	Crispin 1" Air Release Valve, Model AR10
6.	½" Brass Street Elbow
7.	No.16 Wire Mesh Screen (Non-Corrodible)
8.	4" Thick Concrete Pad - Class 'C' Concrete
9.	Guardshack, Model GS-1, Available From BPDI, Inc. Available In Leaf Green Or Desert Tan

GENERAL NOTES:

1. The valve shall be installed at high points and on long runs to vent the accumulation of air with the line under pressure- see the construction plans for specific locations.
2. The valve shall have a 5/64" orifice with valve sealing faces of stainless steel and BUNA-N rubber.
3. The valve shall be Crispin model AR10 for 6" and larger water mains.
4. Crispin model AR10 valve construction consists of a 1" IPST inlet & ½" IPST outlet, cast iron body and top flange with stainless steel float and trim.
5. The air release assembly shall be located out of the path of traffic but within right-of-way or easement.

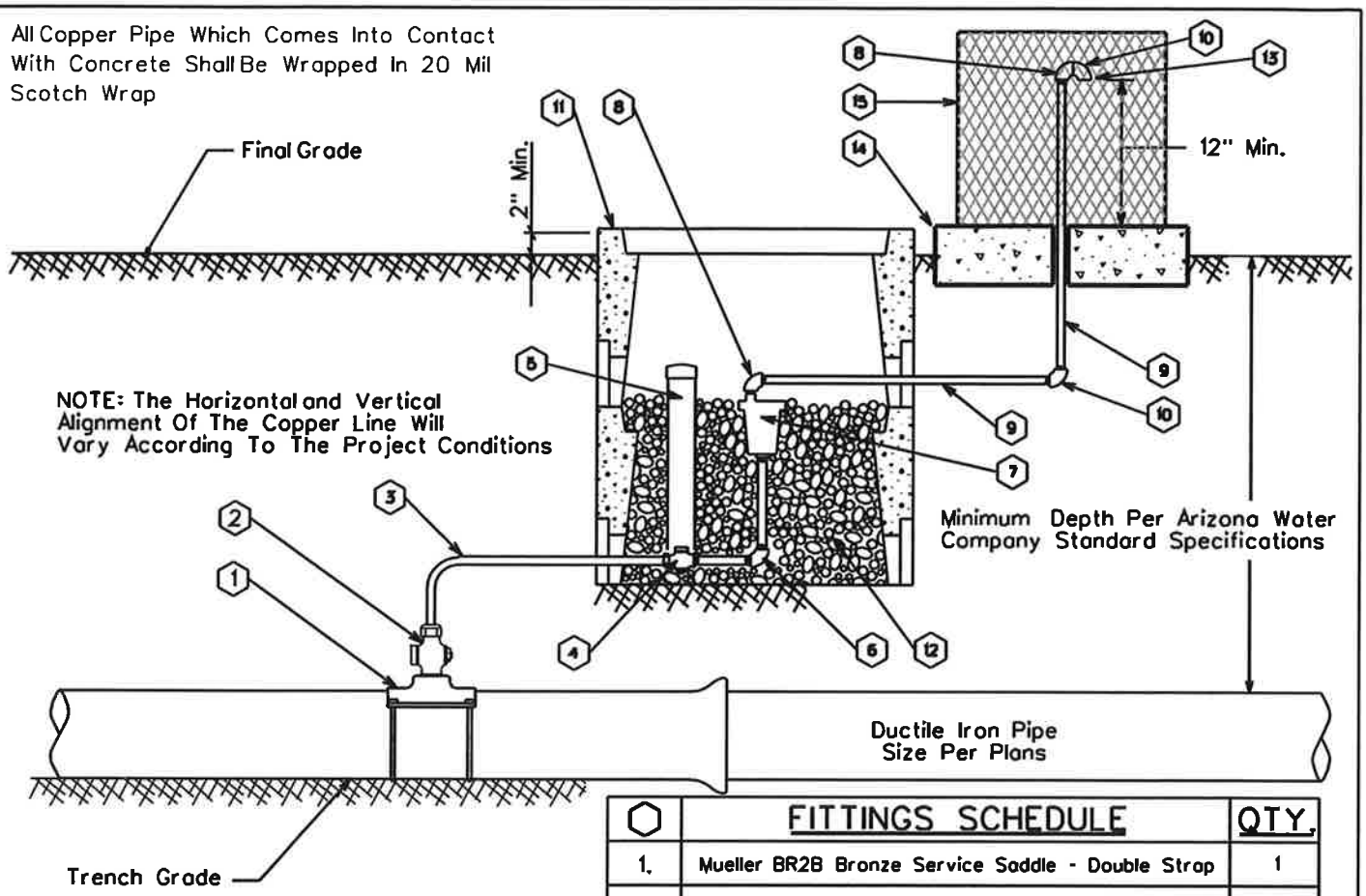
ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

TYPICAL AIR RELEASE VALVE

DRAWN BY:	APPROVED BY:	DATE:	△08.24.2006	E-9-8-2
CB	MW	03.20.1997		

All Copper Pipe Which Comes Into Contact With Concrete Shall Be Wrapped In 20 Mil Scotch Wrap



⬡	FITTINGS SCHEDULE	QTY.
1.	Mueller BR2B Bronze Service Saddle - Double Strap	1
2.	1" Mueller B-25008 Taper x Comp. Ball Corp Stop	1
3.	1" Type 'K' Copper w/NO Splices - Field Fit	As Req'd
4.	1" Mueller B-25028 IP x Comp. Ball Corp Stop	1
5.	3" PVC Pipe w/ Cap (Loose Fit)	1
6.	1" x 4" Brass Nipple w/90° Elbow	1
7.	Crispin 1" Air Release Valve, Model AR10	1
8.	½" Brass Street Elbow	2
9.	½" Galvanized Pipe - Length as req'd	2
10.	½" Galvanized 90° Ell	2
11.	Number 1 Meter Box	2
12.	2" Sized AB (Fill Meter Box To The Top Of The Air Release Valve)	As Req'd
13.	No.16 Wire Mesh Screen (Non-Corrodible)	1
14.	4" Thick Concrete Pad - Class 'C' Concrete	1
15.	Guardshack, Model GS-1, Available From BPDI, Inc. Available In Leaf Green Or Desert Tan	1

GENERAL NOTES:

1. The valve shall be installed at high points and on long runs to vent the accumulation of air with the line under pressure- see the construction plans for specific locations.
2. The valve shall have a 5/64 " orifice with valve sealing faces of stainless steel and BUNA-N rubber.
3. The valve shall be Crispin model AR10 for 6" and larger water mains.
4. Crispin model AR10 valve construction consists of a 1" IPST inlet & ½" IPST outlet, cast iron body and top flange with stainless steel float and trim.
5. The air release assembly shall be located out of the path of traffic but within the right-of-way or easement.

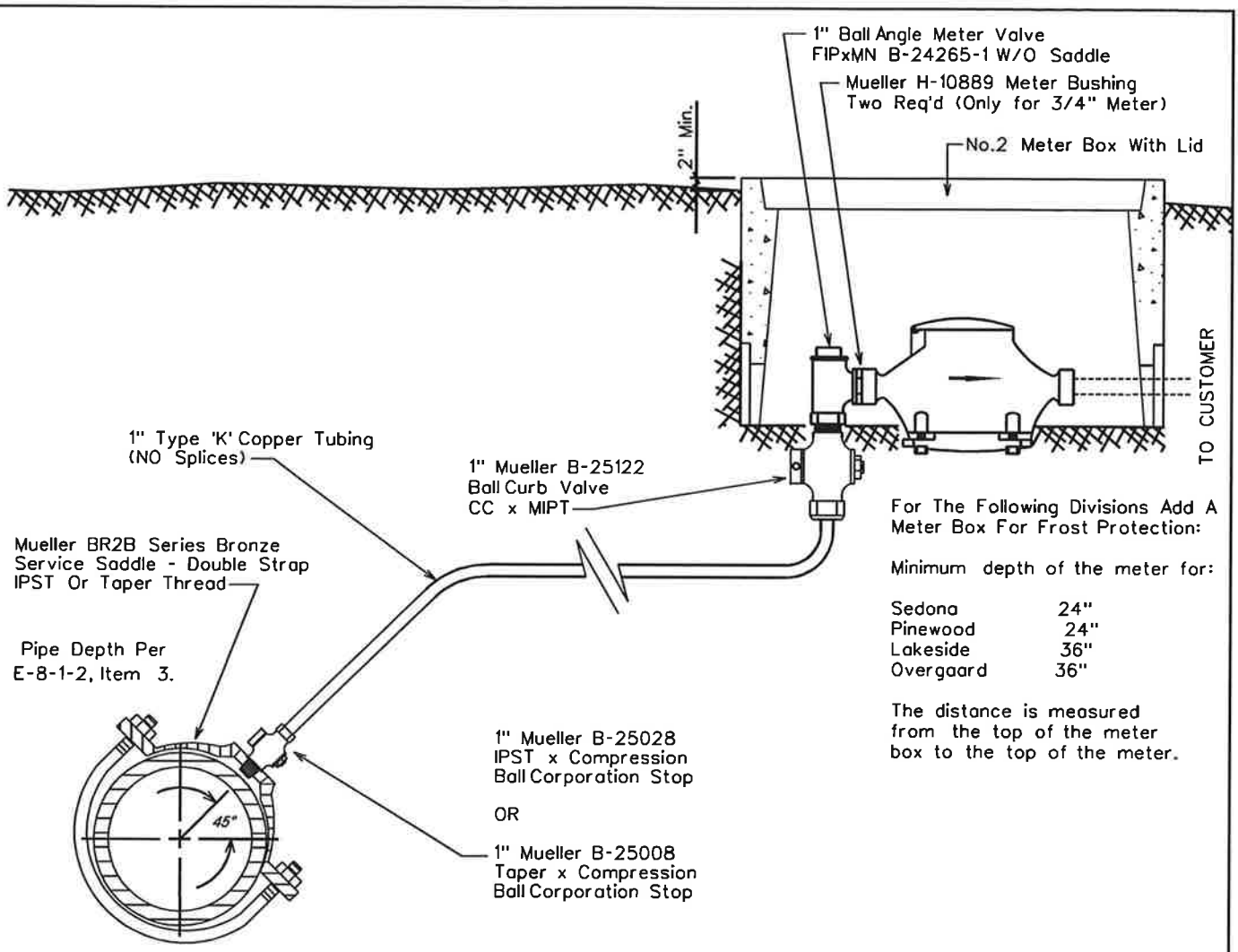
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

AIR RELEASE VALVE FOR THE NORTHERN REGION

DRAWN BY:	APPROVED BY:	DATE:		
CB	MW	03.20.1997	△08.24.2006	E-9-8-3



For The Following Divisions Add A Meter Box For Frost Protection:

Minimum depth of the meter for:

Sedona	24"
Pinewood	24"
Lakeside	36"
Overgaard	36"

The distance is measured from the top of the meter box to the top of the meter.

SADDLE TAP TO CA, PVC, OR DI PIPE

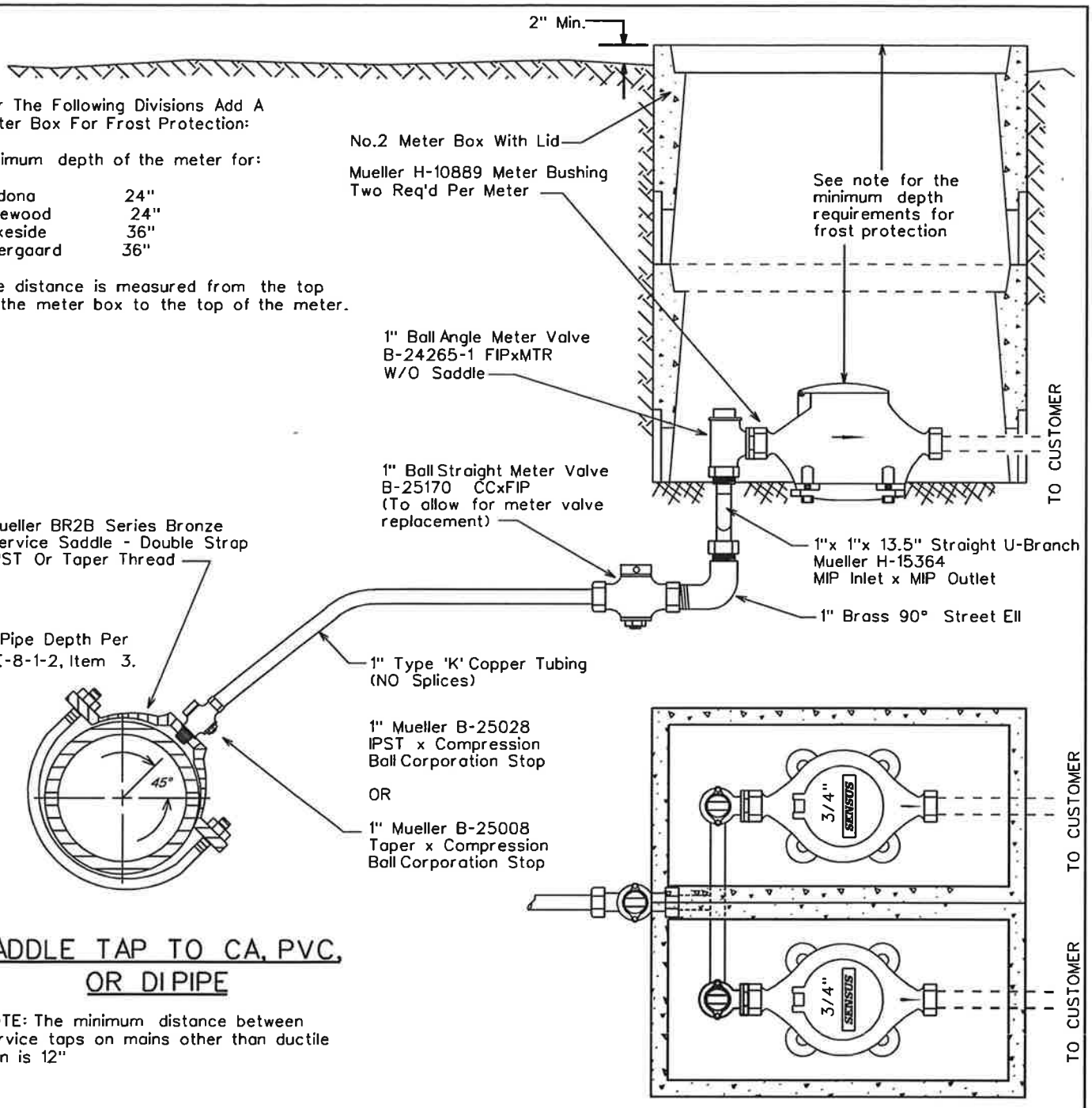
NOTE: The minimum distance between taps on mains other than ductile iron is 12"

NOTE:
Only the meter is supplied by Arizona Water Company

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF
SINGLE SERVICE CONNECTION FOR A 3/4" OR 1" METER

DRAWN BY:	APPROVED BY:	DATE:	△ 03.17.2006	E-9-9-1
CCO	M.W.	3/20/86		



For The Following Divisions Add A Meter Box For Frost Protection:

Minimum depth of the meter for:

Sedona	24"
Pinewood	24"
Lakeside	36"
Overgaard	36"

The distance is measured from the top of the meter box to the top of the meter.

SADDLE TAP TO CA, PVC, OR DI PIPE

NOTE: The minimum distance between service taps on mains other than ductile iron is 12"

NOTE:
Only the meter is supplied by Arizona Water Company

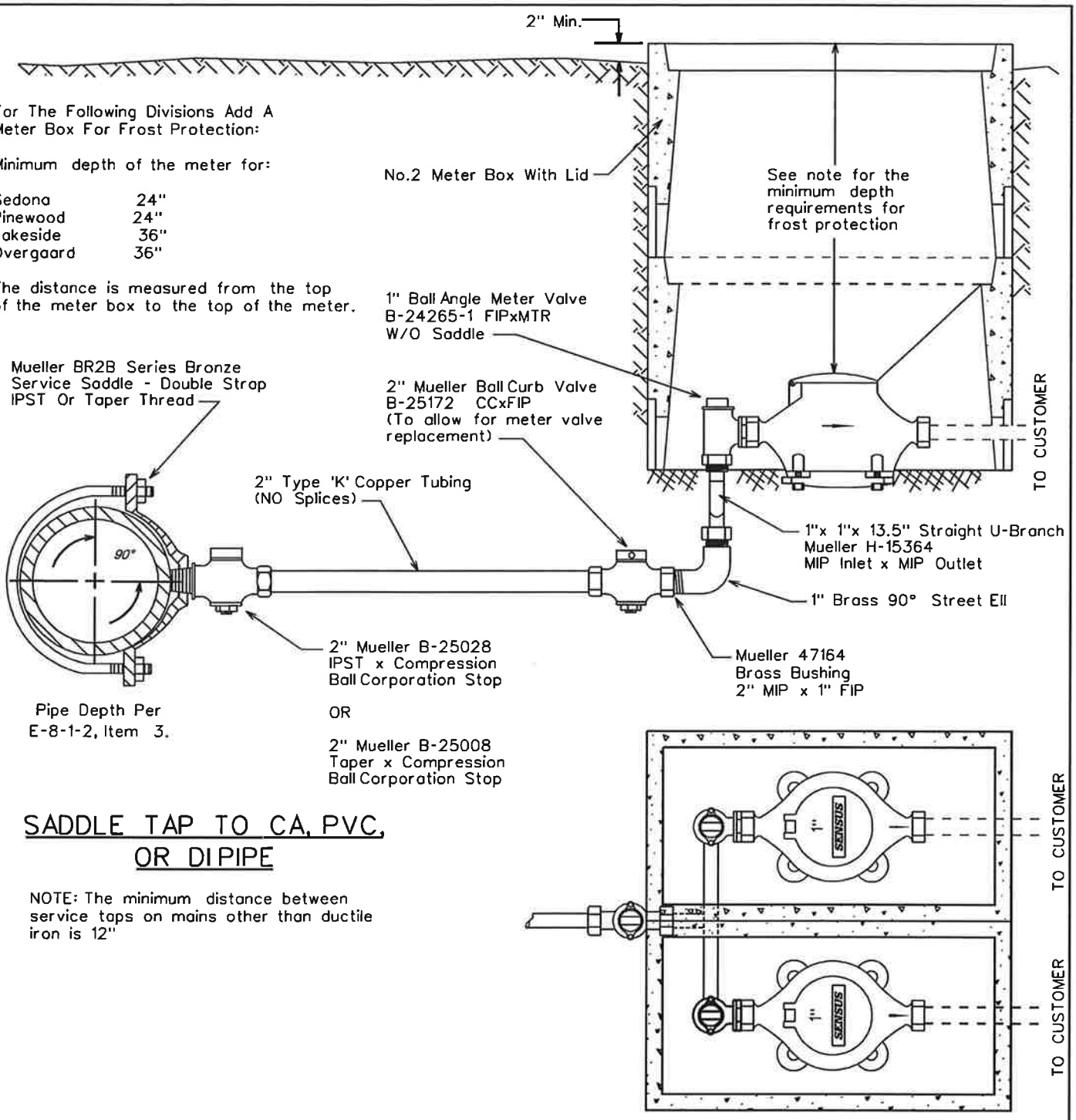
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

DOUBLE SERVICE CONNECTION FOR 3/4" METERS

DRAWN BY:	APPROVED BY:	DATE:	△ 08.25.2006	E-9-10-1
CCO	M.W.	3-20-86		



SADDLE TAP TO CA, PVC, OR DI PIPE

NOTE: The minimum distance between service taps on mains other than ductile iron is 12"

NOTE: THE LENGTH OF SERVICE IS LIMITED TO COMMERICIALLY AVAILABLE ROLLS, TYPICALLY 60 FEET

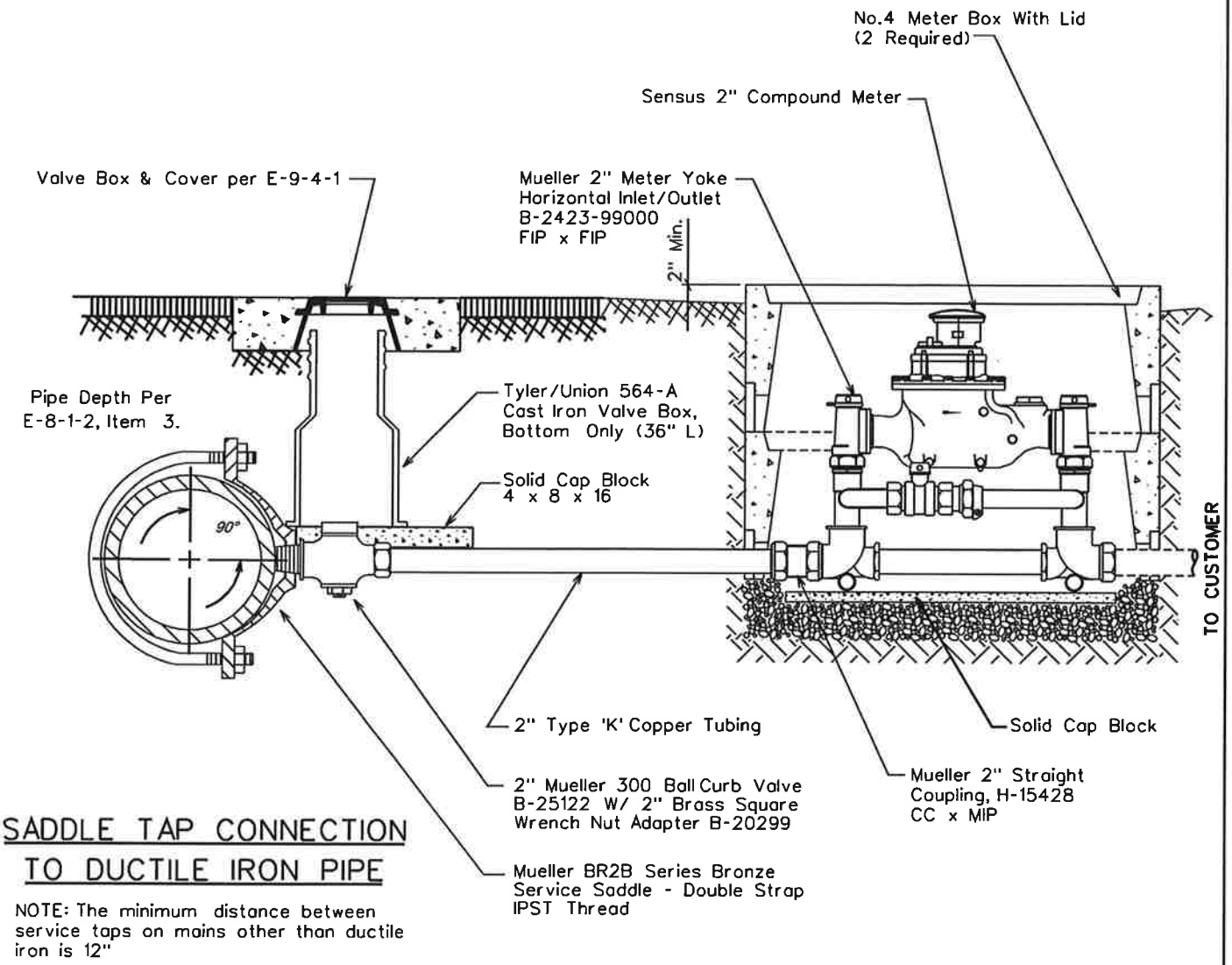
NOTE:
Only the meter is supplied by Arizona Water Company

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

DOUBLE SERVICE CONNECTION FOR 1" METERS

DRAWN BY:	APPROVED BY:	DATE:	△ 08.29.2006	E-9-10-2
CB	M.W.	03.17.2006		



SADDLE TAP CONNECTION TO DUCTILE IRON PIPE

NOTE: The minimum distance between service taps on mains other than ductile iron is 12"

NOTE: THE LENGTH OF SERVICE IS LIMITED TO COMMERICIALLY AVAILABLE ROLLS, TYPICALLY 60 FEET

NOTE:

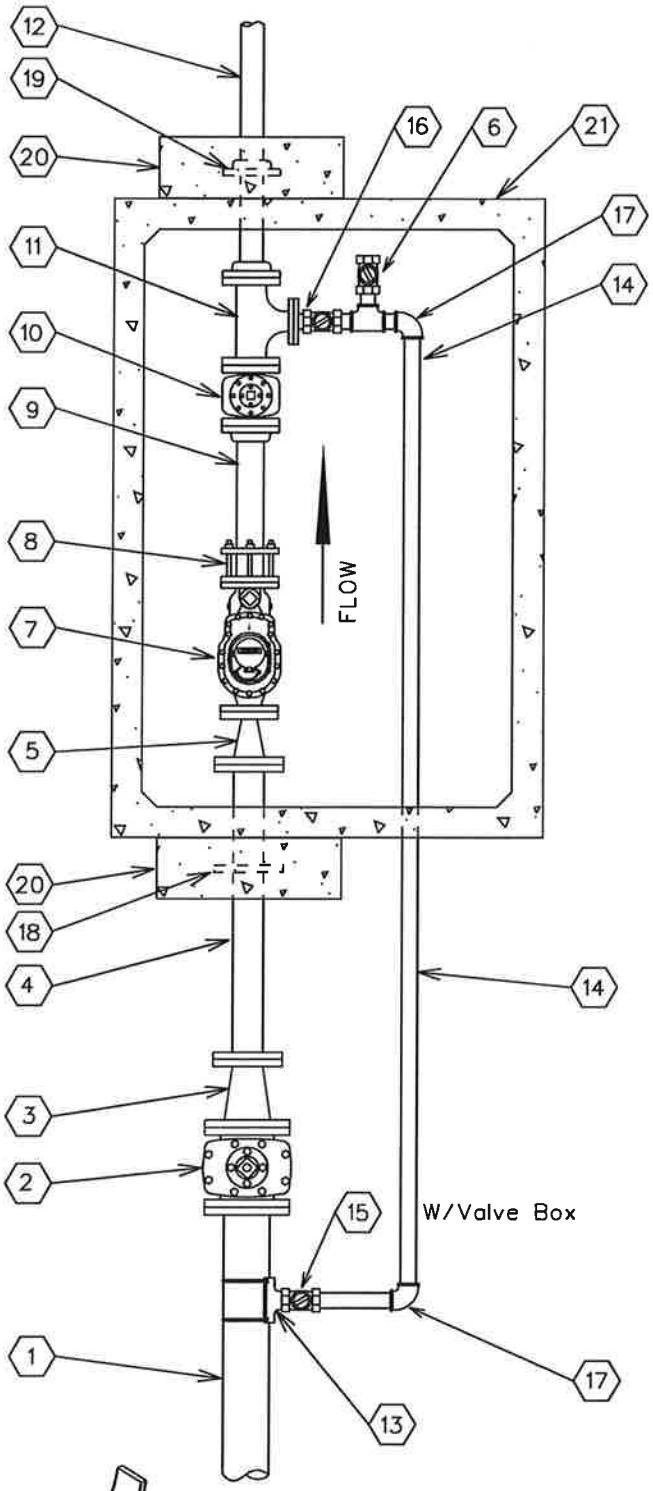
Only the meter is supplied by Arizona Water Company

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

TYPICAL 2" SERVICE CONNECTIONS

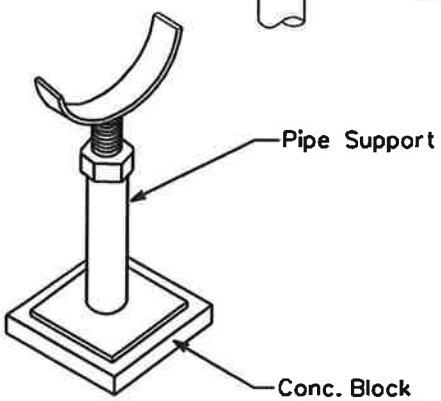
DRAWN BY:	APPROVED BY:	DATE:	△ 08.29.2006	E-9-11-1
JW	M.W.	3/20/86		



No.	FITTINGS SCHEDULE
1.	6" D.I.P.
2.	6" G.V.B.&C. mj x flng
3.	6"x4" Reducer flng x mj
4.	4"x3'-0" D.I.P. Spool flng x pe
5.	4" x 3" Reducer flng
6.	2" Test Port
7.	3" Compound Meter
8.	3" F.C.A.
9.	3"x2'-0" D.I. Spool flng x pe
10.	3" Gate Valve flng
11.	3"x2" Flg Tee w/ 2" Companion Flange
12.	3"x4'-0" D.I. Spool flng x pe
13.	6"x2" Tapping Saddle
14.	2" Copper Pipe
15.	2" Mueller B25122 Ball Valve w/B20299 Nut
16.	2" Locking Ball Valve (normally closed)
17.	2" Mueller H-15526 90° Ell CC x CC
18.	4" Megalug
19.	3" Slip-On Welding Flange
20.	24"x24"x8" Conc. Thrust Block P.I.P.
21.	575-LA Conc. Vault

NOTE:

1. Use Rowley pipe supports or equivalent as needed (See detail below).
2. Pipe support locations to be determined by field personnel.
3. All copper pipe that comes in contact with concrete to be wrapped w/10-20 Mil. Scotchwrap corrosion protection tape.
4. All mechanical joint fittings are to be megalugged.
5. Use deflection fittings (45° Ells.) to achieve necessary depths & cover as shown on the standard specification for the installation of a concrete vault (E-9-12-5).



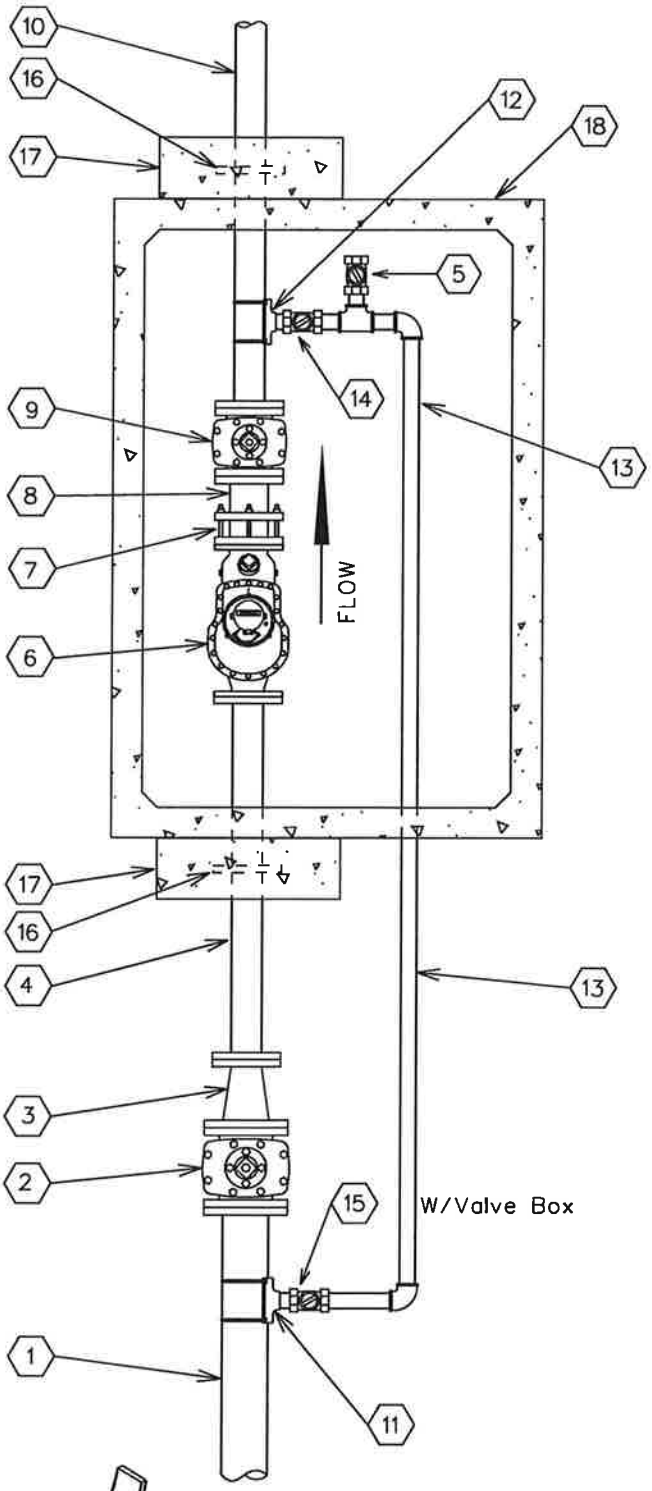
ARIZONA WATER COMPANY

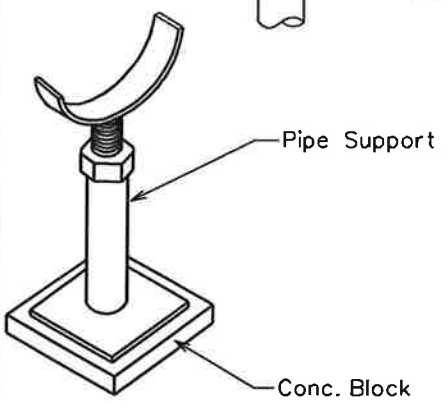
STANDARD SPECIFICATION

FOR THE INSTALLATION OF

3" COMPOUND METER

DRAWN BY:	APPROVED BY:	DATE:	△08.29.2006	E-9-12-1
CCO	MW	10/5/1993		





No.	FITTINGS SCHEDULE
1.	6" D.I.P.
2.	6" G.V.B.&C. mj x flng
3.	6"x4" Reducer flng x mj
4.	4"x3'-0" D.I.P. Spool flng x pe
5.	2" Test Port
6.	4" Compound Meter
7.	4" F.C.A.
8.	4"x1'-0" D.I.P. Spool flng x pe
9.	4" Gate Valve flng
10.	4"x4'-0" D.I.P. Spool flng x pe
11.	6"x2" Tapping Saddle
12.	4"x2" Tapping Saddle
13.	2" Copper Pipe
14.	2" Ball Valve / Locking (Normally Closed)
15.	2" Mueller B25122 Ball Valve w/B20299 Nut
16.	4" Megalug
17.	24"x24"x8" Conc. Thrust Block P.I.P.
18.	575-LA Conc. Vault

NOTE:

1. Use Rowley pipe supports or equivalent as needed (See detail below).
2. Pipe support locations to be determined by field personnel.
3. All copper pipe that comes in contact with concrete to be wrapped w/10-20 Mil. Scotchwrap corrosion protection tape.
4. All mechanical joint fittings are to be megalugged.
5. Use deflection fittings (45° Ells.) to achieve necessary depths & cover as shown on the standard specification for the installation of a concrete vault (E-9-12-5).

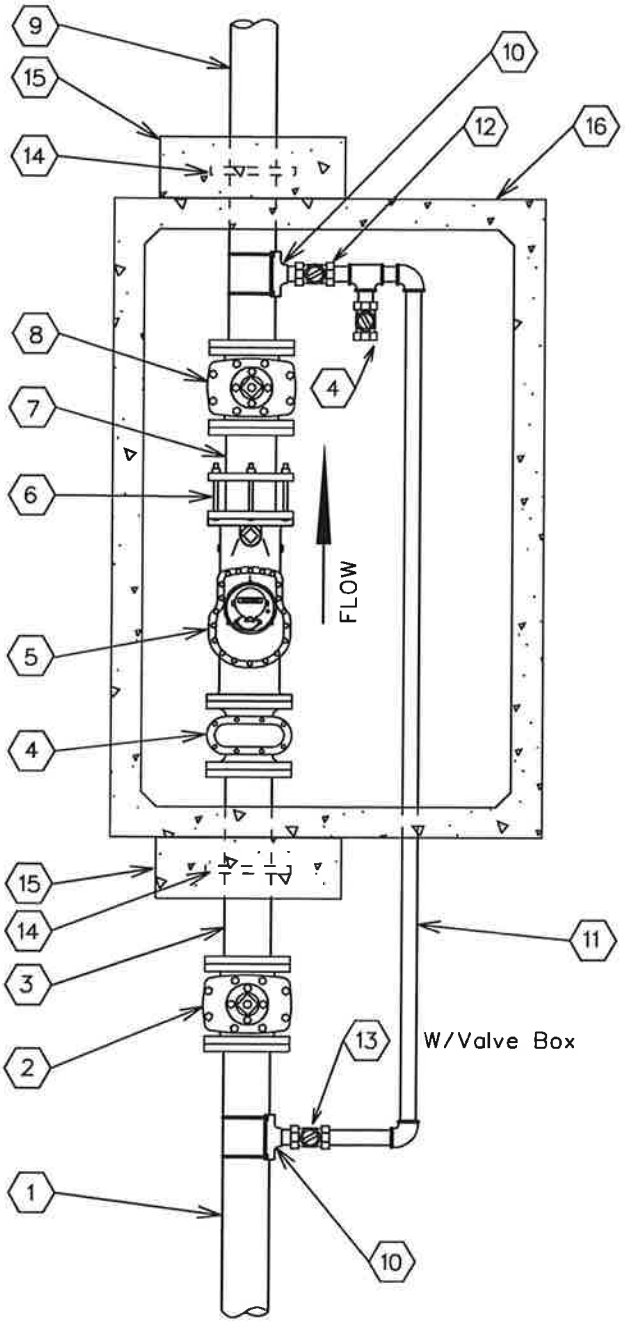
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

4" COMPOUND METER

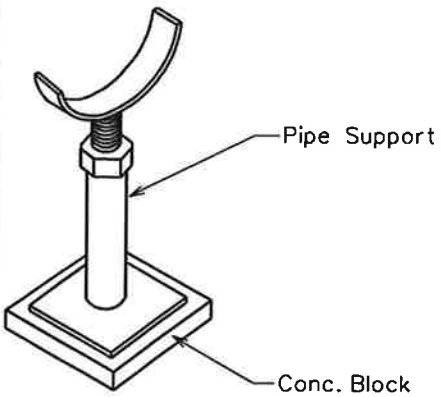
DRAWN BY:	APPROVED BY:	DATE:	△08.29.2006	E-9-12-2
CCO	MW	10/5/1993		



No.	FITTINGS SCHEDULE
1.	6" D.I.P.
2.	6" G.V.B.&C. mj
3.	6"x 3'-0" D.I.P. Spool flng x pe
4.	2" Test Port
5.	6" Compound Meter
6.	6" F.C.A.
7.	6"x 1'-0" D.I.P. Spool flng x pe
8.	6" Gate Valve flng
9.	6"x 4'-0" D.I.P. Spool flng x pe
10.	6"x2" Tapping Saddle
11.	2" Copper Pipe
12.	2" Ball Valve / Locking (Normally Closed)
13.	2" Mueller B25122 Ball Valve w/B20299 Nut
14.	6" Megalug
15.	24"x24"x8" Conc. Thrust Block P.I.P.
16.	575-LA Conc. Vault

NOTE:

1. Use Rowley pipe supports or equivalent as needed (See detail below).
2. Pipe support locations to be determined by field personnel.
3. All copper pipe that comes in contact with concrete to be wrapped w/10-20 Mil. Scotchwrap corrosion protection tape.
4. All mechanical joint fittings are to be megalugged.
5. Use deflection fittings (45° Ells.) to achieve necessary depths & cover as shown on the standard specification for the installation of a concrete vault (E-9-12-5).



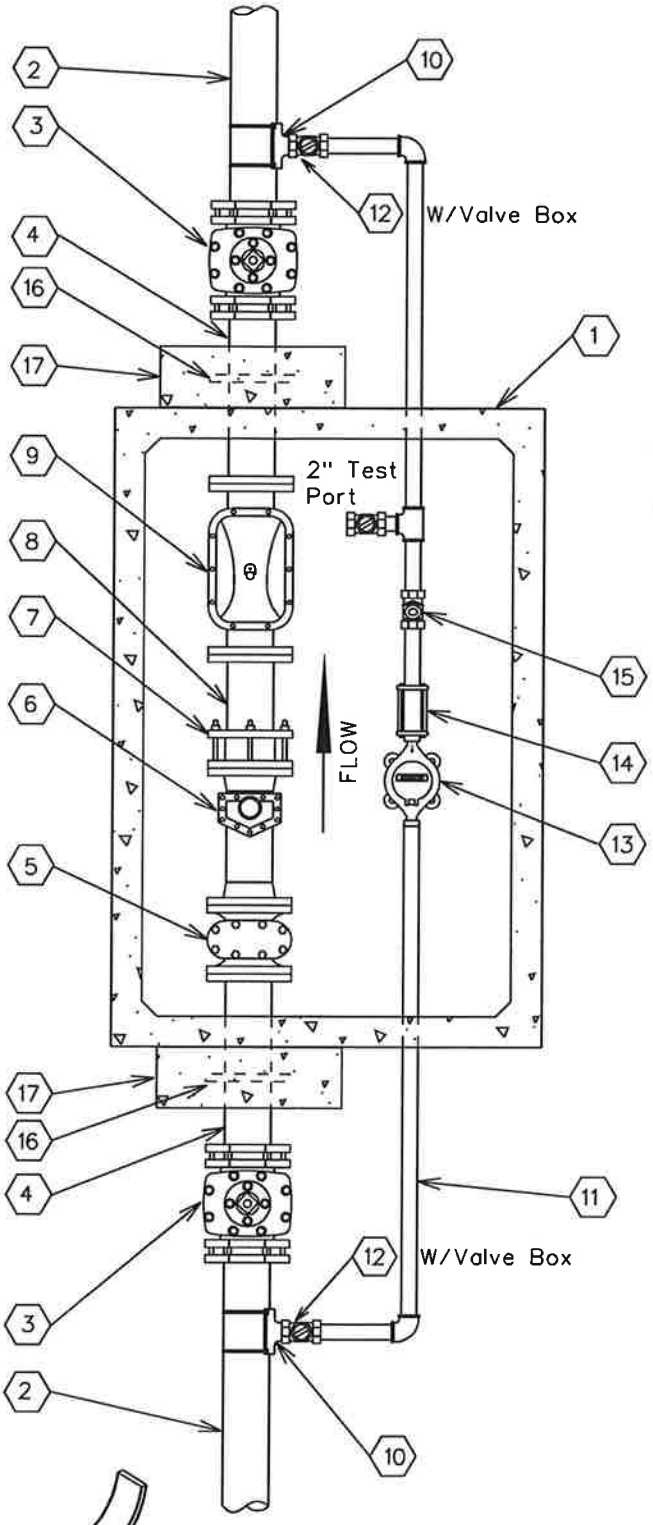
ARIZONA WATER COMPANY

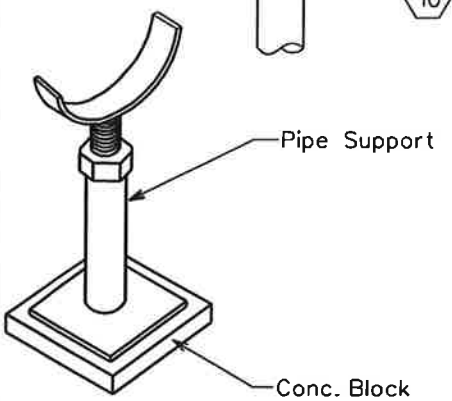
STANDARD SPECIFICATION

FOR THE INSTALLATION OF

6" COMPOUND METER

DRAWN BY:	APPROVED BY:	DATE:	△08.29.2006	E-9-12-3
CCO	MW	10/5/1993		





No.	FITTINGS SCHEDULE
1.	575-LA Conc. Vault
2.	6" D.I.P.
3.	6" G.V.B.&C. m.j.
4.	6" x 3'-0" D.I.P. SPool Piece flng x pe
5.	6" Strainer
6.	6" Turbo Meter
7.	6" F.C.A.
8.	6" x 2'-0" D.I.P. Spool Piece flng x pe (TRIM SPOOL PIECE TO 3x THE PIPE DIA.)
9.	6" Detector Check
10.	6"x*N" Tapping Saddle
11.	*N" Copper Pipe
12.	*N" Ball Valve (Locking)
13.	*N" Meter
14.	*N" Coup. Adapt.
15.	*N" Flapper Check Valve
16.	6" Megalug
17.	24"x24"x8" Conc. Thrust Block P.I.P.

*N - Size To Be determined By A.W.Co.

NOTE:

1. Use Rowley pipe supports or equivalent as needed (See detail below).
2. Pipe support locations to be determined by field personnel.
3. All copper pipe that comes in contact with concrete to be wrapped w/10-20 Mil. Scotchwrap corrosion protection tape.
4. All mechanical joint fittings are to be megalugged.
5. Use deflection fittings (45° Ells.) to achieve necessary depths & cover as shown on the standard specification for the installation of a concrete vault (E-9-12-5).
6. To change from a 6" service to a 4" service, change all listed 6" materials to 4" materials.

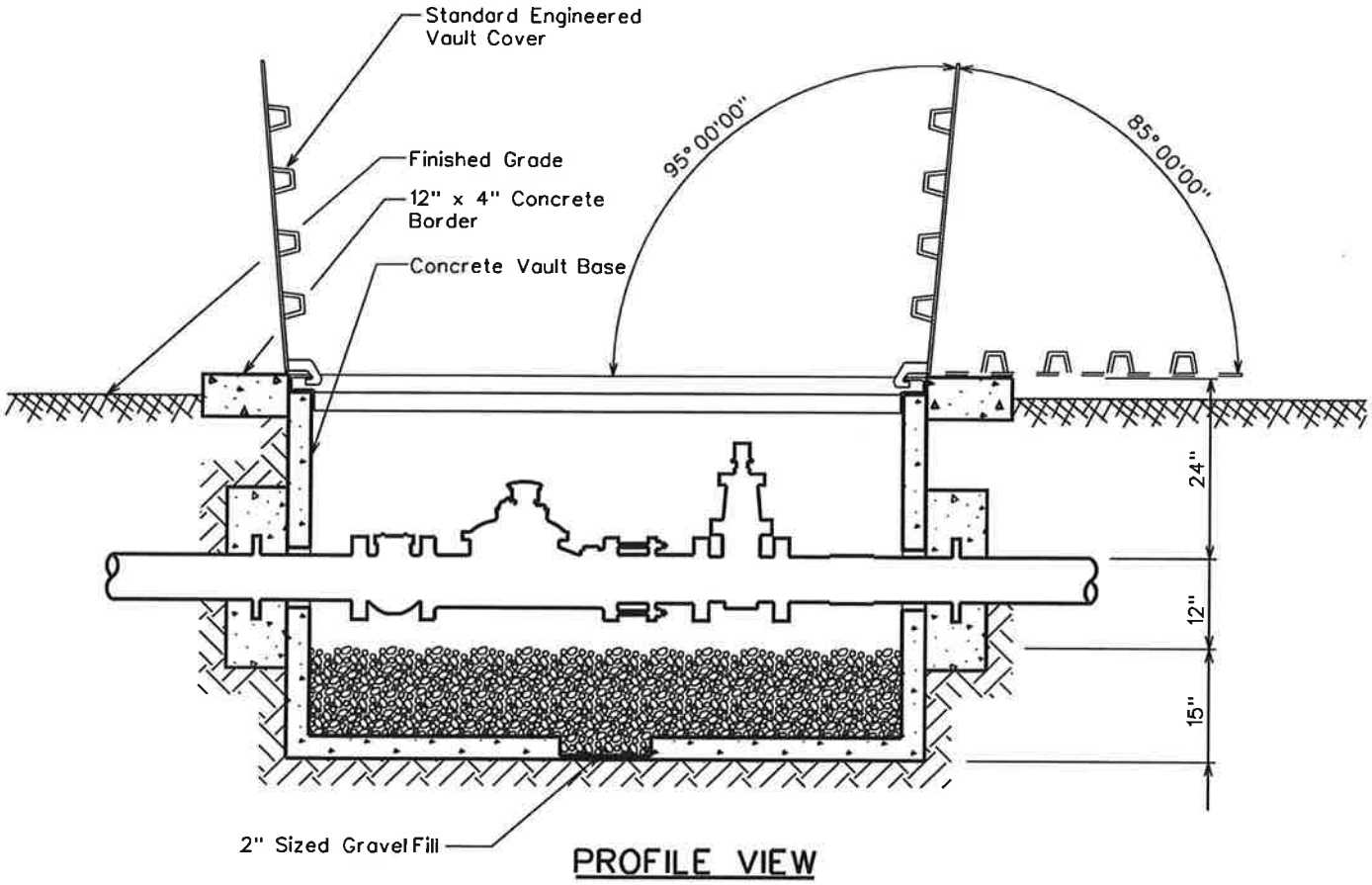
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

6" COMPOUND SERVICE

DRAWN BY:	APPROVED BY:	DATE:	△08.29.2006	E-9-12-4
CCO	MW	10/05/1993		



PROFILE VIEW

CONCRETE VAULT & COVER SPECIFICATIONS

Vault - Base No. 575-BL
Cover - Standard Engineered Vault Cover
- 4874 Aluminum Diamond Plate Cover For Non-Traffic Loading Areas
  Or
- 4874 Galvanized Steel Diamond Plate Cover W/ H-20 Traffic Loading
- Double Torsion Spring Assisted Doors W/ Recessed Hasp & Safety Latches

NOTES

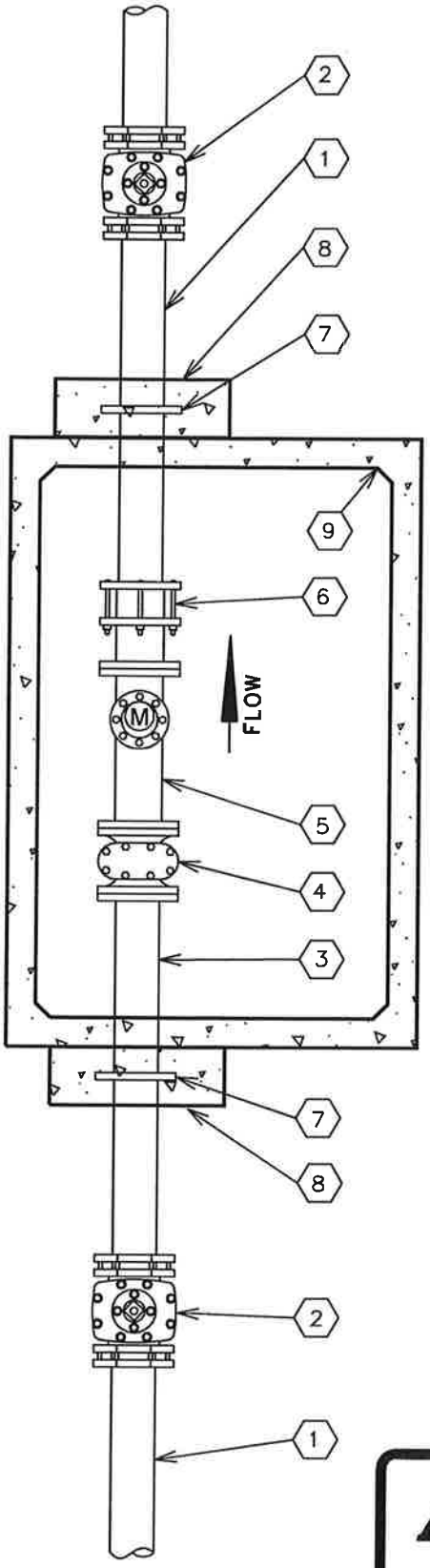
1. Total Depth Of Concrete Vault To Be A Maximum Of 3'-0" From Top Of Vault Cover To Top Of Gravel Fill.
2. Service Connections Larger Than 6" In Diameter Will Conform To The Same Vault & Cover Specifications. Size Of Vault & Cover To Be Determined By A.W.Co. Engineers.

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

CONCRETE VAULT

DRAWN BY:	APPROVED BY:	DATE:	△	
CCO	MW	10/5/1993	△ 05.17.2001	E-9-12-5



No.	FITTINGS SCHEDULE
1.	Ductile Iron Pipe
2.	Gate Valve M.J.
3.	D.I.P. Spool Piece Flg x Pe (10xDia.)
4.	Meter Strainer
5.	Propeller Meter
6.	Flanged Coupling Adapter
7.	Megalug Gland (Thrust Anchor)
8.	Concrete Thrust Block P.I.P.
9.	Concrete Vault

NOTE:

1. Use Rowley pipe supports or equivalent as needed (See E-9-12-4).
2. Pipe support locations to be determined by field personnel.
3. All Sched. 40 Stl. pipe outside of vault to be wrapped w/10-20 Mil. Scotchwrap corrosion protection tape.
4. All mechanical joint fittings to are to be megalugged.
5. Use deflection fittings (45° Ells.) to achieve necessary depths & cover as shown on the standard specification for the installation of a concrete vault (E-9-12-5).

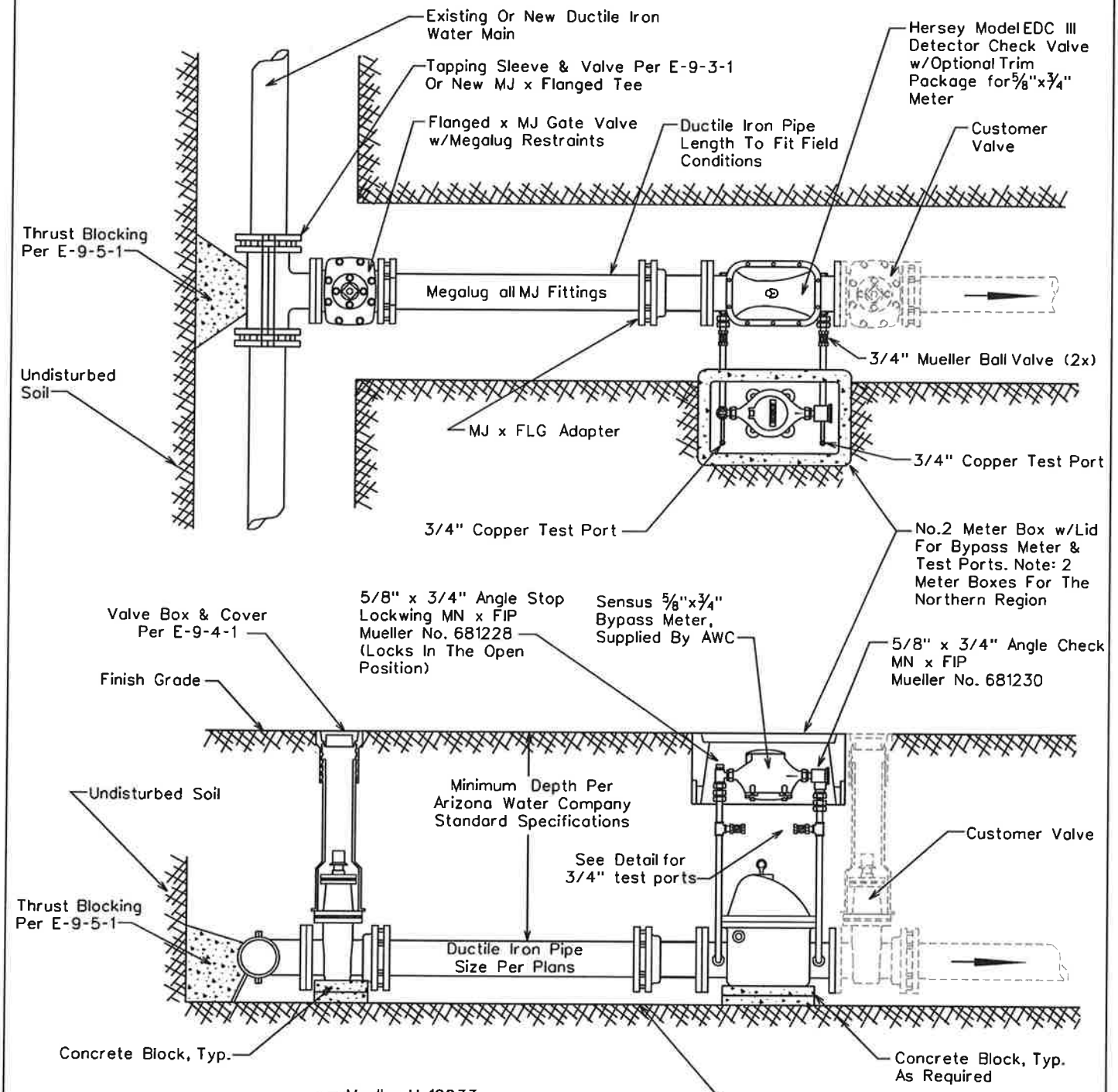
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

NON-POTABLE PROPELLER METER

DRAWN BY:	APPROVED BY:	DATE:	△	
JPK	MW	7-20-95		E-9-12-6



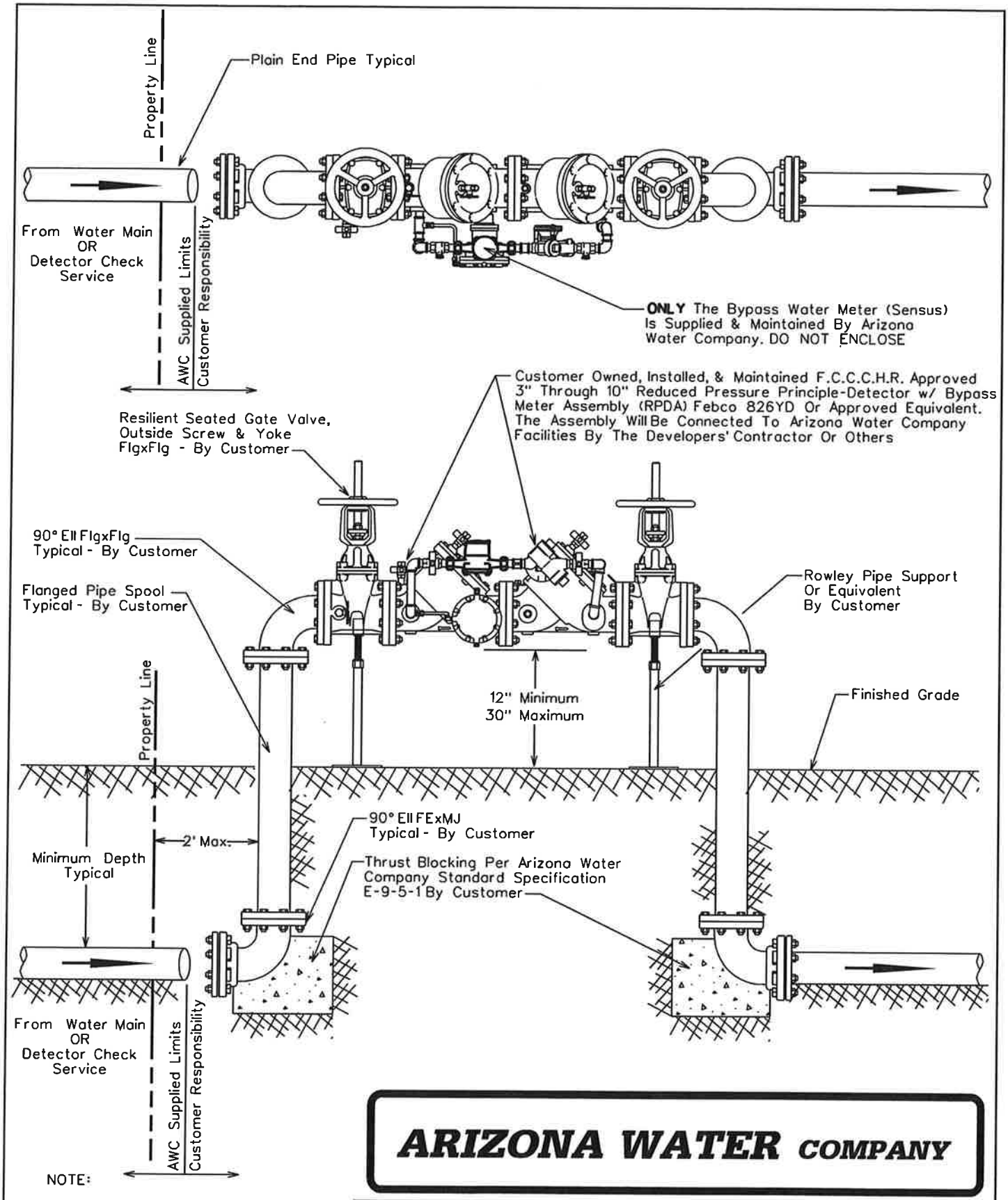
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

TYPICAL 4" THRU 8" DETECTOR CHECK VALVES

DRAWN BY:	APPROVED BY:	DATE:	△03.09.2007	E-9-13-1
CB	MW	10.16.1990		



NOTE:

Minimum Depth Of Cover Over 6" & 8" Mains is 36 Inches, 12" & Greater is 48 Inches Unless Otherwise Specified

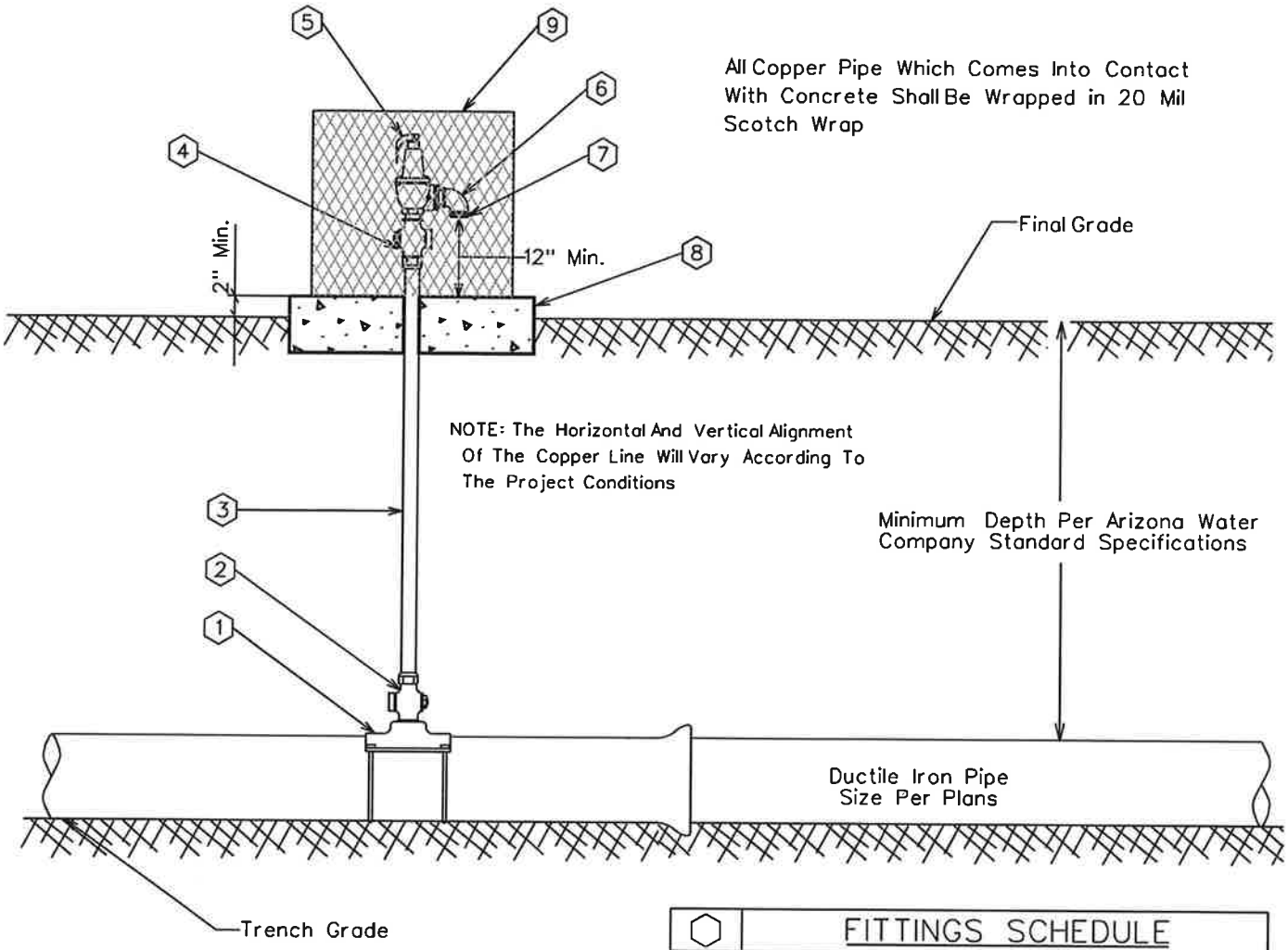
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

3" THRU 10" REDUCED PRESSURE PRINCIPLE-DETECTOR WITH BYPASS METER ASSEMBLY (RPDA) FOR FIRELINE SERVICES

DRAWN BY:	APPROVED BY:	DATE:	△1-19-2000	E-9-13-2
CB	MW	10-13-98		



⬡	FITTINGS SCHEDULE
1.	Mueller BR2B Bronze Service Saddle - Double Strap
2.	2" Mueller B-25008 Taper x Comp. Ball Corp Stop
3.	2" Type 'K' Copper w/NO Splices - Field Fit
4.	2" Mueller B-25028 IP x Comp. Ball Corp Stop
5.	2" Pressure Relief Valve Watts 174A With A 2" Inlet / 2" Outlet 30-150 psi W/ Bronze Body
6.	2" Brass Street Elbow
7.	No.16 Wire Mesh Screen (Non-Corrodible)
8.	4" Thick Concrete Pad - Class 'C' Concrete
9.	Vandal enclosure to be centered on the concrete pad

NOTE:

1. Pressure relief valves are typically located just down stream of a pressure reducing station or where system conditions might be subject to greater than allowable pressures.
2. The relief valve assembly and vandal enclosure shall be located out of the roadway, but within the right-of-way or easement.

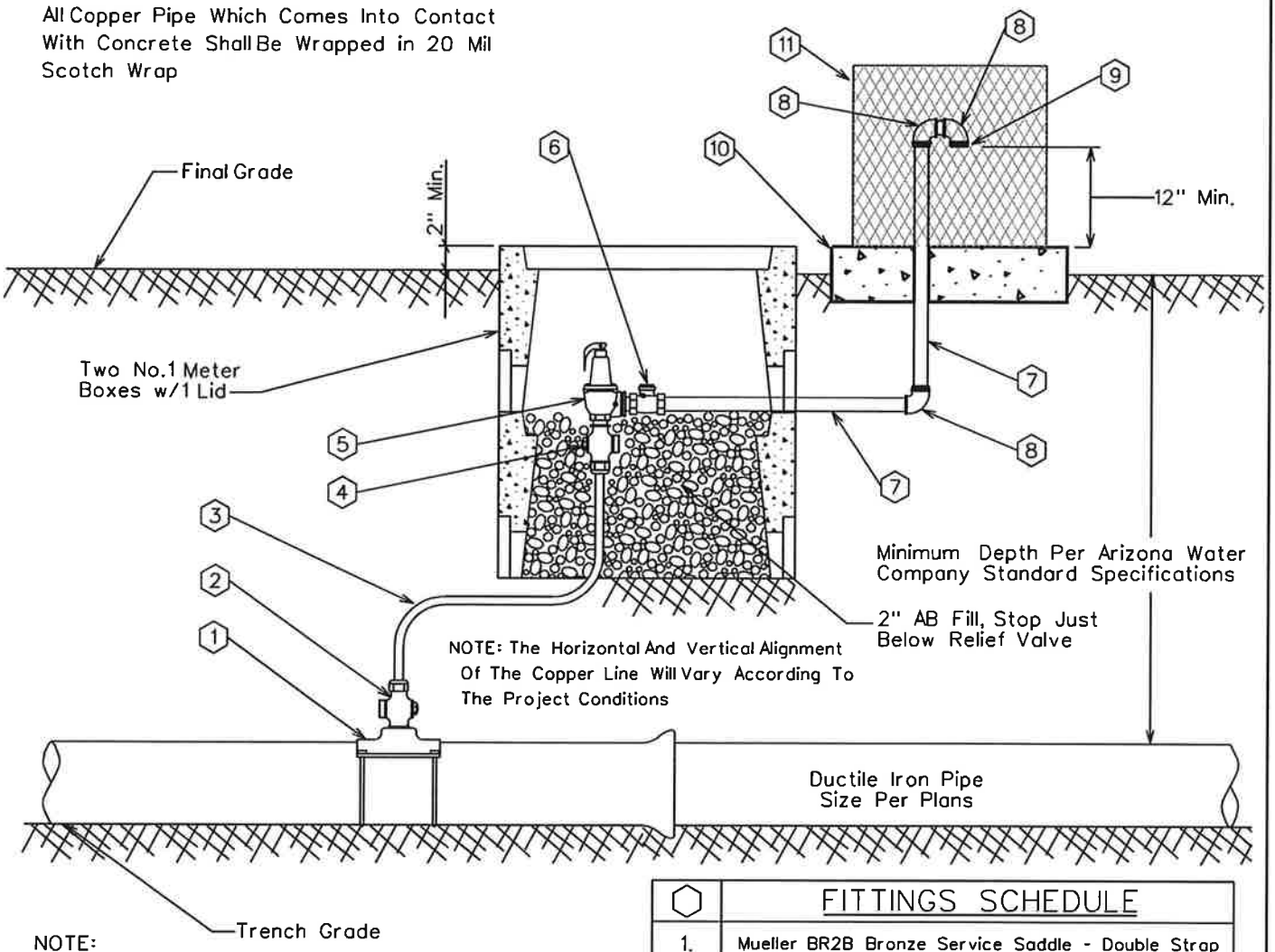
ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

TYPICAL PRESSURE RELIEF VALVE ASSEMBLY

DRAWN BY:	APPROVED BY:	DATE:	△ 08.29.2006	E-9-14-1
CCO	MW	3/20/1986		

All Copper Pipe Which Comes Into Contact With Concrete Shall Be Wrapped in 20 Mil Scotch Wrap



NOTE:

1. Pressure relief valves are typically located just down stream of a pressure reducing station or where system conditions might be subject to greater than allowable pressures.
2. The relief valve assembly and vandal enclosure shall be located out of the roadway, but within the right-of-way or easement.

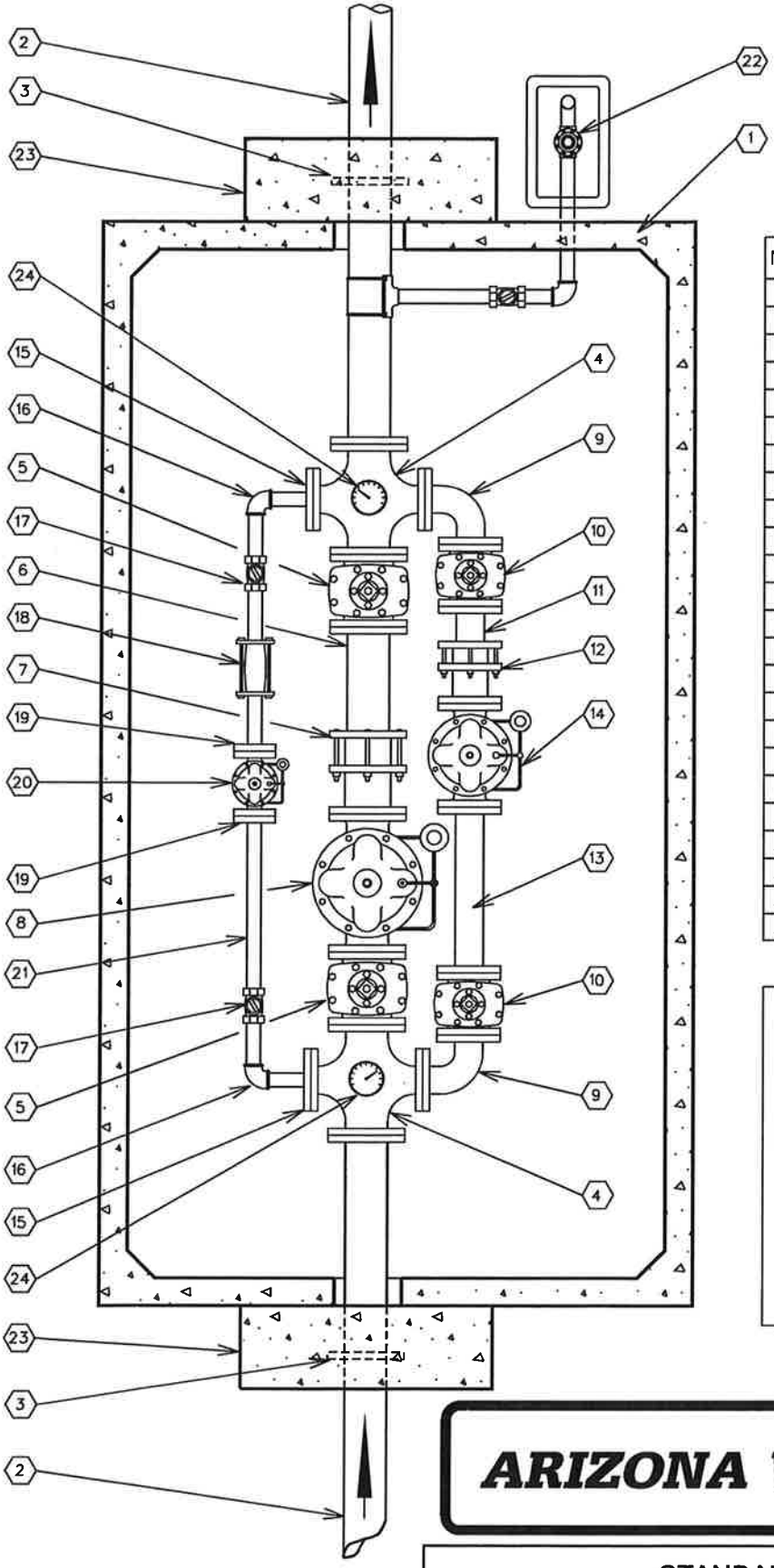
⬡	FITTINGS SCHEDULE
1.	Mueller BR2B Bronze Service Saddle - Double Strap
2.	2" Mueller B-25008 Taper x Comp. Ball Corp Stop
3.	2" Type 'M' Rigid Copper w/NO Splices - Field Fit
4.	2" Mueller B-25028 IP x Comp. Ball Corp Stop
5.	2" Pressure Relief Valve Watts 174A With A 2" Inlet / 2" Outlet 30-150 psi W/ Bronze Body
6.	2" Bronze Check Valve Watts Series CV
7.	2" Schedule 40 Cut Pipe - Field Fit
8.	2" Brass Street Elbow
9.	No.16 Wire Mesh Screen (Non-Corrodible)
10.	4" Thick Concrete Pad - Class 'C' Concrete
11.	Guardshack, Model GS-1, Available From BPDI, Inc. Available In Leaf Green Or Desert Tan

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

PRESSURE RELIEF VALVE - NORTHERN REGION

DRAWN BY:	APPROVED BY:	DATE:	△08.29.2006	E-9-14-2
CCO	MW	3/20/1986		



No.	FITTINGS SCHEDULE
1.	612 LA Conc. Vault (See Note 3)
2.	6"x6'-0" D.I.P. Spool Flg.xP.E.
3.	6" Megalug (Thrust Anchor)
4.	6"x4" Cross Flg.
5.	6" Gate Valve Flg.
6.	6"x2'-0" D.I.P. Spool Flg.xP.E.
7.	6" Flg. Coup. Adapt. (Rockwell 913)
8.	6" High Flow Pressure Reducing Valve Flg.
9.	4" 90° Ell. Flg.
10.	4" Gate Valve Flg.
11.	4"x1'-0" D.I.P. Spool Flg.xP.E.
12.	4" FLg. Coup. Adapt. (Rockwell 913)
13.	4"x2'-0" D.I.P. Spool Flg.
14.	4" Medium Flow Pressure Reducing Valve Flg.
15.	2"x9" O.D. Reducing Flg. (I.P.T.)
16.	2" 90° Ell. F.I.P.
17.	2" Ball Valve F.I.P.
18.	2" Comp. Coup. (Rockwell 411)
19.	2" Companion Flg. (I.P.T.)
20.	2" Low Flow Pressure Reducing Valve Flg.
21.	2" Sched. 40 Stl. Pipe
22.	2" Pressure Relief Valve (See E-9-14-1)
23.	12"x36"x36" Conc. Thrust Block P.I.P.
24.	Pressure Gauge w/shut off valve

NOTE:

1. Use Rowley pipe supports or equivalent as needed. (See E-9-12-4)
2. Pipe support locations to be determined by field personnel.
3. Vault-612 LA top section w/12" Dia. sump hole. Cover-concrete slab top w/(4) 4'-0" x2'-6" aluminum spring loaded hinged style covers for non-traffic loading areas. For areas w/low density traffic, cover is to be designed for H-20 traffic loading.
4. All Sched. 40 Stl. pipe outside of vault to be wrapped w/10-20 Mil. Scotchwrap corrosion protection tape.
5. Use deflection fittings (45° Ells.) to achieve necessary depths & cover as shown on the standard specification for the installation of a concrete vault (E-9-12-5).

ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

PRESSURE REDUCING STATION

DRAWN BY:	APPROVED BY:	DATE:	△ 9-27-95	E-9-15-1
JPK	MW	11-16-88		

1. Specific Items To Be Painted Deer-O Pure White Enamel:

   A. All Booster Pumps.
   B. All Electrical Motors And Gas Engines.
   C. Well Pump Discharge Heads.
   D. Electrical Panel.

2. Specific Items To Be Painted Frost Cap White Or Deer-O Pure White Enamel:

   A. Well Shelter.

3. Specific Items To Be Painted OSHA Orange:

   A. Electrical Conduit.

4. All Other Items To Be Painted With Either:
   (At Manager's Discretion)

   A. Cholla Green
   B. Forest Green
   C. Sonora Beige
   D. Red Rock
   E. Rock Brown
   F. Deer-O Pure White
   G. Elkhorn Cactus

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

PAINT COLOR SELECTION

DRAWN BY:	APPROVED BY:	DATE:	△	
CCO		3/20/1986	△ 2/13/2001	E-9-16-1

1. Tank shall conform to AWWA Specification D100-84 with exceptions noted below.

*2. 1/4" minimum shell plate.

3. Minimum of 12" diameter roof vent, screened with No. 16 non-corrodible wire mesh, to be located on a 24" diameter round hinged manhole opening at the center of the tank to provide access to the dollar plate.

4. Overflow pipe shall be the same diameter as the inlet pipe and shall terminate 12 to 24 inches above splash pad or a minimum of 2 overflow pipe diameters above weir box high water level.

5. Storage tank shall be placed upon adequately compacted base material.

6. 6" minimum floor mounted tank drain outlet to be located close to the outer shell.

7. Tank and related fittings shall be enclosed with a 6 foot chain link fence with lockable gates and anti-personnel wire on top of fence.

8. Liquid level shall be indicated by a target and target board on the outside surface of the tank.

9. 24 inch diameter manholes shall be provided on the roof and on the shell near the bottom of the tank. The roof manhole cover shall overlap the manhole by at least 2 inches to provide a rain tight closure. Roof manhole shall be hinged and equipped with a lock. Shell manhole cover to be hinged and bolted in place. *Tanks larger than a 60 foot diameter require 2 shell manholes.

10. Inside and outside ladders shall be located at the roof manhole. Outside ladder shall be caged with locking trap door. Bottom 8 feet of cage shall be enclosed to within 1/2" of shell with 10 gauge sheet steel.

11. Finished tank shall be disinfected in accordance with Arizona Department of Health Services Engineering Bulletin No. 8 before being placed into service.

12. The following information will be included with application for approval to construct:

    1. Tank location _____
    2. Tank height _____
    3. Tank diameter _____
    4. Tank capacity _____
    5. Method of water level control _____

    _____

13. The storage tank will not be constructed within the 100 year flood plain and the tank site will be graded to slope away from the tank.

14. The welded steel storage tank will be coated as per AWWA Specification D102, and N.S.F. Standard 61.

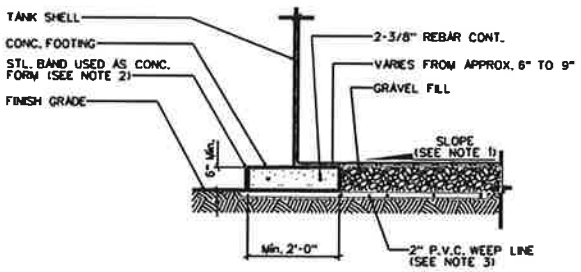
*Exceptions to AWWA Specification D100-84

FOUNDATION NOTES

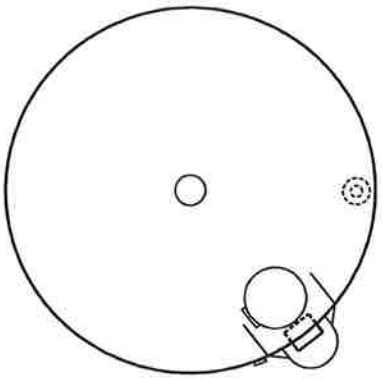
1. FINISH CONCRETE SURFACE MUST SLOPE UPWARDS FROM THE STEEL BAND APPROX. 1" IN 10'-0".

2. TOP OF STEEL BAND MUST BE MAINTAINED LEVEL TO WITHIN 1/8".

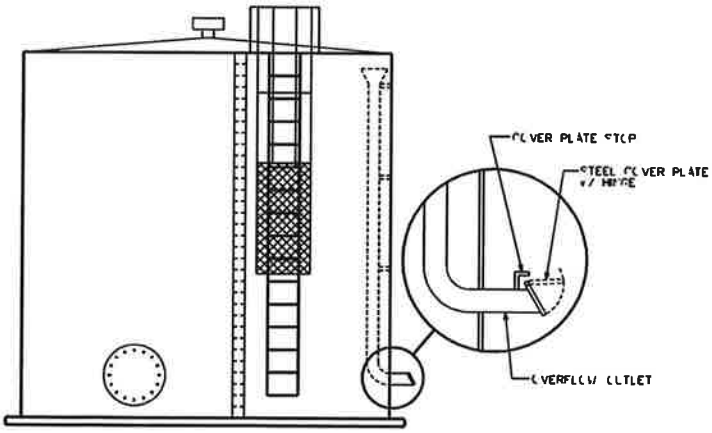
3. INSTALL 8-2" DIA.x10'-0" P.V.C. WEEP LINES, EQUALLY SPACED (EVERY 45°). PERFORATE 8'-0" OF LINE WITH 1/2" DIA. HOLES @ 6" O.C. PLUG INTERIOR END OF LINE w/2" CAP.



FOUNDATION DETAIL



PLAN VIEW



PROFILE VIEW

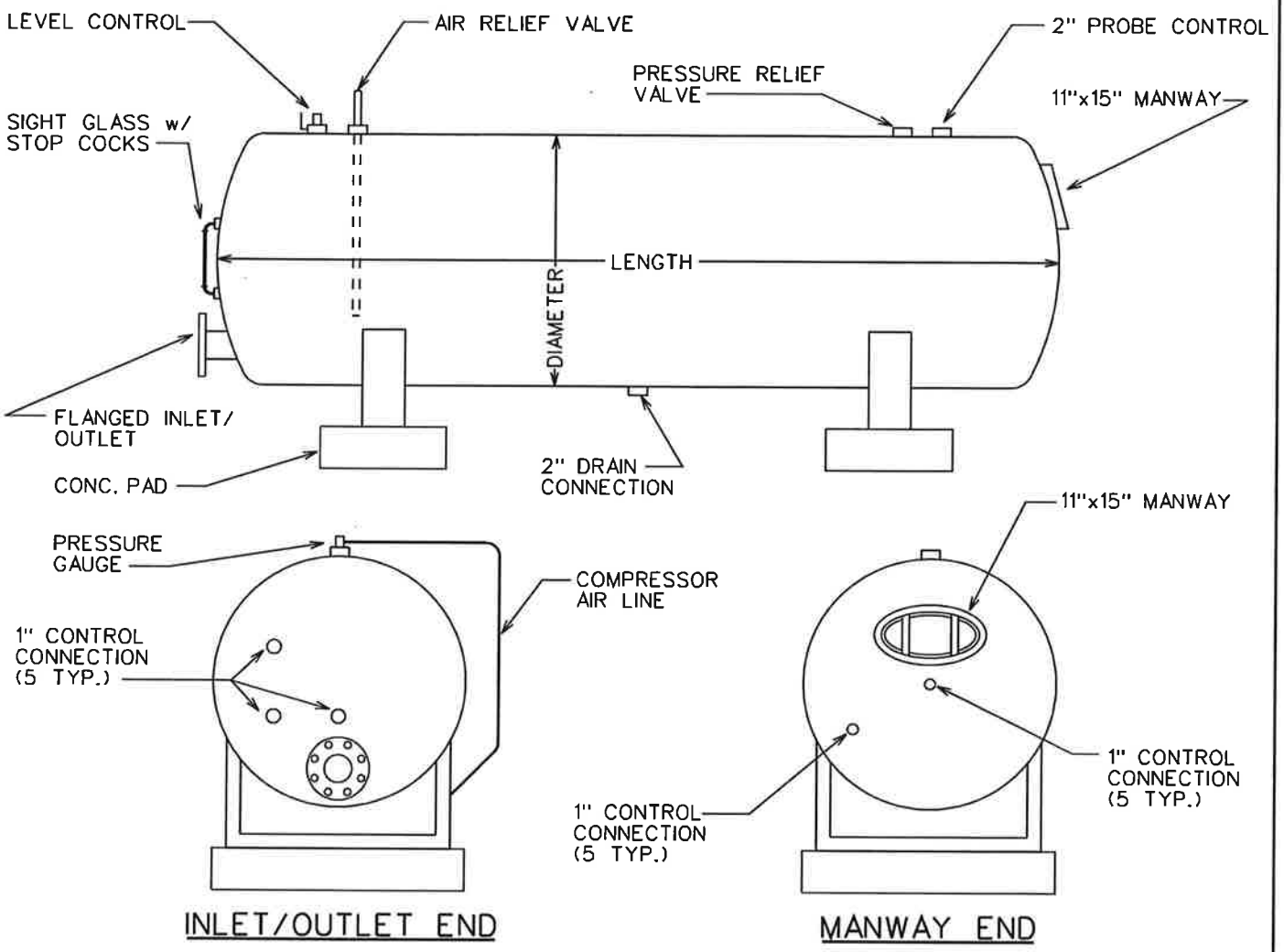
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

STEEL WATER STORAGE TANK

DRAWN BY:	APPROVED BY:	DATE:	△	
JPK	MJW	10-17-88	2-12-96	E-9-17-1



INLET/OUTLET END

MANWAY END

1. ALL HYDROPNEUMATIC TANKS SHALL BE DESIGNED & CONSTRUCTED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE ASME CODE FOR UNFIRED PRESSURE VESSELS, SECTION VIII, DIVISION 1.
2. FINISHED TANK SHALL BE DISINFECTED IN ACCORDANCE WITH ADEQ BULLETIN No. 8 BEFORE BEING PLACED INTO SERVICE.
3. THE WELDED STEEL HYDROPNEUMATIC TANK WILL BE COATED AS PER AWWA SPECIFICATION D102 & NSF STANDARD 61.
4. THE FOLLOWING INFORMATION WILL BE INCLUDED WITH THE APPLICATION FOR APPROVAL TO CONSTRUCT.
   1. Tank Location _____
   2. Tank Length _____
   3. Tank Diameter _____
   4. Tank Capacity _____
   5. Maximum Working Pressure _____

ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

HYDROPNEUMATIC TANK

DRAWN BY:	APPROVED BY:	DATE:	△ 01.16.2007	E-9-18-1
JPK	MW	3-20-1986		

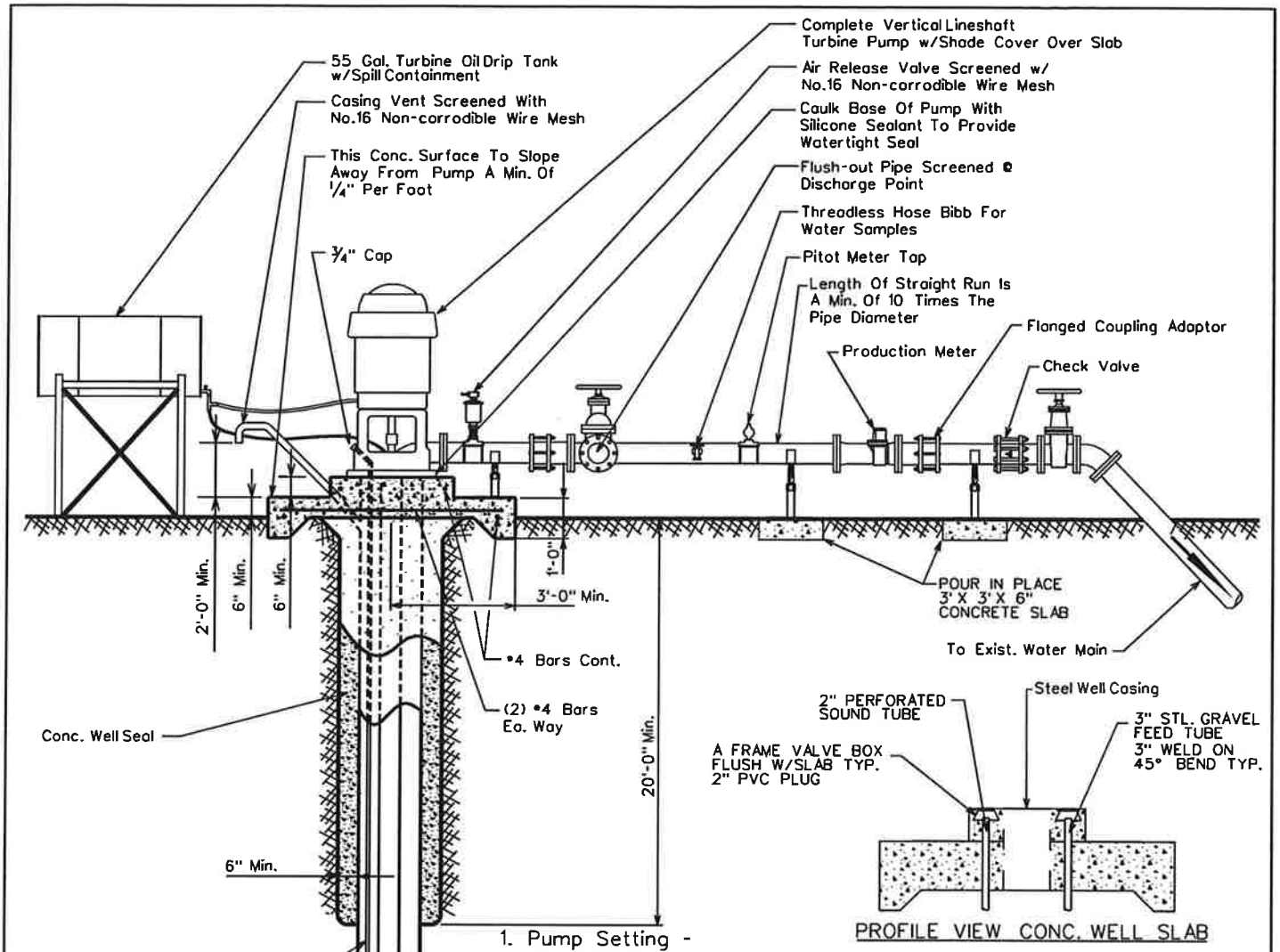
NOT
CONVERTED
TO
CAD

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

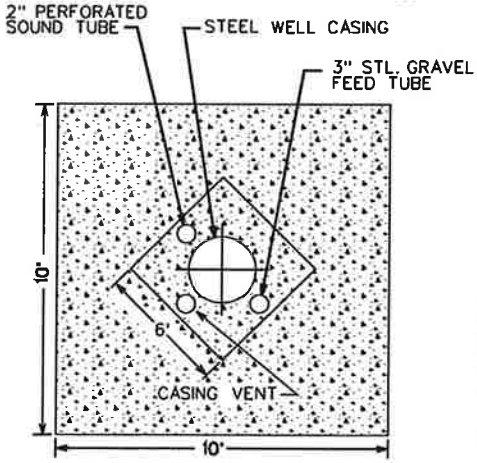
WELL SHELTER

DRAWN BY:	APPROVED BY:	DATE:	△	
CB		03.20.1986	△04.03.2001	E-9-19-1



PROFILE VIEW CONC. WELL SLAB

1. Pump Setting -
2. System Pressure @ Water Main -
3. Design G.P.M. -
4. Pump Controlled By -
5. Well Does Not Lie Within The 100 Year Flood Plain.
6. Well Does Not Lie Within 100 Feet Of A Septic Tank.
7. Well Does Not Lie Within 50 Feet Of A Sewer Line.
8. Well Does Not Lie Within 100 Feet Of A Discharge Activity Which Requires An APP.
9. Well Does Not Lie Within 100 Feet Of An Underground Storage Tank.
10. Well Does Not Lie Within 100 Feet Of A Hazardous Waste Facility.
11. All Water Related Fittings Will Conform to N.S.F. Standard 61.
12. The Well Is Not Located Within 500 Feet Of Surface Water.
13. The Site Will Be Graded To Provide Adequate Drainage Away From The Well.
14. 6.88 lbs. of Davis #8084 Grey Dye, Per Yard, For 2500 PSI Concrete



PLAN VIEW CONC. WELL SLAB

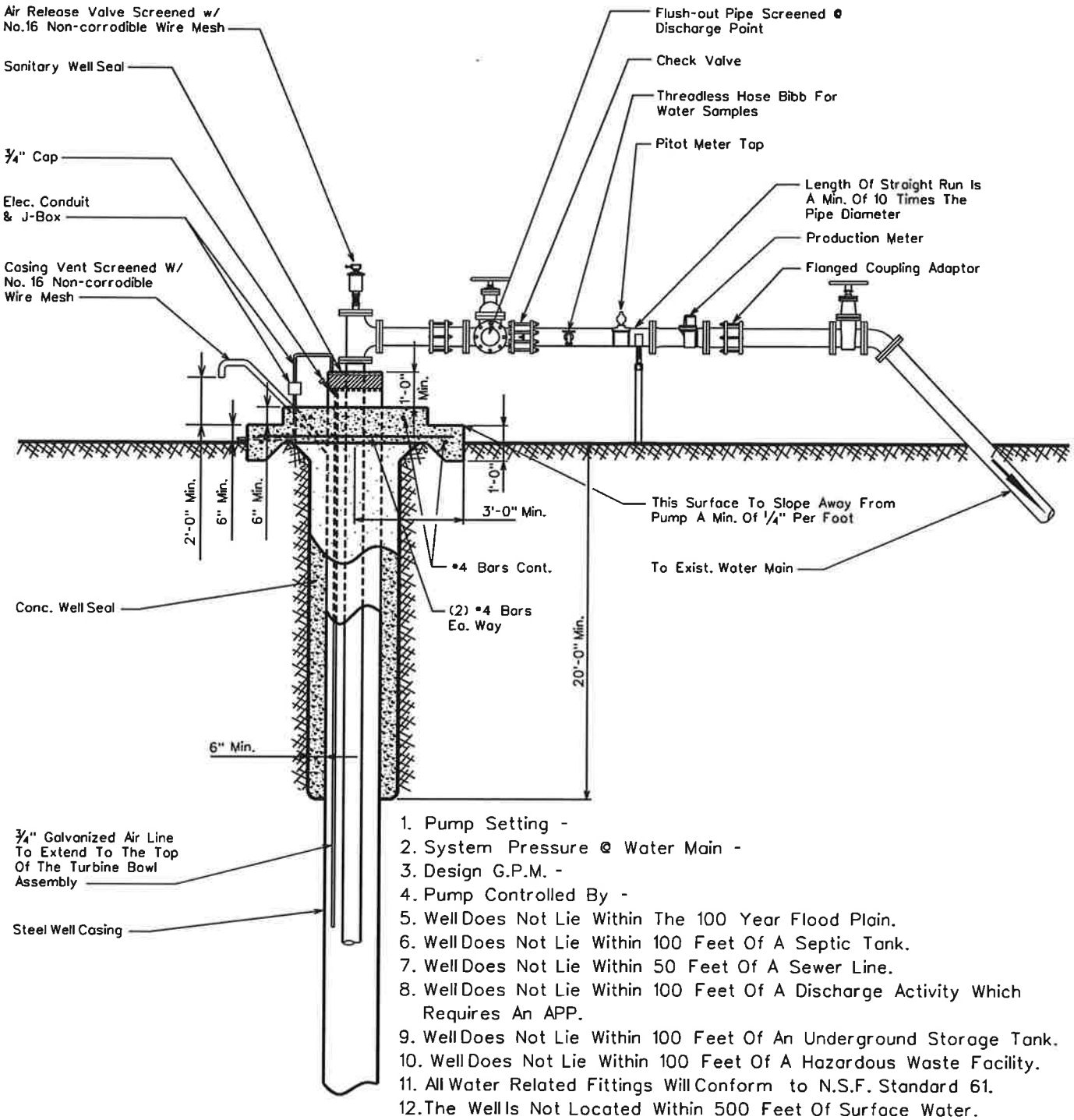
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

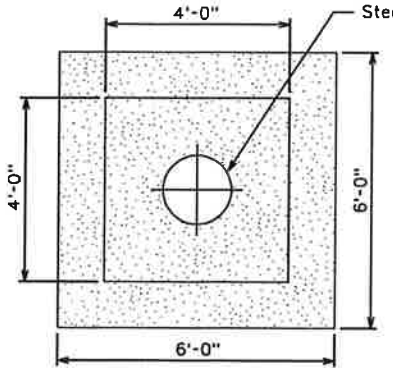
FOR THE INSTALLATION OF

TYPICAL WELL W/ LINESHAFT TURBINE PUMP

DRAWN BY:	APPROVED BY:	DATE:	△	
JW	M.W.	3-20-86	9/15/04	E-9-20-1



1. Pump Setting -
2. System Pressure @ Water Main -
3. Design G.P.M. -
4. Pump Controlled By -
5. Well Does Not Lie Within The 100 Year Flood Plain.
6. Well Does Not Lie Within 100 Feet Of A Septic Tank.
7. Well Does Not Lie Within 50 Feet Of A Sewer Line.
8. Well Does Not Lie Within 100 Feet Of A Discharge Activity Which Requires An APP.
9. Well Does Not Lie Within 100 Feet Of An Underground Storage Tank.
10. Well Does Not Lie Within 100 Feet Of A Hazardous Waste Facility.
11. All Water Related Fittings Will Conform to N.S.F. Standard 61.
12. The Well Is Not Located Within 500 Feet Of Surface Water.
13. The Site Will Be Graded To Provide Adequate Drainage Away From The Well.



PLAN VIEW CONC. WELL SLAB

ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

TYPICAL WELL W/ SUBMERSIBLE TURBINE PUMP

DRAWN BY:	APPROVED BY:	DATE:	△	
jpk	M.W.	3-20-86	2-16-01	E-9-21-1

All New Purchases To Conform To The Following:

Column Pipe

4" I.D. - 8	Threads	Per	Inch	Tapered	3/4"	Per	Foot	Right	Hand
6" I.D. - 8	"	"	"	"	"	"	"	"	"
8" I.D. - 8	"	"	"	"	"	"	"	"	"
10" I.D.- 8	"	"	"	"	"	"	"	"	"
12" I.D.- 8	"	"	"	"	"	"	"	"	"
14" I.D.- 8	"	"	"	"	"	"	"	"	"

Oil Tube - Peerless Type

1 1/2" O.D. - 14	Threads	Per	Inch	Right	Hand
2" O.D. - 12	"	"	"	"	"
2 1/2" O.D. - 10	"	"	"	"	"
3" O.D. - 10	"	"	"	"	"
3 1/2" O.D. - 10	"	"	"	"	"
4" O.D. - 10	"	"	"	"	"

Line Shaft

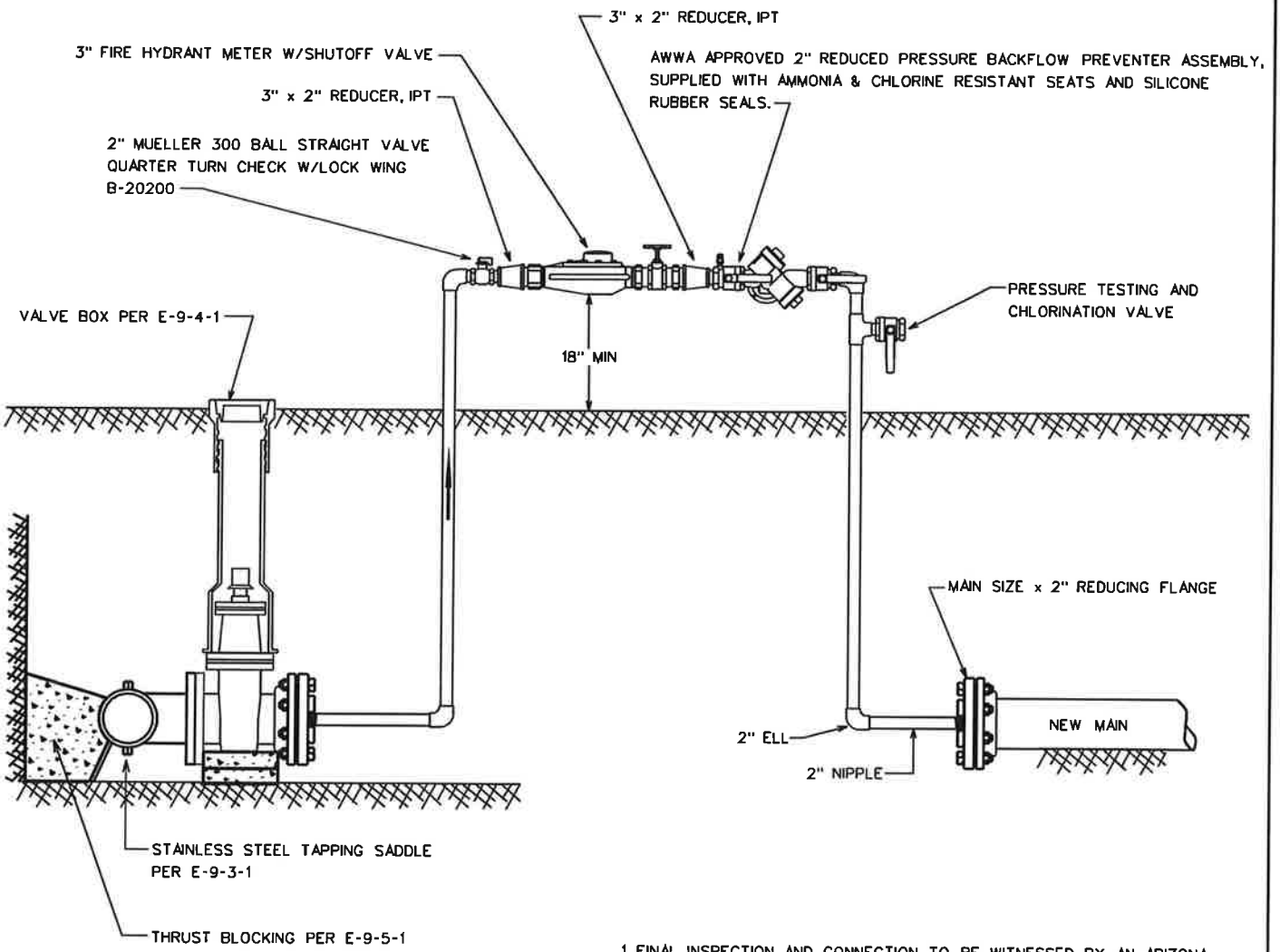
3/4" O.D. - 10	Threads	Per	Inch	Left	Hand
1" O.D. - 14	"	"	"	"	"
1-3/16" O.D. - 10	"	"	"	"	"
1-1/2" O.D. - 10	"	"	"	"	"
1-11/16" O.D. - 10	"	"	"	"	"
1-15/16" O.D. - 10	"	"	"	"	"
2-3/16" O.D. - 10	"	"	"	"	"
2-7/16" O.D. - 8	"	"	"	"	"

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

COLUMN PIPE, OIL TUBE AND LINE SHAFT

DRAWN BY:	APPROVED BY:	DATE:	△ 2/13/2001	E-9-22-1
CCO		3/20/1996		



1. FINAL INSPECTION AND CONNECTION TO BE WITNESSED BY AN ARIZONA WATER COMPANY REPRESENTATIVE.
2. REDUCING FLANGES TO BE PROPERLY RESTRAINED.
3. INSTALL JUMPER TAP FOR TEMPORARY METER DOWNSTREAM OF THE REDUCING FLANGE FOR PRESSURE AND BACTEE TESTING.
4. JUMPER ASSEMBLY MUST BE A MINIMUM OF 18" ABOVE FINISHED GRADE.
5. BACKFLOW ASSEMBLY REQUIRES CERTIFICATION.
6. ASSEMBLY NOT TO BE REMOVED AND SPOOL PIECE INSTALLED FOR FINAL CONNECTION UNTIL ALL TESTING, BACTERIAL CLEARANCE AND FINAL INSPECTIONS HAVE BEEN OBTAINED.
7. ALL NEW PIPING SHALL BE PROPERLY RESTRAINED.

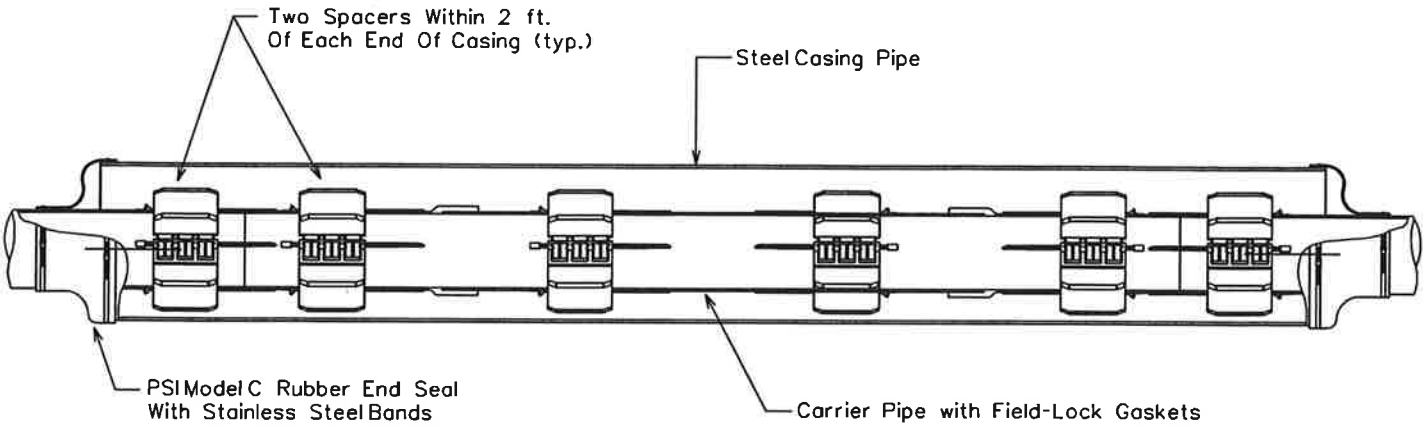
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

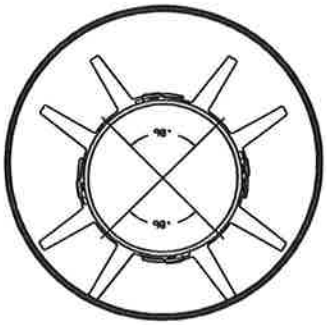
HOT TAP & JUMPER METER CONNECTION

DRAWN BY:	APPROVED BY:	DATE:	△	
CB	MJW	05.14.2004		E-9-23-1



CROSS SECTION

The casing spacers shall be the PSI Ranger II Casing Spacers as manufactured by Pipeline Seal and Insulator, Inc., Houston, Texas.



SECTION CUT

End Seals

After insertion of the carrier pipe into the casing, the ends of the casing shall be closed by installing 1/8" thick synthetic rubber end seals equal to the PSI Model "C" end seal as manufactured by Pipeline Seal and Insulator, Inc., Houston, Texas.

NOTE: The Carrier Pipe Shall Be Polywrapped Prior To The Skid Installation & Insertion Into The Carrier Casing For Divisions Requiring Polywrapped Pipe.

OD Push On Joint Bell	OD M.J. BELL
6" - 8.66"	6" - 11.12"
8" - 10.82"	8" - 13.37"
12" - 15.05"	12" - 17.94"
16" - 19.74"	16" - 22.56"
20" - 23.98"	20" - 27.08"
24" - 28.16"	24" - 31.58"
30" - 35.40"	30" - 39.12"
36" - 41.84"	36" - 46.00"
48" - 55.94"	48" - 60.00"

*Thickness Of Skid To Extend A Minimum of 1/2" Above The O.D. Of The Pipe Bell or Gland.

PIPE SIZE	CASING SIZE	CASING SIZE ID	CASING SCHEDULE	WALL THICKNESS	SKID SIZE
6"	16"	15.25"	STD.	.375	*x4x12
8"	18"	18.25"	STD.	.375	*x4x12
12"	22"	21.25"	STD.	.375	*x4x12
16"	28"	27.25"	STD.	.375	*x4x12
20"	32"	31.25"	STD.	.375	*x4x12
24"	36"	35.25"	STD.	.375	*x4x12
30"	48"	47.25"	STD.	.375	*x4x12
36"	54"	53.25"	STD.	.375	*x4x12
48"	66"	65.25"	STD.	.375	*x4x12

ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

TYPICAL WATER LINE ENCASEMENT

DRAWN BY:	APPROVED BY:	DATE:	△ 09.27.2006	E-9-24-1
CB		3/20/1996		

CALCIUM HYPOCHLORITE TABLET CHLORINATOR FEEDER SPECIFICATIONS

SCOPE - This specification describes a ARCH Chemicals Calcium Hypochlorite Tablet Chlorination System as manufactured by ARCH Chemicals, 501 Merritt Seven, P.O. Box 5204, Norwalk, CT, 06856-5204.

DESCRIPTION - The chlorination system shall be completely assembled, ready to install. The chlorination system shall be a ARCH Chemicals Calcium Hypochlorite Tablet Feeder, or its equivalent, and shall be supplied with all its components factory mounted.

COMPONENTS - The Chlorination system shall have the following components:
A. 1-¼" ARCH Chemical solid calcium hypochlorite tablet feeder
B. Polyethylene system enclosure
C. Integrated, level controlled solution tank
D. Adjustable flow control valve
E. Manual on/off valve (at inlet)
F. Chemical metering pump
G. On/off pump control switch
H. Waterproof electrical junction box
I. Corrosion resistant schedule 40 piping
J. Reverse flow check valves
K. Total solution output control valve

ELECTRICAL FIXTURES - The following electrical fixtures shall be provided:
A. Safety switch, 2 pole, fused for 30 Amps, for 120 Volts, 60 cycle, single phase power.

CHLORINATOR DESIGN - The chlorination facility shall be designed and constructed in accordance with Arizona State Department of Health Engineering Bulletin Number 8 - "Disinfection of Water Systems". Latest Revision.

CHLORINATION EQUIPMENT - The chlorination equipment shall be a ARCH Chemicals Calcium Hypochlorite tablet chlorinator, approved by NSF Standard 61.

CHLORINATOR OPERATION - The chlorination facility shall be operated in accordance with Arizona State Department of Health Engineering Bulletin Number 8, "Disinfection of Water Systems", Table 1. latest revision.

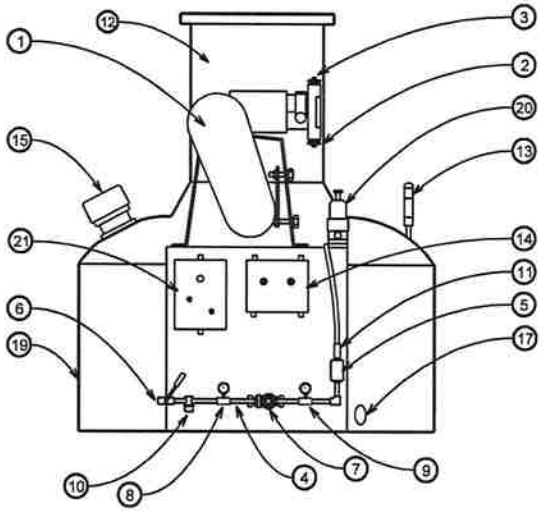
CHLORINATOR SYSTEM DESCRIPTION - ARCH Chemicals tablet chlorinator systems incorporate a patented chlorinator which is designed to utilize ARCH Chemicals 1-¼" solid calcium hypochlorite tablets (Approved NSF Standard 60). Meets AWWA Standard B-300, EPA Registration # 1258-1179.The chlorinator is mounted on a polyethylene system enclosure. The inlet water is sprayed on the calcium hypochlorite tablet and collected in a solution tank. This chlorinated solution is then pumped out of the tank through a chemical metering pump. This metering pump is then adjusted to obtain the desired CL residual.

ARCH Chemicals Calcium Hypochlorite Tablet Chlorinator

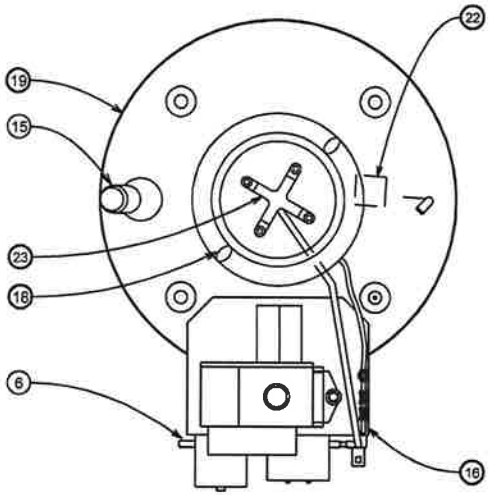
NTS

HYPOCHLORINATOR COMPONENTS:

1. Chemical Metering Pump
2. Pump Suction Connection
3. Pump Discharge Connection
4. Inlet Water Assembly
5. Inlet Water Solenoid Valve
6. Inlet Shut-Off Valve
7. Inlet Pressure Regulator
8. Inlet Water Pressure Gauge
9. Spray Nozzle Water Pressure Gauge
10. Inlet Strainer
11. Inlet Tubing Connection
12. Dry Chemical Hopper
13. Suction Line
14. Electrical Control Box With Power On/Off
15. Electric Mixer
16. Solution Discharge Connection
17. Tank Drain Valve
18. Observation Port
19. Mixed Chemical Holding Tank
20. Pressure Relief Valve
21. Pump Speed Control
22. High Level Shut-Off Float Switch
23. Water Spray Nozzles



FRONT VIEW

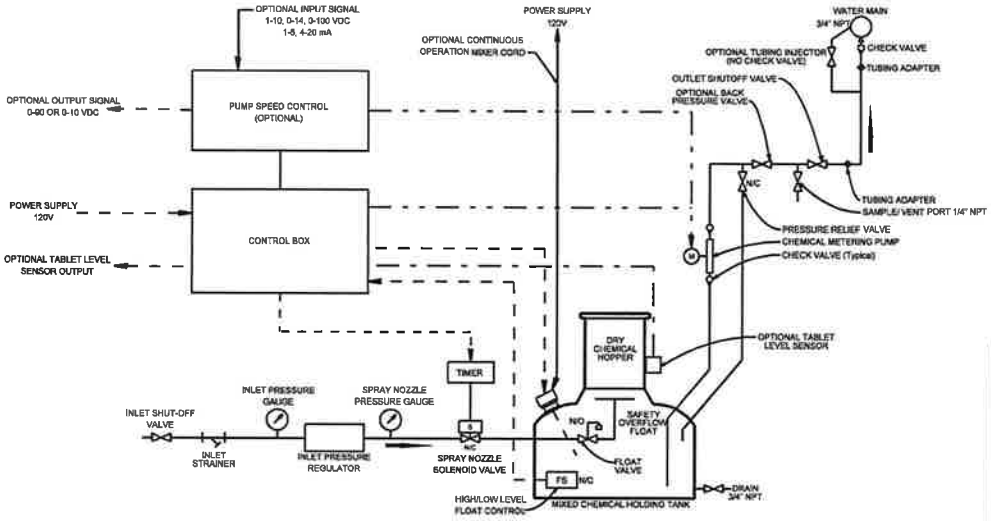


TOP VIEW

HOPPER REMOVED FOR CLARITY

Chlorinator Fluid Schematic

NTS



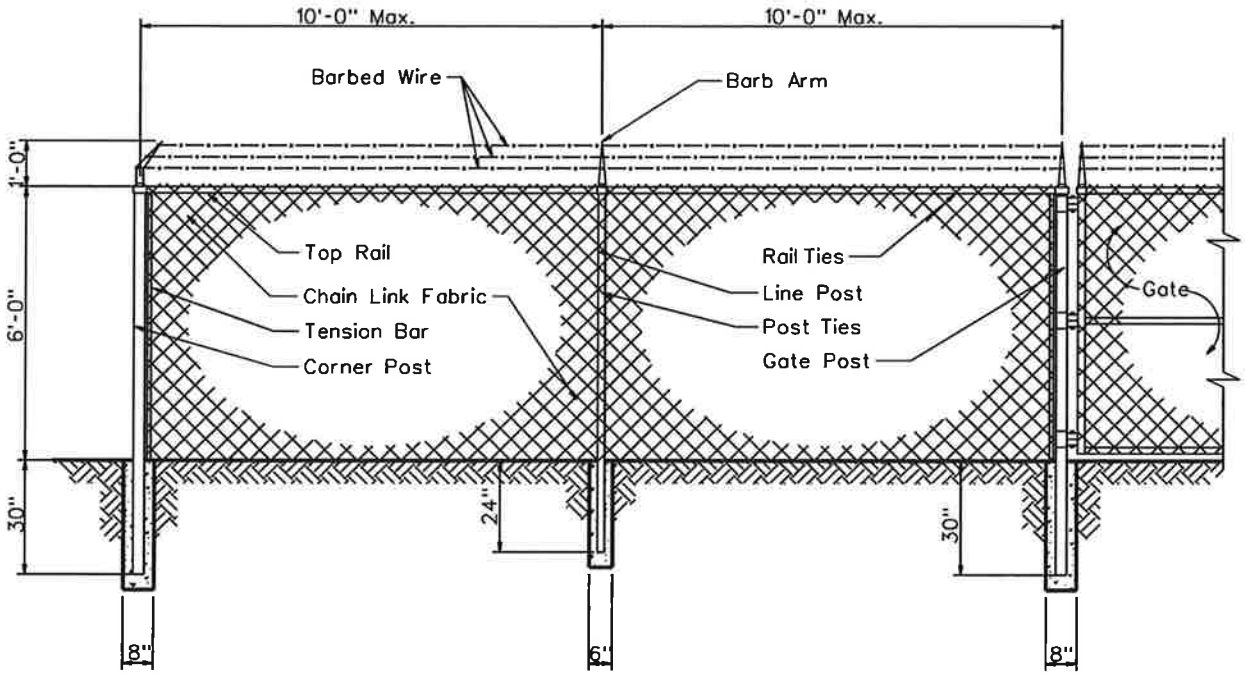
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

CALCIUM HYPOCHLORITE TABLET CHLORINATOR

DRAWN BY:	APPROVED BY:	DATE:	△	
CB	MW	02-09-2000		E-9-25-1



Line Post:	1-7/8" O.D.	1.74 lbs. P/L.F.	ASTM A-256
End Post:	2-7/8" O.D.	4.64 lbs. P/L.F.	ASTM A-256
Corner Post:	2-7/8" O.D.	4.64 lbs. P/L.F.	ASTM A-256
Gate Post:	2-7/8" O.D.	4.64 lbs. P/L.F.	ASTM A-256
Top Rail:	1-5/8" O.D.	4.64 lbs. P/L.F.	ASTM A-256
Chain Link Fabric:	9 Ga. 2" Mesh Galv. Before Weave		
Selvage:	Barb/Knuckle		
Fittings:	Pressed Steel		
Barb Wire:	2-1/2 Ga./2 Point		
Barb Arm:	1 Piece/45° Arm		
Tension Wire:	9 Ga./Galv.		
Line Post Set:	6"x24" In Concrete		
Terminal Post Set:	8"x30" In Concrete		

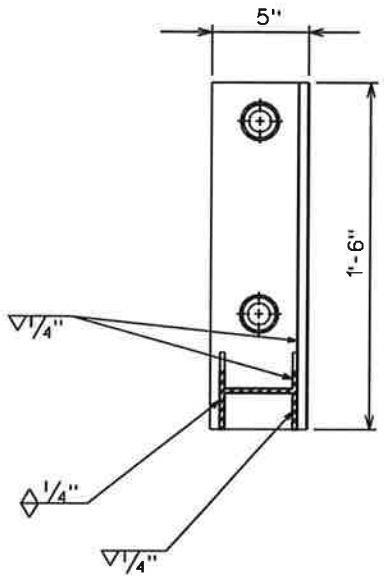
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

CHAIN LINK FENCE

DRAWN BY:	APPROVED BY:	DATE:	△	
CCO	MW	7/7/1992	2/9/2001	**E-9-26-1**

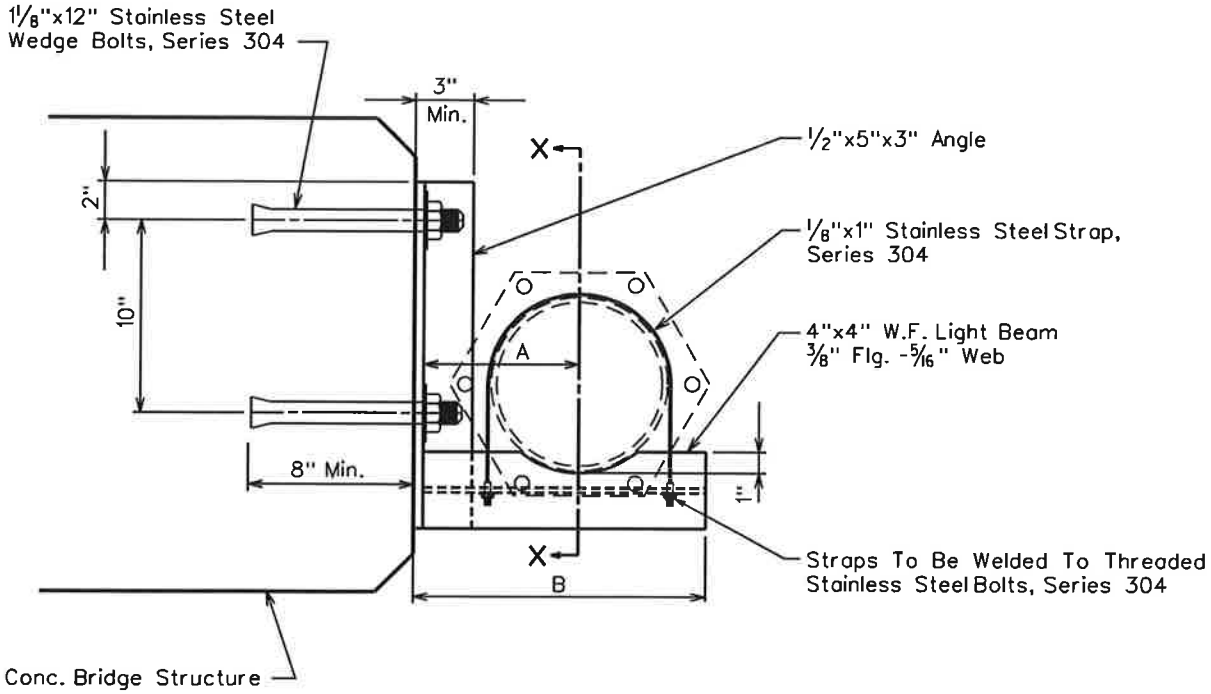


NOTES

1. Minimum 2 Supports Per Joint Of Pipe.
2. All Bolts Shall Have A Lock Washer Under The Nut.
3. All Nuts Shall Be Stainless Steel Series 304.

PIPE SIZE	A	B
8"	8"	15"
10"	9"	17"
12"	10"	19"

SECTION X-X



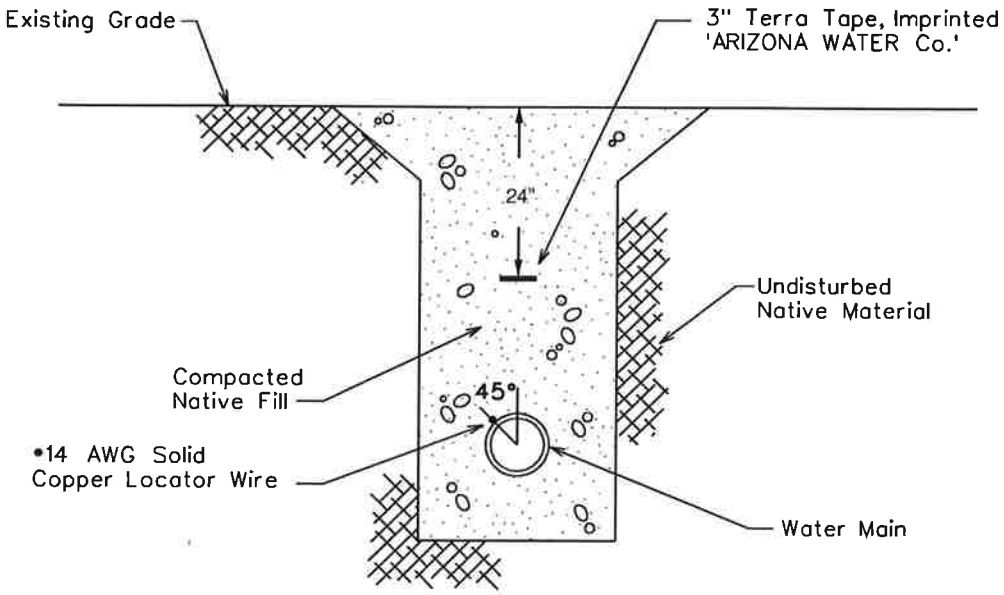
SUSPENSION DETAIL

ARIZONA WATER COMPANY

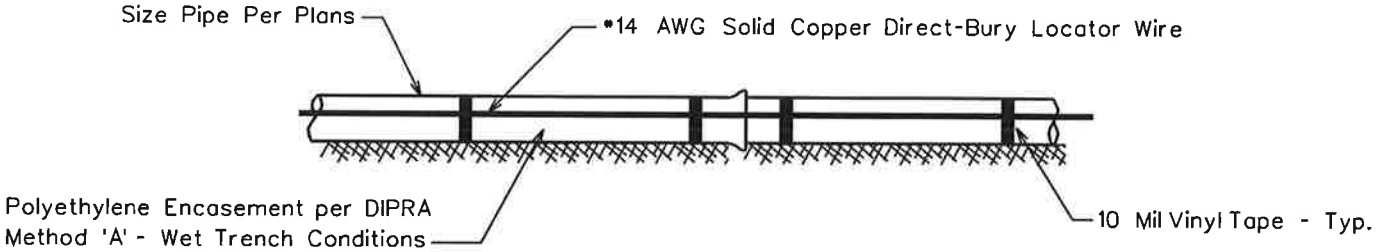
STANDARD SPECIFICATION
FOR THE INSTALLATION OF

SIDE HUNG WATER LINE SUSPENSION

DRAWN BY:	APPROVED BY:	DATE:	△	
JPK	MJW	7-12-96		E-9-27-1



TYPICAL WATER TRENCH DETAIL



TYPICAL PROFILE VIEW

WIRE GENERAL NOTES:

1. All pipe shall have •14 AWG Solid Copper Direct-Bury Locator Wire Installed Directly To The Polywrap At 45° From The Vertical Center Of The Pipe and Shall Be Attached Using 10 Mil Vinyl Tape.
2. The Locating Wire Shall Terminate At the Top Of Each Valve Box and Be Capable of Extending 12" Above the Top Of The Box In Such A Manner So As Not To Interfere With Valve Operation.

TAPE GENERAL NOTES:

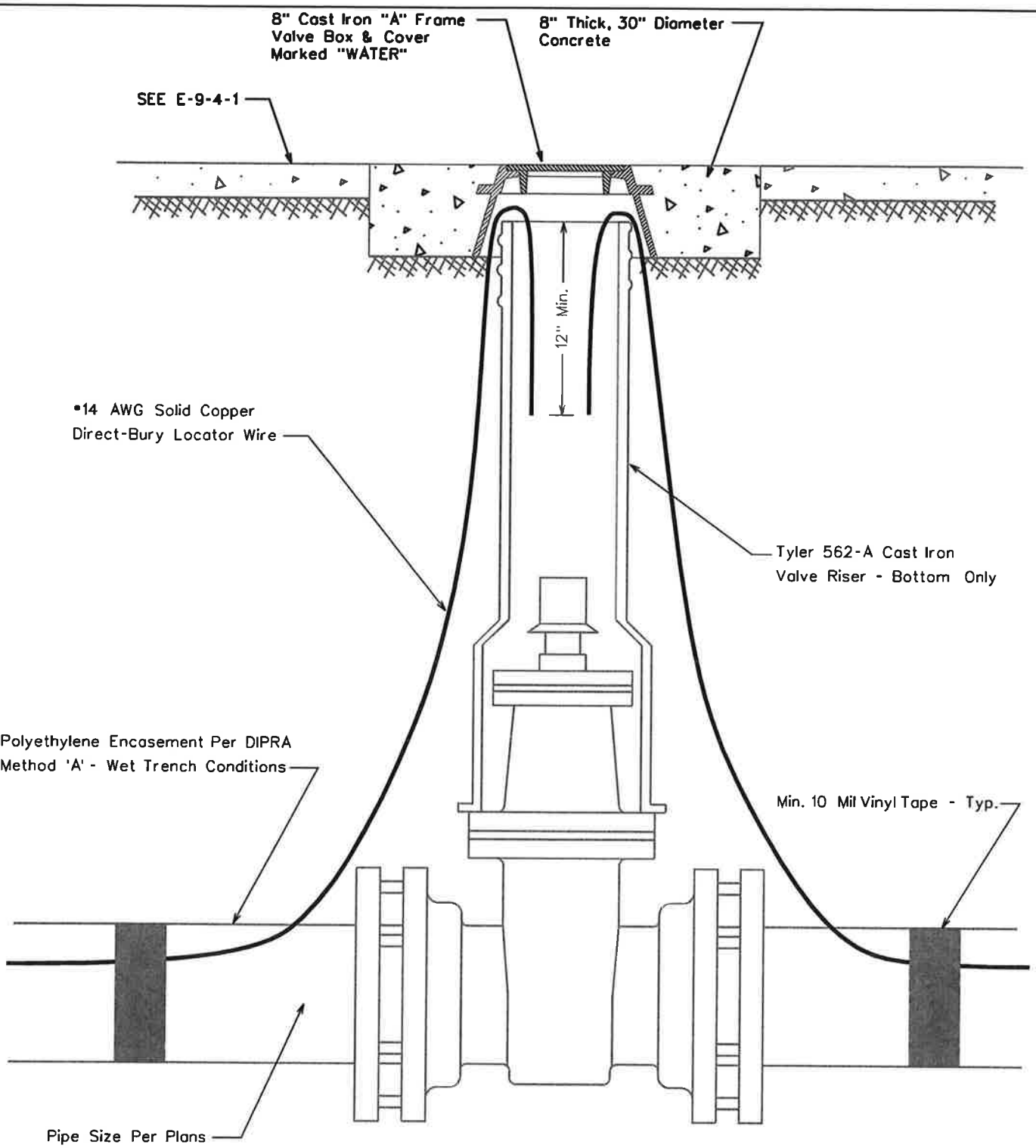
1. Use Terra Tape 3" Marking Tape As Manufactured By Reef Industries Inc. Of Houston, Texas (1-800-231-2417)
2. The Tape Is Blue & Imprinted 'ARIZONA WATER Co.'
3. INSTALLATION: The Pipe Warning Tape Shall Be Installed Over All Water Mains And Shall Be Buried 24 Inches Below The Surface Over The Center Of The Pipe.
   A) The Backfill Shall Be Sufficiently Leveled So That The Tape Is Installed On A Flat Surface.
   B) The Tape Shall Be Centered In The Trench With The Printed Side Up.
   C) Care Shall Be Exercised To Avoid Movement Of The Tape While The Remaining Backfill Is Moved Into The Trench.

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF

PIPE WARNING TAPE AND LOCATOR WIRE

DRAWN BY:	APPROVED BY:	DATE:	△09.27.2006	E-9-28-1
CB		03.24.1997		



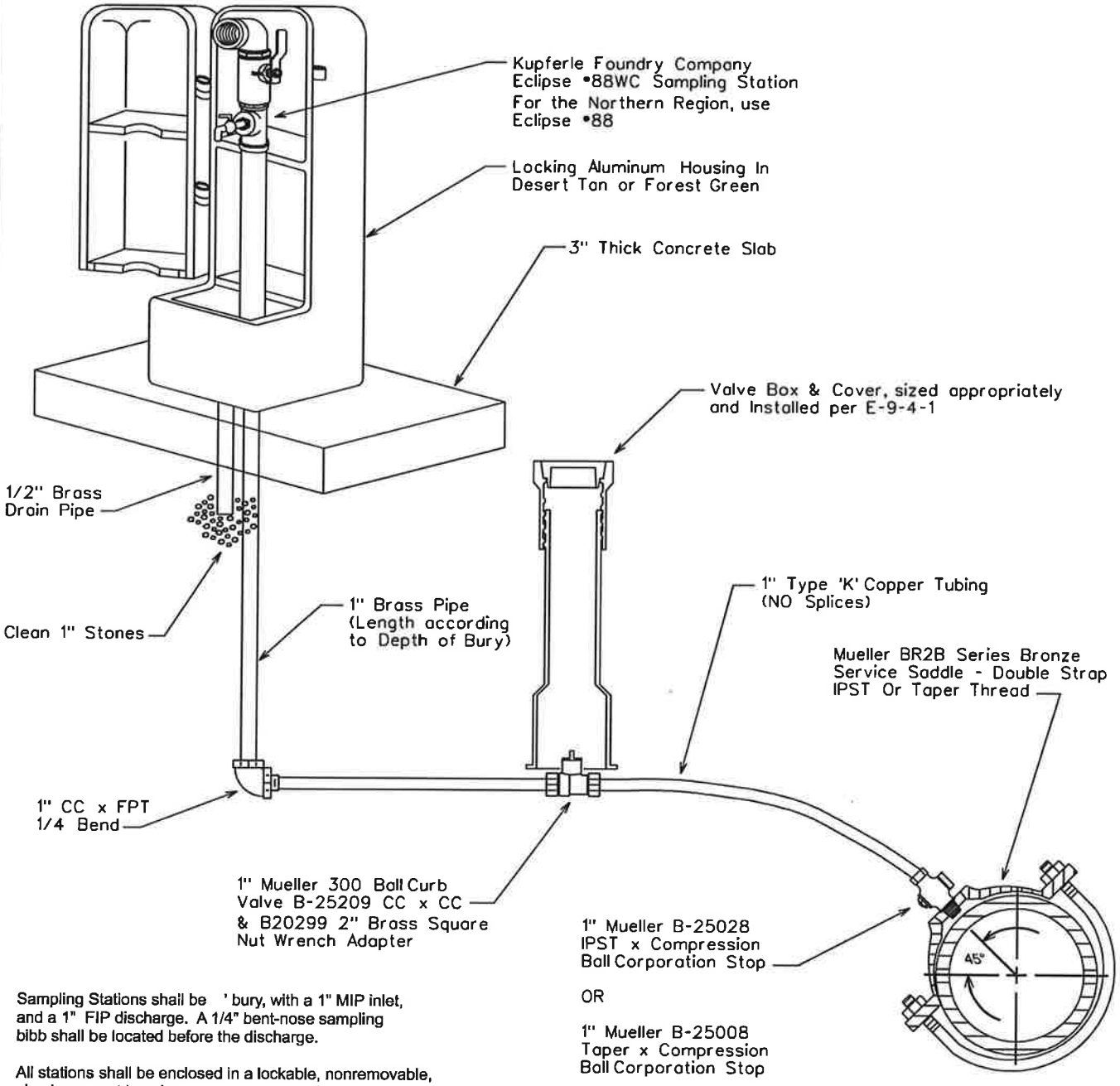
ARIZONA WATER COMPANY

STANDARD SPECIFICATION

FOR THE INSTALLATION OF

LOCATOR WIRE TERMINATION

DRAWN BY:	APPROVED BY:	DATE:	△	
CB		09.27.2006		E-9-28-2



Sampling Stations shall be ' bury, with a 1" MIP inlet, and a 1" FIP discharge. A 1/4" bent-nose sampling bibb shall be located before the discharge.

All stations shall be enclosed in a lockable, nonremovable, aluminum-cast housing.

When opened, the station shall require no key for operation, and the water will flow in an all brass waterway.

All working parts will be of brass and serviceable from above ground with no digging. (OPTIONAL: if desired, a 1/2" brass drain tube will be provided within the locking cover).

A 1" ball valve will control the water flow, and be located before (or after) the sampling bibb, as manufactured by Kupferle Foundry, St. Louis, MO 63102.

SADDLE TAP TO CA, PVC, OR DI PIPE

NOTE: The minimum distance between taps on mains other than ductile iron is 12"

Pipe Depth Per
E-8-1-2, Item 3.

ARIZONA WATER COMPANY

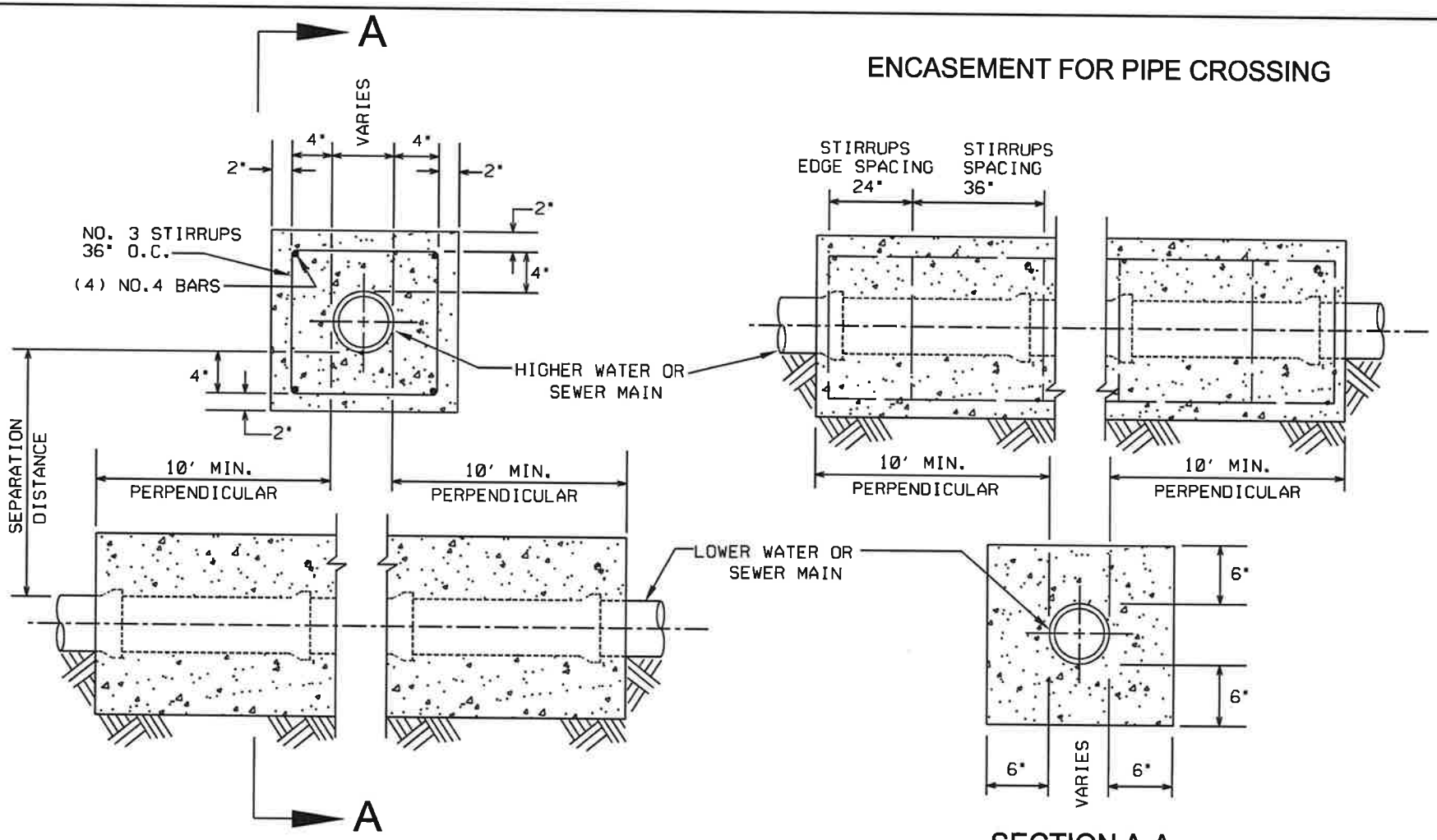
STANDARD SPECIFICATION

FOR THE INSTALLATION OF

SAMPLING STATION

DRAWN BY:	APPROVED BY:	DATE:	△	
CB	MW	01.24.2007		E-9-29-1

ENCASEMENT FOR PIPE CROSSING



SECTION A-A

NOTES:

1. 2,000 PSI CONCRETE
2. SEPARATION DISTANCES AND/OR OTHER EXTRA PROTECTION SHALL BE REQUIRED TO PROTECT WATER MAINS FROM CONTAMINATION BY SANITARY SEWER MAINS. SEE AWC STANDARD SPECIFICATION PAGES E-8-1-9 AND E-8-1-10.
3. SEE CROSS SECTION DETAIL FOR LIMITS OF SEPARATION/EXTRA PROTECTION. ALL DISTANCES ARE MEASURED PERPENDICULARLY FROM THE OUTSIDE OF THE PIPES.
4. RECLAIMED WATER SHALL BE CONSIDERED A SANITARY SEWER WHEN PLACED NEXT TO A POTABLE WATER MAIN.

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF
WATER AND SANITARY SEWER
SEPARATION/PROTECTION

DRAWN BY:	APPROVED BY:	DATE:	△	
CB	JW	04.07.2008		E-9-30-1

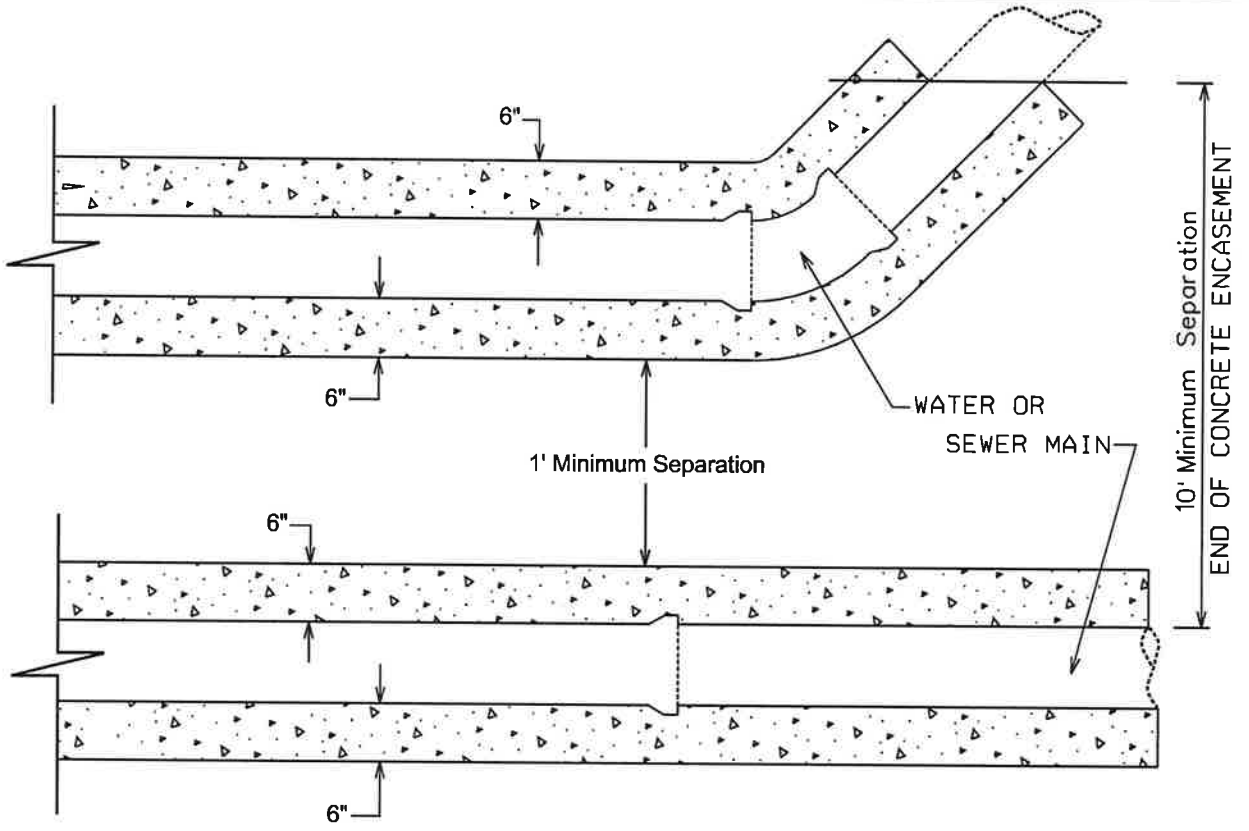
NOTES:

1. 2,000 PSI CONCRETE

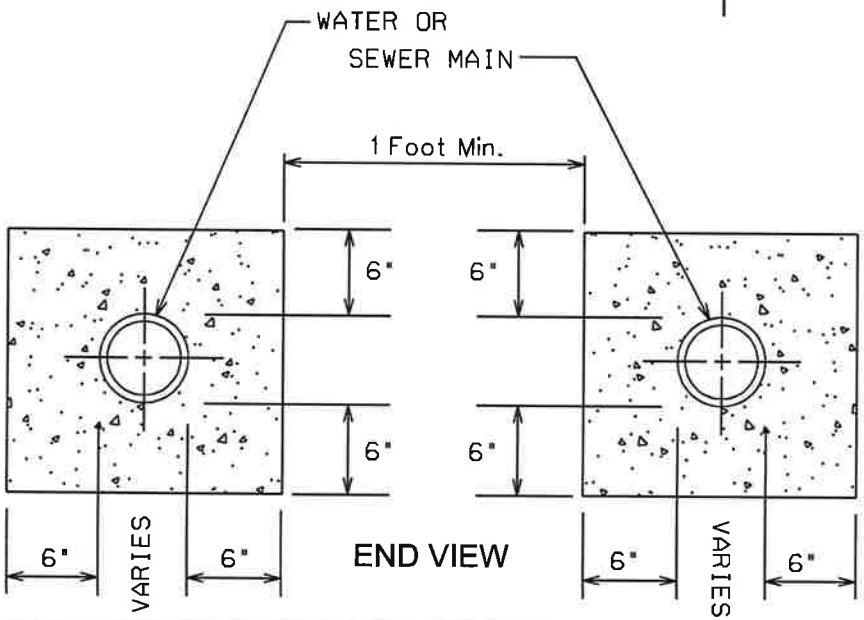
2. SEPARATION DISTANCES AND/OR OTHER EXTRA PROTECTION SHALL BE REQUIRED TO PROTECT WATER MAINS FROM CONTAMINATION BY SANITARY SEWER MAINS. SEE AWC STANDARD SPECIFICATION PAGES E-8-1-9 AND E-8-1-10.

3. SEE CROSS SECTION DETAIL FOR LIMITS OF SEPARATION/EXTRA PROTECTION. ALL DISTANCES ARE MEASURED PERPENDICULARLY FROM THE OUTSIDE OF THE PIPES.

4. RECLAIMED WATER SHALL BE CONSIDERED A SANITARY SEWER WHEN PLACED NEXT TO A POTABLE WATER MAIN.



PLAN VIEW



ENCASEMENT FOR PARALLEL PIPES

ARIZONA WATER COMPANY

STANDARD SPECIFICATION
FOR THE INSTALLATION OF
WATER AND SANITARY SEWER
SEPARATION/PROTECTION

DRAWN BY:	APPROVED BY:	DATE:	△	
CB	JW	04.07.2008		E-9-30-2

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