



0000165890

Arizona Water Company
W-01445A-15-0277

Amendment to Application

PART 8 OF 12

Arizona Corporation Commission
DOCKETED
AUG 21 2015

DOCKETED BY 

Western Group Rate Case

Exhibit FKS-1

5168 Hwy 84 Gate Valves

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5168
P.E. NUMBER:
BUDGET ITEM NO.: B-1
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: RAY MURRIETA	WORK TO BE FINISHED BY: WITHIN 60 DAYS
TAX CODE:	

DESCRIPTION OF WORK:

Install three line stops and construct four 16-inch gate valves to replace three 16-inch butterfly valves along Gila Bend Highway (Hwy 84) between VIP Boulevard and Thornton Road.

FACTORS JUSTIFYING WORK:

APPROVED 2015 BUDGET ITEM (\$90,000)
Company servicemen discovered three failed and inoperable 16-inch butterfly valves between VIP Boulevard and Thornton Road while attempting to tie in a new main extension on Hwy 84. The 16-inch concrete asbestos water main on Hwy 84 provides service to an industrial park and five large industrial water users. In the event of a main break, service to the entire industrial park is interrupted while the Company makes repairs. Additional time is required to isolate the break and drain the additional water main prior to completing repairs because the failed and inoperable valves increase the isolation distance, resulting in increased water loss. Installation of one additional gate valve and replacing the failed and inoperable valves allows Company operators to minimize service disruptions and water loss. This project is necessary to maintain safe, reliable and adequate water service to the industrial park.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	James Wilson gw 4/29/15	4/22/15
LABOR	6,500	REVIEWED FOR ESM/TROW VERIFICATION:	
CONTRACT PORTION	73,748	Charles Briggs CB 04-29-2015	04-23-2015
OVERHEAD	9,600	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 89,848	M. Mendez 4/29/15	4/24/15
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	Fredrick Schneider 4-20-15	4-27-2015
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	Joseph Harris	4/28/15
NET COMPANY CASH REQUIRED	\$ 89,848	AUTHORIZED BY PRESIDENT:	
COMMENTS:		William M Garfield	4-29-15
		CONSTRUCTION RELEASE:	
		<p>2015 4/29/15</p> <p>2014 BUDGET</p>	

ARIZONA WATER COMPANY

W.A. NUMBER: 1-5168

WORK AUTHORIZATION - DETAIL SHEET

P.E. NUMBER:

BUDGET ITEM NO.:

SHEET NO.:

B-1

2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER
	343	16-inch Butterfly Valve	3	1986

PROJECT DESCRIPTION

Install three line stops and construct four 16-inch gate valves to replace three 16-inch butterfly valves along Gila Bend Highway (Hwy 84) between VIP Boulevard and Thornton Road.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Remove existing butterfly valves		1	\$ 6,162.05	\$ 6,162
	Install 16" FLG x MJ GVB&C w/3' FLGxPE spool & transition coupling		3	7,633.19	22,900
	Install 16" line stop with related fittings		3	10,950.50	32,852
	Remove existing 16" valve, replace w/16" DIP & transition coupling		1	5,819.92	5,820
	Contracting Tax		1	4,214.24	4,214
	Performance Bond		1	300.00	300
	CO-1 traffic control		1	1,500.00	1,500
	SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345			
SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345				
SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345				

TOTAL CONTRACT WORK \$ 73,748

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
	SERVICE CONNECTIONS: SINGLE-SHORT	345			
	METERS	346			

TOTAL MATERIALS \$ -

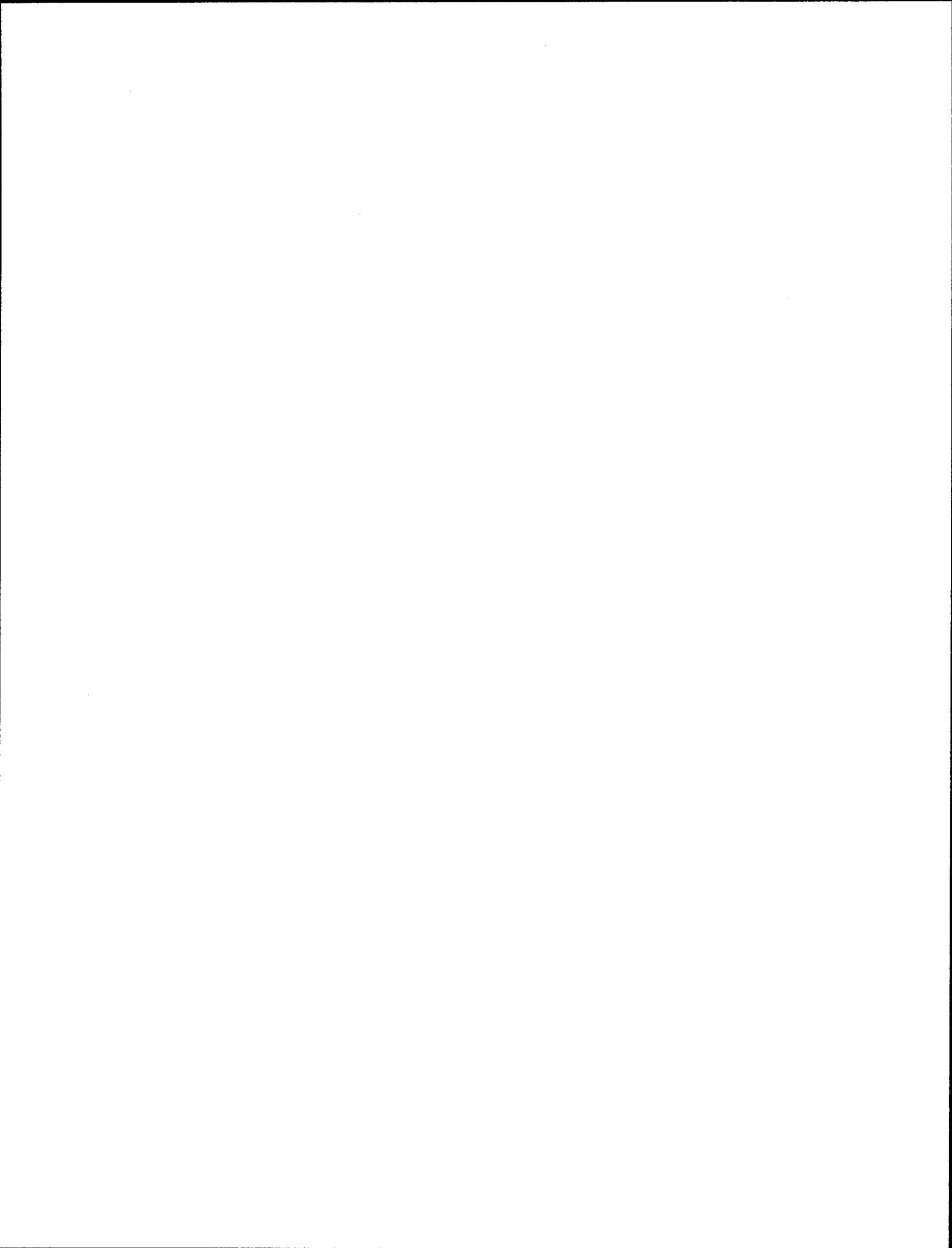
L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Engineering Design and Project Management	343	40	\$ 55.00	\$ 2,200
	TESTING FEE	343	1	\$ 100.00	100
	PERMIT FEE	343	1	500.00	500
	SURVEY FEE	343	1	1,500.00	1,500
	FIELD INSPECTION	343	40	55.00	2,200
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345			

TOTAL LABOR \$ 6,500

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 80,248

OVERHEAD 9,600

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 89,848



REPLACE BROKEN 16-INCH BUTTERFLY VALVES WITH 16-INCH GATE VALVES ALONG HIGHWAY 84 LOCATED WITHIN THE NORTHEAST 1/4 OF SEC. 25, T.6S., R.5E., G. & S.R.B. & M.

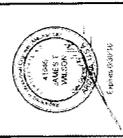
ITEM DESCRIPTION	QTY	TOTAL
16" LINE STOP	3 EA	
6" F.L.G. GV	4 EA	
16" TRANSITION COUPLING	10 EA	
3" F.L.G. X P.E. BPOOL	8 EA	

UTILITY	LINE STYLE
Existing
Proposed

1-15158	FINAL VALLEY	NE 1/4 SEC. 25, T.6S., R.5E.	0428	5/7/2014	AS SHOWN	BWP
REVISIONS: 1. REVISED BY BWP ON 9-11-14 PER ADOPT COMMENTS.						

ARIZONA WATER COMPANY
 3885 N. BLACK CANYON HWY. POST OFFICE BOX 29096
 PHOENIX, ARIZONA 85028-9096
 (602) 946-6950

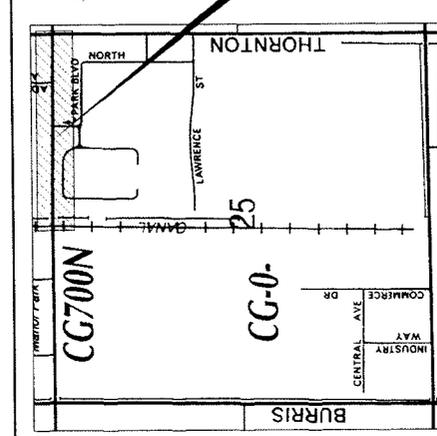
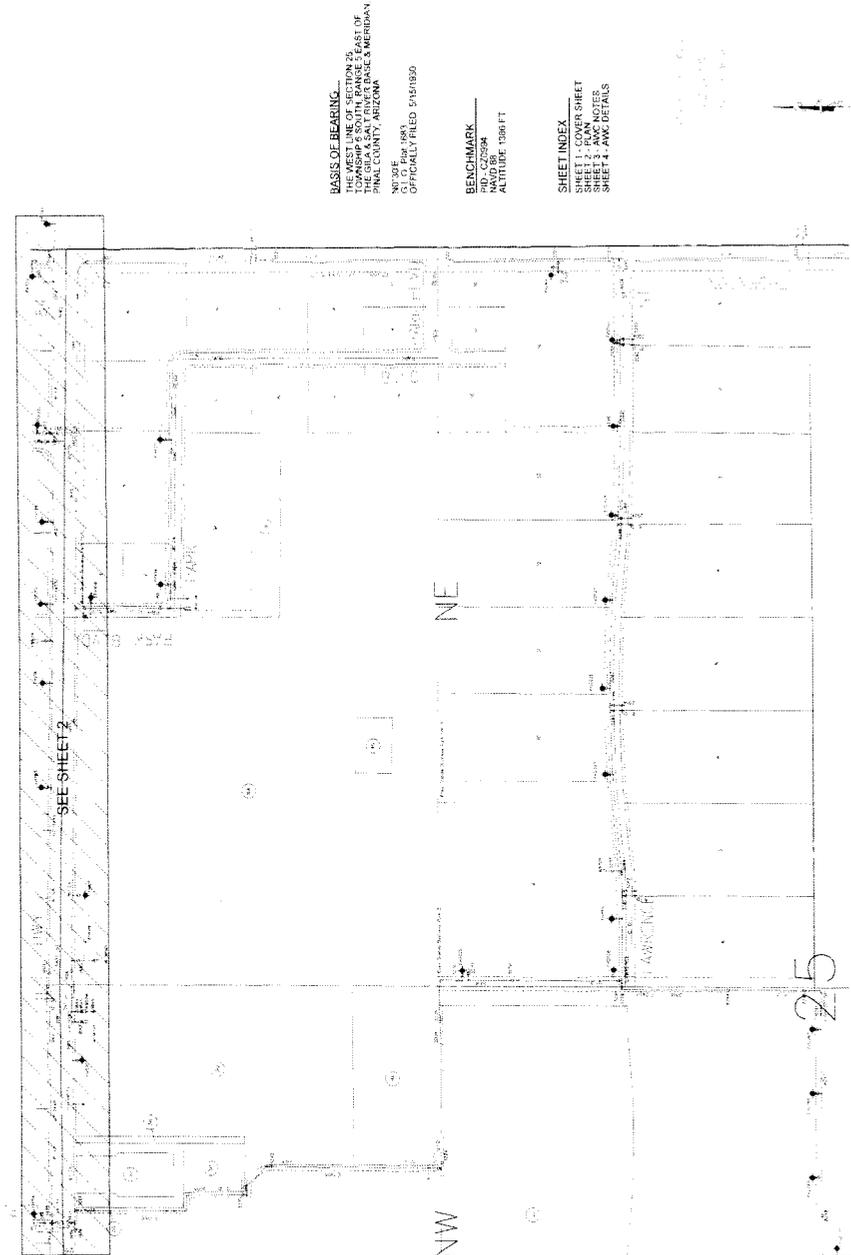
COVER SHEET
 REPLACE BROKEN 16-INCH BUTTERFLY VALVES WITH 16-INCH GATE VALVES ALONG HIGHWAY 84



PV-0074
 SHEET 1 OF 4

QUANTITIES LIST

UTILITY LEGEND



VICINITY MAP
 N.L.L.B.

AS BUILT CERTIFICATION

ACCEPTED BY: _____ DATE: _____
 CITY ENGINEERING INSPECTOR

CITY ENGINEER: _____ DATE: _____

CITY OF CASA GRANDE PLAN APPROVAL

CITY ENGINEER: _____ DATE: _____
 THE CITY ENGINEER'S SIGNATURE IS REQUIRED FOR THIS PLAN TO BE CONSIDERED FOR CONSTRUCTION.

CITY OF CASA GRANDE PLAN APPROVAL RECOMMENDED

ENGINEER: _____ DATE: _____
 THE CITY ENGINEER'S SIGNATURE IS REQUIRED FOR THIS PLAN TO BE CONSIDERED FOR CONSTRUCTION.

REPLACE BROKEN 16-INCH BUTTERFLY VALVES WITH 16-INCH GATE VALVES ALONG HIGHWAY 84 LOCATED WITHIN THE NORTHEAST 1/4 OF SEC. 25, T.6S., R.5E., G. & S.R.B. & M.

REPLACE BROKEN 16-INCH BUTTERFLY VALVES WITH 16-INCH GATE VALVES ALONG HIGHWAY 84 LOCATED WITHIN THE NORTHEAST 1/4 OF SEC. 25, T.6S., R.5E., G. & S.R.B. & M.



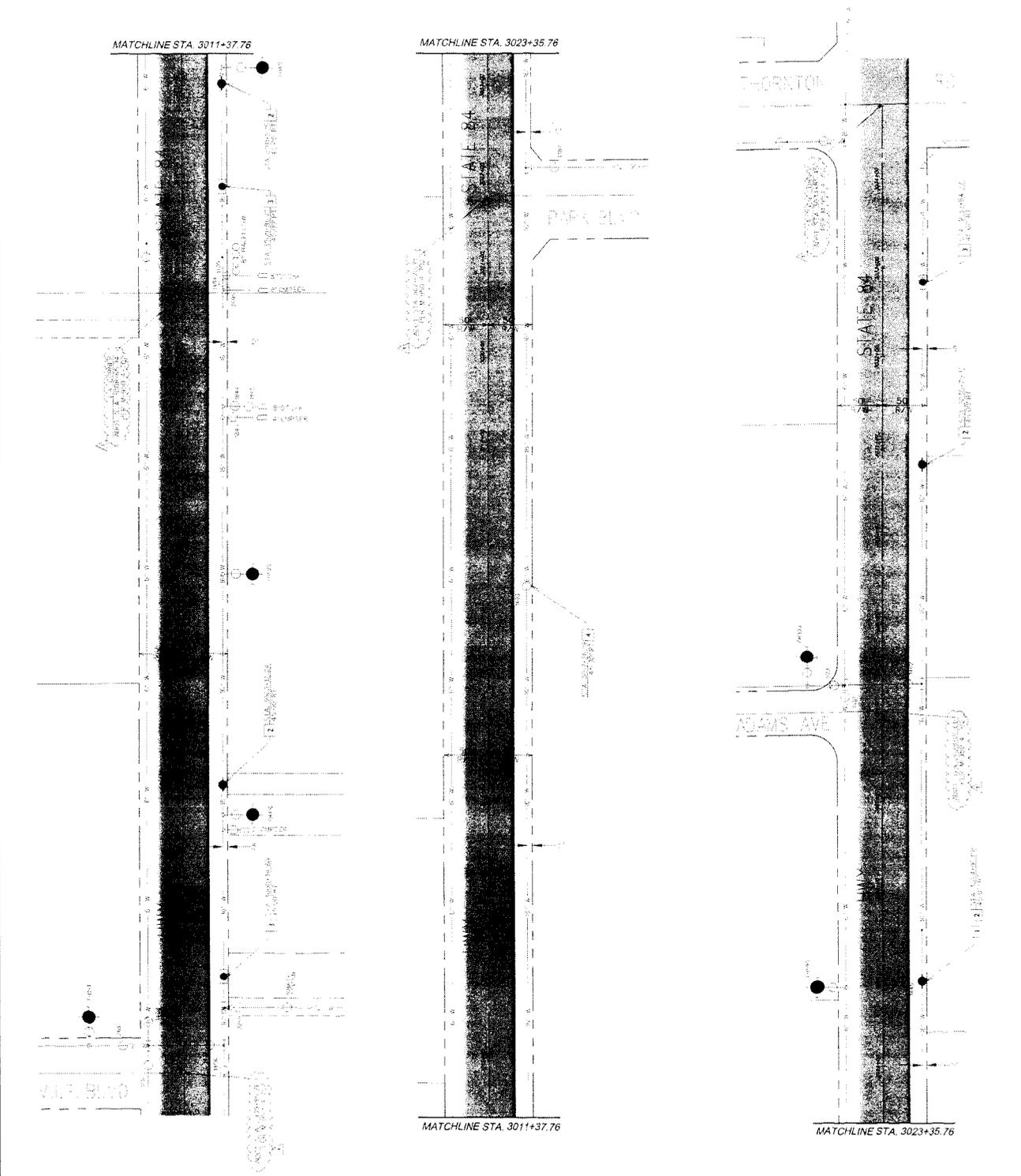
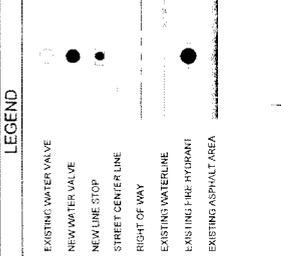
PV-0074
SHEET 2 OF 4

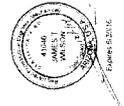
ARIZONA WATER COMPANY
2025 N BLACK CANYON HWY
PHOENIX, ARIZONA 85028-2005
POST OFFICE BOX 29308
19251 240-6585

1-5108
FINAL VALVE
NET/IN SEC. 25-T, 6S, R 5E
S/12014
AS SHOWN
BWP
263-1100
REVISED BY BWP ON 8/11/14 PER ADOT COMMENTS.

REPLACE BROKEN 16-INCH BUTTERFLY VALVES WITH 16-INCH GATE VALVES ALONG HIGHWAY 84

- WATER CONSTRUCTION**
1. Remove & Replace Existing 16" Butterfly Valve
 2. Install 16" G.V. & C.W. FT/EG - 1 PE Spool & Transition Coupling
 3. Install 16" Line Stop
 4. Remove Existing 16" Valve, Replace w. 16" TDP & Transition Coupling
- Notes:
1. All trench bedding, backfill and compaction within ADOT (DOT) shall be per ADOT Structural Specifications for Road and Bridge Construction.

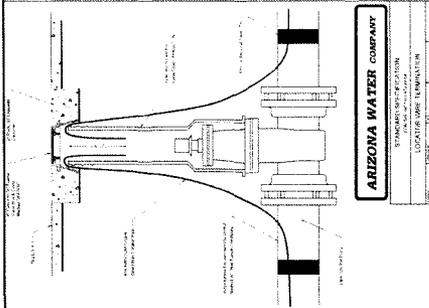
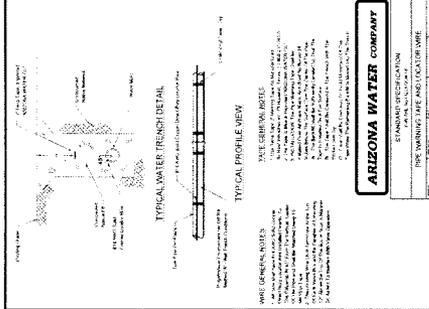
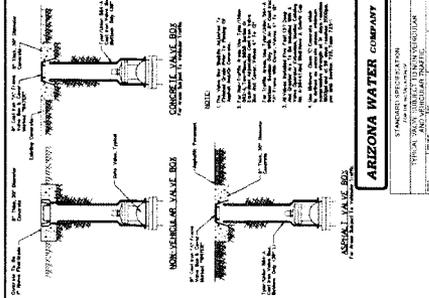
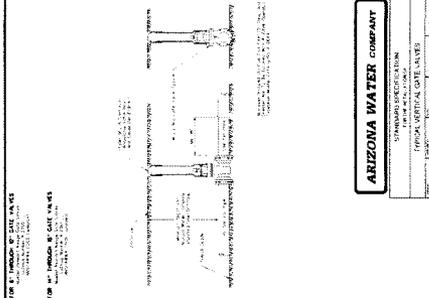
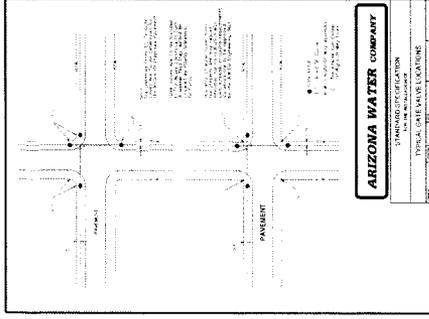
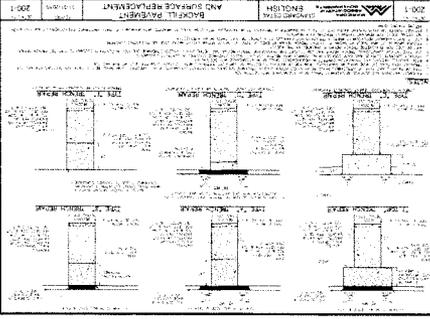


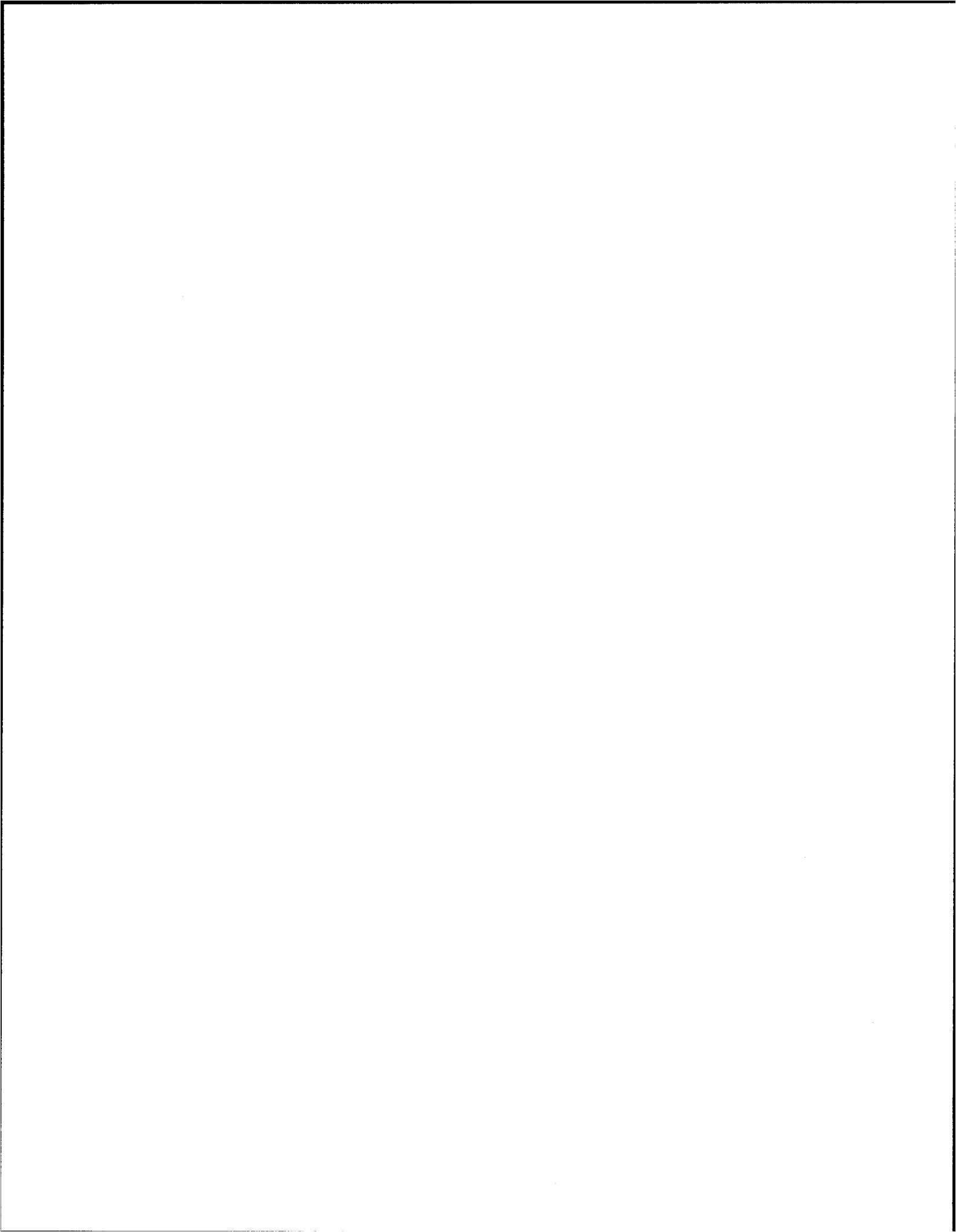


ARIZONA WATER COMPANY
 3855 N BLACK CANYON HWY
 PHOENIX ARIZONA 85038-0006
 (602) 240-8800

PROJECT: PINAL VALLEY
 CONTRACT NO: 25-T-65-R-55
 DATE: 5/7/2014
 DRAWN BY: AS SHOWN
 CHECKED BY: BMP

253-1100
 800-514-6111





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

April 29, 2015

Mr. Mike Mills
Ellison-Mills Contracting, LLC
3152 N. Lear Avenue, Suite #2
Casa Grande, AZ 85122

Re: Highway 84 Gate Valves

PROJECT: Hwy 84 Gate Valves	
SYSTEM: Pinal Valley	
CONTRACT NO.:	
PE. NO.:	W.A. NO.: 1-5168

Dear Mr. Mills:

Enclosed is your copy of the Proposal/Contract for the above-referenced project, which has been accepted by Arizona Water Company (the "Company"). The project shall be constructed in accordance with the Company's *General Conditions of Contract, the Specifications and the Drawings* which were included with the Company's previously provided Proposal/Contract, copies of which are being provided again and attached herewith.

Also enclosed are two copies of the Commencement Notice for the above-referenced project. Please sign one of the copies and return it to my attention retaining the other for your records.

As provided in paragraph 4 of the Company's Proposal/Contract executed by the Company on April 30, 2015, Ellison-Mills Contracting, LLC acknowledged that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work. In addition, as provided in paragraph 44 of the Company's General Conditions of Contract, the 100% Performance and Payment Bonds must be provided within ten (10) calendar days of the date of the Commencement Notice. Failure to provide an acceptable 100% Performance and Payment Bond does not limit the Company's

E-MAIL: ENGINEERING@AZWATER.COM

Mr. Mike Mills
Ellison-Mills Contracting, LLC

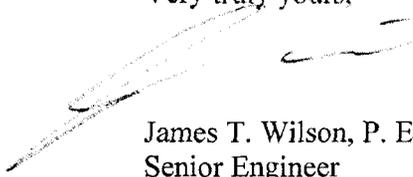
April 29, 2015
Page 2

ability to terminate the Proposal/Contract or seek restitution for damages that the Company may have or will incur.

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting. In addition, please provide the required Performance and Payment Bonds to the Company promptly so that the contracted work can be completed within the contract's timeline.

If you have any questions, please call me at this office.

Very truly yours,



James T. Wilson, P. E.
Senior Engineer
jwilson@azwater.com

afh
Enclosure



ARIZONA WATER COMPANY

Casa Grande Office: PO Box 11030 - Casa Grande, AZ 85130-1030
Voice: 520-836-8785 Fax: 520-836-2850

PROPOSAL/CONTRACT

CONTRACTOR: <i>Ellison-mills Contracting LLC</i>	SYSTEM: <i>PV / CG</i>
ADDRESS: <i>3152 N Linn Ave Suite # 2</i>	W.A. No(s): <i>1-5168</i>
CITY ST ZIP: <i>Casa Grande AZ 85122</i>	BID DUE DATE: <i>July 18, 2014</i>

CONTRACTOR SUBMITS this PROPOSAL/CONTRACT to ARIZONA WATER COMPANY, an Arizona corporation (the "Company"), to perform the work and complete the project described on Page 2 (the "Project"), as an independent prime contractor.

- Contractor certifies that It has a complete copy of, and has read, understands and accepts, the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings, (the "Specifications"), all of which are attached hereto. Contractor has examined the specific plans and related construction drawings for the Project (the "Drawings"), copies of which are also attached hereto. The General Conditions of Contract, Specifications and Drawings are incorporated into this Proposal/Contract. Contractor affirms that all work and materials to be furnished or purchased for the Project will be in strict conformance with the General Conditions of Contract, Specifications and Drawings.
- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract.
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person.
- Contractor acknowledges that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work.
- Prior to the commencement of work, Contractor will submit to the Company a list of all materials to be used in the Project. The materials list will include the manufacturer, part number, price and quantity included in this Proposal/Contract.
- Contractor will furnish all labor, tools, equipment and materials required to complete the Project according to the General Conditions of Contract, Specifications and Drawings. No materials purchased by Contractor to be incorporated into the Project are subject to tax at the time of purchase and Contractor will not charge the Company for any such tax. Contractor will pay the applicable transaction privilege tax (the "Contracting Tax") on the Project after Contractor receives payment of the final Project Invoice from the Company. The cost of materials incorporated into the Project which are exempt by Arizona Revised State Statutes ("A.R.S.") from the Contracting Tax, for example, pipes or valves having a diameter of four (4) inches or larger, including equipment, fittings and any other related part that is used in operating the pipes or valves (A.R.S. §42-5061 B.6.), will not be included in the total cost of the labor and materials upon which the Contracting Tax is computed. 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.
- Contractor will maintain detailed accounting records of all materials purchased and incorporated into the Project. Such records will include all supporting original vendor invoices for all materials purchased. Following completion of the Project, Contractor will submit an itemized accounting to the Company which will include all supporting original vendor invoices and satisfactory evidence of payment thereof. The Company will not pay Contractor for materials not actually incorporated into the Project, and the disposition of such materials will remain Contractor's responsibility.
- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 30 calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and materials quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project Invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS:

Arizona Water Company will provide the four sixteen inch gate valves. No other material will be provided by AWC. Work will be in ADOT right of way. Contractor will need to provide a traffic control plan. So AWC can submit to ADOT for approval prior to beginning of any work. POLLUTION CONTROL INSURANCE IS NOT REQUIRED FOR THIS PROJECT.

CONTRACTOR	PROPOSAL/CONTRACT ACCEPTED:
<i>Ellison-mills Contracting LLC</i>	ARIZONA WATER COMPANY
By: <i>[Signature]</i>	By: <i>[Signature]</i>
Print Name: <i>Mike Mills</i>	Print Name: Fredrick K. Schneider, PE
Title: <i>Owner</i>	Title: Vice President - Engineering
Date: <i>7/18/14</i>	Date: <i>4-30-2015</i>



ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. Mike Mills
Ellison-Mills Contracting, LLC
3152 N. Lear Avenue, Suite #2
Casa Grande, AZ 85122

DATE: 4/30/15
DIVISION: CASA GRANDE
SYSTEM: PINAL VALLEY
W.A.: 1-5168

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Replace broken 16-inch butterfly valves with 16-inch gate valves all with related fittings along highway 84 in Casa Grande, AZ.

PERFORMANCE AND
PAYMENT BONDS
REQUIRED: Yes No

TOTAL DAYS
ALLOWED: 61

COMPLETION
DATE: 6/20/15

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY

Company

ELLISON-MILLS CONTRACTING, LLC

Contractor (type name)

By

Judith K. Salcedo

Title Vice President - Engineering

By

Title

AFH

**ARIZONA STATUTORY BID BOND FOR CONSTRUCTION
PURSUANT TO TITLES 28, 34, AND 41, ARIZONA REVISED STATUTES
(Penalty of this bond must not be less than 10% of the bid amount)**

KNOW ALL MEN BY THESE PRESENTS THAT: **ELLISON-MILLS CONTRACTING, LLC**

(hereinafter "Principal"), as Principal, and **Travelers Casualty And Surety Company Of America** (hereinafter "Surety"), a corporation organized and existing under the laws of the State of **CT**, with its principal offices in the City of **Hartford**, holding a certificate of authority to transact surety business in Arizona issued by the Director of the Department of Insurance pursuant to Title 20, Chapter 2, Article 1, as Surety, are held and firmly bound unto **Arizona Water Company** (hereinafter "Obligee"), in the sum of Ten Percent (10%) of the amount of the bid of Principal, submitted by Principal to the Obligee for the work described below, for the payment of which sum, the Principal and Surety bind themselves, and their heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents.

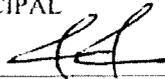
WHEREAS, the Principal has submitted a bid for

**PROJECT: Broken Valves on Hwy 87 - install 3 new G.V. on Hwy 87 and
remove 2 existing valves and install 3 insert valves**

NOW, THEREFORE, if the Obligee shall accept the proposal of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of the proposal and give the bonds and certificates of insurance as specified in the standard specifications or Contract Documents with good and sufficient surety for the faithful performance of the contract and for the prompt payment of labor and materials furnished in the prosecution of the contract, or in the event of the failure of the Principal to enter into the contract and give the bonds and certificates of insurance, if the Principal pays to the Obligee the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by the proposal then this obligation is void. Otherwise, it remains in full force and effect provided, however, that this bond is executed pursuant to the provisions of Section 34-201, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of that section to the extent as if it were copied at length herein.

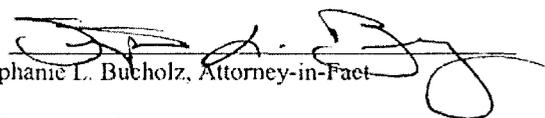
Witness our hands this **18th** day of **July, 2014**.

ELLISON-MILLS CONTRACTING, LLC
PRINCIPAL SEAL

By:  Mike Mills

Title: Owner

**TRAVELERS CASUALTY AND SURETY
COMPANY OF AMERICA**
SURETY SEAL

By: 
Stephanie L. Buchholz, Attorney-in-Fact

CBI Bonding, Inc.
AGENCY OF RECORD
535 E. McKellips Road, Suite #129
Mesa, AZ 85203
AGENCY ADDRESS



POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In Fact No. 225219

Certificate No. 004956969

KNOW ALL MEN BY THESE PRESENTS: That St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company and St. Paul Mercury Insurance Company are corporations duly organized under the laws of the State of Minnesota, that Farmington Casualty Company, Travelers Casualty and Surety Company, and Travelers Casualty and Surety Company of America are corporations duly organized under the laws of the State of Connecticut, that United States Fidelity and Guaranty Company is a corporation duly organized under the laws of the State of Maryland, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Barry R. Farr, Susan A. Toomey, Andrew Farr, Gregory P. Griffith, Debra K. Williams, and Stephanie L. Bucholz

of the City of Mesa, State of Arizona, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 11th day of July, 2012

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company



State of Connecticut
City of Hartford ss.

By: [Signature]
George W. Thompson, Senior Vice President

On this the 11th day of July, 2012, before me personally appeared George W. Thompson, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2016.



[Signature]
Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 18th day of July, 20 14.


Kevin E. Hughes, Assistant Secretary



To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at www.travelersbond.com. Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.



CERTIFICATE OF LIABILITY INSURANCE

ELLIS-4 OP ID: ME

DATE (MM/DD/YYYY)

12/30/14

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

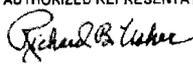
PRODUCER Hill & Usher LLC Insurance, Bonds, Benefits. 3033 North 44th Street, #300 Phoenix, AZ 85018 Richard B. Usher	Phone: 602-956-4220 Fax: 602-956-4418	CONTACT NAME: Commercial Service Team PHONE (A/C, No, Ext): 800-956-4220 FAX (A/C, No): 602-956-4418 E-MAIL ADDRESS: doccontrol@hillusher.com
	INSURER(S) AFFORDING COVERAGE	
INSURED Ellison Mills Contracting, LLC 3152 North Lear #2 Casa Grande, AZ 85122-8146	INSURER A: Travelers Property Casualty Co	NAIC # 25674
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> GENERAL LIABILITY	X		DTCO3782X324-TIL-14	12/31/14	12/31/15	EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person) \$ 5,000
							PERSONAL & ADV INJURY \$ 1,000,000
							GENERAL AGGREGATE \$ 2,000,000
							PRODUCTS - COMP/OP AGG \$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY	X		DTB103079X038-TIL-14	12/31/14	12/31/15	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS						BODILY INJURY (Per accident) \$
	<input checked="" type="checkbox"/> HIRED AUTOS						PROPERTY DAMAGE (Per accident) \$
	<input checked="" type="checkbox"/> SCHEDULED AUTOS						
	<input checked="" type="checkbox"/> NON-OWNED AUTOS						
A	<input checked="" type="checkbox"/> UMBRELLA LIAB			DTSMCUP3079X038-TIL-14	12/31/14	12/31/15	EACH OCCURRENCE \$ 5,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB						AGGREGATE \$ 5,000,000
	<input type="checkbox"/> CLAIMS-MADE						
	DED <input checked="" type="checkbox"/> RETENTION \$ 10,000						
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	N/A		DTJUB3079X038-14	12/31/14	12/31/15	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER
	<input type="checkbox"/> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT \$ 1,000,000
	Y/N <input type="checkbox"/> Y <input checked="" type="checkbox"/> N						E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
 RE: ANY AND ALL JOBS. ADDITIONAL INSURED FORMS CG D246 & CA T353 ATTACHED.

CERTIFICATE HOLDER AZWAT-1 ARIZONA WATER COMPANY ITS OFFICERS, AGENTS & EMPLOYEES PO BOX 29006 PHOENIX, AZ 85038-9006	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1

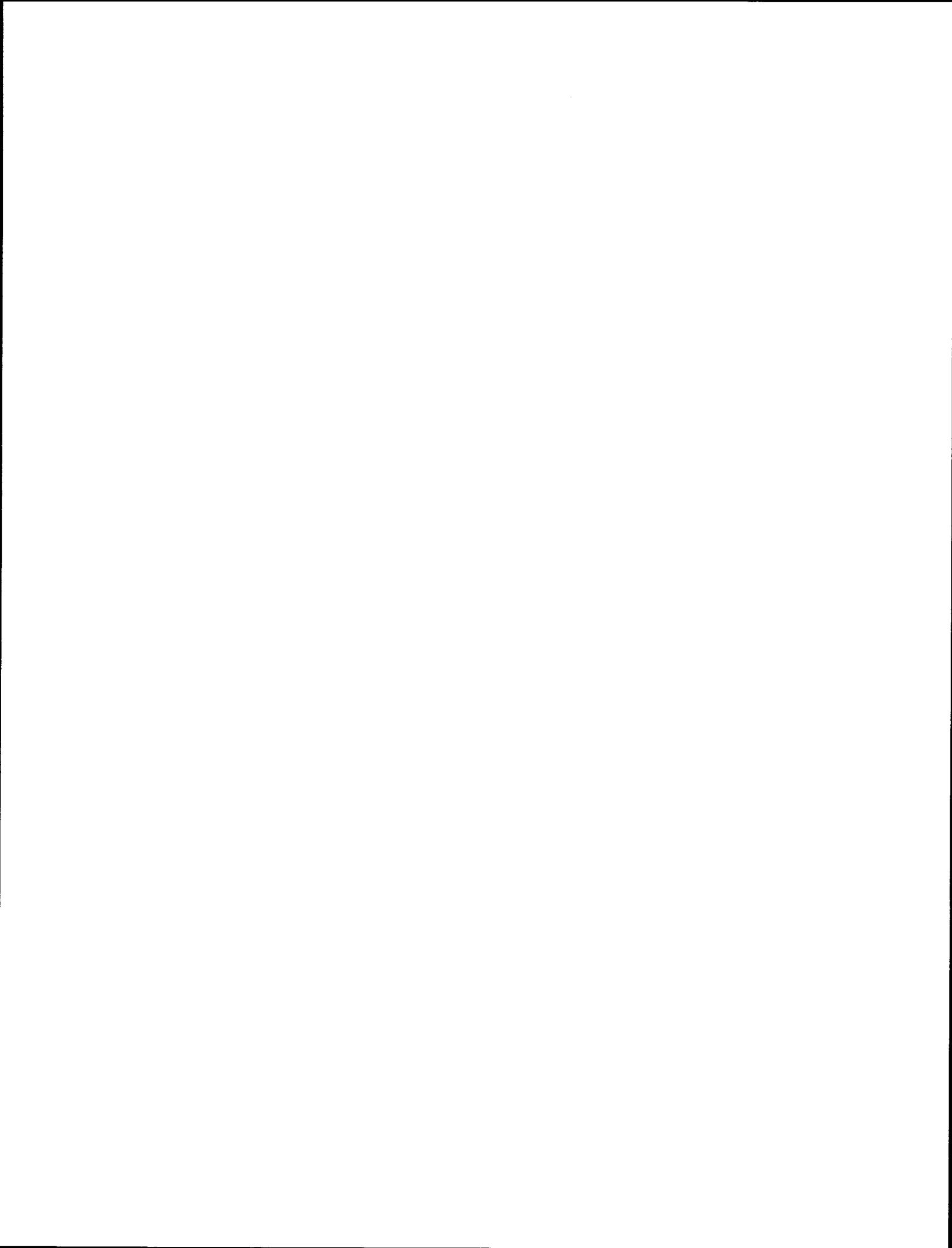
CONSTRUCTION SPECIFICATIONS: E-8-1

STANDARD SPECIFICATION DRAWINGS: E-9-1

gww 4/29/15

**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

A copy of this entire Spec Book was sent out with Ellison-Mills Proposal
package for 1-5168 Hwy 84 Gate Valve on 4/30/15 @ 4



AGREEMENT FOR GENERAL ENGINEERING SERVICES BETWEEN ARIZONA WATER COMPANY AND BLACK MOUNTAIN SURVEYING

TASK ORDER AUTHORIZATION

Black Mountain Surveying Project Number 15044

AWC Project Number Boundary and Topographic Survey for Highway 84 water main butterfly valve in Casa Grande, AZ.

Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038-9006

Effective Date of Authorization May 18, 2015

Upon execution of this Task Order, and effective as of the date shown above, the parties agree that Black Mountain Surveying shall perform the following services:

SCOPE OF SERVICES

As per the attached "Scope of Services" per the attached Exhibit A. **NOTE: Authorization to commence will be given verbally by Division Manager (Ray Murrieta or in his absence, Kevin Pakka, Operations Superintendent).**

COMPENSATION

As per the attached "Land Survey Proposal" dated May 13, 2015

GENERAL TERMS AND CONDITIONS

Surveying's services shall be governed by the Master Agreement dated January 25, 2011 together with this Task Order and any Exhibits attached hereto.

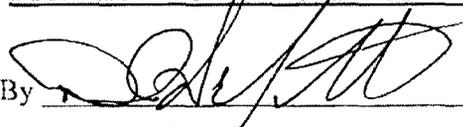
The services performed within this Task Order shall commence on or about May 18, 2015, and shall be complete on or before May 22, 2015.

Black Mountain Surveying's Representative in charge of the services is Dale Mattingly, who may be contacted at 623-266-0402 and dale@blackmountainsurveying.com. Client's Representative in charge of the services is Charles Briggs, who may be contacted at 602-240-6860 and cbriggs@azwater.com.

ARIZONA WATER COMPANY 1-5168

BLACK MOUNTAIN SURVEYING

By 

By 

Title REAL PROPERTY SPECIALIST

Title Owner

Date MAY 14, 2015

Date 5/15/15



17308 West Woodrow Lane Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402
E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

Land Survey Proposal

May 13, 2015

Charles Briggs
Real property Specialist
Arizona Water Company
PO Box 29006
Phoenix, Az. 85038

Dear Charles,

Black Mountain Surveying is pleased to present you with this proposal for land surveying services requested on the following Project:

"Highway 84 Water Main Butterfly Valve Replacement in Casa Grande, AZ."

It is understood that the client listed above wishes to have certain land surveying construction staking services performed on the above referenced project. It is also understood that cost is of concern with this project. All the efforts listed on the attached "Exhibit A" will be billed based on the hourly amounts shown on the attached "Exhibit B" fee schedule. Black Mountain Surveying total hourly amount to be billed for land surveying staking services on this project as outlined on the attached "Exhibit A" shall not exceed \$1,600.00

Sincerely,

Dale A. Mattingly R.L.S.
Senior in charge

CB
5-14-15

"Exhibit A"

Scope of Services

Staking services for Highway 84 Water Main Butterfly Valve Replacement, located in Casa Grande, AZ.

The purpose of this scope is to outline the survey staking services requested on the above referenced project;

- Provide "Right of Way" staking along the south side of highway 84 at the gate valve and line stop locations. (1st trip)
- Provide site "as-built" measurements for the new valve and line stop locations. This "as-built" information will be provided to the engineer in the form of an "X, Y & Z coordinate file with point descriptors. (2nd trip)

A 24 hours notice is required for all staking request.

CB
5-14-15



17308 West Woodrow Lane. Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402

E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

“EXHIBIT B”

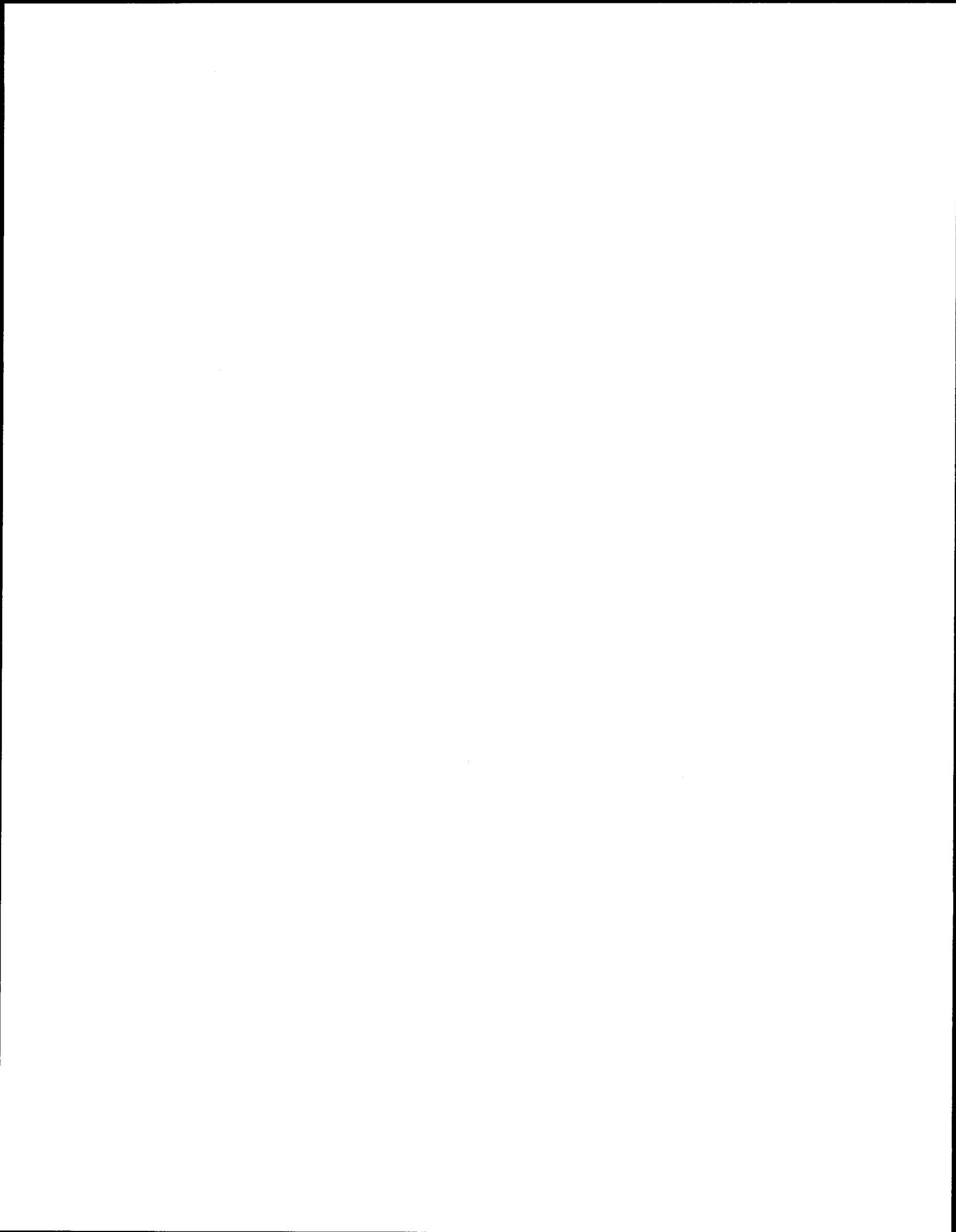
2015 RATE SCHEDULE

EFFECTIVE January 1st, 2015 – December 31st, 2015

	<u>HOURLY RATE</u>
• PRINCIPLE	\$125.00
• REGISTERED LAND SURVEYOR	\$110.00
• 1 MAN GPS FIELD CREW	\$80.00
• 2 MAN CONVENTIONAL SURVEY FIELD CREW	\$100.00
• DRAFT TECHNICIAN	\$80.00

REIMBURSABLES FOR PRINTING AND DELIVERIES WILL BE BILLED AT COST.

5-14-15
CB



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

February 3, 2011

Mr. Dale Mattingly
President
Black Mountain Surveying
17308 W. Woodrow Lane
Surprise, Arizona 85388

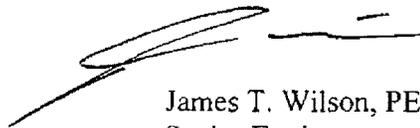
Re: Various Projects

Dear Mr. Mattingly:

Enclosed is your copy of the Master Agreement for ongoing consulting, which has been accepted by Arizona Water Company (the "Company").

If you have any questions, please call me at this office.

Very truly yours,



James T. Wilson, PE
Senior Engineer
engineering@azwater.com

afh
Enclosure

**MASTER AGREEMENT
FOR ONGOING CONSULTING AND ENGINEERING SERVICES
BETWEEN ARIZONA WATER COMPANY
AND BLACK MOUNTAIN SURVEYING**

THIS AGREEMENT is made and entered into on this 25 day of January, 2011, by and between Arizona Water Company, an Arizona corporation, hereinafter referred to as "Client," and BLACK MOUNTAIN SURVEYING, a Trade Name hereinafter referred to as "Consultant."

RECITALS:

WHEREAS, Client desires that from time to time Consultant furnish Client certain consulting services;

WHEREAS, Consultant has available and offers to provide personnel and facilities necessary to perform the services desired under this Agreement;

NOW, THEREFORE, Client and Consultant agree as follows:

I. DESCRIPTION OF PROJECT

Services to be provided shall be as described in written task orders made pursuant to and referencing this Agreement; the form of such task order is attached hereto as Exhibit A.

II. SCOPE OF CONSULTANT SERVICES

Consultant agrees to perform those basic services described in separate written task order(s) signed by Client and Consultant (the "Services"). This Agreement provides the terms, obligations and conditions which shall control all work under such task orders(s). The printed terms and conditions, if any, contained on the reverse side(s) of an accepted task order shall not apply to services provided under this Agreement. Unless modified in writing by both parties, duties of Consultant shall not exceed those service specifically described in each task order. Any work authorized by Client prior to the issuance of a written task order must be authorized in writing and any services then performed by Consultant will be presumed to have been completed under the terms of this Agreement.

III. RESPONSIBILITIES OF CLIENT

In addition to payment for the Services performed under this Agreement, Client shall:

1. Assist and cooperate with Consultant in any manner necessary and within its ability to facilitate Consultant's performance under this Agreement.
2. Designate in writing a person to act as Client's representative with respect to this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define Client's policies, make decisions and execute documents on Client's behalf.

3. Furnish Consultant with all technical data in Client's possession including, but not limited to, maps, surveys, drawings, soils or geotechnical reports, and any other information required by or useful to, Consultant in performance of the Services under this Agreement. Consultant shall be entitled to rely upon the information supplied by Client.

4. Notify Consultant of any known or potential health or safety hazards existing at or near the project site.

5. Provide access to and/or obtain permission for Consultant to enter upon all projects whether or not owned by Client, as required to perform and complete the Services.

IV. AMERICANS WITH DISABILITIES ACT

Any other provision of this Agreement to the contrary notwithstanding, unless otherwise specified in the Scope of Services, Client's contractors shall have sole responsibility as between Client and Consultant for compliance with the Americans With Disabilities Act ("ADA") 42 U.S.C. 12101 et. Seq. and the related regulations. Consultant shall provide client with applicable ADA criteria which maybe required.

V. AUTHORIZATION AND COMPLETION

In signing this Agreement, Client grants Consultant specific authorization to proceed with work as described in Scope of Work and under the terms of this Agreement.

VI. COMPENSATION

For the Services described in each task order, Client agrees to pay, and Consultant agrees to accept the total compensation in accordance with compensation terms included in the task order. Where Consultant has provided Client with a breakdown of the total compensation into subtasks, such breakdowns are estimates only. Consultant may re-allocate compensation between tasks, provided total compensation is not exceeded without the written approval of Client. Time charges shall be in accordance with the Hourly Rate Schedule contained in Exhibit B. The rate schedule may be revised annually by mutual written Agreement. Annual revisions to the Hourly Rate Schedule shall be submitted prior to the date that they take effect. Compensation shall be billed monthly in summary form. Payment to Consultant is due upon presentation of invoice to Client.

As long as Consultant has not defaulted under this Agreement, Client shall pay Consultant within 30 days of the date of Consultant's invoices for services performed and reimbursable expenses incurred under this Agreement. Client may contest any portion of any such invoice, amounts questioned or contested shall be identified and notice given to Consultant within 15 days of the date of the invoice. Any portion of any invoice not contested shall be deemed to be accepted and approved for payment and shall be paid to Consultant within 30 days of the date of the invoice. The Consultant agrees to cooperate with Client in a mutual effort to resolve promptly any contested portions of the Consultant's invoices.

In the event any uncontested portions of any invoice are not paid within 30 days of the date of Consultant's invoice, interest on the unpaid balance shall accrue beginning with the 31st day at the maximum interest rate permitted by law, and Consultant shall have the right to suspend work per Article XV, Suspension of Work.

VII. RESPONSIBILITY OF CONSULTANT

A. Standard of Care Professional Services

Subject to the limitations inherent in the agreed scope of work as to the degree of care, amount of time and expenses to be incurred, and subject to any other limitations contained in this Agreement, Consultant shall perform its Services in accordance with generally accepted standards and practices customarily utilized by competent engineering firms in effect at the time Consultant's Services are rendered. Consultant does not expressly or impliedly warrant or guarantee its Services.

B. Reliance upon Information Provided by Others

If Consultant's performance of services hereunder requires Consultant to rely on information provided by other parties (excepting Consultant's subcontractors), Consultant shall not independently verify the validity, completeness, or accuracy of such information unless otherwise expressly engaged to do so in writing by Client.

C. Consultant's Opinion of Costs

Client acknowledges that construction cost estimates, financial analyses and feasibility projections are subject to many influences including, but not limited to, price of labor and materials, unknown or latent conditions of existing equipment or structures, and time or quality of performance by third parties. Client acknowledges that such influences may not be precisely forecasted and are beyond the control of Consultant and that actual costs incurred may vary substantially from the estimates prepared by Consultant. Consultant does not warrant or guarantee the accuracy of construction or development cost estimates.

D. Construction Phase Services

1. Consultant's Activities at Construction Site. The presence of Consultant's personnel at a construction site, whether as on-site representative, resident engineer, construction manager, or otherwise, does not make Consultant responsible for those duties that belong to Client and/or construction contractors or others, and does not relieve construction contractors or others of their obligations, duties, and responsibilities, including, but not limited to, construction methods, means, techniques, sequences, and procedures necessary for completing all portions of the construction work in accordance with the contract documents, any health or safety programs and precautions required by such construction work, and any compliance with applicable laws and regulations. Any inspection or observation of the contractor's work is solely for the purpose of determining that the work is generally proceeding in conformance with the intent of the project specifications and contract documents. Except for its own Contractors, Consultant makes no warranty or guarantee with respect to the performance of a contractor. Consultant has no authority to exercise control over any construction contractor in connection with their work or health or safety programs and

precautions. Except to protect Consultant's own personnel and except as may be expressly required elsewhere in the scope of services, Consultant has no duty to inspect, observe, correct, or report on health or safety deficiencies of the construction contractor.

2. Shop Drawing and Submittal Review. If required by Consultant's Scope of Services, Consultant shall review shop drawings or other contractor submittals for general conformance with the intent of the contract documents. Except for its own Contractors, Consultant shall not be required to verify dimensions, to engineer contractor's shop drawings or submittals, nor to coordinate shop drawings or other submittals with other shop drawings or submittals provided by contractor.

3. Record Drawings. Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Except for its own Contractors, Consultant is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.

VIII. ASSIGNMENT OF TASKS TO AFFILIATES

If the authorized scope of work requires professional services to be performed in a jurisdiction in which Consultant renders professional services solely through a locally registered engineering affiliate for purposed of compliance with professional licensing requirements in that jurisdiction, Consultant may, in its discretion, upon notice to Client, assign its contractual rights and obligations with respect to such services to such locally registered engineering affiliate.

IX. ASBESTOS / HAZARDOUS MATERIALS

Consultant and Consultant's subcontractors shall have no responsibility for the discovery, handling, removal, or disposal of or exposure of persons to asbestos or hazardous or toxic materials that are present in any form at the Project site. Professional services related to or in any way connected with the investigation, detection, abatement, replacement, use, specification, or removal of products, materials, or processes containing asbestos or hazardous or toxic materials are beyond the scope of this Agreement. Client shall be solely responsible for notifying all appropriate governmental agencies, including the potentially effected public, of the existence of any hazardous or toxic materials located on or at the project site any any time.

In the event Consultant encounters asbestos or hazardous materials at the jobsite, Consultant may, at its option and without liability for damages, suspend the performance of services on the Project until such time as Client and Consultant mutually agree on an amendment to this Agreement to address the issue, or Client retains another specialist consultant or contractor to identify, classify, abate and/or remove the asbestos and/or hazardous materials.

X. CONSULTANT'S WORK PRODUCT

A. Scope

Consultant's work product which is prepared solely for the purposes of this Agreement, including, but not limited to, drawings, test results, recommendations and technical specifications, whether in hard copy or electronic form, shall become the property of Client when Consultant has been fully compensated as set forth herein. Consultant may keep copies of all work product(s) for its records.

Consultant and Client recognize that Consultant's work product submitted in performance of this Agreement is intended only for the project described in this Agreement. Client's alteration of Consultant's work product or its use by Client for any other purpose shall be at Client's sole risk, and Client shall hold harmless and indemnify Consultant against all losses, damages, costs and expense, including attorneys' fees, arising out of or related to any such alteration or unauthorized use.

B. Electronic Copies

If requested, solely as an aid and accommodation to Client, Consultant may provide copies of its work product documents in computer-readable media ("electronic copies," "CADD"). These documents will duplicate the documents provided as work product, but will not bear the signature and professional seals of the registered professionals responsible for the work. Client is cautioned that the accuracy of electronic copies and CADD documents may be compromised by electronic media degradation, errors in format translation, file corruption, printing errors and incompatibilities, operator inexperience and file modification. Consultant will maintain the original copy, which shall serve as the official, archived record of the electronic and CADD documents. Client agrees to hold harmless, indemnify and defend Consultant from any claims arising out of or relating to any change or alteration of electronic copies and CADD documents authorized by the Client, Client's personnel, or Client's Contractor's.

XI. INDEMNIFICATION

A. Indemnification of Client

Consultant agrees to indemnify and hold Client harmless from and against any liability to the extent arising out of the negligent errors or negligent omissions of Consultant, its agents, employees, or representatives, in the performance of Consultant's duties under this Agreement.

B. Consequential Damages.

Regardless of any other term of this Agreement, in no event shall either party be responsible or liable to the other for any incidental, consequential, or other indirect damages.

XII. CONSULTANT'S INSURANCE

Consultant shall procure and maintain the following minimum insurance:

1. Commercial general liability insurance, including personal injury liability, blanket contractual liability and broad-form property damage liability coverage. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

2. Automobile bodily injury and property damage liability insurance covering owned, non-owned, rented, and hired cars. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

3. Statutory workers' compensation and employer's liability insurance as required by state law.

4. Professional liability insurance. The policy limit shall be not less than \$1,000,000.

Client shall be named as additional insured on policies 1 and 2 above. Upon execution of this Agreement, Consultant will provide a certificate of insurance to Client. Consultant will keep the certificate current at all times while this Agreement is in effect. The Consultant will provide a 30-day written notice in the event the above policies are cancelled.

XIII. CONFIDENTIALITY

Consultant agrees it will maintain the confidentiality of all material it receives from Client which Client has clearly identified as "Confidential" and will not disclose, distribute, or publish to any third party such confidential information without the prior permission of Client. Notwithstanding the foregoing, Consultant shall have no confidentiality obligation with respect to information that:

1) becomes generally available to the public other than as a result of disclosure by Consultant or its agents or employees;

2) was available to Consultant prior to its disclosure by Client;

3) becomes available to Consultant from a third party who is not, to the knowledge of Consultant, bound to retain such information in confidence.

In the event Consultant is compelled by subpoena, court order, or administrative order to disclose any confidential information, Consultant shall promptly notify Client and shall cooperate with Client prior to disclosure so that Client may take necessary actions to protect such confidential information from disclosure.

XIV. SUBCONTRACTS

Consultant shall be entitled, to the extent determined appropriate by Consultant, to subcontract any portion of the services to be performed under this Agreement.

XV. SUSPENSION OF WORK

Work under this Agreement may be suspended as follows:

1. By Client. By written notice to Consultant, Client may suspend all or a portion of the Work under this Agreement if unforeseen circumstances beyond Client's control make normal progress of the Work impracticable. Consultant shall be compensated for its reasonable expenses resulting from such suspension including mobilization and demobilization. If suspension is greater than 90 days, then Consultant shall have the right to terminate this Agreement in accordance with Article IVI, Termination of Work.

2. By Consultant. By written notice to Client, Consultant may suspend the Work if Consultant reasonably determines that working conditions at the Site (outside Consultant's control) are unsafe, or in violation of applicable laws, or in the event Client has not made timely payment in accordance with Article VI, Compensation, or for other circumstances not caused by Consultant that are interfering with the normal progress of the Work. Consultant's suspension of Work hereunder shall be without prejudice to any other remedy of Consultant at law or equity.

XVI. TERMINATION OF WORK

A. This Agreement may be terminated by Client as follows: (1) for its convenience on 15 days' notice to Consultant, or (2) for cause, if Consultant materially breaches this Agreement through no fault of Client and Consultant neither cures such material breach nor makes reasonable progress toward cure within 15 days after Client has given written notice of the alleged breach to Consultant.

B. This Agreement may be terminated by Consultant as follows: (1) for cause, if Client materially breaches this Agreement through no fault of Consultant and Client neither cures such material breach nor makes reasonable progress toward cure within 15 days after Consultant has given written notice of the alleged breach to Client, or (2) upon five days' notice if work under this Agreement has been suspended by either Client or Consultant for more than 90 days in the aggregate.

C. Payment upon Termination

In the event of termination, Consultant shall perform such additional work as is reasonably necessary for the orderly closing of the Work. Consultant shall be compensated for all work performed prior to the effective date of termination, plus work required for the orderly closing of the Work, including: (1) authorized work performed up to the termination date plus termination expenses, including all labor and expenses, at Consultant's standard billing rates, directly attributable to termination; (2) all efforts necessary to document the work completed or in progress; and (3) any termination reports requested by Client.

XVII. ASSIGNMENT

This Agreement is binding on the heirs, successors, and assigns of the parties hereto. Except as otherwise set forth under Article VIII, Assignment of Tasks to Affiliates, this Agreement may not be assigned by Client or Consultant without prior, written consent of the other.

XVIII. NO BENEFIT FOR THIRD PARTIES

The services to be performed by Consultant are intended solely for the benefit of Client, and no benefit is conferred on, nor contractual relationship established with any person or entity not a party to this Agreement. No such person or entity shall be entitled to rely on Consultant's services, opinions, recommendations, plans, or specifications without the express written consent of Consultant. No right to assert a claim against the Consultant, its officers, employees, agents, or consultants shall accrue to the construction Contractor or to any subcontractor, supplier, manufacturer, lender, insurer, surety, or any other third party as a result of this Agreement or the performance or nonperformance of the Consultant's services hereunder.

XIX. FORCE MAJEURE

Consultant shall not be responsible for delays caused by circumstances beyond their reasonable control, including, but not limited to (1) strikes, lockouts, work slowdowns or stoppages, or accidents, (2) acts of God, (3) failure of Client to furnish timely information or to approve or disapprove Consultant's instruments of service promptly, and (4) faulty performance or nonperformance by Client, Client's independent consultants or contractors, or governmental agencies. Consultant shall not be liable for damages arising out of any such delay, nor shall the Consultant or Client be deemed to be in breach of this Agreement as a result thereof.

XX. INTEGRATION

This Agreement represents the entire understanding of Client and Consultant as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. This Agreement may not be modified or altered except in writing signed by both parties. Any purchase order issued by Client, whether or not signed by Consultant, and any terms and conditions contained in such purchase order which are inconsistent with this Agreement shall be of no force and effect.

XXI. SEVERABILITY

If any part of this Agreement is found unenforceable under applicable laws, such part shall be inoperative, null, and void insofar as it conflicts with said laws, but the remainder of this Agreement shall be in full force and effect.

XXI. CHOICE OF LAW/JURISDICTION

This Agreement shall be administered and interpreted under the laws of the State of Arizona. Jurisdiction of litigation arising from the Agreement shall be in the State of Arizona.

XXIII. ATTORNEYS' FEES

In the event either party commences legal proceedings against the other, then the prevailing party shall, in addition to any other recovery, be entitled to recover its reasonable attorneys' fees and all other costs of such proceeding.

XXIV. NOTICES

All notices required under this Agreement shall be delivered by personal delivery or first class mail and shall be addressed to the following persons:

Mr. Dale Mattingly
President
Black Mountain Surveying
17308 W. Woodrow Lane
Surprise, Arizona 85388

Mr. Fred Schneider
Vice President - Engineering
Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038

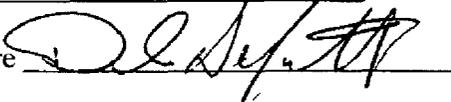
Notice shall be effective upon delivery to the above addresses. Project related instructions may be delivered by electronic mail. Either party may notify the other that a new person has been designated by it to receive notices, or that the address for the delivery of such notices has been changed, provided that, until such time as the other party receives such notice in the manner provided for herein, any notice addressed to the previously-designated person and/or delivered to the previously-designated address shall be effective.

XXV AUTHORIZATION

The persons executing this Agreement on behalf of the parties hereto represent and warrant that the parties have all legal authority and authorization necessary to enter into this Agreement, and that such persons have been duly authorized to execute this Agreement on their behalf.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

BLACK MOUNTAIN SURVEYING

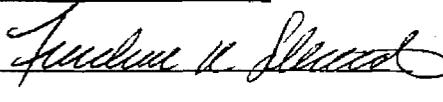
Signature 

Printed Name Dale Mattingly

Title President

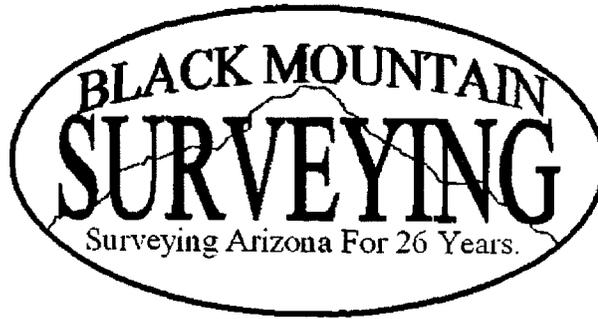
Federal Tax ID number: 56-2500086

ARIZONA WATER COMPANY

Signature 

Printed Name Mr. Fred Schneider

Title Vice-President - Engineering



17308 West Woodrow Lane. Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402

E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

"EXHIBIT B"

2011 RATE SCHEDULE
EFFECTIVE January 1st, 2011 – December 31st, 2011

	<u>HOURLY RATE</u>
• PRINCIPLE	\$95.00
• REGISTERED LAND SURVEYOR	\$90.00
• 1 MAN GPS FIELD CREW	\$65.00
• 2 MAN CONVENTIONAL SURVEY FIELD CREW	\$80.00
• DRAFT TECHNICIAN	\$55.00

REIMBURSABLES FOR PRINTING AND DELIVERIES WILL BE BILLED AT COST.

AGREEMENT FOR GENERAL ENGINEERING SERVICES BETWEEN ARIZONA WATER COMPANY AND BLACK MOUNTAIN SURVEYING

TASK ORDER AUTHORIZATION

Black Mountain Surveying Project Number _____

AWC Project Number _____

Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038-9006

Effective Date of Authorization _____

Upon execution of this Task Order, and effective as of the date shown above, the parties agree that Black Mountain Surveying shall perform the following services:

SCOPE OF SERVICES

Describe here, or attach an Exhibit entitled "Scope of Services"

COMPENSATION

Describe here, or attach an Exhibit entitled "Scope of Services"

GENERAL TERMS AND CONDITIONS

Black Mountain Surveyings's services shall be governed by the Master Agreement dated _____ together with this Task Order and any Exhibits attached hereto.

The services performed within this Task Order shall commence on or about _____, and shall be complete on or before _____.

Black Mountain Surveying's Representative in charge of the services is _____, who may be contacted at _____ and _____ @ _____. Client's Representative in charge of the services is _____, who may be contacted at 602-240-6860 and _____@azwater.com.

Arizona Water Company

BLACK MOUNTAIN SURVEYING

By _____

By _____

Title _____

Title _____

Date _____

Date _____



POLICY NUMBER: UX5913141

**SAFECO INSURANCE COMPANY OF AMERICA
PERSONAL UMBRELLA POLICY DECLARATIONS**

INSURED:
DONNA L MATTINGLY
DALE A MATTINGLY
17308 W WOODROW LN
SURPRISE AZ 85388-7936

AGENT:
INSURANCE ANSWER CENTER LLC
PO BOX 515097
ATTN: POLICY SUPPORT
LOS ANGELES CA 90051-5097
1-800-495-6578

POLICY PERIOD FROM: JAN. 25 2011
TO: JAN. 25 2012

at 12:01 A.M. Standard time at
the address of the insured as
stated herein.

RETAINED LIMIT: \$250
LIMIT OF LIABILITY: \$1,000,000

SCHEDULE OF UNDERLYING INSURANCE:

You, as defined in the policy contract, agree:

- 1) that insurance policies providing the coverages specified on the back of these declarations, if applicable, are in force and will be maintained in force as collectible insurance for at least the required minimum limits stated.
- 2) to insure all motor vehicles owned, leased by or used by you.
- 3) to insure all residence premises owned, leased by or leased to you.
- 4) to insure all recreational vehicles owned, leased by or used by you.
- 5) to insure all watercraft owned by you.

COVERAGES	PREMIUM
Basic premium - includes one automobile and primary residence	\$ 117.00
1 Additional automobile in the household	\$ 38.00
TOTAL ANNUAL PREMIUM	\$ 155.00

You may pay your premium in full or in installments. There is no installment fee for the following billing plans: Full Pay, Annual 2-Pay. Installment fees for all other billing plans are listed below. If more than one policy is billed on the installment bill, only the highest fee is charged. The fee is:
 \$2.00 per installment for recurring automatic deduction (EFT)
 \$2.00 per installment for recurring credit card or debit card
 \$5.00 per installment for all other payment methods

POLICY FORMS APPLICABLE TO THIS POLICY:
CN-7107/EP 4/08, P-1075/EP 12/08, P-967/AZEP 1/09

**PLEASE SEE REVERSE
ORIGINAL**

DATE PREPARED JAN. 25 2011



POLICY NUMBER: X5463793

**SAFECO INSURANCE COMPANY OF AMERICA
AUTOMOBILE POLICY DECLARATIONS**

NAMED INSURED:
DONNA L MATTINGLY
DALE A MATTINGLY
17308 W WOODROW LN
SURPRISE AZ 85388-7936

POLICY CHANGE
CHANGED EFFECTIVE: JAN. 26 2011
POLICY PERIOD FROM: SEPT 18 2010
TO: MAR. 18 2011

at 12:01 A.M. standard time at
the address of the insured as
stated herein.

AGENT:
INSURANCE ANSWER CENTER LLC
PO BOX 515097
ATTN: POLICY SUPPORT
LOS ANGELES CA 90051-5097

AGENT TELEPHONE:
1-800-495-6578

RATED DRIVERS		DONNA L MATTINGLY, DALE A MATTINGLY	
1999 FORD	F150	4 DOOR PICK-UP	ID# 1FTRX07L6XKC24990
2007 FORD LOSS PAYEE	F150 FORD CREDIT CREDIT	2 DOOR PICK-UP	ID# 1FTPW14587KB73806

Insurance is afforded only for the coverages for which limits of liability or premium charges are indicated.

COVERAGES	1999 FORD LIMITS	PREMIUMS	2007 FORD LIMITS	PREMIUMS
LIABILITY:				
BODILY INJURY	\$500,000 Each Person \$500,000 Each Occurrence	\$ 112.50	\$500,000 Each Person \$500,000 Each Occurrence	\$ 113.00
PROPERTY DAMAGE	\$100,000 Each Occurrence	67.50	\$100,000 Each Occurrence	75.30
UNINSURED MOTORISTS:				
BODILY INJURY	\$500,000 Each Person \$500,000 Each Accident	32.40	\$500,000 Each Person \$500,000 Each Accident	32.40
UNDERINSURED MOTORISTS:				
BODILY INJURY	\$500,000 Each Person \$500,000 Each Accident	19.20	\$500,000 Each Person \$500,000 Each Accident	19.20
COMPREHENSIVE			Actual Cash Value Less \$500 Deductible	75.50
COLLISION			Actual Cash Value Less \$500 Deductible	104.50
ADDITIONAL COVERAGES:				
THEFT PREVENTN		.50		.50
		TOTAL \$ 232.10		TOTAL \$ 420.40

You may pay your premium in full or in installments. There is no installment fee for the following billing plans: Full Pay, Annual 2-Pay. Installment fees for all other billing plans are listed below. If more than one policy is billed on the installment bill, only the highest fee is charged. The fee is:
 \$2.00 per installment for recurring automatic deduction (EFT)
 \$2.00 per installment for recurring credit card or debit card
 \$5.00 per installment for all other payment methods

-CONTINUED-

P O BOX 515097, LOS ANGELES, CA 90051

Type of Policy	Required Minimum Limits	
Automobile/Motor Vehicle Liability (Including motor homes)	Bodily Injury and Property Damage	- 500,000 each person/ - 500,000 each occurrence - 100,000 each occurrence
Comprehensive Personal Liability	Single Limit	- 300,000 each occurrence
Premises Liability	Single Limit	- 300,000 each occurrence
Motorcycle Liability	Single Limits	- 500,000 each occurrence
Recreation Vehicle Liability	Single Limits	- 300,000 each occurrence
Watercraft Liability 1. a. Powerboats 32 feet or more in length; or b. Sailing vessels (with or without auxiliary power) 26 feet or more in length 2. All other watercraft	Single Limits Single Limits	- 500,000 each occurrence - 300,000 each occurrence
Incidental Farm Coverage	Single Limits	- 300,000 each occurrence

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE 1/28/2011

PRODUCER
 KEVINN BURRIS (18876)
 2500 S POWER RD
 STE 218
 MESA, AZ 85209-0000
 480-325-1550 FAX: 480-325-8449

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED 5065371
 DALE MATTINGLY / DBA BLACK MOUNTAIN SURVEYING
 17308 W WOODROW LN
 SURPRISE, AZ 85388

INSURERS AFFORDING COVERAGE		NAIC #
INSURER A:	COUNTRY Mutual Insurance Company	20990
INSURER B:		
INSURER C:		
INSURER D:		
INSURER E:		

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR ADD'L LTR INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	AB9033065	8/28/2010	8/28/2011	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Anyone person) \$5,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT OTHER THAN AUTO ONLY: EA ACC AGG
	EXCESS/UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$				EACH OCCURRENCE AGGREGATE
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> No If yes, describe under SPECIAL PROVISIONS below <input type="checkbox"/> Yes				<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT
	OTHER				

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

ADDITIONAL INSURED(S):
 ARIZONA WATER COMPANY
 3805 N BLACK CANYON HWY
 PHOENIX, AZ 85015

CERTIFICATE HOLDER

ARIZONA WATER COMPANY
 3805 N BLACK CANYON HIGHWAY
 PHOENIX, AZ 85015-5351

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Douglas M Bova

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.



CERTIFICATE OF LIABILITY INSURANCE

OPID JC

DATE (MM/DD/YYYY)

01/28/11

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Stuckey Ins & Assoc Agencies 5343 N. 16th Street, Suite 110 Phoenix AZ 85016 Phone: 602-264-5533 Fax: 602-279-9336	CONTACT NAME: PHONE (A/C, No, Ext): _____ FAX (A/C, No): _____ E-MAIL ADDRESS: _____ PRODUCER CUSTOMER ID #: BLACK-3	
	INSURER(S) AFFORDING COVERAGE	
INSURED Black Mountain Surveying 17308 W Woodrow Lane Surprise AZ 85388	INSURER A: The Hartford	NAIC # 22357
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

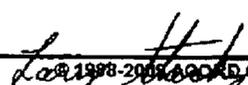
COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GENL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJ <input type="checkbox"/> LOC					EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMPOP AGG \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS					COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DEDUCTIBLE RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$ \$ \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/ MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> I/A	59WECRY0948	01/28/11	01/28/12	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 500000 E.L. DISEASE - EA EMPLOYEE \$ 500000 E.L. DISEASE - POLICY LIMIT \$ 500000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
Re: Consulting Services

CERTIFICATE HOLDER**CANCELLATION**

ARI2W-4 Arizona Water Company 3805 N. Black Canyon Highway Phoenix AZ 85015-5351	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)

1/31/11

PRODUCER

1
Stuckey & Company
 28 Hawk Ridge Circle, Suite 200
 Lake St. Louis MO 63367

INSURED

Dale Andrew Mattingly
 17308 W. Woodrow Lane
 Surprise AZ 85388

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE	
COMPANY LETTER	A
COMPANY LETTER	B / E&O: Aspen Specialty
COMPANY LETTER	C Aspen Specialty
COMPANY LETTER	D
COMPANY LETTER	E

COVERAGES **LIMITS**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO. LTR.	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFF. DATE	POLICY EXP. DATE	AMOUNT	DEDUCTIBLE	COINSUR.
A	CAUSES OF LOSS <input type="checkbox"/> BASIC <input type="checkbox"/> BROAD <input checked="" type="checkbox"/> SPEC.				Building(s): Contents: Computer: LOE: Actual Loss		
B	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR				GENERAL AGGREGATE \$ PRODUCTS-COMP/POP AGG. \$ PERSONAL & ADV. INJURY \$ EACH OCCURENCE \$ FIRE DAMAGE (Any one fire) \$ MED. EXPENSE (Any one person) \$		
C	PROFESSIONAL LIABILITY Errors and Omissions Liability	LBX302110	8/10/10	8/10/11	E & O AGGREGATE \$ \$1,000,000 E & O EACH OCCURENCE \$ \$1,000,000 E & O RETENTION \$ \$1,000		
D	AUTOMOBILE LIABILITY <input type="checkbox"/> Any AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY				COMBINED SINGLE LIMIT \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$ MEDICAL PAYMENTS \$ PERSONAL INJURY PROT. \$ UNINSURED MOTORIST \$		
E	EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM				EACH OCCURENCE \$ AGGREGATE \$ SELF INSURED RETENTION \$		
F	WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY				EACH ACCIDENT \$ DISEASE-POLICY LIMIT \$ DISEASE EACH EMPLOYEE \$		

SPECIAL CONDITIONS/OTHER COVERAGES

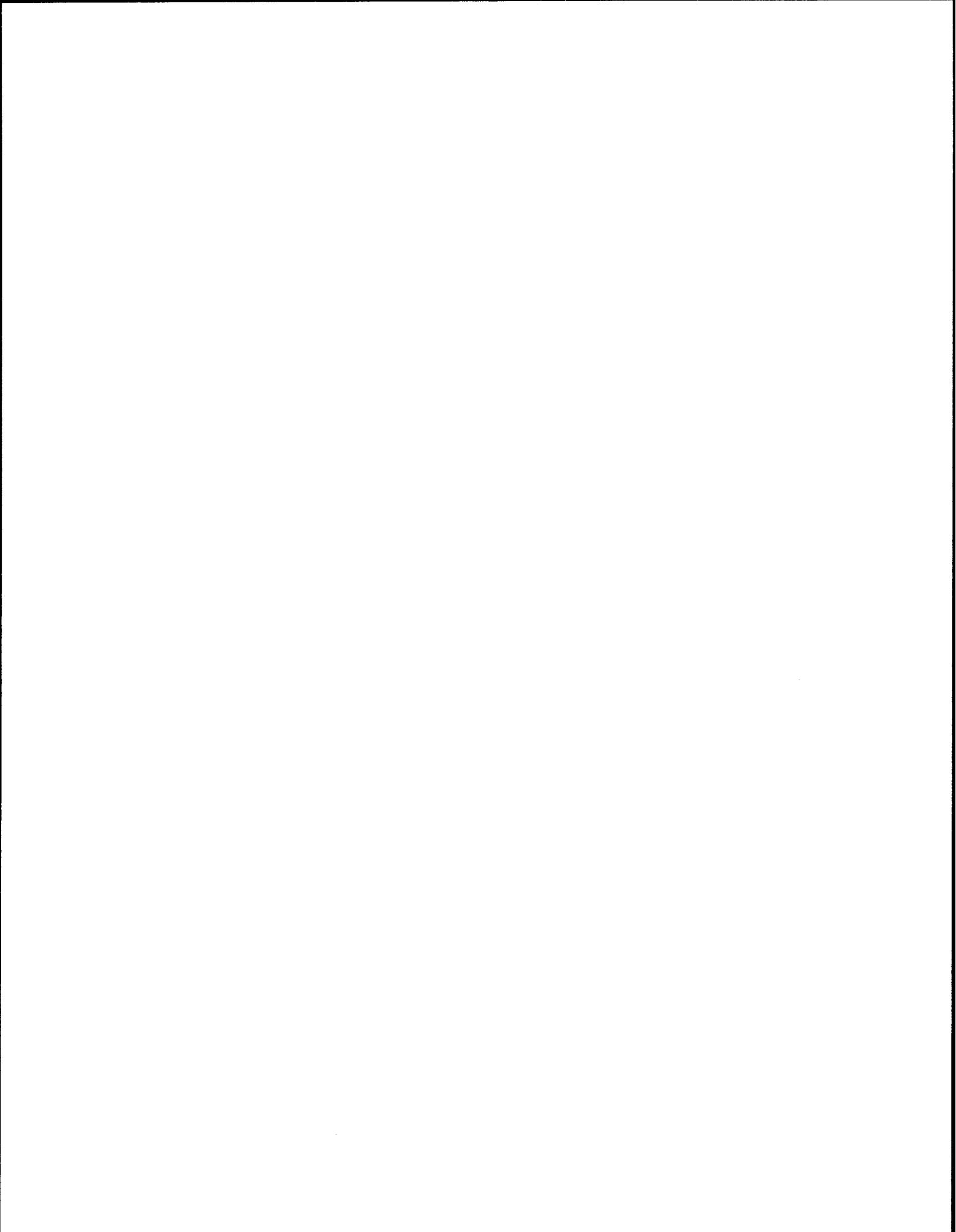
The Certificate Holder is included as an additional insured per policy wording where required by written contract.

CERTIFICATE HOLDER

Arizona Water Company
 3805 N. Black Canyon Highway
 Phoenix, AZ 85015-5351

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE





City of Casa Grande, Development Center, 510 E. Florence Blvd, Casa Grande, AZ 85122 (520)421-8630

Administrative Completeness Review Determination

Applicant: James T Wilson, PE Arizona Water Co

Project/Permit #: CDP-14-01598 1-5168 Highway 84 Valve Replacement

Project/Permit Type: E20B-ADEQ Approval to Construct Drinking Water Facilities

The above-referenced Permit/Project has been determined to be:

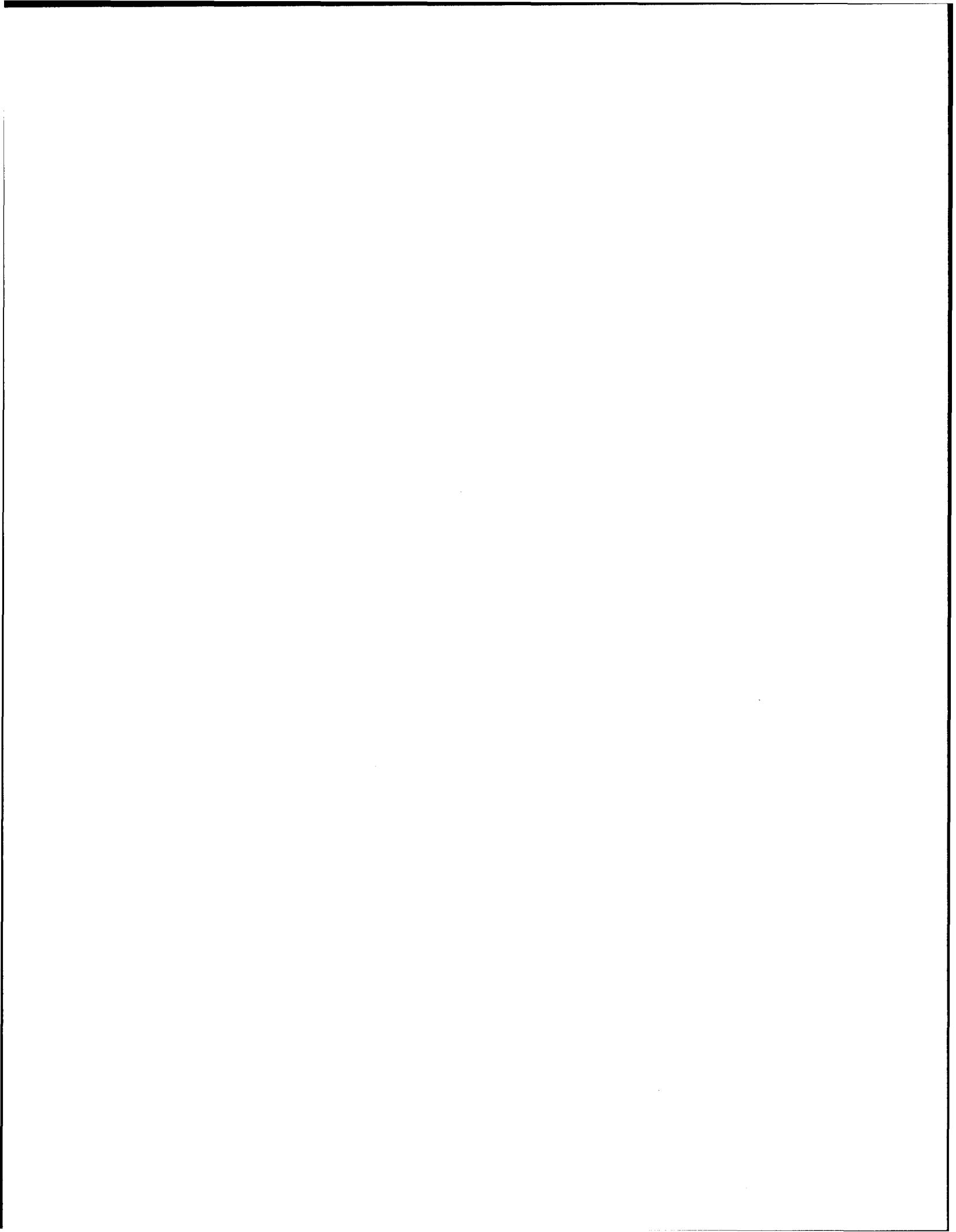
X Administratively Complete as of 12/04/2014 and has been logged in for Substantive Review. You can expect to receive a review letter setting forth a comprehensive list of review comments no later than 01/01/2015.

If you have any questions regarding this matter please contact:

Linda Harris

LHarris@casagrandeaz.gov

520.421.8630 x 3350





Intermodal Transportation

Janice K. Brewer, Governor
John S. Halikowski, Director
Jennifer Toth, State Engineer
Robert Samour, Senior Deputy State Engineer, Operations
Dallas Hammit, Senior Deputy State Engineer, Development

February 3, 2015

Andrew Haas
AZ Water Co.
3805 N. Black Canyon Highway
Phoenix, AZ 85038

Re: Permit No. 1213613

Dear Mr. Haas:

Your Permit to use State Highway Right of Way has been approved and a copy of the permit is attached for your records. Please read the specifications and standards which are part of your approved permit.

To schedule a pre-construction meeting please contact Mr. Frank Cabello, Permit Inspector, at (520) 483-6606 a minimum of five working days prior to performing any work. If Mr. Cabello is unavailable, please contact Mr. Dennis Lillie, Highway Operations Supervisor, at (520) 518-0519.

If at any time during the performance of your work, you determine it will not be possible to complete the permitted work by the expiration date on your permit, please submit a written request for a time extension. Your request should contain the reason for the delay and the additional time needed. Please submit your request to Mr. Cabello for approval and processing.

The safety of your workers and the users of the State Highway is of great concern to us. Prior to beginning work please ensure you are in compliance with the Traffic Control requirements of your permit.

Best wishes in the execution of your work.

Sincerely,

Steve Mishler
Tucson District Development Engineer
1221 S. 2nd Avenue
Tucson, AZ 85713
(520) 388-4227

SM:aa

Enclosures

c: ADOT Maintenance Permits
Mr. Lillie and Mr. Cabello, ADOT Maintenance

T103706

AA RECEIVED



ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
Highway Encroachment Permit Application
(Application for Permission to Use State Highway Right-of-Way)

AUG 19 2014

TUCSON DISTRICT PERMITS

FOR ADOT USE ADOT Agreement Number: _____ ECS JPA Other _____
PERMIT NUMBER: 1213613 ROUTE: SR-84 MILEPOST: 176.31 to 176.91
ADOT PROJECT NUMBER: M-950-4-502 ADOT ENGINEERING STATION: 3009+94 to 3032+84

Name of Encroachment Owner:
Andrew Haas
Mailing Address of Owner:
3805 N. Black Canyon Highway
City:
Phoenix
State: AZ Zip: 85038-9006
Phone:
602-240-8880
E-mail address:
engineering@azwater.com
Name of Local Point of Contact:
Roy Freeman
Phone Number for Local Point of Contact:
520-836-8785

Name of Authorized Agent / Applicant (If other than the Encroachment Owner):
Andrew Haas
Mailing Address:
3805 N. Black Canyon Highway
City:
Phoenix
State: AZ Zip: 85038-9006
Phone:
602-240-8880
Legal Relationship to Owner:
 Contractor Sub Contractor Authorized Employee
 Engineer Attorney Other: _____
E-mail Address:
engineering@azwater.com

City (in or near) Casa Grande Side of Highway: N S E W (check one)
Highway Route # 84 Approximately 1533 Feet N S E W (check one) of Milepost # 176

Encroachment Owner's Project # or Property Parcel #: _____ Project Duration : _____
Description of the proposed work or activity in the right-of-way: Replace four broken 16-inch butterfly valves with 16-inch gate valves along Highway 84 between V.I.P Blvd. and Thorton Road.

The Encroachment Owner will be the Permittee. By signing this application, the Encroachment Owner and the Owner's Agent acknowledge that the information given and statements made in this application are true and correct to the best of his/her knowledge. The Encroachment Owner agrees as the Permittee to accept the following General Obligations and Responsibilities as described on page 2 of the application. By accepting an approved encroachment permit, the Permittee agrees to the requirements described in the permit, to be responsible for all permit requirements, and to comply with ADOT's requirements as set out in the permit. An approved permit consists of but is not limited to this application and final supporting documentation approved by ADOT, and any requirements set by ADOT. NO WORK SHALL TAKE PLACE INSIDE THE RIGHT OF WAY WITHOUT AN APPROVED PERMIT ON SITE.

Andrew J. Haas 8-18-14
Encroachment Owner (Print Name and Sign) Date
Andrew J. Haas 8-18-14
Authorized Agent of Applicant (If other than the Encroachment Owner) (Print Name and Sign) Date

FOR ADOT USE
PERMIT TO USE STATE HIGHWAY RIGHT-OF-WAY

This application is approved as a permit and a permit is issued to the Permittee. Construction is authorized only for the period indicated below.

N/A
Authorized ADOT Name and Signature
Steve Mishler
Authorized ADOT Name and Signature
Steve Mishler, Dev. Engineer

Issue Date February 3, 2015 Permit work to be completed by: April 3, 2015

GENERAL OBLIGATIONS AND RESPONSIBILITIES

THE PERMITTEE SHALL:

1. Assume all legal liability and financial responsibility for the encroachment activity for the duration of the encroachment, including indemnify, defend, and save harmless ADOT and the State of Arizona and any of its agents, directors, officers, employees from and against any and all claims, demands, suits, actions, proceedings, loss, costs, damages of every kind, or expenses, including court costs, reasonable attorney's fees and/or litigation expenses, and costs of claim processing and investigation, arising out of bodily injury or death of any person, or tangible or intangible property damage, caused, or alleged to be caused, in whole or in part, by the negligent or willful acts, or omissions of the Permittee, any of its directors, officers, agents, employees, or volunteers, or its contractor or subcontractors. This indemnity includes any claim or amount arising out of or recovered under the Workers' Compensation Law or arising out of the contractor's failure to conform to any federal, state or local law, statute, ordinance, rule, regulation or court decree. Permittee agrees to provide ADOT with a certificate(s) of insurance consistent with the requirements stated in the ADOT Permit Insurance Matrix. Permittee is also obligated to provide certificates for its contractor(s), if any. The required insurance shall be kept in force by the permittee and its contractors for the term of the permit and shall not expire, be cancelled or materially changed to affect coverage available to the State without thirty (30) days written notice to the State. Automobile and worker's compensation coverage requirements are dependent upon the use of employees and autos for the encroachment activity. Please refer to the Matrix to determine requirements for coverage, limits, language and other insurance related items specific to each permit. Contractor's certificates shall include all subcontractors assureds under its policies, or Contractor shall collect from each of its subcontractors a certificate that meets or exceeds the requirements for a Contractor as outlined in the Matrix. Contractor agrees to maintain and make available to ADOT all subcontractors' certificates upon demand. ADOT reserves the right to require an increase or allow a decrease in insurance limits or coverage based on the risks and financial exposure arising out of the event or activity proposed in the permit application. The Encroachment Permit is issued upon the expressed condition that ADOT and The State of Arizona does not protect or insure against loss of personal property or improvements owned by Permittee. Permittee waives the right to claim damages from ADOT and the State of Arizona for any damage resulting to said property in the event that property is damaged or destroyed by fire or any other perils that is not the direct result of negligence by ADOT or the State of Arizona.
2. Comply with Environmental Laws.
 - A. Environmental Laws refers collectively to any and all federal, state, or local statute, law, ordinance, code, rule, regulation, permit, order, or decree regulating, relating to, or imposing liability or standards of conduct on a person discharging, releasing or threatening to discharge or release or causing the discharge or release of any hazardous or solid waste or any hazardous substance, pollutant, contaminant, water, wastewater or storm water, and specifically includes, but is not limited to: The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act; the Comprehensive Environmental Response, Compensation and Liability Act, as amended; the Toxic Substances Control Act; the Clean Water Act (CWA); the Clean Air Act; the Occupational Safety and Health Act; the Arizona Water Quality Act Revolving Fund Act, the Arizona Hazardous Waste Management Act, any applicable National Pollutant Discharge Elimination System (NPDES) or Arizona Pollutant Discharge Elimination System (AZPDES) permit, any applicable CWA Section 404 permit, or any local pretreatment or environmental nuisance ordinance.
 - B. Specifically agree that in the course of performing any activity for which this Permit is necessary:
 - i. To comply with any and all Environmental Laws;
 - ii. To ensure that no activity under this Permit shall cause ADOT to be in violation of any Environmental Laws;
 - iii. That if the Permittee fails or refuses to comply with any Environmental Laws, or causes ADOT to be in violation of any Environmental Laws, ADOT may at its sole and unreviewable discretion, (1) revoke this Permit; (2) require the Permittee to undertake corrective or remedial action to address any release or threatened release or discharge of the hazardous substance, pollutant or contaminant, water, wastewater or storm water; and (3) expressly consents to entry of injunctive relief to enforce any listed remedies.
 - iv. To indemnify ADOT for any losses, damages, expenses, penalties, liabilities or claims of any nature whatsoever suffered by or asserted against ADOT as a direct or indirect result of the disposal, escape, seepage, leakage, spillage, discharge, emission, or release of any hazardous waste, solid waste, hazardous substance, pollutant or contaminant, water, wastewater or storm water and losses, damages, expenses, penalties, liabilities and claims asserted or arising under the Environmental Laws, or for ADOT's costs in undertaking corrective action pursuant to an order of or settlement with a duly authorized regulatory agency or injured third party or for any penalties associated with Permittee's activities;
3. Be responsible for any repair or maintenance work and repair any aspect or condition of the encroachment that causes danger or hazard to the traveling public, for the duration of the encroachment and must perform such work under the appropriate encroachment permit authorization;
4. Comply with ADOT's traffic control standards with an ADOT approved traffic control plan;
5. Obtain written approval from the abutting property owner (and/or underlying fee owner where ADOT owns its right of way by easement) if the encroachment encroaches on abutting property owned by someone other than the permittee (and/or on underlying fee land owned by someone other than the permittee where ADOT owns its right of way by easement). In any case and at the Department's discretion; ADOT may require written approval from the abutting property owner prior to issuance of the encroachment permit.
6. ADOT reserves the right to require the permittee to perform any repairs necessary to the encroachment throughout the life of the encroachment;
7. Remove the encroachment and restore the right-of-way to its original or better condition if ADOT cancels the encroachment permit, and terminates all rights under the permit, or if the project terminates for any reason beyond ADOT's control;
8. Reimburse ADOT for costs incurred or deposit with ADOT money necessary to cover all costs incurred for activities related to the encroachment, such as inspections, restoring the right-of-way to its original or better condition, removing the encroachment, or repair encroachment to originally permitted condition and comply with ADOT's bond policy as applicable;
9. Notify a new owner to apply for an encroachment permit, as required by Arizona Administrative Rule R17-3-502(D);
10. Apply for a new encroachment permit if the use of the permitted encroachment or the use of adjoining property changes;
11. Keep a copy of the encroachment permit at the work site or site of encroachment activity;
12. Construct the encroachment according to attached Specifications, Standards and the plans approved by ADOT as part of the final permit; any changes shall be approved by ADOT prior to implementation;
13. Obtain all required permits from other government agencies or political subdivisions;
14. Remove any defective materials, or materials that fail to pass ADOT's final inspection, and replace with materials ADOT specifies.
15. Have the right to a hearing as prescribed in Arizona Administrative Code, R17-3-509 if the permit application is denied;
16. Understand that once issued, the permit is revocable and subject to modification or abrogation by ADOT at any time, without prejudice.

By accepting an approved encroachment permit, the Permittee agrees to the requirements described in the permit, to be responsible for all permit requirements, and to comply with ADOT's requirements as set out in the permit. NO WORK SHALL TAKE PLACE INSIDE THE RIGHT OF WAY WITHOUT AN APPROVED PERMIT ON SITE. I have read and understand the above requirements: Initial ASH Date 6-18-14

Specifications for Permit No. 1213613
October 23, 2014 to January 1, 2015w/insurance

Page 1 of 4

GENERAL REQUIREMENTS

GR-1 All work shall be done in accordance with current Arizona Department of Transportation Standards, Specifications, and approved plans, and administered by Mr. Dennis Lillie, Highway Operations Supervisor in Casa Grande.

GR-1A THE PERMITTEE SHALL NOT DEVIATE FROM THIS PERMIT OR THE APPROVED PLANS WITHOUT PRIOR WRITTEN APPROVAL FROM THE PERMITS OFFICE.

GR-2 NO WORK SHALL BEGIN PRIOR TO NOTIFICATION OF PROPER AUTHORITIES. TO SCHEDULE A PRE-CONSTRUCTION MEETING, CONTACT MR. FRANK CABELLO, PERMIT INSPECTOR AT (520) 483-6606 A MINIMUM OF 5 WORKING DAYS PRIOR TO START OF WORK AND WITHIN 3 DAYS AFTER COMPLETION FOR FINAL INSPECTION. IF MR. CABELLO IS UNAVAILABLE, CONTACT MR. DENNIS LILLIE, HIGHWAY OPERATIONS SUPERVISOR, AT (520) 836-2240 IN CASA GRANDE. *Failure to comply with this requirement will result in work stoppage.*

GR-3 It is the permittee's responsibility to obey all local ordinances, obtain all licenses, pay all charges, fees, and taxes and give notices necessary and incidental to the due and lawful prosecution of the work. If the permit work includes excavation, see attachment A.

GR-3a THE PERMITTEE IS RESPONSIBLE FOR COMPLIANCE WITH SECTION 404 OF THE FEDERAL CLEAN WATER ACT. OBTAINING ALL 404 PERMITS AND ANY REQUIRED STATE 401 SECTION CERTIFICATIONS IS THE RESPONSIBILITY OF THE PERMITTEE. These programs are administered by the Corps of Engineers and the Arizona Department of Environmental Quality (ADEQ) respectively. FURTHER, THE PERMITTEE IS RESPONSIBLE FOR OBTAINING AND COMPLIANCE WITH THE NECESSARY ARIZONA POLLUTION DISCHARGE ELIMINATION SYSTEM (AZPDES) PERMIT AND REQUIRED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND APPROVALS. This program is administered by ADEQ.

Traffic shall be protected in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, the Arizona Supplement to the MUTCD 2009 Edition, and the ADOT Traffic Control Design Guidelines. All signs, placement of signs and the necessity of flag persons are the responsibility of the Permittee. All flag persons shall be Arizona certified. The Arizona Supplement to the MUTCD 2009 Edition and the ADOT Traffic Control Design Guidelines are available on the Internet or from:

Arizona Department of Transportation
Engineering Records
1655 W. Jackson, Room 112F
Phoenix, Arizona 85007
Phone (602) 712-7498

GR-4B APPROVED TRAFFIC CONTROL PLAN ATTACHED HERETO AND A PART OF THIS PERMIT.

NO WORK SHALL BEGIN UNTIL AN APPROVED TRAFFIC CONTROL PLAN STAMPED BY ADOT REGIONAL TRAFFIC ENGINEERING IS ON SITE.

GR-5 Prior to final inspection by the Highway Operations Supervisor, all surplus material shall be removed from the right-of-way, and the right-of-way left in a neat and natural state. Any existing ADOT or permitted

Specifications for Permit No. 1213613
October 23, 2014 to January 1, 2015w/insurance

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features (i.e. fence, pipes, posts, signs, landscaping, etc.) damaged during permit work shall be repaired by the Permittee.

GR-6 The Permittee agrees to comply with state law for Underground and Overhead facilities. The Permittee shall assume full responsibility in attaining clearances from utility companies and will be responsible for damage to any utility line. Permittee shall call BLUE STAKE AT **1-800-STAKE-IT** two (2) working days prior to any excavation. If Blue Stake is not available, the Permittee shall be responsible for contacting all utilities directly, two working days prior to any excavation. Please provide your ADOT permit number to the blue stake operator.

GR-7 All work shall be conducted during daylight hours unless approved by ADOT.

GR-8 The application of water to control dust shall be as deemed necessary by the inspector.

GR-9 If at any time during the performance of the work, it is determined that it will not be possible to complete the Permitted work by the expiration date, the Permittee or their representative shall submit a written request for a time extension. The request shall be submitted to the ADOT Inspector and will contain the reason for the delay and the amount of time needed.

GR-10 In case of discrepancy or conflict with documents issued with this Permit, the following are listed in the order in which they govern:

1. Permit Specifications
2. Special Provisions (when incorporated as part of the permit)
3. Project Plans
4. Standard Drawings
5. Standard Specifications

INSURANCE REQUIREMENTS

IF SUBCONTRACTORS WILL BE UTILIZED FOR WORK PERFORMED PURSUANT TO A PERMIT, IT IS THE RESPONSIBILITY OF THE ENCROACHMENT OWNER (PERMITTEE) AND THE PRIME CONTRACTOR TO VERIFY THAT EACH AND EVERY SUBCONTRACTOR WORKING PURSUANT TO THEIR PERMIT MAINTAINS VALID AND COLLECTIBLE INSURANCE CONSISTENT WITH THE REQUIREMENTS DESCRIBED IN THE CURRENT ADOT INSURANCE MATRIX ATTACHED HERETO.

MIGRATORY BIRD MITIGATION:

The contractor/permittee shall not remove any trees or large tree limbs between March 1st and August 31st unless a qualified Biologist has conducted a bird nest search of those trees/limbs and has determined that no active bird nests are present. The bird nest search will be conducted within 10 days prior to tree/limb removal, and shall include a search for visible nests, as well as observation of the trees to determine the potential presence of cavity nests. Trees and limbs may be removed if they have been surveyed within 10 days prior to removal as long as only inactive bird nests, if any, are present. Between September 1st and February 28th, tree/limb removal is not subject to this restriction.

Specifications for Permit No. 1213613
October 23, 2014 to January 1, 2015w/insurance

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UNDERGROUND UTILITIES

UG-1 Utility lines shall be placed within five (5) feet of the right-of-way line unless otherwise approved by drawing attached hereto and part of this permit.

UG-4 Excavations, vertical drops, equipment and/or material shall not be left overnight or unattended without proper safety protection. Temporary fencing shall completely enclose the referenced construction activity and shall be secured after normal working hours to prevent unauthorized access. If allowed, open trenches during non-working hours shall be limited to 50 feet in length.

UG-5 The minimum depth of utility lines shall be 48 inches below finished grade, natural ground, cut ditch, or borrow ditch, whichever is lower. The minimum **depth of gas lines** below finished grade, natural ground, cut ditch, or borrow ditch, whichever is lower, shall be four (4) feet for low pressure lines (less than 60 psi) and five (5) feet for high pressure lines (60 psi or greater).

*UG-5A Utilities with new installation within a current ADOT construction projects shall be at an elevation to ensure 48 inches of cover from new finished grade, cut or drainage ditch whichever is lower. When installation is in the area of a drainage structures, the elevation shall be at a depth to ensure 48 inches of clearance. The minimum **depth of gas lines** below finished grade, natural ground, cut ditch, or borrow ditch, whichever is lower, shall be four (4) feet for low pressure lines (less than 60 psi) and five (5) feet for high pressure lines (60 psi or greater).

*UG-6 Utilities relocated for ADOT construction projects shall be at an elevation to ensure 48 inches of cover from new finished grade, cut or drainage ditch whichever is lower. When relocation is due to conflict with drainage structures, the elevation shall be at a depth to ensure 48 inches of clearance. The minimum **depth of gas lines** below finished grade, natural ground, cut ditch, or borrow ditch, whichever is lower, shall be four (4) feet for low pressure lines (less than 60 psi) and five (5) feet for high pressure lines (60 psi or greater).

UG-7 For utilities placed closer than 30 feet to the pavement edge, additional depth will be required to eliminate conflicts with the installation of ADOT signing. Depth shall be 48 inches unless otherwise noted on the approved permit plans.

UG-8 Seals shall be used between a sleeve and the utility line.

UNDERGROUND UTILITY BEDDING, BACKFILL AND COMPACTION

BBC-1 Pipe installation shall conform to the requirements of ADOT Standard Specification Section 501 and ADOT Standard Drawing C-13.15.

BBC-2 Bedding and pipe backfill material for **polyvinyl chloride pipe (PVC) pipe** shall conform to ADOT Standard Specification 808-3.04. Bedding and pipe backfill shall be placed in lifts not more than eight inches in depth before compaction. Each lift shall be watered and compacted to a density not less than 95% of the maximum density.

BBC-3 Bedding material for all other types of pipe shall conform to ADOT Standard Specification 501-3.02. Pipe backfill shall conform to ADOT Standard Specification 501-3.04. Bedding and pipe backfill shall be placed in

Specifications for Permit No. 1213613
October 23, 2014 to January 1, 2015w/insurance

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lifts not more than eight inches in depth before compaction. Each lift shall be watered and compacted to a density not less than 95% of the maximum density.

BBC-4 For pipes 36 inches or larger, one sack cement treated slurry that meet the requirements of ADOT Standard Specifications **501-3.02** and **501-3.04** shall be used as bedding material from the bottom of the pipe to the spring line.

BBC-5 Bedding material shall be brought up evenly on both sides of the pipe for the full pipe length to the spring line.

BBC-6 Trench backfill **outside the roadway prism** shall be material taken from the excavation or other suitable material. Trench backfill shall not contain organic material, rubbish, debris and other deleterious material and shall not contain solid material which exceeds eight inches in diameter. Trench backfill shall be placed in lifts not more than eight inches in depth before compaction. Each lift shall be watered and compacted to a density not less than 95% of the maximum density.

BBC-6a Trenches **within the roadway prism outside the pavement section** require the following backfill specifications. Trench backfill material shall be 100% Aggregate Base material conforming to ADOT Standard Specification Section **303**. Trench backfill shall be placed in lifts not more than eight inches in depth before compaction. Each lift shall be watered and compacted to a density not less than 95% of the maximum density.

BBC-7 An acceptable alternate method of trench backfill is the use of cement treated slurry using **one** sack of cement **per cubic yard** according to ADOT Standard Specification **501-3.02** and **501-3.04**.

BBC-8 The Permittee shall furnish proof of compaction, from a qualified laboratory. Maximum density shall be determined in accordance with AASHTO T-99 for each material. A minimum of one density test shall be taken per 8 inch lift of each type of material (bedding, pipe backfill and trench backfill). Bedding and pipe backfill shall have one density test taken per 8 inch lift for each 200 linear feet of installation. Trench backfill shall have one density test taken per 8 inch lift for each 1000 feet of installation. Density tests are not required for slurry trench backfill. The Permittee shall furnish proof of compaction within 3 working days from when the test was taken and before placement of the next lift of material above.

NO DRILLING, POTHOLING OR EXCAVATION WORK SHALL TAKE PLACE IN THE PAVEMENT SECTION OF ROADWAY WITHOUT PRIOR APPROVAL OF THE PERMITS OFFICE.

THE PERMITTEE SHALL MINIMIZE THE DISTURBANCE OF VEGETATION WITHIN THE ADOT RIGHT OF WAY.

1213613



CERTIFICATE OF LIABILITY INSURANCE

1/1/2015

DATE (MM/DD/YYYY)
12/27/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Insurance Brokers, LLC 725 S. Figueroa Street, 35th Fl. CA License #0F15767 Los Angeles CA 90017 (213) 689-0065	CONTACT NAME: _____ PHONE (A/C, No., Ext.): _____ FAX (A/C, No.): _____ E-MAIL ADDRESS: _____
	INSURER(S) AFFORDING COVERAGE INSURER A: SCF Indemnity Insurance Company INSURER B: _____ INSURER C: _____ INSURER D: _____ INSURER E: _____ INSURER F: _____
INSURED 1348151 Arizona Water Company PO BOX 29006 Phoenix AZ 85038	

COVERAGES **ARIWA01** CERTIFICATE NUMBER: **11579320** REVISION NUMBER: **XXXXXXXX**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INBR LTR	TYPE OF INSURANCE	ADDL SUBR INBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC		NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX DAMAGE TO RENTED PREMISES (Ea occurrence) \$ XXXXXXXX MED EXP (Any one person) \$ XXXXXXXX PERSONAL & ADV INJURY \$ XXXXXXXX GENERAL AGGREGATE \$ XXXXXXXX PRODUCTS - COMPOR AGG \$ XXXXXXXX
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS		NOT APPLICABLE			COMBINED SINGLE LIMIT (Ea accident) \$ XXXXXXXX BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX
	UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$		NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX AGGREGATE \$ XXXXXXXX
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y	170227	1/1/2014	1/1/2015	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER EL EACH ACCIDENT \$ 1,000,000 EL DISEASE - EA EMPLOYEE \$ 1,000,000 EL DISEASE - POLICY LIMIT \$ 1,000,000

APPROVED
 OCT 23 2014
 ABC - ASD
 RISK MANAGEMENT

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
 State of Arizona, its departments (ADOT), agencies, boards, commissions, universities and its officers, officials, agents and employees shall be named as additional insured's with respect to liability arising out of activities performed by or on behalf of the permittee or contractor, waiver of subrogation applies.

CERTIFICATE HOLDER

CANCELLATION See Attachment

11579320 Arizona Department of Transportation 1221 South 2nd Ave Tucson AZ 85713	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
---	---

Attachment "A"

Archaeological Clearance Notification

Cultural survey specifications and responsibilities:

In accordance with the Arizona State Historic Preservation Act, ADOT must consider the effects of its actions, including the issuance of permits, on historic properties. It is the Permittee's responsibility to obtain documents indicating that the proposed permit would not affect historic properties or, if it would affect such properties, to provide documentation attesting to the mitigation of those effects, prior to beginning excavation work within ADOT Rights of Ways. Such documentation may include concurrence on the effect from the State Historic Preservation Office or a data recovery plan approved by the Arizona State Museum (in the case of mitigative data recovery).

Archaeological Features:

The attention of the Permittee is directed to the Arizona Revised Statutes §41-841 through 846 and §41-861 through 865. Violation of A.R.S §41-841 through 845 is a Class 2 misdemeanor. Violation of A.R.S. §41-861 through 865 can be classified as either a Class 1 misdemeanor or a Class 5 felony.

Section 6(a) of the Federal Archaeological Resources Protection Act of 1979 specifies that no person may excavate, remove, damage or otherwise alter or deface any archaeological resource located on public (Federal) lands or Indian lands unless such activity is pursuant to a permit issued under Section 4 of the Act. Violations of this act are considered a felony, and are punishable by fine and imprisonment.

Although the permittee will be responsible to make every effort prior to construction to identify all cultural resources in a permit area, previously unidentified archaeological materials could be found during the construction of the permit. When historic or archaeological features are encountered or discovered during any activity related to construction of the permit, the permittee shall stop work immediately at that location, and shall take all reasonable steps to secure the preservation of those features.

The permittee shall immediately contact ADOT's Historic Preservation Team, listed below and the ADOT District Permits Office that issued the permit and make arrangements for the proper treatment of such resources. The permittee shall not resume work until he/she is so directed by the Arizona Department of Transportation.

Environmental Planning Group
Linda Davis, Historic Preservation Team Leader
1611 W. Jackson St. EM02
Phoenix, AZ 85003
Telephone 602-712-8636 (voice)
602-712-3066 (FAX)
ldavis2@azdot.gov

SECTION 501 PIPE CULVERT AND STORM DRAINS:

501-1 Description:

The work under this section shall consist of furnishing pipe and all other materials required and the installing of pipe, including excavating, and furnishing, placing and compacting backfill material, all in accordance with the details shown on the plans and the requirements of these specifications.

At each location where a pipe is to be installed, the project plans will specify the size and approximate length along with the requirements for each approved option at that location, such as the wall thickness, corrugation configuration, coatings, linings, class and strength. At each such specified location, pipe of one kind and material shall be selected by the contractor from the options shown. All contiguous pipe and all metal pipe in close proximity shall be of the same kind and material. Special sections, fittings, elbows, branch connections, tapered inlets, end sections, connectors, coupling, and other such items shall be of the same material and coating as the pipe to which they are attached unless otherwise stated in these specifications.

When trenching to depths in excess of five feet is required, prior to construction the contractor shall submit in writing to the Engineer a detailed description of its proposed trenching operations, including shoring methods.

501-2 Materials:

501-2.01 All Pipe Except Nonreinforced, Cast-In-Place:

Except for nonreinforced, cast-in-place concrete pipe, materials shall conform to the requirements of Section 1010.

501-3 Construction Requirements:

501-3.01 Preparation of Foundations, Trenches, and Embankments:

A trench condition is defined as a trench which has vertical slopes to a point at least one foot above the top of the pipe and its maximum width is as detailed on the plans. Unless specified otherwise, the contractor may install pipe in either a non-trench condition or a trench condition in natural ground or in embankment.

Where rock, hardpan, or other unyielding material is encountered, such material shall be removed below the vertical limits as shown on the plans. The depth to be removed shall be at least 12 inches or as designated by the Engineer. The width to be removed shall depend on whether a trench or non-trench condition exists. If a trench condition exists, the width of the trench as shown on the plans shall be maintained throughout the additional depth. If a non-trench condition exists, the width of the removal shall be a

minimum of the outside diameter of the pipe plus two feet for pipe under four feet in diameter, or a minimum of the outside diameter of the pipe plus three feet for pipe of four or more feet in diameter. The overexcavated area shall be backfilled with structure backfill material as designated in Subsection 203-5.03(B)(1) and compacted in layers not exceeding six inches in depth. When a firm foundation is not encountered at the bottom of the vertical limits as shown on the plans due to soft, spongy, or other unstable soil, such unstable soil shall be removed for a width of at least the horizontal outside dimension of the pipe on each side of the pipe and to the depth specified by the Engineer. The unstable soil removed shall be replaced with structure backfill material as designated in Subsection 203-5.03(B)(1) and compacted in six-inch lifts. The completed foundation shall be firm for its full length and width. When specified on the project plans, the foundation shall have a longitudinal camber of the magnitude specified.

501-3.02 Bedding:

(A) Bedding Material:

(1) General:

Bedding material for all pipe shall conform to the following aggregate gradation:

Sieve Size	Percent Passing
1-1/2 inch	100
1 inch	90 - 100
No. 8	35 - 80
No. 200	0 - 8.0

The plasticity index of the bedding material for all pipe shall not exceed 8 when tested in accordance with the requirements of AASHTO T 90.

Bedding material for all pipe shall have a value of resistivity not less than 2,000 ohm-centimeters unless otherwise specified or approved by the Engineer. Bedding material shall have a pH value between 6.0 and 10.0, inclusive, for all metal pipe installations except aluminum. Bedding material for aluminum pipe installations shall have a pH value between 6.0 and 9.0, inclusive. Bedding material shall have a pH value between 6.0 and 12.0, inclusive, for all concrete or plastic pipe installations. Tests for pH and resistivity shall be in accordance with the requirements of Arizona Test Method 236.

(2) Standard Aggregate Bedding Material:

Standard bedding material shall conform to the aggregate requirements here-in-before specified and may be compacted, jetted or placed as an aggregate slurry as herein specified.

The maximum water content in an aggregate slurry mixture shall be 35 gallons of water per ton of bedding material. Unless otherwise approved by the Engineer, the slurry shall

be compacted with internal vibrators in accordance with the requirements of Subsection 601-3.03(D). Aggregate slurry shall be thoroughly mixed in a mixer approved by the Engineer.

(3) Cement-Treated Slurry Bedding Material:

When pipe culverts or storm drains 36 inches in diameter or larger are placed in a trench, the bedding material from bottom of pipe to springline shall be a cement-treated slurry. Cement-treated slurry bedding material shall conform to the gradation specified for bedding material under Subsection 501-3.02(A)(1) and additionally shall have a cement content of one sack per cubic yard. Cement-treated slurry shall be thoroughly mixed in a mixer or at a central batch plant as approved by the Engineer and shall have a slump of eight to 11 inches.

(B) Placement of Bedding Material:

(1) General:

All trash, forms, sheeting, bracing, and loose rock or loose earth shall be removed from the area into which bedding material is to be placed. Bedding material shall be placed under and around the pipe to the elevation at the point of maximum width of the pipe (springline), as shown on the plans. At the contractor's option, bedding material may be placed above the springline of the pipe.

Bedding material shall be placed in a manner which will prevent distortion, damage to, or displacement of the pipe from its intended location. Bedding material shall also be placed so that adequate support will be provided in the haunch support areas for the pipe. Voids or loose soils which are found to occur due to improper placement or compaction of bedding materials will result in rejection of that portion of the pipe installation. Replacement of the pipe will be at no additional cost to the Department.

(2) Standard Aggregate Bedding Material:

Standard aggregate bedding material shall be placed either in uniform horizontal layers not exceeding eight inches in depth before compaction or in uniform horizontal layers not exceeding four feet in depth when placed as a slurry. Bedding material may also be placed in uniform horizontal layers not exceeding four feet in depth when compaction is done by jetting.

(3) Cement-Treated Slurry Bedding Material:

Cement-treated slurry bedding material shall be placed in a uniform manner that will prevent voids in, or segregation of, the bedding material, and will not float or shift the culvert or pipe. Cement-treated slurry bedding material shall be placed from bottom of pipe to pipe springline. No backfilling above the cement-treated slurry shall be commenced until 24 hours after the cement-treated slurry has been placed.

(C) Compaction of Bedding Material:

(1) General:

Compaction of bedding material shall be performed without damage to the pipe and surrounding in-place material. Special care shall be taken in placing, shaping and compacting all bedding material under haunches of pipe to prevent moving the pipe or raising it from its bedding.

(2) Standard Aggregate Bedding Materials:

Standard aggregate bedding material shall be compacted to at least 95 percent of the maximum density determined in accordance with the requirements of the applicable test methods of the ADOT Materials Testing Manual, as directed and approved by the Engineer.

When standard aggregate bedding material is placed as an aggregate slurry or compacted by jetting, the material placed below the springline of the pipe shall be compacted prior to placement of material above the springline of the pipe.

Jetting shall not be used for any material placed more than one foot above the top of the pipe.

Ponding will not be permitted in any case.

Jetting shall be done in such a manner that water will not be impounded. Jetting methods shall be supplemented by the use of vibratory or other compaction equipment when necessary to obtain the required compaction. Bedding material compacted by jetting shall use the least amount of water that will properly consolidate the material and move the material under the pipe to eliminate voids. A jetting probe shall be inserted into the material. It shall be of such length as to reach the material under the pipe. Water shall be provided to the jetting probe at a minimum pressure of 30 pounds per square inch. The jetting probe shall be inserted at uniformly spaced intervals on both sides of the pipe, a maximum spacing of three feet.

The contractor shall excavate holes in the compacted aggregate slurry or jetted bedding material to the depths and at the locations designated by the Engineer. These holes shall be of such size as to allow the required density testing to be performed in a safe manner. Upon completion of the tests, the contractor shall refill the excavated areas and compact the material to the required density in a manner satisfactory to the Engineer.

(3) Cement-Treated Slurry Bedding Material:

Cement-treated slurry bedding material shall not require additional compaction after placement up to pipe springline if it meets the material requirements of Subsection 501-3.02(A) and is placed as outlined in Subsection 501-3.02(B). The Engineer may require the use of vibrators with cement-treated slurry bedding if the fluidity of the mixture is not sufficient to fill all voids. No density tests will be required in the cement-treated slurry bedding material as placed up to pipe springline.

501-3.03 Installation:

(A) General:

Pipe shall be handled carefully. Proper facilities shall be provided for handling and lowering the sections of pipe. All pipes which show defects due to negligence or rough handling shall be removed and replaced if so ordered by the Engineer. If damaged galvanized steel pipe is not replaced it shall be repaired in accordance with the requirements of AASHTO M 36. Damage to the coating of bituminous coated pipe shall be repaired using material conforming to the requirements of AASHTO M 190.

Pipe shall be installed in reasonably close conformity with the lines, grades and dimensions shown on the project plans or specified by the Engineer.

Prior to the staking of pipe culverts a study of the normal flow of the drainage shall be made. As a result of the study, a change in length or location of pipe may be required as approved by the Engineer to attain proper placement of the pipe. Pipe profiles shall be approved by the Engineer prior to constructing or installing each structure.

Unless otherwise permitted by the Engineer, the installing of the pipe shall begin at the downstream end.

Bell or groove ends of rigid conduits and outside circumferential laps of flexible conduits shall be placed facing upstream.

Helical corrugated pipe shall be installed with the separate sections firmly joined together with the corrugations in alignment.

Where there is restricted cover, the bolts of the bands connecting flexible pipe shall be advanced so that the tops of the bolts will be in line with or below the top of the pipe.

When aluminum alloys come in contact with concrete, the contacting surfaces shall be coated either with asphalt mastic conforming to the requirements of AASHTO M 243 or with aluminum-impregnated caulking compound.

When specified on the project plans, the vertical diameter of round, flexible conduit shall be increased five percent by shop elongation.

Any pipe which is not in true alignment or which shows undue settlement after laying or is damaged shall be removed. The trench shall be prepared as hereinbefore specified and the pipe shall be installed again. Any pipe which, in the opinion of the Engineer, is damaged so that it cannot be used shall be replaced.

Paved or partially lined flexible pipe shall be installed so that the longitudinal center line of the paved segment coincides with the flow line. Elliptical and elliptically reinforced rigid pipe shall be installed with the major axis within five degrees of a vertical plane through the longitudinal axis of the pipe.

The interior of all pipes shall be free of dirt and foreign material as the work progresses and all pipes shall be left clean at the time of final acceptance.

Connections to new or existing pipes or structures shall be made in accordance with the details shown on the project plans or as may be ordered by the Engineer in order to complete the work specified.

When using metal safety end sections, the embankment slope shall be warped to match the end section.

For a skewed pipe installation, the toe of the embankment slope shall be warped to match the toe of the skewed metal safety end section in order to provide effective drainage.

When metal safety end sections are used, the bolts in the safety bars shall be torqued at 70 foot-pounds.

(B) Full Circle Corrugated Metal Pipe:

(1) General:

Field joints for each type of corrugated metal pipe shall provide circumferential and longitudinal strength to maintain the pipe alignment, prevent separation of the pipe, prevent infiltration of side fill material, and prevent leakage of water into the surrounding soil. Coupling bands and gaskets shall conform to the requirements of Subsection 1010-2.01.

Corrugations in the coupling bands shall have the same dimensions as the corrugations in the pipes being connected. Pipe fabricated with helical corrugations shall have the ends rerolled to circumferential corrugations to facilitate coupling. The re-rolled end shall extend a minimum of two corrugations from the end of the pipe.

When a new pipe is to be connected to the end of an existing in-place helical pipe, a coupling band with projections (dimples) may be used to make the connection. Bands for pipe diameters to 72 inches, inclusive, and corrugation sizes of 2-2/3 by 1/2 or three by one inches shall be at least 10-1/2 inches wide. Bands for pipes 36 to 72 inches in

diameter, inclusive, with corrugations five by one inches shall be at least 12 inches wide.

Bands shall have two circumferential rows of projections. The rows of projections shall be spaced to provide equal contact on each side of the pipes being joined.

When bands with projections (dimples) are used to join new pipe to existing pipe, the joints shall be sealed with a continuous sponge rubber strip. The strip shall conform to the minimum requirements of ASTM D 1056, Grade 2A1, and shall be at least 7 inches wide and 3/8 inch thick.

Where existing pipes are to be extended, the ends of the existing pipe shall be in such condition that the new pipe can be firmly joined to form an acceptable joint. All existing pipe ends that are damaged or are out of shape such that they cannot be joined in an acceptable manner shall be repaired.

Damaged galvanized coating shall be cleaned with a wire brush and the damaged area painted with at least one full coat of zinc paint, as specified in Subsection 1002-2.02. If the Engineer determines that the end of an existing pipe is damaged to the extent that it cannot be repaired sufficiently to be joined properly to the new pipe, the damaged portion shall be removed.

Where prefabricated pipe fittings are to be installed in existing pipes, a portion of the existing pipe shall be removed in order to accommodate the fitting.

(2) Watertight and Water Resistant Joints:

Watertight joints shall be provided for siphon and irrigation pipe installation and when specified in the Special Provisions, standard drawings, or shown on the project plans. Watertight joints, unless otherwise specified, will not be required for storm drains, culverts, or other drainage pipe, however, joints for these pipes shall be water resistant.

Watertight and water resistant joints shall conform to the requirements of Subsection 1010-2.01 of the specifications. When watertight joints are shown on the project plans or specified in the Special Provisions, the assembled joint shall pass a performance test, as specified herein or as approved by the Engineer, without significant leakage at the joint:

- (a) A hydrostatic pressure test on a joint shall be made on an assembly of two sections of pipe, properly connected in accordance with the joint design. At the option of the contractor, suitable bulkheads shall be provided within the pipe adjacent to and on either side of the joint, or the outer ends of the two joined pipe sections shall be bulkheaded. No mortar or concrete coatings, fillings, or packings in addition to that normally required for the joint shall be placed prior to watertightness tests. After the pipe sections are fitted together with the gasket or gaskets in place, the assembly shall be subjected to a pressure resulting from a head of 10 feet of water above the

crown of the pipe for 10 minutes. Moisture or beads of water appearing on the surface of the joint will not be considered as leakage. The tests on individual joints may be performed at the fabricator's facility or at the job site.

The joint watertightness test shall be performed on pipe sections in straight alignment and on pipe sections deflected from straight alignment. When testing pipe sections not on straight alignment, the pipe sections shall be positioned to create a gap on one side of the outside perimeter of the pipe that is 1/2 inch wider than the gap for pipe sections in straight alignment. When coupling bands are used to test pipe sections not on straight alignment and the maximum gap on one side of the outside perimeter of the pipe is less than 1/2 inch wider than that for pipe sections in straight alignment, said coupling band pipe sections shall be positioned to provide maximum gap.

- (b) Joints, other than watertight joints, which employ rubber gaskets, whether flat or "O" rings, will be considered water resistant. No testing will be required to establish that condition.

The contractor shall furnish to the Engineer a Certificate of Compliance, in accordance with the provisions in Subsection 106.05 of the specifications, that the material being furnished conforms to the joint property requirements as described herein. Field tests may be required by the Engineer whenever there is a question regarding compliance with these requirements.

(C) Slotted Pipe:

Slotted pipe shall be joined with coupling bands as shown on the project plans and the joint shall be made water resistant. Prior to attaching the coupling band, sealant material shall be placed between the coupling band and the periphery of the pipe section ends.

Prior to backfilling and paving operations, the slot shall be covered to prevent infiltration of material into the pipe. Heavy tape, roofing paper, timber or other material may be used. Coverings shall be removed when the paving operations have been completed.

Slotted pipe shall be backfilled with grout in accordance with the details shown on the project plans. The grout shall conform to the requirements of Subsection 913-2.04. Grout shall not be placed when a descending air temperature falls below 40 degrees F or until an ascending air temperature exceeds 35 degrees F. Temperatures shall be taken in the shade and away from artificial heat. The grout shall be cured in accordance with the requirements of Subsection 912-3.09.

(D) Precast Concrete Pipe:

Pipe sections shall be jointed such that the inner surfaces are reasonably flush and even, and the ends are centered as required.

Unless a particular type of joint is specified on the project plans, joints shall be made with Portland cement mortar, Portland cement grout, rubber gaskets, plastic sealing compound, or any other type approved by the Engineer.

Self-centering tongue and groove mortar joints shall be finished smooth on the inside. For diapered joints, diapers shall be used to retain the poured grout. Joints shall be thoroughly wetted before mortar or grout is applied.

When Portland cement mixtures are used, the completed joints shall be protected against rapid drying by means of an approved curing method. No joint shall be grouted until the following two sections of pipe are laid.

When required, flexible watertight gasketed joints shall be installed on the pipe in accordance with the requirements of AASHTO M 198, Paragraph 5.1.

(E) Spiral Rib Corrugated Metal Pipe:

Spiral rib corrugated metal pipe shall be installed in accordance with the requirements specified in Subsection 501-3.03(B) for full circle corrugated metal pipe, except as otherwise specified herein. Special care shall be taken during placement of the pipe and backfilling to avoid damage to the pipe.

Lateral field connections between metal pipes shall be welded and any galvanizing damaged by welding shall be repaired in accordance with the requirements of Subsection 1010-2(A). Coupling bands shall be supplied in accordance with Subsection 1010-2.03(C).

The coupling bands used to connect spiral rib pipe sections shall be hugger-type bands, made from the same material as the pipe, or other approved design, and shall be fitted with gaskets or "O" rings fabricated from neoprene or butyl rubber or other durable, resilient material approved by the Engineer, and assembled in such a manner as to form a sealed joint. "O" ring gaskets required for watertight joints shall be composed of rubber as specified in ASTM C 361, Section 6.9, and shall be placed in the first corrugation of each pipe end and shall be compressed by tightening the coupling band, in accordance with the manufacturer's installation instructions.

(F) Concrete-Lined Corrugated Metal Pipe:

Concrete-lined corrugated metal pipe shall be installed in accordance with the requirements specified in Subsection 501-3.03(B) for full circle corrugated metal pipe, except as otherwise specified herein.

Pipe shall be joined with hugger-type bands which are 0.064 inches in thickness, of the same material as the pipe, and shall be two-piece for pipe greater than 48 inches in diameter.

Coupling bands, in addition to the requirements specified in Subsection 1010-2.02(A), shall be a minimum of 10-1/2 inches wide, formed with two corrugations that are spaced to provide nesting in the second corrugation of each pipe end and shall be drawn together by a minimum of two galvanized bolts, 1/2 inch in diameter, inserted in a bar held in place by a strap welded to the pipe. Bands drawn together by other connection arrangements, such as angles, shall not be allowed. "O" ring gaskets required for watertight joints shall be composed of rubber as specified in ASTM C 361, Section 6.9, and shall be placed in the first corrugation of each pipe end and shall be compressed by tightening the coupling bands in accordance with the manufacturer's installation instructions.

(G) Corrugated High Density Polyethylene Plastic Pipe:

Corrugated high density polyethylene plastic pipe shall be assembled and installed in accordance with the manufacturer's instructions.

Watertight joints, unless otherwise specified, will not be required for storm drains, culverts, or other drainage pipes. However, joints for these pipes shall be water resistant. Watertight joints shall be provided for siphon and irrigation pipe installations.

Watertight and water resistant joints shall conform to the requirements of Subsection 1010-8 of these specifications.

A six- by eighteen-inch strip of magnetic tape shall be placed in the trench at the crown of each length of installed pipe.

Special care shall be taken in the handling and installation of corrugated high density polyethylene plastic pipe and fittings to prevent damage and to assure that proper line and pipe grade are maintained throughout the backfilling operation.

When end sections for corrugated high density polyethylene plastic pipe are called for on the plans, the contractor shall use metal safety end sections unless otherwise specified.

501-3.04 Backfilling and Compacting:

(A) Backfill Material:

(1) Pipe Backfill:

Pipe backfill material shall be selected from excavation or from a source selected by the contractor. It shall not contain frozen lumps, stones larger than three inches in diameter, chunks of clay or other objectionable material. Backfill material to be used for pipes, pipe-arches or arches made of metal shall have a value of resistivity not less than 2,000 ohm-centimeters or the value shown on the project plans. When resistivity is not shown

on the plans, the backfill material shall have a value of resistivity not less than that of the existing in-place material or 2,000 ohm-centimeters, whichever is less. Backfill material shall have a pH value between 6.0 and 10.0, inclusive, for all metal pipe installations, except aluminum. Backfill material for aluminum pipe installations shall have a pH value between 6.0 and 9.0, inclusive. Backfill material shall have a pH value between 6.0 and 12.0, inclusive, for all concrete or plastic pipe installations. Tests for pH and resistivity shall be in accordance with the requirements of Arizona Test Method 236.

Pipe backfill material shall conform to the following gradation:

Sieve Size	Percent Passing
3 inch	100
3/4 inch	60 - 100
No. 8	35 - 80
No. 200	0 - 12.0

The plasticity index shall not exceed 12 when tested in accordance with the requirements of AASHTO T 90.

As an alternate, pipe backfill may conform to the material requirements listed for bedding material as specified in Subsection 501-3.02(A), for standard aggregate bedding material or cement-treated slurry bedding material.

(2) Trench Backfill:

Trench backfill material shall not contain organic material, rubbish, debris and other deleterious material and shall not contain solid material which exceeds eight inches in greatest dimension and shall be soil selected from excavation or from a source selected by the contractor.

As an alternate, trench backfill may conform to the material requirements listed for bedding material as specified in Subsection 501-3.02(A) for standard aggregate bedding material or cement-treated slurry bedding material.

(3) Slope Plating:

The roadway slope at the inlet ends of pipe culverts shall be plated with an impervious material. The plating material shall be a fine-grained, cohesive material with at least 50 percent of it passing the No. 40 sieve and with a plasticity index of at least 10 and shall be placed as shown on the plans. The plasticity index will be determined in accordance with the requirements of AASHTO T 90.

(B) Placement of Backfill Material:

(1) General:

All trash, forms, sheeting, bracing, and loose rock or loose earth shall be removed from the areas to be backfilled before backfill material is placed.

Backfill compacted by pneumatic or mechanical tamping devices, shall be placed in layers not more than eight inches in depth before compaction.

Pipe backfill shall be brought up evenly on both sides of the pipe for the full length to an elevation one foot above the top of the pipe.

Trench backfill shall be placed from one foot above the top of the pipe to the elevation at which base or surfacing materials are to be placed or to the top of the trench. Backfill material shall be placed around and over arches in accordance with the requirements of Section 502.

(2) Standard Aggregate Slurry:

Pipe backfill or trench backfill mixed as a standard aggregate slurry shall be placed in uniform horizontal layers not exceeding four feet in depth. The slurry shall be compacted with internal vibrators in accordance with the requirements of Subsection 601-3.03(D).

(3) Cement-Treated Slurry:

Cement-treated slurry pipe backfill placement above springline shall not commence within 24 hours of the placement of the underlying cement-treated bedding material below springline. Cement-treated pipe backfill shall be placed in a uniform manner that will prevent voids in or segregation of the backfill to an elevation one foot above the top of the pipe. No backfilling above the cement-treated slurry pipe backfill shall be commenced until 24 hours after the cement-treated slurry has been placed.

If cement-treated slurry bedding material is used for trench backfill, it shall not be disturbed or loaded in any manner within 24 hours of placement as above.

(C) Compaction of Backfill Material:

Backfill material shall be compacted to at least 95 percent of the maximum density determined in accordance with the requirements of the applicable test methods of the ADOT Materials Testing Manual, as directed and approved by the Engineer.

Jetting shall not be used to compact pipe backfill, trench backfill or any material placed more than one foot above the top of the pipe.

Ponding will not be allowed in any case.

If trench backfill or pipe backfill is placed as an aggregate slurry, the contractor shall excavate holes in the compacted slurry to the depths and at the locations designated by the Engineer. These holes shall be of such size as to allow the required density tests to be performed in a safe manner. Upon completion of the tests, the contractor shall refill the excavated areas and compact the material to the required density in a manner satisfactory to the Engineer.

Cement-treated slurry bedding material for pipe backfill shall not require additional compaction after placement up to an elevation one foot above the top of pipe if it meets the material requirements of Subsection 501-3.02(A) and is placed and compacted as outlined in Subsection 501-3.04(B) and (C). No density tests will be required in the cement-treated slurry bedding material when it is utilized for pipe backfill to an elevation one foot above the top of pipe.

Cement-treated slurry bedding material used for trench backfill shall meet the requirements listed above for pipe backfill up to the elevation which it is placed.

501-3.05 Filter Material:

When shown on the project plans or specified in the Special Provisions, filter material shall be carefully placed around perforated pipe.

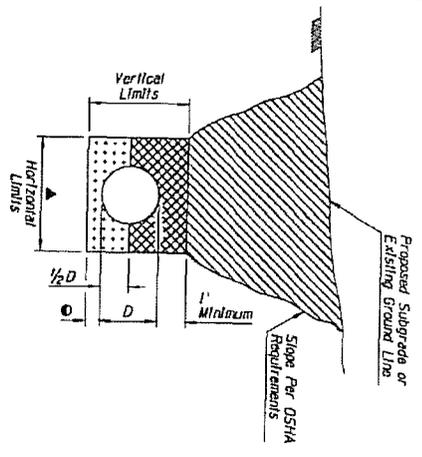
Filter material shall conform to the grading requirements for fine aggregate in Section 1006 and shall be placed in accordance with the details shown on the project plans.

501-3.06 Encasement of Pipe:

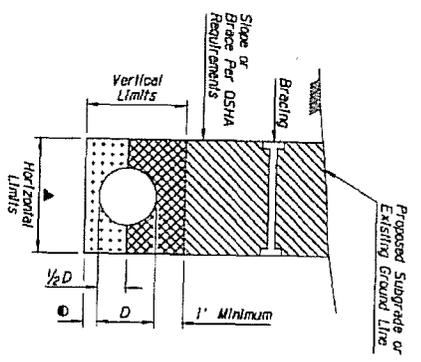
When shown on the project plans, pipe shall be encased in Class B concrete. Portland cement concrete shall conform to the requirements of Section 1006.

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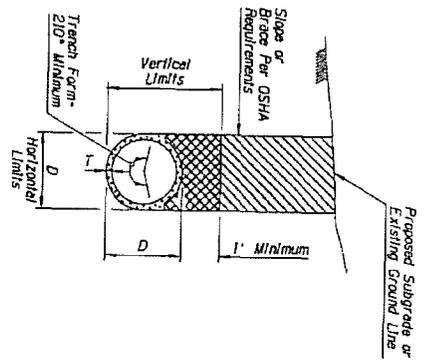
NO.	REVISIONS OR NOTES	DATE
1	ISSUED PER SPECIFICATIONS	
2		
3		
4		



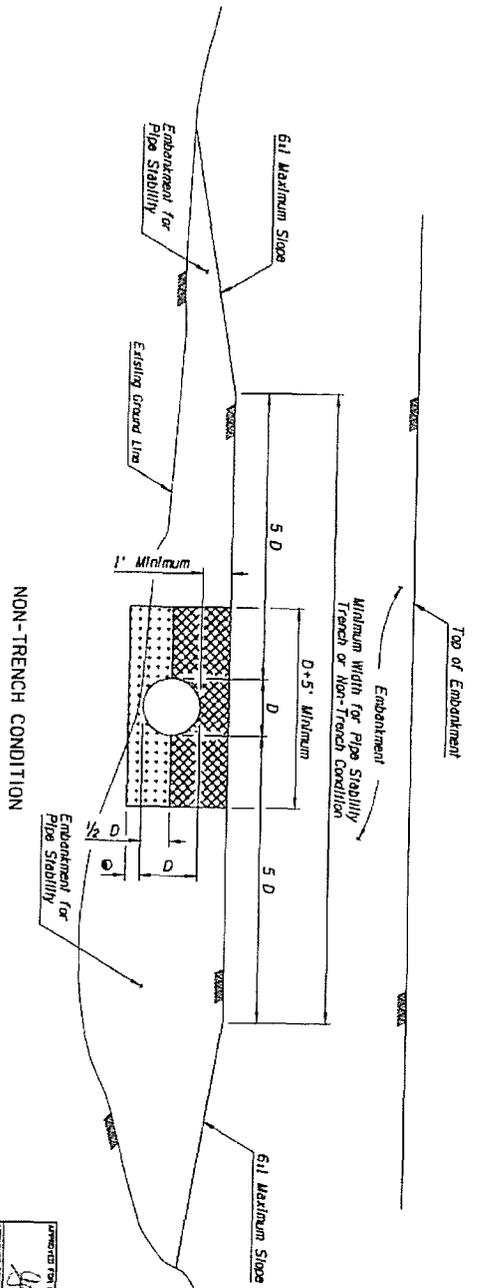
TRENCH CONDITION IN NATURAL GROUND OR IN EMBANKMENT WITHOUT BRACING



TRENCH CONDITION IN NATURAL GROUND OR IN EMBANKMENT WITH BRACING SHOWN



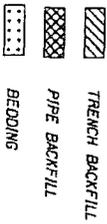
TRENCH CONDITION MHC/PCP IN NATURAL GROUND OR IN EMBANKMENT



NON-TRENCH CONDITION

GENERAL NOTES

- Pipes shall be installed either in a trench condition or in a non-trench condition in natural ground or in embankment.
- In a trench condition, the vertical and horizontal limits shall be maintained. If horizontal limits are exceeded or the vertical limits are not maintained, a non-trench condition exists.
- Bracing and shoring shall conform to OSHA requirements.
- Pipe backfill may be bedding material.
- In a non-trench condition, the embankment for pipe stability shall be constructed in lifts to the limits shown in the detail, simultaneously with the bedding material and pipe backfill. If the contractor chooses to construct it as a trench condition, the embankment shall be constructed before excavating the trench.
- Outside diameter of full circle pipe or arch pipe, elliptical pipe.
- Minimum wall thickness for MHC/PCP, See Plans.
 - ▲ For D < 4', D + 6" each side, minimum D + 2" each side, maximum
 - ① For D > 4', D + 1" each side, minimum D + 3" each side, maximum
- ② 6 inches except when on underlying or unstable material. See Sid Specs.



APPROVED FOR DESIGN	DATE
APPROVED FOR INSTALLATION	DATE
STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	5/12
TYPICAL PIPE INSTALLATION	C-13.15

808-3.04 Bedding and Cover Material:

Bedding and cover material for PVC piping, flexible emitter hose and 24-volt wiring shall be sand conforming to the gradation requirements of Subsection 1006-2.03(B) with the following exceptions:

Sand Bedding Sieve Size	Percent Passing
No. 4	100
No. 16	30 - 80
No. 50	0 - 30
No. 100	0 - 25
No. 200	0 - 20.0

All piping and 24-volt wire shall be installed as detailed on the project plans and shall have the minimum cover shown.

Gravel sumps, as detailed on the project plans, shall be crushed coarse aggregate Number 57 conforming to the requirements of AASHTO M 43.

SECTION 303 AGGREGATE SUB-BASES AND AGGREGATE BASES:

303-1 Description:

The work under this section shall consist of furnishing, placing and compacting aggregate sub-bases and aggregate bases in accordance with the details shown on the project plans and the requirements of these specifications. Aggregate sub-bases and aggregate bases are designated as Class 1 through Class 6. The class of aggregate sub-base and aggregate base will be shown on the project plans or specified in the Special Provisions.

303-2 Materials:

Aggregate for the various classes of aggregate sub-bases and aggregate bases shall consist of stone, gravel or other approved inert material of similar characteristics, and shall be clean and free from vegetable matter and other deleterious substances. Aggregate sub-bases and aggregate bases shall conform to the requirements shown in the following table for the class specified:

Table 303-1

Class of Aggregate	Percent Passing Sieve Inch or No.							PI Max.
	3	1-1 1/2	1	3/4	1/4	8	200	
1			100	90-100		35 - 55	0-8.0	3
2		100	90 - 100			35 - 55	0-8.0	3
3								
4	100				35-70		0-10.0	5
5	100				30-75		0-10.0	5
6								

Notes:

- (1) The percentage, by weight, passing each sieve will be determined in accordance with the requirements of Arizona Test Method 201.
- (2) The PI (Plasticity Index) will be determined in accordance with the requirements of AASHTO T 90.
- (3) Classes 1, 2 and 3 are bases; Classes 4, 5 and 6 are sub-bases.
- (4) The requirements for Class 3 and for Class 6 will be specified in the Special Provisions.
- (5) For Class 1 through Class 4 aggregate, the amount of fractured coarse aggregate particles shall be at least 30 percent, when tested in accordance with the requirements of Arizona Test Method 212.
- (6) Resistance to abrasion for Class 1 through Class 4 aggregate will be determined in accordance with the requirements of AASHTO T 96 and shall meet the following requirements:

Maximum loss of 9 percent at 100 revolutions
 Maximum loss of 40 percent at 500 revolutions

When production of Class 1 through Class 4 aggregate requires composite mixing of materials from more than one source to meet the gradation requirements of Table 303-1, the material from each source shall meet the abrasion requirements specified in herein.

303-3 Construction Requirements:

303-3.01 Placement:

Aggregate sub-bases and aggregate bases shall have water added to them and shall be mixed and processed to produce a uniform blend of material before final placement. After processing, the material shall be placed and spread on the prepared subgrade, sub-base or base in a uniform layer or layers not exceeding six inches in compacted depth, unless otherwise approved in writing by the Engineer. The method of dumping or spreading shall be determined by the contractor. The spread material shall be free of segregation.

303-3.02 Compaction:

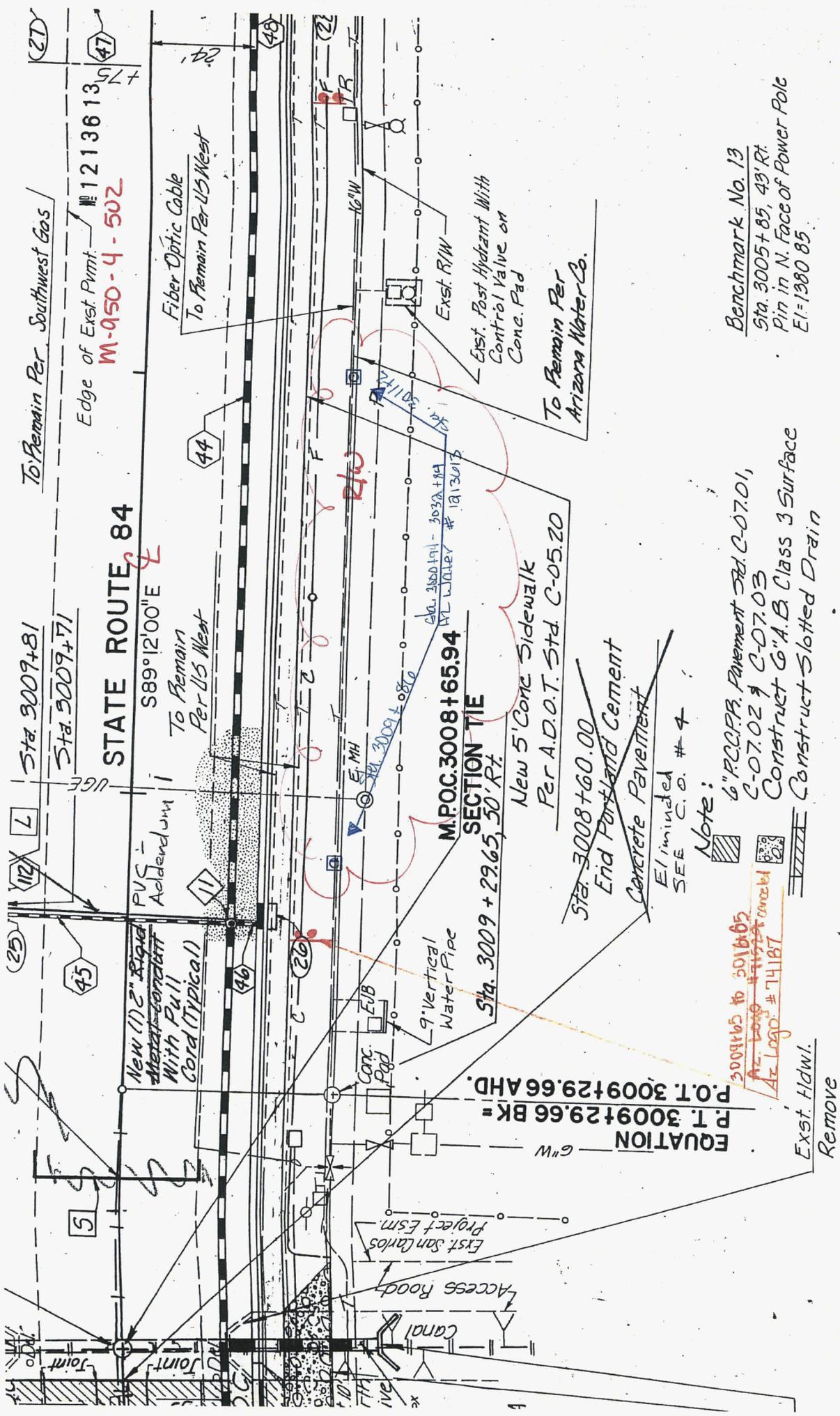
Each layer of aggregate sub-base and aggregate base shall be compacted to a density of not less than 100 percent of the maximum density determined in accordance with the requirements of the applicable test methods of the ADOT Materials Testing Manual, as directed and approved by the Engineer.

303-3.03 Finishing:

The final layer of sub-base or base shall be finished with equipment capable of shaping and grading the finish surface within the tolerances specified herein. The finished surface of aggregate sub-base or aggregate base shall not vary from the grades established by the Engineer by more than ± 0.04 feet. The compacted layers of aggregate sub-base and aggregate base shall be maintained in a condition satisfactory to receive any subsequent sub-base, base or surfacing material or traffic, when so required. Areas not within the allowable tolerance shall be corrected by scarifying, placing additional material, re-mixing, reshaping and re-compacting to the specified density and surface tolerance.

303-4 Method of Measurement:

The quantity of aggregate sub-base and aggregate base will be calculated by the cubic yard in place, using plan dimensions.



To Remain Per Southwest Gas

Edge of Exst. Pmnt. 1213613
 M-950-4-50Z

STATE ROUTE 84

S89°12'00"E

To Remain Per US West

M.P.O.C. 3008+65.94

SECTION TIE
 Sta. 3009 + 29.65, 50' Rt.

New 5' Conc Sidewalk
 Per A.D.O.T. Std. C-05.20

~~Sta. 3008+60.00~~
 End Portland Cement Concrete Pavement

Eliminated
 SEE C.O. # 4

Note:

- 6" P.C.C.P.B. Pavement Per C-07.01, C-07.02 & C-07.03
- Construct 6" A.B. Class 3 Surface
- Construct Slotted Drain

2009105 to 3011605
 At Logo # 74187

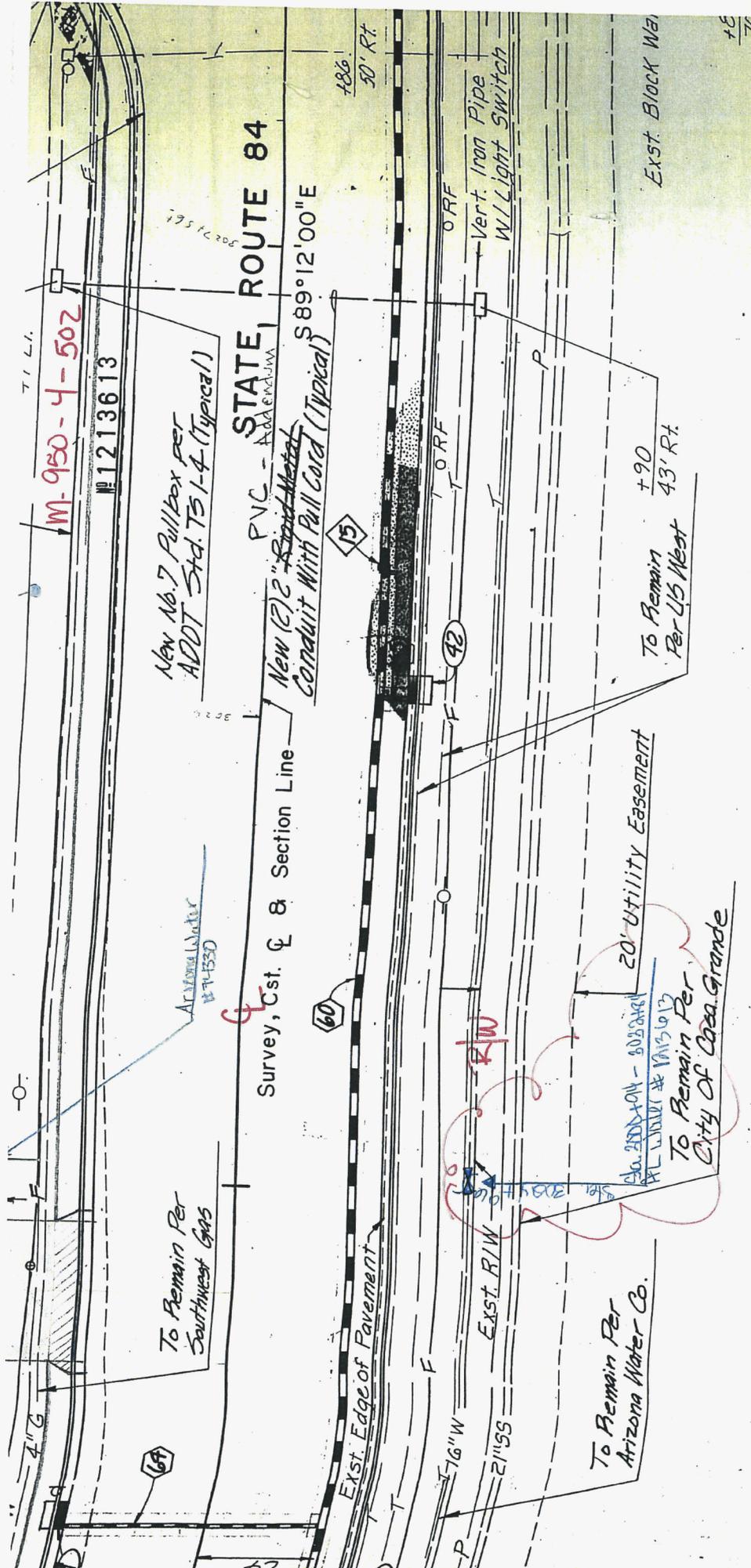
EQUATION
 P.T. 3009+29.66 BK =
 P.O.T. 3009+29.66 AHD.

Exst. Hdwl. Remove

Benchmark No. 13
 Sta. 3005+85, 49' Rt.
 Pin in N. Face of Power Pole
 EI=1380.85

To Remain Per Arizona Water Co.

REVISION	DATE	NAME	ARIZONA DEPARTMENT OF TRANSPORTATION
	7/1/89		



Bench Mark No. 16:
 Sta. 3025+60.00, 40' Rt.
 Pin in North Face of
 Power Pole.
 Elev. = 1386.03

New No. 7 Pullbox per
 ADDT Std. T51-4 (Typical)

PVC - STATE ROUTE 84

New (2) 2" ~~Rigid Metal~~
 Conduit with Pull Cord (Typical)

Survey, Cst. & Section Line

To Remain Per
 Southwest Gas

Exst. Edge of Pavement

Exst. R/W

To Remain Per
 Arizona Water Co.

20' Utility Easement

To Remain Per
 City of Choa Grande

To Remain
 Per US West

Vert. Iron Pipe
 w/ Light Switch

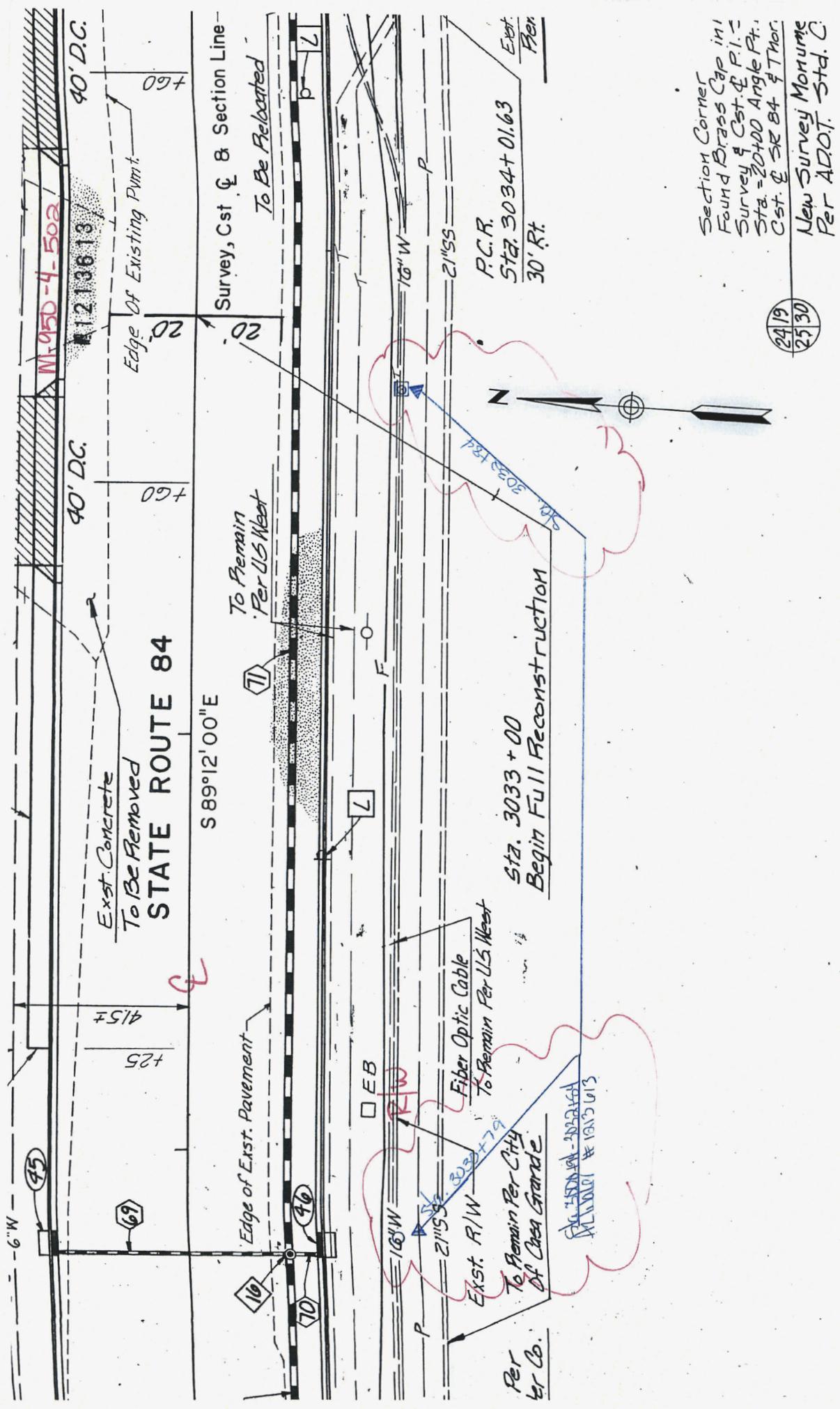
Exst. Block Wa

M-950-4-502
 1213613

S 89° 12' 00" E

186
 50' Rt.

+E
 70



M-950-4-502

1213613

40' D.C.

40' D.C.

Exst. Concrete
To Be Removed

STATE ROUTE 84

S 89° 12' 00" E

Survey, Cst. C & Section Line
To Be Relocated

To Remain
Per US West

Edge of Exst. Pavement

16" W

21" SS

16" W

21" SS

R.C.R.
Sta. 3034+01.63

30' Rt.
Exst.
Ben

Sta. 3033+00
Begin Full Reconstruction

Fiber Optic Cable
To Remain Per US West

Exst. R/W
To Remain Per City
Of Chea Grande

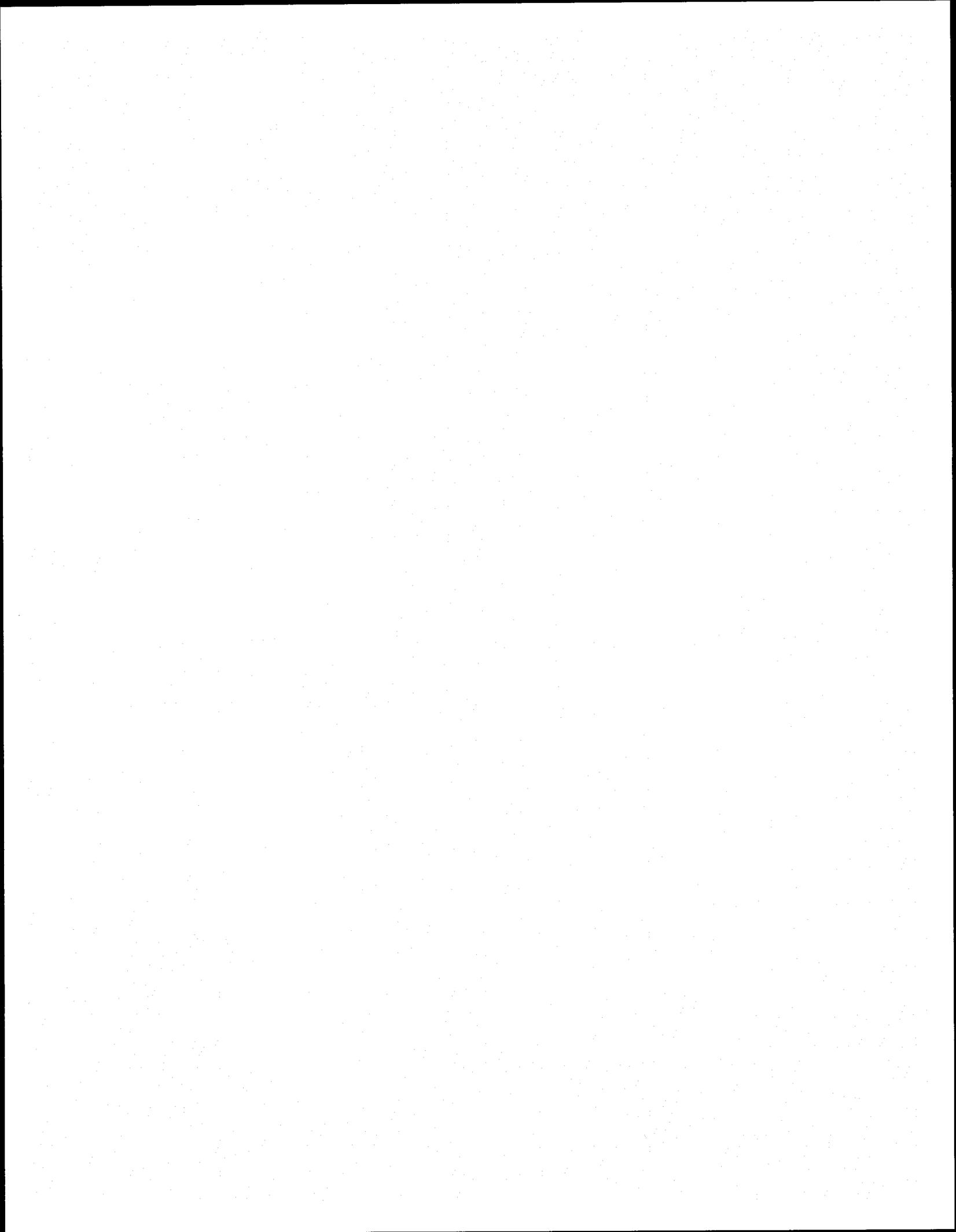
Per Co.

1213613

Section Corner
Found Brass Cap in
Survey & Cst. C P.I.
Sta. = 20+00 Angle Pt.
Cst. C SE 84 & Thor.
New Survey Monuments
Per A.D.O.T. Std. C

24/19
25/30

Note: For Signalization, Conduit
& Pullbox Details See Sheets
20, 21, 22, 23





Intermodal Transportation

Douglas A. Ducey, Governor
John S. Halikowski, Director
Dallas Hammit, State Engineer
Steve Boschen, Division Director

March 16, 2015

Roy Freeman
Andrew Haas
3805 N. Black Canyon Highway
Phoenix, AZ 85038

**Re: Permit No. 1213613
Extension No. 1**

Dear Mr. Roy Freeman:

This letter will serve to advise you that the completion date of the above referenced permit has been extended for six months from your previous completion date.

LOCATION: SR-84(EB) @ 176.000-176.000

NEW COMPLETION DATE: July 21, 2015

Thank you in advance for ensuring that the permit work is completed within the new time frame in this extension.

Sincerely,

Steve Mishler
Tucson District Development Engineer
1221 S. 2nd Avenue
Tucson, AZ 85713
(520) 429-4993

SM:aa

c: Maintenance Permits
Maintenance Supervisor



CERTIFICATE OF LIABILITY INSURANCE

1/1/2016

DATE (MM/DD/YYYY)
12/29/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Insurance Brokers, LLC 725 S. Figueroa Street, 35th Fl. CA License #0F15767 Los Angeles CA 90017 (213) 689-0065	CONTACT NAME	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED 1348151 Arizona Water Company PO BOX 29006 Phoenix AZ 85038	INSURER(S) AFFORDING COVERAGE	
	INSURER A : SCF Indemnity Insurance Company	NAIC # 13928
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	

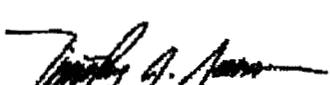
COVERAGES ARIWA01 **CERTIFICATE NUMBER: 11579320** **REVISION NUMBER: XXXXXXXX**

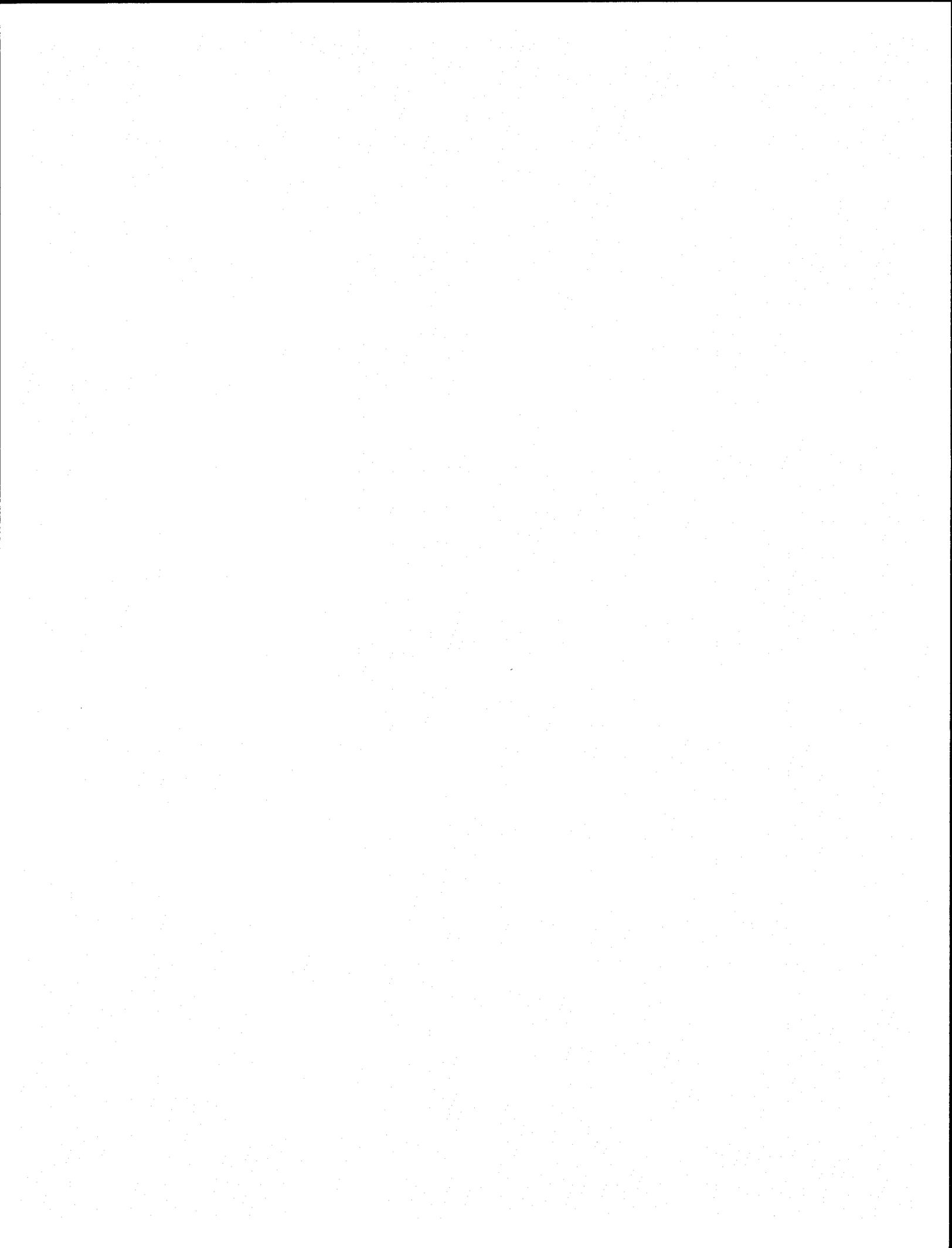
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GENL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER			NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX DAMAGE TO RENTED PREMISES (Ea occurrence) \$ XXXXXXXX MED EXP (Any one person) \$ XXXXXXXX PERSONAL & ADV INJURY \$ XXXXXXXX GENERAL AGGREGATE \$ XXXXXXXX PRODUCTS - COMP/OP AGG \$ XXXXXXXX
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS			NOT APPLICABLE			COMBINED SINGLE LIMIT (Ea accident) \$ XXXXXXXX BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$			NOT APPLICABLE			EACH OCCURRENCE \$ XXXXXXXX AGGREGATE \$ XXXXXXXX
A	WORKERS COMPENSATION AND EMPLOYERS LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/ MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N Y	N/A	1009629	1/1/2015	1/1/2016	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

APPROVED
 MAR 11 2015
 ADOT - ASD
 RISK MANAGEMENT

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 State of Arizona, its departments (ADOT), agencies, boards, commissions, universities and its officers, officials, agents and employees shall be named as additional insured's with respect to liability arising out of activities performed by or on behalf of the permittee or contractor, waiver of subrogation applies.

CERTIFICATE HOLDER	CANCELLATION See Attachment
11579320 Arizona Department of Transportation 1221 South 2nd Ave Tucson AZ 85713	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 





City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

CONDITIONAL USE PERMIT APPLICATION

(Electronic Version Available at: www.casagrandeaz.gov/web/guest/devforms)

Request Type (Please indicate the type of Conditional Use Permit):

- Residential Non-Residential Special Purpose Fence
- Involves new building construction No new construction

1. **PROJECT NAME** 8 Ft. High C.M.U. Block Wall w/ Gates at Well Site 24
 Site Address 823 N. Arizola Rd. Casa Grande, AZ 85222
 Assessor Parcel # (s) 505-22-002H
 Existing Zoning UR Acreage 0.23

2. **APPLICANT INFORMATION:**
 Name Ray Murrieta - Arizona Water Company
 Address 220 E. 2nd Street City Casa Grande State AZ Zip Code 85122
 Phone (520) 836-8785 Fax (520) 723-3081 Email Address rmurrieta@azwater.com
 Status (Owner, Lessee, Agent, etc.) Agent

3. **PROPERTY OWNER(S):**
 Name Arizona Water Company
 Address PO Box 29006 City Phoenix State AZ Zip Code 85038-9006
 Phone (602) 240-6860 Fax (602) 294-2169 Email Address engineering@azwater.com

OWNER/APPLICANT ACKNOWLEDGEMENT OF RESPONSIBILITIES:

The signature(s) hereby certify that the statements made by myself and constituting part of this application are true and correct. I am fully aware that any misrepresentation of any information on this application may be grounds for denial of this application. I agree that if this request is issued on the representations made in this submittal, and any approval or subsequently issued building permit(s) or other type of permit(s) may be revoked without notice if there is a breach of representations.

 Signature of Property Owner Date Signature of Applicant Date

** Applicants who are not the property owner of record are required to have the application co-signed by the property owner and provide a signed statement by the property owner authorizing the submittal of the application on their behalf by the applicant. See attached Owner Authorization Form.

CITY INTAKE:
 Date Accepted & Logged In: _____ Intake Staff: _____
 Fee Receipt # _____ Assigned Planner: _____
Planner Approval for Submittal: _____



CONDITIONAL USE PERMIT REVIEW

Overview

A Conditional Use Permit is a permit granted by the Planning and Zoning Commission which sets special conditions governing the use of property in a zone where such uses are conditionally permitted. It ensures that your proposed use will be compatible with the existing and permitted uses located in the area.

Application Processing

- 1) Staff Review of Submitted Plans- The complete application will be routed to City Staff and agencies that are involved in the review process for their comments. Review comments will be sent back to the applicant no more than 28 days after the submittal of a complete application. The applicant is responsible for addressing staff comments/redlines and submitting revised plans. Staff will respond to the re-submittal, and any subsequent reviews within a maximum of 14 days.
- 2) Planning and Zoning Commission Hearing – After comments/redlines have been adequately addressed, a Staff Report will be prepared and the application forwarded to the Planning & Zoning Commission for consideration. Planning & Zoning Commission hearings are held on the first Thursday of each month at 6:00 p.m. at the City Hall Council Chambers, 510 E. Florence Boulevard, Casa Grande, AZ 85122.

Submittal Package

Each application for Conditional Use Permit approval shall be accompanied by the following plans that will be reviewed by City Staff and presented to the Planning and Zoning Commission for Final Approval (17.68.110):

- 1) If the Conditional Use Permit involves the construction of a new building or building additions a separate Major Site Plan application is required.
- 2) If the Conditional Use Permit does not involve the construction of a new building or building additions a site plan containing the following information shall be submitted:
 - a) Name of project
 - b) North point indicator
 - c) Scale of not less than 1" to 50' for Residential (*for addressing purposes*)
 - d) Scale of not less than 1" to 100' feet for Commercial (*for addressing purposes*)
 - e) Vicinity map
 - f) Site statistics (in table form), indicating the following:
 - Zoning & proposed use
 - Site area net & gross (*show in acres and square feet*)
 - Total building area (*square feet*)
 - Total number of required and provided parking spaces including bike racks and handicap parking spaces
 - Dwelling unit # and density (*if condominium or high density housing project*)
 - g) Adjacent zoning districts
 - h) Boundary line of property with dimensions
 - i) Buildings and structures
 - j) Minimum setbacks (*Building and parking*)
 - k) Fences and walls
 - l) Show screen wall/fence/trash enclosure elevations
 - m) Proposed detached signage
 - n) Exterior refuse collection areas



- o) Exterior lighting including cut sheets
- p) Parking facilities, including bicycle racks
- q) Provision for handicapped accessibility, including but not limited to wheelchair ramps, parking spaces, hand rails, and curb openings in accordance with A.R.S. 34-404 through 34-439
- r) Sidewalks, walkways, driveways, loading areas and docks, bikeways
- s) Existing and future street improvements, access points, etc
- t) Proposed right-of-way dedications or land to be reserved for public use, with the use indicated
- u) Proposed improvement phasing
- v) Existing and proposed drainage ways, washes, and flood plains
- w) Location of existing and proposed multi-use and pedestrian trails

Public Notice

- 1) City Staff will provide the applicant the following notification items 21 days prior to the hearing:
 - a) Sign Posting Instructions
- 2) Notice of the Paper- City staff will prepare the Notice of Public Hearing.
- 3) Sign Posting- The applicant must post a Notice of Public Hearing Sign at least fifteen (15) calendar days prior to the date of the public hearing subject to the Casa Grande Public Notice Sign Posting Instructions. (<http://www.casagrandeaz.gov/web/guest/devforms>)
- 4) Notice to Property Owners - City Staff will prepare and mail the Notice of Public Hearing.

Fees

Conditional Use Permit-Non-Residential: \$1,290

Technology Recovery Fee: 5% of Review Fee



CONDITIONAL USE PERMIT- APPLICATION INTAKE CHECKLIST

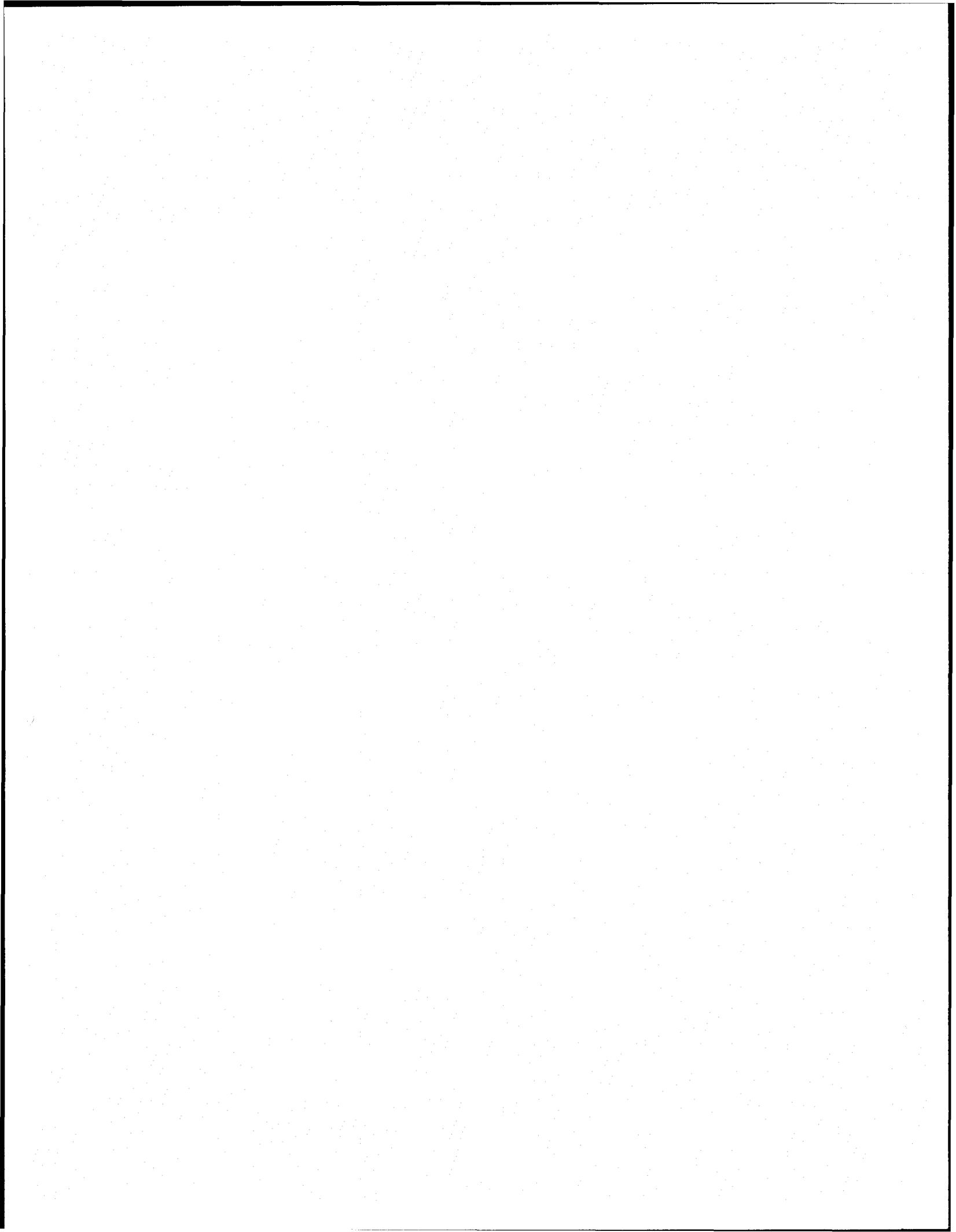
- | | Applicant | Planner |
|---|--------------------------|---------|
| 1. Owners Authorization Form (if applicant is not owner) _____ | <input type="checkbox"/> | _____ |
| 2. Project Narrative _____ | <input type="checkbox"/> | _____ |
| 3. Justification Statement (see review criteria) _____ | <input type="checkbox"/> | _____ |
| 4. Site plan (not accompanied by CUP's that require a Major Site Plan) _____ | <input type="checkbox"/> | _____ |
| ▪ (4 Copies – (24" x 36" folded) | | |
| 5. Lighting Plan (if applicable) _____ | <input type="checkbox"/> | _____ |
| ▪ (2 Copies – (24" x 36" folded) | | |
| 6. CD containing all Submittal Items _____ | <input type="checkbox"/> | _____ |
| ▪ (1 CD with all documents in PDF format) | | |
| 7. Application Fees _____ | <input type="checkbox"/> | _____ |

****Prior to submittal the applicant is required to meet with the Project Planner to confirm the complete submittal of all required items.****

Plan Review Distribution

<u>Agency/ Department</u>	Site Plan	Lighting Plan
<u>Planning</u>	X	X
<u>Fire</u>	X	
<u>DC Engineer</u>	X	
<u>City Engineer</u>	X	
<u>Traffic Engineer</u>	X	
<u>Community Services</u>		
<u>Sanitation</u>		
<u>Wastewater</u>		
<u>ADOT</u> (1)	X	
<u>Public Review</u>	X	X

(1) Required for projects adjacent to State or Interstate Highways



STATE OF ARIZONA }
COUNTY OF PINAL } ss.

Blotted	Paged	Indexed
✓	✓	

I hereby certify that the within instrument was filed for record in Pinal County, State of Arizona.

Witness my hand and official seal.

WILLIAM S. TRUMAN
Pinal County Recorder

By: Linda Garcia Deputy

MINNESOTA TITLE COMPANY
3003 N. CENTRAL AVE.
PHOENIX, ARIZONA 85012

EAK

BT 789 443

DEED OF EASEMENT

No. 518102
Date: JUL 2 1975 8:00 Am INDEXED
Docket and Page 789 443
Request of: Minnesota Title



KNOW ALL MEN BY THESE PRESENTS that Minnesota Title Company as Trustee under Trust 1209 being the sole owner of the following described property does hereby dedicate said property as a public highway:

Situated in Pinal County, Arizona, and described as being the East 30 feet of the Southwest quarter of Section 22, Township 6 South, Range 6 East, G&SRB&M.

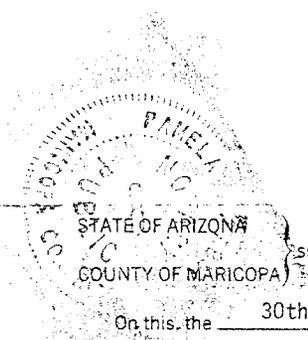
6-2-77
ng

EXCEPT the South 648.32 feet thereof.

IN WITNESS WHEREOF Minnesota Title Company has hereunto executed this Deed of Easement as of the 30th day of June, 1975.

MINNESOTA TITLE COMPANY, as Trustee

BY: Edward A. Krutel
Edward A. Krutel, Trust Officer



On this, the 30th day of June, 1975

before me, the undersigned officer, personally appeared EDWARD A. KRUTEL who acknowledged himself to be the Trust Officer of MINNESOTA TITLE COMPANY, an Arizona corporation, as Trustee, and that he, as such officer, being authorized so to do executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation as Trustee by himself as such officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Pamela A. Asher George
Notary Public

My commission will expire

10-10-78

STATE OF ARIZONA
COUNTY OF PINAL

ss. I hereby certify that the within instrument was filed for record in Pinal County, State of Arizona.

Blotted	Paged	Indexed
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	INDEXED

Witness my hand and official seal.
WILLIAM S. TRUMAN
Pinal County Recorder

By: Larame Moore Deputy

No.: 702439
Date: SEP 11 1975 at 8:45 AM
Docket and Page: DKT 796 PAGE 272
Request of: Arizona Water Co

DKT 796 PAGE 272



DEED OF EASEMENT

KNOW ALL MEN BY THESE PRESENTS:

That Southwestern Consolidated Land Company, an Arizona corporation, being the sole owner of the following described property, does hereby dedicate said property as a public highway:

The East 30.00 feet of the North 330.00 feet of the South 648.32 feet of the East half of the Southwest quarter of Section 22, Township 6 South, Range 6 East of the Gila and Salt River Baseline and Meridian, Pinal County, Arizona, as shown on attached Exhibit "A" and made a part hereof by this reference.

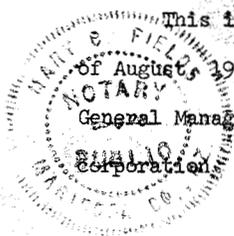
IN WITNESS WHEREOF Southwestern Consolidated Land Company has hereunto executed this Deed of Easement as of the 27 day of August, 1975.

SOUTHWESTERN CONSOLIDATED LAND CO.

By: R. E. Polenske
Richard E. Polenske
Executive Vice President
and General Manager

State of Arizona)
) ss.
County of Maricopa)

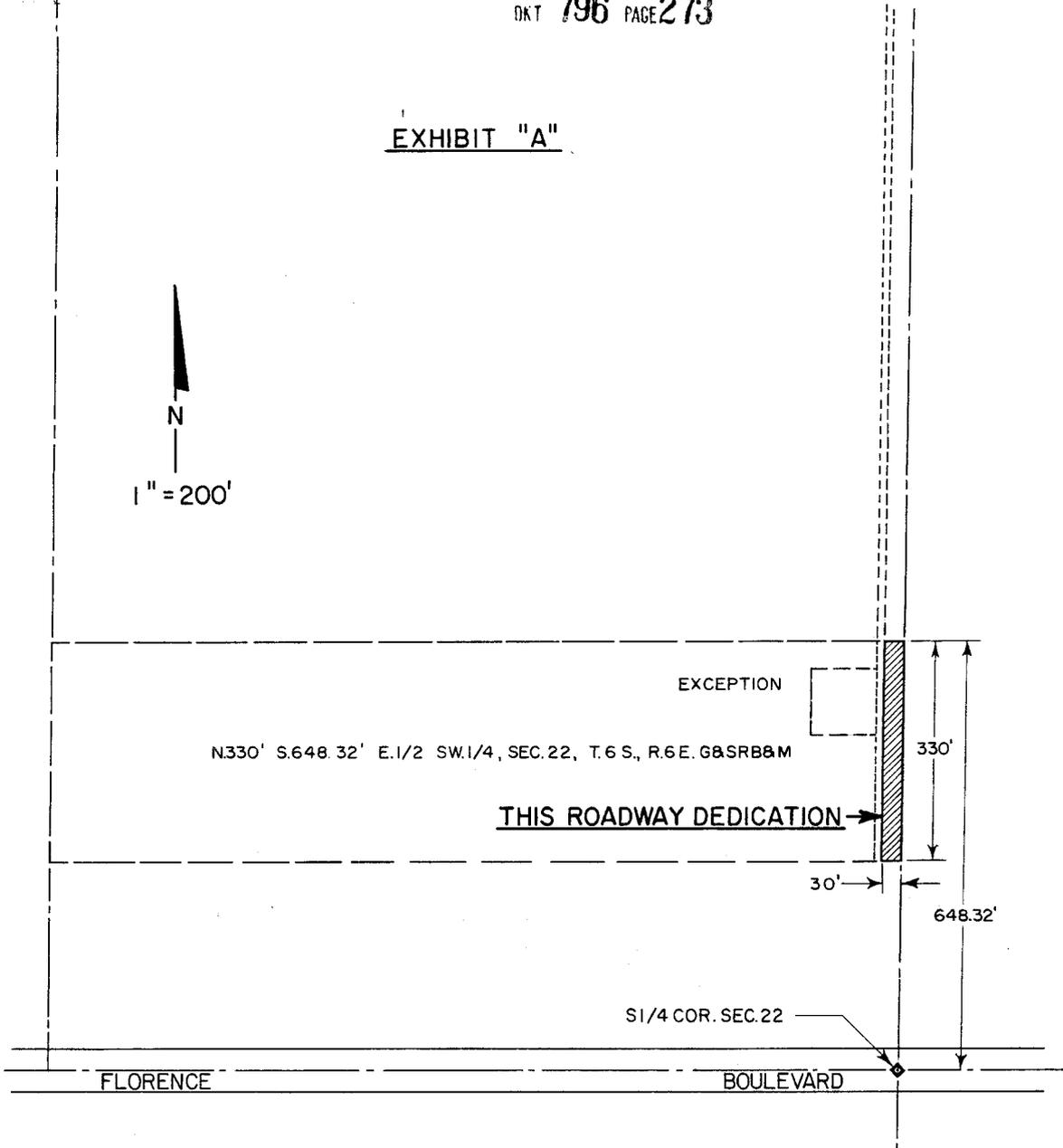
This instrument was acknowledged before me this 27 day of August, 1975 by Richard E. Polenske, Executive Vice President and General Manager of Southwestern Consolidated Land Company, an Arizona Corporation.



My Commission Expires: 9-21-78

Mary C. Fields
Notary Public

EXHIBIT "A"



14.12

8-5-75 LMB

ARIZONA WATER COMPANY

2612 NORTH 16TH STREET POST OFFICE BOX 5396
PHOENIX, ARIZONA 85010
(602) 258-6101

STATE OF ARIZONA
COUNTY OF PINAL

ss.

I hereby certify that the within instrument was filed for record in Pinal County, State of Arizona.

No.: 008033

Date: 22 JUN 1977 09 00

Blotted	Paged	Indexed
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

INDEXED

Witness my hand and official seal.
WILLIAM S. TRUMAN
Pinal County Recorder

Docket and Page: 871 PAGE 878

Request of: B. Water Co.

By: Ann M. Brubaker Deputy

341019 - C.S. 209

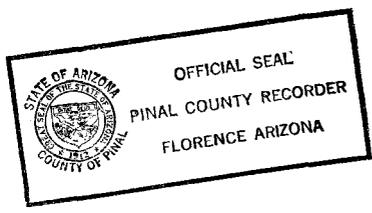
EASEMENT FOR WATER MAIN

871 PAGE 878

In consideration of One Dollar (\$1.00) and other good and valuable considerations the receipt of which is hereby acknowledged, we grant Arizona Water Company, (hereinafter called "Company"), its successors and assigns, an easement to construct, operate and maintain water mains upon, across, over and under the surface of the following described premises situate in Pinal County, Arizona.

The South 318.32 feet of the East half of the Southwest quarter of Section 22, Township 6 South, Range 6 East of the Gila and Salt River Baseline and Meridian. This easement more particularly described as: The West 10.00 feet of the East 40.00 feet of the hereinabove described premises.

7-13-77
my



together with the rights to repair, replace, maintain and remove said mains from said premises, to trim or remove any tree or shrubs that in the judgment of the Company, may interfere with the construction or endanger the operation of said mains. By accepting this easement the Company agrees to exercise reasonable care to avoid damage to said premises and all property that may at any time be thereon.

Oxford Life Insurance Co. Inc.
BY: Henry E. Martin U.P.
Pinal County (Acknowledgement Only)

Date March 25, 1977

WITNESS:

County Attorney

Sheriff

STATE OF ARIZONA }
County of Maricopa } ss.

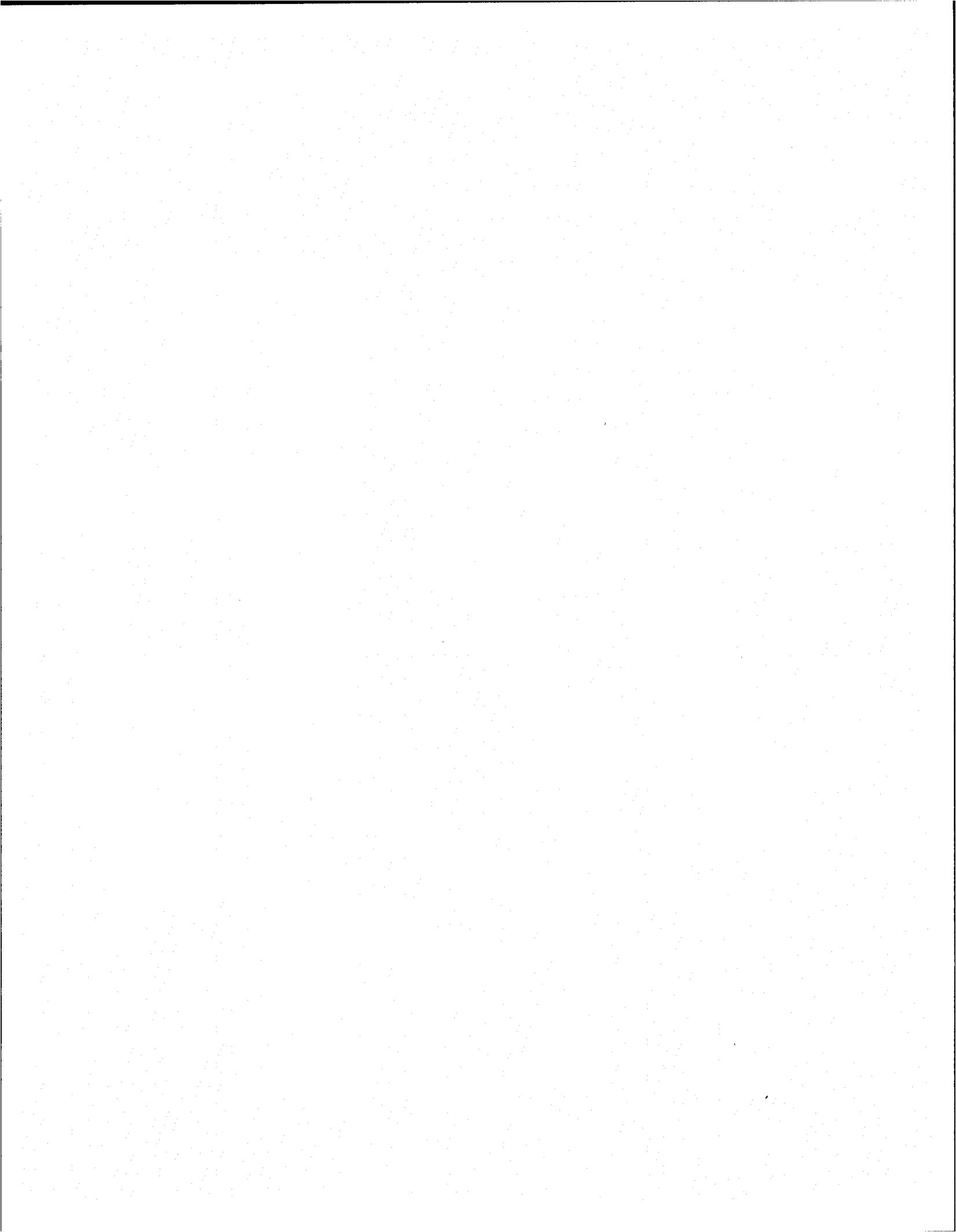
This instrument was acknowledged before me this 25th day of March, 1977

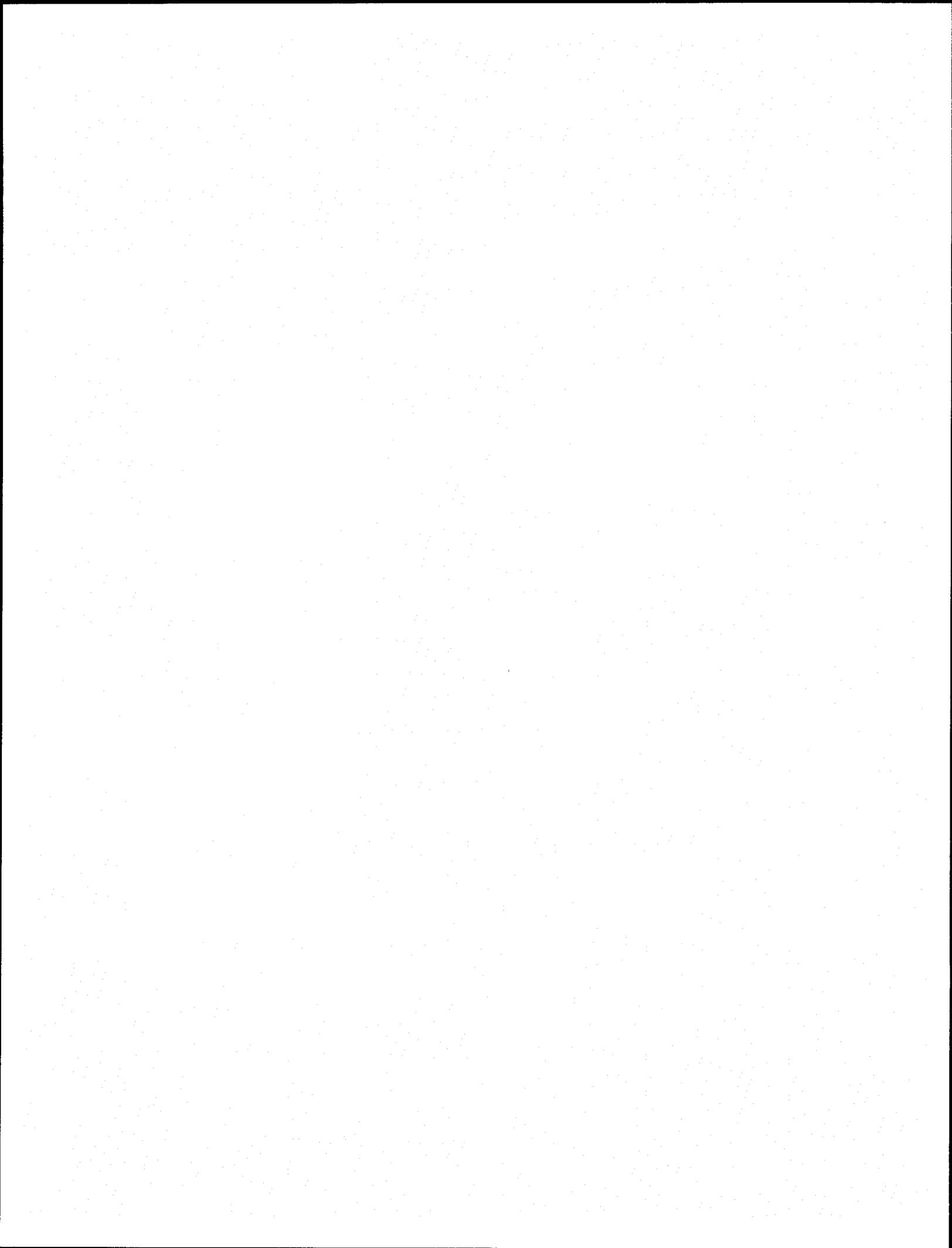
By: Henry E. Martin
WITNESS my hand and official seal the day and year in this certificate above written.



My commission expires: My Commission Expires April 29, 1980

Sharon A. Olson
Notary Public.







ARIZONA WATER COMPANY

CONSTRUCTION
PLACED IN SERVICE
NOTICE

WORK AUTHORIZATION NO.: 1-5168

DIVISION: CG/PV

DATE PLACED IN SERVICE: 7/20/15

CONTRACT NO:

FOR PURPOSES OF MODIFIED ACCELERATED COST RECOVERY SYSTEM, AN ASSET IS "PLACED IN SERVICE" WHEN IT IS IN A CONDITION OR STATE OF READINESS AND AVAILABILITY FOR A SPECIFICALLY ASSIGNED FUNCTION, WHETHER IT BE FOR USE IN A TRADE OR BUSINESS, OR FOR THE PRODUCTION OF INCOME.

I CERTIFY THAT THE ASSET(S) CONSTRUCTED PURSUANT TO THE PROVISIONS OF THE ABOVE-REFERENCED WORK AUTHORIZATION ARE READY FOR SERVICE AS OF THE DATE SHOWN ABOVE.

[Handwritten Signature]

Division Manager or Operations Superintendent
(signature)

7-30-15

Date

FOR ORIGINAL TO ACCOUNTING DEPARTMENT

A-1-3-1
FKS 11/24/11

Western Group Rate Case

Exhibit FKS-1

5169 Overfield Road

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5169
 P.E. NUMBER:
 BUDGET ITEM NO.:
 SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: JAMES WILSON	WORK TO BE FINISHED BY: WITHIN 130 DAYS
TAX CODE: 2100	

DESCRIPTION OF WORK:

Replace approximately 3,870 LF of 6-inch PVC along Overfield Rd. with 4,000 LF of 12 DIP. Construct in accordance with attached drawings and/or Arizona Water Company specifications.

FACTORS JUSTIFYING WORK:

APPROVED 2014 BUDGET ITEM (\$500,000)
 Water loss in the Pinal Valley water system has approached 10% and is currently at approximately 8%. The existing water main and services scheduled for replacement have over 13 recorded leaks in the past two years. The servicemen repaired an estimated 15 additional leaks prior to the Company tracking leaks. Water mains in this portion of the Pinal Valley water system are constructed of thin walled PVC and were installed prior to the Company's use of C-900 PVC water mains. This PVC water main has deteriorated to the point that replacement is necessary. Replacing the failing water main mitigates the need for further repairs; helping to reduce water loss in the Pinal Valley water system. This water main is critical to move water from Coolidge to Casa Grande. Company engineers determined the replacement water main has a section line alignment and should be upsized to 12-inch.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	9/22/14
MATERIAL	2,550	James Wilson <i>sw</i> 9/26/14	
LABOR	13,500	REVIEWED FOR ESMT/ROW VERIFICATION:	09-23-2014
CONTRACT PORTION	305,174	Charles Briggs <i>CB</i> 09-29-2014	
OVERHEAD	38,500	REVIEWED BY:	9/25/14
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 359,724	Mario Mendez <i>MM</i> 9/29/14	
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	9-25-14
CONTRIBUTIONS RECEIVED	0	Fredrick Schneider <i>FS</i> 10-1-14	
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	9/25/14
TOTAL CONTRIBUTIONS/ADVANCES	0	Joseph Harris	
NET COMPANY CASH REQUIRED	\$ 359,724	AUTHORIZED BY PRESIDENT:	9-26-2014
		William Garfield	

COMMENTS:

2014 RTC Construction Amount: \$760,00
 2015 Anticipated Construction Budget Amount: \$20,000
 Total Project Cost \$380,000

CONSTRUCTION RELEASE:

RELEASED TO CONSTRUCTION
 Authorized by **FRED SCHNEIDER**
 Date 9/26/14

AFH

AJA

ARIZONA WATER COMPANY

WORK AUTHORIZATION - DETAIL SHEET

W.A. NUMBER: 1-5169
 P.E. NUMBER:
 BUDGET ITEM NO.: B-1
 SHEET NO.: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER

PROJECT DESCRIPTION
 Replace approximately 3,870 LF of 6-inch PVC along Overfield Rd. with 4,000 LF of 12 DIP.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
		Install 12-inch DIP w/polywrap and related fittings complete	343	4,007	\$ 51.46
	Tie over new 12-inch DIP to exist. 12-inch DIP w/related fittings	343	1	4,152.41	4,152
	Install 12-inch tap sleeve and valve, tap on existing 12-inch DIP	343	1	20,947.96	20,948
	Install 12" x 6" MJ x FLG Tee, 6" MJ x FLG Gate Valve				
	Remove existing 6-inch valve and tie into exist. 6-inch DIP with related fittings	343	2	5,503.35	11,007
	Install 12" x 6" MJ x FLG Tee, 6" MJ x FLG G. V. and Fire Hydrant	343	5	4,126.84	20,634
	Abandon existing valve per detail	343	3	218.39	655
	Install 1-inch short single service and tie over to exist. Cust. Line	345	7	1,252.87	8,770
	Install 1-inch long single service and tie over to exist. Cust. Line	345	6	2,094.79	12,569
	Install 1-inch long double service and tie over to exist. Cust. Line	345	2	2,681.23	5,362
	Install air release valve	345	1	2,464.21	2,464
	Contracting Tax	345	1	10,311.52	10,312
	Performance and Payment Bond	345	1	2,100.52	2,101
	SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345			
TOTAL CONTRACT WORK					\$ 305,174

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
	SERVICE CONNECTIONS: SINGLE-SHORT	345			
	METERS	346	17	150.00	2,550
TOTAL MATERIALS					\$ 2,550

L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
		Engineering/Project Management	343	80	\$ 75.00
	TESTING FEE	343	1	\$ 500.00	500
	PERMIT FEE	343	1	1,500.00	1,500
	SURVEY FEE	343	1	1,500.00	1,500
	FIELD INSPECTION	343	80	50.00	4,000
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345			
TOTAL LABOR					\$ 13,500

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR					\$ 321,224
OVERHEAD					38,500
TOTAL					\$ 359,724

REFUNDABLE PORTION NON-REFUNDABLE PORTION

COST ESTIMATE

AFH

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5169
P.E. NUMBER:
BUDGET ITEM NO.: 1-5169
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: JAMES WILSON	WORK TO BE FINISHED BY: WITHIN 130 DAYS
TAX CODE: 2100	

DESCRIPTION OF WORK:

Complete construction of 4,000 LF of 12 DIP to replace approximately 3,870 LF of 6-inch PVC along Overfield Road.

FACTORS JUSTIFYING WORK:

APPROVED 2015 BUDGET ITEM (\$160,000)
Water loss in the Pinal Valley water system has approached 10% and is currently at approximately 8%. The existing water main and services scheduled for replacement have over 13 recorded leaks in the past two years. The servicemen repaired an estimated 15 additional leaks prior to the Company tracking leaks. Water mains in this portion of the Pinal Valley water system are constructed of thin walled PVC and were installed prior to the Company's use of C-900 PVC water mains. This PVC water main has deteriorated to the point that replacement is necessary. Replacing the failing water main mitigates the need for further repairs; helping to reduce water loss in the Pinal Valley water system. This water main is critical to move water from Coolidge to Casa Grande. Company engineers determined the replacement water main has a section line alignment and should be upsized to 12-inch. Construction began in November of 2014 and completion is scheduled for May 2015.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	2,550	James Wilson <i>gw</i> 2/24/15	2/19/15
LABOR	8,500	REVIEWED FOR ESTIMATOR VERIFICATION:	
CONTRACT PORTION	153,131	Charles Briggs <i>CB</i> 02-24-2015	02-18-2015
OVERHEAD	19,700	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 183,881	Mario Mendez <i>M.M.</i> 2/25/15	2/19/15
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	Fredrick Schneider <i>F.S.</i> 2-25-15	2-20-2015
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	Joseph Harris <i>J.H.</i>	2/20/15
NET COMPANY CASH REQUIRED	\$ 183,881	AUTHORIZED BY PRESIDENT:	
COMMENTS:		William Garfield <i>W.G.</i>	2-24-15
2014 Expenditures: \$198,000 2015 Construction Cost \$183,881 Total Project Cost \$382,000 Transfer additional funds required (\$23,881) from WA 1-5166 (Coolidge Airport ARF)		CONSTRUCTION RELEASE: RELEASED TO CONSTRUCTION Authorized by <u>FRED SCHNEIDER</u> Date <u>2/24/15</u> 2015 RE-RELEASE	

AFH

ARIZONA WATER COMPANY

WORK AUTHORIZATION - DETAIL SHEET

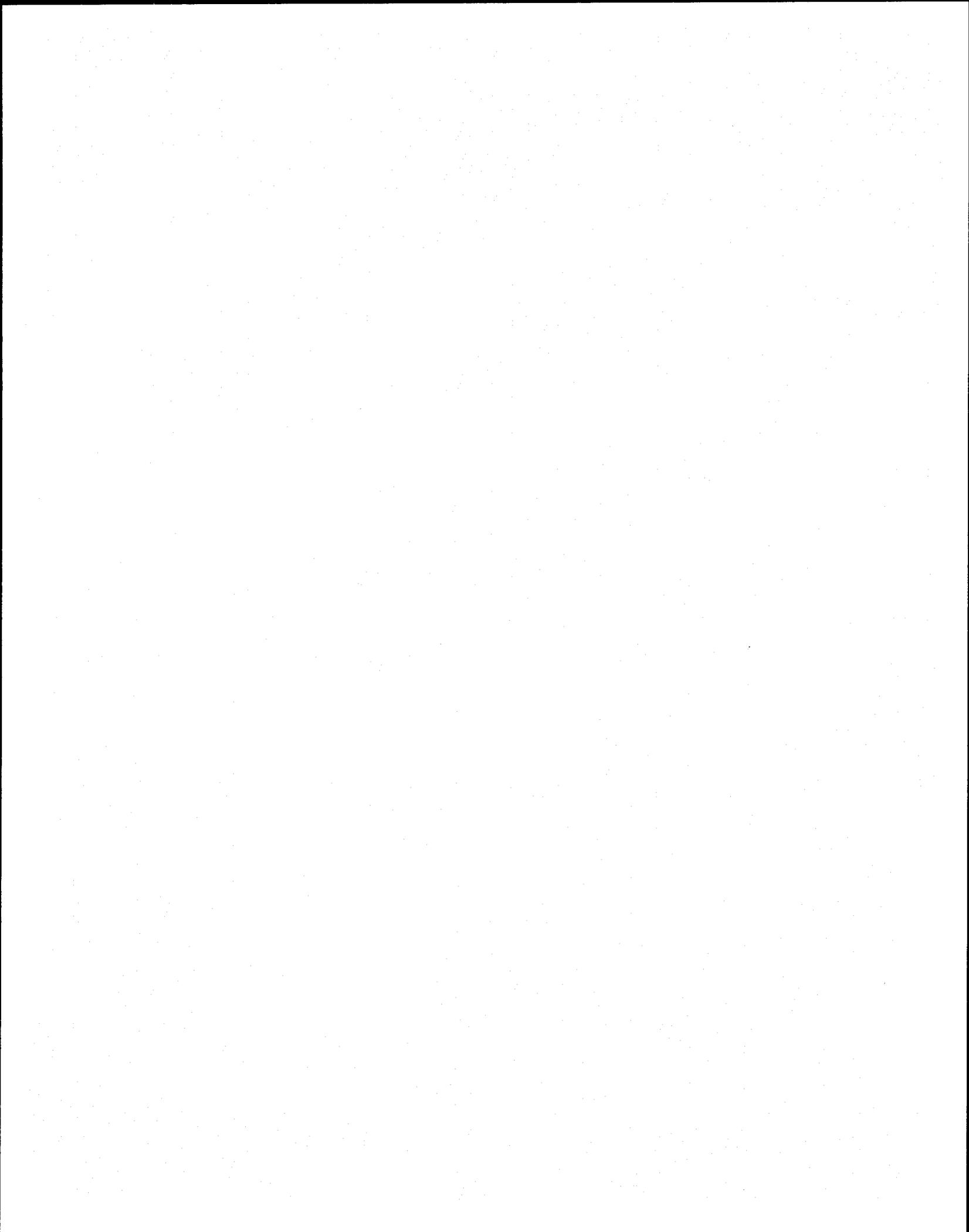
W A NUMBER: 1-5169
P.E. NUMBER:
BUDGET ITEM NO.: 1-5169
SHEET NO.: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER
		343	6-inch PVC water main	3870

PROJECT DESCRIPTION
Complete construction of 4,000 LF of 12 DIP to replace approximately 3,870 LF of 6-inch PVC along Overfield Road.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL	
		Install 12-inch DIP w/polywrap and related fittings complete	343	4,007	\$ 51.46	\$ 206,200
	Tie over new 12-inch DIP to exist. 12-inch DIP w/related fittings	343	1	4,152.41	4,152	
	Install 12-inch tap sleeve and valve, tap on existing 12-inch DIP	343	1	20,947.96	20,948	
	Install 12" x 6" MJ x FLG Tee, 6" MJ x FLG Gate Valve	343	0			
	Remove existing 6-inch valve and tie into exist. 6-inch DIP with related fittings	343	2	5,503.35	11,007	
	Install 12" x 6" MJ x FLG Tee, 6" MJ x FLG G. V. and Fire Hydrant	343	5	4,126.84	20,634	
	Abandon existing valve per detail	343	3	218.39	655	
	Install 1-inch short single service and tie over to exist. Cust. Line	345	7	1,252.87	8,770	
	Install 1-inch long single service and tie over to exist. Cust. Line	345	6	2,094.79	12,569	
	Install 1-inch long double service and tie over to exist. Cust. Line	345	2	2,681.23	5,362	
	Install air release valve	345	1	2,464.21	2,464	
	Contracting Tax	345	1	10,311.52	10,312	
	Performance and Payment Bond	345	1	2,121.52	2,122	
	Change Order No. 2 Road Crossing Realignment	345	1	(4,591.39)	(4,591)	
	Payment for work completed (2014) Materials delivered	345	1	(147,473.31)	(147,473)	
TOTAL CONTRACT WORK					\$ 153,131	
M A T E R I A L S						
		SERVICE CONNECTIONS: DOUBLE-LONG	345			
		SERVICE CONNECTIONS: DOUBLE-SHORT	345			
		SERVICE CONNECTIONS: SINGLE-LONG	345			
	SERVICE CONNECTIONS: SINGLE-SHORT	345				
	METERS	346	17	150.00	2,550	
TOTAL MATERIALS					\$ 2,550	
L A B O R	Engineering/Project Management	343	40	\$ 75.00	\$ 3,000	
		TESTING FEE	343	1	\$ 500.00	500
		PERMIT FEE	343	1	1,500.00	1,500
		SURVEY FEE	343	1	1,500.00	1,500
		FIELD INSPECTION	343	40	50.00	2,000
		INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
		INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345				
	INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				
TOTAL LABOR					\$ 8,500	
SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR					\$ 164,181	
OVERHEAD					19,700	
TOTAL					\$ 183,881	
		REFUNDABLE PORTION <input type="checkbox"/>	NON-REFUNDABLE PORTION <input type="checkbox"/>	COST ESTIMATE		

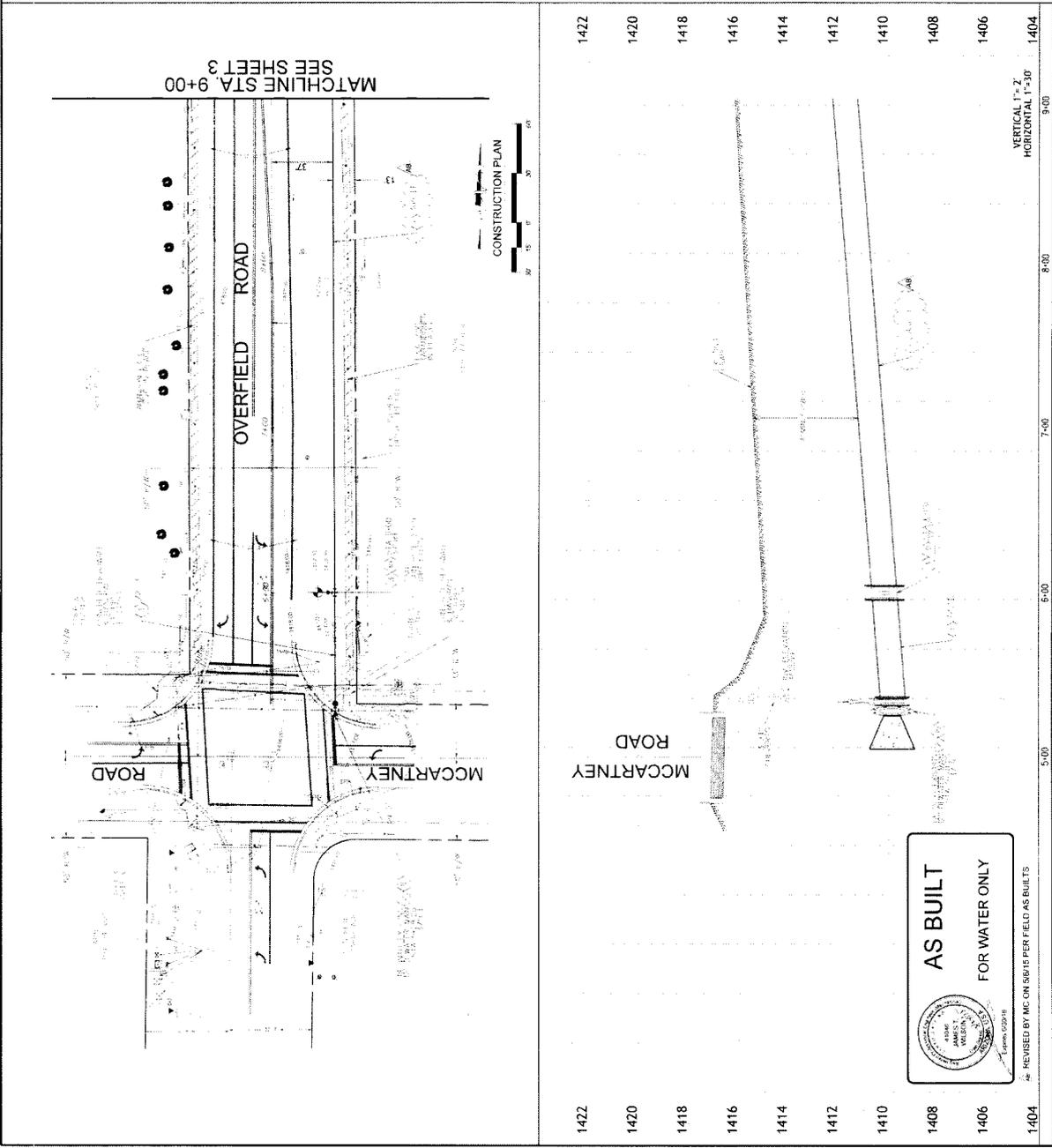
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263-1100 1-800-374-1100 Phoenix, AZ 85004	MC 7/12/14 AS SHOWN 2100	CONSTRUCTION/PROFILE REPLACE 3.75" PVC WITH 3.86" PVC WITH 3.86" DIP ALONG OVERFIELD ROAD
	EAST 1/2 SEC. 32, T. 5 S., R. 7 E. PINAL VALLEY	ARIZONA WATER COMPANY 3905 N. BLACK CANYON HWY. PHOENIX, ARIZONA 85028-9008 (602) 246-6880

THE INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM THE RECORD DRAWINGS AND FIELD SURVEY DATA. THE ENGINEER HAS CONDUCTED A VISUAL CHECK OF THE RECORD DRAWINGS AND FIELD SURVEY DATA AND HAS FOUND THEM TO BE CORRECT. THE ENGINEER HAS NOT CONDUCTED A FIELD SURVEY OF THE PROJECT. THE ENGINEER HAS NOT CONDUCTED A FIELD SURVEY OF THE PROJECT. THE ENGINEER HAS NOT CONDUCTED A FIELD SURVEY OF THE PROJECT.

MATCHLINE STA. 9+00 SEE SHEET 3



AS BUILT
FOR WATER ONLY



REVISIONS BY MC ON 5/16/15 PER FIELD AS BUILT

ARIZONA WATER COMPANY 3865 N. BLOOMINGTON HWY. PHOENIX, ARIZONA 85018-0008 (602) 240-9900	REPLACE 3.750 LF OF 6-INCH PVC WITH 3.857 LF OF 12-INCH DIP ALONG OVERFIELD ROAD
	CONSTRUCTION/PROFILE
1-5169	PINAL VALLEY EAST 1/2 SEC. 32 T. 5 S. R. 7 E 7/1/2014 AS SHOWN MC
THE INFORMATION ON THIS PLAN IS PROVIDED FOR YOUR INFORMATION ONLY AND IS NOT TO BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.	263-1100 1900 STONE ST. PHOENIX, ARIZONA 85016

PV-0081
SHEET 3 OF 11

1. OVERFIELD ROAD SHALL BE CONSTRUCTED TO A FINISH GRADE OF 1406.00 AT STA. 14+00.00. THE FINISH GRADE SHALL BE MAINTAINED THROUGHOUT THE LENGTH OF THE ROAD.

2. THE ROAD SHALL BE CONSTRUCTED TO A FINISH GRADE OF 1406.00 AT STA. 14+00.00. THE FINISH GRADE SHALL BE MAINTAINED THROUGHOUT THE LENGTH OF THE ROAD.

3. THE ROAD SHALL BE CONSTRUCTED TO A FINISH GRADE OF 1406.00 AT STA. 14+00.00. THE FINISH GRADE SHALL BE MAINTAINED THROUGHOUT THE LENGTH OF THE ROAD.

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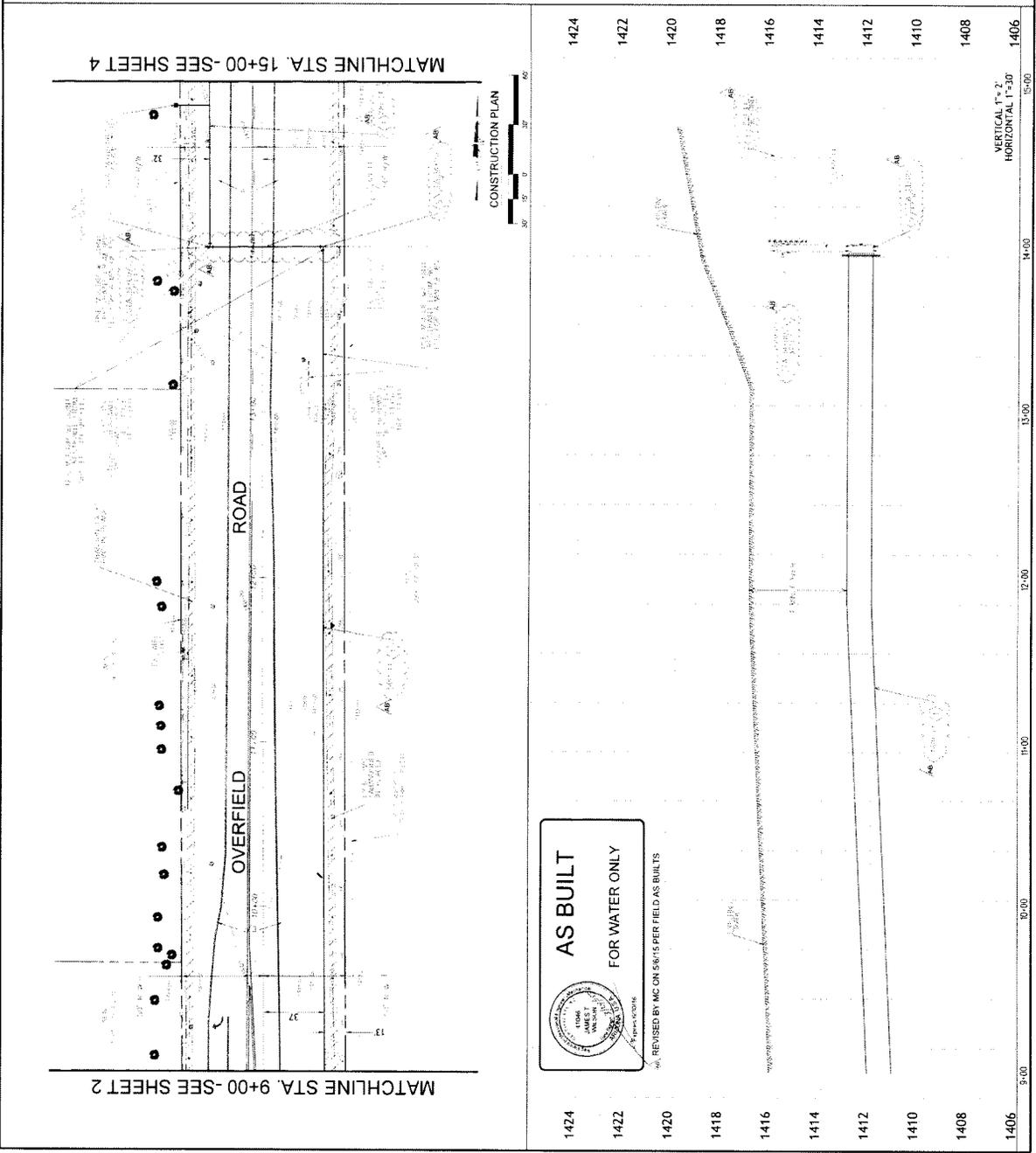
6. THE ROAD SHALL BE CONSTRUCTED TO A FINISH GRADE OF 1406.00 AT STA. 14+00.00. THE FINISH GRADE SHALL BE MAINTAINED THROUGHOUT THE LENGTH OF THE ROAD.

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AS BUILT
FOR WATER ONLY
 REVISED BY MC ON 5/6/15 PER FIELD AS BUILTS

PV-0081 SHEET 4 OF 11	ARIZONA WATER COMPANY 2905 N. BLACK CANYON HWY. PHOENIX, ARIZONA 85008-9006 (602) 240-6950 POST OFFICE BOX 29008	REVISION PROFILE ALONG OVERFIELD ROAD	MC 7/1/2014 AS SHOWN	2100
		EAST 1/2 SEC. 32 T. 5 S. R. 7 E. PINAL VALLEY	1-5169	THE DESIGN SHALL BE THE RESPONSIBILITY OF THE DESIGNER. IN ACCORDANCE WITH ARIZONA STATUTES AND THE ARIZONA DEPARTMENT OF TRANSPORTATION AND CONSTRUCTION.

1. THE DESIGN SHALL BE THE RESPONSIBILITY OF THE DESIGNER. IN ACCORDANCE WITH ARIZONA STATUTES AND THE ARIZONA DEPARTMENT OF TRANSPORTATION AND CONSTRUCTION.

2. THE DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES.

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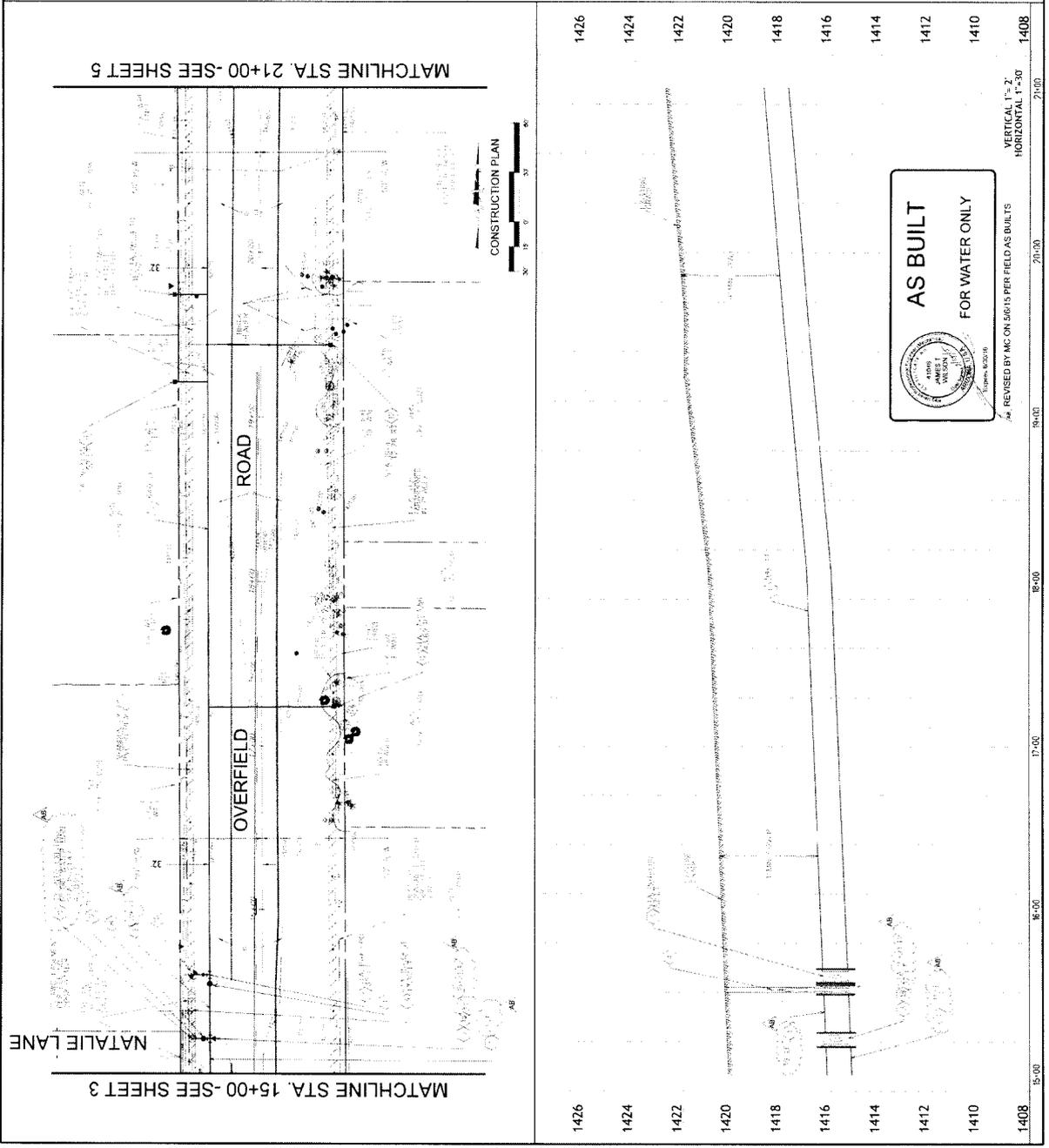
16. THE DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES.

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	1-5169 FINAL VALLEY EAST 1/2 SEC. 21, T. 5 S., R. 7 E. 2100 AS SHOWN MC 7/12/14
ARIZONA WATER COMPANY 2505 N. BLACK CANYON HWY. POST OFFICE BOX 28008 PHOENIX, ARIZONA 85028-0008 (602) 240-6990	
REPLACE 3.720 LF OF 8-INCH PVC WITH 3.867 LF OF 12-INCH DIP ALONG OVERFIELD ROAD	
CONSTRUCTION PROFILE	

PV-0081
SHEET 6 OF 11

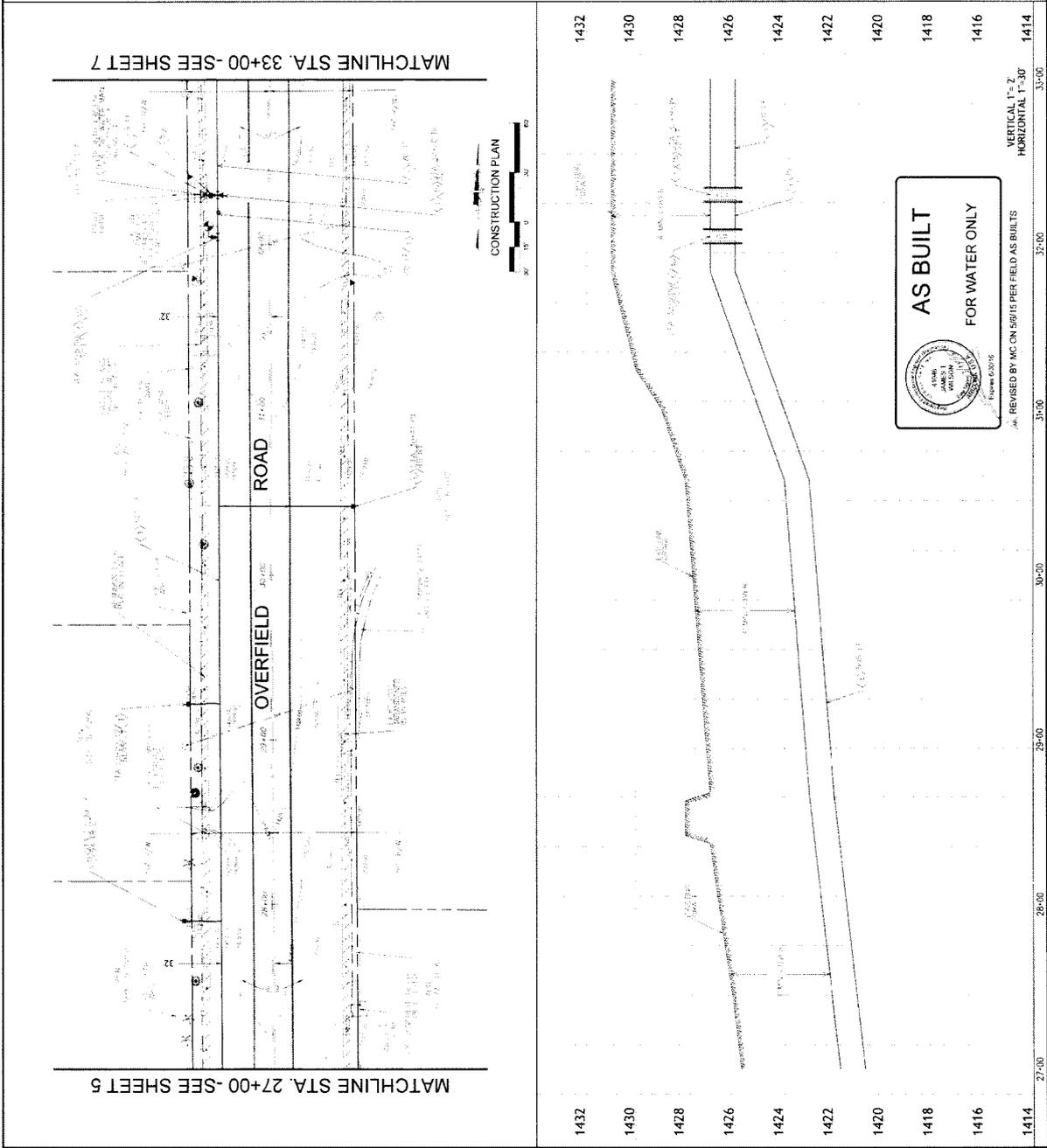
WATER CONSTRUCTION NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ARIZONA WATER CONSTRUCTION SPECIFICATIONS AND THE ARIZONA WATER CONSTRUCTION MANUAL.
2. ALL MATERIALS SHALL BE APPROVED BY THE ENGINEER AND SHALL BE TESTED AND REPORTED TO THE ENGINEER PRIOR TO INSTALLATION.
3. ALL WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME.
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10. ALL WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME.

CONSTRUCTION PROFILE:

VERTICAL CURVE DATA:

Station	Vertical Curve Type	Length (ft)	Grade (%)
1432.00	Vertical Curve	100.00	-0.50
1433.00	Vertical Curve	100.00	-0.50
1434.00	Vertical Curve	100.00	-0.50
1435.00	Vertical Curve	100.00	-0.50
1436.00	Vertical Curve	100.00	-0.50
1437.00	Vertical Curve	100.00	-0.50
1438.00	Vertical Curve	100.00	-0.50
1439.00	Vertical Curve	100.00	-0.50
1440.00	Vertical Curve	100.00	-0.50
1441.00	Vertical Curve	100.00	-0.50
1442.00	Vertical Curve	100.00	-0.50
1443.00	Vertical Curve	100.00	-0.50
1444.00	Vertical Curve	100.00	-0.50

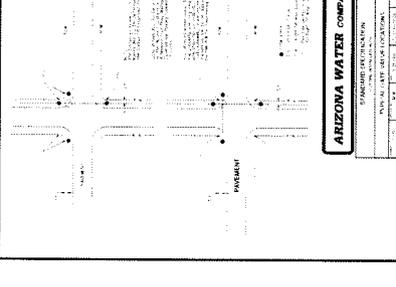
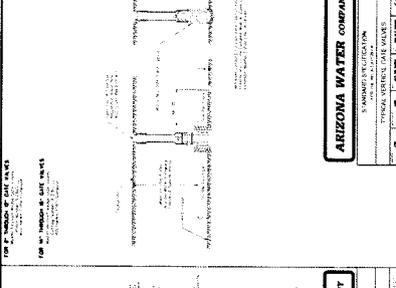
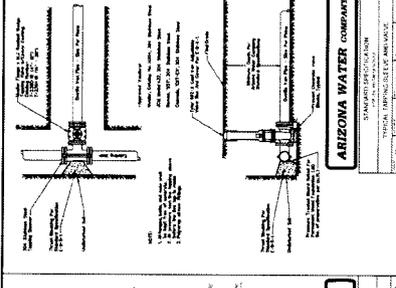
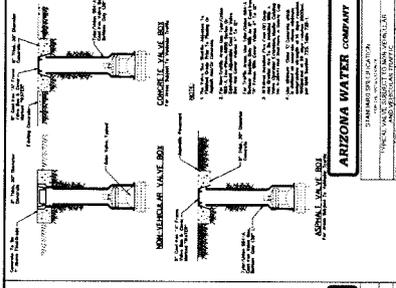
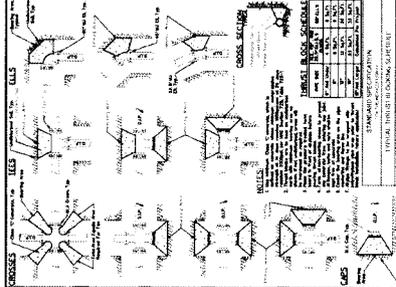
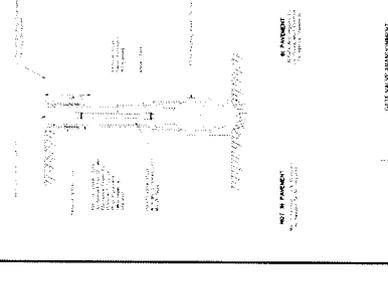
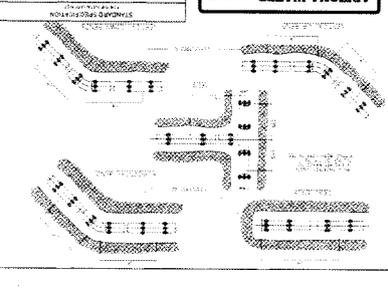
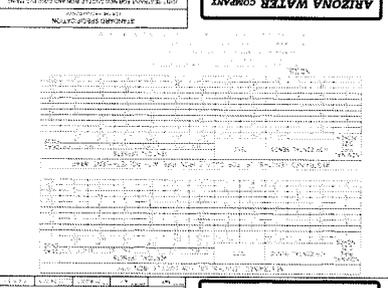
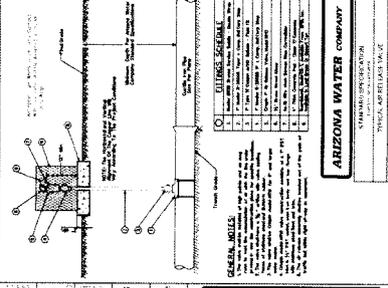
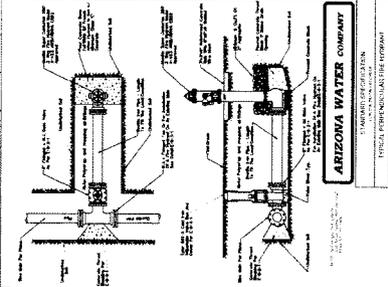
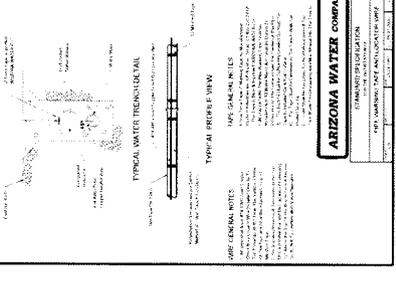
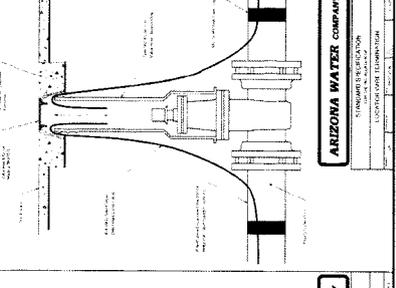
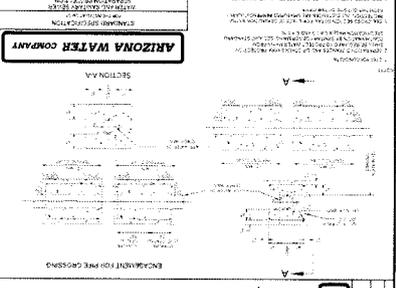
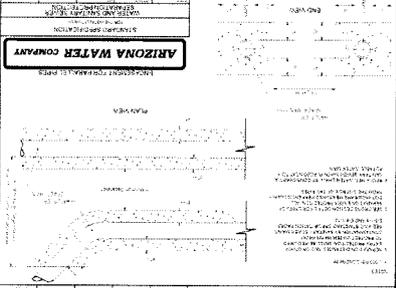
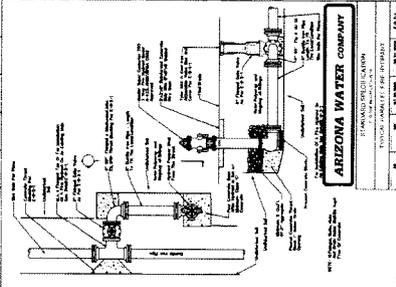


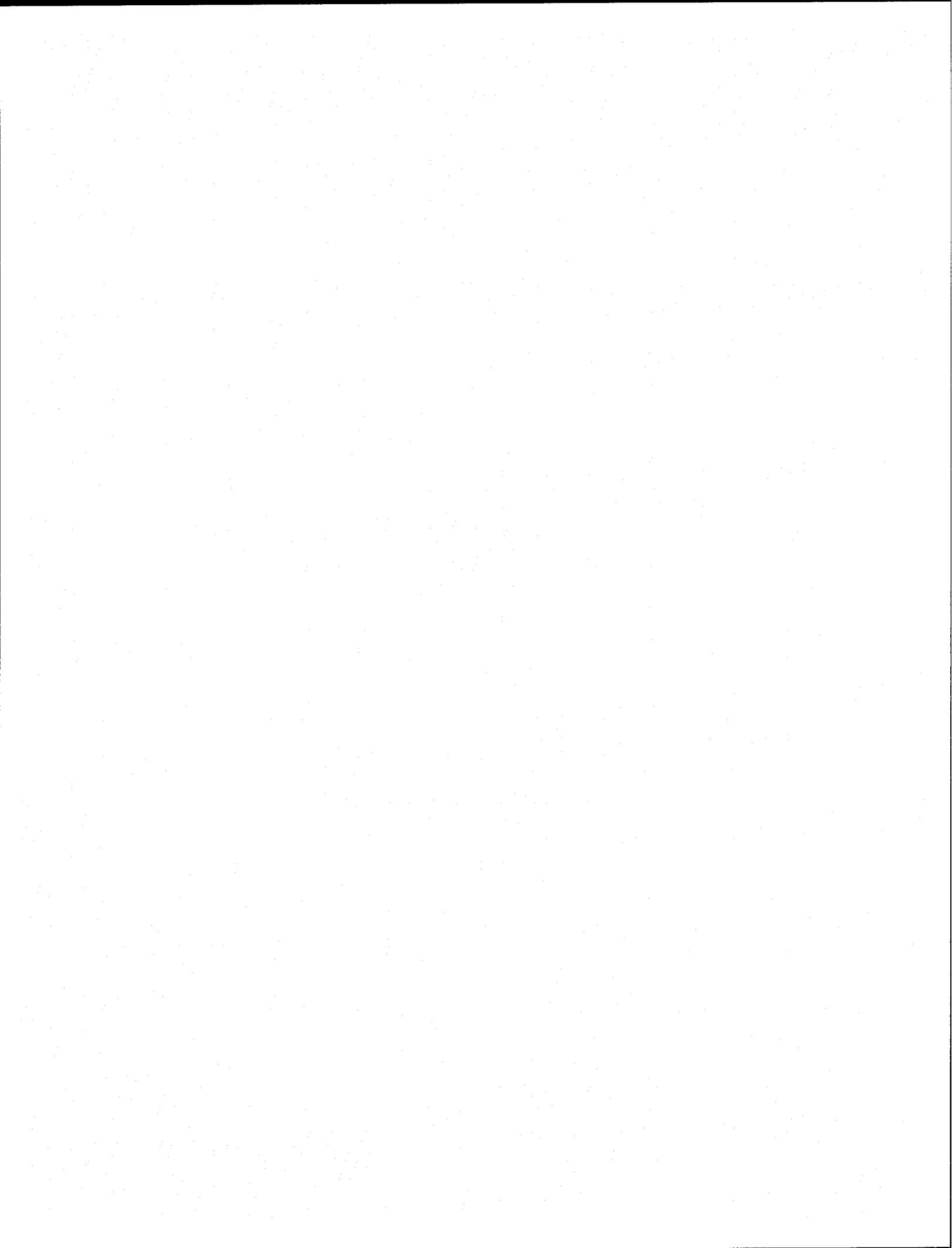
ARIZONA WATER COMPANY
 3005 N. BLACK CANYON HWY. POST OFFICE BOX 20035
 PHOENIX, ARIZONA 85008-0035
 (602) 240-6960

1-6189
 PINAL VALLEY
 EAST 1/2 SEC. 32, T. 5 S., R. 7 E.
 7/1/2014 AS SHOWN
 MC

REVISIONS BY MC ON 5/6/15 PER FIELD AS BUILTS
 263-1100
 800-574-3117

AS BUILT
 FOR WATER ONLY
 REVISIONS BY MC ON 5/6/15 PER FIELD AS BUILTS





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

September 26, 2014

Mr. Mike Mills
Ellison-Mills Contracting, LLC
3152 N. Lear Avenue, Suite 2
Casa Grande, AZ 85122

Re: Overfield Road Replacement

PROJECT: Overfield Road Replacement	
SYSTEM: Pinal Valley	
CONTRACT NO.:	
P.E. NO.:	W.A. NO.: 1-5169

Dear Mr. Mills:

Enclosed is your copy of the Proposal/Contract for the above-referenced project, which has been accepted by Arizona Water Company (the "Company"). The project shall be constructed in accordance with the Company's *General Conditions of Contract, the Specifications and the Drawings* which were included with the Company's previously provided Proposal/Contract, copies of which are being provided again and attached herewith.

Also enclosed are two copies of the Commencement Notice for the above-referenced project. Please sign one of the copies and return it to my attention retaining the other for your records.

As provided in paragraph 4 of the Company's Proposal/Contract executed by the Company on October 1, 2014, Ellison-Mills Contracting, LLC acknowledged that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work. In addition, as provided in paragraph 44 of the Company's General Conditions of Contract, the 100% Performance and Payment Bonds must be provided within ten (10) calendar days of the date of the Commencement Notice. Failure to provide an acceptable 100% Performance and Payment Bond does not limit the Company's

E-MAIL: MAIL@AZWATER.COM

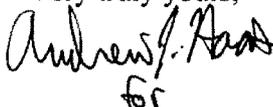
Mr. Mills
Ellison-Mills Contracting, LLC

September 26, 2014
Page 2

ability to terminate the Proposal/Contract or seek restitution for damages that the Company may have or will incur.

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting. In addition, please provide the required Performance and Payment Bonds to the Company promptly so that the contracted work can be completed within the contract's timeline.

If you have any questions, please call me at this office.

Very truly yours,

for

James T. Wilson, P. E.
Senior Engineer
jwilson@azwater.com

afh
Enclosure



ARIZONA WATER COMPANY

Pinel Valley - Casa Grande
220 E 2nd Street Casa Grande Az. 85122
320-436-8745

PROPOSAL/CONTRACT

CONTRACTOR: <u>Ellison-Mills Contracting LLC</u>	SYSTEM: <u>041</u>
ADDRESS: <u>3152 N Lear Ave Suite #2</u>	W.A. No(s): <u>1-5169</u>
CITY ST ZIP: <u>Casa Grande AZ 85122</u>	BID DUE DATE: <u>September 12, 2014</u>

CONTRACTOR SUBMITS this PROPOSAL/CONTRACT to ARIZONA WATER COMPANY, an Arizona corporation (the "Company"), to perform the work and complete the project described on Page 2 (the "Project"), as an independent prime contractor.

- Contractor certifies that it has a complete copy of, and has read, understands and accepts, the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings, (the "Specifications"), all of which are attached hereto. Contractor has examined the specific plans and related construction drawings for the Project (the "Drawings"), copies of which are also attached hereto. The General Conditions of Contract, Specifications and Drawings are incorporated into this Proposal/Contract. Contractor affirms that all work and materials to be furnished or purchased for the Project will be in strict conformance with the General Conditions of Contract, Specifications and Drawings.
- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract.
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person.
- Contractor acknowledges that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work.
- Prior to the commencement of work, Contractor will submit to the Company a list of all materials to be used in the Project. The materials list will include the manufacturer, part number, price and quantity included in this Proposal/Contract.
- Contractor will furnish all labor, tools, equipment and materials required to complete the Project according to the General Conditions of Contract, Specifications and Drawings. No materials purchased by Contractor to be incorporated into the Project are subject to tax at the time of purchase and Contractor will not charge the Company for any such tax. Contractor will pay the applicable transaction privilege tax (the "Contracting Tax") on the Project after Contractor receives payment of the final Project Invoice from the Company. The cost of materials incorporated into the Project which are exempt by Arizona Revised State Statutes ("A.R.S.") from the Contracting Tax, for example, pipes or valves having a diameter of four (4) inches or larger, including equipment, fittings and any other related part that is used in operating the pipes or valves (A.R.S. §42-6001 B.6.), will not be included in the total cost of the labor and materials upon which the Contracting Tax is computed. 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.
- Contractor will maintain detailed accounting records of all materials purchased and incorporated into the Project. Such records will include all supporting original vendor invoices for all materials purchased. Following completion of the Project, Contractor will submit an itemized accounting to the Company which will include all supporting original vendor invoices and satisfactory evidence of payment thereof. The Company will not pay Contractor for materials not actually incorporated into the Project, and the disposition of such materials will remain Contractor's responsibility.
- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project Invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 120 calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project Invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and material quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project Invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS: ~~Open road crossings, program support over 1 month~~

MM
7/

Service interruptions for tie over's not to exceed 4 hours.

CONTRACTOR <u>Ellison-Mills Contracting LLC</u>	PROPOSAL/CONTRACT ACCEPTED: ARIZONA WATER COMPANY
By: <u>[Signature]</u>	By: <u>[Signature]</u>
Print Name: <u>Mike Mills</u>	Print Name: <u>Fredrick K. Schneider, PE</u>
Title: <u>Owner</u>	Title: <u>Vice President - Engineering</u>
Date: <u>9/12/14</u>	Date: <u>10-1-2014</u>

AJH



ARIZONA WATER COMPANY

Pinal Valley - Casa Grande
 220 E 2nd Street Casa Grande Az. 85122
 520-838-8788

PROPOSAL/CONTRACT

CONTRACTOR: Ellison-Mills Contracting LLC		SYSTEM: 041
AZ CONTRACTOR LICENSE NO: 241166	CLASSIFICATION: A	W.A. No(s): 1-5169
ADDRESS: 3152 N. Lear Avenue, Suite 2		BID DUE DATE: September 12, 2014
CITY ST ZIP Casa Grande, AZ 85122	BID BOND REQUIRED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

DESCRIPTION OF PROJECT: **Replace approx 3870 lf of 6 inch PVC with approx 4,007 LF of 12 inch DIP along Overfield Road in the East 1/2 SEC. 32, T.5 S. , R. 7 E. Per DWG PV-0081 , AWC Specifications and General Conditions of Contract**

	QUANTITY	UNIT PRICE		TOTAL COST		
		LABOR	MATERIALS	LABOR	MATERIALS	
1-2. MATERIALS EXEMPT FROM CONTRACTING TAX (per Paragraph 6)						
Install 12 inch DIP w/ polywrap and related fittings complete	4007 LF	\$22.23	\$29.23	\$89,075.61	\$117,124.63	
Tie over new 12 " DIP to existing 12 inch DIP w/ related fittings complete	1	\$3809.96	\$342.45	3,809.96	342.45	
Install 12 inch tap sleeve and valve and tap on exist 12 inch DIP	1	\$15165.92	\$5782.04	15,165.92	5,782.04	
Install 12" X 6" MJ X FLG TEE , 6" MJ X FLG GV						
Remove existing 6 " valve and tie into existing 6 " DIP w/ related fittings	2	\$2759.24	\$2744.11	\$5,518.48	\$5,488.22	
Install 12" X 6" MJ X FLG TEE , 6" MJ X FLG GV , and Fire Hydrant	5	973.98	3152.86	4,869.90	\$15,764.30	
Abandon exist valve per detail	3	218.39	0.00	655.17	0.00	
3. Total Labor to install Exempt Materials (add the amounts in column 1)				3	\$119,095.04	
4. Total Exempt Materials (add the amounts in column 2)					4	144,501.62 <i>WVW</i>
5-6. NON-EXEMPT MATERIALS						
Install 1 inch short single service and tie over to existing customer line	7	\$621.21	\$621.66	\$4,418.47	\$4,351.62	
Install 1 inch long single service and tie over to existing customer line	6	\$1287.95	806.84	7,727.70	4,841.04	
Install 1 inch long double service and tie over to existing customer line	2	1842.28	838.95	3,684.56	1,677.90	
Install air release valve	1	1640.32	823.89	1,640.32	823.89	
7. Total Labor to install Non-Exempt Materials (add the amounts in column 5)				7	\$17,471.05	
8. Total Non-Exempt Materials (add the amounts in column 6)					8	\$11,624.45
9. Subtotal A (add lines 3, 7 and 8)					9	\$148,260.54
10. Contracting Tax Base (multiply the amount on line 9 by 0.65)				10	\$96,369.35	
11. Applicable Contracting Tax Rate				11	10.7%	
12. Contracting Tax (multiply the amount on line 10 by line 11)					12	10,311.52
13. Subtotal B (add lines 4, 9 and 12)					13	168,572.06
14. 100% Performance and Payment Bonds Cost					14	2,000.00
15. Estimated Total Cost (add lines 13 and 14)					15	170,572.06

WVW
 30,2013.67
 2121.52
 305,195
 WVW

NOTE: The Estimated Total Cost includes all labor and materials for backfill, pavement replacement, chip seal, and traffic control necessary for the Project.



ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. Mike Mills
Ellison-Mills Contracting, LLC
3152 N. Lear Avenue, Suite 2
Casa Grande, AZ 85122

DATE: 10/2/14
DIVISION: CASA GRANDE
SYSTEM: PINAL VALLEY
W.A.: 1-5169

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Replace approximately 3,870 LF of 6-inch PVC with approximately 4,007 LF of 12" DIP along Overfield Road as per DWG PV-0081.

PERFORMANCE AND
PAYMENT BONDS
REQUIRED:

Yes No

TOTAL DAYS
ALLOWED:

130

COMPLETION
DATE:

2/9/15

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY

Company

ELLISON-MILLS CONTRACTING, LLC

Contractor (type name)

By *Justin K. Salinas*
Title Vice President - Engineering

By _____
Title _____

ASH

AFH



ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1

CONSTRUCTION SPECIFICATIONS: E-8-1

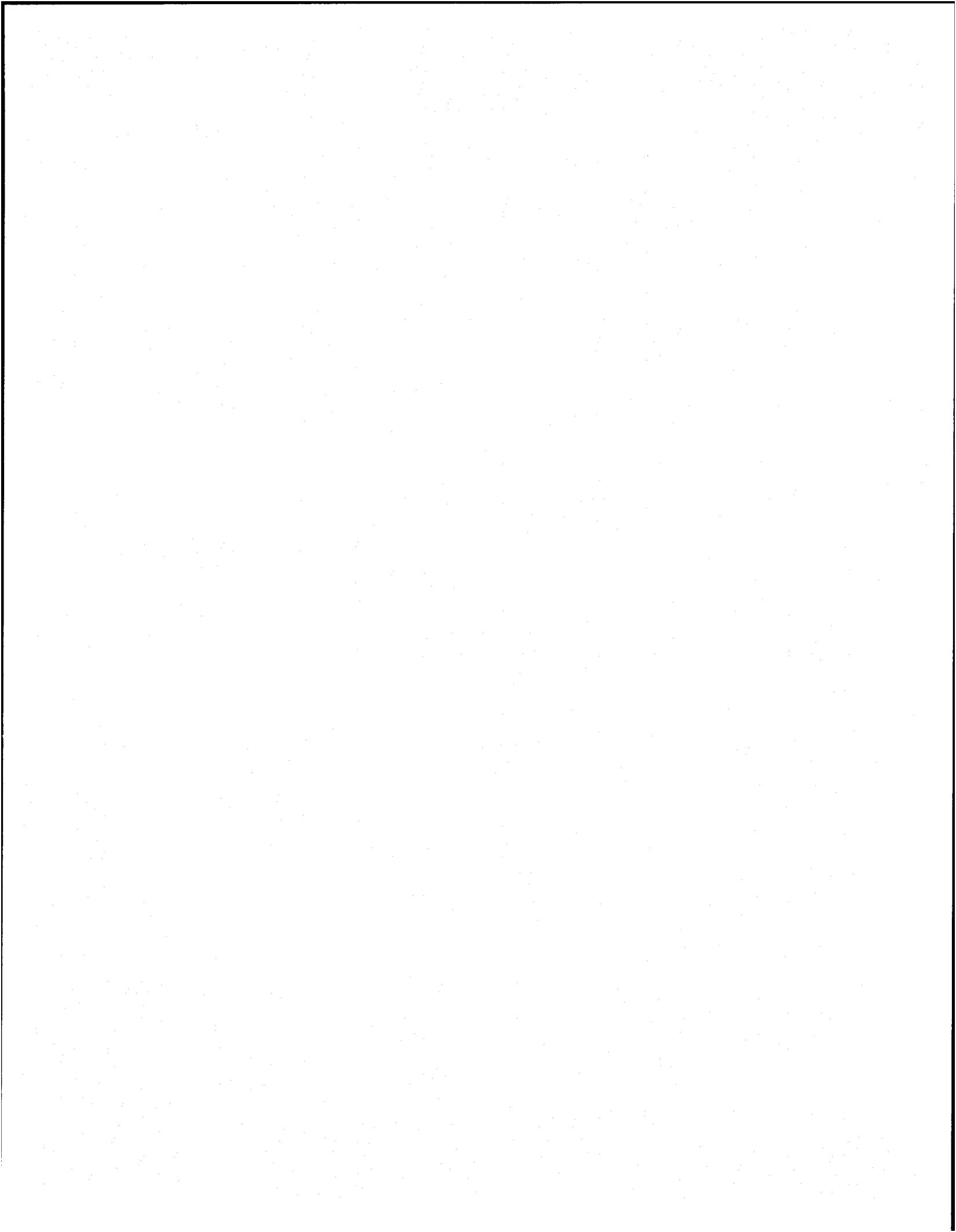
STANDARD SPECIFICATION DRAWINGS: E-9-1

**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

ATH
9-30-14

A copy of this entire Spec Book was sent out with Ellison Mills
package for 1-5169 Overfield Replacement on 10/21/14

Proposal



AGREEMENT FOR GENERAL ENGINEERING SERVICES BETWEEN ARIZONA WATER COMPANY AND BLACK MOUNTAIN SURVEYING

TASK ORDER AUTHORIZATION

Black Mountain Surveying Project Number 14020

AWC Project Number Topographic Survey for Cottonwood Lane between Peart and Arizola Roads, West Main Street, and Overfield Road - Casa Grande, AZ.

Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038-9006

Effective Date of Authorization March 5, 2014

Upon execution of this Task Order, and effective as of the date shown above, the parties agree that Black Mountain Surveying shall perform the following services:

SCOPE OF SERVICES

As per the attached "Scope of Services" per the attached Exhibit A. **NOTE: Authorization to commence will be given verbally by Division Manager (Ray Murrieta or in his absence, Roy Freeman, Operations Superintendant).**

COMPENSATION

As per the attached "Land Survey Proposal" dated February 25, 2014

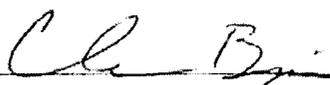
GENERAL TERMS AND CONDITIONS

Black Mountain Surveying's services shall be governed by the Master Agreement dated January 25, 2011 together with this Task Order and any Exhibits attached hereto.

The services performed within this Task Order shall commence on or about March 5, 2014, and shall be complete on or before March 14, 2014.

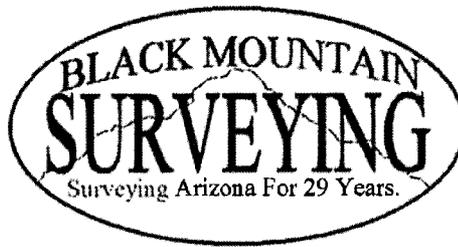
Black Mountain Surveying's Representative in charge of the services is Dale Mattingly, who may be contacted at 623-266-0402 and dale@blackmountainsurveying.com. Client's Representative in charge of the services is Charles Briggs, who may be contacted at 602-240-6860 and cbriggs@azwater.com.

ARIZONA WATER COMPANY

By 
Title REAL PROPERTY SPECIALIST
Date FEBRUARY 27, 2014

BLACK MOUNTAIN SURVEYING

By 
Title Owner/Operator
Date 3/2/14



17308 West Woodrow Lane. Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402
E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

Land Survey Proposal

February 25, 2014

Charles Briggs
Real property Specialist
Arizona Water Company
PO Box 29006
Phoenix, Az. 85038

Dear Charles,

Black Mountain Surveying is pleased to present you with this proposal for land surveying services requested on the following Project:

"Overfield Road Topographic Survey", located in Casa Grande, Az.

Black Mountain Surveying shall provide surveying and mapping services as outlined on the attached "Exhibit A & B," for a lump sum of **\$3,200.00**

Sincerely,

A handwritten signature in black ink, appearing to read "Dale A. Mattingly". The signature is written in a cursive style with a large, stylized initial "D".

Dale A. Mattingly R.L.S.
Senior in charge

EXHIBIT A

Scope of Services

Topographic Survey
Overfield Road between Woodruff and McCartney
Casa Grande-Coolidge, Pinal County, Arizona

TOPOGRAPHIC SURVEY

The purpose of the survey is to plot existing water main(s), appurtenances, all above/below ground utilities, and all physical features of every kind located along Overfield Road, between Woodruff and McCartney Roads as depicted on Exhibit B and how the water main(s), appurtenances, utilities, and features relate to their locations within, around, above, and below the easement or dedicated right-of-way including, but not limited to and where applicable:

All structures, improvements, edges of pavement, unimproved or dirt roads, railroad tracks, spurs, ballast, roadbeds, trestles, rails, ties, bridges, abutments, pylons, beams, trusses, signs, switches, signals, curb, gutter, scuppers, sidewalks, driveways, fences, gates, walls, hand rails, guardrails, posts, poles, mailboxes, stoops, steps, eaves, trees, shrubs, landscape, hardscape, manholes, vaults, guy lines, cross-members,, overhangs, meters, meter boxes, transformers, cabinets, buildings, shelters, sheds, enclosures, pipe culverts, box culverts, storm drains, wing walls, basins, ditches, flumes, chutes, troughs, sluices, spillways, streams, washes, channels, canals, trenches, dykes, dams, diversions, all pipes, tubes, ducts, drains, hoses, conduits, wires, cables, and cords of every kind whether suspended, span, cross, are attached or affixed to any of the features described herein. Also, locate, identify and plot all utility bluestake markings within the bounds of the survey as depicted on Exhibit B. The survey will also:

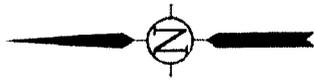
- Include the inverts of all culverts located within the boundary of the survey.
- Include sewer manhole rim elevations, sewer line inverts, the number and direction of connections located within the boundary of the survey.
- Generate topography with 1 foot intervals. Elevation references shall be based on a known local permanent monument with the vertical datum based on NAVD88.
- Include a Basis of Bearing.
- Include a Vicinity Map
- Include the Cadastral location of the survey
- Take color digital photographs of the survey.

ADDITIONAL INFORMATION

Project Location: Casa Grande-Coolidge, Arizona, lying within the East half of Section 32 and the West half of Section 33, Township 5 South, Range 7 East of the G.&S.R.B.&M., Pinal County, Arizona.

Deliverables:

- 1 Adobe PDF file of the survey in its entirety.
- 1 compact disc with the following: digital drawing files of the survey in its entirety in AutoCAD 2007 or earlier version, and all color digital photographs of the survey.



Limits of Survey

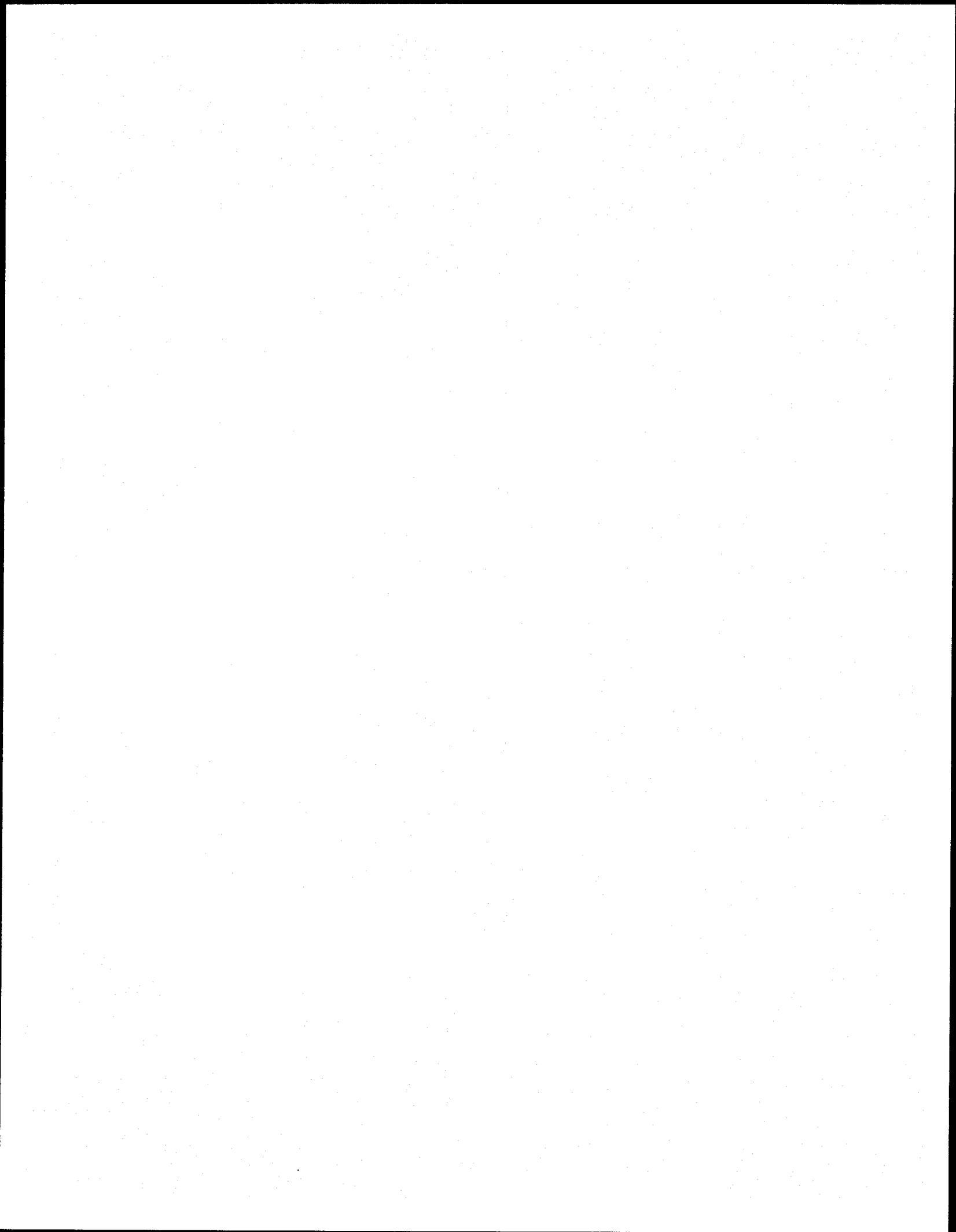


ARIZONA WATER COMPANY

DESCRIPTION
EXHIBIT B
Map to Exhibit A

LOCATION:
E 1/2 32, W 1/2 33, T.5S., R.7E., G&S.R.B.&M.

DATE: 02.18.2014
SCALE: 1" = 800'
DRAWN BY: CB



ARIZONA WATER COMPANY

INTER-OFFICE MEMORANDUM

Leaky on Overfield Rd
Control forms

DATE 11-13-13

TO:

- ✓ 344 - Overfield & McCartney ^{No Control} Forms
- ✓ 345 - 7100 N. Overfield Rd
- X 12-82 - Overfield Rd & Nancy Ln
- X 12-116 - Overfield Rd & McCartney
- X 12-138 - Overfield Rd & McCartney
- ✓ 13-16 - ^{Bartlett &} Overfield
- X 13-43 - Overfield & Natalie Ln

- X 13-53 - Overfield Lot 29R & Natalie Ln
- X 13-103 - 6878 N. Overfield
- X 13-126 - Overfield & McCartney
- X 13-153 - 7100 N. Overfield
- X 13-154 - Overfield & McCartney
- X 13-116 - Overfield & Natalie Ln



ARIZONA WATER COMPANY

COPY

WATER LOSS CONTROL FORM

DATE: 6-9-12 SYSTEM: AU-CG PWSID AND NAME: 11-009 LEAK #: 12-82

TYPE OF LEAK: SERVICE MAIN FITTING VOLUME (GPM) 150

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. SE SEC. 32 T. 5 R. 7

ADDRESS #: _____ STREET NAME: Overfield Rd at McCarthey Ave

LOT#: _____ SUBDIVISION NAME: (e.g., PINWOOD UNIT 1)

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) Overfield & Nancy Lanes N. of McCarthey Rd

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1972 MATERIAL: PVC SIZE: 6" LENGTH: _____ FITTING TYPE: _____ DEPTH OF COVER: 48"
(e.g. Meter/Valve) (inches)

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)

POLY-WRAPPED: YES NO

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH)

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING JOINT, COLLAPSE)

Cracked pipe.

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLING, SURGE, ADJ. CONST. ACTIVITIES)

High pressure.

DESCRIPTION OF REPAIRS MADE: Replace section of 18' 6" C-900

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK#-YR-PIC#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC.)

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

1056
2010/11
10/10/12
m

TOTAL LABOR HOURS: APPR 36

TOTAL MATERIAL COST: \$ 789.64

LEAK DETECTION EQUIPMENT USED (Y/N): NO.



COPY

WATER LOSS CONTROL FORM

DATE: 10-3-11 SYSTEM: N-66 PWSID AND NAME: 11009 LEAK #: 12-116

TYPE OF LEAK: SERVICE [] MAIN [X] FITTING [] VOLUME (GPM) 100

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. SE SEC. 32 T. 55 R. 7E

ADDRESS #: N/A STREET NAME: Overfield Rd North of McCartney Rd

LOT#: 22E SUBDIVISION NAME: (e.g., PINWOOD UNIT) N/A

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) Overfield Rd. North of McCartney Rd

SERVICE/MAIN/FITTING CONDITION: YEAR: 1988 MATERIAL: C-900 SIZE: 6" LENGTH: N/A FITTING TYPE: (e.g. Meter/Valve) C-900 DEPTH OF COVER: (Inches) 60"

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS) 1" Hole in Bottom of 6" C-900 P.V.C.

POLY-WRAPPED: YES [] NO [X]

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH) 1" Hole in Bottom of 6" C-900 PVC

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/Joint, COLLAPSE) 1" Hole in Bottom of 6" C-900 PVC.

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLING, SURGE, ADJ. CONST. ACTIVITIES)

DESCRIPTION OF REPAIRS MADE: installed 6" Repair clamp.

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"
REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)
REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK#-YR-PIC#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC.)
PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

TOTAL LABOR COSTS:
TOTAL MATERIAL COST: \$ 192.72

LEAK DETECTION EQUIPMENT: (SEE 101-11-01)



ARIZONA WATER COMPANY

WATER LOSS CONTROL FORM

DATE: 12-7-12 SYSTEM: PV-CC PWSID AND NAME: 11-007 LEAK #: 12-138

TYPE OF LEAK: SERVICE MAIN FITTING VOLUME (GPM) 70

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. SE SEC. 32 T. 55 R. 7E

ADDRESS #: _____ STREET NAME: Overfield

LOT#: _____ SUBDIVISION NAME: (e.g., PINWOOD UNIT 1) Overfield Rd / MCCARTHEY RD

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) Overfield Rd & MCCARTHEY RD

SERVICE/MAIN/FITTING CONDITION:

YEAR: _____ MATERIAL: PVC SIZE: 6" LENGTH: _____ FITTING TYPE: _____ DEPTH OF COVER: 7'
(e.g. Meter/Valve) (Inches)

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT 84"

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)

crack

POLY-WRAPPED: YES NO

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH)

unknown

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/Joint, COLLAPSE)

2' crack in pipe

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTling, SURGE, ADJ. CONST. ACTIVITIES)

unknown

DESCRIPTION OF REPAIRS MADE: installed 6" repair clamp

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK #-YR-PIC#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC.)

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

TOTAL LABOR HOURS: 45.

TOTAL MATERIAL COST: \$ 845.00.

LEAK DETECTION EQUIPMENT USED (Y/N): NO



ARIZONA WATER COMPANY

COPY

WATER LOSS CONTROL FORM

DATE: 1-30-13 SYSTEM: AU-CG PWSID AND NAME: 11-009 LEAK #: 13-16

TYPE OF LEAK: SERVICE MAIN FITTING VOLUME (GPM) 2

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. NF SEC. 32 T. SS R. 7E

ADDRESS #: 12A-21A STREET NAME: BARTLETT & Overfield Rd

LOT#: 12A-21A SUBDIVISION NAME: (e.g., PINWOOD UNIT 1)

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) BARTLETT & Overfield Rd.

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1994 MATERIAL: T.S. SIZE: 6" LENGTH: - FITTING TYPE: Tapping sleeve DEPTH OF COVER: 48"

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)

FAIR - Loose Bolts on T.S. - Re-tighten Bolts.

POLY-WRAPPED: YES NO

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT N/A

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH) N/A

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING JOINT, COLLAPSE)

BOLTS ON TAPPING SLEEVE WERE LOOSE.

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLING, SURGE, ADJ. CONST. ACTIVITIES)

Loose Bolts on T.S.

DESCRIPTION OF REPAIRS MADE:

Re-tighten Bolts on Tapping Sleeve.

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK # - YR - PIC #) [FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC.]

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

Reg. 4
Richard 11
Jesse 11
Jesse 11
Dan 8
Jesus 7

TOTAL LABOR HOURS: 48 hrs.

TOTAL MATERIAL COST: \$ 812.90

LEAK DETECTION EQUIPMENT USED (Y/N): N.O.



ARIZONA WATER COMPANY

COPY

WATER LOSS CONTROL FORM

DATE: 3-28-13 SYSTEM: P1.C6 PWSID AND NAME: 11009 LEAK #: 13-43

TYPE OF LEAK: SERVICE MAIN FITTING VOLUME (GPM) 500 GPM
150,000 Total

LOCATION OF LEAK: LEGAL DESCRIPTION: ¼ SEC. SE SEC. 32 T. 5S R. 7E

ADDRESS #: N/A STREET NAME: Overfield & Natalie Lane

LOT#: 220 SUBDIVISION NAME: (e.g. PINWOOD UNIT 1) N/A

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) Overfield & Natalie Lane

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1988 MATERIAL: C900 SIZE: 6" LENGTH: _____ FITTING TYPE: N/A (e.g. Metal/Valve) DEPTH OF COVER: 48" (Inches)

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR (FAIR) GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)
C900 PVC pipe (6") looked to be in fair condition

POLY-WRAPPED: YES NO

INTERIOR CONDITION: (CIRCLE ONE) (N/A) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH)
N/A

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/Joint, COLLAPSE)
4" long crack along main

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLING, SURGE, ADJ. CONST. ACTIVITIES)
N/A

DESCRIPTION OF REPAIRS MADE: Installed 12" repair clamp
6" x 12" \$335.49

REQUIRED ATTACHMENT: COPY OF ¼ ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"
REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)
REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK#-YR-PIG#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC)
PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

Jesse - 6 hrs
Jose - 14 hrs
Dan - 14 hrs
Joe - 6 hrs

TOTAL LABOR HOURS: 40
TOTAL MATERIAL COST: \$ 335.49

LEAK DETECTION EQUIPMENT USED (Y/N): NO



ARIZONA WATER COMPANY

COPY

WATER LOSS CONTROL FORM

DATE: 4/29/13 SYSTEM: 041 PWSID AND NAME: 11009 LEAK #: B-53

TYPE OF LEAK: SERVICE [] MAIN [x] FITTING [] VOLUME (GPM) 5 GPM 100,000 gal Total

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. SE SEC. 32 T. 55 R. 7E

ADDRESS #: N/A STREET NAME: Overfield RD & Natalie Ln

LOT#: N/A SUBDIVISION NAME: (e.g., PINWOOD UNIT 1) N/A

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION)

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1988 MATERIAL: PVC SIZE: 6" LENGTH: FITTING TYPE: (e.g. Meter/Valve) DEPTH OF COVER: 48" (Inches)

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)

Crack

POLY-WRAPPED: YES [] NO [x]

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH)

N/A

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/Joint, COLLAPSE)

2" Crack in main

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLING, SURGE, ADJ. CONST. ACTIVITIES)

Water Hammer

DESCRIPTION OF REPAIRS MADE: Installed Full Circle Clamp

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

REQUIRED DIGITAL PHOTOS: RENAME FILE TO {LEAK #-YR-PIC#} (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC...)

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

Jesse - 5 hrs
Jose - 5 hrs
Joe - 5 hrs
Aaron - 5 hrs

TOTAL LABOR HOURS: 20 hrs

TOTAL MATERIAL COST: \$ 505.64

LEAK DETECTION EQUIPMENT USED (Y/N): NO



ARIZONA WATER COMPANY

WATER LOSS CONTROL FORM

DATE: 6-13-13 SYSTEM: 041 PWSID AND NAME: 11009 LEAK #: 13-103

TYPE OF LEAK: SERVICE MAIN FITTING VOLUME (GPM) 2 gpm / 20,160

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. SE SEC. 32 T. S5 R. 7E

ADDRESS #: 6878 STREET NAME: Overfield Rd.

LOT#: 30 SUBDIVISION NAME: (e.g., PINEWOOD UNIT 1) N/A

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) N. Overfield Rd.

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1988 MATERIAL: C-PVC SIZE: 6" LENGTH: - FITTING TYPE: (e.g. Meter/Valve) N/A DEPTH OF COVER: (inches) 48"

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS) Crack on side of pipe

POLY-WRAPPED: YES NO

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH) N/A

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/JOINT, COLLAPSE) Cracks

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLING, SURGE, ADJ. CONST. ACTIVITIES) N/A

DESCRIPTION OF REPAIRS MADE: Install a 6" repair clamp

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK #-YR-PIC#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC...)

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

Jesse - 3
Jose - 3
Richard - 3
Dan - 3

TOTAL LABOR HOURS: 12 hrs.

TOTAL MATERIAL COST: \$ 170.00

LEAK DETECTION EQUIPMENT USED (Y/N): NO



ARIZONA WATER COMPANY

WATER LOSS CONTROL FORM

DATE: 8-1-13 SYSTEM: M1 PWSID AND NAME: 11009/PV-66 LEAK #: 13-126
TYPE OF LEAK: SERVICE [] MAIN [x] FITTING [] VOLUME (GPM) 2 gpm / 20160 total

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. SE SEC. 32 T. 5S R. 7E

ADDRESS #: N/A STREET NAME: Overfield Rd

LOT#: 22E SUBDIVISION NAME: (e.g., PINWOOD UNIT 1)

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) Overfield Rd and McCartney Rd

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1985 MATERIAL: CG 900 SIZE: 6" LENGTH: 3' FITTING TYPE: Bell DEPTH OF COVER: 48"

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)

Crack

POLY-WRAPPED: YES [] NO [x]

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH)

Pipe was a brown on the inside

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/JOINT, COLLAPSE)

Crack at bell/joint

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLING, SURGE, ADJ. CONST. ACTIVITIES)

Surge - pipe rated for 150 psi system runs @ 160 psi

DESCRIPTION OF REPAIRS MADE: Spliced in 3' section of RTP with messers

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK #-YR-PIC#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC...)

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

Jesse - 6
Scott - 6
Steve - 6
Ty - 6

TOTAL LABOR HOURS: 24 hrs.

TOTAL MATERIAL COST: \$ 652.23

LEAK DETECTION EQUIPMENT USED (Y/N): NP



ARIZONA WATER COMPANY

WATER LOSS CONTROL FORM

DATE: 9/12/13 SYSTEM: 041 PWSID AND NAME: 11009 / PV-CG LEAK #: 13-153

TYPE OF LEAK: SERVICE MAIN FITTING VOLUME (GPM) 400 GPM / 192.00 total

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. 56 32 SEC. 1/4 T. 55 R. 7E

ADDRESS #: 7100 STREET NAME: N. OVERFIELD Rd. (WHITE MNT. DERMATOLOGIST)

LOT#: 200 SUBDIVISION NAME: (e.g., PINWOOD UNIT 1) JUANITA MARINS

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) McCARTNEY

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1980 MATERIAL: PVC SIZE: 6" LENGTH: 6' FITTING TYPE: (e.g. Meter/Valve) DEPTH OF COVER: (Inches) 42"

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)

EXTERIOR FINE. THIN WALL PVC

POLY-WRAPPED: YES NO

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH)

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/JUNT, COLLAPSE)

SIDE OF PVC BLEW OUT

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLEMENT, SURGE, ADJ. CONST. ACTIVITIES)

POSSIBLE BEDDING EARTH SETTLEMENT, HIGHER PRESSURE WITH THIN WALL PVC

DESCRIPTION OF REPAIRS MADE: 4' PIECE OF C-900 DROPPED IN WITH

2 QUANTUM COUPLINGS

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK #-YR-PIC#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC.)

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

TOTAL LABOR HOURS: 80 Hours

TOTAL MATERIAL COST: \$ 1,180.00

LEAK DETECTION EQUIPMENT USED (Y/N) N



ARIZONA WATER COMPANY

WATER LOSS CONTROL FORM

DATE: 9-19-13 SYSTEM: 041 PWSID AND NAME: 11009/PV-66 LEAK #: 13-154
TYPE OF LEAK: SERVICE MAIN FITTING VOLUME (GPM) 2 gpm / 14,400 Total

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. SE SEC. 32 T. 5S R. 7E

ADDRESS #: N/A STREET NAME: Overfield Rd.

LOT#: 22E SUBDIVISION NAME: (e.g. PINWOOD UNIT 1)

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) McCartney Rd and Overfield Rd

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1988 MATERIAL: PVC SIZE: 6" LENGTH: - FITTING TYPE: (e.g. Meter/Valve) N/A DEPTH OF COVER: 42" (Inches)

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)

Crack / split

POLY-WRAPPED: YES NO

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH)

N/A

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/Joint, COLLAPSE)

Main split

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLING, SURGE, ADJ. CONST. ACTIVITIES)

Surge, high pressure

DESCRIPTION OF REPAIRS MADE: Installed 6" repair clamp

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK #-YR-PIC#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC...)

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

Jose - 8
Dan - 8
Aaron - 3
Roger - 3

TOTAL LABOR HOURS: 22 hrs.

TOTAL MATERIAL COST: \$ 523.00

LEAK DETECTION EQUIPMENT USED (Y/N): No



DATE: 10/2/13 SYSTEM: 041 PWSID AND NAME: 11009/PV-G6 LEAK #: 13-166

TYPE OF LEAK: SERVICE MAIN FITTING VOLUME (GPM) 100

LOCATION OF LEAK: LEGAL DESCRIPTION: 1/4 SEC. BASE SEC. 32 T. 55 R. 7E

ADDRESS #: N/A STREET NAME: OVERFIELD

LOT#: _____ SUBDIVISION NAME: (e.g., PINWOOD UNIT 1) _____

LOCATION: (e.g. MAJOR CROSS STREETS, INTERSECTION) NATALIE LN. AND OVERFIELD Rd

SERVICE/MAIN/FITTING CONDITION:

YEAR: 1988 MATERIAL: PVC SIZE: 6" LENGTH: N/A FITTING TYPE: N/A (e.g. Meter/Valve) DEPTH OF COVER: 36" (Inches)

EXTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

EXTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, CRACKS)

NO PITS, HOLE IN 6" PVC LINE

POLY-WRAPPED: YES NO

INTERIOR CONDITION: (CIRCLE ONE) BAD POOR FAIR GOOD EXCELLENT

INTERIOR CONDITION DESCRIPTION: (e.g. CORROSION, PITS, TUBERCULATION, SCOURING, SLIME GROWTH)

COULD NOT TELL

DESCRIPTION OF LEAK: (e.g. PINHOLE, RADIAL CRACK, AXIAL CRACK, COUPLING/JOINT, COLLAPSE)

1" HOLE IN PVC LINE. ROCK MAY HAVE BEEN LAYING UNDER 6" PVC LINE.

CAUSE OF LEAK: (e.g. CORROSION, FREEZING, BEDDING/BACKFILL, EARTH SETTLENG, SURGE, ADJ. CONST. ACTIVITIES)

BEDDING MAY HAVE CAUSED LEAK

DESCRIPTION OF REPAIRS MADE: 6" REPAIR CLAMP

REQUIRED ATTACHMENT: COPY OF 1/4 ATLAS WITH LOCATION OF LEAK MARKED WITH A RED "X"

REQUIRED ATTACHMENT: MATERIAL(S) LIST AND COST(S)

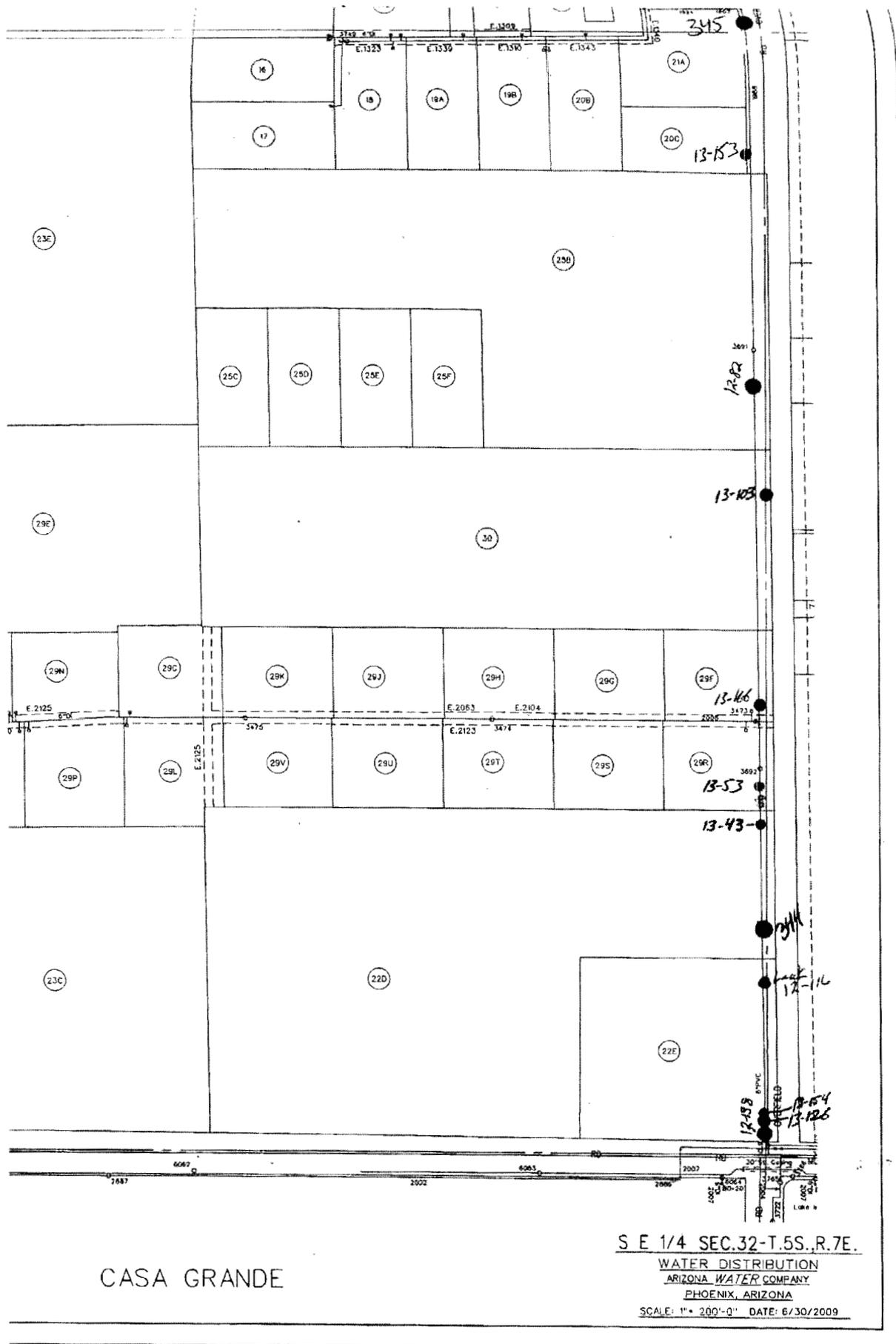
REQUIRED DIGITAL PHOTOS: RENAME FILE TO (LEAK#-YR-PIC#) (FORMAT 001-11-01.JPG, 001-11-02.JPG, ETC.)

PLACE DIGITAL PHOTOS IN THE LEAK DETECTION DIRECTORY UNDER THE APPROPRIATE DIVISION/SYSTEM ON THE COMPANY'S SHARED DRIVE

TOTAL LABOR HOURS: 62

TOTAL MATERIAL COST: \$ 970.00

LEAK DETECTION EQUIPMENT USED (Y/N): NO

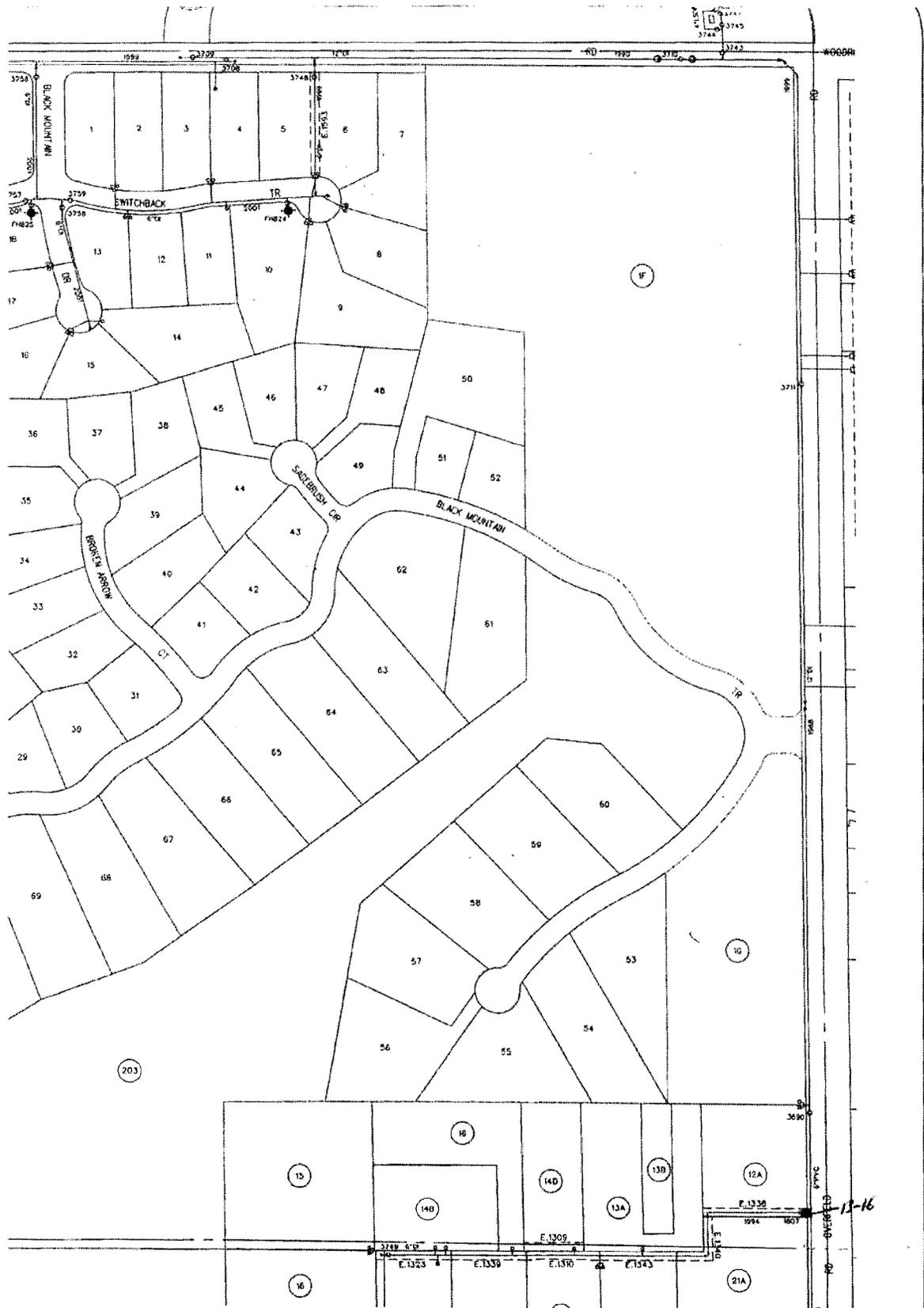


CASA GRANDE

S E 1/4 SEC.32-T.5S.,R.7E.

WATER DISTRIBUTION
 ARIZONA WATER COMPANY
 PHOENIX, ARIZONA

SCALE: 1" = 200'-0" DATE: 6/30/2009

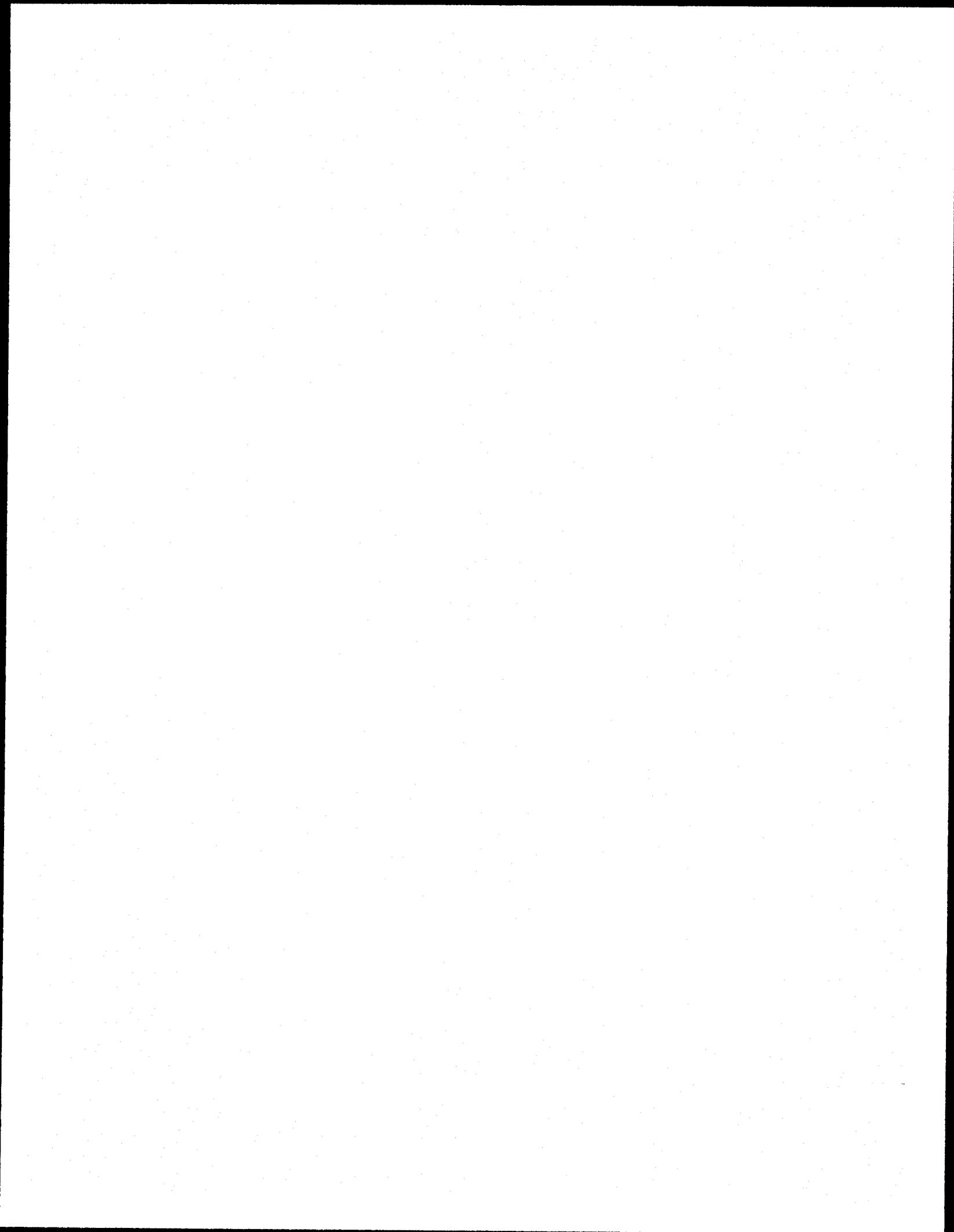


CASA GRANDE

NE 1/4 SEC. 32-T. 5S. R. 7E.

WATER DISTRIBUTION
 ARIZONA WATER COMPANY
 PHOENIX, ARIZONA

SCALE: 1" = 200'-0" DATE: 5/13/2009



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

February 3, 2011

Mr. Dale Mattingly
President
Black Mountain Surveying
17308 W. Woodrow Lane
Surprise, Arizona 85388

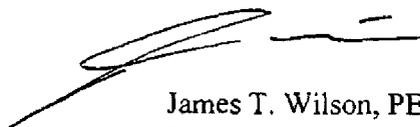
Re: Various Projects

Dear Mr. Mattingly:

Enclosed is your copy of the Master Agreement for ongoing consulting, which has been accepted by Arizona Water Company (the "Company").

If you have any questions, please call me at this office.

Very truly yours,



James T. Wilson, PE
Senior Engineer
engineering@azwater.com

afh
Enclosure

E-MAIL: mail@azwater.com

W:\01-AGREEMENTS, DRAFTS, LTRS & DOCS\MASTER AGREEMENTS\BLACK MOUNTAIN\MASTER CONSULTING AGREEMENT CVR LTR BLACK MOUNTAIN SURVEYING.DOCX
JTW:AFH 10:57 AM 2/3/11

11/10/10
FKS:afh
E-3-11-8

**MASTER AGREEMENT
FOR ONGOING CONSULTING AND ENGINEERING SERVICES
BETWEEN ARIZONA WATER COMPANY
AND BLACK MOUNTAIN SURVEYING**

THIS AGREEMENT is made and entered into on this 25 day of January, 2011, by and between Arizona Water Company, an Arizona corporation, hereinafter referred to as "Client," and BLACK MOUNTAIN SURVEYING, a Trade Name hereinafter referred to as "Consultant."

RECITALS:

WHEREAS, Client desires that from time to time Consultant furnish Client certain consulting services;

WHEREAS, Consultant has available and offers to provide personnel and facilities necessary to perform the services desired under this Agreement;

NOW, THEREFORE, Client and Consultant agree as follows:

I. DESCRIPTION OF PROJECT

Services to be provided shall be as described in written task orders made pursuant to and referencing this Agreement; the form of such task order is attached hereto as Exhibit A.

II. SCOPE OF CONSULTANT SERVICES

Consultant agrees to perform those basic services described in separate written task order(s) signed by Client and Consultant (the "Services"). This Agreement provides the terms, obligations and conditions which shall control all work under such task orders(s). The printed terms and conditions, if any, contained on the reverse side(s) of an accepted task order shall not apply to services provided under this Agreement. Unless modified in writing by both parties, duties of Consultant shall not exceed those service specifically described in each task order. Any work authorized by Client prior to the issuance of a written task order must be authorized in writing and any services then performed by Consultant will be presumed to have been completed under the terms of this Agreement.

III. RESPONSIBILITIES OF CLIENT

In addition to payment for the Services performed under this Agreement, Client shall:

1. Assist and cooperate with Consultant in any manner necessary and within its ability to facilitate Consultant's performance under this Agreement.

2. Designate in writing a person to act as Client's representative with respect to this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define Client's policies, make decisions and execute documents on Client's behalf.

3. Furnish Consultant with all technical data in Client's possession including, but not limited to, maps, surveys, drawings, soils or geotechnical reports, and any other information required by or useful to, Consultant in performance of the Services under this Agreement. Consultant shall be entitled to rely upon the information supplied by Client.

4. Notify Consultant of any known or potential health or safety hazards existing at or near the project site.

5. Provide access to and/or obtain permission for Consultant to enter upon all projects whether or not owned by Client, as required to perform and complete the Services.

IV. AMERICANS WITH DISABILITIES ACT

Any other provision of this Agreement to the contrary notwithstanding, unless otherwise specified in the Scope of Services, Client's contractors shall have sole responsibility as between Client and Consultant for compliance with the Americans With Disabilities Act ("ADA") 42 U.S.C. 12101 et. Seq. and the related regulations. Consultant shall provide client with applicable ADA criteria which may be required.

V. AUTHORIZATION AND COMPLETION

In signing this Agreement, Client grants Consultant specific authorization to proceed with work as described in Scope of Work and under the terms of this Agreement.

VI. COMPENSATION

For the Services described in each task order, Client agrees to pay, and Consultant agrees to accept the total compensation in accordance with compensation terms included in the task order. Where Consultant has provided Client with a breakdown of the total compensation into subtasks, such breakdowns are estimates only. Consultant may re-allocate compensation between tasks, provided total compensation is not exceeded without the written approval of Client. Time charges shall be in accordance with the Hourly Rate Schedule contained in Exhibit B. The rate schedule may be revised annually by mutual written Agreement. Annual revisions to the Hourly Rate Schedule shall be submitted prior to the date that they take effect. Compensation shall be billed monthly in summary form. Payment to Consultant is due upon presentation of invoice to Client.

As long as Consultant has not defaulted under this Agreement, Client shall pay Consultant within 30 days of the date of Consultant's invoices for services performed and reimbursable expenses incurred under this Agreement. Client may contest any portion of any such invoice, amounts questioned or contested shall be identified and notice given to Consultant within 15 days of the date of the invoice. Any portion of any invoice not contested shall be deemed to be accepted and approved for payment and shall be paid to Consultant within 30 days of the date of the invoice. The Consultant agrees to cooperate with Client in a mutual effort to resolve promptly any contested portions of the Consultant's invoices.

In the event any uncontested portions of any invoice are not paid within 30 days of the date of Consultant's invoice, interest on the unpaid balance shall accrue beginning with the 31st day at the maximum interest rate permitted by law, and Consultant shall have the right to suspend work per Article XV, Suspension of Work.

VII. RESPONSIBILITY OF CONSULTANT

A. Standard of Care Professional Services

Subject to the limitations inherent in the agreed scope of work as to the degree of care, amount of time and expenses to be incurred, and subject to any other limitations contained in this Agreement, Consultant shall perform its Services in accordance with generally accepted standards and practices customarily utilized by competent engineering firms in effect at the time Consultant's Services are rendered. Consultant does not expressly or impliedly warrant or guarantee its Services.

B. Reliance upon Information Provided by Others

If Consultant's performance of services hereunder requires Consultant to rely on information provided by other parties (excepting Consultant's subcontractors), Consultant shall not independently verify the validity, completeness, or accuracy of such information unless otherwise expressly engaged to do so in writing by Client.

C. Consultant's Opinion of Costs

Client acknowledges that construction cost estimates, financial analyses and feasibility projections are subject to many influences including, but not limited to, price of labor and materials, unknown or latent conditions of existing equipment or structures, and time or quality of performance by third parties. Client acknowledges that such influences may not be precisely forecasted and are beyond the control of Consultant and that actual costs incurred may vary substantially from the estimates prepared by Consultant. Consultant does not warrant or guarantee the accuracy of construction or development cost estimates.

D. Construction Phase Services

1. Consultant's Activities at Construction Site. The presence of Consultant's personnel at a construction site, whether as on-site representative, resident engineer, construction manager, or otherwise, does not make Consultant responsible for those duties that belong to Client and/or construction contractors or others, and does not relieve construction contractors or others of their obligations, duties, and responsibilities, including, but not limited to, construction methods, means, techniques, sequences, and procedures necessary for completing all portions of the construction work in accordance with the contract documents, any health or safety programs and precautions required by such construction work, and any compliance with applicable laws and regulations. Any inspection or observation of the contractor's work is solely for the purpose of determining that the work is generally proceeding in conformance with the intent of the project specifications and contract documents. Except for its own Contractors, Consultant makes no warranty or guarantee with respect to the performance of a contractor. Consultant has no authority to exercise control over any construction contractor in connection with their work or health or safety programs and

precautions. Except to protect Consultant's own personnel and except as may be expressly required elsewhere in the scope of services, Consultant has no duty to inspect, observe, correct, or report on health or safety deficiencies of the construction contractor.

2. Shop Drawing and Submittal Review. If required by Consultant's Scope of Services, Consultant shall review shop drawings or other contractor submittals for general conformance with the intent of the contract documents. Except for its own Contractors, Consultant shall not be required to verify dimensions, to engineer contractor's shop drawings or submittals, nor to coordinate shop drawings or other submittals with other shop drawings or submittals provided by contractor.

3. Record Drawings. Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Except for its own Contractors, Consultant is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.

VIII. ASSIGNMENT OF TASKS TO AFFILIATES

If the authorized scope of work requires professional services to be performed in a jurisdiction in which Consultant renders professional services solely through a locally registered engineering affiliate for purposed of compliance with professional licensing requirements in that jurisdiction, Consultant may, in its discretion, upon notice to Client, assign its contractual rights and obligations with respect to such services to such locally registered engineering affiliate.

IX. ASBESTOS / HAZARDOUS MATERIALS

Consultant and Consultant's subcontractors shall have no responsibility for the discovery, handling, removal, or disposal of or exposure of persons to asbestos or hazardous or toxic materials that are present in any form at the Project site. Professional services related to or in any way connected with the investigation, detection, abatement, replacement, use, specification, or removal of products, materials, or processes containing asbestos or hazardous or toxic materials are beyond the scope of this Agreement. Client shall be solely responsible for notifying all appropriate governmental agencies, including the potentially effected public, of the existence of any hazardous or toxic materials located on or at the project site any any time.

In the event Consultant encounters asbestos or hazardous materials at the jobsite, Consultant may, at its option and without liability for damages, suspend the performance of services on the Project until such time as Client and Consultant mutually agree on an amendment to this Agreement to address the issue, or Client retains another specialist consultant or contractor to identify, classify, abate and/or remove the asbestos and/or hazardous materials.

X. CONSULTANT'S WORK PRODUCT

A. Scope

Consultant's work product which is prepared solely for the purposes of this Agreement, including, but not limited to, drawings, test results, recommendations and technical specifications, whether in hard copy or electronic form, shall become the property of Client when Consultant has been fully compensated as set forth herein. Consultant may keep copies of all work product(s) for its records.

Consultant and Client recognize that Consultant's work product submitted in performance of this Agreement is intended only for the project described in this Agreement. Client's alteration of Consultant's work product or its use by Client for any other purpose shall be at Client's sole risk, and Client shall hold harmless and indemnify Consultant against all losses, damages, costs and expense, including attorneys' fees, arising out of or related to any such alteration or unauthorized use.

B. Electronic Copies

If requested, solely as an aid and accommodation to Client, Consultant may provide copies of its work product documents in computer-readable media ("electronic copies," "CADD"). These documents will duplicate the documents provided as work product, but will not bear the signature and professional seals of the registered professionals responsible for the work. Client is cautioned that the accuracy of electronic copies and CADD documents may be compromised by electronic media degradation, errors in format translation, file corruption, printing errors and incompatibilities, operator inexperience and file modification. Consultant will maintain the original copy, which shall serve as the official, archived record of the electronic and CADD documents. Client agrees to hold harmless, indemnify and defend Consultant from any claims arising out of or relating to any change or alteration of electronic copies and CADD documents authorized by the Client, Client's personnel, or Client's Contractor's.

XI. INDEMNIFICATION

A. Indemnification of Client

Consultant agrees to indemnify and hold Client harmless from and against any liability to the extent arising out of the negligent errors or negligent omissions of Consultant, its agents, employees, or representatives, in the performance of Consultant's duties under this Agreement.

B. Consequential Damages.

Regardless of any other term of this Agreement, in no event shall either party be responsible or liable to the other for any incidental, consequential, or other indirect damages.

XII. CONSULTANT'S INSURANCE

Consultant shall procure and maintain the following minimum insurance:

1. Commercial general liability insurance, including personal injury liability, blanket contractual liability and broad-form property damage liability coverage. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

2. Automobile bodily injury and property damage liability insurance covering owned, non-owned, rented, and hired cars. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

3. Statutory workers' compensation and employer's liability insurance as required by state law.

4. Professional liability insurance. The policy limit shall be not less than \$1,000,000.

Client shall be named as additional insured on policies 1 and 2 above. Upon execution of this Agreement, Consultant will provide a certificate of insurance to Client. Consultant will keep the certificate current at all times while this Agreement is in effect. The Consultant will provide a 30-day written notice in the event the above policies are cancelled.

XIII. CONFIDENTIALITY

Consultant agrees it will maintain the confidentiality of all material it receives from Client which Client has clearly identified as "Confidential" and will not disclose, distribute, or publish to any third party such confidential information without the prior permission of Client. Notwithstanding the foregoing, Consultant shall have no confidentiality obligation with respect to information that:

1) becomes generally available to the public other than as a result of disclosure by Consultant or its agents or employees;

2) was available to Consultant prior to its disclosure by Client;

3) becomes available to Consultant from a third party who is not, to the knowledge of Consultant, bound to retain such information in confidence.

In the event Consultant is compelled by subpoena, court order, or administrative order to disclose any confidential information, Consultant shall promptly notify Client and shall cooperate with Client prior to disclosure so that Client may take necessary actions to protect such confidential information from disclosure.

XIV. SUBCONTRACTS

Consultant shall be entitled, to the extent determined appropriate by Consultant, to subcontract any portion of the services to be performed under this Agreement.

XV. SUSPENSION OF WORK

Work under this Agreement may be suspended as follows:

1. By Client. By written notice to Consultant, Client may suspend all or a portion of the Work under this Agreement if unforeseen circumstances beyond Client's control make normal progress of the Work impracticable. Consultant shall be compensated for its reasonable expenses resulting from such suspension including mobilization and demobilization. If suspension is greater than 90 days, then Consultant shall have the right to terminate this Agreement in accordance with Article IVI, Termination of Work.

2. By Consultant. By written notice to Client, Consultant may suspend the Work if Consultant reasonably determines that working conditions at the Site (outside Consultant's control) are unsafe, or in violation of applicable laws, or in the event Client has not made timely payment in accordance with Article VI, Compensation, or for other circumstances not caused by Consultant that are interfering with the normal progress of the Work. Consultant's suspension of Work hereunder shall be without prejudice to any other remedy of Consultant at law or equity.

XVI. TERMINATION OF WORK

A. This Agreement may be terminated by Client as follows: (1) for its convenience on 15 days' notice to Consultant, or (2) for cause, if Consultant materially breaches this Agreement through no fault of Client and Consultant neither cures such material breach nor makes reasonable progress toward cure within 15 days after Client has given written notice of the alleged breach to Consultant.

B. This Agreement may be terminated by Consultant as follows: (1) for cause, if Client materially breaches this Agreement through no fault of Consultant and Client neither cures such material breach nor makes reasonable progress toward cure within 15 days after Consultant has given written notice of the alleged breach to Client, or (2) upon five days' notice if work under this Agreement has been suspended by either Client or Consultant for more than 90 days in the aggregate.

C. Payment upon Termination

In the event of termination, Consultant shall perform such additional work as is reasonably necessary for the orderly closing of the Work. Consultant shall be compensated for all work performed prior to the effective date of termination, plus work required for the orderly closing of the Work, including: (1) authorized work performed up to the termination date plus termination expenses, including all labor and expenses, at Consultant's standard billing rates, directly attributable to termination; (2) all efforts necessary to document the work completed or in progress; and (3) any termination reports requested by Client.

XVII. ASSIGNMENT

This Agreement is binding on the heirs, successors, and assigns of the parties hereto. Except as otherwise set forth under Article VIII, Assignment of Tasks to Affiliates, this Agreement may not be assigned by Client or Consultant without prior, written consent of the other.

XVIII. NO BENEFIT FOR THIRD PARTIES

The services to be performed by Consultant are intended solely for the benefit of Client, and no benefit is conferred on, nor contractual relationship established with any person or entity not a party to this Agreement. No such person or entity shall be entitled to rely on Consultant's services, opinions, recommendations, plans, or specifications without the express written consent of Consultant. No right to assert a claim against the Consultant, its officers, employees, agents, or consultants shall accrue to the construction Contractor or to any subcontractor, supplier, manufacturer, lender, insurer, surety, or any other third party as a result of this Agreement or the performance or nonperformance of the Consultant's services hereunder.

XIX. FORCE MAJEURE

Consultant shall not be responsible for delays caused by circumstances beyond their reasonable control, including, but not limited to (1) strikes, lockouts, work slowdowns or stoppages, or accidents, (2) acts of God, (3) failure of Client to furnish timely information or to approve or disapprove Consultant's instruments of service promptly, and (4) faulty performance or nonperformance by Client, Client's independent consultants or contractors, or governmental agencies. Consultant shall not be liable for damages arising out of any such delay, nor shall the Consultant or Client be deemed to be in breach of this Agreement as a result thereof.

XX. INTEGRATION

This Agreement represents the entire understanding of Client and Consultant as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. This Agreement may not be modified or altered except in writing signed by both parties. Any purchase order issued by Client, whether or not signed by Consultant, and any terms and conditions contained in such purchase order which are inconsistent with this Agreement shall be of no force and effect.

XXI. SEVERABILITY

If any part of this Agreement is found unenforceable under applicable laws, such part shall be inoperative, null, and void insofar as it conflicts with said laws, but the remainder of this Agreement shall be in full force and effect.

XXI. CHOICE OF LAW/JURISDICTION

This Agreement shall be administered and interpreted under the laws of the State of Arizona. Jurisdiction of litigation arising from the Agreement shall be in the State of Arizona.

XXIII. ATTORNEYS' FEES

In the event either party commences legal proceedings against the other, then the prevailing party shall, in addition to any other recovery, be entitled to recover its reasonable attorneys' fees and all other costs of such proceeding.

XXIV. NOTICES

All notices required under this Agreement shall be delivered by personal delivery or first class mail and shall be addressed to the following persons:

Mr. Dale Mattingly
President
Black Mountain Surveying
17308 W. Woodrow Lane
Surprise, Arizona 85388

Mr. Fred Schneider
Vice President - Engineering
Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038

Notice shall be effective upon delivery to the above addresses. Project related instructions may be delivered by electronic mail. Either party may notify the other that a new person has been designated by it to receive notices, or that the address for the delivery of such notices has been changed, provided that, until such time as the other party receives such notice in the manner provided for herein, any notice addressed to the previously-designated person and/or delivered to the previously-designated address shall be effective.

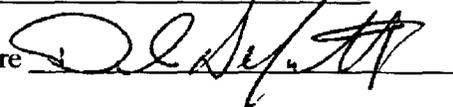
XXV AUTHORIZATION

The persons executing this Agreement on behalf of the parties hereto represent and warrant that the parties have all legal authority and authorization necessary to enter into this Agreement, and that such persons have been duly authorized to execute this Agreement on their behalf.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

BLACK MOUNTAIN SURVEYING

Signature



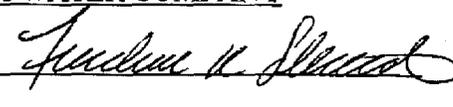
Printed Name Dale Mattingly

Title President

Federal Tax ID number: 56-2500086

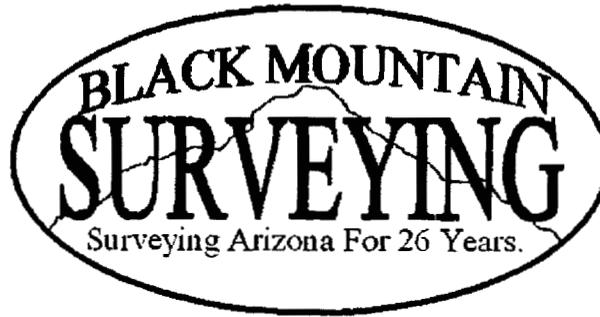
ARIZONA WATER COMPANY

Signature



Printed Name Mr. Fred Schneider

Title Vice-President - Engineering



17308 West Woodrow Lane. Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402

E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

"EXHIBIT B"

2011 RATE SCHEDULE
EFFECTIVE January 1st, 2011 – December 31st, 2011

	<u>HOURLY RATE</u>
• PRINCIPLE	\$95.00
• REGISTERED LAND SURVEYOR	\$90.00
• 1 MAN GPS FIELD CREW	\$65.00
• 2 MAN CONVENTIONAL SURVEY FIELD CREW	\$80.00
• DRAFT TECHNICIAN	\$55.00

REIMBURSABLES FOR PRINTING AND DELIVERIES WILL BE BILLED AT COST.

AGREEMENT FOR GENERAL ENGINEERING SERVICES BETWEEN ARIZONA WATER COMPANY AND BLACK MOUNTAIN SURVEYING

TASK ORDER AUTHORIZATION

Black Mountain Surveying Project Number 14020

AWC Project Number Topographic Survey for Cottonwood Lane between Peart and Arizola Roads, West Main Street, and Overfield Road - Casa Grande, AZ.

Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038-9006

Effective Date of Authorization March 5, 2014

Upon execution of this Task Order, and effective as of the date shown above, the parties agree that Black Mountain Surveying shall perform the following services:

SCOPE OF SERVICES

As per the attached "Scope of Services" per the attached Exhibit A. **NOTE: Authorization to commence will be given verbally by Division Manager (Ray Murrieta or in his absence, Roy Freeman, Operations Superintendent).**

COMPENSATION

As per the attached "Land Survey Proposal" dated February 25, 2014

GENERAL TERMS AND CONDITIONS

Black Mountain Surveying's services shall be governed by the Master Agreement dated January 25, 2011 together with this Task Order and any Exhibits attached hereto.

The services performed within this Task Order shall commence on or about March 5, 2014, and shall be complete on or before March 14, 2014.

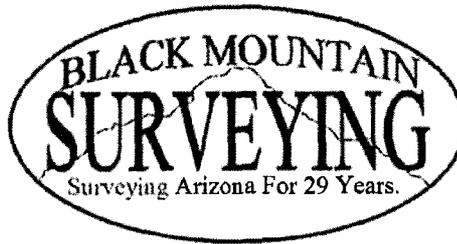
Black Mountain Surveying's Representative in charge of the services is Dale Mattingly, who may be contacted at 623-266-0402 and dale@blackmountainsurveying.com. Client's Representative in charge of the services is Charles Briggs, who may be contacted at 602-240-6860 and cbriggs@azwater.com.

ARIZONA WATER COMPANY

By Ch. Briggs
Title REAL PROPERTY SPECIALIST
Date FEBRUARY 27, 2014

BLACK MOUNTAIN SURVEYING

By [Signature]
Title Owner/Operator
Date 3/2/14



17308 West Woodrow Lane. Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402
E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

Land Survey Proposal

February 25, 2014

Charles Briggs
Real property Specialist
Arizona Water Company
PO Box 29006
Phoenix, Az. 85038

Dear Charles,

Black Mountain Surveying is pleased to present you with this proposal for land surveying services requested on the following Project:

"Overfield Road Topographic Survey", located in Casa Grande, Az.

Black Mountain Surveying shall provide surveying and mapping services as outlined on the attached "Exhibit A & B," for a lump sum of **\$3,200.00**

Sincerely,

A handwritten signature in black ink, appearing to read "Dale A. Mattingly". The signature is written in a cursive style.

Dale A. Mattingly R.L.S.
Senior in charge

EXHIBIT A

Scope of Services

Topographic Survey
Overfield Road between Woodruff and McCartney
Casa Grande-Coolidge, Pinal County, Arizona

TOPOGRAPHIC SURVEY

The purpose of the survey is to plot existing water main(s), appurtenances, all above/below ground utilities, and all physical features of every kind located along Overfield Road, between Woodruff and McCartney Roads as depicted on Exhibit B and how the water main(s), appurtenances, utilities, and features relate to their locations within, around, above, and below the easement or dedicated right-of-way including, but not limited to and where applicable:

All structures, improvements, edges of pavement, unimproved or dirt roads, railroad tracks, spurs, ballast, roadbeds, trestles, rails, ties, bridges, abutments, pylons, beams, trusses, signs, switches, signals, curb, gutter, scuppers, sidewalks, driveways, fences, gates, walls, hand rails, guardrails, posts, poles, mailboxes, stoops, steps, eaves, trees, shrubs, landscape, hardscape, manholes, vaults, guy lines, cross-members,, overhangs, meters, meter boxes, transformers, cabinets, buildings, shelters, sheds, enclosures, pipe culverts, box culverts, storm drains, wing walls, basins, ditches, flumes, chutes, troughs, sluices, spillways, streams, washes, channels, canals, trenches, dykes, dams, diversions, all pipes, tubes, ducts, drains, hoses, conduits, wires, cables, and cords of every kind whether suspended, span, cross, are attached or affixed to any of the features described herein. Also, locate, identify and plot all utility bluestake markings within the bounds of the survey as depicted on Exhibit B. The survey will also:

- Include the inverts of all culverts located within the boundary of the survey.
- Include sewer manhole rim elevations, sewer line inverts, the number and direction of connections located within the boundary of the survey.
- Generate topography with 1 foot intervals. Elevation references shall be based on a known local permanent monument with the vertical datum based on NAVD88.
- Include a Basis of Bearing.
- Include a Vicinity Map
- Include the Cadastral location of the survey
- Take color digital photographs of the survey.

ADDITIONAL INFORMATION

Project Location: Casa Grande-Coolidge, Arizona, lying within the East half of Section 32 and the West half of Section 33, Township 5 South, Range 7 East of the G.&S.R.B.&M., Pinal County, Arizona.

Deliverables:

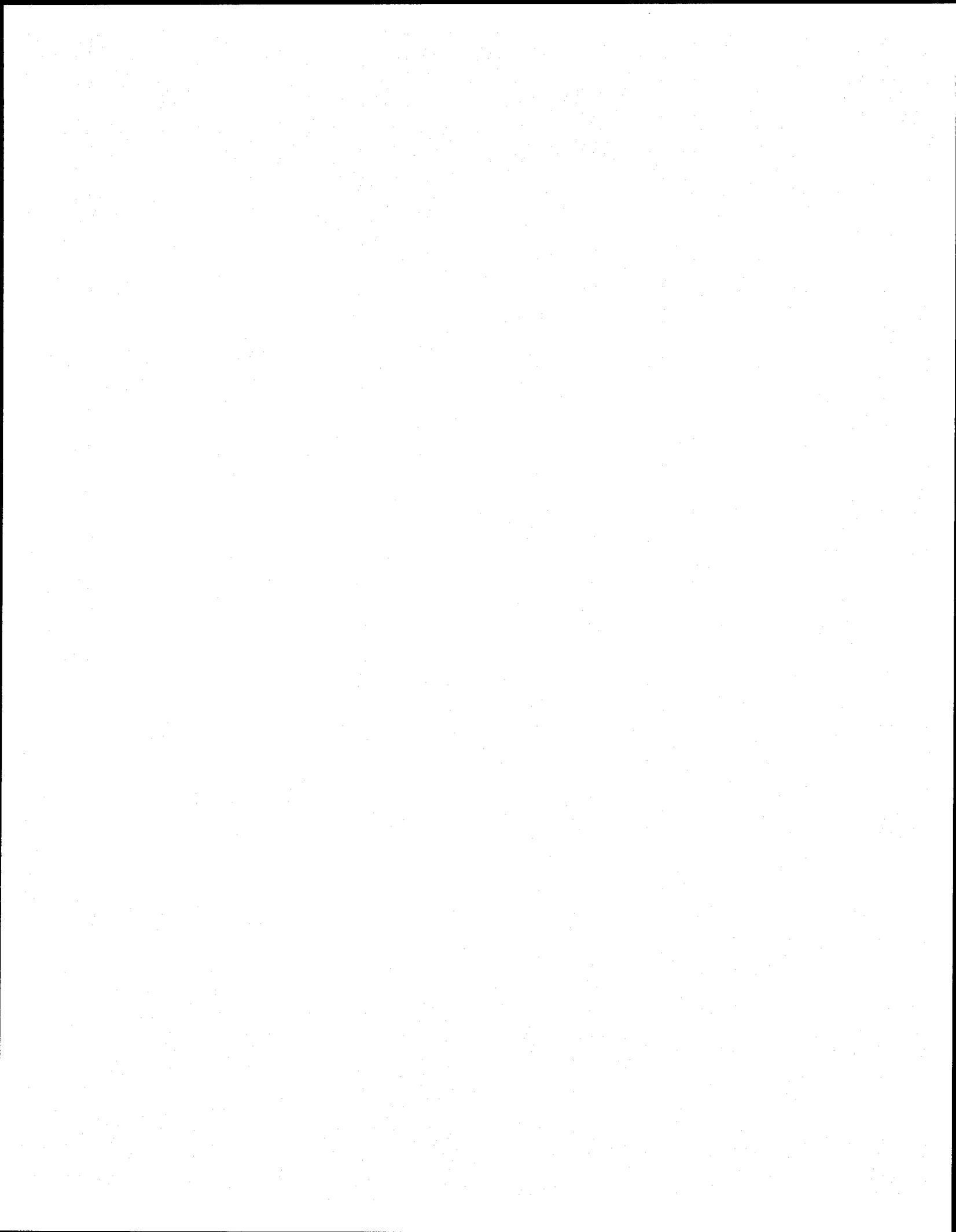
- 1 Adobe PDF file of the survey in its entirety.
- 1 compact disc with the following: digital drawing files of the survey in its entirety in AutoCAD 2007 or earlier version, and all color digital photographs of the survey.



Limits of Survey



ARIZONA WATER COMPANY	
DESCRIPTION	EXHIBIT B Map to Exhibit A
LOCATION	E 1/2 32, W 1/2 33, T.5S., R.7E., G&S.R.B.&M.
DATE	02.18.2014
SCALE	1" = 800'
DRAWN BY	CB





November 18, 2014

Arizona Water Company
3805 N. Black Canyon Hwy, P.O. Box 29006
Phoenix, Arizona 85038-9006

Arizona Water Company – Overfield Rd. (replace 3,870 LF PVC w/ 3,997 LF 12” DIP)
DPRV1410-060
Engineer Job Number: 1-5169

The Water plans for the above project have been reviewed and approved by Pinal County.

A right-of-way use permit will be required. The right-of-way use permit fee is \$509.64. **A copy of this letter must be attached to all permit applications or the application will not be processed.**

Permit fees must be paid at the time permits are issued.

Please contact our office at 520-866-6033 for any questions regarding fees, for any questions regarding permits please contact the Inspection Section at 520-866-6454.

Sincerely,

Lester Chow
*Engineering Division Manager
Pinal County, Community Development Department*

Cc: Permit
Development

COMMUNITY DEVELOPMENT
ENGINEERING DIVISION



PINAL COUNTY
Wide open opportunity

PINAL COUNTY DEPARTMENT OF PUBLIC WORKS

Highways • Flood Control • Fleet Maintenance • Emergency Services
P. O. Box 727, 31 N. Pinal St., Building F, Florence, AZ 85232 (520) 866-6411 FAX (520) 866-7943

**APPLICATION FOR PERMIT TO USE RIGHT OF WAY
(UTILITY COMPANIES)**

A FEE OF \$0.12 CENTS PER LINEAR FOOT OF UTILITY INSTALLATION OR A MINIMUM FEE OF \$50.00 (WHICHEVER IS GREATER). FEE WILL BE DETERMINED UPON APPROVAL. TWO (2) SETS OF COUNTY APPROVED PLANS WILL ALSO NEED TO ACCOMPANY THE APPLICATION. IF THE WORK DESCRIBED HEREIN IS TO BE CONNECTED TO OR BENEFIT APPLICANT'S REAL PROPERTY, A DESCRIPTION OF THAT PROPERTY MUST ALSO ACCOMPANY THE APPLICATION AT THE TIME OF FILING. THE FILING OF THIS APPLICATION DOES NOT GUARANTEE OR GRANT THE ISSUANCE OF A PERMIT. ALL MINIMUM FEES ARE NON REFUNDABLE.

THIS APPLICATION IS FOR WORK IN PINAL COUNTY RIGHT-OF-WAY ONLY. VERIFICATION OF RIGHT-OF-WAY IS THE RESPONSIBILITY OF THE PERMITTEE. IF ROW IS AN EASEMENT, PERMISSION FROM UNDERLYING PROPERTY MUST BE PROVIDED.

UPON ACCEPTANCE OF COMPLETED APPLICATION, THERE IS A SEVEN (7) TO TEN (10) WORKING DAY PROCESSING PERIOD. CALLS REGARDING PERMIT STATUS WILL BE ACCEPTED AFTER SEVEN (7) WORKING DAYS.

IF GRADED OR DISTURBED AREA EQUALS OR EXCEEDS 0.1 AC., YOU MUST APPLY FOR A DUST CONTROL PERMIT FROM AIR QUALITY CONTROL (520-866-6929).

LINEAR FEET : 3,997 LF of 12 inch DIP

APPLICANT:

FIRM/INDIVIDUAL NAME: Arizona Water Company

CONTACT PERSON (If Different from Above): Kevin Pakka EMAIL: kpakka@azwater.com

ADDRESS (City, Street, State, Zip Code): Casa Grande , 220 E 2nd Street , Az. 85122

PHONE & FAX: PH 836-8785 Fax 836-2850

CONTRACTOR NAME & LICENSE NO: Ellison - Mills Contracting LLC
241166 A

SCOPE OF WORK / DESCRIPTION: (i.e., overhead, underground, trench, bore, pavement cut, length)
Replace approx 3870 lf of 6 inch PVC with approx 4,007 LF of 12 inch DIP , 15 services, 1 air relief , by a combination of trenching and boring of services.

pavement cut across Overfield Rd approx. 40 feet. Per Pinal Co. approved plans AWC DWG # PV-0081
DPRV1410-060

RIGHT OF WAY LOCATION: Section 32 Township 5 S Range 7 E

ROAD NAME & OTHER INFORMATION: (Closest Intersection, Direction, Distance)
From the intersection of McCartney Rd and Overfield Rd along McCartney to approx. 1000 feet south of the
intersection of Overfield Rd and Woodruff Rd.

EXPECTED: Start Date 12-20-14 Duration (Days) 130 Completion Date 6-19-15

THIS APPLICATION IS NOT A PERMIT. NO WORK WILL BE ALLOWED TO TAKE PLACE INSIDE THE RIGHT-OF-WAY UNTIL A PERMIT IS ISSUED BY PINAL COUNTY, HEREINAFTER REFERRED TO AS "COUNTY" AND POSTED BY PERMITTEE ON-SITE. THE PERMIT WILL BE SUBJECT TO GENERAL CONDITIONS SET FORTH HEREIN AND ANY SPECIAL CONDITIONS APPLICABLE TO THE SCOPE OF WORK.

**ROW PERMIT
CONDITIONS**

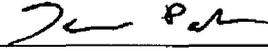
1. Licensee shall defend, indemnify, save and hold harmless Pinal County, its officials and employees without limitation from and against any and all claims (including, but not limited to, workers' compensation, disability or environmental liability claims), damages, losses, liabilities, fees, fines or expenses (including but not limited to attorney fees, court costs, and cost of appellate proceedings) relating to, arising from, resulting from or alleged to have arisen or resulted from the Licensee's exercise of this right-of-way. Licensee's duty to defend, indemnify, save and hold harmless Pinal County, its officials and employees shall arise in connection with any and all claims, damages, losses, liabilities, fees, fines or expenses that are attributable to bodily injury, personal injury, sickness, disease, death or damage to, or destruction of, tangible or intangible property including the loss of use therefrom, or environmental claims and fines, caused in whole or in part by any act, error, mistake or omission of Licensee, its officers, officials, employees, members, guests invitees, participants, agents, vendors, subcontractors or anyone for whose acts Licensee may be liable. That the Licensee assumes the responsibility and all liability for injury or damage to said highway, or to any person while using said highway, caused by arising out of the exercise of this permit or license.
2. That all work done shall be at the sole cost and expense of the Licensee and shall be done at such time and in such a manner as to be least inconvenient to the general public, and as directed by the agent of the Licensor. Work must be finished in the time specified on permit unless the appropriate renewal fees are paid prior to the expiration date.
3. That when the proposed work is completed, the Licensee shall repair the roadbed and replace the surfacing material thereon, and will leave the said road in as good a condition as it is now or better, so far as the road is affected by the Licensee.
4. If the subject of the permit or license fails to pass final inspection, the Licensee will remove or replace the same within such time as specified by written notice from the Licensor, or if at any time hereafter, any material used by the Licensee in replacing or reconstructing any part of said highway proves defective, the Licensee will replace the same with the kind and quality of material which the Licensor shall specify.
5. That if the title and possession of any property placed upon the right-of-way by the Licensee remains in said Licensee, the Licensee shall and will promptly perform all necessary repair work upon written notice from the Licensor, and will not permit or allow any condition to exist which would be a hazard or source of danger to the general public. In the event Licensee fails or refuses to make necessary repairs within a reasonable time after notice from licensor, licensor may make any repairs necessary to eliminate a hazard or source of danger to the public and charge Licensee for the repairs.
6. That if at any time hereafter the right-of-way, or any portion thereof occupied and used by the Licensee, may be needed or required by the Licensor, any permit or license granted in pursuance of this application may be revoked by the Licensor and all rights thereunder terminated and upon sufficient notice, the Licensee shall and will remove all property belonging to said Licensee. This permit is not exclusive unless otherwise stated in the permit. The County reserves the right to use or allow others to use any part of the County right-of-way, property or land pertaining to this permit. The Applicant agrees to allow others of the public free and unrestricted access to, and use of, the County right-of-way, property or land at all times for the lawful purposes.
7. That in the event that the work to be done under the authority of this permit or license necessitates the creation of any hazard or source of danger to any person or vehicle using said highway, said Licensee shall and will provide and maintain at all times during the existence of said hazard sufficient barriers, hanger signals, lanterns, detours in accordance with the Manual on Uniform Traffic Control Devices (M.U.T.C.D.) and shall and will take such other measures of precaution as the Licensor shall direct.
8. That if the work to be undertaken is of such a nature or character that the Licensor deems it necessary that said work be laid out or inspected by the Licensor, said Licensee will defray any and all expenses incurred by said Licensor and herein agrees to reimburse the Licensor and for that purpose will deposit with the Licensor a sum of money in the amount necessary to cover all cost incurred by the Licensor.
9. That in the event any property belonging to or the area occupied by such property being used by the Licensee within any portion of the right-of-way interferes with or is needed to construct, maintain, reconstruct, improve, or relocate any highway, street, road, drainage, or utility lines or structures pertaining thereto, by or for the Licensor or the general public, said Licensee shall at his own expense relocate, remove, lower or raise such property, within a reasonable time, when requested to do so by the Licensor in writing.
10. On or before the effective date of this permit the Licensee shall provide the following to the County Engineer:
 - a. A certificate of insurance confirming that the Licensee has obtained and maintains general liability insurance with a limit of \$1,000,000 per occurrence and \$1,000,000 products liability insurance, said coverage to remain in force for the entire term for which the Permit is granted. All policies shall specify that the subject coverage is primary and shall identify the County as an additional insured. Satisfaction of this insurance requirement shall, in no way limit the Licensee's indemnity obligation as set forth in Paragraph 1 above. Fifteen days written notice of any change in coverage or cancellation of any policy shall be provided to the County Engineer.
 - b. The licensee insurance or self-insurance shall be primary and any insurance maintained by the County shall not contribute to, or be excess of, the Applicant's insurance or self-insurance.
 - c. The licensee insurance or self-insurance shall contain a waiver of rights of recovery or subrogation against the County, its officials and employees for any and all claims, damages, losses, liabilities or expenses relating to, arising from, resulting from, or alleged to have risen or resulted from, the right-of-way.
11. This right-of-way is for County property and shall not be construed as an authorization for use of adjacent private or public property, grounds or land or any other area where a separate right-of-way, agreement or permit may be required. Licensee shall be responsible for obtaining all necessary right-of-way, agreements, permits or insurance by the federal, state, municipal or other governmental or private entity.

12. Licensee will promptly compensate or reimburse County the full amount of any damage to, or loss of use of, County buildings, facilities, grounds, lands, water or property caused by licensee, its officers, officials, employees, members, guests, invitees, or agents. Compensation or reimbursement to the County shall also include, but not limited to, restoration, clean-up, abatement, remedial action, legal fees and expenses or fines.

13. The County shall not be responsible for loss of, damage to, or loss of use of, tangible or intangible property of Licensee, its officers, officials, employees, members, invitees or agents.

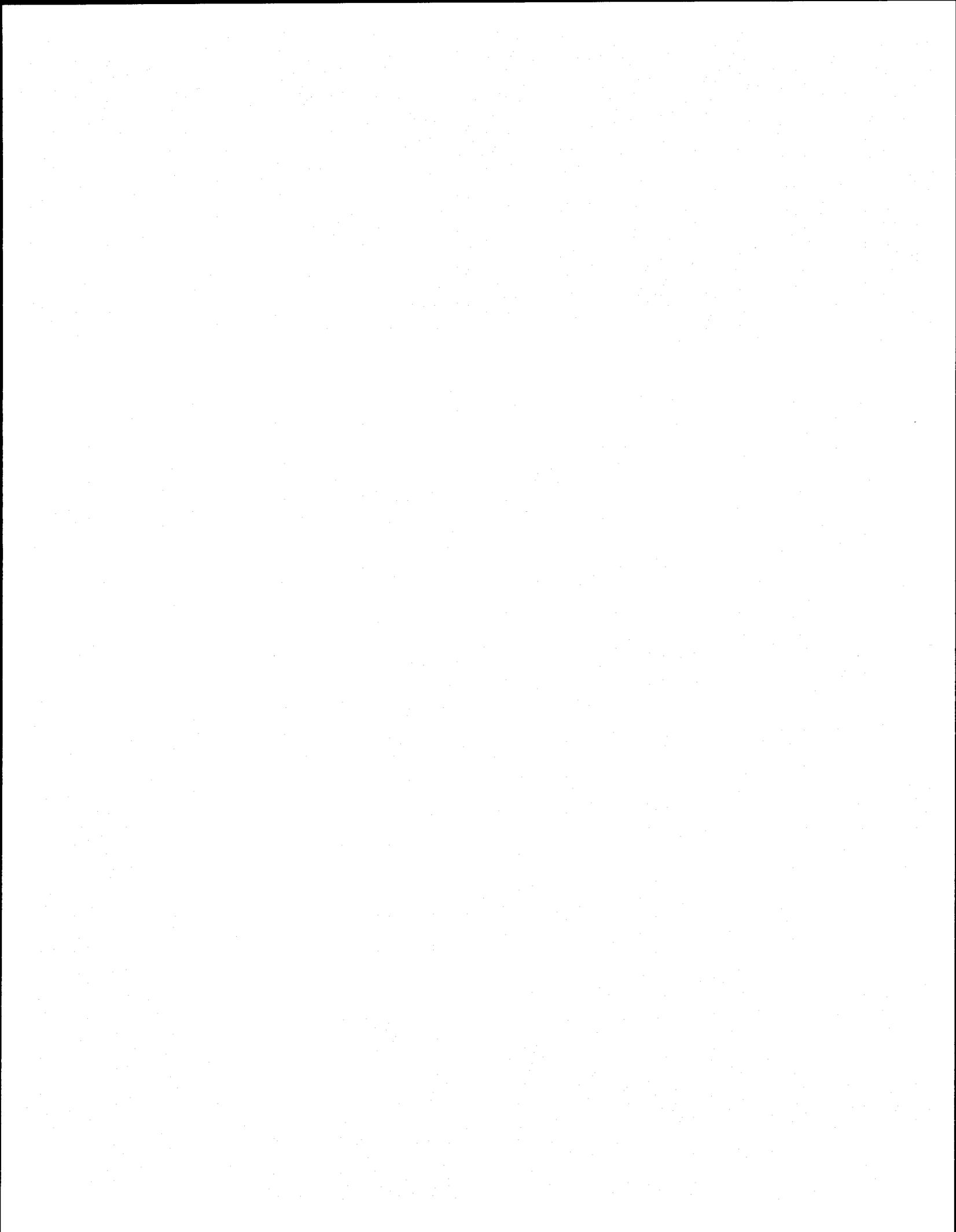
I have read and agree to abide by the terms, conditions and limitations listed above.

Name: Kevin Pakka

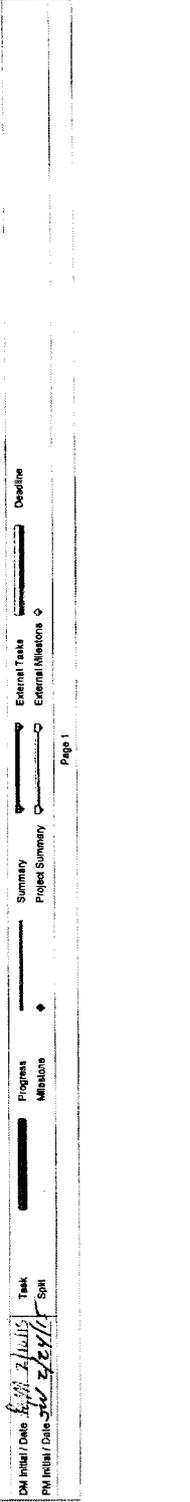
Signature: 

On Behalf of: Arizona Water Company

Date: 12-3-14



ID	Task Name	Duration	Start	Finish	Resources
1	Design	135 days	Mon 2/24/14	Fri 6/18/15	DM, James Wilson
2	Coordinate with field	20 days	Mon 3/24/14	Fri 4/18/14	DM
3	Survey	20 days	Mon 3/24/14	Fri 4/18/14	DM
4	Blue Stake White Mark	1 day	Mon 4/7/14	Fri 4/18/14	DM
5	Survey Complete	0 days	Fri 4/18/14	Fri 4/18/14	DM
6	Preliminary design drawings to field for comment	30 days	Mon 4/21/14	Fri 5/30/14	DM
7	Final design drawings	10 days	Mon 5/19/14	Fri 6/6/14	DM
8	Design drawings complete	0 days	Fri 6/6/14	Fri 6/6/14	DM
9	QADCC	15 days	Mon 7/28/14	Fri 8/15/14	DM
10	Permit	80 days	Mon 8/18/14	Fri 12/5/14	DM, John Knobbe, James Wilson
11	ATC Submittal	20 days	Mon 8/18/14	Fri 9/12/14	DM, John Knobbe, James Wilson
12	Final Co. RDW Permit	80 days	Mon 8/18/14	Fri 12/5/14	DM, John Knobbe, James Wilson
13	ATC	0 days	Fri 12/5/14	Fri 12/5/14	DM, John Knobbe, James Wilson
14	Bidding, WA Approval and RTC	20 days	Mon 8/18/14	Fri 9/12/14	DM, John Knobbe, James Wilson
15	Bid Project	30 days	Mon 8/18/14	Fri 10/24/14	DM, John Knobbe, James Wilson
16	Work Administration Approval and Award Contract	0 days	Mon 8/18/14	Fri 9/12/14	DM, John Knobbe, James Wilson
17	RTC and Execute Contract	160 days	Mon 10/27/14	Fri 1/23/15	DM, John Knobbe, James Wilson
18	Construction	20 days	Mon 10/27/14	Fri 11/20/14	DM, John Knobbe, James Wilson
19	Review and Approve Construction Materials List, Submittal, Schedule, Bonds	1 day	Mon 11/24/14	Mon 11/24/14	DM, John Knobbe, James Wilson
20	Pre-construction Meeting	5 days	Tue 11/25/14	Mon 12/1/14	DM, John Knobbe, James Wilson
21	Construction Staking	80 days	Mon 12/8/14	Fri 3/27/15	DM, John Knobbe, James Wilson
22	Construction Inspection	5 days	Mon 3/23/15	Fri 3/27/15	DM, John Knobbe, James Wilson
23	Pressure Test, Chlorination and Bac-T Test Data	0 days	Fri 3/27/15	Fri 3/27/15	DM, John Knobbe, James Wilson
24	Construction Completion	5 days	Mon 5/11/15	Fri 5/15/15	DM, John Knobbe, James Wilson
25	Final Tie In	0 days	Fri 5/15/15	Fri 5/15/15	DM, John Knobbe, James Wilson
26	Filed in Service	30 days	Mon 3/30/15	Fri 6/5/15	DM, John Knobbe, James Wilson
27	ADEQ AOC	10 days	Mon 3/30/15	Fri 4/10/15	DM, John Knobbe, James Wilson
28	Submit Field As-Built Record Drawings, Pressure Test, Chlorination and Bac-T Test Data	10 days	Mon 4/13/15	Fri 4/24/15	DM, John Knobbe, James Wilson
29	Pressure and Submit AOC application	10 days	Mon 4/27/15	Fri 5/8/15	DM, John Knobbe, James Wilson
30	ADEQ Review and Approval	0 days	Fri 5/8/15	Fri 5/8/15	DM, John Knobbe, James Wilson
31	AOC	15 days	Mon 5/18/15	Fri 6/8/15	DM, John Knobbe, James Wilson
32	Project Close Out	10 days	Mon 5/18/15	Fri 6/8/15	DM, John Knobbe, James Wilson
33	Acceptance of Paving, HIS Notice, Progress Reports, Final Inspection, Final Construction, PCC Notice, and Prepare Final ATB Package	10 days	Mon 5/18/15	Fri 6/8/15	DM, John Knobbe, James Wilson
34	ATB Approval	5 days	Mon 6/1/15	Fri 6/5/15	DM, John Knobbe, James Wilson
35	Project Complete	0 days	Fri 6/5/15	Fri 6/5/15	DM, John Knobbe, James Wilson





WARNING
CORROSION
PROTECTION
ANY DAMAGE

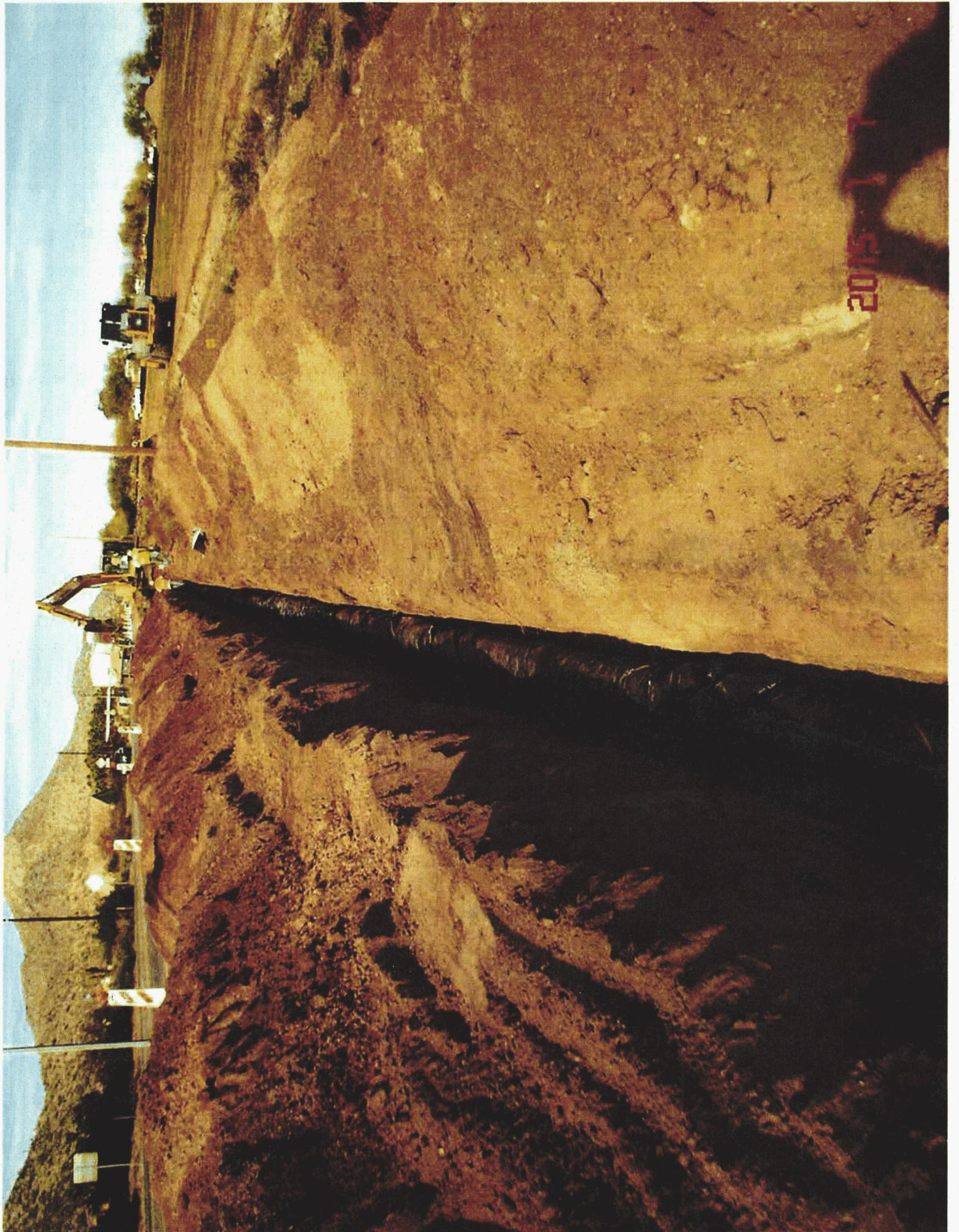
WARNING
CORROSION
PROTECTION
ANY DAMAGE

2015 1 12



2015 1 9



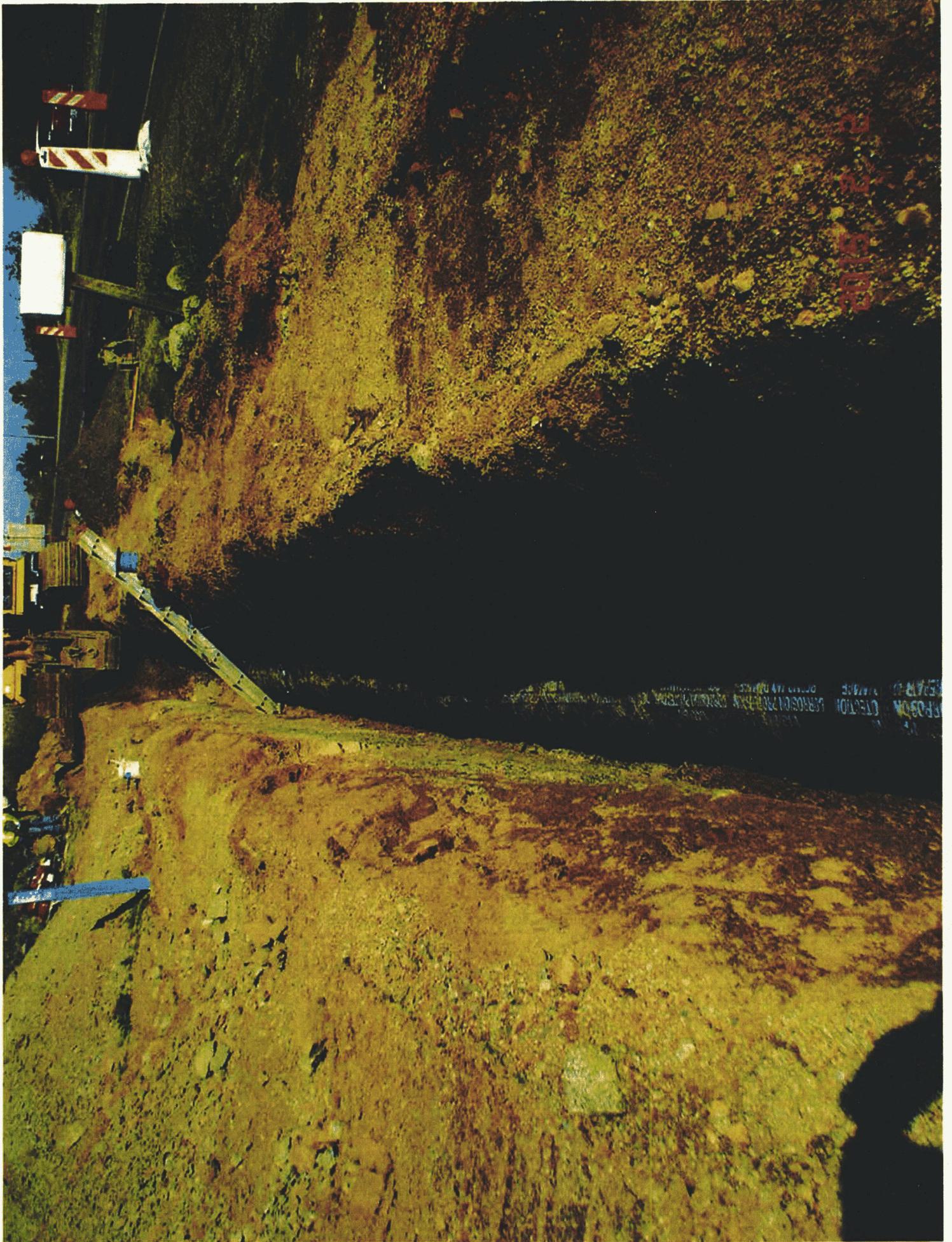




2015 1 13



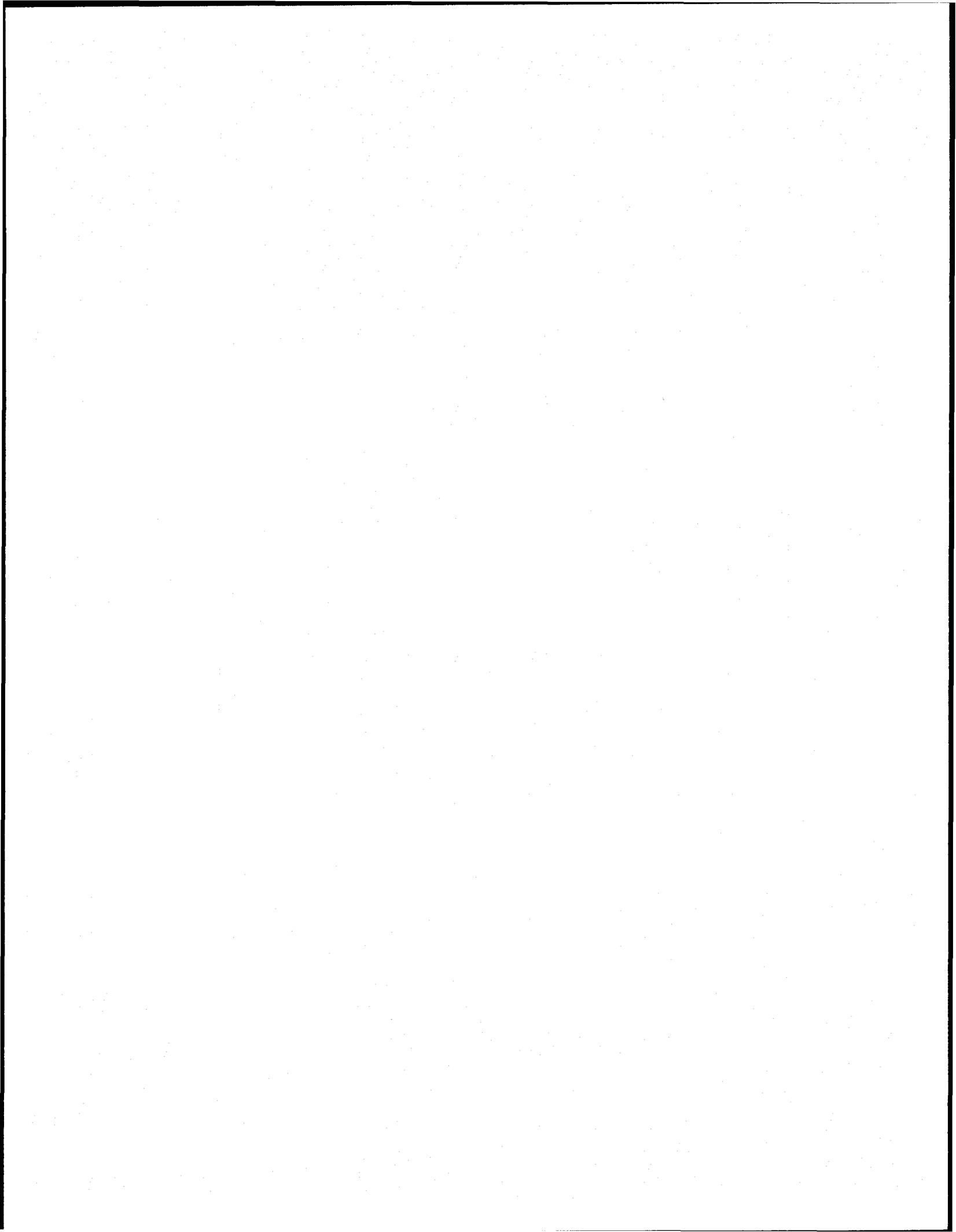
2015 1 19







112 500



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

March 4, 2015

Engineering Review Desk
Arizona Department of Environmental Quality
1110 W Washington St, 5th Floor
Phoenix, Az 85007

Re: Engineer's Certificate of Completion for Overfield Road Replacement
AWC W.A. No. 1-5169
ADEQ File No. 20140233

Dear Engineering Review Desk:

Enclosed is the Engineer's Certificate of Completion for the above-referenced project along with a copy of the Approval to Construct, the pressure, chlorination, bacteriological test data, and As Built Drawing.

If you have any questions concerning this construction, please call or write at your convenience.

Very truly yours,



Andrew J. Haas, P. E.
Chief Engineer

afh
Enclosures

E-MAIL: mail@azwater.com

ENGINEER'S CERTIFICATE OF COMPLETION AND FINAL INSPECTION "ECC"

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) - WATER QUALITY DIVISION 5/01

ADEQ FILE NO.: 20140233 → X DRINKING WATER DESIGN <i>(New separate form now used for WASTEWATER DESIGN)</i> <small>If separate Drinking Water & Wastewater Approvals to Construct were issued, separate ECCs required</small>	COUNTY: Pinal OWNER: ARIZONA WATER COMPANY
Project Name: Overfield Road Replacement <i>(as shown on Approval to Construct)</i>	
W.A. No.1-5169 SYSTEM No.11-009 Project Description: Permit for approximately 4,007 LF of 12-inch DIP, 5 fire hydrants and related fittings for Overfield Road Replacement Project. The length of pipe was decreased to 3,857 LF. The Overfield Road crossing was moved to STA 14+00 to avoid conflict with storm drain at STA 13+50 <p align="right"><small>(as shown on Approval to Construct, unless completed project differed, in which case describe in detail)</small></p>	

I, James T. Wilson, a Professional Engineer registered in the State of Arizona, have inspected the construction of the above described project, and certify that *(check all applicable boxes, complete applicable blanks):*

ITEMS 1) THRU 4) MUST BE COMPLETED

- 1) The work on this project was completed on 2/24/2015 (date).
- 2) On 2/24/2015 a final construction inspection was conducted by MYSELF [*←check one→*] under MY DIRECT SUPERVISION by Scott Johnson (print name).
- 3) The materials utilized and the installation and construction of those materials and equipment are in conformance with the approved plans and specifications.
- 4) All provisions listed in the ADEQ Approval to Construct for this project, a copy of which I have attached to this certificate, have been fully satisfied or exceptions are listed on the reverse side of this certificate.
- 5) All construction and preoperational tests (infiltration, exfiltration, pressure, deflection, chlorination, bacti, etc.) [*circle types performed*] were properly conducted, met ADEQ requirements, and are represented in attachments to this Certificate. The total number of pages of test results attached is 3.

EITHER 6A) or 6B) MUST BE CHECKED

- 6A) Any deviation from the approved plans and the ADEQ Certificate of Approval to Construct have been noted on the attached "As-Built" plans (as stipulated in the Approval to Construct provisions) prepared and sealed pursuant to A.R.S. § 32-125 on 3/24/15 (date). Of the total 11 sheets of "As-Built" plans attached, deviations from the approved plans are shown on sheets numbered 3 OF 11 AND 8 OF 11. All deviations from the approved plans comply with the ADEQ minimum design and construction standards contained in statute, rule, bulletin or referenced codes, and with the key elements of the approved plans.

- 6B) The completed project did not deviate from the plans which received the Approval to Construct.

EITHER 7A) or 7B) MUST BE CHECKED

- 7A) This project did not require the preparation of an Operation and Maintenance Manual.
(the only projects which do NOT require an O&M manual are gravity-only sewage collection systems, single-family residence septic systems, and drinking water distribution projects that include no source, storage, or pressurization facilities).
- 7B) A FINAL Operation and Maintenance Manual has been prepared for this project and a copy is attached. This manual meets all ADEQ minimum design and construction standards contained in statute, rule, bulletin, referenced codes, the key elements of the approved plans, and, if applicable, with Attachment B of the September 10, 1994 Engineering Advisory for Individual Alternate Systems.

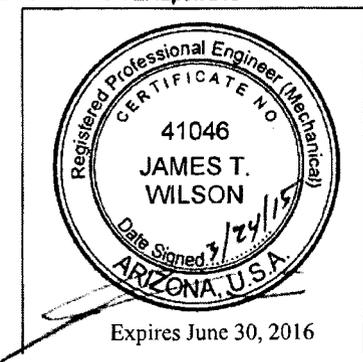
EITHER 8A) or 8B) MUST BE CHECKED

- 8A) Review of this project for Approval of Construction issuance does not require a fee because this project involves only drinking water, not wastewater.
- 8B) In accordance with A.A.C. R18-9-103 Schedule B, a check in the amount of \$ _____ is attached as initial fee for review of the submitted and other information for issuance of an Approval of Construction.
- 9) Other, see additional information on reverse side.

Engineer Address PO Box 29006, Phoenix, AZ 85038-9006
 Phone 602-240-6860

AZ DEPARTMENT OF ENVIRONMENTAL QUALITY ACCEPTANCE

 EMPLOYEE SIGNATURE (PRINTED NAME) DATE





**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF APPROVAL TO CONSTRUCT
WATER FACILITIES**

ADEQ File No: 20140233	LTF No: 61146
System Name: Pinal Valley	System Number: 11-009
Project Owner: Arizona Water Company	
Address: P O Box 29006, Phoenix, AZ 85038	
Project Location: Casa Grande	County: Pinal
Description: AZ WATER CO. - OVERFIELD ROAD REPLACEMENT 1-5169. ATC PERMIT FOR APPROX. 4,007 LF OF 12-INCH DIP, 5 FIRE HYDRANTS AND RELATED FITTINGS.	

Approval to construct the above-described facilities as represented in the approved documents on file with the Arizona Department of Environmental Quality is hereby given subject to provisions 1 through 5 continued on page 2 through 2

1. This project must be constructed in accordance with all applicable laws, including Title 49, Chapter 2, Article 9 of the Arizona Revised Statutes and Title 18, Chapter 5, Article 5 of the Arizona Administrative Code.
2. Upon completion of construction, the engineer shall fill out the Engineer's Certificate of Completion and forward it to the Central Regional Office located in Phoenix. If all requirements have been completed, that unit will issue a Certificate of Approval of Construction. R18-5-507(B), Ariz. Admin. Code. At the project owner's request, the Department may conduct the final inspection required pursuant to R18-5-507(B); such a request must be made in writing in accordance with the time requirements of R18-5-507(C), Ariz. Admin. Code.
3. This certificate will be void if construction has not started within one year after the Certificate of Approval to Construct is issued, there is a halt in construction of more than one year, or construction is not completed within three years of the approval date. Upon receipt of a written request for an extension of time, the Department may grant an extension of time; an extension of time must be in writing. R18-5-505(E), Ariz. Admin. Code.
4. Operation of a newly constructed facility shall not begin until a Certificate of Approval of Construction has been issued by the Department. R18-5-507(A), Ariz. Admin. Code.

Reviewed by: ASB

By: David Burchard 9/15/14
David Burchard
Water Quality Division

cc: File No : 20140233
Regional Office: Central
Owner: Arizona Water Company
County Health Department: Pinal
Engineer: Arizona Water Company
Member of Regional Commission

RECEIVED
SEP 18 2014
PHOENIX OFFICE
ENGINEERING

**APPROVAL TO CONSTRUCT
POTABLE WATERLINE
ADEQ FILE No. 20140233
PAGE 2 OF 2: PROVISIONS CONTINUED**

5. The Arizona Department of Environmental Quality's review of this application was subject to the requirements of the licensing time frames ("LTF") statute under Arizona Revised Statutes ("A.R.S.") § 41-1072 through § 41-1079 and the LTF rules under Arizona Administrative Code ("A.A.C.") R18-1-501 through R18-1-525. This Notice is being issued within the overall time frame for your application.

ADEQ hereby approves your application for Approve to Construct Drinking Water Facilities under A.R.S. § 49-351. Your copy is enclosed.

This decision is an appealable agency action under A.R.S. § 41-1092. You have a right to request a hearing and file an appeal under A.R.S. § 41-1092.03(B). You must file a written Request for Hearing or Notice of Appeal within **30 days** of your receipt of this Notice. A Request for Hearing or Notice of Appeal is filed when it is received by ADEQ's Hearing Administrator as follows:

Office of Administrative Counsel
Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007

The Request for Hearing or Notice of Appeal shall identify the party, the party's address, the agency and the action being appealed and shall contain a concise statement of the reasons for the appeal. Upon proper filing of a Request for Hearing or Notice of Appeal, ADEQ will serve a Notice of Hearing on all parties to the appeal. If you file a timely Request for Hearing or Notice of Appeal you have a right to request an informal settlement conference with ADEQ under A.R.S. § 41-1092.06. This request must be made in writing no later than **20 days** before a scheduled hearing and must be filed with the Hearing Administrator at the above address.

Please contact Ali Baadiyan at (602) 771-4127 or asb@azdeq.gov if you have questions regarding this Notice or the Certificate of Approved to Construct.

INSTRUCTIONS

Please complete the test data and submit this form with the Engineers Certificate of Completion. An Approval of Construction cannot be issued without the data identified below in accordance with Arizona Administrative Code (A.A.C.) R18-5-508(C). Please attach all supplemental information and calculations to this form.

DATA

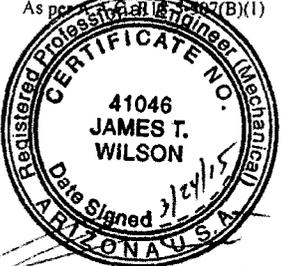
1.

PRESSURE TEST DATA					
Indicate Segment Tested		OVERFIT ROAD			
Pressure and Leakage Test Results (Pass/Fail)		PASS			
Date Tested		2-10-15			
Time Started		9:45 AM			
Time Finished		11:45 AM			
Pipe Diameter		12"			
Footage Tested		38571'			
Allowable Leakage		9.2568			
Leakage Observed		0			
Pressure at Test Point		200 PSI			
Employee Observing the Test (Please Print Legibly)		SCOTT H. JOHNSON			
Signature of Employee Observing the Test		<i>Scott H. Johnson</i>			

2.

DISINFECTION SAMPLING					
Initial Sampling (Minimum 50 ppm available chlorine)	Date	2-11-15			
	Time	9:00 AM			
	ppm Cl ₂	200 ppm			
After 24 Hours Detention Time (Minimum 10 ppm free chlorine)	Date	2-12-15			
	Time	9:00 AM			
	ppm Cl ₂	200 ppm			
After Sufficient Flushing (Water is clear and system Cl ₂ residual is measured)	Date	2-18-15			
	Time	12:00 PM			
	ppm Cl ₂	1.0			
Bacteriological Sampling(s):	Date	2-18-15			
	Time	12:15 PM			
	Attached (Y/N)	Y			
	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

3.

Certification	Professional Seal
<p>I, <u>SCOTT H. JOHNSON</u>, certify that I have inspected the work performed and have found it to be satisfactory and in accordance with Arizona Administrative Code, Arizona Engineering Bulletins, and the approved specifications.</p> <p><i>Scott H. Johnson</i> 2-24-15 Authorized Persons Signature Date</p>	<p>As per Arizona Administrative Code (A.A.C.) R18-5-508(B)(1)</p>  <p>EXPIRES 6/30/16</p>

Regina Lynde
 Arizona Water Company
 3805 N. Black Canyon Hwy
 Phoenix, AZ 85015

Project: Specials
 Project Number: Overfield WA-1-5169 2/18/15

Reported:
 02/24/15 13:10

5021660

CHAIN OF CUSTODY RECORD



17831 N. 25th Avenue • Phoenix, AZ 85023 • (602) 324-6100 • Fax (602) 324-6101
 4585 S. Palo Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0516

Page 1 of 1

Please Print Clearly

CLIENT INFORMATION		Address		City	State	Zip	Phone (602)	Fax Number or Email Address
Arizona Water		220 E 2 ND ST		CASA GRANDE	AZ	85122	836-8785	(520) 836-2850
Project Name		Project Number		Contact	P.O. No.	Fax Results	QC Report	EOD
Overfield		WA-1-5169		RAY MURRIETA		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SAMPLE TYPE CODES		TURN AROUND TIME		REQUESTED ANALYSES				
DW=Drinking Water WW=Wastewater SW=Surface Water GW=Groundwater O=Other S=Soil/Solid T=Travel Blank F=Food G=Sludge/Sewer/G		Laboratory Authorization Required for Rush <input type="checkbox"/> Standard 10 - 15 Day <input type="checkbox"/> Other		[Diagonal lines indicating analysis requested]				
Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	No. of Containers	Lab No.
Overfield #1	2/18/15	12:15pm	Overfield #1			PL	1	01
Overfield #2	2/18/15	12:30pm	Overfield #2			PL	1	02

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: (SPECIAL) Do NOT Report to AEDR Overfield #1 I.O / Overfield #2 I.O

SAMPLE CONDITION UPON RECEIPT (Lab Use)	
No. of Containers	2
Temperature	12.3°C
Custody Seals	Y ⁽¹⁰⁾
Seals Intact	Y N
Preserved	Y N

RELINQUISHED BY		SAMPLES RECEIVED BY	
① Sampler Signature: Scott H. Jackson	Date: 2/18/15	Signature: [Signature]	Date: 2/18/15
Sampler Printed Name: SCOTT H. JACKSON	Time: 1:00pm	Printed Name: [Signature]	Time: 12:14S
② Sampler Signature: [Signature]	Date: 2/18/15	Signature: [Signature]	Date: 2/18/15
Sampler Printed Name: [Signature]	Time: 11:25	Printed Name: [Signature]	Time: 14:25
③ Sampler Signature:	Date:	Signature:	Date:
Sampler Printed Name:	Time:	Printed Name:	Time:

WHITE-LAB YELLOW-CLIENT

FORM GEN-170 (05/06) Of Over Temp per Client. 2/18/15

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

LEGEND

Technical Services, Inc.

www.legend-group.com

17631 N. 25th Avenue • Phoenix, AZ 85023
P (602) 324-6100 • F (602) 324-6101

Regina Lynde
Arizona Water Company
3805 N. Black Canyon Hwy
Phoenix, AZ85015

Project: Specials
Project Number: Overfield WA-1-5169 2/18/15

Reported:
02/24/15 13:10

Analyte

Overfield #1 (5021660-01) Drinking Water (Grab) Sampled: 02/18/15 12:15 Received: 02/18/15 14:25

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----	-------	----------	-------	----------	----------	--------	-------

Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5B0508	02/18/15 17:20	02/18/15 17:20	SM 9223B	
Total Coliforms	Absent		P/A	1	B5B0508	02/18/15 17:20	02/18/15 17:20	SM 9223B	

Overfield #2 (5021660-02) Drinking Water (Grab) Sampled: 02/18/15 12:30 Received: 02/18/15 14:25

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----	-------	----------	-------	----------	----------	--------	-------

Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5B0508	02/18/15 17:20	02/18/15 17:20	SM 9223B	
Total Coliforms	Absent		P/A	1	B5B0508	02/18/15 17:20	02/18/15 17:20	SM 9223B	

Sample Condition Upon Receipt:

Temperature: 12.30 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Accreditations: AZ(PHX)0004, AZ(TUC)0004, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

Chain of Custody indicates special only do not report to ADEQ- BF

The sample was received above temperature upon receipt. Analyze above temperature as indicated on the chain of custody- BF

Notified Scott of the absent results on 02/23/15. BF

Notes and Definitions

Legend Technical Services of Arizona, Inc.

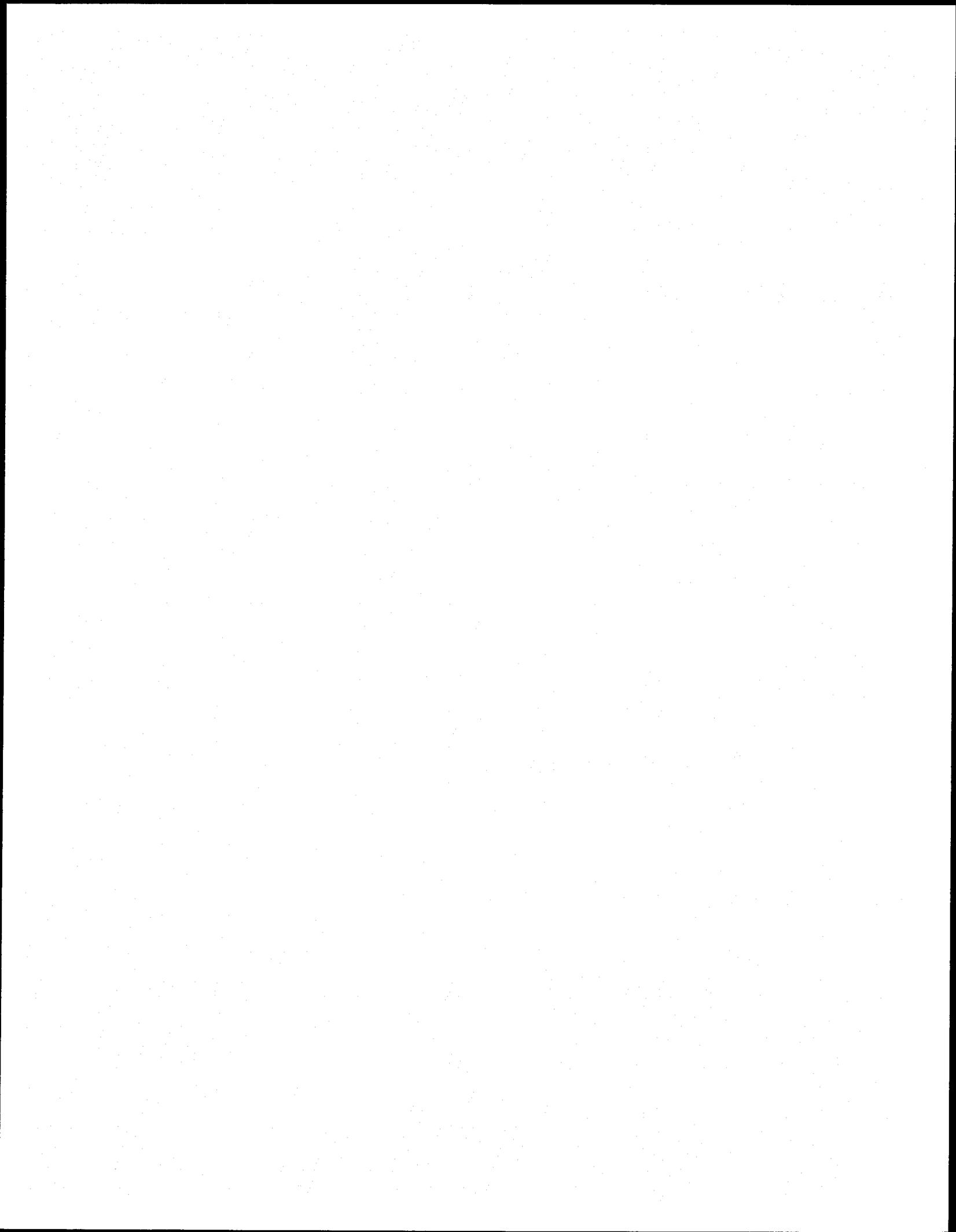


Client Services Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Phone Number: (602) 324-6100

Page 1 of 2





Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Henry R. Darwin
Director

APPROVAL OF CONSTRUCTION

Project Description: AZ Water Co. - Overfield Road Replacement 1-5169. AOC permit for approx. 3,857 LF of 12-inch DIP, 5 fire hydrants and related fittings.

Location: Casa Grande, AZ

Project Owner: Arizona Water Company
Address: PO Box 29006 . Phoenix, AZ 85038

The Arizona Department of Environmental Quality (ADEQ) hereby issues an Approval of Construction for the above-described facility based on the following provisions of Arizona Administrative Code (A.A.C.) R18-5-507 et seq.

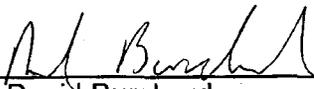
On 3/24/15, James T. Wilson, P.E., certified that the project was built according to the as-built plans and specifications and ADEQ's Certificate of Approval to Construct.

On 9/15/14 ADEQ issued a Certificate of Approval to Construct for the referenced project.

This Approval of Construction authorizes the owner to begin operating the above-described facilities as represented in the approved plan on file with the ADEQ. Be advised that A.A.C. R18-5-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

ASB

PWS No.: 11-009
LTF No.: 62088



 David Burchard
 Manager

4/1/15

 Date Approved

Cc: ADEQ File No.: 20140233
Pinal County Health Department
AZ Corporation Commission
Engineer

RIGHT TO APPEAL INFORMATION

The Arizona Department of Environmental Quality's review of this application was subject to the requirements of the licensing time frames ("LTF") statute under Arizona Revised Statutes ("A.R.S.") § 41-1072 through § 41-1079 and the LTF rules under Arizona Administrative Code ("A.A.C.") R18-1-501 through R18-1-525. This Notice is being issued within the overall time frame for your application.

ADEQ hereby approves your application for Approval of Construction Drinking Water Facilities under A.R.S. § 49-351. Your copy of the Approval of Construction Permit is on the reverse side of this Right to Appeal Information sheet.

This decision is an appealable agency action under A.R.S. § 41-1092. You have a right to request a hearing and file an appeal under A.R.S. § 41-1092.03(B). You must file a written Request for Hearing or Notice of Appeal within **30 days** of your receipt of this Notice. A Request for Hearing or Notice of Appeal is filed when it is received by ADEQ's Hearing Administrator as follows:

Office of Administrative Counsel
Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007

The Request for Hearing or Notice of Appeal shall identify the party, the party's address, the agency and the action being appealed and shall contain a concise statement of the reasons for the appeal. Upon proper filing of a Request for Hearing or Notice of Appeal, ADEQ will serve a Notice of Hearing on all parties to the appeal. If you file a timely Request for Hearing or Notice of Appeal you have a right to request an informal settlement conference with ADEQ under A.R.S. § 41-1092.06. This request must be made in writing no later than **20 days** before a scheduled hearing and must be filed with the Hearing Administrator at the above address.

Please contact Ali Baadiyan at (602) 771-4127 or asb@azdeq.gov if you have questions regarding this Notice or the Certificate of Approved of Construction.

Western Group Rate Case

Exhibit FKS-1

5170 Cottonwood BPS & Tank

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5170
 P.E. NUMBER: 1431
 BUDGET ITEM NO.: B-1
 SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: JAMES WILSON	WORK TO BE FINISHED BY: WITHIN 180 DAYS
TAX CODE: 0403	

DESCRIPTION OF WORK:
 Reconstruct the Cottonwood Lane tank and booster pump station. Remove the top four feet of the one million gallon storage tank, replace the roof and rafters, and coat the interior and exterior of the tank. Replace the welded steel suction and discharge piping with ductile iron pipe. Replace the booster pumps, motors and discharge heads.

FACTORS JUSTIFYING WORK:
 APPROVED 2014 BUDGET ITEM (\$650,000):
 The roof and rafters of the Cottonwood Lane 1MG storage tank were damaged during a tank overflow. The storage tank was drained and removed from service for inspection by Company engineers. Upon inspection, Company engineers requested a detailed structural evaluation of the tank. Heerup Engineering completed a structural analysis. The report recommends removal and replacement of the top 4 feet of the tank, adding a 24-inch vent and 18-inch over flow to allow the tank to overflow properly and prevent over pressurization of the tank, and additional structural damage. The damage is visible from outside the tank and the City of Casa Grande requested the Company repair the tank to make it more visually appealing and reflect the cities modern and developed theme. The old and failing booster pump station was constructed in 1962 and is over 50 years old. Company Engineers have determined the booster pumps are worn, operating at reduced capacity and efficiency, nearing the end of their service life. The welded steel suction and discharge piping is corroded and nearing the end of its useful life. The 24-inch and 16-inch isolation valves between the 1MG tank and BPS are inoperable and require replacement.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	James Wilson <i>gw 11/21/14</i>	11/17/14
LABOR	7,700	REVIEWED FOR ESM/TROW VERIFICATION:	
CONTRACT PORTION	160,635	Charles Briggs <i>CB 11-24-2014</i>	11-17-2014
OVERHEAD	20,200	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 188,535	Andy Haas <i>AH 11-24-14</i>	11-17-14
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	Fredrick Schneider <i>FS 12-1-14</i>	11-17-14
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	Joseph Harris	11/18/14
NET COMPANY CASH REQUIRED	\$ 188,535	AUTHORIZED BY PRESIDENT:	
		William Garfield	11-19-2014

COMMENTS:
 2014 Expenditure \$188,000
 2015 Anticipated Expenditure \$662,000
 Total Project Cost \$850,000
 Transfer all charges from PE 1431 to this WA
 Transfer funds from 1-5169 (Overfield Rd.) WA's to fund this project

CONSTRUCTION RELEASE:
RELEASED TO CONSTRUCTION
 Authorized by FRED SCHNEIDER
 Date 11/20/14

ARIZONA WATER COMPANY

W.A. NUMBER: 1-5170
 P.E. NUMBER: 1431
 BUDGET ITEM NO.: B-1
 SHEET NO.: 2 of 2

WORK AUTHORIZATION - DETAIL SHEET

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER

PROJECT DESCRIPTION:
 Reconstruct the Cottonwood Lane tank and booster pump station. Remove the top four feet of the one million gallon storage tank, replace the roof and rafters, and coat the interior and exterior of the tank. Replace the welded steel suction and discharge piping with ductile iron pipe. Replace the booster pumps, motors and discharge heads.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	BPS suction and discharge header, surge anticipator and related fitting	325	0	208,200	
	Demo BPS suction and discharge piping	325	0	27,300.00	
	1-inch service, BFP, hose bib and related fittings	325	0	5,000.00	
	Sampling station and related fittings	325	0	3,300.00	
	Relocate existing J-box and related wiring	325	0	1,400.00	
	Paint BPS header, motors and discharge heads	325	0	3,400.00	
	Provide and install new pump assembly	325	0	37,800.00	
	Storage tank structural design	325	1	34,500.00	34,500
	Construct storage tank repairs	325	0	129,800.00	
	Tank interior and exterior coating	325	0	163,400.00	
	Cathodic protection system	325	0	12,000.00	
	150HP VSS motor	325	0	13,000.00	0
	Contracting tax	325	0	40,965.00	
	Performance and payment bond	325	0	9,378.00	
Coating Inspection	325	0	5,000.00	0	
CO-1 Temporary Pump Station	325	1	126,135.00	126,135	
Contingency	325	0	50,000.00		

TOTAL CONTRACT WORK \$ 160,635

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
SERVICE CONNECTIONS: SINGLE-SHORT	345				
METERS	346	0	150.00		

TOTAL MATERIALS \$ -

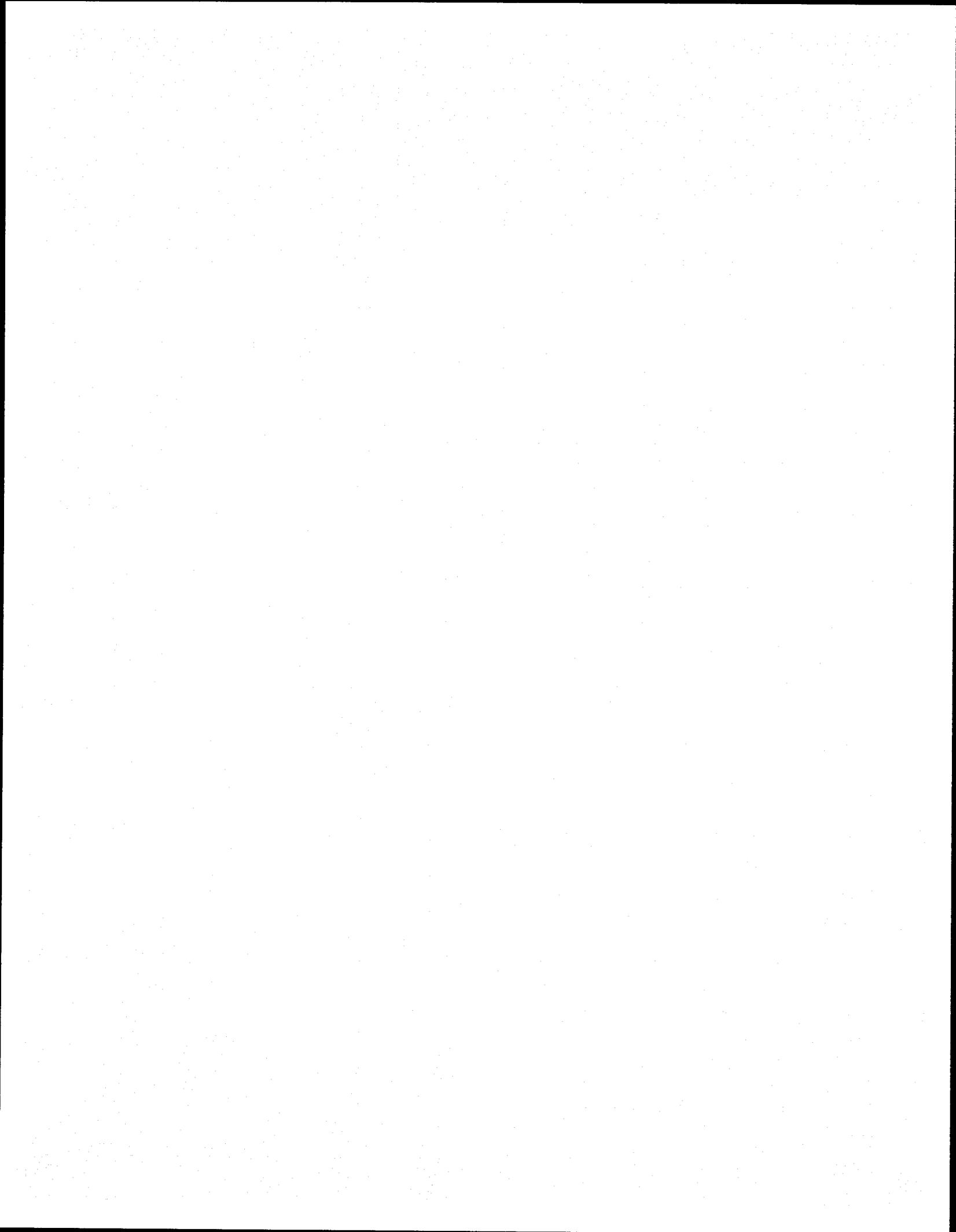
L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Engineering Design and Project Management	325	40	\$ 55.00	\$ 2,200
	TESTING FEE	325	1	\$ 1,500.00	1,500
	PERMIT FEE	325	1	1,800.00	1,800
	SURVEY FEE	325			
	FIELD INSPECTION	325	40	55.00	2,200
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345				
INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345				
INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				

TOTAL LABOR \$ 7,700

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 168,335

OVERHEAD 20,200

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 188,535



ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5170
P.E. NUMBER: 1431
BUDGET ITEM NO.: 1-5170
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: JAMES WILSON	WORK TO BE FINISHED BY: WITHIN 120 DAYS
TAX CODE: 0403	

DESCRIPTION OF WORK:
Complete reconstruction of the Cottonwood Lane tank and booster pump station. Remove the top four feet of the one million gallon storage tank, replace the roof and rafters, and coat the interior and exterior of the tank. Replace the welded steel suction and discharge piping with ductile iron pipe. Replace the booster pumps and one motor.

FACTORS JUSTIFYING WORK:
APPROVED 2015 BUDGET ITEM (\$950,000)
The roof and rafters of the Cottonwood Lane 1MG storage tank were damaged during a tank overflow. The storage tank was drained and removed from service for inspection by Company engineers. Upon inspection, Company engineers requested a detailed structural evaluation of the tank. Heerup Engineering completed a structural analysis. The report recommends removal and replacement of the top 4 feet of the tank, adding a 24-inch vent and 18-inch over flow to allow the tank to overflow properly and prevent over pressurization of the tank, and additional structural damage. The damage is visible from outside the tank and the City of Casa Grande requested the Company repair the tank to make it more visually appealing and reflect the Cities' modern and developed theme. The old and failing booster pump station was constructed in 1961 and is over 50 years old. Company Engineers have determined the booster pumps are worn, operating at reduced capacity and efficiency, and nearing the end of their service life. The welded steel suction and discharge piping is corroded and nearing the end of its useful life. The 24-inch and 16-inch isolation valves between the 1MG tank and BPS are inoperable and require replacement.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	150	James Wilson gw 2/4/15	1/26/15
LABOR	14,300	REVIEWED FOR ESMT/ROW VERIFICATION	
CONTRACT PORTION	743,408	Charles Briggs CB 02-05-2015	01-26-2015
OVERHEAD	90,900	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 848,758	Andy Haas AWH 2-5-15	1-27-15
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	Fredrick Schneider FS 2-5-15	1-27-15
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	Joseph Harris	1/27/15
NET COMPANY CASH REQUIRED	\$ 848,758	AUTHORIZED BY PRESIDENT:	
		William M Garfield	1-30-2015

COMMENTS:

2014 Expenditure \$70,000
2015 Expenditure \$849,000
Total Project Cost \$919,000

CONSTRUCTION RELEASE:

RELEASED TO CONSTRUCTION
Authorized by FRED SCHNEIDER
Date 2/4/2015

2015 RE-RELEASE

ARIZONA WATER COMPANY

W.A. NUMBER: 1-5170

P.E. NUMBER: 1431

BUDGET ITEM NO.: B-1

SHEET NO.: 2 of 2

WORK AUTHORIZATION - DETAIL SHEET

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER
		342	4' of Tank steel, roof & metals	1
	325	150 HP motor	1	1961 - 1-1613
	325	2200 GPM Pump	1	1974 - 1-4013
	325	2200 GPM Pump	1	1961 - 1-1613
	325	2200 GPM Pump	1	2014 - 1-5127 1961 - 1-1613
	343	12-inch Steel main water main	78 LF	1961 - 1-1613
	343	14-inch Steel main water main	50 LF	1961 - 1-1613
	343	24-inch Steel main water main	23 LF	1961 - 1-1613

PROJECT DESCRIPTION:
 Reconstruct the Cottonwood Lane tank and booster pump station. Remove the top four feet of the one million gallon storage tank, replace the roof and rafters, and coat the interior and exterior of the tank. Replace the welded steel suction and discharge piping with ductile iron pipe. Replace the booster pumps, motors and discharge heads.

CONTRACT WORK	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
		BPS suction and discharge header, surge anticipator and related fitting	325	1	208,200
	Demo BPS suction and discharge piping	325	1	27,300.00	27,300
	1-inch service, BFP, hose bib and related fittings	325	1	5,000.00	5,000
	Sampling station and related fittings	325	1	3,300.00	3,300
	Relocate existing J-box and related wiring	325	3	1,400.00	4,200
	Paint BPS header, motors and discharge heads	325	1	3,400.00	3,400
	Provide and install new pump assembly	325	3	33,476.00	100,428
	Storage tank structural design	325	1	34,500.00	34,500
	Construct storage tank repairs	325	1	129,800.00	129,800
	Tank interior and exterior coating	325	0	163,400.00	
	Cathodic protection system	325	1	12,000.00	12,000
	150HP VSS motor	325	1	10,000.00	10,000
	Contracting tax	325	1	40,965.00	40,965
	Performance and payment bond	325	1	9,378.00	9,378
	Coating Inspection	325	1	13,250.00	13,250
	CO-1 Temporary Pump Station	325	1	166,751.00	166,751
	CO-2 Tank level indicator and ring shoring	325	1	15,000.00	15,000
	Contingency	325	1	25,000.00	25,000
	Partial payment for work completed in 2014 (temporary BPS and bond	325	1	(65,063.75)	(65,064)

TOTAL CONTRACT WORK \$ 743,408

MATERIALS	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
		SERVICE CONNECTIONS: DOUBLE-LONG	345		
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
	SERVICE CONNECTIONS: SINGLE-SHORT	345			
	METERS	346	1	150.00	150

TOTAL MATERIALS \$ 150

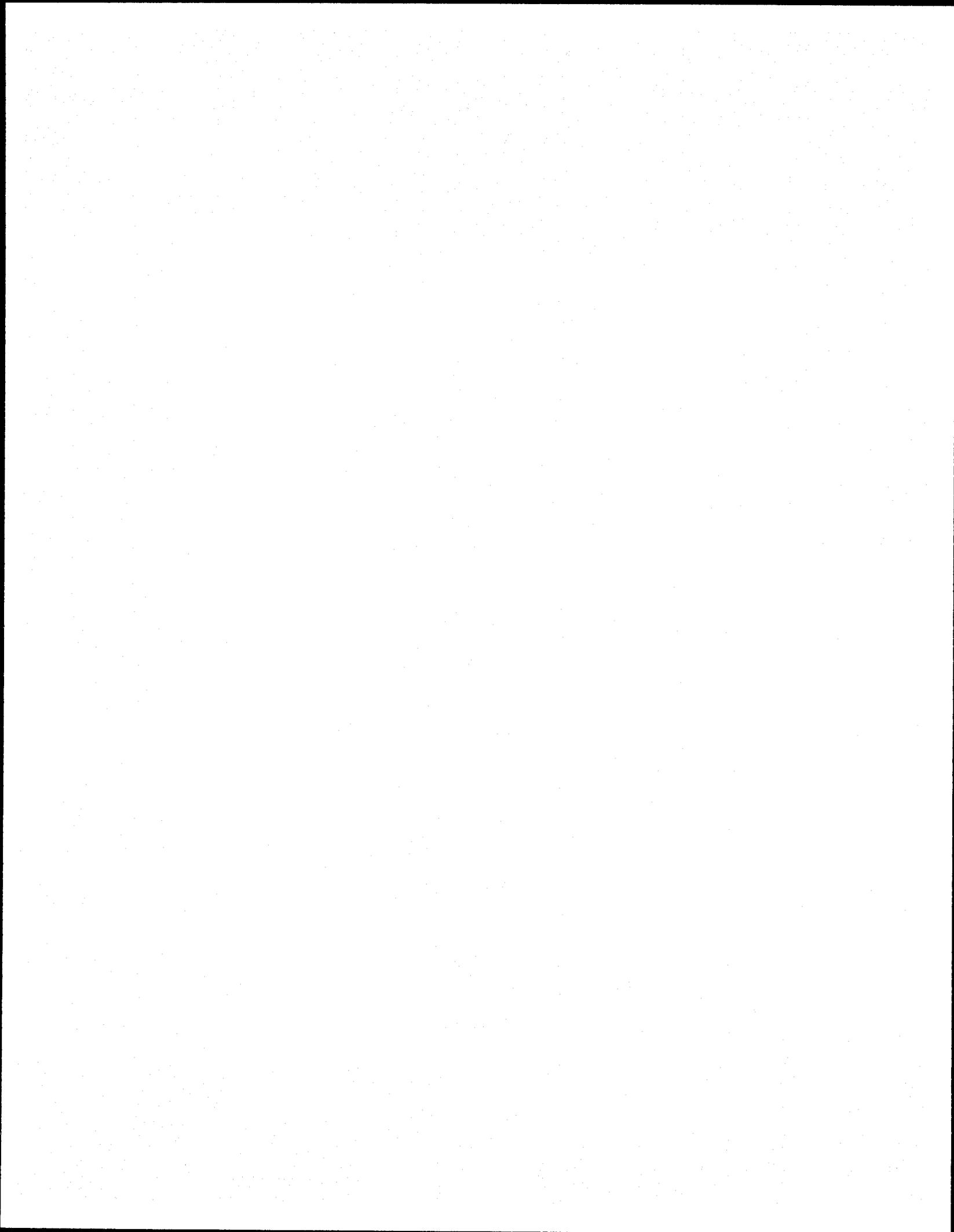
LABOR	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
		Engineering Design and Project Management	325	100	\$ 55.00
	TESTING FEE	325	1	\$ 1,500.00	1,500
	PERMIT FEE	325	1	1,800.00	1,800
	SURVEY FEE	325			
	FIELD INSPECTION	325	100	55.00	5,500
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345			

TOTAL LABOR \$ 14,300

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 757,858

OVERHEAD 90,900

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 848,758





HEERUP ENGINEERING, PC

10812 N. 44th Street
Phoenix, AZ 85012

Tel: (602)293-6829
Fax: (602)595-0678

HE File 1208
1MG WT-Casa Grande

April 4, 2012

Chad Kauffman
OPTCO Painting
5136 S. Desert View Drive
Apache Junction, AZ 85120

Project: Inspection for Structural Evaluation of 1 MG Water Tank in Casa Grande, AZ

Dear Mr. Kauffman:

Per a request from your office, Heerup Engineering, PC (HE) has conducted an inspection and evaluation of the Arizona Water Company 1 MG Water Tank, on Cottonwood Lane, Casa Grande, Arizona.

We were initially contacted by your office on February 13, 2012. Curriculum Vitae for Carl V. Heerup II, PE is in Appendix C.

Our work and reporting has been conducted in accordance with the following standards among others:

- ASTM E620-04, "Standard Practice of Reporting Opinions of Technical Experts"
- ASTM E678-07, "Standard Practice for Evaluation of Technical Data"

Applicable Codes and Standards

- American Water Works Association Standard AWWA D100-11, "Welded Carbon Steel Tanks for Water Storage" (AWWA D100)
- Minimum Design Loads for Buildings and other Structures, 2010 Edition (ASCE-7)

Excerpts from AWWA D100 are contained in Appendix B.

Inspection

Mr. Carl V. Heerup II, PE conducted an on-site inspection of the structure on March 7, 2012, with Mr. Greg Sprinkle.

Mr. Heerup examined the foundation of the structure, of steel ring-wall and gravel, and noted no significant corrosion, excessive displacement, or other signs of distress.

He examined the interior floor, and noted very minor corrosion, only minor displacement, and no other signs of distress.

The walls, consisting of steel plate, were examined, and below approximately 48" from the eave, there was no significant corrosion on the exterior, only minor interior corrosion, and no apparent distortion (Figure 1). Between approximately 48" down and the eaves, however, there were a number of large dents around the perimeter, including displacements of approximately 9" (Figure 2). At the exterior, these were moderately corroded. At the interior, the walls and the eave angle were also distorted and moderately corroded. (Figure 3)

The rafters, consisting of 12" and 6" channels, were severely distorted and severely corroded. All rafters were bent about their minor axis in the direction of the web, with displacements of up to 12" (Figure 4). They were also torqued, with a rotation of 4°-8° counterclockwise (as viewed from the tank wall) (Figure 5). Significant areas of the flanges were heavily corroded, with section loss of 1/32" to 1/8" (Figure 6). All attachments at the walls and between rafters appeared intact, although a number of bolts were moderately corroded (Figure 7). Attachments at the center column were heavily corroded (Figure 8).

The roof plate, consisting of welded steel plate, approximately 3/16" thick, was severely distorted and somewhat corroded at the locations where it had been resting on the rafters during painting, and had received no paint. The plate was raised off of the rafters by up to 9" all about the quarter point of rafter span (Figure 9). In places this raising continued to near the center column. Two locations were observed where the roof plate was resting on cathodic protection insulators which were jammed between it and the rafters (Figure 10). At the exterior, the distortion had created ponding locations, as evidenced by dirt accumulations (Figure 11).

The center column, consisting of 8" steel pipe, exhibited minor distortion and minimal corrosion (Figure 8). The column was plumb, within a few tenths of a degree, but had been rotated approximately 6°, as evidenced by the paint marks near the footing (Figure 12).

Appurtenances were examined. The 24" manways at the lower ring were in good condition, as was the roof manway. The exterior ladder was in good condition, and was AWWA D100-compliant (Figure 13). There is no interior ladder. The 24" outlet was in fair condition, exhibiting heavy-moderate corrosion on the inside. The 10" overflow pipe was in fair condition, but the weir box had been totally corroded away at its bottom (Figure 14). The 12" center vent was in good condition, but appears too small for the inlet (Figure 11). This vent also will not serve as the center manway, and there is no added manway near the center, as required by AWWA D100. The vent had an insect screen, but it did not appear to be equipped with a pressure-vacuum mechanism.

On March 8, 2012, Mr. James Wilson, of Arizona Water Company, contacted Mr. Heerup. He reported that the inlet was approximately 16" in diameter, and that the maximum operating flow rate (in and out) is 5800 gallons per minute.

Analysis and Conclusions

Based on our experience, inspection, research and analysis, and within a reasonable degree of engineering certainty, it is our opinion that:

- The tank was overfilled, most likely due to inadequate venting and excessively rapid inflow.
- When this occurred, the roof plate bowed upward, dragging parts of the walls inward. As the walls moved inward, they forced the outer ends of the rafters (to which they are attached) toward the center. This force resulted in sympathetic buckling of the rafters and rotation of the capital to which they were attached.

- The distortions in the roof and the rafters are plastic, that is, relief of the stresses did not allow them to return to their original shape and relative locations.
- Damage to the coatings has combined with the separation of the roof plate from the top of the rafters to promote corrosion above the waterline.
- The rafters and roof plates are irreparably damaged, as is the eave angle and the upper part of the walls.
- The ability of the tank to contain water is not adversely affected, although the small, unprotected, vent and the small overflow cause a hazardous condition if any excessive inflow were to recur.
- The ability of the roof to sustain its required loads has been compromised.
- The tank is not in compliance with AWWA D100-11, due to roof damage, inadequate venting, inadequate overflow, and the lack of a center manway.

Recommendations

Based on the analysis, above, it is our opinion that:

- Cosmetic repair of the damage to the walls, will not resolve the issues cited.
- At the earliest opportunity, the tank should be taken out of service, repaired, and upgraded to conform to AWWA D100.
- Repair should consist of removal and replacement of the top 4' of the walls and all of the rafters and the roof plate. It should also include removal and replacement of the weir box. All work should be designed, constructed, and inspected in accordance with AWWA D100.
- Upgrade should include adequate venting, addition of a center manway, and larger overflow pipe. Again, work should be designed, constructed, and inspected in accordance with AWWA D100.
- The entire tank interior should be re-coated at that time, and the cathodic protection system should be inspected and, if necessary, repaired to assure increased life of the refurbished tank.
- If the tank is to be placed back into service before repairs and upgrades are completed, minimum upgrades should be taken, including:
 - Replace the center vent with a 24"Ø pressure-vacuum-relief vent.
 - Replace the overflow pipe with an 18"Ø (preferably) or 16"Ø pipe and penetration.
 - Post the roof as "Danger-no access allowed."

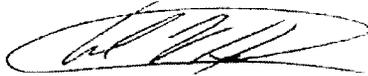
1MG WT-Casa Grande
April 4, 2012

HE File 1208
Page 4 of 4

Heerup Engineering, P C's professional services were performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable structural engineers practicing in this or similar localities. No warranty, express or implied, is made. We reserve the right to amend our opinions and conclusions should additional information become available.

Please let us know if we can be of any further service on this or future matters.

Regards,
HEERUP ENGINEERING, PC



Carl V. Heerup II
Principal Engineer

CVH/cvh

Appendix A – Photographs
Appendix B – Extracts of AWWA D100
Appendix C – Curriculum Vitae



APPENDIX A
PHOTOGRAPHS

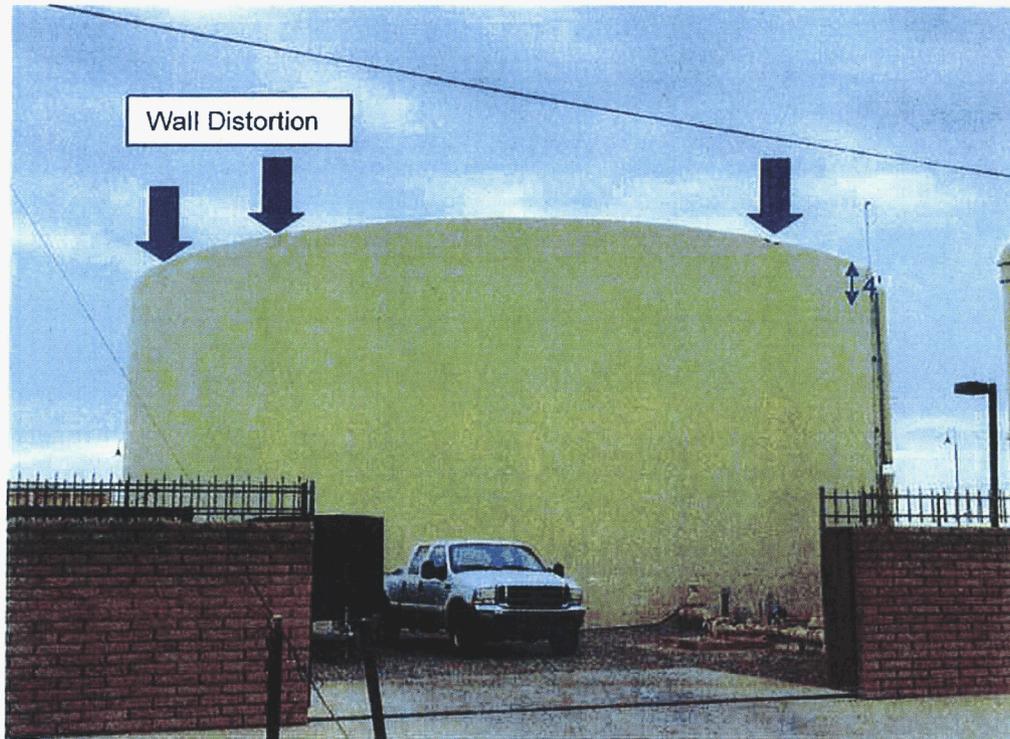


Figure 1 – Overview of Tank Exterior.

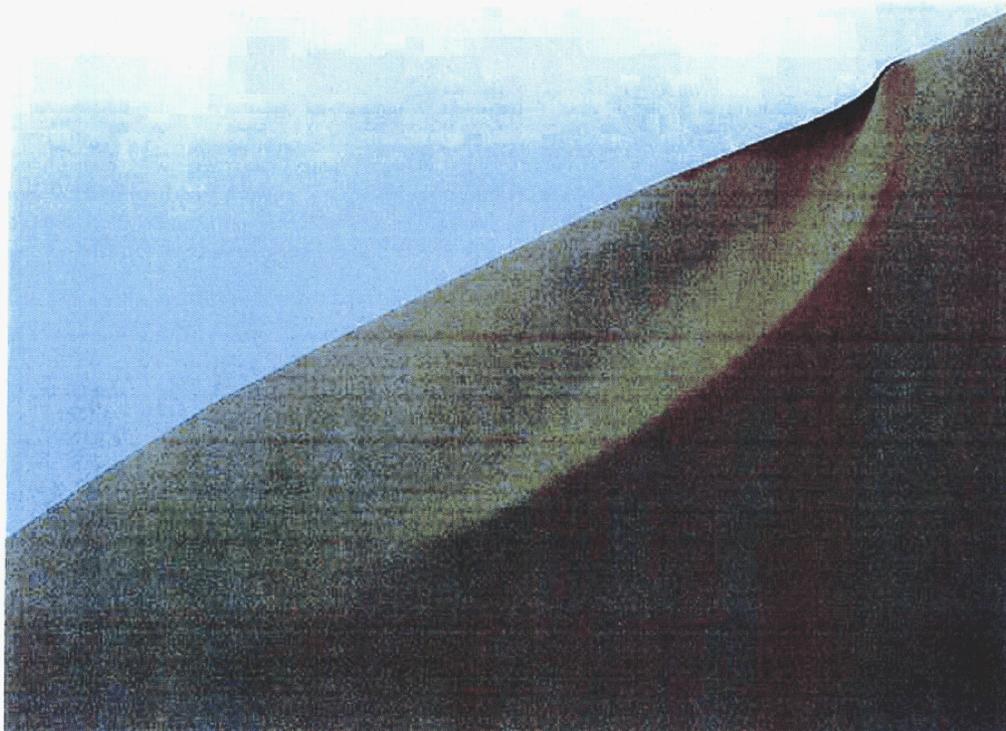


Figure 2 – Typical Wall Distortion.

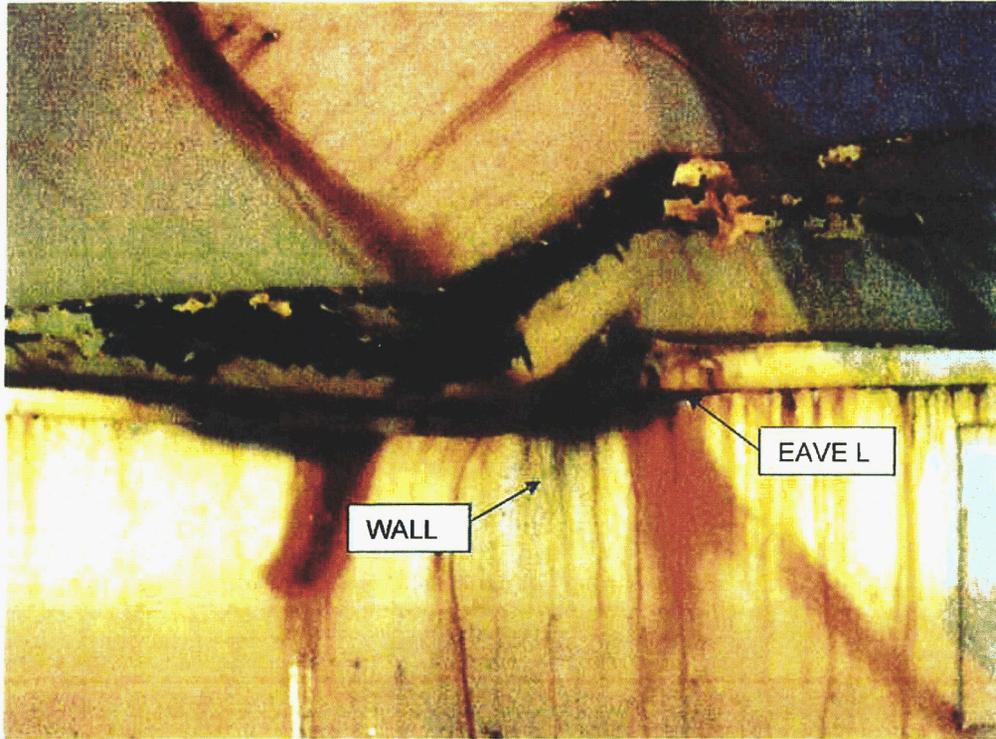


Figure 3 – Distortion of Wall and Eave Angle at Interior

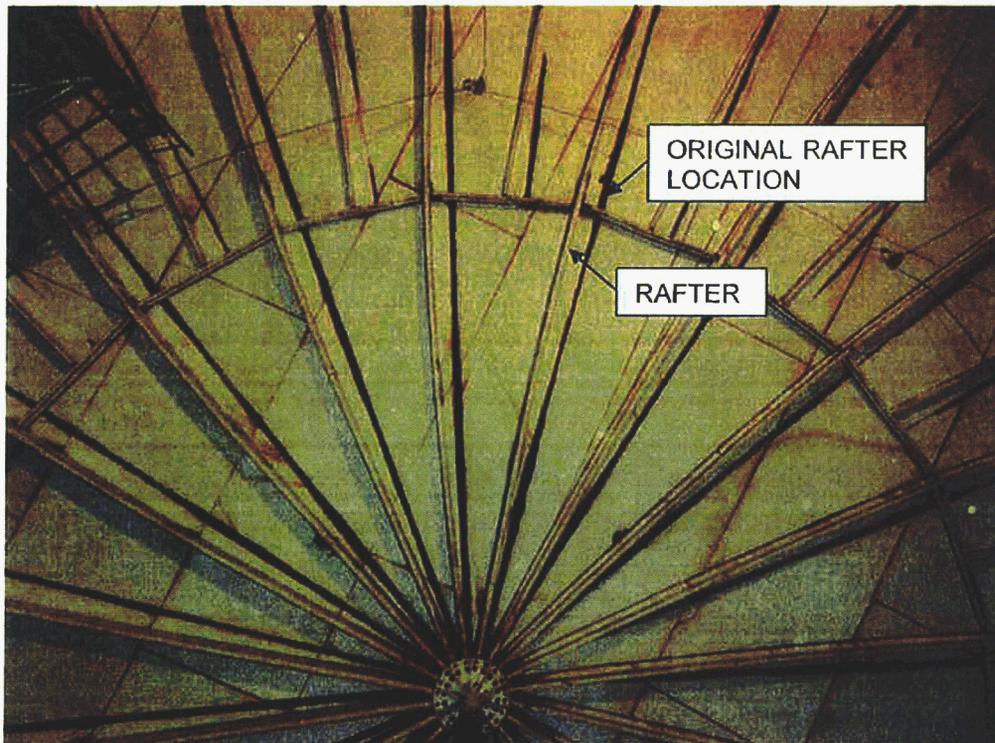


Figure 4 – Rafter Distortion

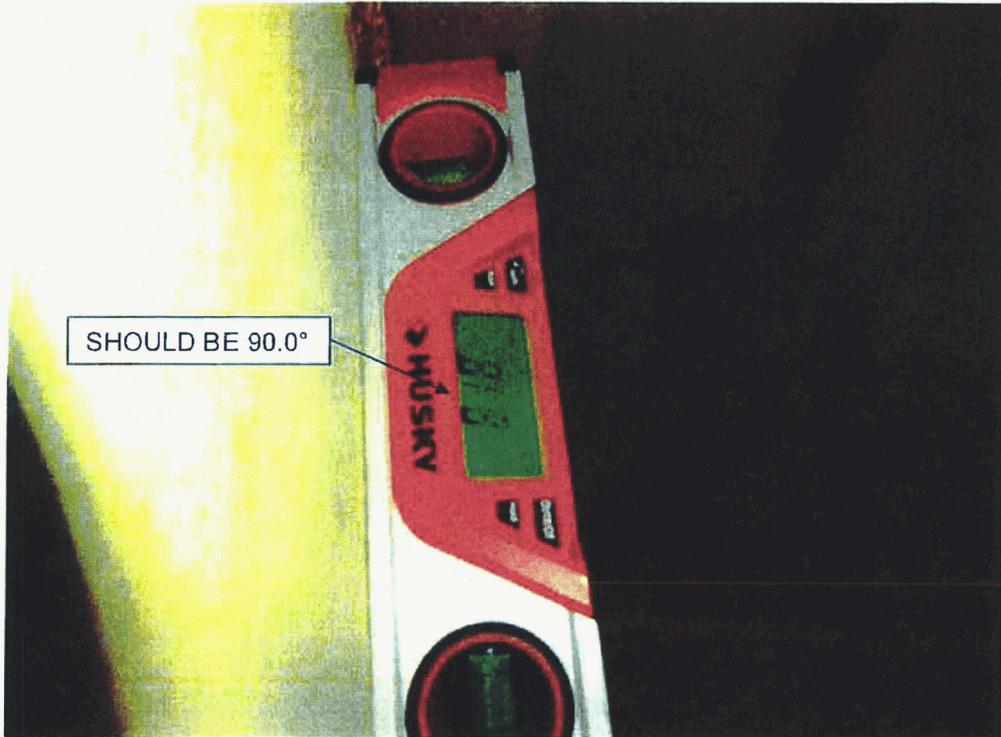


Figure 5 – Rafter Twist

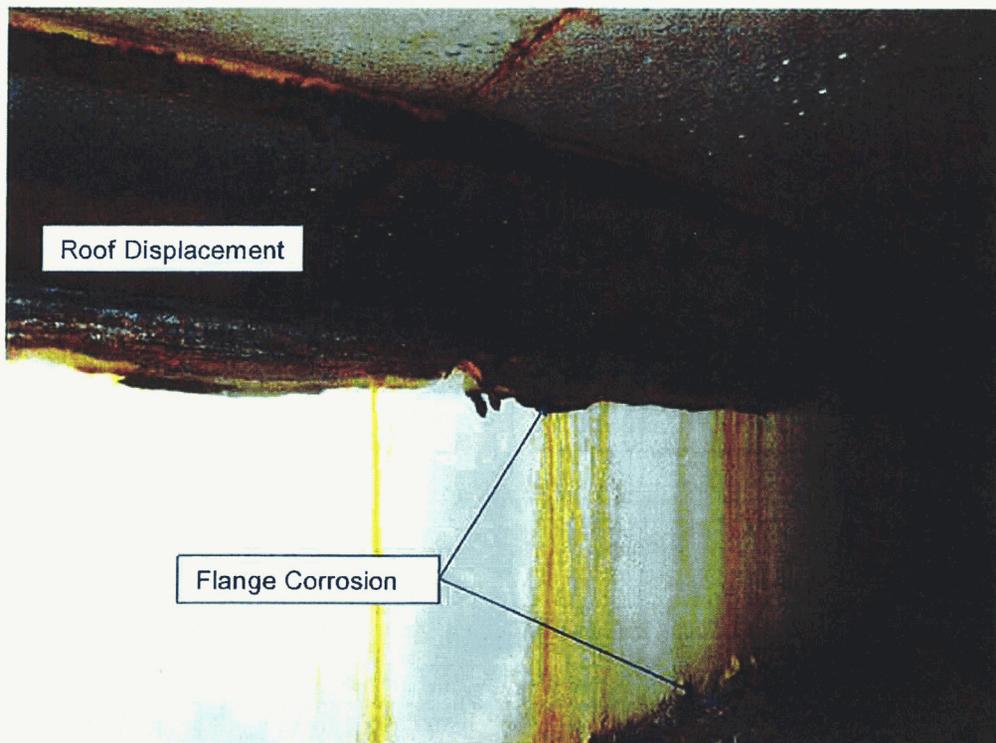


Figure 6 – Flange Corrosion & Roof Distortion



Figure 7 – Rafter Connections



Figure 8 – Connections at Center Column

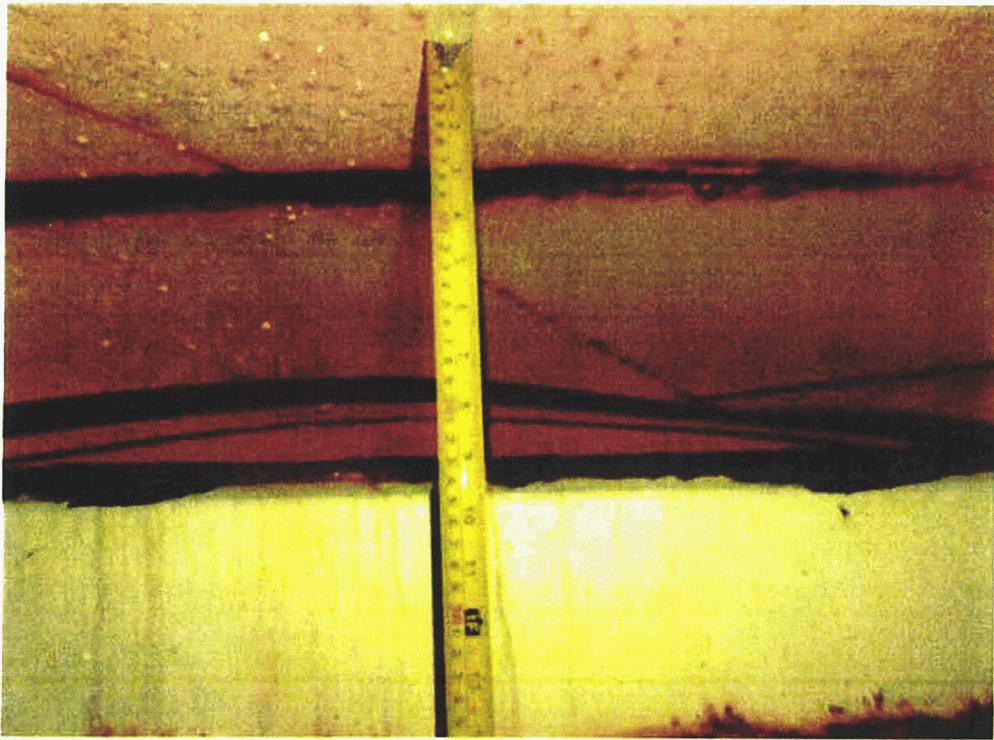


Figure 9 – Roof Corrosion and Displacement



Figure 10 – Cathodic Protection Insulator Supporting Roof Plate

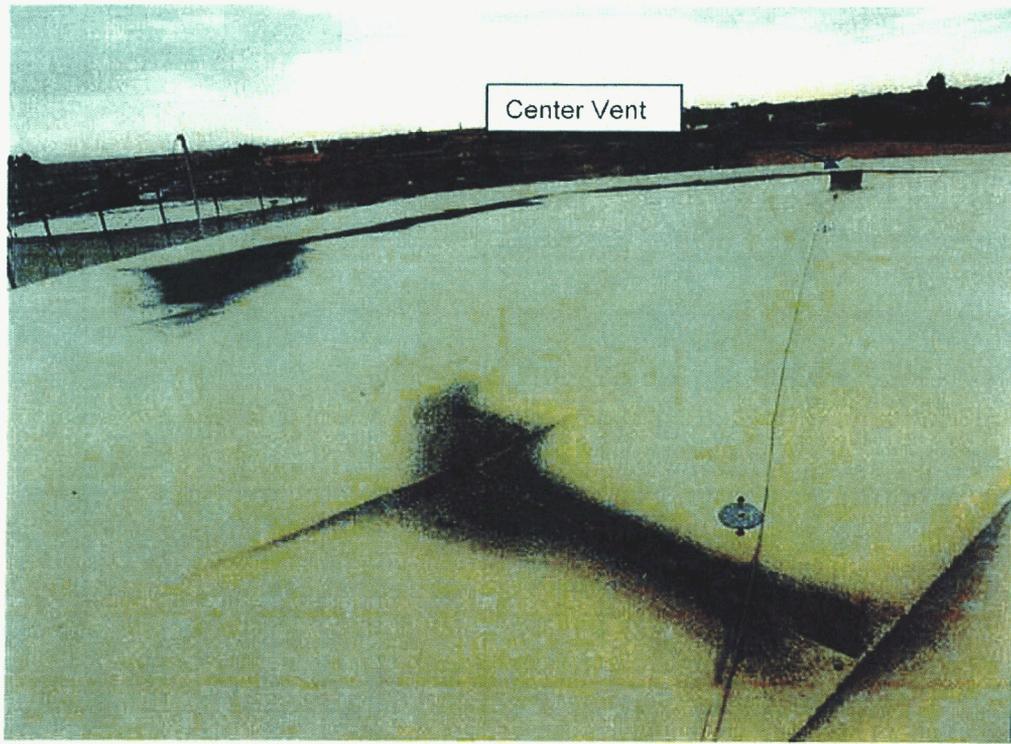


Figure 11 – Evidence of Ponding

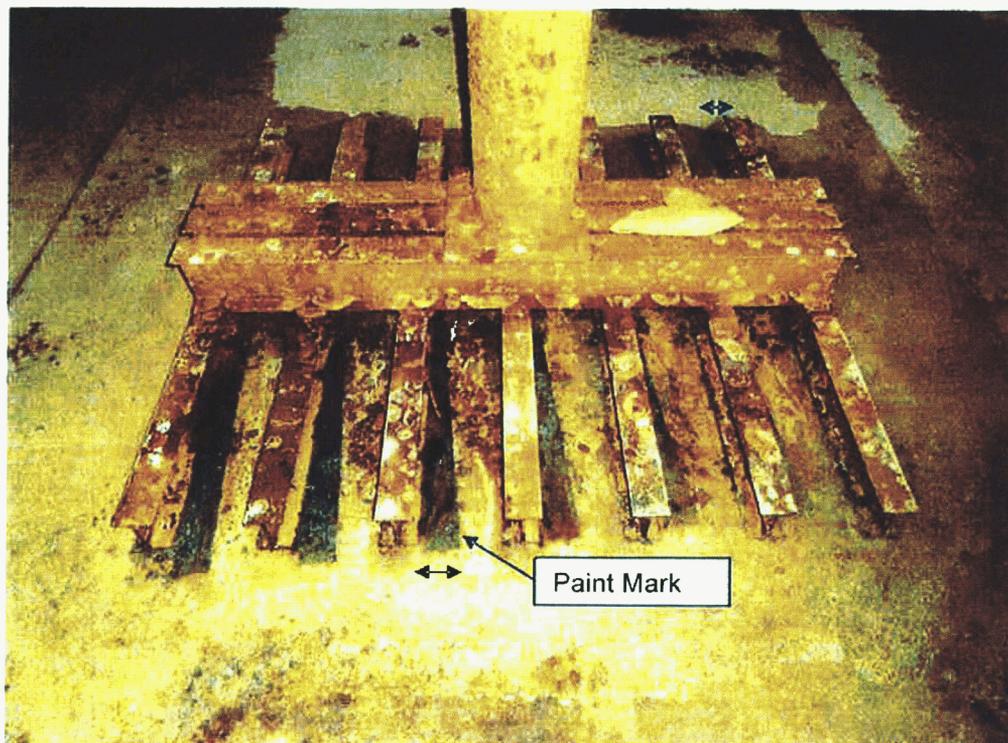


Figure 12 – Column Rotation

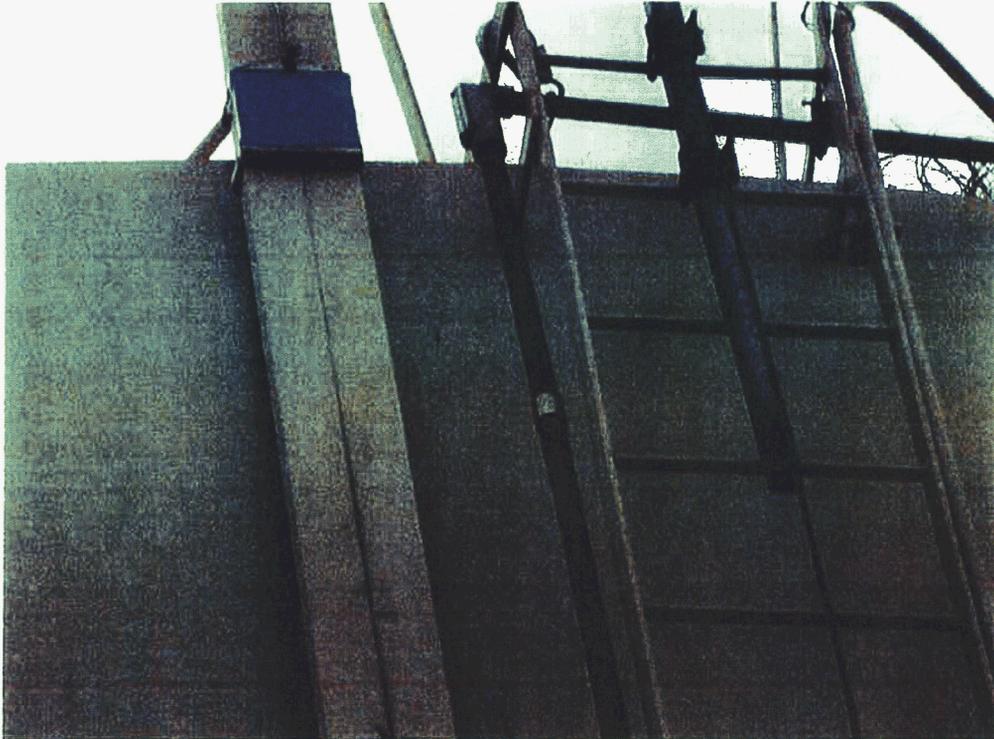
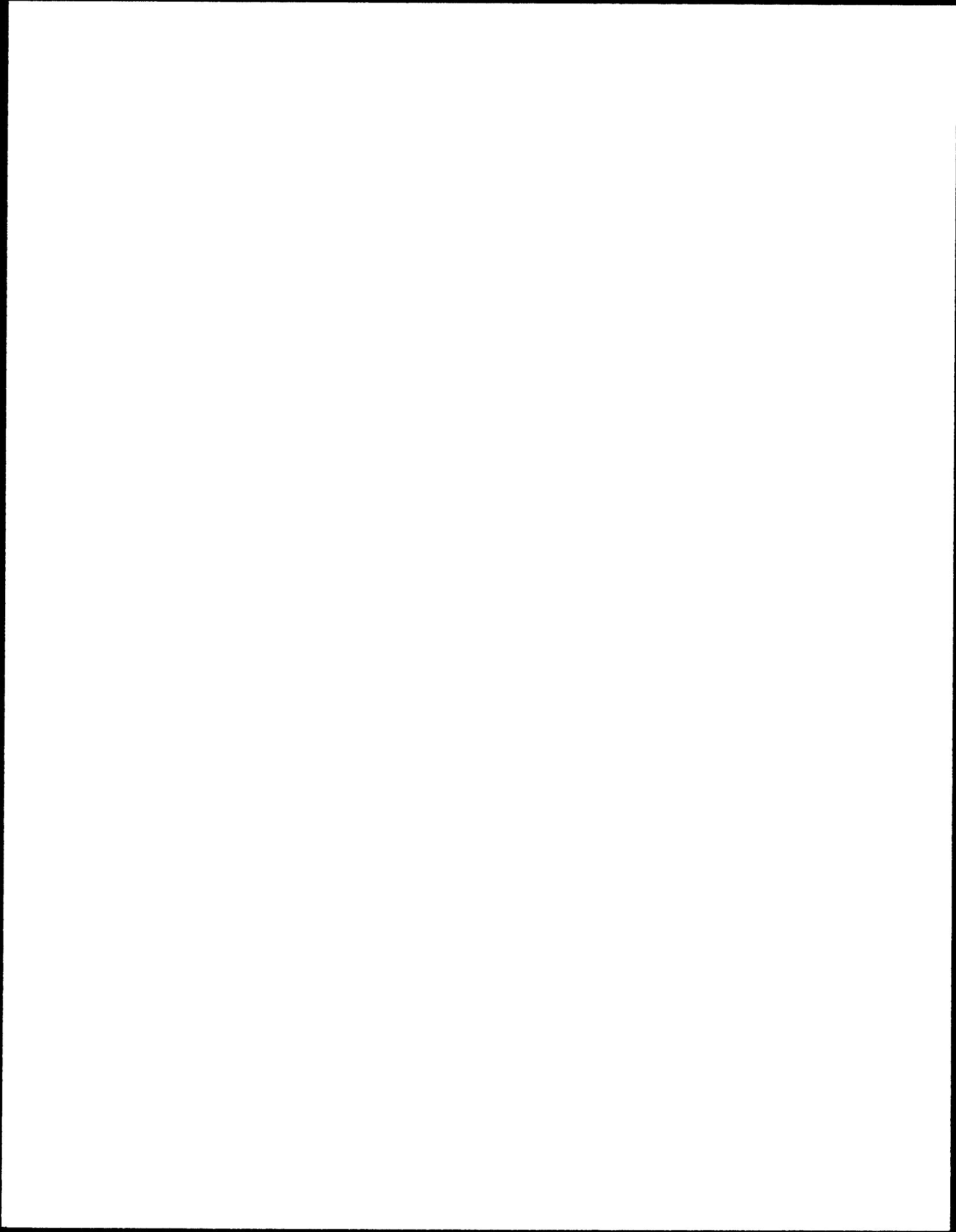


Figure 13 -- Ladder



Figure 14 – Overflow Weir Box

APPENDIX B
EXTRACTS OF AWWA D100



3.1.1 *Dead load.* Dead load shall be the estimated weight of permanent construction. The unit weights used shall be 490 lb/ft³ (7,850 kg/m³) for steel and 144 lb/ft³ (2,310 kg/m³) for concrete.

3.1.2 *Water load.* Water load shall be the weight of all of the water when the tank is filled to the TCL. The unit weight used for water shall be 62.4 lb/ft³ (1,000 kg/m³). The weight of water in a wet riser, which is supported directly on foundations, shall not be considered a vertical load on the riser.

3.1.3 *Roof design loads.*

3.1.3.1 *Snow load.* The allowance for the pressure resulting from the design snow load shall be a minimum of 25 lb/ft² (1,205 N/m²) on the horizontal projection of the tank and external balcony for roof surfaces having a slope of 30° or less, with the horizontal. For roof surfaces with greater slope, the design-snow-load allowance shall be zero. The design-snow-load allowance may be reduced when the tank is located where the lowest one-day mean temperature is 5°F (-15°C), or warmer, and local experience indicates that a smaller load may be used.

3.1.3.2 *Live load.* The minimum roof design live load shall be 15 lb/ft² (720 N/m²).

3.1.3.3 *Deflection limit.* There is no deflection limit for roof plates that span between structural supports.

3.1.4 *Wind load.* Wind pressure shall be calculated by the formula

$$P_w = q_z G C_f \geq 30 C_f \quad (\text{Eq 3-1})^*$$

Where:

P_w = wind pressure applied to projected area on a vertical plane, in pounds per square foot

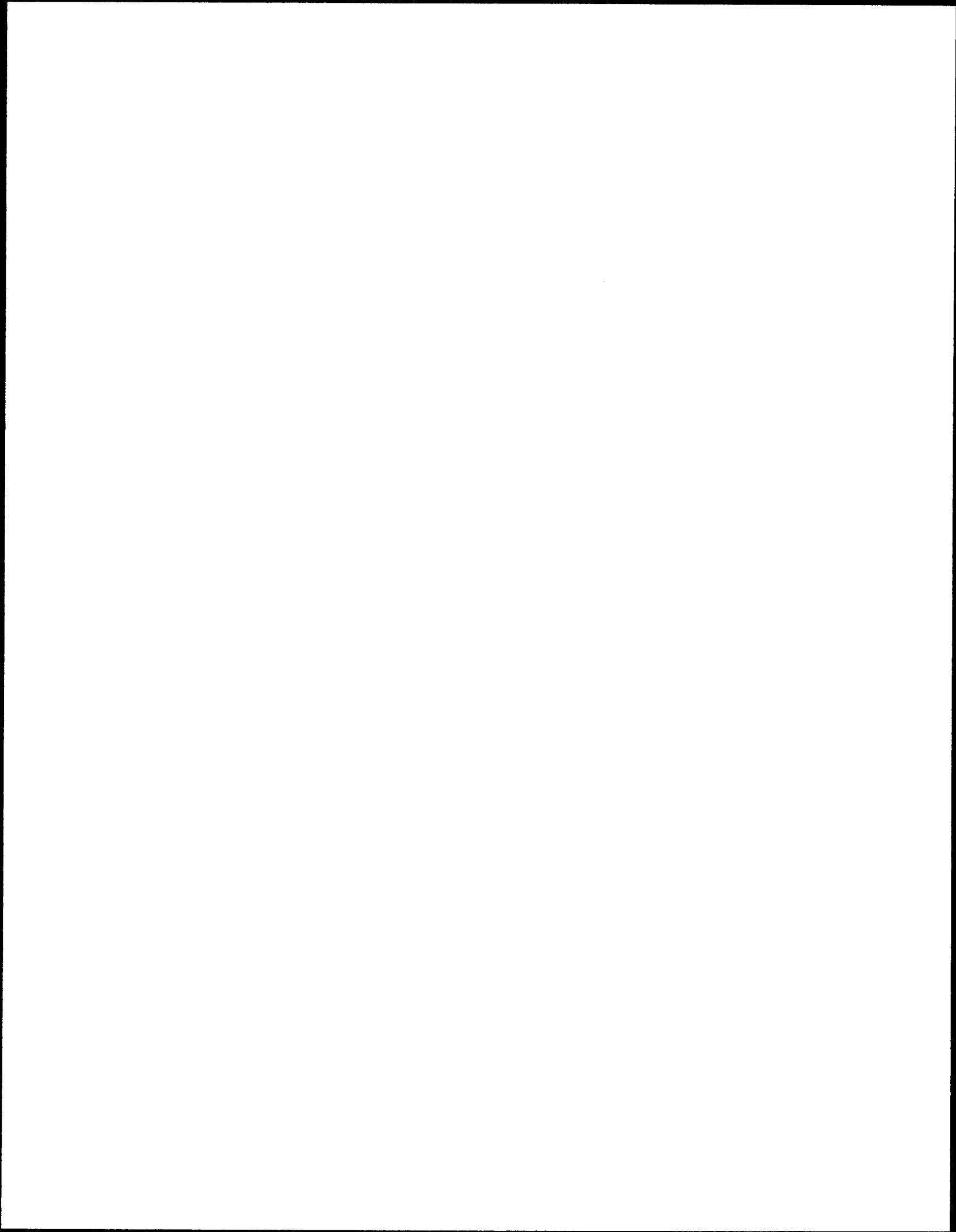
G = gust-effect factor. The gust-effect factor shall be taken as 1.0 or may be calculated using the procedure given in ASCE 7. The calculated gust-effect factor shall be based on a damping ratio of 0.05 and shall not be less than 0.85.

C_f = force coefficient (see Table 2)

q_z = velocity pressure evaluated at height z of the centroid of the projected area, in pounds per square foot

$$q_z = 0.00256 K_z V^2 \quad (\text{Eq 3-2})^*$$

* For equivalent metric equation, see Sec. 3.14.



The overflow shall originate at the top in a weir box or other appropriate type of intake. The top angle of the tank shell shall not be cut or partially removed. The overflow shall have a capacity at least equal to the specified inlet rate, with a head above the lip of the overflow of not more than 12 in. (304 mm) for side-opening overflows and not more than 6 in. (152 mm) for other types of overflows. Unless otherwise specified, the outlet of the overflow pipe shall be covered with a coarse, corrosion-resistant screen equivalent to $\frac{3}{8}$ in. (9.5 mm) or larger mesh, or a flap valve.

Unless otherwise specified, the overflow pipe shall be steel pipe, with screwed or welded connections if less than 4 in. (102 mm) in diameter, or with flanged or welded connections if 4 in. (102 mm) in diameter or larger. The overflow pipe shall be supported at proper intervals with suitable brackets.

Sec. 7.4 Access

7.4.1 *General.* Ladders, stairs, platforms, rails, access openings, and safety devices shall comply with OSHA standards. Requirements for safety cages, rest platforms, roof handrails, and other safety devices that are in excess of the requirements given in OSHA shall be specified.

7.4.2 Ladders.

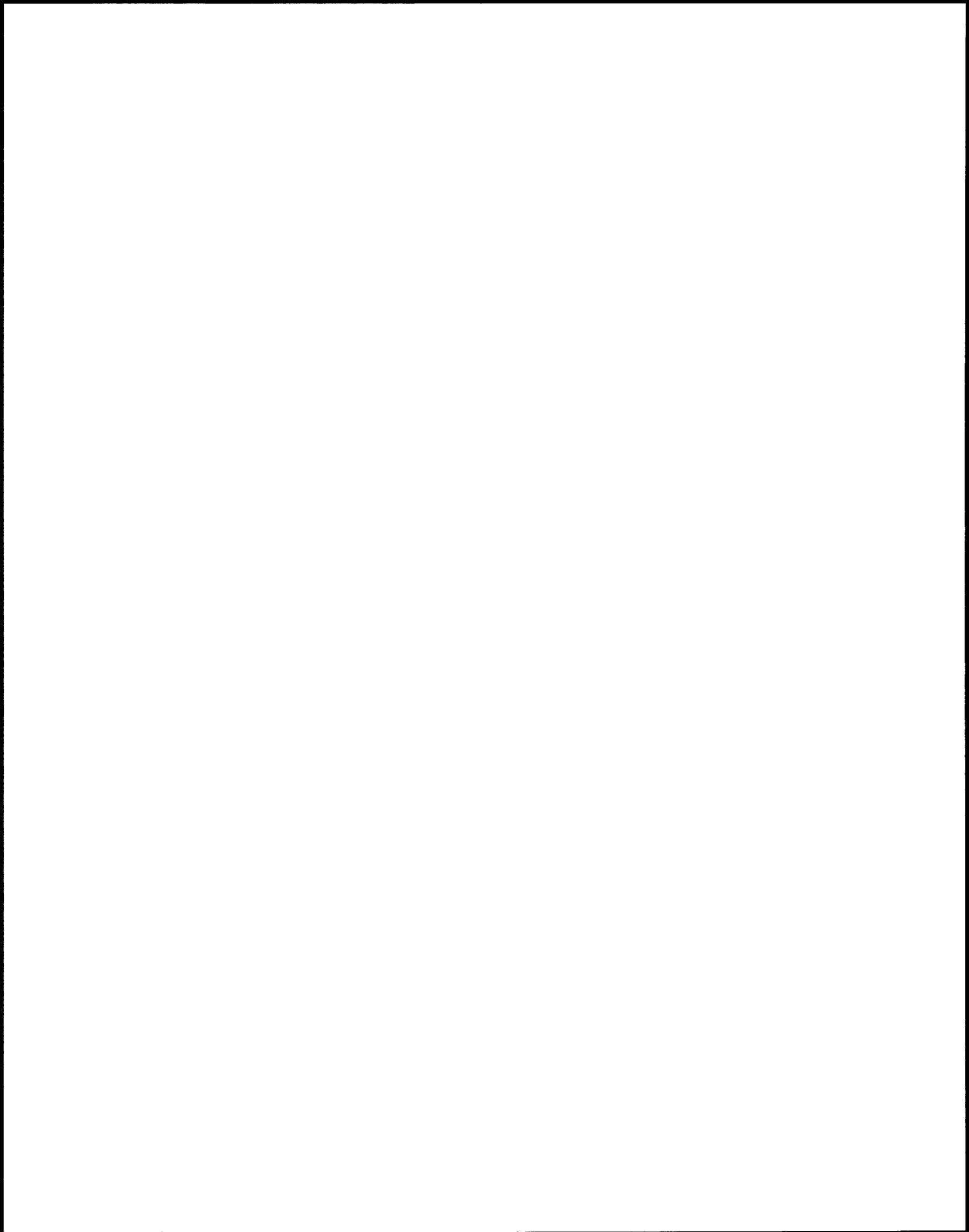
7.4.2.1 *General.* Ladders shall have side rails not less than 2 in. \times $\frac{3}{8}$ in. (51 mm \times 9.5 mm), with a spacing between the side rails of not less than 16 in. (406 mm) and rungs not less than $\frac{3}{4}$ in. (19 mm) round or square, spaced 12 in. (305 mm) apart on centers. Ladders shall not in any place have a backward slope. Ladders with a single point of connection, including rolling ladders, shall not be used. Skid-resistant rungs shall be provided when specified.

7.4.2.2 *Outside tank ladder.* An outside tank ladder shall be provided for access from a point 8 ft (2.4 m), or as specified, above the tank bottom to the roof or roof ladder. The location of the ladder shall be specified.

7.4.2.3 *Access to roof hatches and vents.* Access to roof hatches and vents shall be provided. Such access shall be from the outside tank ladder and shall comply with the following:

1. Where roof slope is 5 in 12 or greater, a ladder or stairs shall be provided.
2. Where roof slope is less than 5 in 12 and greater than 2 in 12, a single handrail and nonskid surface shall be provided.
3. Where roof slope is 2 in 12 or less, handrails and nonskid surface are not required.

7.4.2.4 *Inside tank ladder.* When specified, an inside tank ladder shall be provided for access from the roof to the bottom of the tank.



7.4.3 *Roof openings.*

7.4.3.1 *Ladder.* A roof opening with hinged cover and hasp for locking shall be provided near the outside tank ladder, or roof ladder if provided. The opening shall have a minimum dimension of 24 in. (610 mm), or as required by OSHA, if used to access an inside tank ladder. The opening shall have a curb at least 4 in. (102 mm) high, and the cover shall have a downward overlap of at least 2 in. (51 mm).

7.4.3.2 *Roof center.* An additional opening with a removable cover having an opening dimension or diameter of at least 20 in. (510 mm) and a 4-in. (102-mm) minimum height neck shall be provided at, or near, the center of the tank. The opening may be used as a tank vent opening, provided the vent is removable.

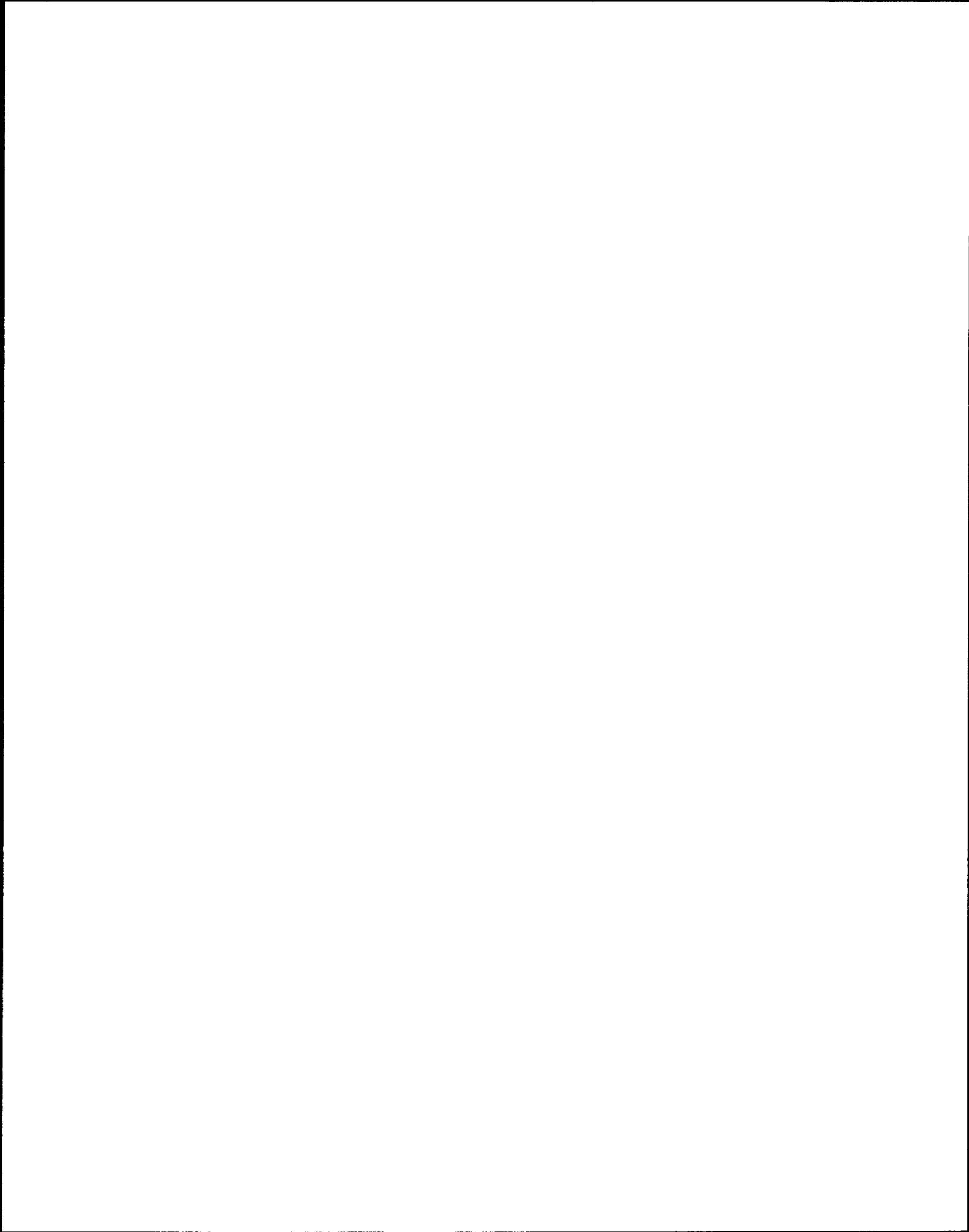
7.4.4 *Shell manholes.* Two shell manholes shall be provided in the first ring of the tank shell. The location of the manholes shall be specified. If any access cover weighs more than 50 lb (22.7 kg), a hinge or davit shall be provided. At least one manhole shall be circular with a minimum diameter of 30 in. (760 mm). Other manholes may be circular, 24 in. (600 mm) in diameter, or elliptical, 18 in. × 22 in. (450 mm × 550 mm) minimum size. The shell plate where the manholes are located shall be reinforced to comply with Sec. 3.13, and portions of the manholes, including reinforcing of the neck, the bolting, and the cover, shall be designed to withstand the weight and pressure of the tank contents.

Sec. 7.5 **Vent**

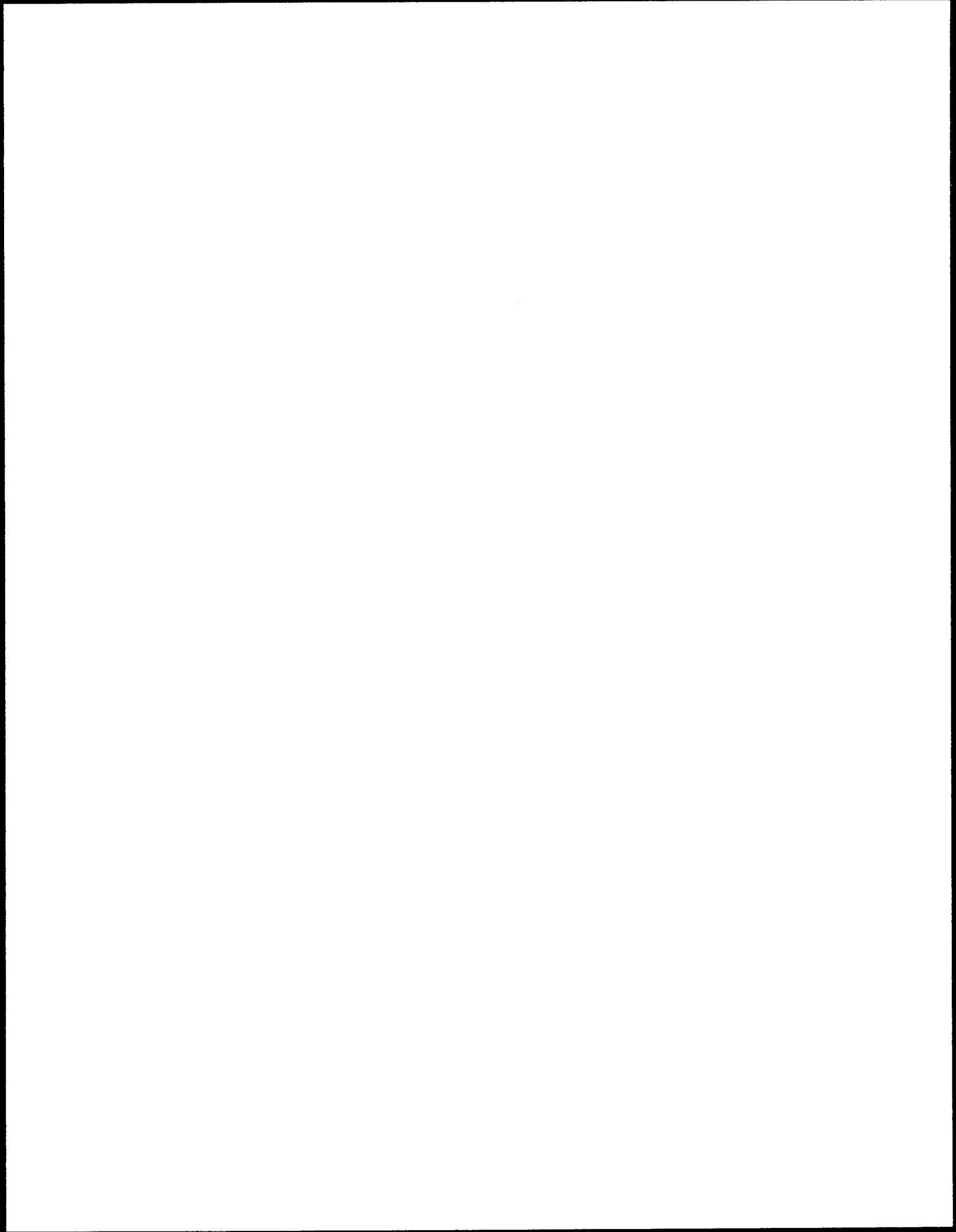
Tanks equipped with roofs shall have a vent above the TCL, which shall have a capacity to pass air so that at the maximum flow rate of water, either entering or leaving the tank, excessive pressure will not be developed. The overflow pipe shall not be considered a tank vent.

7.5.1 *Location.* Even if more than one vent is required, one tank vent shall always be located near the center of the roof.

7.5.2 *Screening.* The vent shall be designed and constructed to prevent the entrance of birds or animals. When the vent is provided with screening against insects, a pressure-vacuum-screened vent or a separate pressure-vacuum relief mechanism shall be provided that will operate in the event that the screens frost over or become clogged. The screens or relief mechanism shall not be damaged by the occurrence and shall return automatically to operating position after the clogging is cleared.



APPENDIX C
CURRICULUM VITAE





Carl V. Heerup, P.E.

10812 N. 44th Street
Phoenix, AZ 85028

Tel: (602) 923-6829
Fax: (602) 595-0678
Cell: (602) 451-3275

SERVICES

Structural Engineering, Civil Engineering, and Construction Management, including Value Engineering, CPM Scheduling, Claims Analysis, Construction Inspection and Quality Assurance

EDUCATION

BS, Civil Engineering, University of California, Berkeley, 1977
MS, Structural Engineering, University of California, Berkeley, 1985

EXPERIENCE

2003-Present

Principal Engineer, Heerup Engineering, PC, Phoenix Arizona.

Providing Construction Management, Civil & Structural Engineering services to Owners, Engineers, and Contractors. Clients include:

- Arizona-American Water Services
- Global Water, Inc.
- McBride Engineering Solutions, Inc.
- Water Works Engineers, LLC
- Water Synergy, Inc.
- D.L. Norton General Contracting, Inc.
- SDB, Inc.
- Currier Construction, Inc.
- Garney
- Sundt
- Jon Wayne Construction and Consulting
- City of Avondale
- City of Douglas
- City of Apache Junction
- Augspurger-Komm Engineering, Inc.

1995-2003

Chief Resident Engineer, Damon S. Williams Associates, L.L.C., Phoenix Arizona.

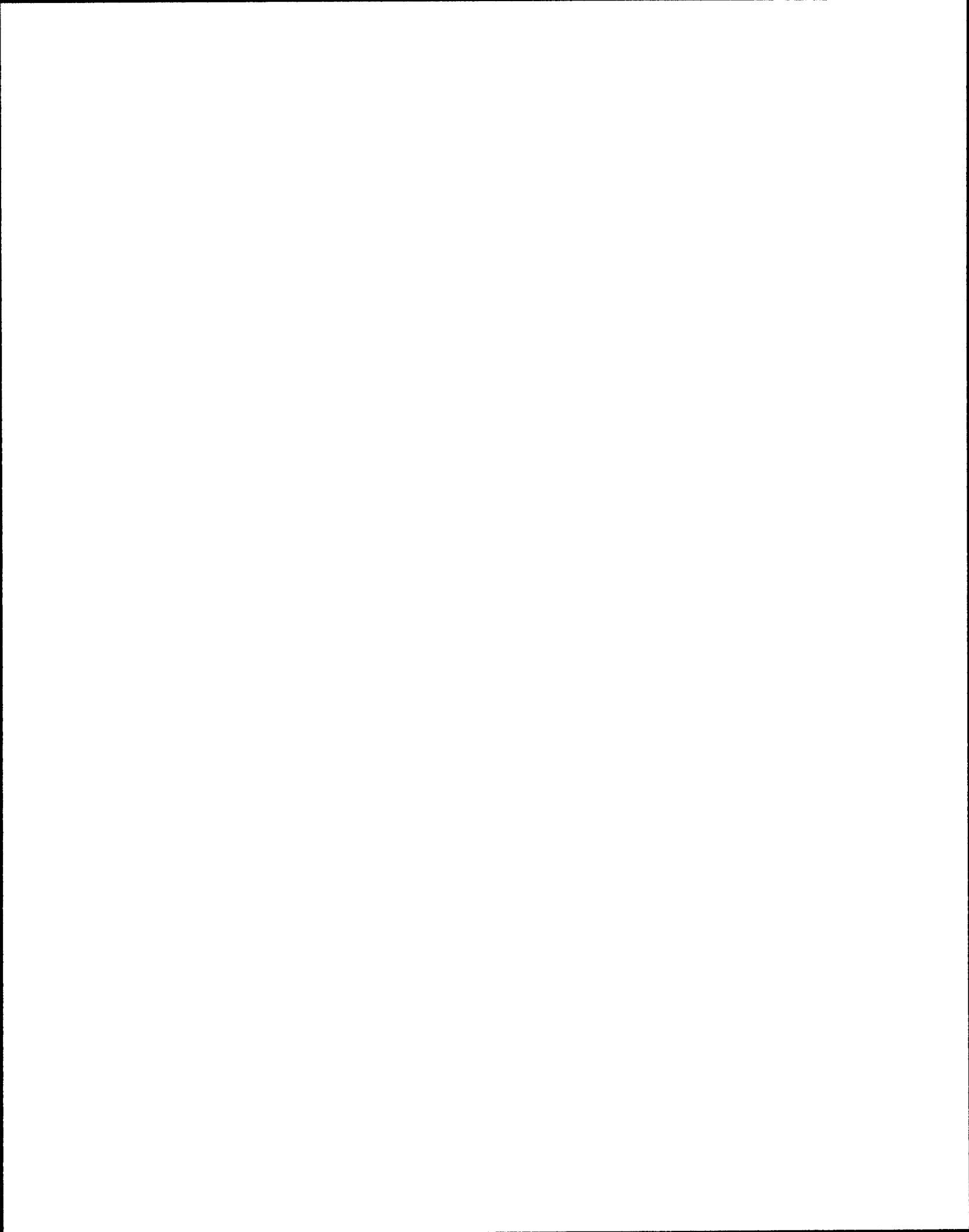
Resident Engineer, Project Manager, Supervisory Engineer, and/or Structural Design Engineer on numerous water/wastewater facility projects, including treatment plants, pumping stations, and pipelines.

- Budgeting, contract negotiation, sub-consultant coordination, relations with Owners and with Contractors.
- Supervised a staff of six engineers, inspectors, and support staff; including hiring recommendations, professional development, and personnel evaluations.
- Constructability reviews of designs and advise designers on construction techniques, scheduling, estimating, and specifications.
- Establish and maintain policies, procedures, and systems, including: construction management, safety, standard design details, standard specifications, construction management information systems, cost estimating, and code and standards library.

1986-1995

Construction Group Leader, NASA Ames Research Center, Moffett Field, California.

Construction Manager, Project Manager, Supervisory Engineer, and/or Structural Design Engineer on numerous research facility projects, including wind tunnels, aircraft



hangars, computer/office facilities, and research laboratories.

Functions, similar to those cited above, but for an Owner which self-performed most Construction Management functions. Projects included research facilities & general buildings and civil works.

1985-1986 **Field Structural Engineer**, O'Brien-Kreitzburg Associates, San Francisco, California.

Conduct full range of construction management functions for two construction contracts working on structural repair and rehabilitation of the world's largest wind tunnel, the Full-Scale Aerodynamic Research Facility. Supervised technical operations of two inspectors.

1984-1985 **Graduate Student & Teaching Assistant**, University of California, Berkeley.

1981-1984 **Structural Engineer**, R&D Department, Ed. Züblin AG, Stuttgart, Germany.

Structural analysis, design, and detailing for newly developed modular construction systems, including space-truss roofs and precast school buildings in Stuttgart. Overseas assignment as Precasting Superintendent for guided busway in Adelaide, South Australia.

MILITARY

2006-2007

Engineer Officer, Retired on Active Duty, Action Officer, Strategic Effects Directorate, Headquarters Multi-National Force, **Iraq**.

Volunteer recalled from retirement to active duty. Assisted in coordination between U.S. State Department, Coalition military, and various Government of Iraq agencies. Principal duty in co-ordination of military construction efforts with the City of Baghdad and National Government agencies responsible for regulation and operation and maintenance of the facilities repaired and/or constructed.

1984-2002 **Reserve Engineer Officer**, various units in San Francisco Bay Area.

Successive assignments as Intelligence Officer, Company Commander, Logistics Officer, and Executive Officer in a combat engineer battalion, as Engineer Trainer/ Observer in a training division, and as Brigade Engineer in a medical brigade. Retired as a major.

1977-1981 **Active Duty Combat Engineer Officer**, CoC, 78th Engineer Battalion, Germany.

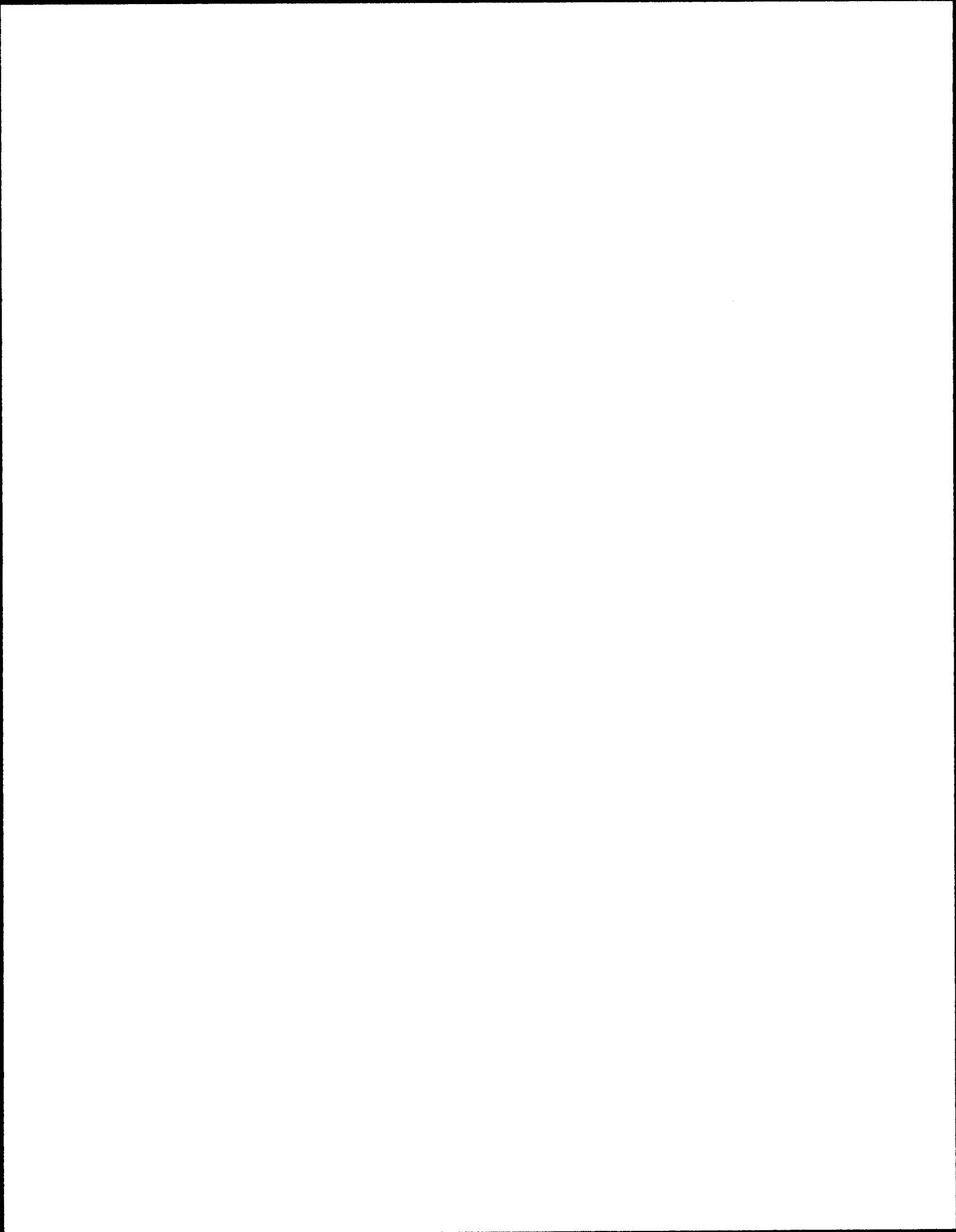
Successive assignments as Platoon Leader, Company Executive Officer, and Company Commander. Responsible for all aspects of training, support, and operations of a 132-man company in sapper and construction missions.

PROFESSIONAL

Professional Engineer (Civil), Arizona
Professional Engineer (Structural), Arizona
Professional Engineer (Civil), California
Professional Engineer (Civil), Texas
Member, American Society of Civil Engineers
Member, American Concrete Institute
Member, International Code Council
Member, American Water Works Association.
Member, SSPC

**SUPPLEMENTARY
QUALIFICATIONS**

Courses in treatment plant operation (water and wastewater)
Asbestos Abatement Inspection, Operation, and Supervision
Lead Abatement Inspection and Specification



**FORENSIC
ENGINEERING AND
REPAIR PROJECTS**

As principal of Heerup Engineering, PC, Mr. Heerup performed the following:

Condominium Construction Deficiency Remediation, Bella Vista Homeowners Association. Structural Engineer for work to alleviate construction deficiencies for a 300-unit condominium development. Analyze effects of deficiencies, design remediation, inspect work in progress, adjust design on-the-fly as needed to accommodate hidden conditions. Repairs included installation of wood shear walls, anchor & hold-downs; structural reinforcement by pressure-pumped concrete and carbon-fiber reinforcement of elevated slab, and underpinning of foundations with helical piers.

Elevated Water Storage Tank Rehabilitation, City of Douglas.

Prime Design Engineer and Construction Manager for \$700,000 rehabilitation of two 300,000 gallon riveted steel water tanks. Work included structural repairs, replacement of substandard ladders, hatches, and vents, and re-coating of interior.

42nd Place Reservoir Construction, City of Phoenix. Consultant to General Contractor to determine causes and recommend remediation of various concrete issues arising during construction.

23rd Avenue WRF Headworks Forensic Analysis, City of Phoenix. Consultant to inspect and analyze headworks structure to determine causes and effects of concrete and steel corrosion and make recommendations on repairs.

Casa Requena Footbridge Repair, Casa Requena Homeowners' Association. Structural Consultant to determine causes and to design repairs to wooden footbridges connecting various buildings in this condominium project.

91st Avenue WRF Structural Rehabilitation, City of Phoenix. Structural Consultant to determine causes and to design and supervise repairs and structural rehabilitation for corrosion damage to various concrete structures. Work includes repair of extensive spalling at aeration basins and rehabilitation of corroded concrete grit washer.

Belmont Avenue Tree Downing, Brown Community Management. Consultant to inspect existing structure and determine what, if any damage had been done to it as a result of the wind downing a tree whose roots had extended under the foundation. Downing had occurred several months previously, tree had been removed and hole filled.

23rd Avenue WRF Chlorine Contact Basin Forensic Analysis, City of Phoenix. Consultant to General Contractor to determine causes and recommend remediation of concrete and reinforcing corrosion to existing chlorine contact basin.

Mormon Lake Roof, America First Insurance

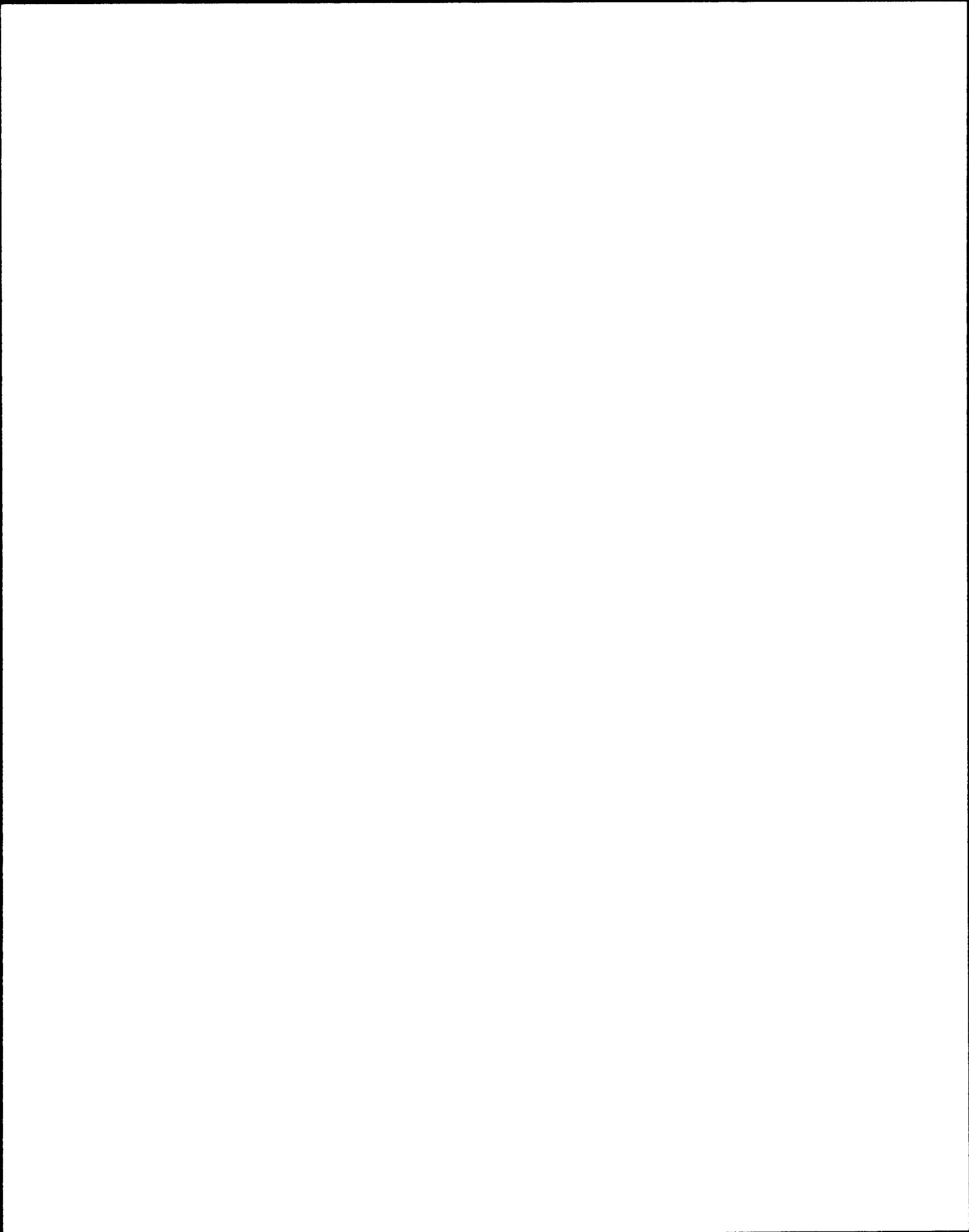
Consultant to determine what, if any damage had been done to the roof of a house by unusually-heavy snowfall the previous winter.

Elevated Water Storage Tank Rehabilitation, City of Douglas.

Prime Design Engineer and Construction Manager for \$400,000 rehabilitation of a 600,000 gallon riveted steel water tank. Work included structural repairs, replacement of substandard ladders, hatches, and vents, and re-coating of interior.

Condominium Construction Deficiency Remediation, 900 Devonshire Homeowners Association. Construction Engineer for work to alleviate construction deficiencies for a 40-unit condominium development. Work includes proposal evaluation, inspection of work, repair design, and schedule.

South Plant Reclamation Facility Rehabilitation, City of Surprise. Structural Consultant to analyze causes and effects of corrosion to steel digester and to design and supervise repairs.



**DESIGN AND
CONSTRUCTION
PROJECTS**

As member of Joint Regional Operations Center (JROC), in Baghdad, Iraq:

Major Heerup facilitated coordination among the various U.S. Military agencies; the City of Baghdad Government, and the Iraq National Government Ministries, to facilitate planning, design, construction, turn-over, operation, and repair of a variety of projects and facilities. These included parks, vocational schools, water treatment and distribution systems, and wastewater collection and treatment systems. This coordination was essential in ensuring that the U.S. efforts were actually supportive of the people's needs, were in compliance with the local and national government's requirements, and were constructed in accordance with the contracts.

As principal of Heerup Engineering, PC, Mr. Heerup performed the following:

Airport Water Treatment Plant Expansion, City of Prescott. Resident Engineer and for construction of \$40,000,000 expansion of this active plant. (in progress) Work includes modification of existing nitrification/ de-nitrification facilities, addition of aeration basins and secondary clarifiers, replacement of headworks and influent pump stations, including equalization basin, and replacement of disinfection and effluent pumping facilities. Work included review of design documents and value engineering.

1,000,000 Water Tank, City of Apache Junction. Construction Manager and Special Inspector for construction of \$1,000,000 pre-stressed concrete water tank. (in progress) Work includes review of design documents and value engineering.

Compliance Improvements, Wastewater Treatment Plant, City of Douglas.

Structural Engineer for \$2,000,000 rehabilitation of outdated wastewater plant. Work included replacing headworks, new RAS/WAS pump station, new chlorine contact basin, new non-potable water pump station, and new belt press building.

Water Reclamation Facility Expansion, City of Avondale. Resident Engineer for \$40,000,000 expansion of this active plant. Work includes modification of existing nitrification/ de-nitrification facilities, addition of primary clarifier and anaerobic digestion systems, replacement of headworks and influent pump station, including equalization basin, and replacement of disinfection and effluent pumping facilities.

PVUC-1 Upgrades (Maricopa), Global Water. Structural Consultant for modernization of sequenced batch reactors and filter systems. Work includes inspection, evaluation, modification, and reinforcement of existing structures to facilitate new equipment installation.

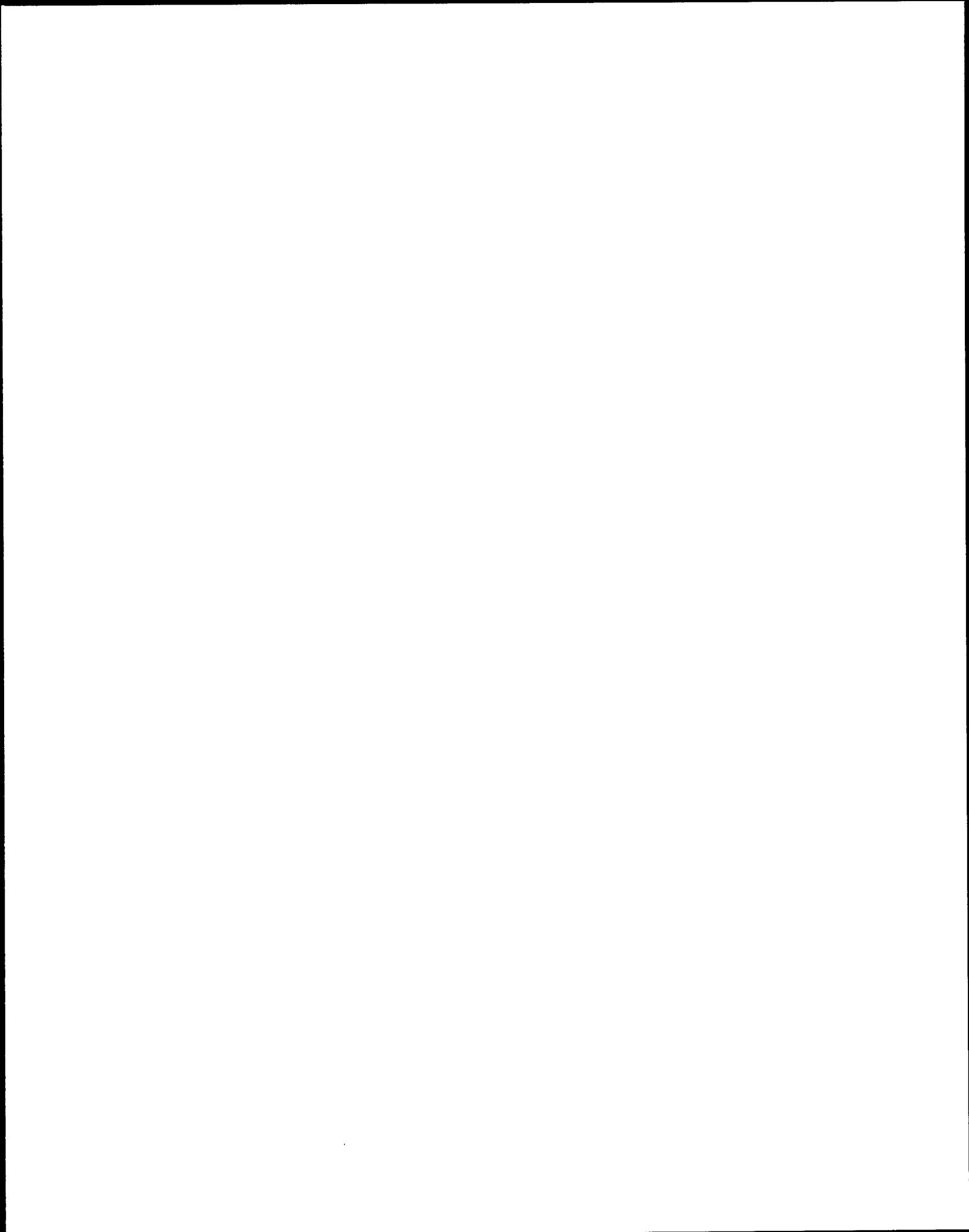
South WTF Reuse Pump Station and Chlorine Facility Upgrade, Town of Florence. Structural Engineer for concrete junction structure and pump slab and conversion of chlorine gas to sodium hypochlorite disinfection system.

Well Site 20B Arsenic Facility, Litchfield Park Services Company. Structural Engineer for arsenic treatment facility at an existing well site. Work includes new concrete backwash tank, and equipment and piping slabs, masonry site wall and steel entry gate.

Anthem Water Campus Headworks Improvements, Arizona-American Water Company. Structural Engineer for installation of new screening system. Work includes new concrete equipment slab, retaining structure, and elevated equipment supports, and structural steel maintenance platform.

Well Site 6 Rehabilitation, City of Tempe. Structural Engineer for new masonry-and-steel site wall and steel entry gate.

Well Site 7 & 8 Booster Pump Station & Storage Reservoir, Wickenburg Ranch Estates. Structural Engineer for additions to two well sites. Work includes new steel



**DESIGN AND
CONSTRUCTION
PROJECTS
(Continued)**

storage reservoir, equipment, and piping slabs, masonry site wall and steel entry gates.

South WTF Operations Building Expansion, Town of Florence. Structural Engineer for expansion of the existing concrete masonry operations building.

Town Reservoir Electrical Upgrades, Litchfield Park Services Company. Structural Consultant for electrical improvements to a reservoir site. Work includes new equipment slabs.

Vehicle Driver Training Facility, U.S. Marine Corps Base, Hawaii. Structural design engineer for "obstacles" for a training facility for vehicle drivers headed overseas. Obstacles were re-locatable structural steel simulations of side-hill slopes, canal road, and bridges as may be encountered in the urban operations in Afghanistan and Iraq.

Well Site 34C Improvements, Litchfield Park Services Company. Structural Engineer for improvements to a well site. Work includes new equipment, piping, and chemical storage slabs, masonry site wall and steel entry gate.

Palm Valley WRF Upgrades, Litchfield Park Services Company. Structural Consultant for improvements and modernization of an existing water reclamation facility. Work includes inspection, modifications to and reinforcement of existing structures, new chemical storage facility, and new equipment pads.

Verrado Reservoir, Arizona-American Water Company. Structural Special Inspector for 1-million-gallon below-ground pre-stressed concrete water tank (circumferentially wrapped).

Arsenic Removal Facilities, Arizona-American Water Company. Structural Special Inspector for \$5 million arsenic removal system at two sites. Work includes two 1-million-gallon above-ground steel storage tanks, concrete pump stations, concrete clarifiers, masonry service buildings, masonry administration buildings, and miscellaneous concrete structures.

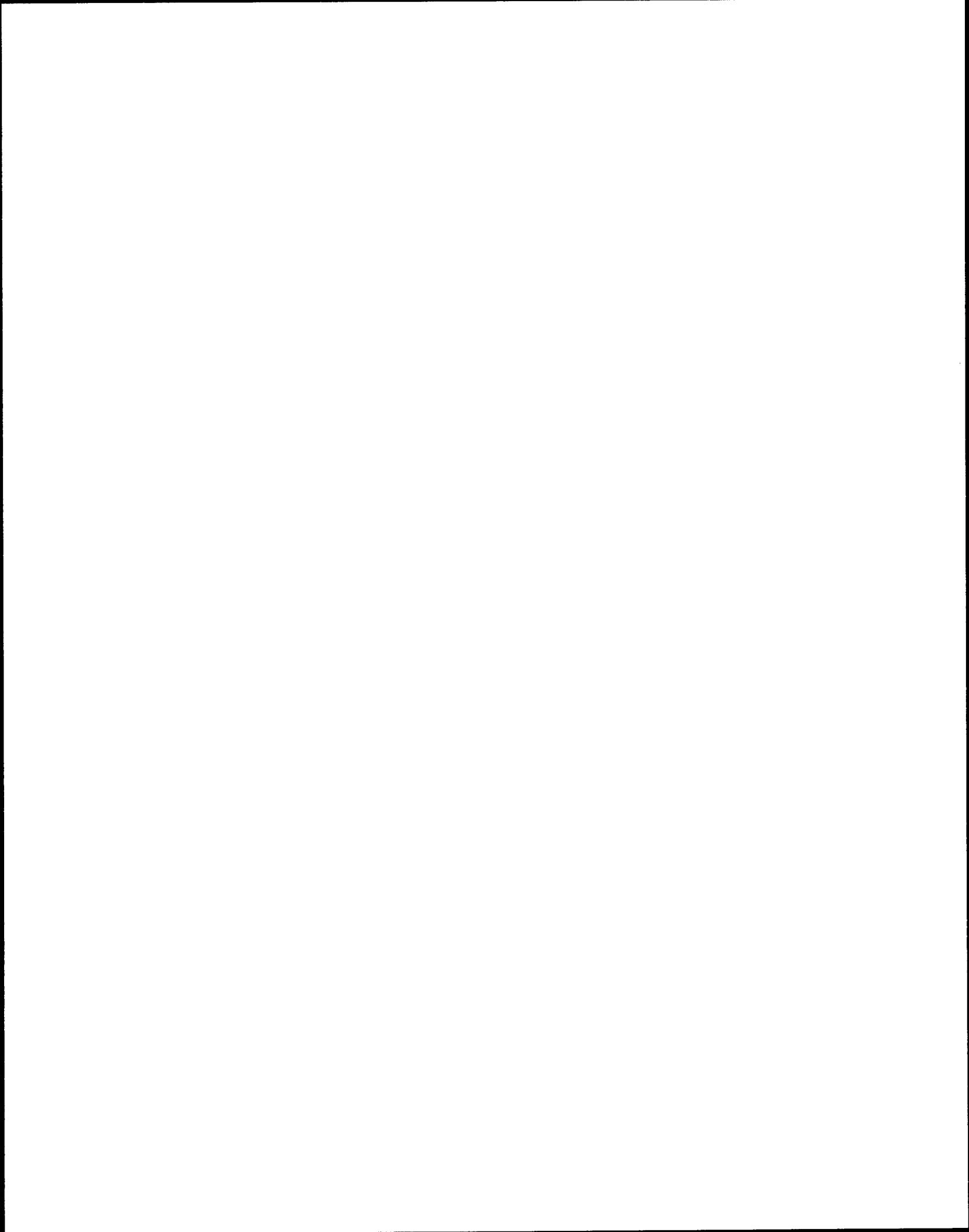
Granular Iron Media Arsenic Removal Facilities, Arizona-American Water Company. Structural Design Engineer and Special Inspector for \$2.5 million arsenic removal systems at five sites. The work on this, CM-at-risk, project includes one 50,000-gallon above-ground steel storage tank, four underground concrete storage tanks, concrete equipment wells, precast concrete service buildings, masonry and miscellaneous concrete structures.

Saddlebrooke Ranch Water Reclamation Facility. Structural Design Engineer and Special Inspector for the 300,000 gallon/day first phase of this design-build Sequenced Batch Reactor wastewater treatment plant. Work includes raised concrete splitter box, various equipment pads, and pre-cast concrete pump stations.

Tolleson Wastewater Plant. Contractor's Engineer responsible for design and inspection of air piping support and expansion system for the expansion of this facility.

Picacho-EJR Ranch Regional Water Reclamation Plant. Structural Design Engineer for the 1.8-million gallon/day first phase of this, 5.4 million gallon/day activated sludge plant. The work on this design-build project includes cast-in-place influent and effluent pumping stations, two bioreactors, three rectangular clarifiers, disc filter tanks, ultra-violet disinfection channels, a 3000 square-foot masonry service and control building, and miscellaneous concrete structures.

Anthem Water Campus Disinfection Improvements. Structural Engineer/ Resident Engineer for \$1.5 million conversion from sodium hypochlorite disinfection to Ultra-violet supplemented by hypochlorite. Work included building extension, installation of



**DESIGN AND
CONSTRUCTION
PROJECTS
(Continued)**

ultraviolet system, installation of injection, analyzer, and control systems, design and construction of pressurized concrete contact chamber.

Anthem Water Campus Wastewater Treatment Plant Expansion Phase 3. Project Manager/ Resident Engineer for third-party CM of \$6.0 million expansion of membrane-treatment plant including new membrane basins and systems, upgrade of existing systems, electrical service upgrade, new bioreactors & odor control facilities, & site work.

Anthem Water Campus Wastewater Treatment Plant Expansion Phase 4. Structural Engineer for \$5 million expansion of membrane-treatment plant including new bioreactor, membrane basins and systems, bridge crane extension, pumping station, equipment supports, and site work.

Sky Harbor Airport Terminal 3 Fuel Spill Corridor. Structural Engineer for design-build project to modify storage and office building to accommodate improved fire-fighting access.

Sky Harbor Airport Stage-and-Go Facility. Civil/ Structural Engineer for design-build project to construct a vehicle holding and flight information area to minimize fuel use while maintaining airport security.

Sky Harbor Airport Decorative Security Fence. Civil/ Structural Engineer for design-build project to construct crash-resistant decorative apron fencing to maintain airport security.

Corgett Water Reclamation Plant. Structural Engineer for construction of expansion of a small waste-water treatment plant including new filter.

Picacho Wastewater Treatment Plant. Structural Design Engineer for first stage of a Sequenced Batch Reactor wastewater treatment plant. Work included steel equipment/work platform, precast influent and effluent pumping stations, and miscellaneous equipment slabs.

Russell Ranch Wastewater Treatment Plant Expansion. Structural Engineer for construction of second stage of a packaged wastewater treatment plant. Work included a steel catwalk, security gate, and equipment slabs.

Anthem Water Campus Water Treatment Plant Expansion Phase 3. Project Manager/ Resident Engineer for construction of \$5.3 million expansion of membrane-treatment plant including new membrane basins and systems, upgrade of existing systems, electrical service upgrade, new support building, and site work.

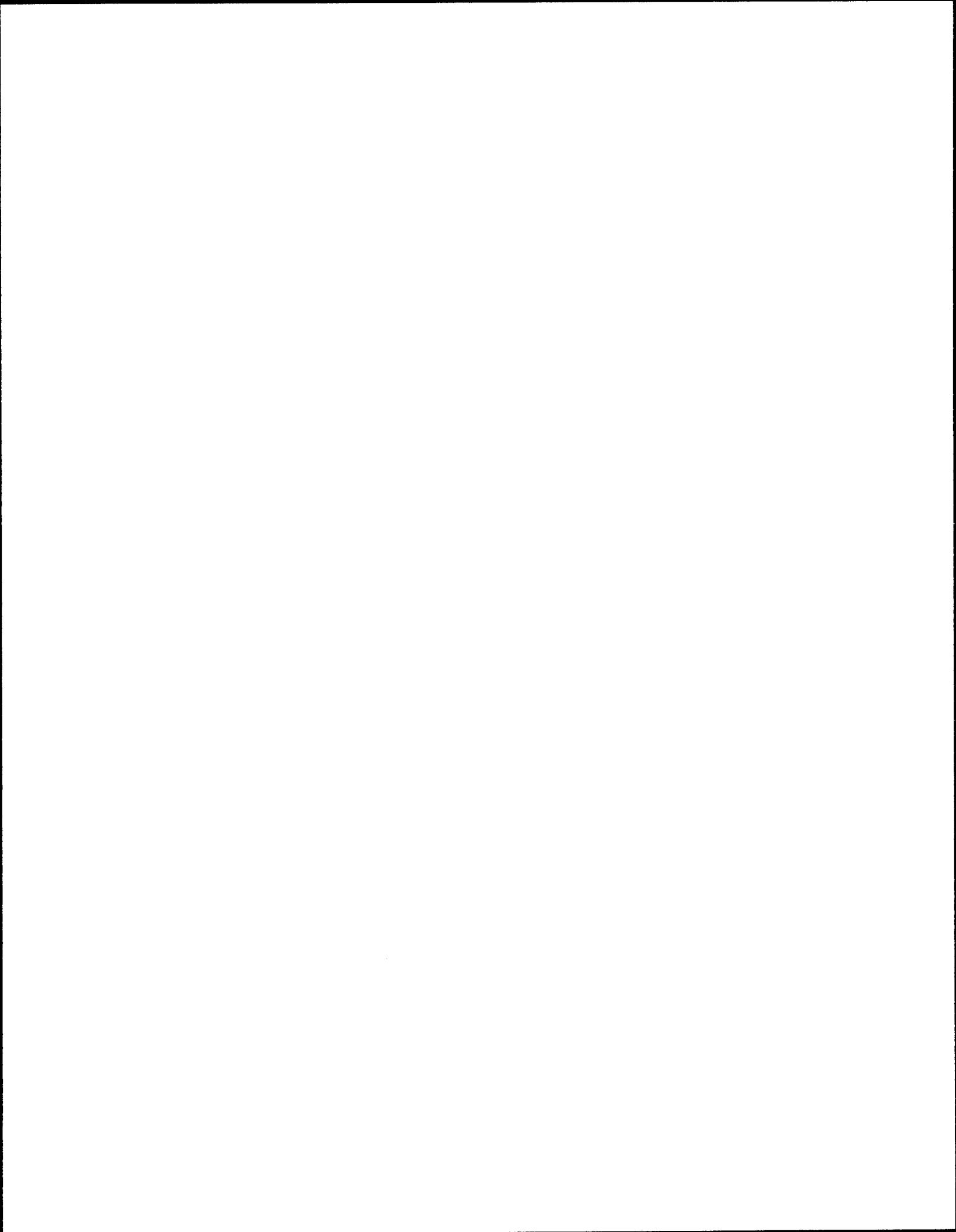
For previous employers, Mr. Heerup performed the following:

City of Phoenix Chlorination Facilities, Phase III. Project Manager/ Resident Engineer for third-party CM of \$3.9 million conversion from gaseous chlorine injection to on-site hypochlorite generation system at 12 reservoir sites.

City of Phoenix Happy Valley Reservoir. Project Manager/ Resident Engineer for \$5.5 million construction of 5-million gallon prestressed concrete reservoir, valving system for a future reservoir and future booster pump station, and on-site chlorine generation system, along with instrumentation, control, and security systems.

City of Avondale Solids Handling Facility. Project Manager/ Structural Engineer for design and construction of a \$2.2 million centrifuge facility, including building, pumping systems, and wet-scrubber odor control system.

City of Phoenix Lift Station and Pipeline. Resident Engineer for \$4.7 million construction of sewage lift station and 4 miles of dual 14" forcemain. Work included pumping system, wet-scrubber odor control system, biocide injection system, emergency



**DESIGN AND
CONSTRUCTION
PROJECTS
(Continued)**

generator, along with instrumentation, control, and security systems.

City of Glendale Arrowhead Ranch Water Reclamation Facility Expansion. Resident Engineer for third-party CM of \$17 million expansion and upgrade. Work included conversion to nitrification/de-nitrification activated sludge process, conversion to air-lift filter process, and conversion to ultra-violet disinfection process, improvements to electrical service, installation of emergency generation system and installation of new sludge pumping facilities and wet-scrubber odor control system.

Grand Canyon National Park Airport Water Collection, Storage, and Treatment. Resident Engineer/ Structural Design Engineer for construction of \$4.2 million expansion and improvements to water system. Work included lining of catchment basins, construction of two 1,000,000 gallon storage reservoirs, installation of a package treatment plant, and of pumping facilities, transmission and distribution lines, and conversion of toilet facilities and landscape irrigation from potable to recycled water.

City of Phoenix Lift Station Improvements. Resident Engineer for \$4 million construction of various improvements at ten different lift station sites. Improvements included structural rehabilitation, protective coating of structures, safety and security improvements, odor control facilities, security systems, and emergency generators.

Seismic Repair of Dirigible Hangar #3. Project Manager/ Construction Manager for design and construction of repairs to this historic, 1930's timber structure.

Structural Repair of 7x10 Wind Tunnels. Project Manager/ Structural Engineer/ Construction Manager for the design and construction of repairs to two steel-framed, steel-plate wind tunnels.

Repair and Rehabilitation of Building N-215. Project Manager/ Construction Manager for the construction of HVAC, and fire suppression and alarm systems, improvements to the neutral buoyancy space suit test facility, and reroofing of this converted hangar, now an office/ research facility.

Construction of VSTOL Control Simulation Facility. Construction Manager for this design-build project to convert a man-rated centrifuge building into a facility for simulation testing of control systems for various experimental VSTOL aircraft.

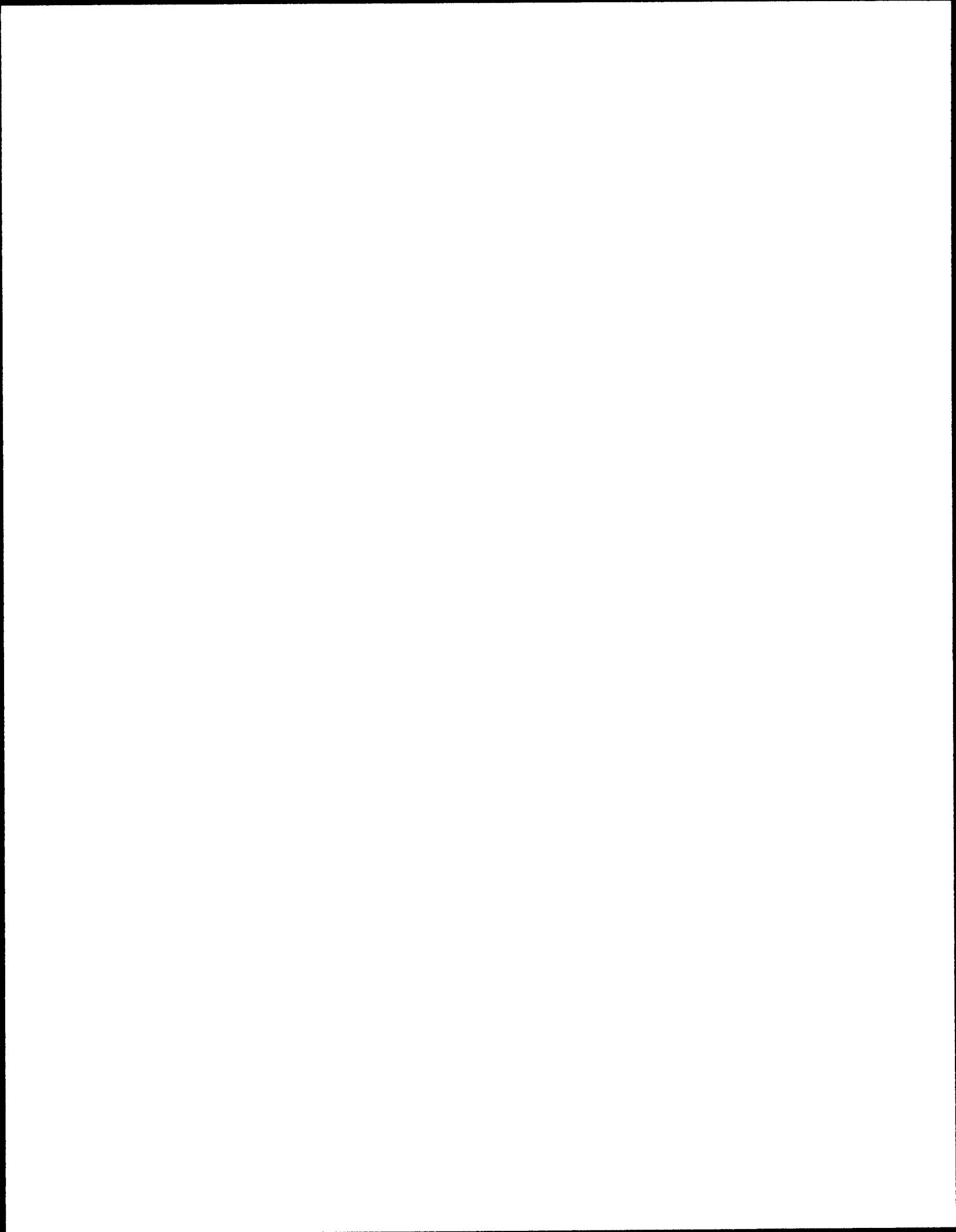
Structural Repair of Runway. Senior Construction Manager for the repair of the Moffett Field Runway, taxiway, and aprons.

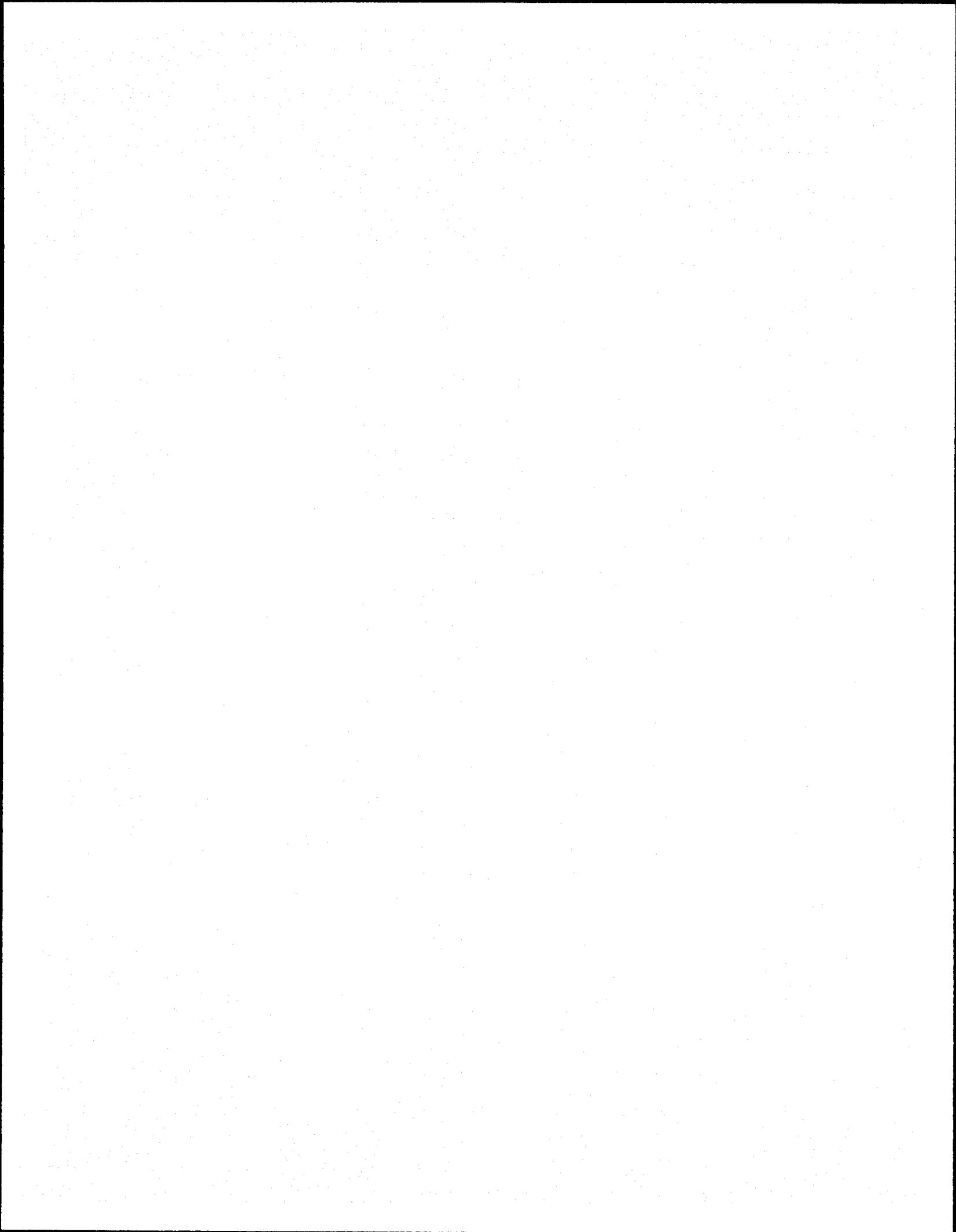
Life Safety Improvements. Program Manager for multi-year program to bring facilities into line with current life safety codes. Acted as project manager and construction manager for various projects including fire suppression and alarm system installation, exiting improvements, structural reinforcement, hazardous-material handling improvements, natural-gas system seismic safety, and improvements to safety of industrial facilities.

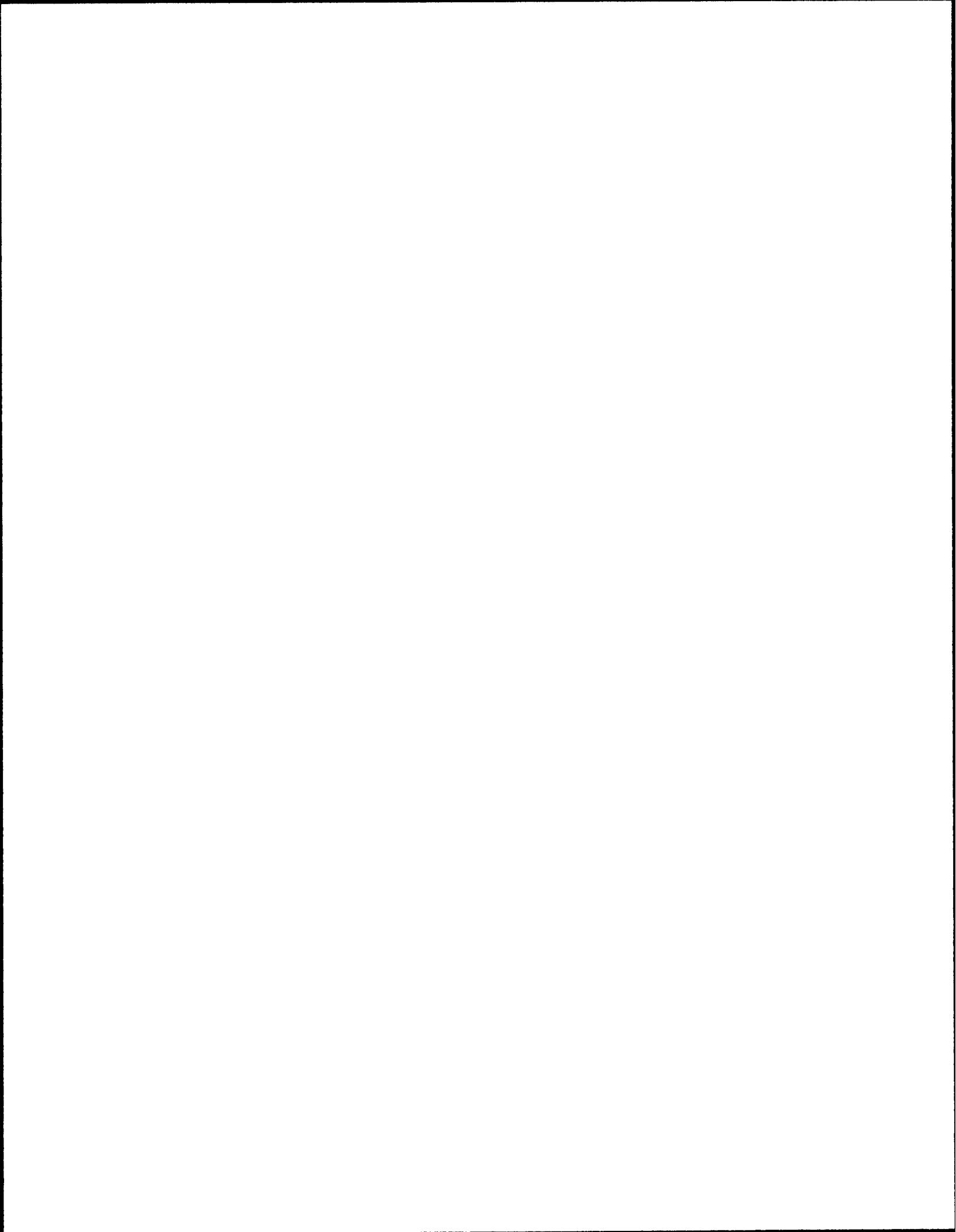
Guided Busway Construction, Adelaide, South Australia. Superintendent of precasting operations and general foreman for erection of structural-precast roadbed. Fully responsible for design revisions, scheduling, quality control, and transportation of structural precast. On-site supervisor of erection crew.

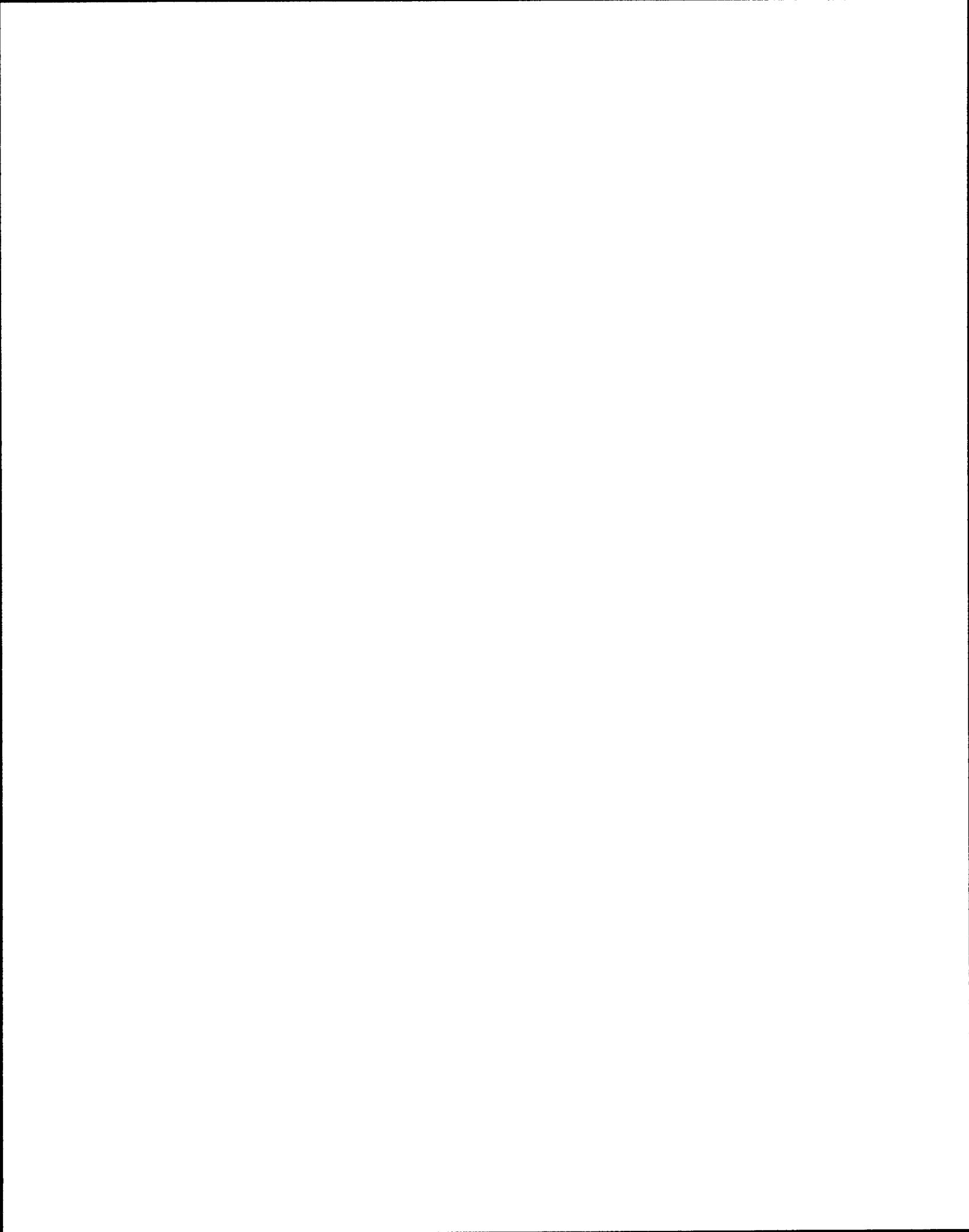
Agricultural Schools, Iraq. Assisted in design and detailing of components for various agricultural schools for the government of Iraq. The components were of pre-cast insulating concrete.

Space-Truss Design Development. Lead engineer for integration of computer-aided analysis and design of proprietary modular space-truss system. In-house computer program was on the leading edge of computer-aided design in 1983.







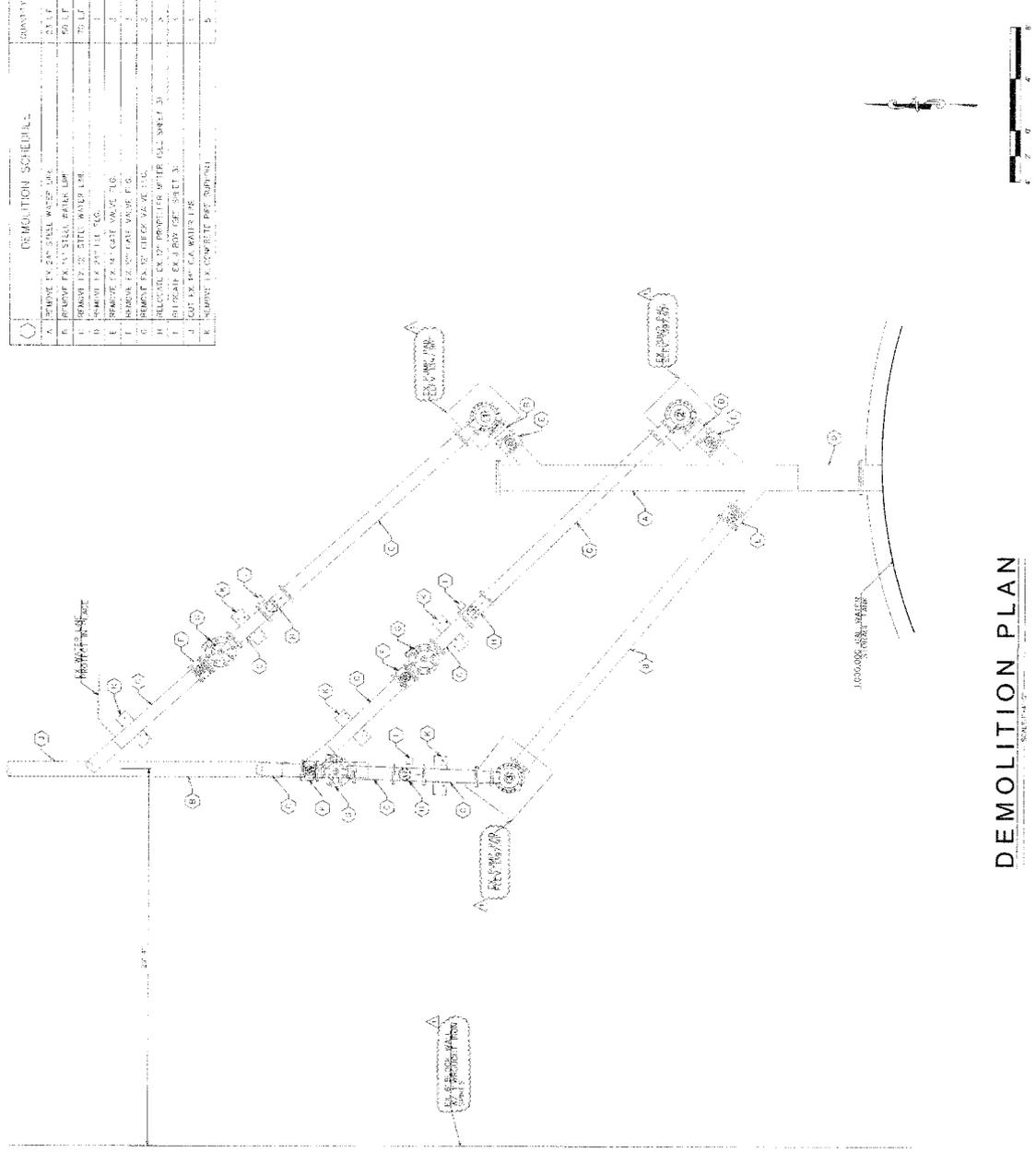




ARIZONA WATER COMPANY
 3805 N. BLACK CANYON HWY POST OFFICE BOX 29008
 PHOENIX, ARIZONA 85028-9008
 (602) 240-8800

DEMOLITION PLAN
 PROJECT SHEET DESC: REPLACE THE EX. ROOSTER MANHOLE WATER STORAGE RESERVOIR AND AT THE COTTONWOOD PLANE WATER FACILITY SITE
 DRAWN BY: BMP
 CHECKED BY: AS SHOWN
 DATE: 4/7/2014
 0403
 AM 1/4 SEC. 21, T. 6 S., R. 9 E.
 PINAL VALLEY
 1-5-170
 1431

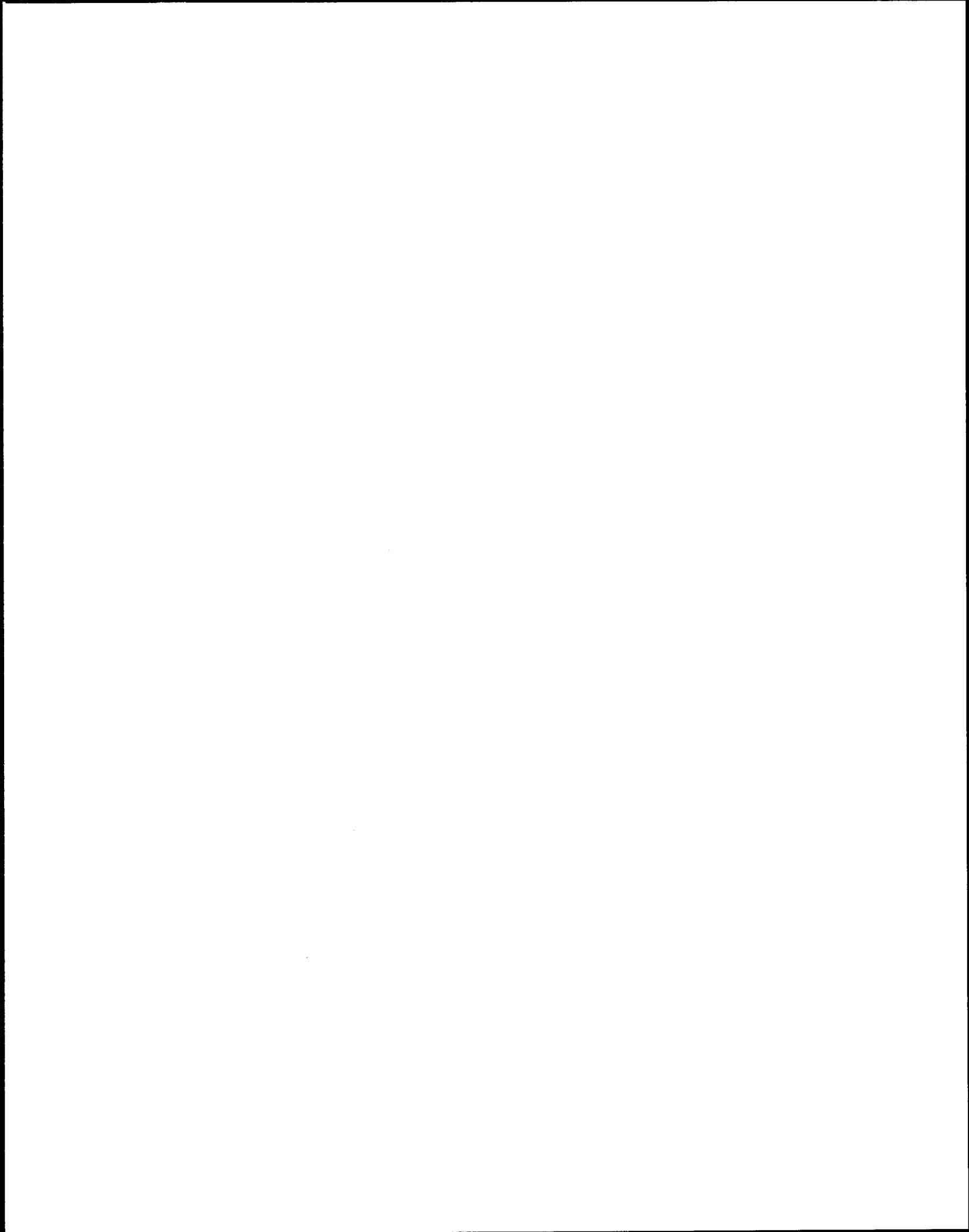
The engineer agrees to be bound in accordance with the Arizona Statutes and the Arizona Board of Professional Engineers and Surveyors.
 283-1100
 1-800-538-6787
 ENGINEERED BY: RMP ON 10/14/14 PER AEC COMMENTS

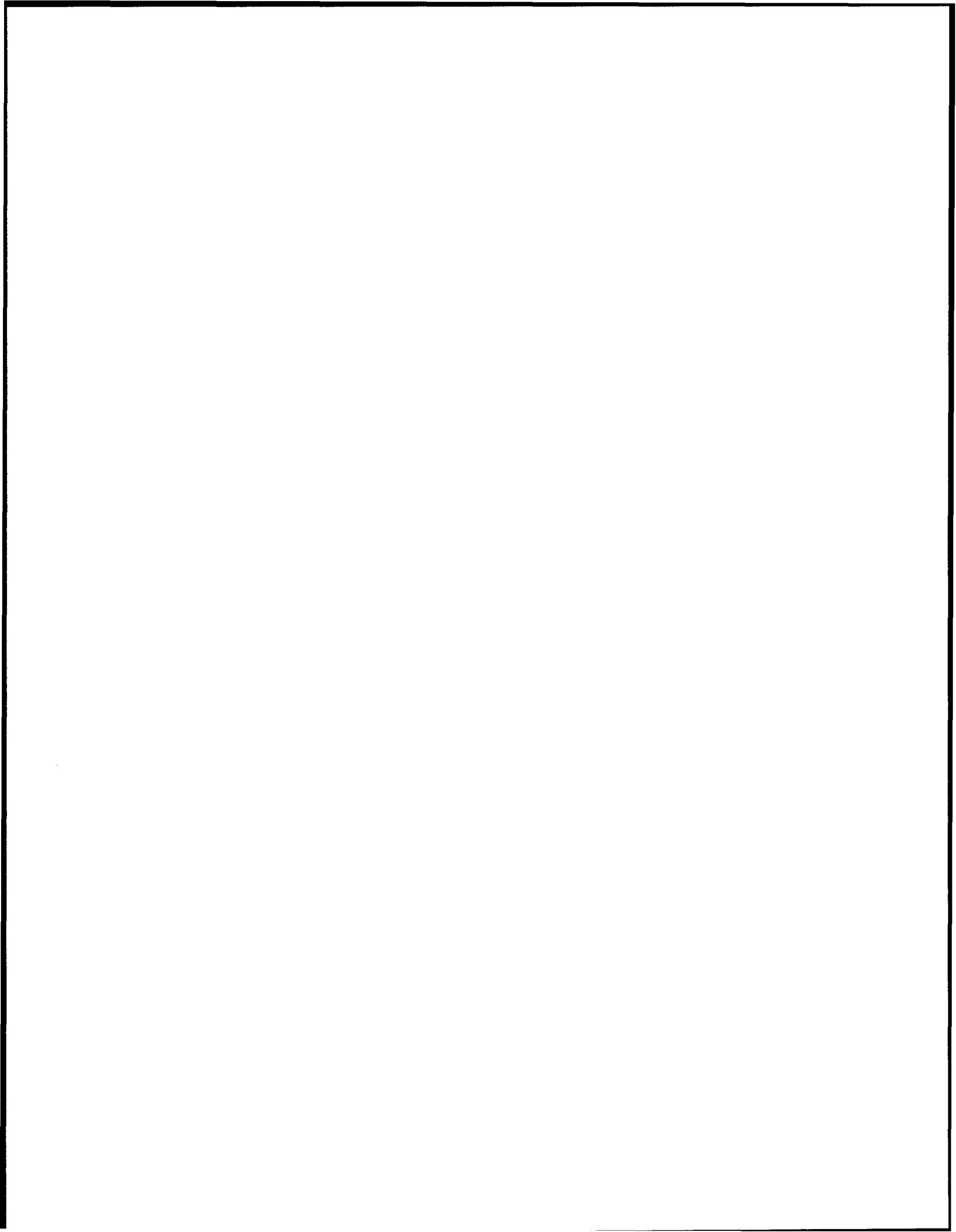


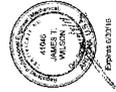
DEMOLITION SCHEDULE

NO.	DESCRIPTION
A	REMOVE EX. ROOSTER WATER DIA. 30" MANHOLE
B	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
C	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
D	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
E	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
F	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
G	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
H	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
I	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
J	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE
K	REMOVE EX. 12" DIA. WATER DIA. 30" MANHOLE

DEMOLITION PLAN







PV-0077
SHEET 4 OF 7

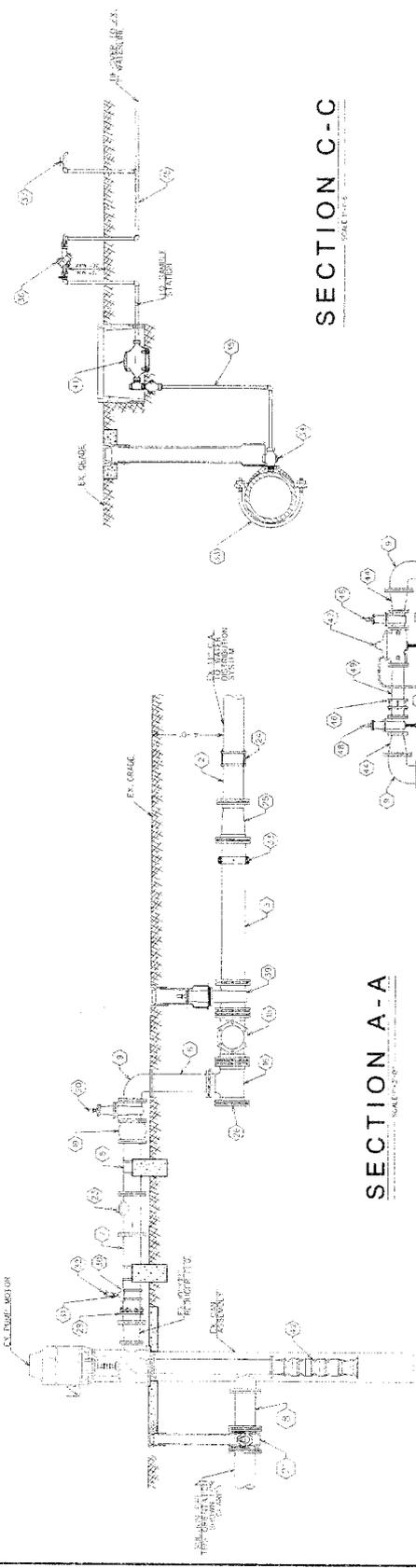
ARIZONA WATER COMPANY
3808 N. BLACK CANYON HWY. POST OFFICE BOX 38008
PHOENIX, ARIZONA 85039-9008
(602) 240-6660

REPAIR AND REHABILITATE THE EX. 1,000,000 GAL. WATER STORAGE RESERVOIR AND
AT THE COTTONWOOD LAKE WATER FACILITY SITE.
REPLACE THE EX. ROSSIER PUMP SECTION AND DISCHARGE PIPING

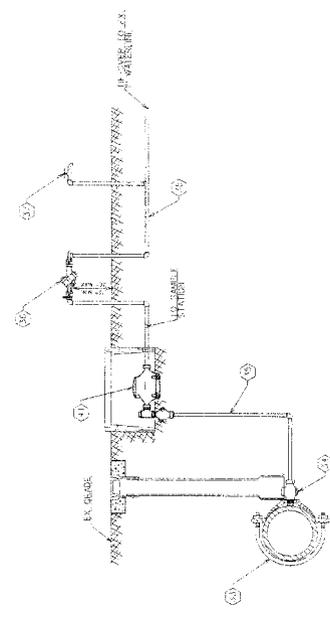
SECTIONS/DETAILS

DATE: 4/7/2014	BY: SMP
DATE: 04/03	BY: AS SHOWN
PROJECT: NW 1/4 SEC. 21, T. 6 S., R. 8 E.	PROJECT: 263-1100
PROJECT: PINAL VALLEY	PROJECT: 1-5170
PROJECT: 1431	PROJECT: 1431

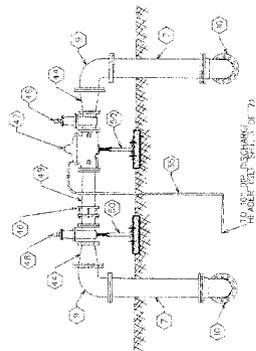
The treatment shown is to be installed in accordance with Arizona State Company Standard Specifications for Engineering Quality.



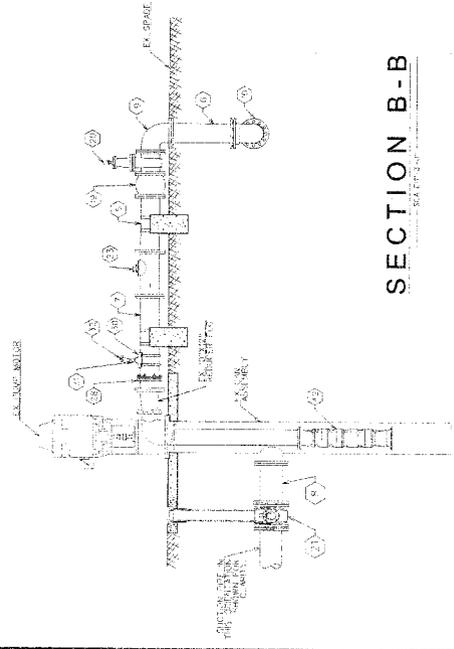
SECTION A-A
SCALE: 1/8" = 1'-0"



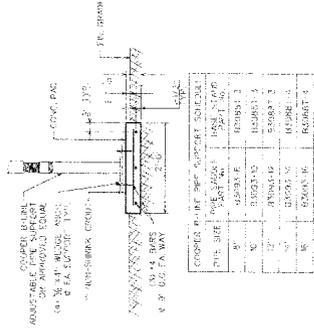
SECTION C-C
SCALE: 1/8" = 1'-0"



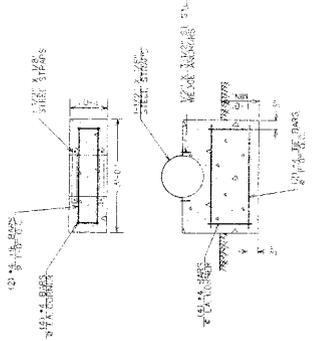
SECTION D-D
SCALE: 1/8" = 1'-0"



SECTION B-B
SCALE: 1/8" = 1'-0"

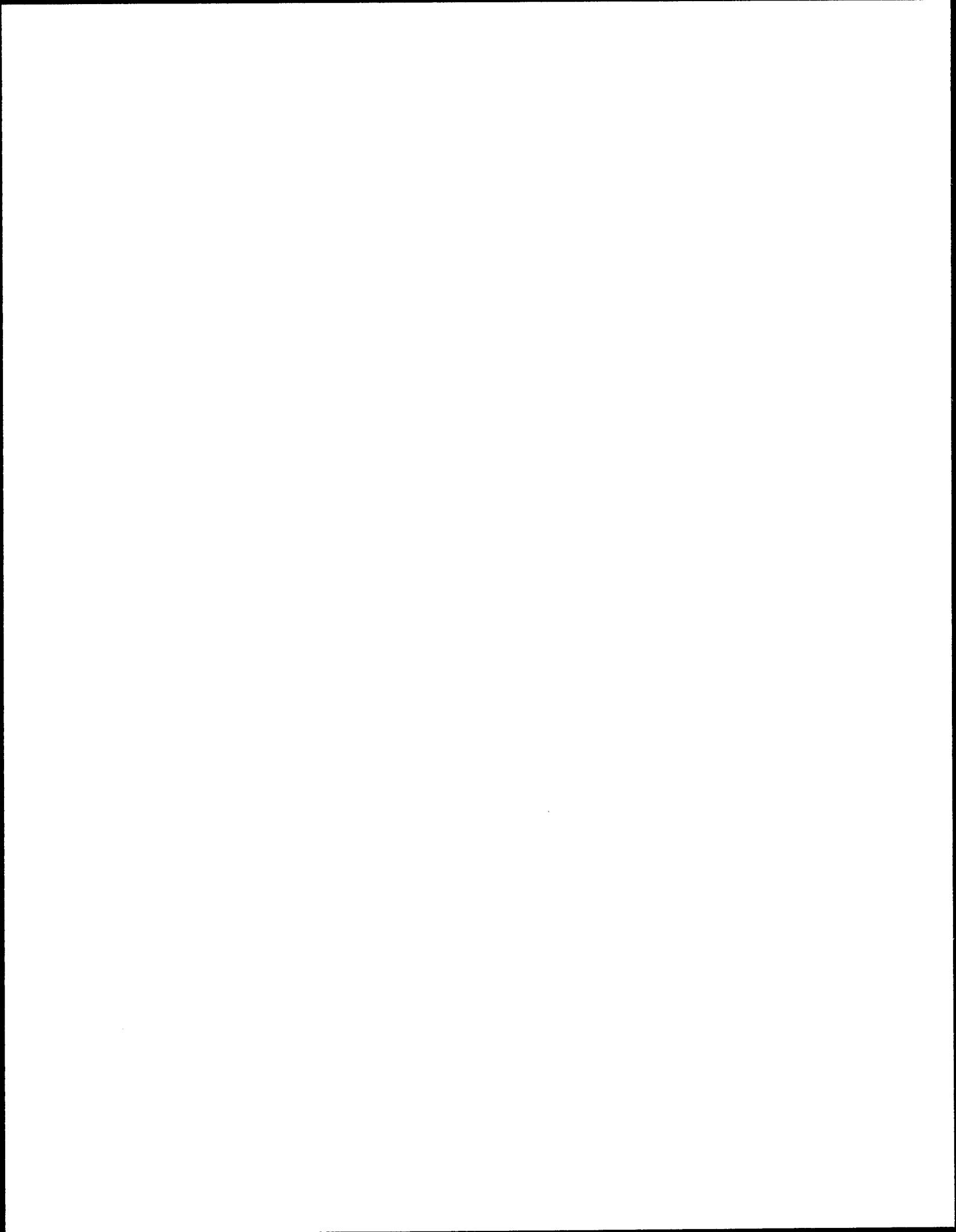


PIPE SUPPORT B
SCALE: 1/8" = 1'-0"



PIPE SUPPORT A
SCALE: 1/8" = 1'-0"

NO.	DESCRIPTION	QUANTITY
1	ADJUSTABLE PIPE SUPPORT	1
2	6" X 6" STEEL ANGLE	1
3	2" X 6" WOODEN CLEAT	1
4	CONCRETE	1
5	ROBUST 1	1
6	ROBUST 2	1
7	ROBUST 3	1
8	ROBUST 4	1
9	ROBUST 5	1
10	ROBUST 6	1
11	ROBUST 7	1
12	ROBUST 8	1
13	ROBUST 9	1
14	ROBUST 10	1
15	ROBUST 11	1
16	ROBUST 12	1
17	ROBUST 13	1
18	ROBUST 14	1
19	ROBUST 15	1
20	ROBUST 16	1
21	ROBUST 17	1
22	ROBUST 18	1
23	ROBUST 19	1
24	ROBUST 20	1
25	ROBUST 21	1
26	ROBUST 22	1
27	ROBUST 23	1
28	ROBUST 24	1
29	ROBUST 25	1
30	ROBUST 26	1
31	ROBUST 27	1
32	ROBUST 28	1
33	ROBUST 29	1
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95	ROBUST 91	1
96	ROBUST 92	1
97	ROBUST 93	1
98	ROBUST 94	1
99	ROBUST 95	1
100	ROBUST 96	1
101	ROBUST 97	1
102	ROBUST 98	1
103	ROBUST 99	1
104	ROBUST 100	1





PV-0077
SHEET 5 OF 7

ARIZONA WATER COMPANY
3905 N. BLACK CANYON HWY. POST OFFICE BOX 25005
PHOENIX, ARIZONA 85039-9000
(602) 240-8860

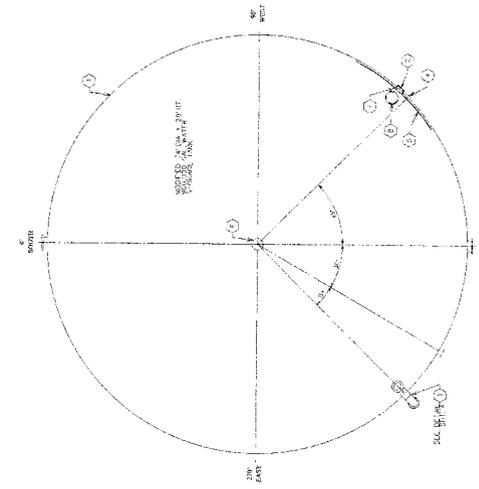
PROJECT NO. 2007-0001
REPAIR AND REHABILITATE THE EX. 1,000,000 GAL. WATER STORAGE RESERVOIR AND REPLACE THE EX. ROSSITER MAIN 24" DIAM. STEEL MAIN AND BRANCH PIPING AT THE COTTONWOOD LAKE WATER FLOWY SITE
ELEVATIONS/ORIENTATIONS

DATE	4/7/2014	BY	BWP
DATE	AS SHOWN	BY	AS SHOWN
DATE	0403	BY	0403
DATE	NM 14 SEC. 21 T. 6 S. R. 6 E.	BY	
DATE	FINAL VALLEY	BY	
DATE	1-5170	BY	1431

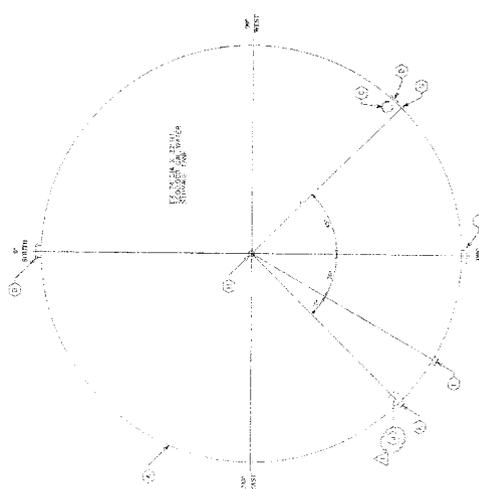
The installation shown is to be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks. The installation shown is to be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.

SPECIFICATION FOR MODIFIED STEEL WATER STORAGE TANK

1. Tank shall conform to ANSI Specification (ASME) with exceptions noted below.
2. Minimum thickness shall be as specified in the drawings.
3. Minimum of 2" diameter steel pipe shall be used for all connections. All connections shall be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.
4. Minimum pipe shall be 2" diameter steel pipe. All connections shall be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.
5. Minimum 24 inch diameter valves shall be provided on the tank. The tank shall be provided with a minimum of 2" diameter steel pipe for all connections. All connections shall be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.
6. Make tank water tight in all connections.
7. Provide the tank with a minimum of 2" diameter steel pipe for all connections. All connections shall be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.
8. Minimum of 2" diameter steel pipe shall be used for all connections. All connections shall be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.
9. The tank shall be provided with a minimum of 2" diameter steel pipe for all connections. All connections shall be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.
10. The tank shall be provided with a minimum of 2" diameter steel pipe for all connections. All connections shall be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.
11. Tank shall be provided with a minimum of 2" diameter steel pipe for all connections. All connections shall be made in accordance with the Arizona Rules and Regulations for the construction of water storage tanks.



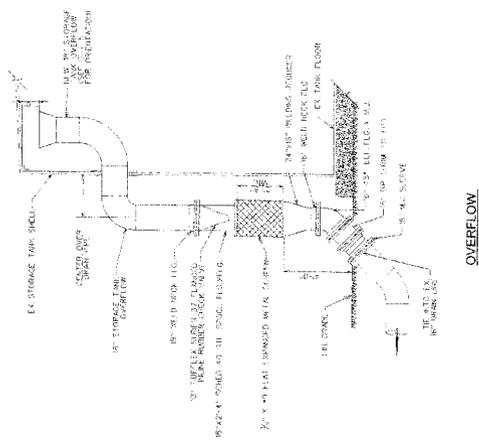
NEW TANK ORIENTATION PLAN



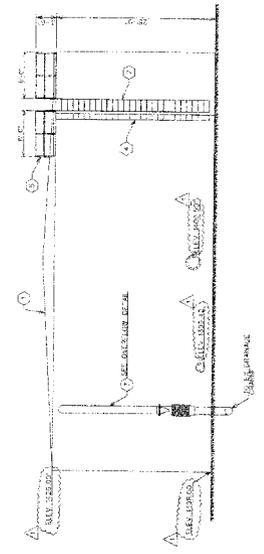
EXISTING TANK ORIENTATION PLAN

NO.	DESCRIPTION	QUANTITY	UNIT
1	NEW FITTINGS	1	CONTR.
2	NEW MAIN	1	CONTR.
3	NEW BRANCH	1	CONTR.
4	NEW VALVE	1	CONTR.
5	NEW PIPE	1	CONTR.
6	NEW FITTING	1	CONTR.
7	NEW MAIN	1	CONTR.
8	NEW BRANCH	1	CONTR.
9	NEW VALVE	1	CONTR.
10	NEW PIPE	1	CONTR.

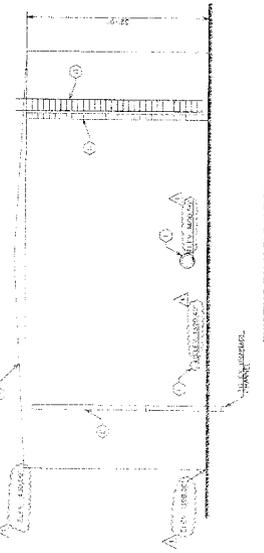
NO.	DESCRIPTION	QUANTITY	UNIT
1	NEW FITTINGS	1	CONTR.
2	NEW MAIN	1	CONTR.
3	NEW BRANCH	1	CONTR.
4	NEW VALVE	1	CONTR.
5	NEW PIPE	1	CONTR.
6	NEW FITTING	1	CONTR.
7	NEW MAIN	1	CONTR.
8	NEW BRANCH	1	CONTR.
9	NEW VALVE	1	CONTR.
10	NEW PIPE	1	CONTR.



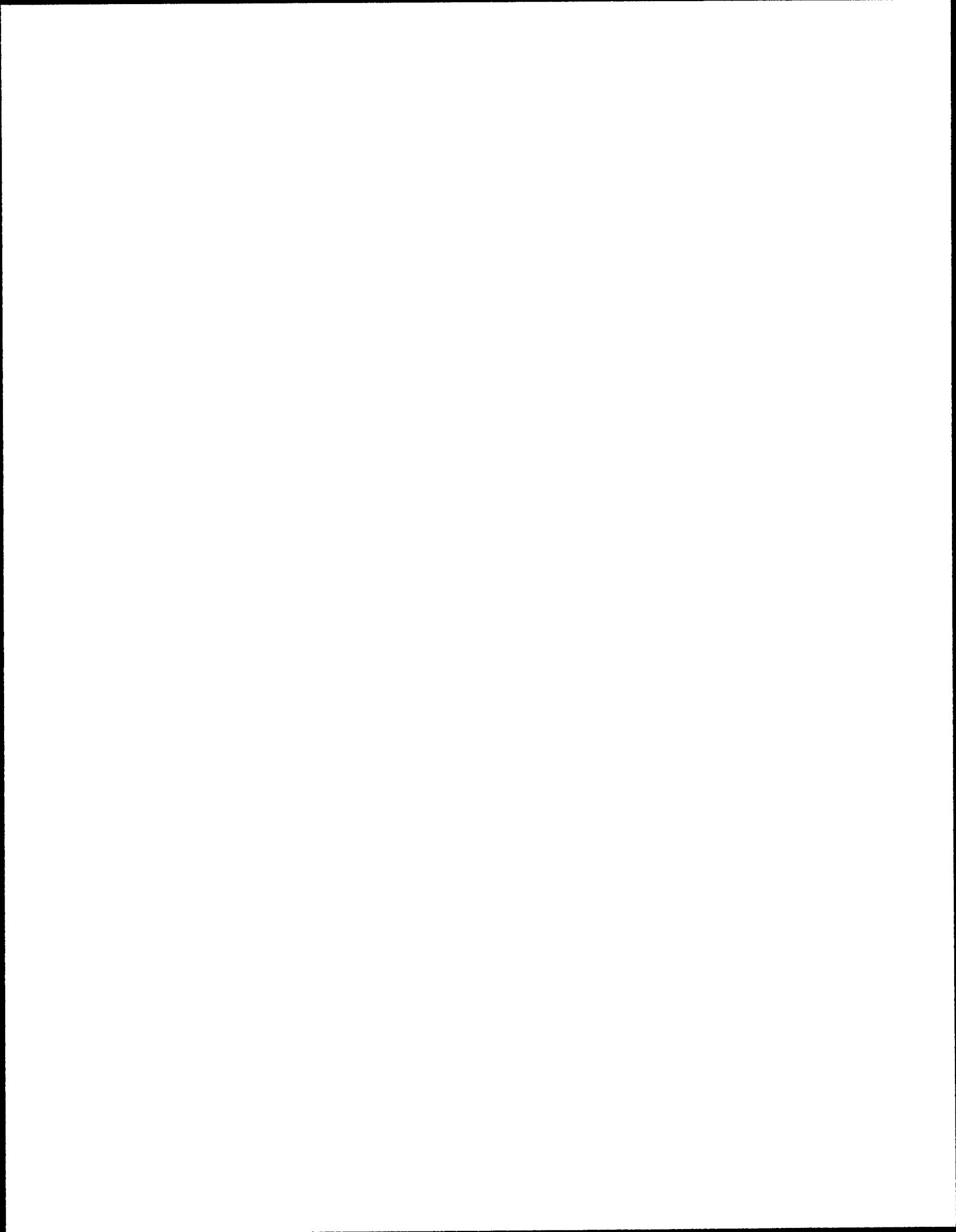
OVERFLOW

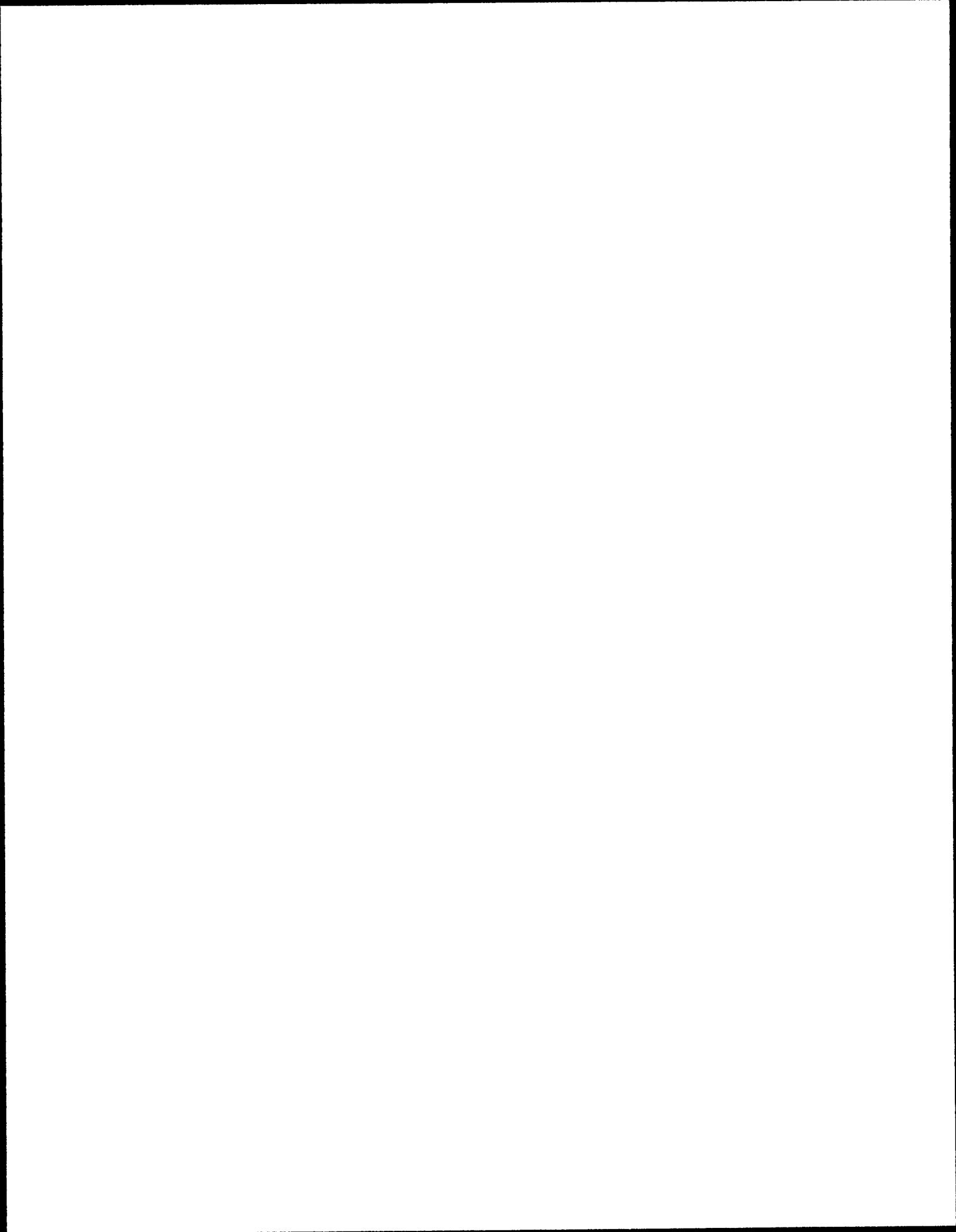


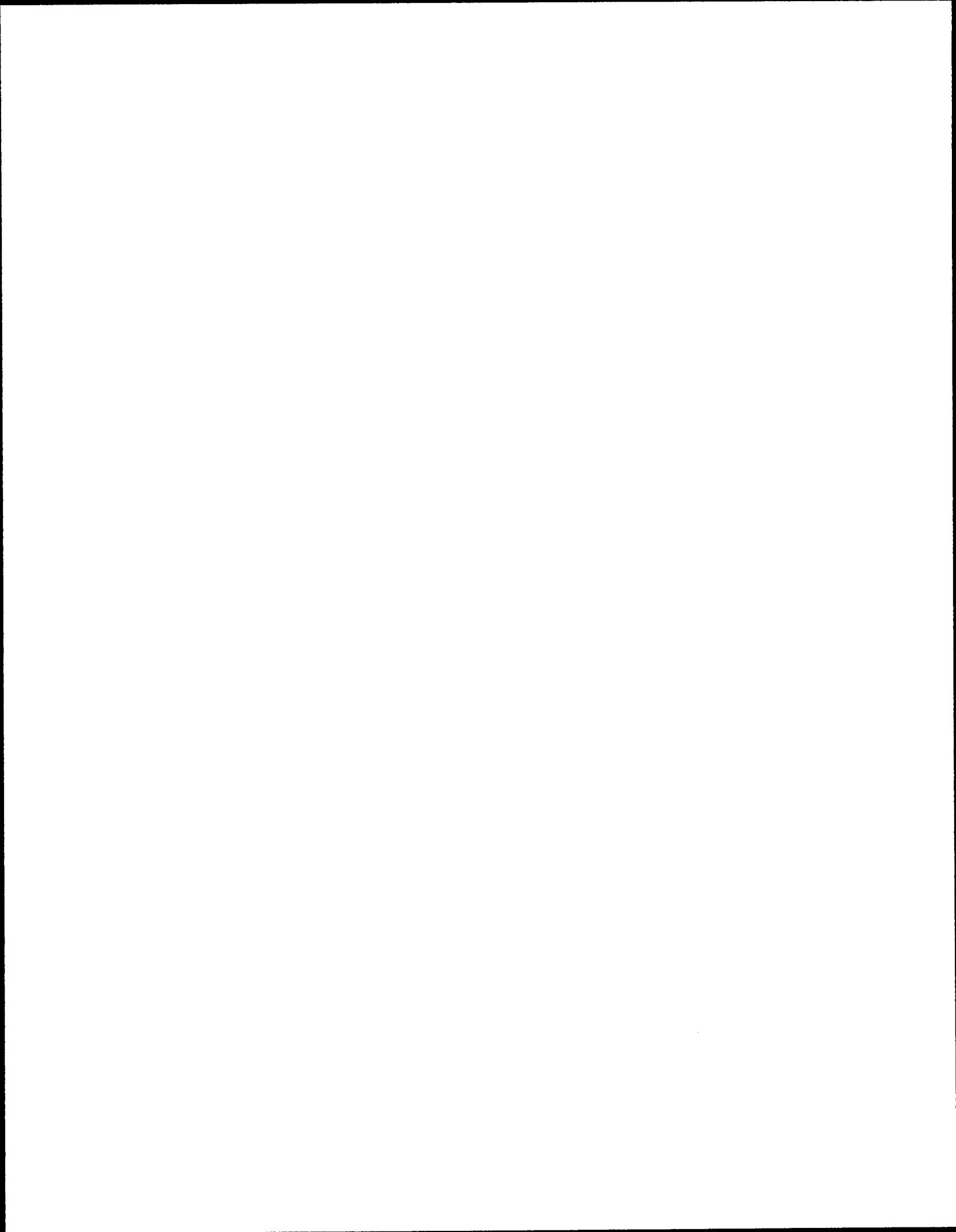
NEW TANK ELEVATION

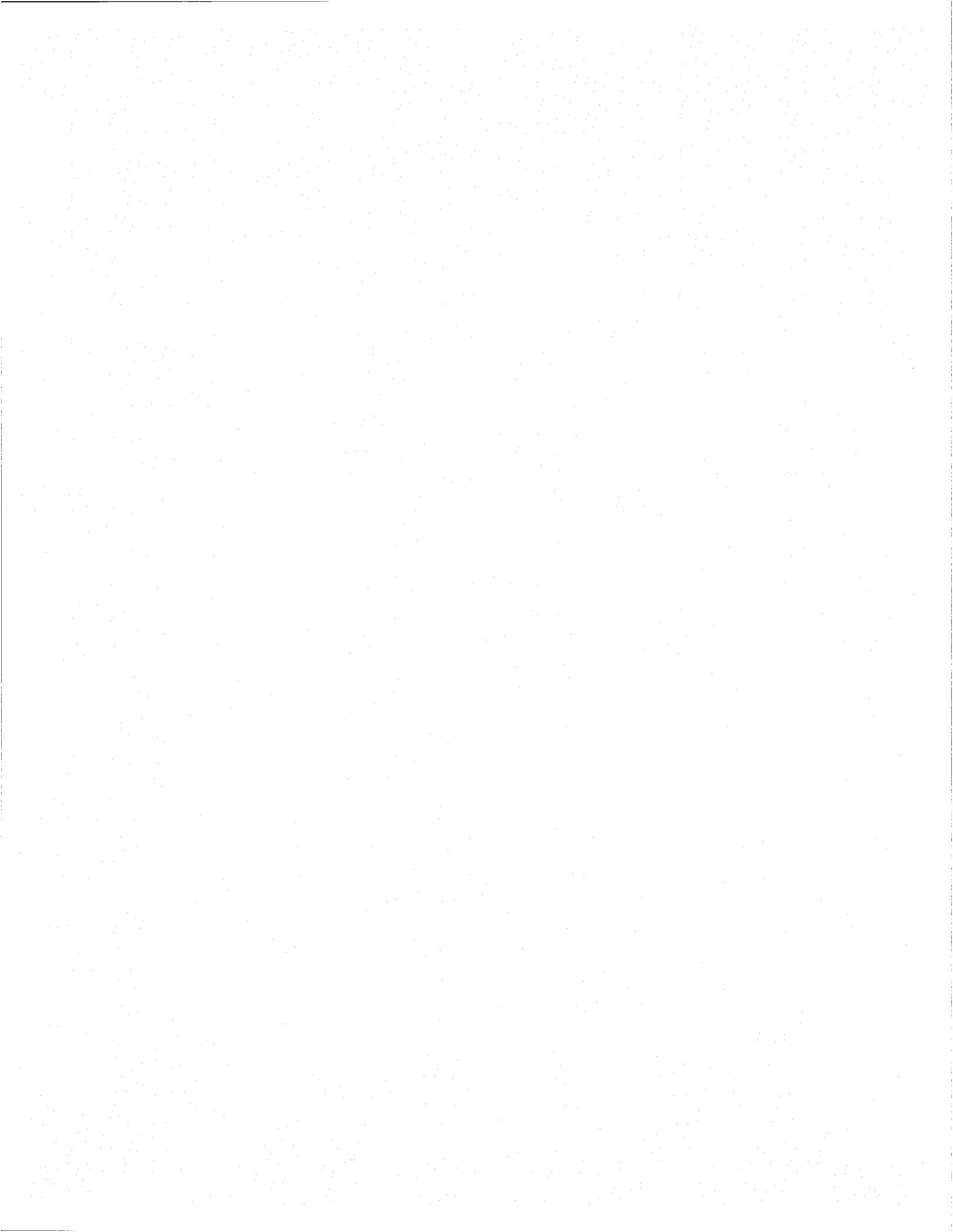


EXISTING TANK ELEVATION









SCANNED

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

August 28, 2014

Engineering Review Desk
Arizona Department of Environmental Quality
1110 W. Washington St., 5th Floor
Phoenix, AZ 85007

Re: Approval to Construct

Dear Engineering Review Desk:

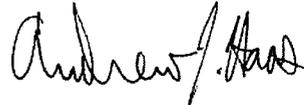
We are submitting for your approval four copies of the construction drawings and a Design Report for the following job:

Work Authorization No.: 1-5170
Project Name: Cottonwood Lane
Location: NW¼, Section 21, T.65., R.6E.
Casa Grande, Arizona

Please return two copies of the approved drawings to our office.

If you have any questions concerning this construction, please contact us at your convenience.

Very truly yours,

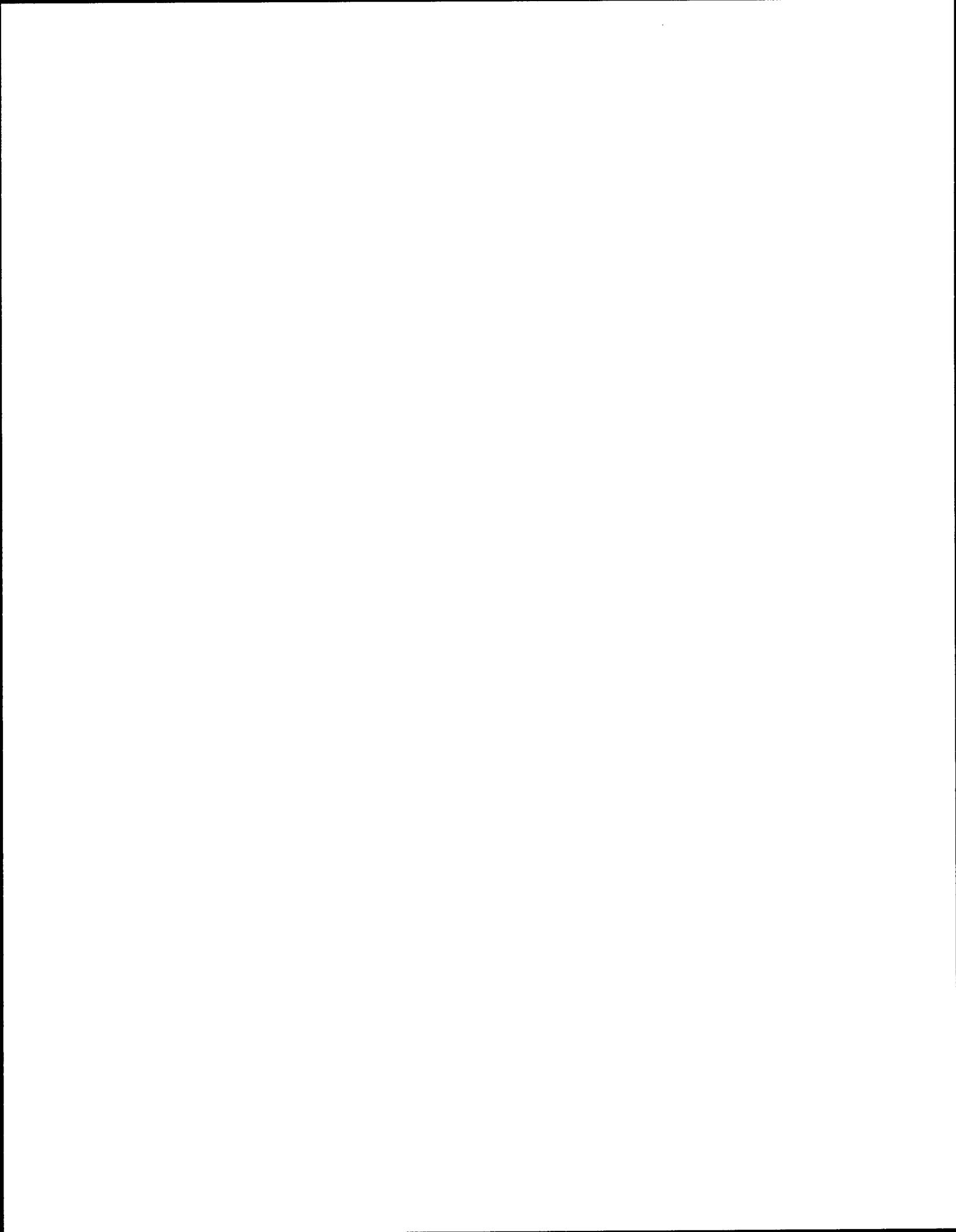


Andrew J. Haas, P. E.
Chief Engineer

sgo
Enclosures

FILE COPY

E-MAIL: mail@azwater.com





ENGINEERING REVIEW SECTION
APPLICATION FOR APPROVAL TO CONSTRUCT
DRINKING WATER FACILITIES

INSTRUCTIONS

Please fill out and submit this Application for Approval to Construct Drinking Water Facilities (ATC) to obtain authorization to construct a public drinking water system in accordance with Arizona Administrative Code (A.A.C.) R18-5-505.

GENERAL APPLICATION PROCESS

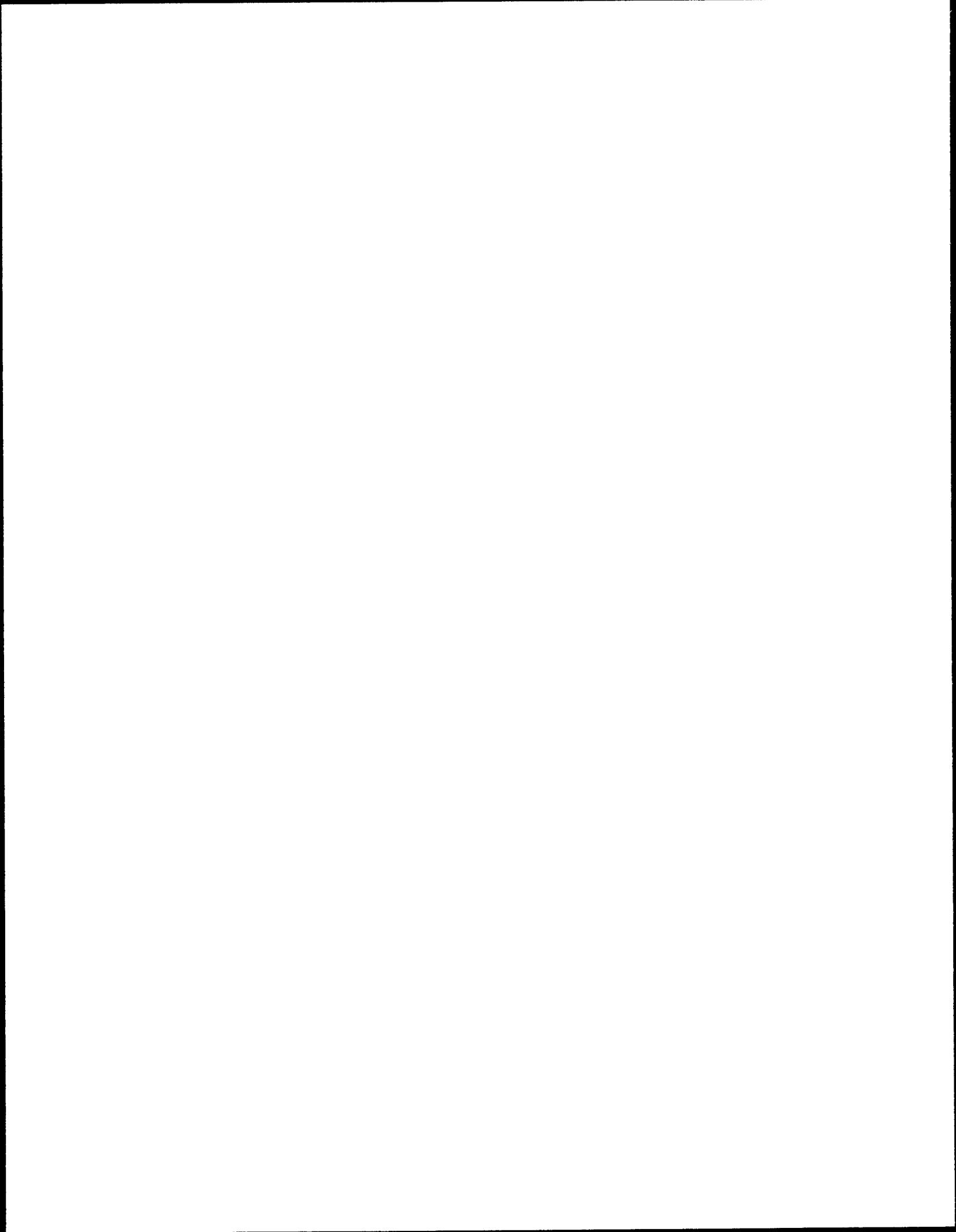
1. Submit this ATC and appropriate supplemental information and forms, which are identified in this form. Please refer for Form 222 (<http://www.azdeq.gov/environ/water/permits/download/222.pdf>) for guidance on what should be submitted with this application and the number of copies. Please see the document entitled Application Submittal Locations (<http://www.azdeq.gov/environ/water/permits/download/appsub.pdf>) to determine where to submit your application (County, City, or ADEQ Regional Office).
2. The following is a tabulation of fees for drinking water systems:

Fee Category (R18-14-202)	Fee ^{a, b}
Approval to Construct for a Public Water Distribution System:	
o 150 or fewer service connections	\$900
o 151 to 300 service connections	\$1,400
o 301 to 450 service connections	\$1,900
o 451 to 600 service connections	\$2,400
o 601 to 750 service connections	\$2,900
o Each additional 150 service connections	Add \$500
Water Treatment Plants and Blending Plans (including new source approval if applicable):	
o < 0.1 Million gallons per day (MGD)	\$1,500
o ≥ 0.1 MGD and < 1.0 MGD	\$2,000
o ≥ 1.0 MGD and < 5.0 MGD	\$3,000
o ≥ 5.0 MGD	\$5,000
Well (including new source approval if applicable), each	\$1,250
Storage Tank, each	\$800
Booster Pump, each	\$800 × 3
Main Line Extension (for minor water line extensions only)	\$250
Chlorinators/Disinfection Devices, each	\$250
Extension of Time to Construct ^c	50% of the application fee, not to exceed \$500
Priority Review Fee ^d	Double the Standard Fee

Notes:

- a. Fees are calculated on a per-unit basis: i.e., a separate fee is assessed for each separate storage tank, booster pump, disinfection device or well.
- b. Fees for each application type are cumulative; an applicant must pay the total of all pertinent fees.
- c. Extensions of time to construct are issued pursuant to A.A.C. R18-5-505(E); the Section states that an Approval to Construct becomes void if construction is not commenced within a specific time period, unless the Department grants an extension of time.
- d. Priority Review projects require Department authorization prior to filing.

3. Satisfy any deficiency requests arising from the Department's pre-construction review of the submitted information.
4. Receive an "Approval to Construct (ATC)" from the Department authorizing construction of the water distribution system.
5. Begin construction of the water system within one year of the signed approval to construct and complete construction within three years from signed Approval to Construct (ATC).





ENGINEERING REVIEW SECTION
APPLICATION FOR APPROVAL TO CONSTRUCT
DRINKING WATER FACILITIES
 ADEQ/WQD-114DW

LICENSING TIME FRAMES

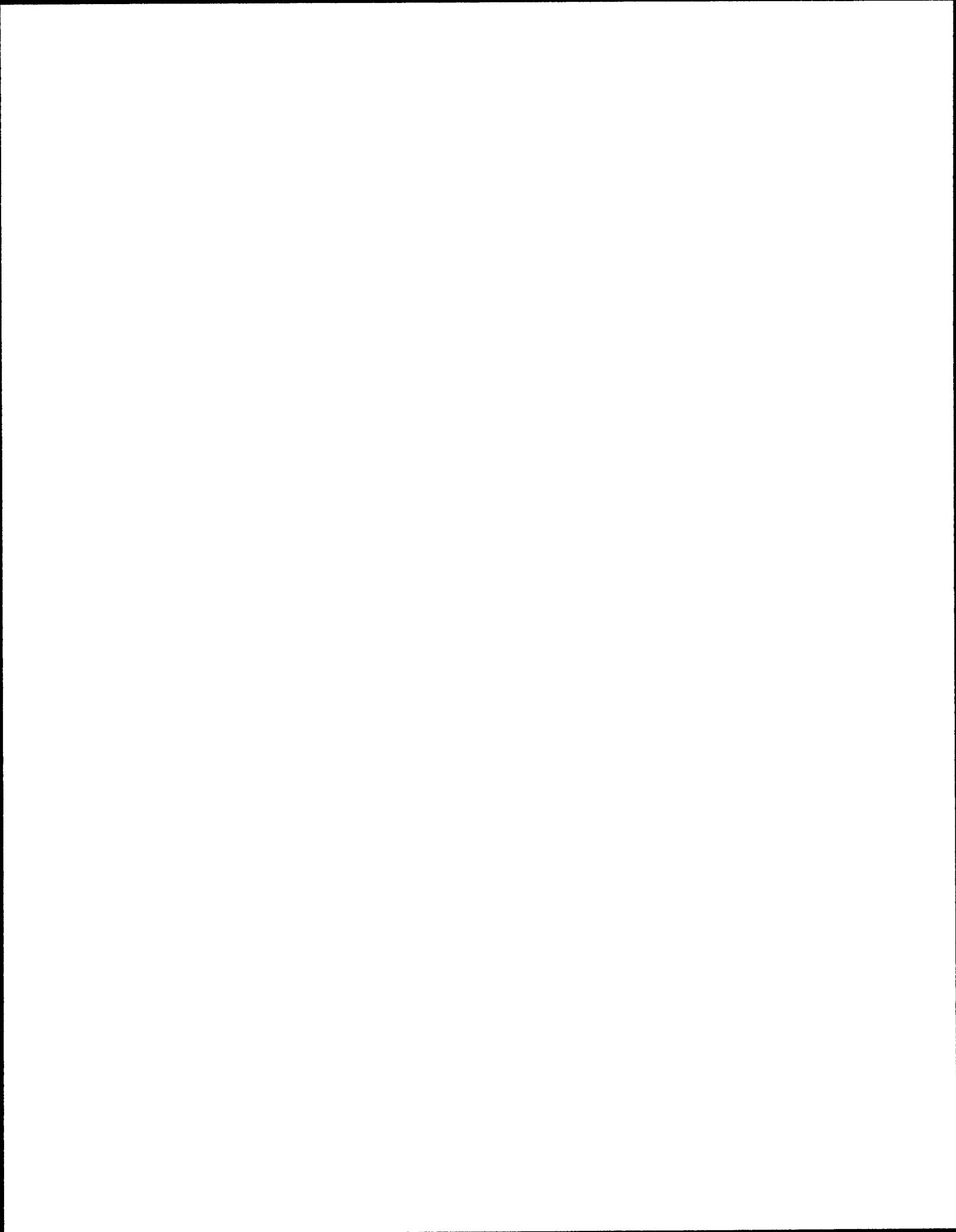
Licensing Time Frames are specified by Arizona Department of Environmental Quality in AAC R18-1-525, which limits the number of business days ADEQ can review your project without a penalty. They are:

License Type	Administrative Review	Substantive Review	Overall Time Frame
Approval to Construct drinking water treatment facility, project or well.			
Standard	16	37	53
Complex	16	67	83
Drinking Water New Source Approval			
Standard	16	37	53
Complex	16	67	83
Time Extension Approval			
Standard	16	16	32

HOW TO NAME YOUR PROJECT

Name the project according to one of the following guidelines:

1. If a distribution system serves a specific subdivision, assign the same name "XXX Subdivision."
2. If a distribution system serves a specific facility, assign that name "XXX RV Park" or "...XXX Campground" or "...XXX Shopping Center."
3. If a water main that does not directly service any residences or other facilities but which will enable facilities and their water mains further upstream to connect to a water line extension: "XXX 'Water Line Extension."





ENGINEERING REVIEW SECTION
APPLICATION FOR APPROVAL TO CONSTRUCT
DRINKING WATER FACILITIES
 ADEQ/WQD-114DW

GENERAL INFORMATION

1 Project Information Standard review Priority review Time extension (renewal)

Project Name: 1-5170 Cottonwood Storage Tank and BPS repair and rehabilitation
 Project Description: Repair and rehabilitate the existing water storage tank and booster pump station suction and discharge piping at the Cottonwood Lane Facility.
 This project is funded by the American Recovery and Reinvestment Act of 2009

2 Applicant (Owner or Developer)

Name: Arizona Water Company Phone: 602-240-6860
 Title: Owner Firm Name: Arizona Water Company
 Mailing Address: P. O. Box 29006
 City: Phoenix State: AZ Zip: 850038-9006
 E-mail Address: ~~engineering@azwater.com~~ JWILSON@AZWATER.COM

3 Applicant's Agent, if any (Engineer or Consultant)

Name: Engineer James T. Wilson Phone: 602-240-6860
 Arizona BTR Registration Number: 41046 Fax: 602-294-2169
 Title: Engineer Firm Name: Arizona Water Company
 Mailing Address: P. O. Box 29006
 City: Phoenix State: AZ Zip: 850038-9006
 E-mail Address: jwilson@azwater.com

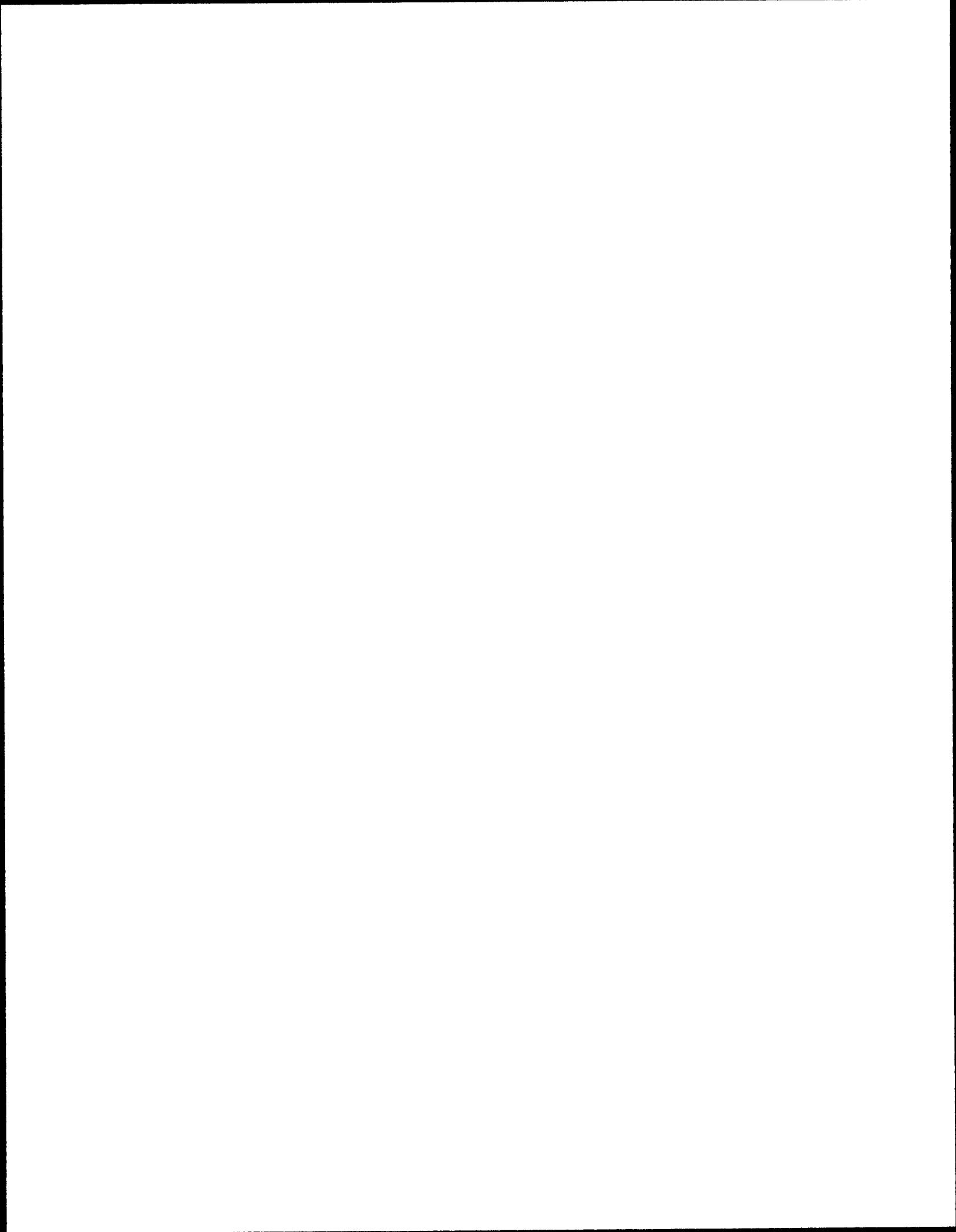
4 Site Information

County: Pinal Nearest City: Casa Grande
 Township: 65 Range: 6E Section: 21 , Quarter Section: NE SE SW (NW)
 Latitude: 32° 53' 37" N Longitude: 111° 44' 17" W

5 Existing Environmental Permits (Check One)

List any other federal or state environmental permits issued for or needed by the facility, including any related Approvals to Construct (ATCs) or Approvals of Construction (AOCs) that may have previously been authorized and are related to this application (attach additional pages or copies if necessary)

DEPARTMENT USE ONLY		DATE STAMP
File Number		
Fee Paid for this Project		
Check Total		
Date Compliance Status Request Sent		





ENGINEERING REVIEW SECTION
APPLICATION FOR APPROVAL TO CONSTRUCT
DRINKING WATER FACILITIES
 ADEQ/WQD-114DW

SUPPLEMENTAL INFORMATION

6 Water System Details Check Box if this is a New Public Water System currently under Capacity Development review

Water System Name: Casa Grande System Number: 11-009

7 Water System Contact Person or Check Box if same as in Item 2

Name: _____ Phone: _____
 Title: _____ Firm Name: _____
 Mailing Address: _____
 City: _____ State: _____ Zip: _____
 E-mail Address: _____

8 Drinking Water Service Agreement (Check Box if applicable)

I have attached a completed Drinking Water Service Agreement form.
<http://www.azdeq.gov/enviro/water/dw/download/serviceagreement.pdf>

9 Site Plan and Fee (Check Box if Complete)

- I have provided a general site plan showing the boundaries and key aspects of the project.
- I have provided the appropriate fee (see instructions)

10 Selected Components Included (Check All Components that Are being Applied for)

Main Line Extension Information (for minor water line extensions only)

A) Please include details for the main line extension:

Diameter (in)	Length (ft)	Material	From Station – To Station
12	13	D. I. P	N/A
14	20	D. I. P	N/A
16	32	D. I. P	N/A
24	11	D. I. P	N/A

Public Water Supply Distribution System Information

A) Number of connections:

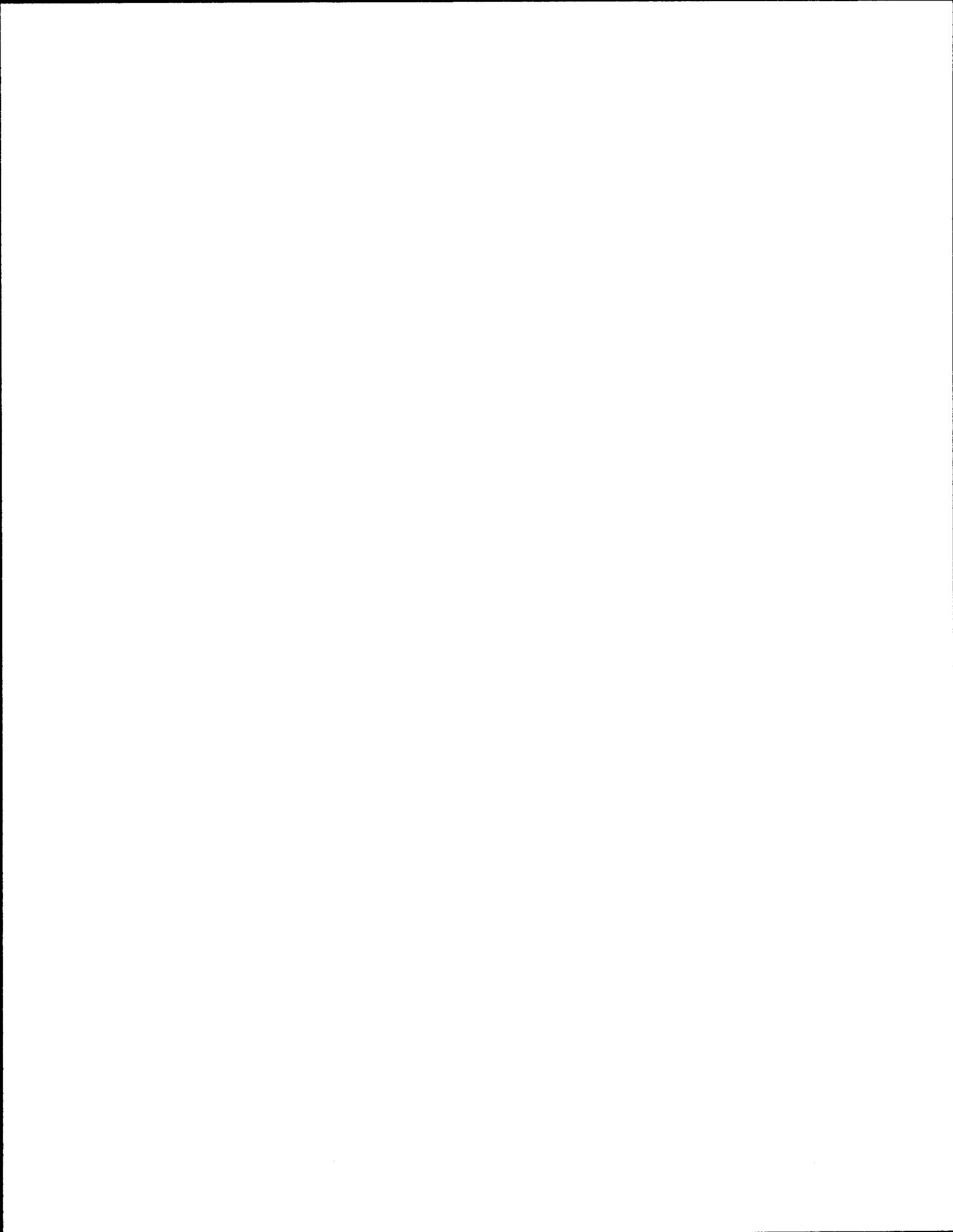
1. ≤ 150 2. 151 to 300 3. 301 to 450 4. 451 to 600 5. 601 to 750 6. > 750

_____ Actual Number of connections per this application. _____ No. Residential _____ No. Commercial
 _____ Single-Family _____ Multi-Family

B) Total population to be served by the new system: _____

C) Design Flow of System.

- 1. Average Design Flow (Peak Month) _____ gpd _____ gpm _____ psi
- 2. Peak Daily Demand Flow _____ gpd _____ gpm _____ psi
- 3. Required Fire Flow _____ gpm _____ duration _____ psi
- 4. Fire Flow and Peak Daily Demand (Total) _____ gpm at _____ psi





ENGINEERING REVIEW SECTION
APPLICATION FOR APPROVAL TO CONSTRUCT
DRINKING WATER FACILITIES
 ADEQ/WQD-114DW

Water Treatment Plant Information **Surface Water** **Well Water**

- A) Please select the capacity of the treatment plant:
- < 0.1 Million gallons per day (MGD)
 - 0.1 to <1.0 MGD
 - 1.0 to <5.0 MGD
 - ≥ 5.0 MGD

B) Indicate the inorganic/organic contaminant(s) for treatment.

Contaminant	Lab Result (ppb)	Technology Used to Treat (Filtration, RO, Absorptive Media, Ion Exchange, etc)	Predicted Final Treatment Value (ppb)

Blending Plan Information

- A) Please select the capacity of the blending plan:
- < 0.1 MGD
 - 0.1 to <1.0 MGD
 - 1.0 to <5.0 MGD
 - ≥ 5.0 MGD

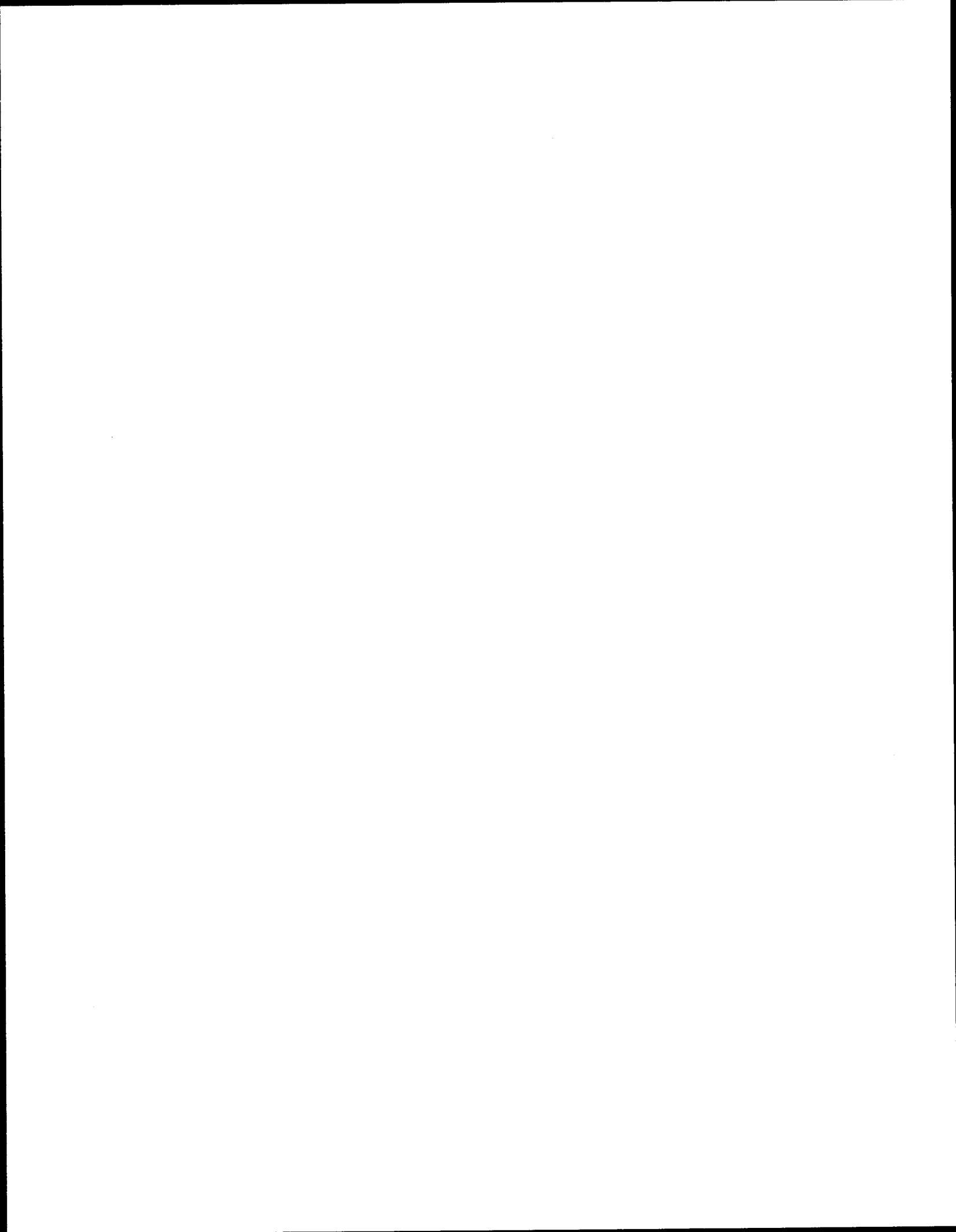
Well Approval Information

- New Source Approval.**
 1. I have attached a copy of the ADWR Notice of Intent to Drill Well (NOI)
 2. ADWR Well # 55-_____
 3. Water test results submitted, or Water test results will be submitted with the AOC application
 4. Capacity Development Application has been submitted
- Existing Well.**
 1. Change of Status Form Included (if Applicable)
 2. ADWR Well # 55-_____

Storage Tank Information

A) Please indicate the following information for the storage tanks associated with this project:

Tank Number	Tank Capacity (gallons)	Material of Construction	Liner Material or Corrosion Protection
1	1,000,000	Steel	Carboline 691 NSF Epoxy, Carboline 760 Reactamine NSF Polyurethane



ENGINEERING REVIEW SECTION
APPLICATION FOR APPROVAL TO CONSTRUCT
DRINKING WATER FACILITIES
 ADEQ/WQD-114DW

Booster Pump Information

A) Please include the details for each booster pump:

Pump Number	Pump Rated Capacity	Horsepower	Manufacturer	Model #
1	2,000 <i>GPW</i>	150	Goulds	14 RHMC
2	2,000 <i>GPW</i>	150	Goulds	14 RHMC
3	2,000 <i>GPW</i>	150	Goulds	14 RHMC

Chlorinator and/or Disinfection System Information

Gas Tablet

ATC Time Frame Extension Information

Original ADEQ File # _____

Priority Review Fee Information

The fees included are double the standard fees for all items for review

11 Construction Quality Drawings (Check Box if Complete)

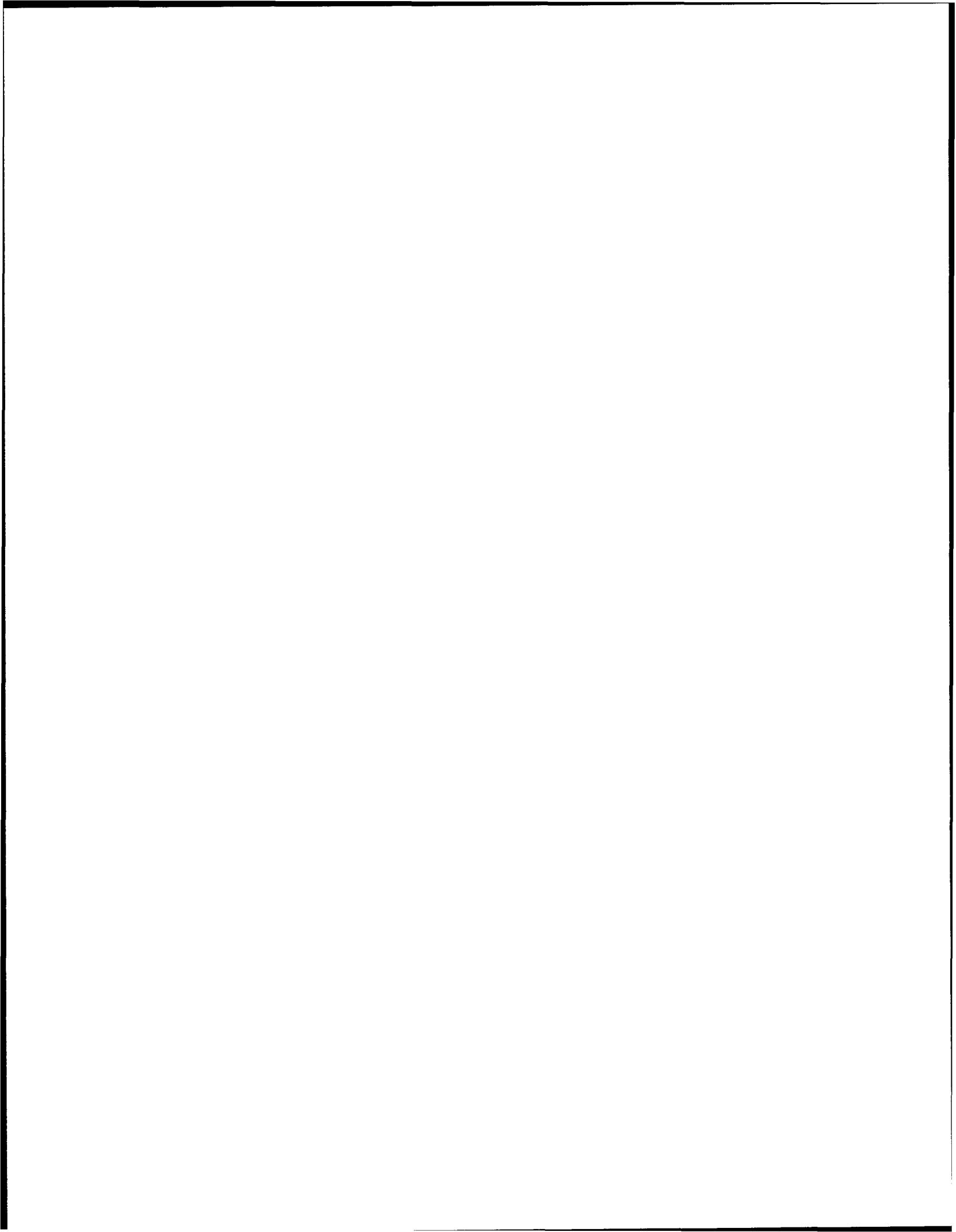
- a. The engineering plans must be final plans. Plans marked preliminary, not for construction or similar languages will not be reviewed.
 - b. Specifications are included in the construction drawings and/or are a separate attachment;
 - c. The profiles of all waterlines 10" and greater must be shown on engineering plans.
 - d. The plans must include thrust block details, pipe bedding details, blow-off valves (as caps will not be accepted) and air release vales (ARV) are required at all high points.
 - e. Backflow in accordance with R-18-4-115
- I have provided all the information listed in a. though d. above.

12 Water Distribution System Design Flows (Check Box if Complete)

I have attached documentation of design and fire flows for significant components of the drinking water distribution system and the basis for calculating the design flows.

13 Design Report (Check Box if Complete)

I have included design documents, including plans, specifications, drawings, reports, and calculations that are signed, dated, and sealed by an Arizona-registered professional engineer. The designer shall use good engineering judgment following engineering standards of practice, and rely on appropriate engineering methods, calculations, and guidance. A design report will describe the proposed construction and basis of design, provide design data and other pertinent information that defines the work to be done, and establishes the adequacy of the design to meet the system demand. A design report provides information such as water pressure of existing waterline, minimum water pressure during fire flow, water capacity required to fulfill overall water needs, etc.





ENGINEERING REVIEW SECTION
APPLICATION FOR APPROVAL TO CONSTRUCT
DRINKING WATER FACILITIES
ADEQ/WQD-114DW

14 Certification Statement (To be completed by the Applicant's Agent in item 3 above)

I, James T. Wilson, P.E., certify that this Application for Approval to Construct and all attachments were prepared under my direction or authorization and all information is, to the best of my knowledge, true, accurate and complete. I also certify that the drinking water system described in this form is or will be constructed, designed, and operated in accordance with terms and conditions of the Drinking Water Systems (A.A.C. R18-5-505) and applicable requirements of Arizona Revised Statutes Title 49, Chapter 2, and Arizona Administrative Code Title 18, Chapter 5 regarding drinking water systems and sanitary facilities for subdivisions.

[Signature]
Signature of Applicant's Agent (Engineer or Consultant)

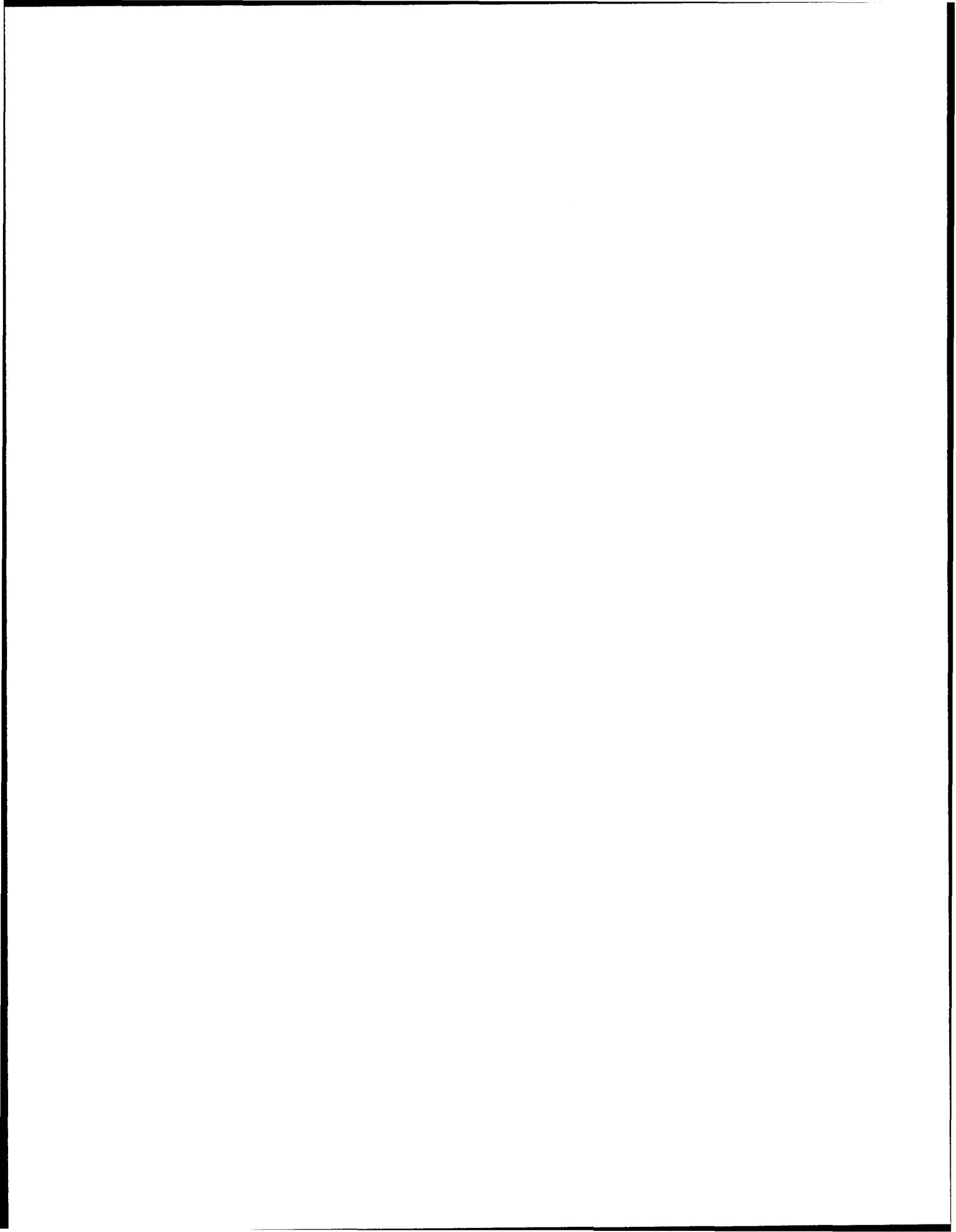
8/28/14
Date

15 Certification Statement (To be completed by the Applicant in item 2 above)

I, James T. Wilson, P.E., am aware that there are significant penalties for submitting false information including permit revocation as well as the possibility of fine and imprisonment for knowing violations. I hereby a) grant ADEQ permission to enter the site for inspections; b) authorize the Project Engineer to prepare and submit plan documents to the ADEQ Engineering Review Desk (if entered in item #3); and c) agree to construct the sanitary facilities according to the ADEQ Certificate of Approval and the approved plan documents.

[Signature]
Signature of Applicant (Owner or Developer)

8/28/14
Date





ARIZONA WATER COMPANY

Design Report for ADEQ

W.A. No. and/or Job Name: 1-5170 Cottonwood Lane

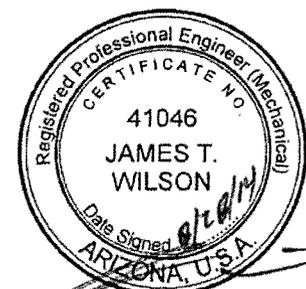
Project Description: Remove the top four feet of the existing one million gallon storage reservoir and replace the roof, rafters and center column. Reduce the reservoir height and storage volume by 4 ft and approximately 129,000 gallons, respectively. Replace three existing high service booster pumps and discharge heads. Replace the existing welded steel suction and discharge piping with approximately 13 LF of 12-inch ductile iron water main (DIP), 20 LF of 14-inch DIP, 32 LF of 16-inch DIP, 11 LF of 24-inch DIP and replace one 1-inch service connection.

Reason for Project: This project replaces damaged portions of the water storage reservoir and pumping equipment that is nearing the end of its service life. This project improves the reliability of the Pinal Valley water distribution system (PVWS) without changing flow or pressure in the system.

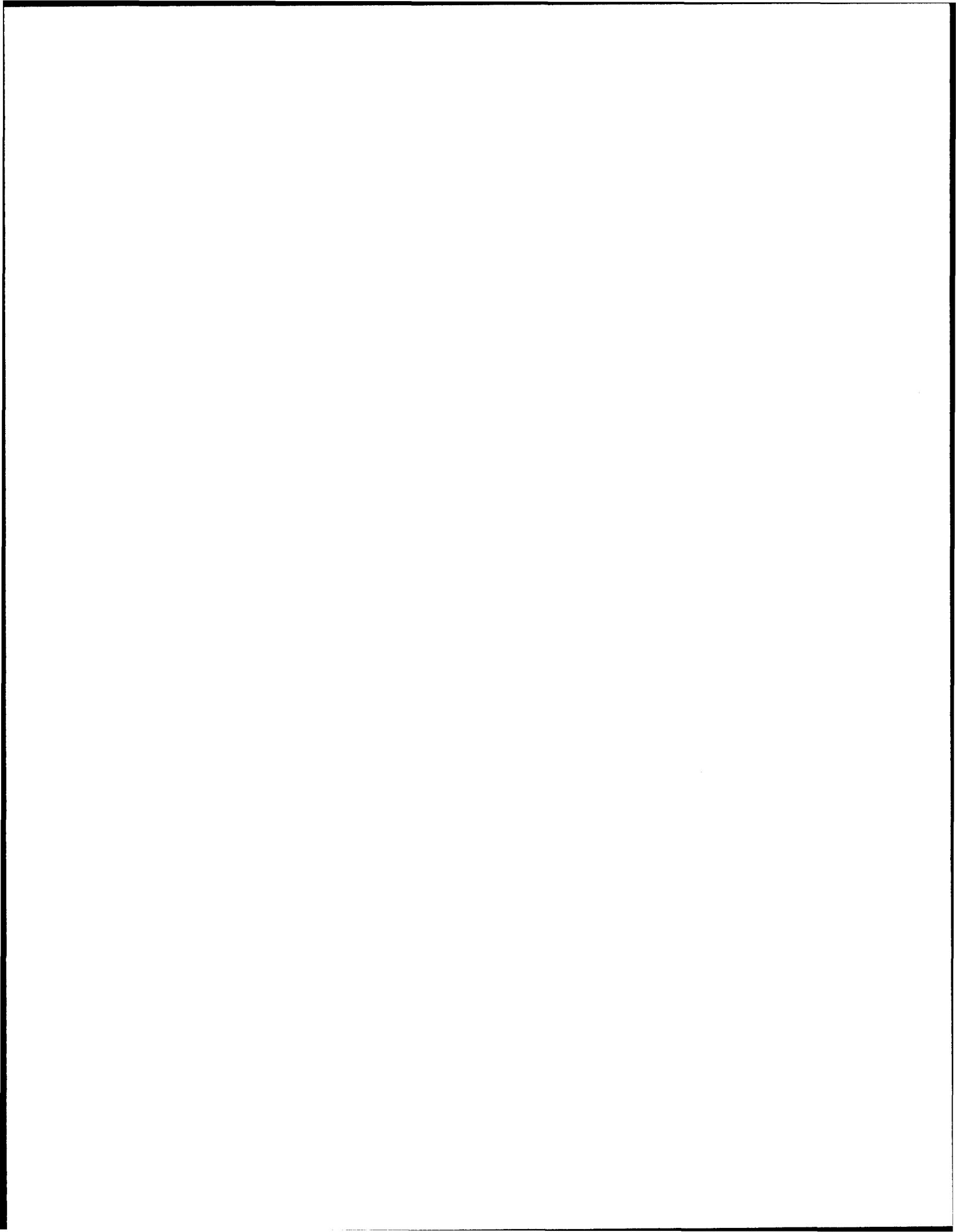
Water System Analysis: This project only involves replacement of existing water facilities in an established area of the PVWS. No new or additional demands are being placed on the distribution system as a result of this project. The Cottonwood Lane reservoir only serves as a wet well for the onsite high service booster pump station. Off-site storage reservoirs at elevation provide system pressure and storage in conformance with State and Local requirements. Reducing the Cottonwood Lane reservoir volume by approximately 129,000 gallons will not affect system pressure, flow or reliability. Pressures in project area range from 70 psi to 90 psi which complies with ADEQ requirements for nominal working pressure. Since this project does not increase system demand, or change the size or capacity of the booster pump station, system pressures and flows will not change as a result of this project.

System pressures exceed the ADEQ minimum allowable pressure of 20 psi under all flow conditions.

The system has adequate supply and storage in conformance with State and Local requirements,



Expires 6/30/2016



Vendor ID	Name	Payment Number	Check Date	Document Number	
ADEQ 001	ARIZONA DEPT ENVIRONMENTAL	50054123	8/7/2014	052261	
Your Document Number	Date	Amount	Amount Paid	Discount	Net Amount Paid
405765	7/31/2014	\$9,800.00	\$9,800.00	\$0.00	\$9,800.00

\$9,800.00 \$9,800.00 \$0.00 \$9,800.00

THIS DOCUMENT HAS A TRUE WATERMARK WHEN HELD TO LIGHT, A MICRO PRINTED BORDER AND VISIBLE FIBERS THAT CAN BE SEEN FROM BOTH SIDES. VOID IF THESE DO NOT APPEAR.



ARIZONA WATER COMPANY

GENERAL ACCOUNT

3805 N. BLACK CANYON HIGHWAY
 POST OFFICE BOX 29006
 PHOENIX, ARIZONA 85038-9006

Date
 8/7/2014

052261

91-170
 1221

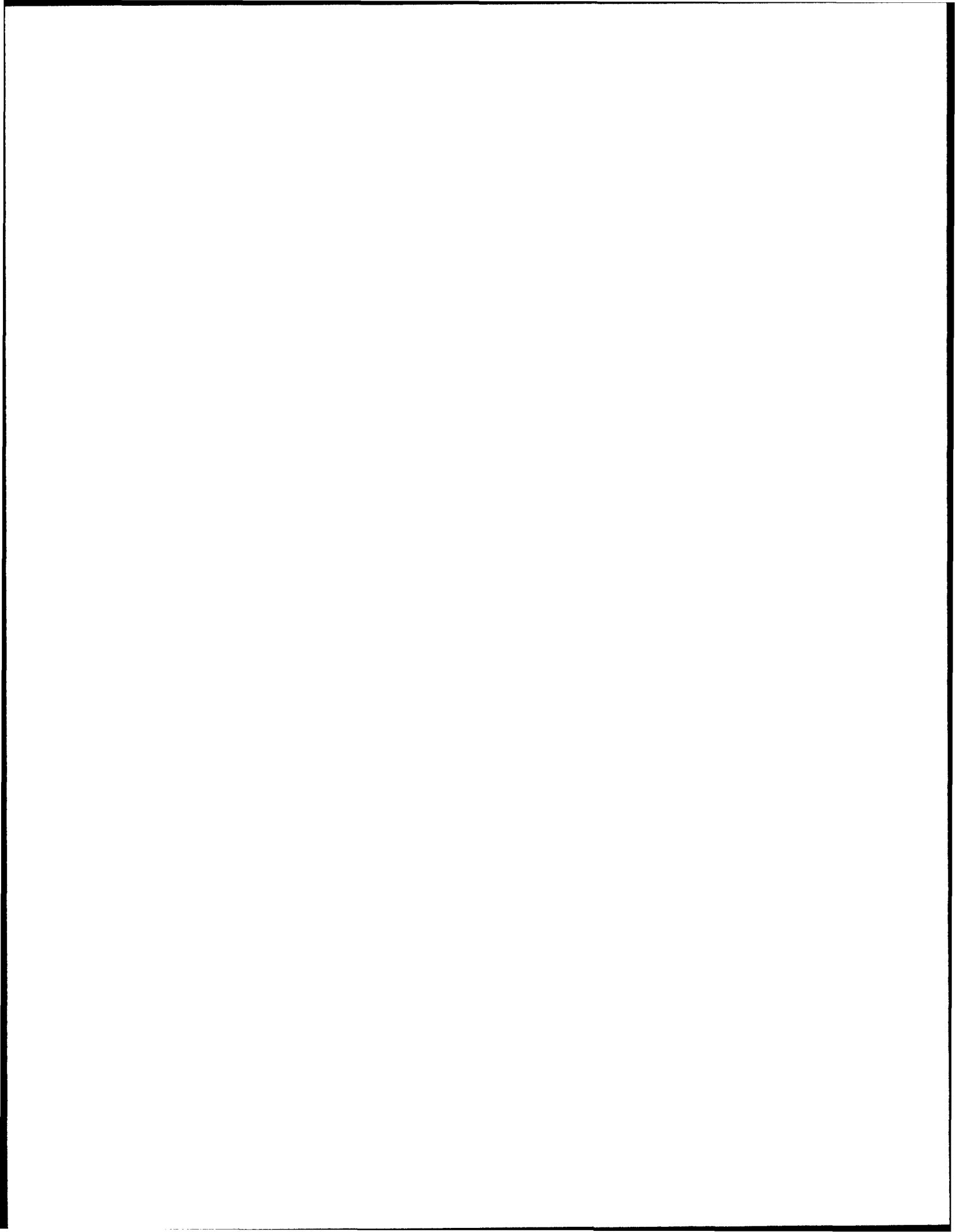
Check Amount
 \$9,800.00

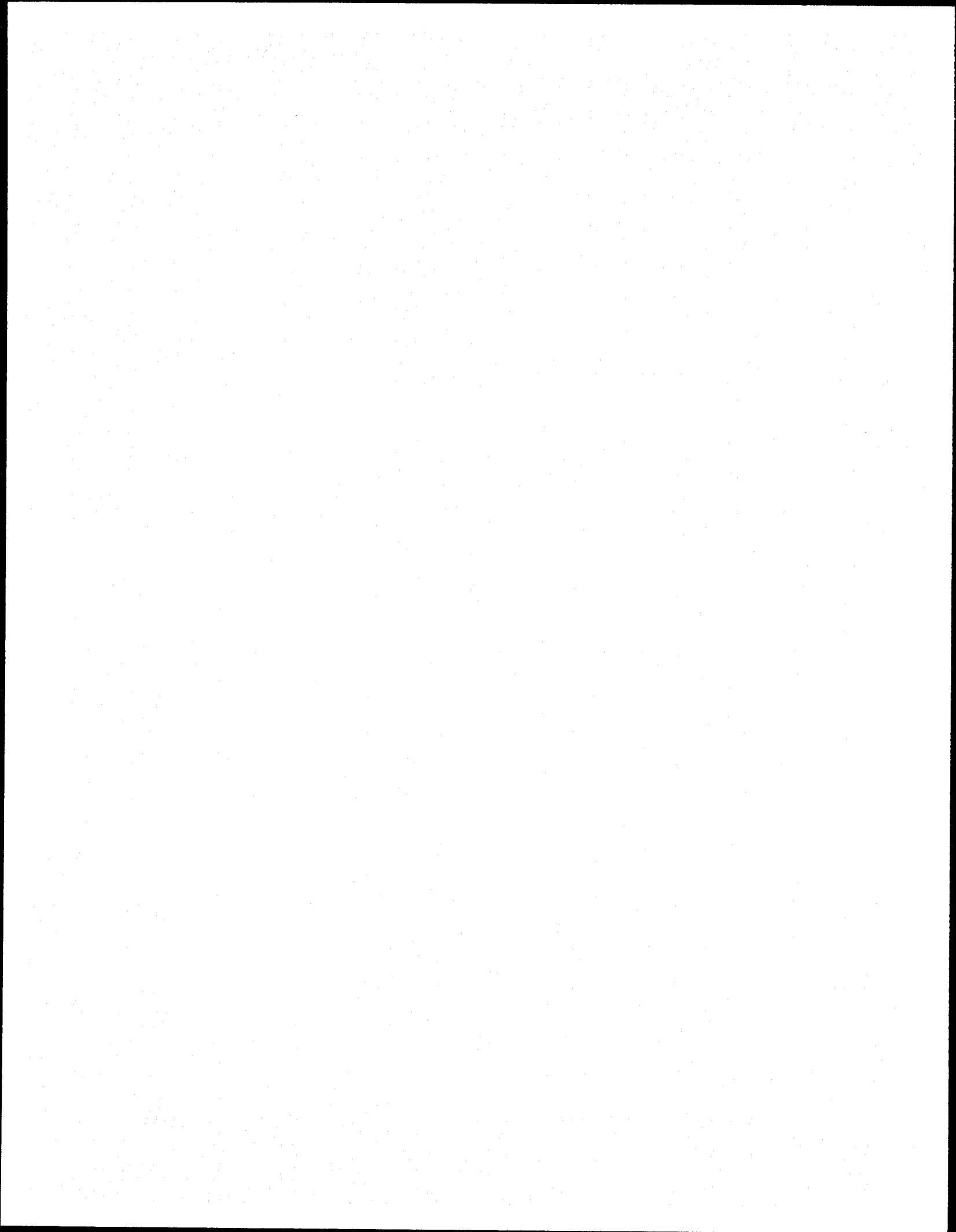
Nine Thousand Eight Hundred Dollars and 00 Cents

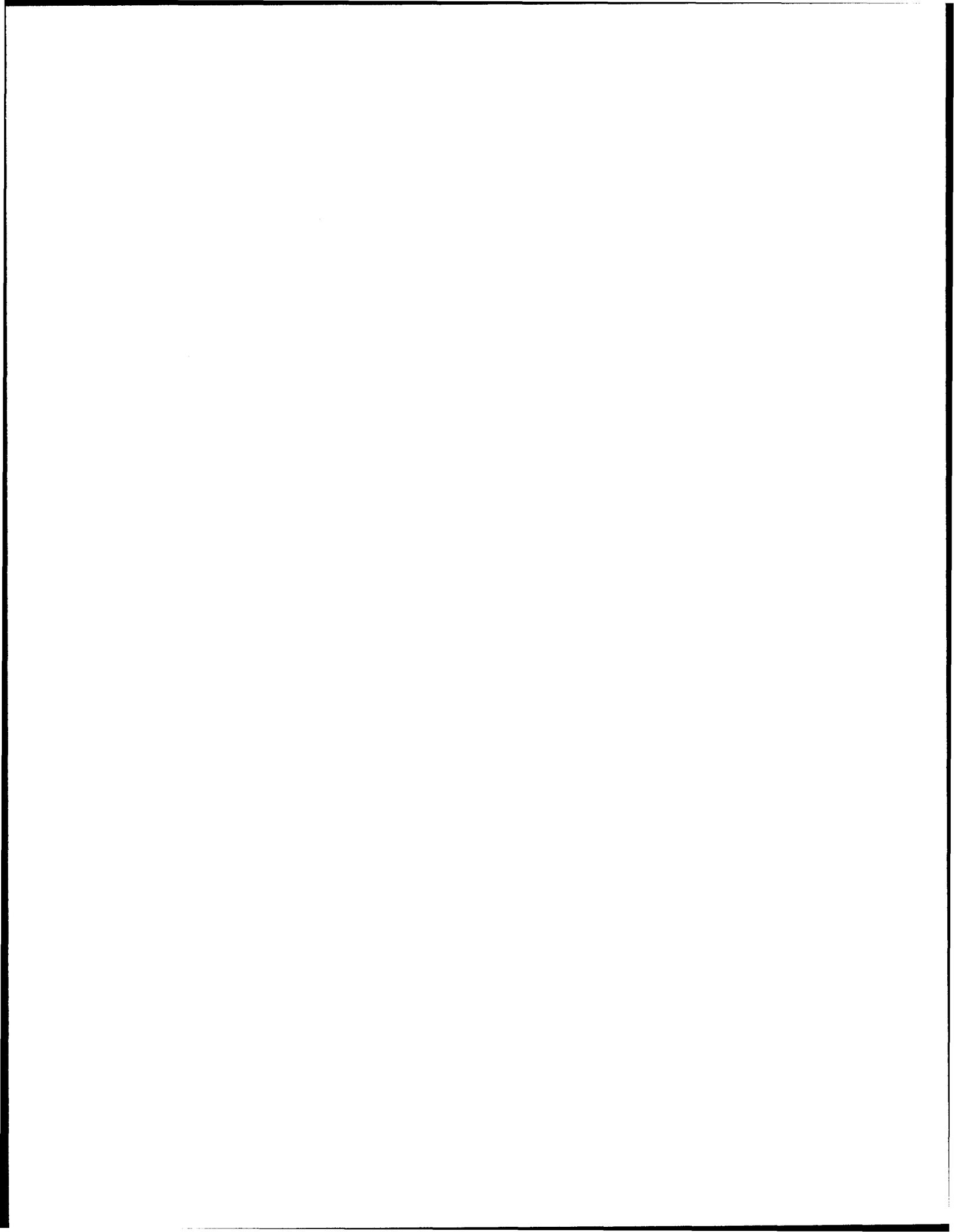
Pay to the Order of:

ARIZONA DEPT ENVIRONMENTAL QUALITY
 ENGINEERING REVIEW
 1110 W WASHINGTON
 PHOENIX AZ 85007

THIS DOCUMENT HAS A TRUE WATERMARK WHEN HELD TO LIGHT, A MICRO PRINTED BORDER AND VISIBLE FIBERS THAT CAN BE SEEN FROM BOTH SIDES. VOID IF THESE DO NOT APPEAR.









ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF APPROVAL TO CONSTRUCT
WATER FACILITIES

Page 1 Of 1

ADEQ File No: 20140228	LTF No: 61087
System Name: Az Water Co-Casa Grande	System Number: 11-009
Project Owner: Arizona Water Company	
Address: P O Box 29006, Phoenix, AZ 85038	
Project Location: Casa Grande	County: Pinal
Description: REPLACE THREE BOOSTER PUMPS, SUCTION AND DISCHARGE PIPINGS WITH 13 LF OF 12-INCH, 20 LF OF 14-INCH, 32-LF OF 16-INCH, AND 11-LF OF 24-INCH DIP, REMOVE THE TOP 4-FOOT AND REPLACE THE ROOF OF THE TANK .	

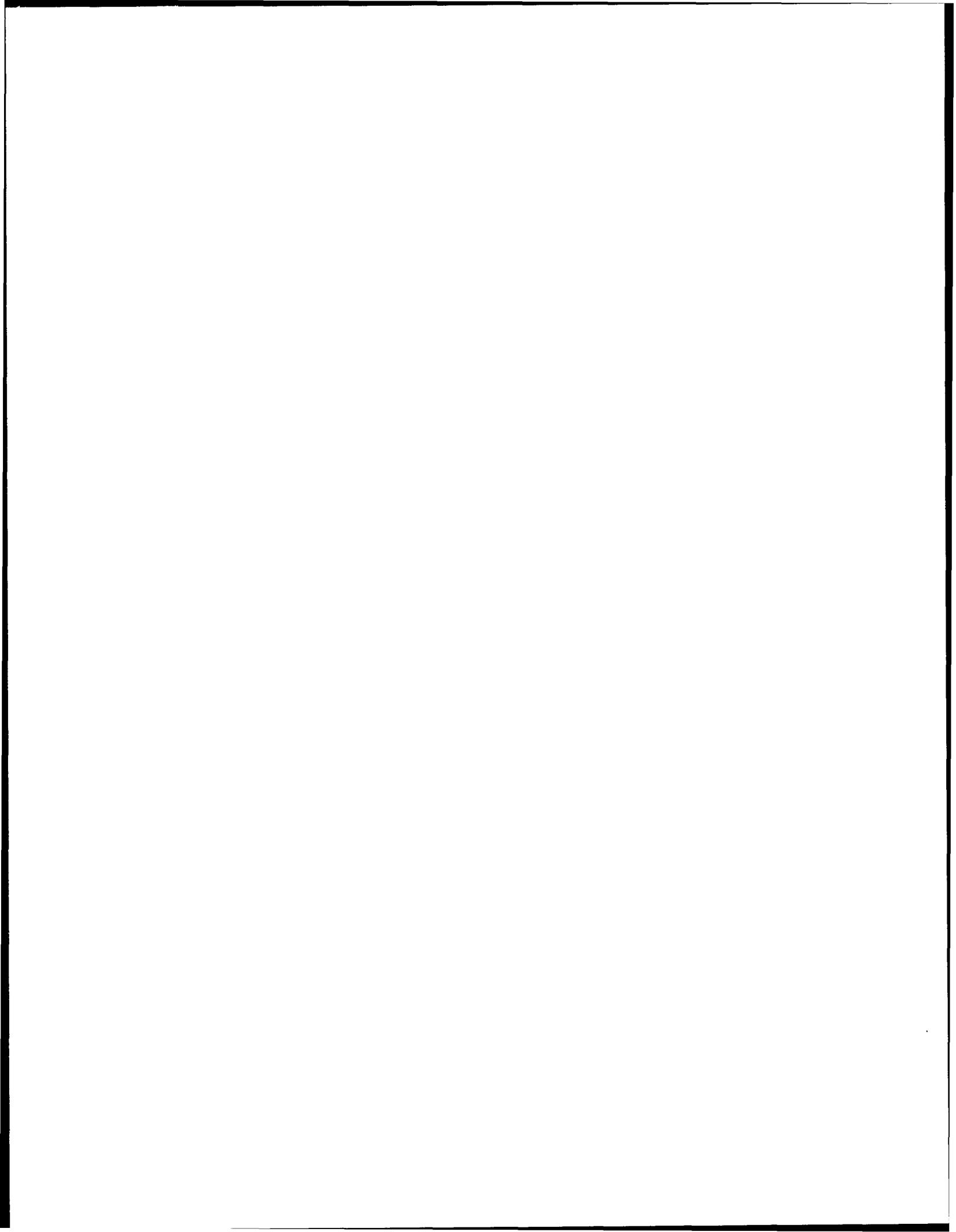
Approval to construct the above-described facilities as represented in the approved documents on file with the Arizona Department of Environmental Quality is hereby given subject to provisions 1 through 1 continued on page 1 through 1

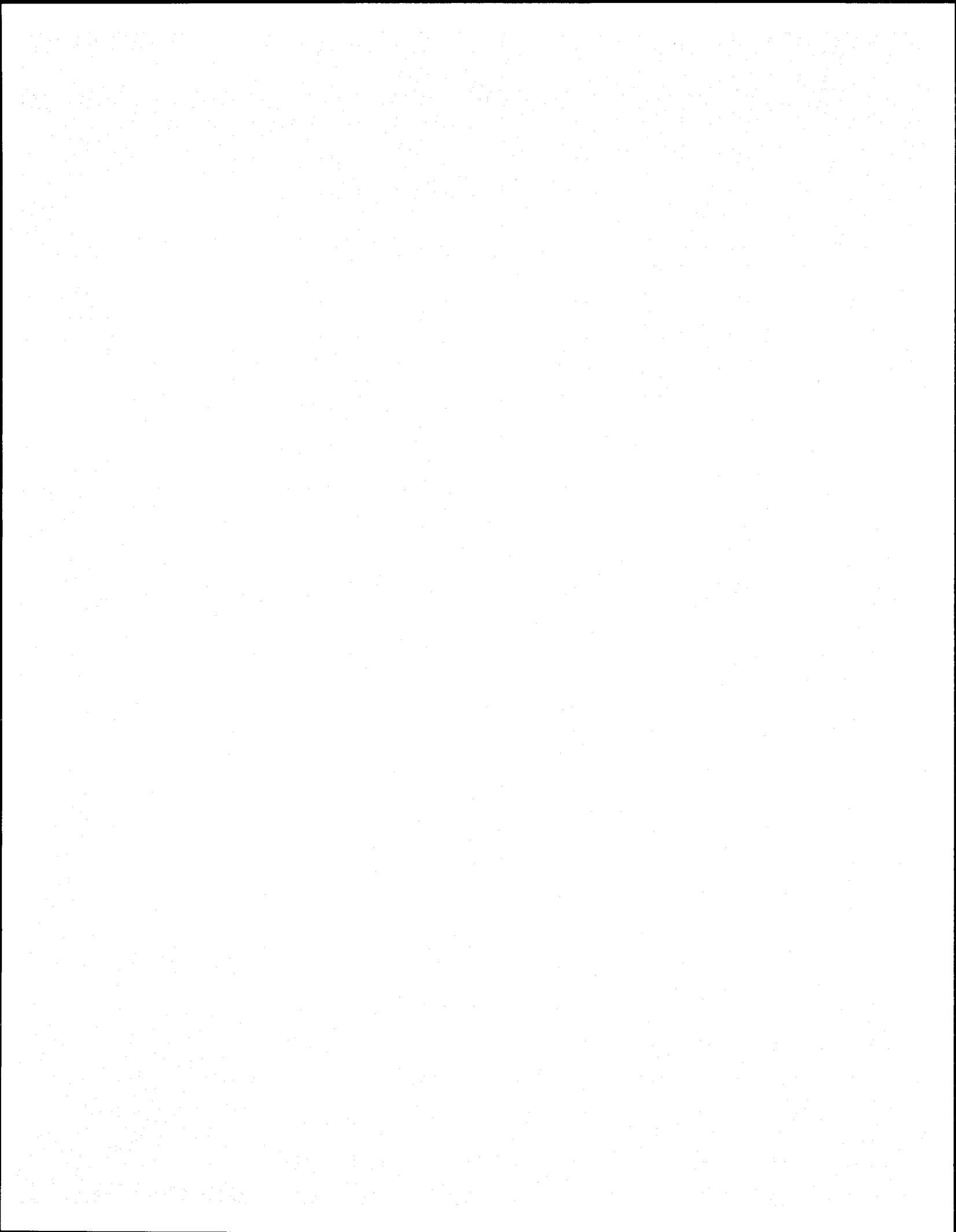
1. This project must be constructed in accordance with all applicable laws, including Title 49, Chapter 2, Article 9 of the Arizona Revised Statutes and Title 18, Chapter 5, Article 5 of the Arizona Administrative Code.
2. Upon completion of construction, the engineer shall fill out the Engineer's Certificate of Completion and forward it to the Central Regional Office located in Phoenix. If all requirements have been completed, that unit will issue a Certificate of Approval of Construction. R18-5-507(B), Ariz. Admin.Code. At the project owner's request, the Department **may** conduct the final inspection required pursuant to R18-5-507(B); such a request must be made in writing in accordance with the time requirements of R18-5-507(C), Ariz. Admin. Code.
3. This certificate will be void if construction has not started within one year after the Certificate of Approval to Construct is issued, there is a halt in construction of more than one year, or construction is not completed within three years of the approval date. Upon receipt of a written request for an extension of time, the Department may grant an extension of time; an extension of time must be in writing. R18-5-505(E), Ariz. Admin. Code.
4. Operation of a newly constructed facility shall not begin until a Certificate of Approval of Construction has been issued by the Department. R18-5-507(A), Ariz. Admin. Code.

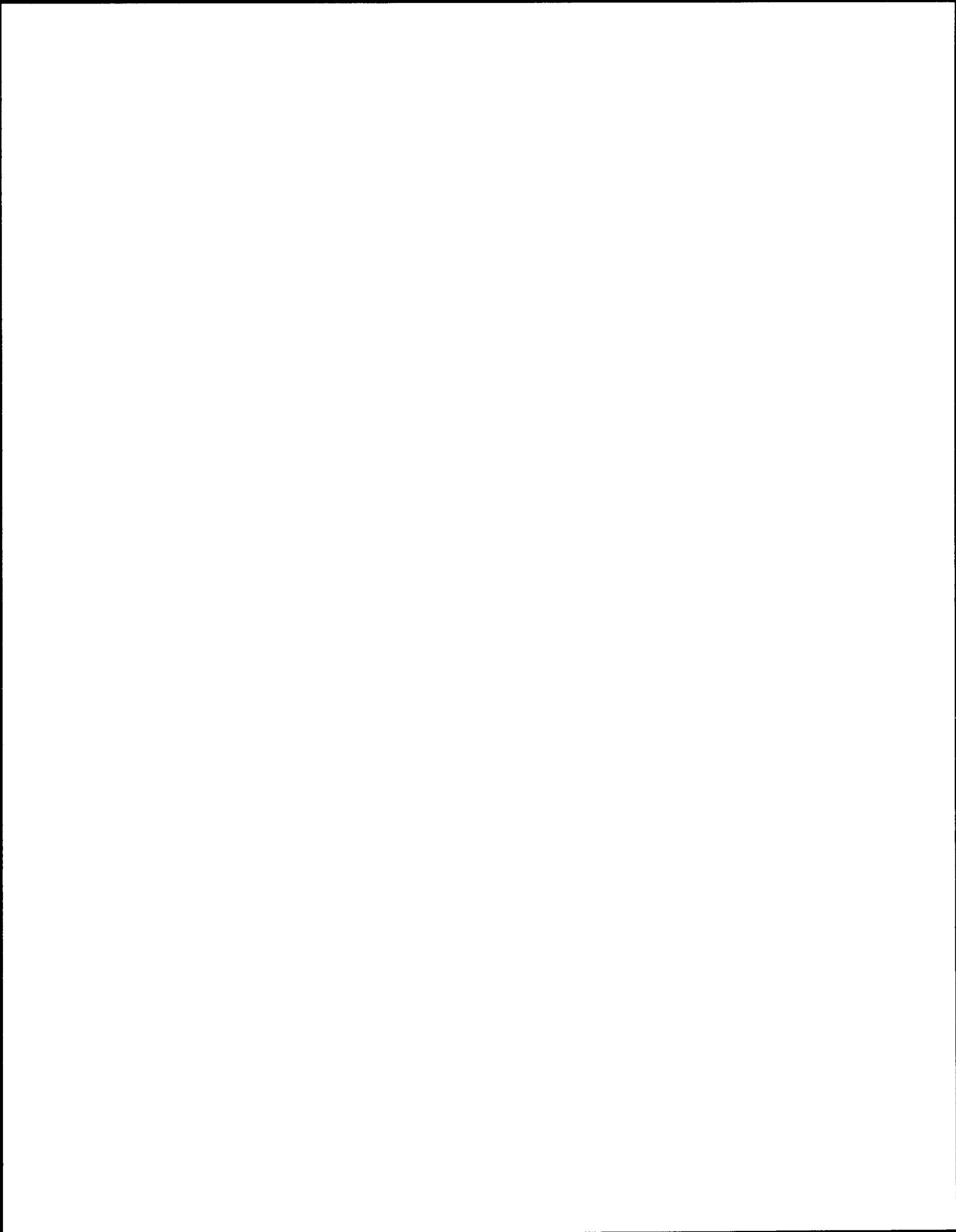
Reviewed by: TF1

By: David Burchard 10/21/14
Date
Water Quality Division

cc: File No : 20140228
Regional Office: Central
Owner: Arizona Water Company
County Health Department: Pinal
Engineer: Arizona Water Company
Planning and Zoning/Az Corp. Commission
Engineering Review Database - Etr021







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 12, 2014

Mr. Joel Felix
Felix Construction Company
1326 W. Industrial Drive
Coolidge, AZ 85128

Re: Cottonwood BPS Rehabilitation

PROJECT: Cottonwood BPS Rehab	
SYSTEM: Pinal Valley	
CONTRACT NO.:	
P.E. NO.:	W.A. NO.: 1-5170

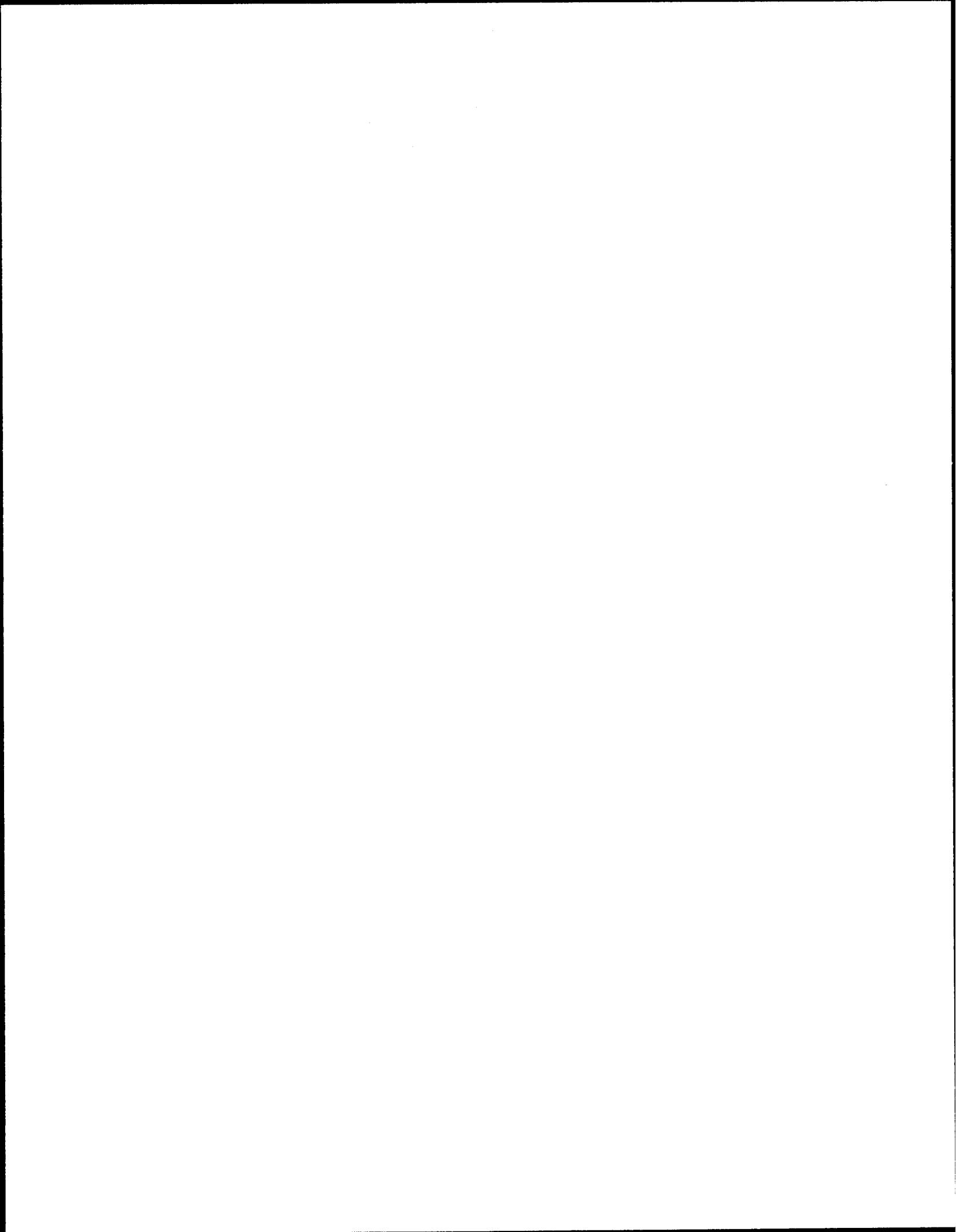
Dear Mr. Felix:

Enclosed is your copy of the Proposal/Contract for the above-referenced project, which has been accepted by Arizona Water Company (the "Company"). The project shall be constructed in accordance with the Company's *General Conditions of Contract, the Specifications and the Drawings* which were included with the Company's previously provided Proposal/Contract, copies of which are being provided again and attached herewith.

Also enclosed are two copies of the Commencement Notice for the above-referenced project. Please sign one of the copies and return it to my attention retaining the other for your records.

As provided in paragraph 4 of the Company's Proposal/Contract executed by the Company on November 18, 2014 Felix Construction Company acknowledged that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work. In addition, as provided in paragraph 44 of the Company's General Conditions of Contract, the 100% Performance and Payment Bonds must be provided within ten (10) calendar days of the date of the Commencement Notice. Failure to provide an acceptable 100% Performance and Payment Bond does not limit the Company's

E-MAIL: MAIL@AZWATER.COM



Mr. Joel Felix
Felix Construction Company

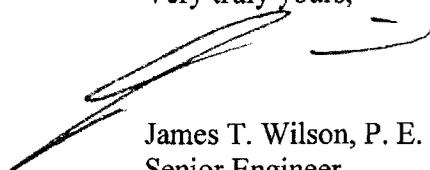
November 12, 2014
Page 2

ability to terminate the Proposal/Contract or seek restitution for damages that the Company may have or will incur.

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting. In addition, please provide the required Performance and Payment Bonds to the Company promptly so that the contracted work can be completed within the contract's timeline.

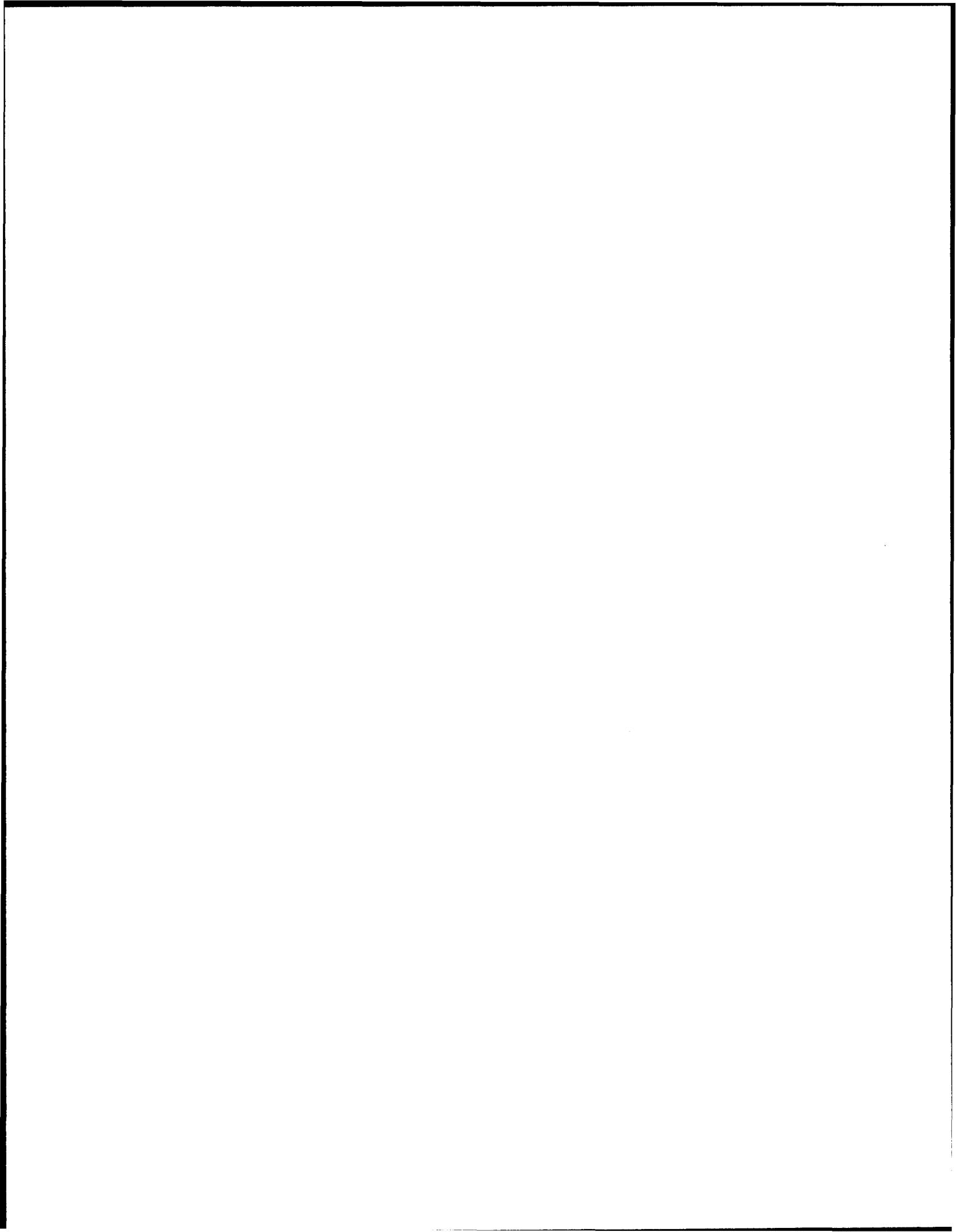
If you have any questions, please call me at this office.

Very truly yours,



James T. Wilson, P. E.
Senior Engineer
jwilson@azwater.com

afh
Enclosure





ARIZONA WATER COMPANY

Pinal Valley - Casa Grande
220 E. 2nd Street

PROPOSAL/CONTRACT

CONTRACTOR: FELIX CONSTRUCTION COMPANY	SYSTEM: Pinal Valley
ADDRESS: 1326 W. INDUSTRIAL DRIVE	W.A No(s): 1-5170
CITY ST ZIP: COOLIDGE, AZ 85128	BID DUE DATE: August 28, 2014

CONTRACTOR SUBMITS this PROPOSAL/CONTRACT to ARIZONA WATER COMPANY, an Arizona corporation (the "Company"), to perform the work and complete the project described on Page 2 (the "Project"), as an independent prime contractor.

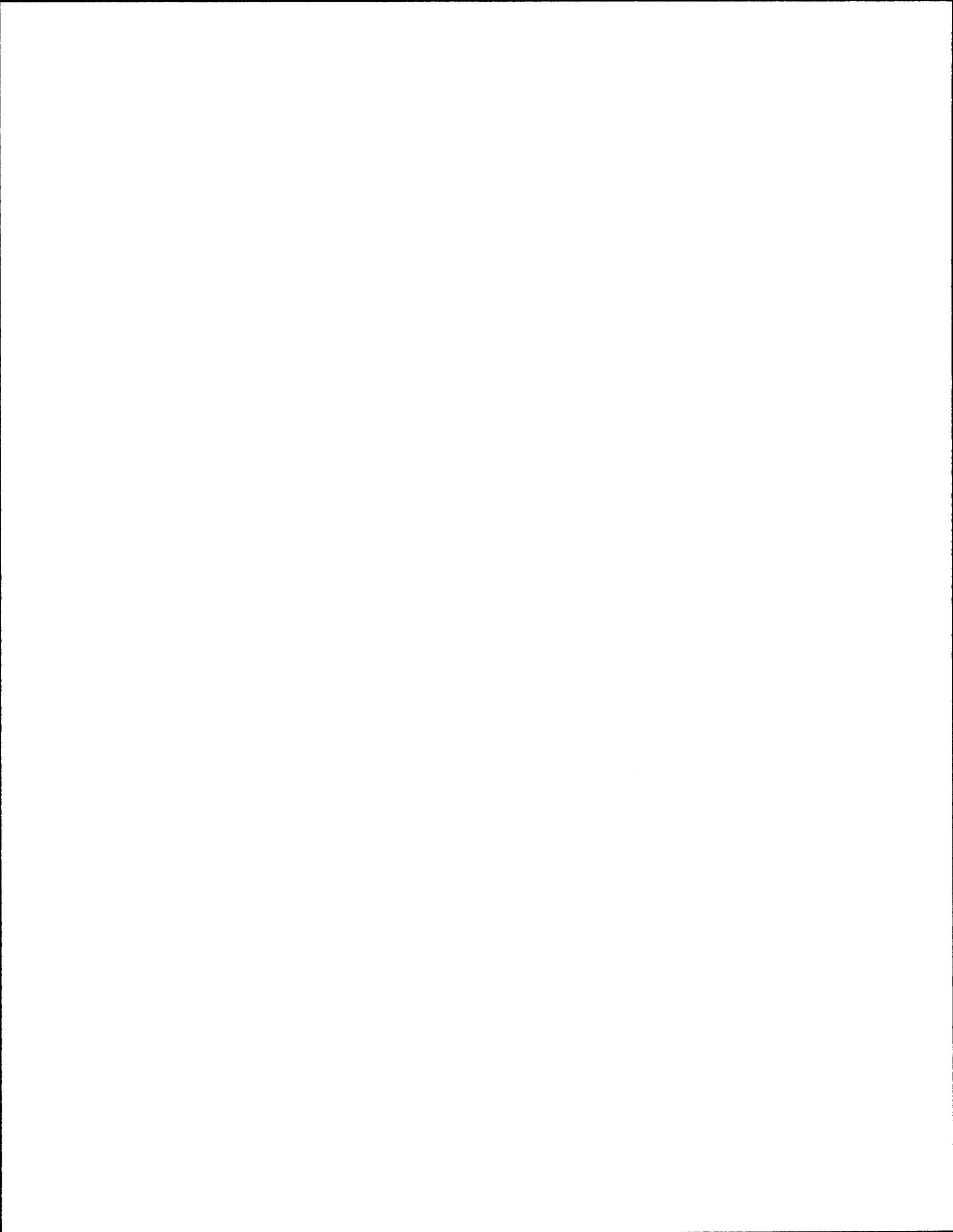
- Contractor certifies that it has a complete copy of, and has read, understands and accepts, the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings, (the "Specifications"), all of which are attached hereto. Contractor has examined the specific plans and related construction drawings for the Project (the "Drawings"), copies of which are also attached hereto. The General Conditions of Contract, Specifications and Drawings are incorporated into this Proposal/Contract. Contractor affirms that all work and materials to be furnished or purchased for the Project will be in strict conformance with the General Conditions of Contract, Specifications and Drawings.
- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract.
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person.
- Contractor acknowledges that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work.
- Prior to the commencement of work, Contractor will submit to the Company a list of all materials to be used in the Project. The materials list will include the manufacturer, part number, price and quantity included in this Proposal/Contract.
- Contractor will furnish all labor, tools, equipment and materials required to complete the Project according to the General Conditions of Contract, Specifications and Drawings. No materials purchased by Contractor to be incorporated into the Project are subject to tax at the time of purchase and Contractor will not charge the Company for any such tax. Contractor will pay the applicable transaction privilege tax (the "Contracting Tax") on the Project after Contractor receives payment of the final Project Invoice from the Company. The cost of materials incorporated into the Project which are exempt by Arizona Revised State Statutes ("A.R.S.") from the Contracting Tax, for example, pipes or valves having a diameter of four (4) inches or larger, including equipment, fittings and any other related part that is used in operating the pipes or valves (A.R.S. §42-5061 B.6.), will not be included in the total cost of the labor and materials upon which the Contracting Tax is computed. 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.
- Contractor will maintain detailed accounting records of all materials purchased and incorporated into the Project. Such records will include all supporting original vendor invoices for all materials purchased. Following completion of the Project, Contractor will submit an itemized accounting to the Company which will include all supporting original vendor invoices and satisfactory evidence of payment thereof. The Company will not pay Contractor for materials not actually incorporated into the Project, and the disposition of such materials will remain Contractor's responsibility.
- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 180 DAYS calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project Invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and materials quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project Invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS:

See attached Special Conditions dated 8-8-2014. The Company will make four progress payments and one final payment.

CONTRACTOR	PROPOSAL/CONTRACT ACCEPTED:
FELIX CONSTRUCTION COMPANY	ARIZONA WATER COMPANY
By: <i>[Signature]</i>	By: <i>[Signature]</i>
Print Name: JOEL FELIX	Print Name: Fredrick K. Schneider, PE
Title: MANAGER	Title: Vice President - Engineering
Date: 9/11/14	Date: 11-18-2014

AFH





ARIZONA WATER COMPANY

Pinel Valley - Casa Grande
 220 E. 2nd Street
 Casa Grande, AZ 85122 PH: 520-838-8785

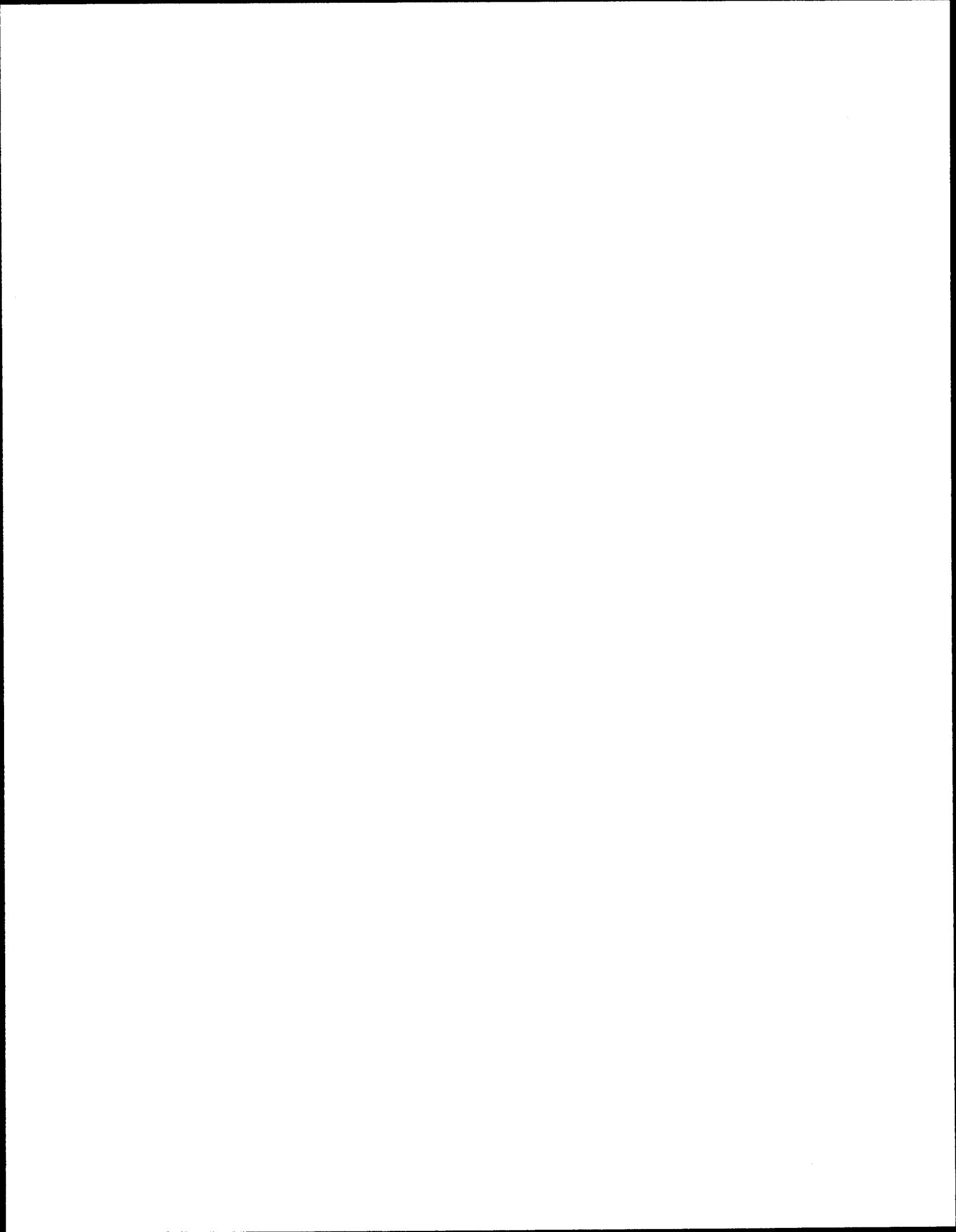
PROPOSAL/CONTRACT

CONTRACTOR: FELIX CONSTRUCTION COMPANY		SYSTEM: Pinel Valley
AZ CONTRACTOR LICENSE NO:	CLASSIFICATION:	WA No(s): 1-5170
ADDRESS: 1326 W. INDUSTRIAL DRIVE		BID DUE DATE: August 28, 2014
CITY ST ZIP: COOLIDGE, AZ 85128	BID BOND REQUIRED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

DESCRIPTION OF PROJECT: **Repair and Rehabilitate Cottonwood Lane water storage reservoir and booster pump station in Casa Grande, Arizona. Design and construct in accordance with the attached design plans and Arizona Water Company Specifications.**

	QUANTITY	UNIT PRICE		TOTAL COST	
		LABOR	MATERIALS	LABOR	MATERIALS
1-2. MATERIALS EXEMPT FROM CONTRACTING TAX (per Paragraph 6)					
Provide and install booster pump station suction and discharge header, surge anticipator valve and related fittings	Lot	56,700	151,500	56,700	151,500
3. Total Labor to Install Exempt Materials (add the amounts in column 1)				56,700	
4. Total Exempt Materials (add the amounts in column 2)					151,500
5-6. NON-EXEMPT MATERIALS					
Demo and remove existing booster pump station suction and discharge header and related fittings	Lot	27,300	-	27,300	
Provide and install 1-inch service, backflow preventer, hose bibb and related fittings (Company will provide 1-inch meter)	Lot	2200	2800	2200	2800
Provide and install sampling station and related fittings	1	1400	1900	1400	1900
Relocate existing electrical J-box to production meter and extend conduit and control wiring	3	1100	300	3300	900
Coat above ground booster pump station header, discharge heads and motors	Lot	1700	1700	1700	1700
Provide and install lineshaft turbine pump, column, shaft and related fittings	3	5600	44,200	16,800	132,600
Structural design for removal of the top 4 ft. of the existing 74 ft. Ø x 32 ft. height storage reservoir and replacement of the roof rafter system, roof plates, roof vent, roof manway, overflow, safety railing and add interior ladder in conformance with AWWA D100 (reduce storage reservoir height to 28 ft.)	Lot	34,500	-	34,500	-
Provide and install roof rafter system, roof plates, roof vent, roof manway, overflow, safety railing, interior ladder and modify existing exterior ladder and level gauge in conformance with AWWA D100	Lot	62,100	67,700	62,100	67,700
Coat entire interior and exterior of water storage reservoir	Lot	81,700	81,700	81,700	81,700
Remove and Reinstall existing cathodic protection system and commission	Lot	4200	7800	4200	7800
Coat entire interior and exterior of water storage reservoir with equal alternate coating system (PRICE ONLY)	Lot	ADD BIDD			
Provide and apply CHLOR*RID® surface treatment on entire interior shell and floor of water storage reservoir (PRICE ONLY)	Lot	15000	5000		
7. Total Labor to Install Non-Exempt Materials (add the amounts in column 5)				235,200	
8. Total Non-Exempt Materials (add the amounts in column 6)					297,100
9. Subtotal A (add lines 3, 7 and 8)					589,000
10. Contracting Tax Base (multiply the amount on line 9 by 0.65)				382,850	
11. Applicable Contracting Tax Rate				10.7%	
12. Contracting Tax (multiply the amount on line 10 by line 11)					40,965
13. Subtotal B (add lines 4, 9 and 12)					781,465
14. 100% Performance and Payment Bonds Cost					9378
15. Estimated Total Cost (add lines 13 and 14)					790,843

NOTE: The Estimated Total Cost includes all labor and materials for backfill, pavement replacement, chip seal, and traffic control necessary for the Project.





ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. Joel Felix
Felix Construction Company
1326 W. Industrial Drive
Coolidge, AZ 85128

DATE: 11/12/14
DIVISION: CASA GRANDE
SYSTEM: PINAL VALLEY
W.A.: 1-5170

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Repair and Rehabilitate Cottonwood Lane water storage reservoir and booster pump station in Casa Grande, Arizona. Design and construct in accordance with the attached design plans and Arizona Water Company Specifications.

PERFORMANCE AND
PAYMENT BONDS
REQUIRED: Yes No

TOTAL DAYS
ALLOWED: 143 ~~180~~ *110*

COMPLETION
DATE: April 10, 2015

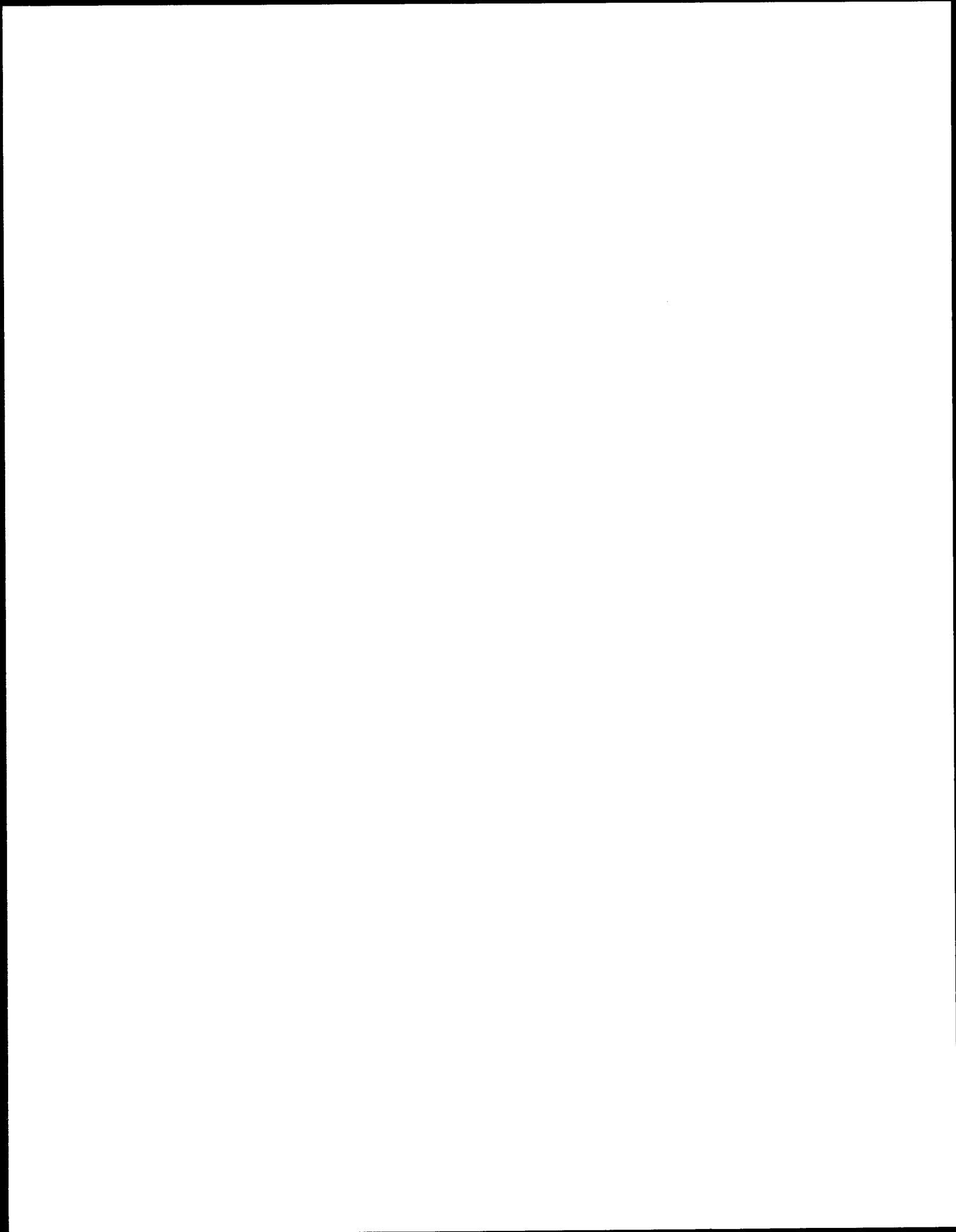
Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY
Company

FELIX CONSTRUCTION COMPANY
Contractor (type name)

By *Justin K. Blum*
Title Vice President - Engineering

By *Archie Lopez*
Title President





ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1

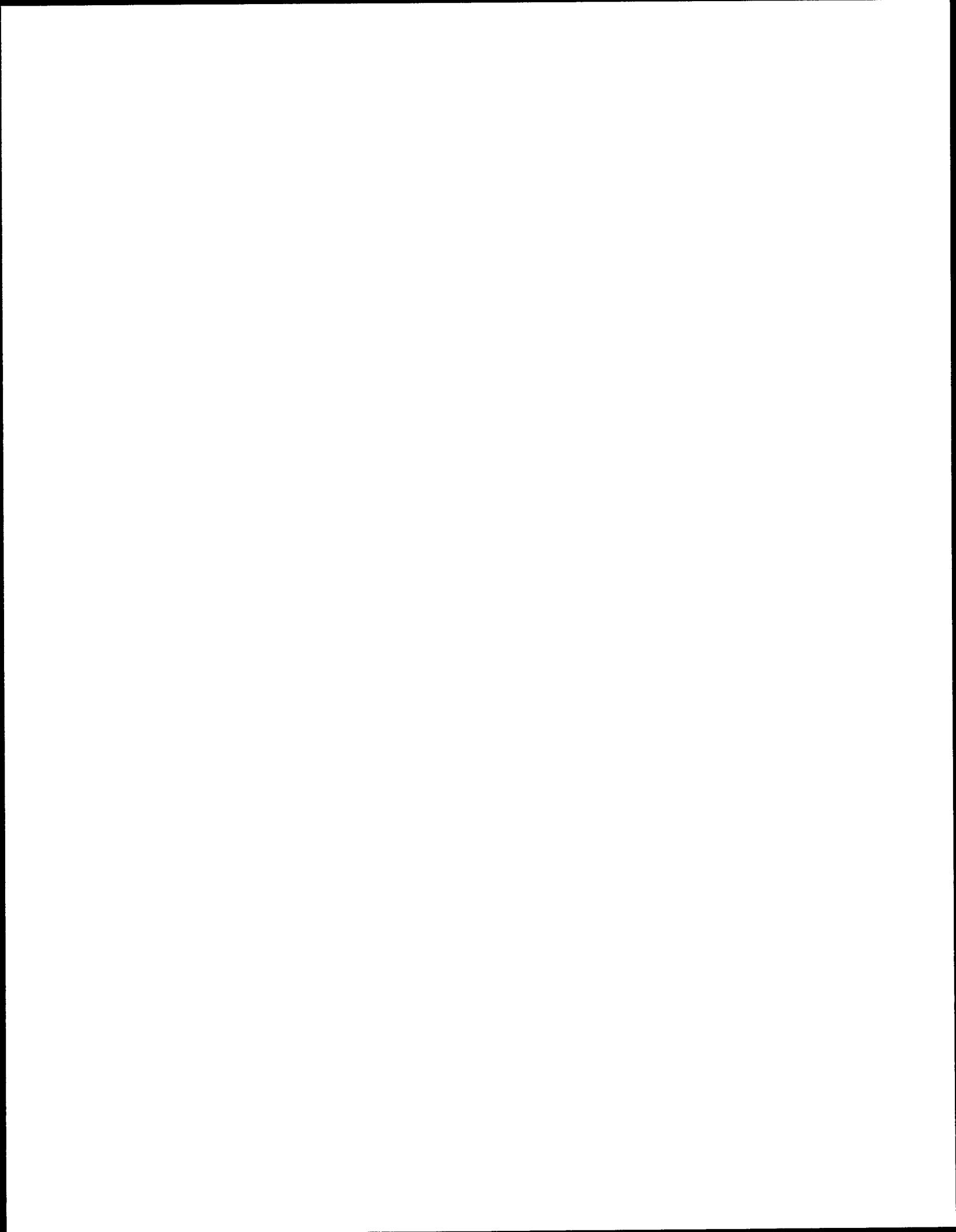
CONSTRUCTION SPECIFICATIONS: E-8-1

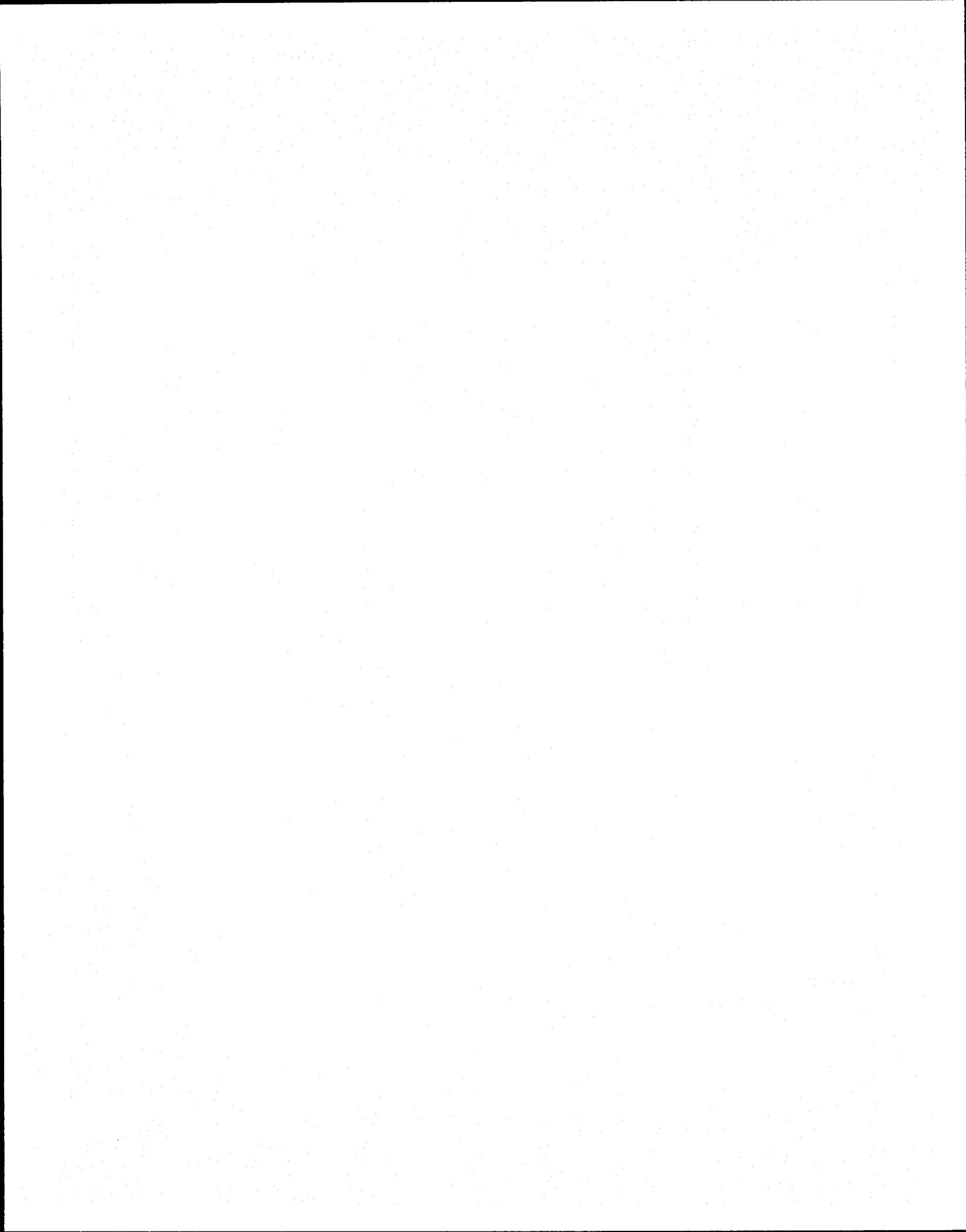
STANDARD SPECIFICATION DRAWINGS: E-9-1

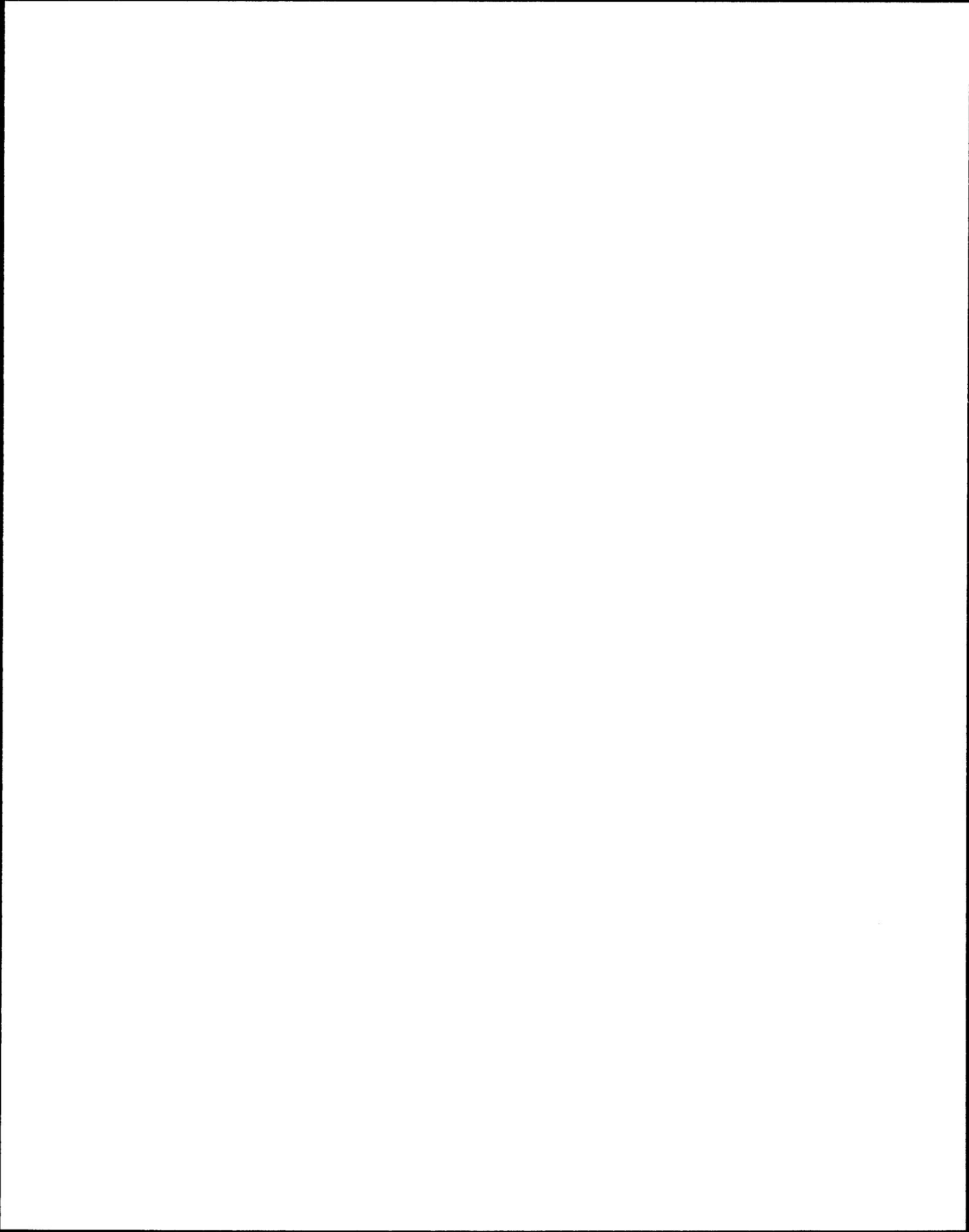
**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

A copy of this entire Spec Book was sent out with *Felix Construction* Proposal
package for *1-5170 Cottonwood BPS Rehabilitation on*

*11/18/14
AWC*







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

May 12, 2015

Mr. Greg Sprinkle
Industrial Inspection and Consulting, LLC
P. O. Box 51026
Phoenix, AZ 85076-1026

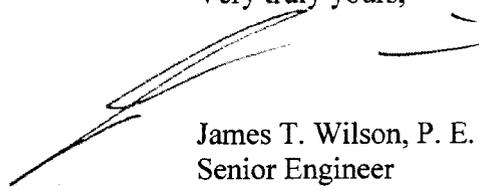
Re: Cottonwood Storage Tank - BPS

Dear Mr. Sprinkle:

Enclosed is your original of the Agreement for Consulting Services for the above referenced project, which has been accepted by Arizona Water Company.

If you have any questions, please call me at this office.

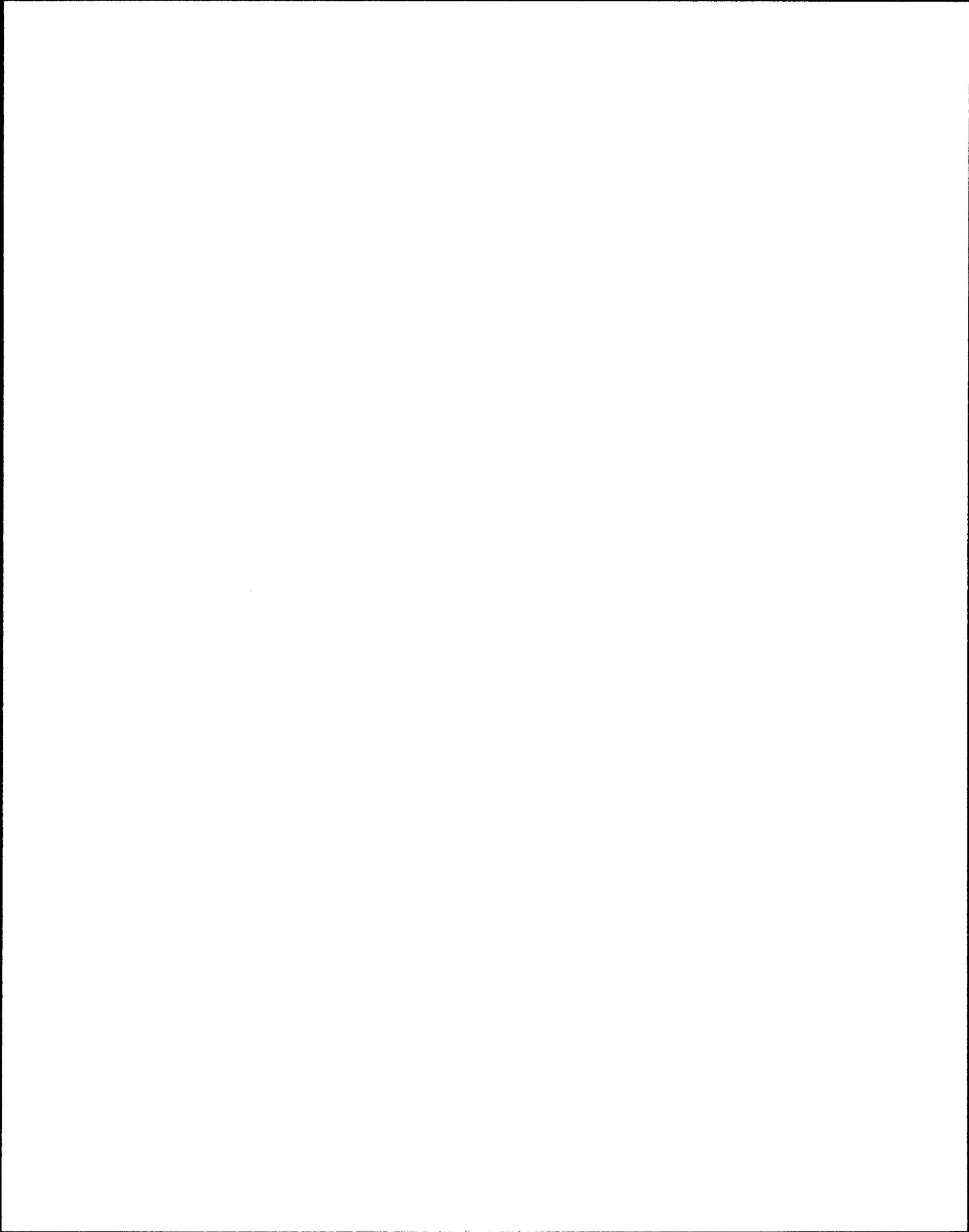
Very truly yours,



James T. Wilson, P. E.
Senior Engineer
jwilson@azwater.com

afh
Enclosure

E-MAIL: mail@azwater.com



AGREEMENT FOR CONSULTING SERVICES BETWEEN
ARIZONA WATER COMPANY AND
INDUSTRIAL INSPECTION AND CONSULTING, LLC

THIS AGREEMENT is made and entered into on this 12th day of MAY, 2015, by and between Arizona Water Company, an Arizona corporation, hereinafter referred to as "Company," and Industrial Inspection and Consulting, a/an limited liability company hereinafter referred to as "Consultant".

RECITALS

WHEREAS, Company is authorized to and desires to retain Consultant to provide engineering design, post design and construction administration services for coating inspection and consulting for Cottonwood Lane 1MG Water Storage Tank Rehabilitation ("Project").

WHEREAS, Consultant is agreeable to providing personnel and facilities necessary to perform the desired services within Company's required time; and

WHEREAS, Company desires to retain Consultant to perform the services in the manner, at the time, and for the compensation set forth herein;

NOW, THEREFORE, Company and Consultant agree as follows:

1. Description of Project

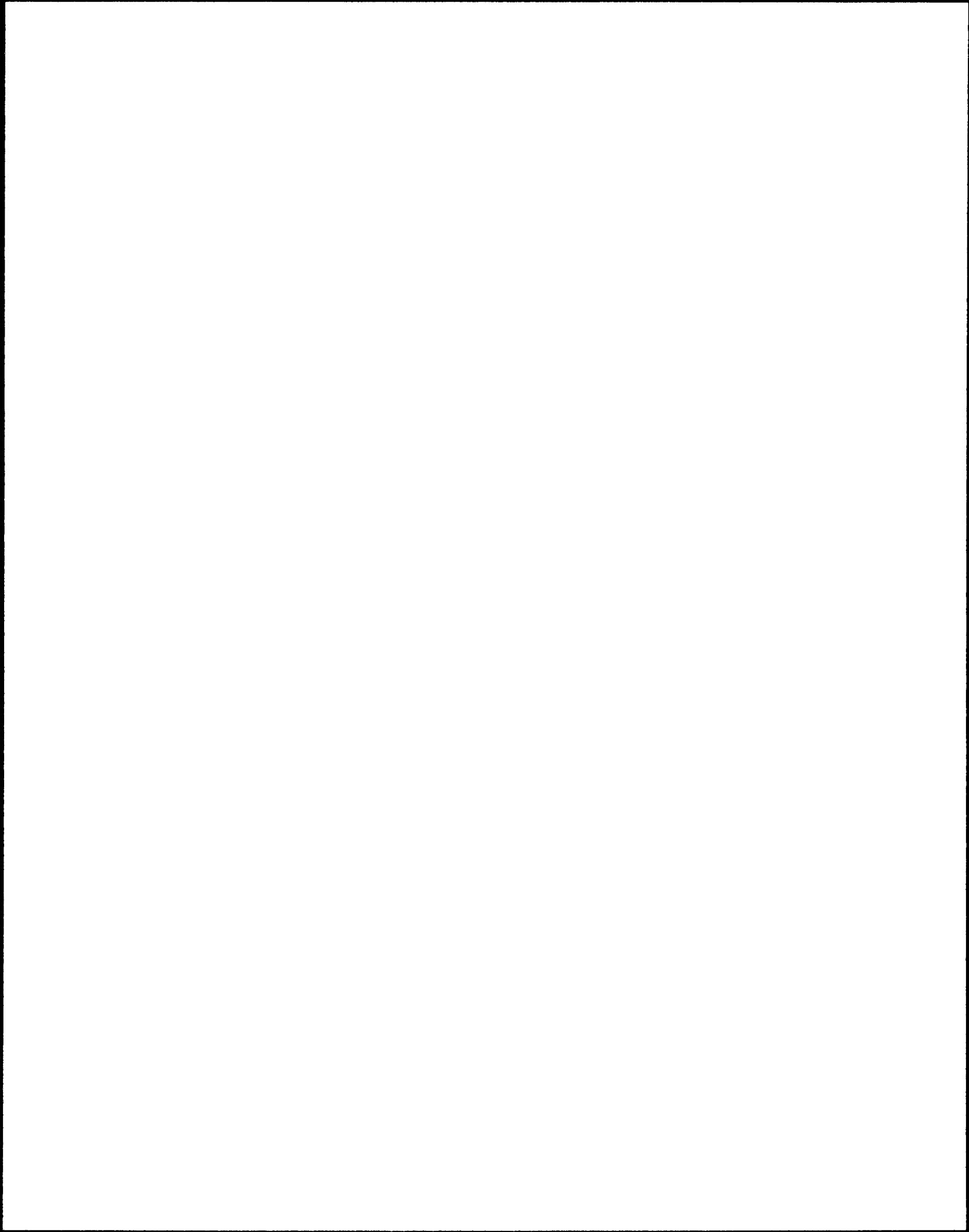
Company and Consultant agree that Project is as described in Exhibit A, hereto, incorporated by reference herein and entitled "Scope of Work," dated January 13, 2015. If, during the course of Project, Company and Consultant agree to changes in Project, such changes shall be effective only after being incorporated in this Agreement by written amendment, signed by representative of Company and Consultant.

2. Scope of Consultant Services

Consultant agrees to perform those services described hereafter. Unless modified in writing by both parties, duties of Consultant shall not be construed to exceed those services specifically set forth herein.

a. Basic Services: Consultant agrees to perform those services described in the Scope of Work (the "Services"). Any tasks not specifically described in the Scope of Work will be Additional Services.

b. Additional Services: Company shall pay Consultant all fees and costs incurred in performing Additional Services provided the services were authorized by Company in writing. Unless otherwise agreed in writing, Additional Services shall be



compensated in accordance with Consultant's standard billing rates at the time the Additional Services are performed.

c. Litigation Assistance: Unless specifically stated therein, the Scope of Work does not include assistance to support, prepare, document, bring, defend or assist in litigation undertaken or defended by Company. All such services required or requested of the Consultant by Company or any third party (except claims between Company and Consultant) will be reimbursed at Consultant's applicable rates for such litigation services.

3. Responsibilities of Company

In addition to payment for the Services performed under this Agreement, Company shall:

a. Assist and cooperate with Consultant in any manner necessary and within its ability to facilitate Consultant's performance under this Agreement.

b. Designate in writing a person to act as Company's representative with respect to this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define Company's policies, make decisions and execute documents on Company's behalf.

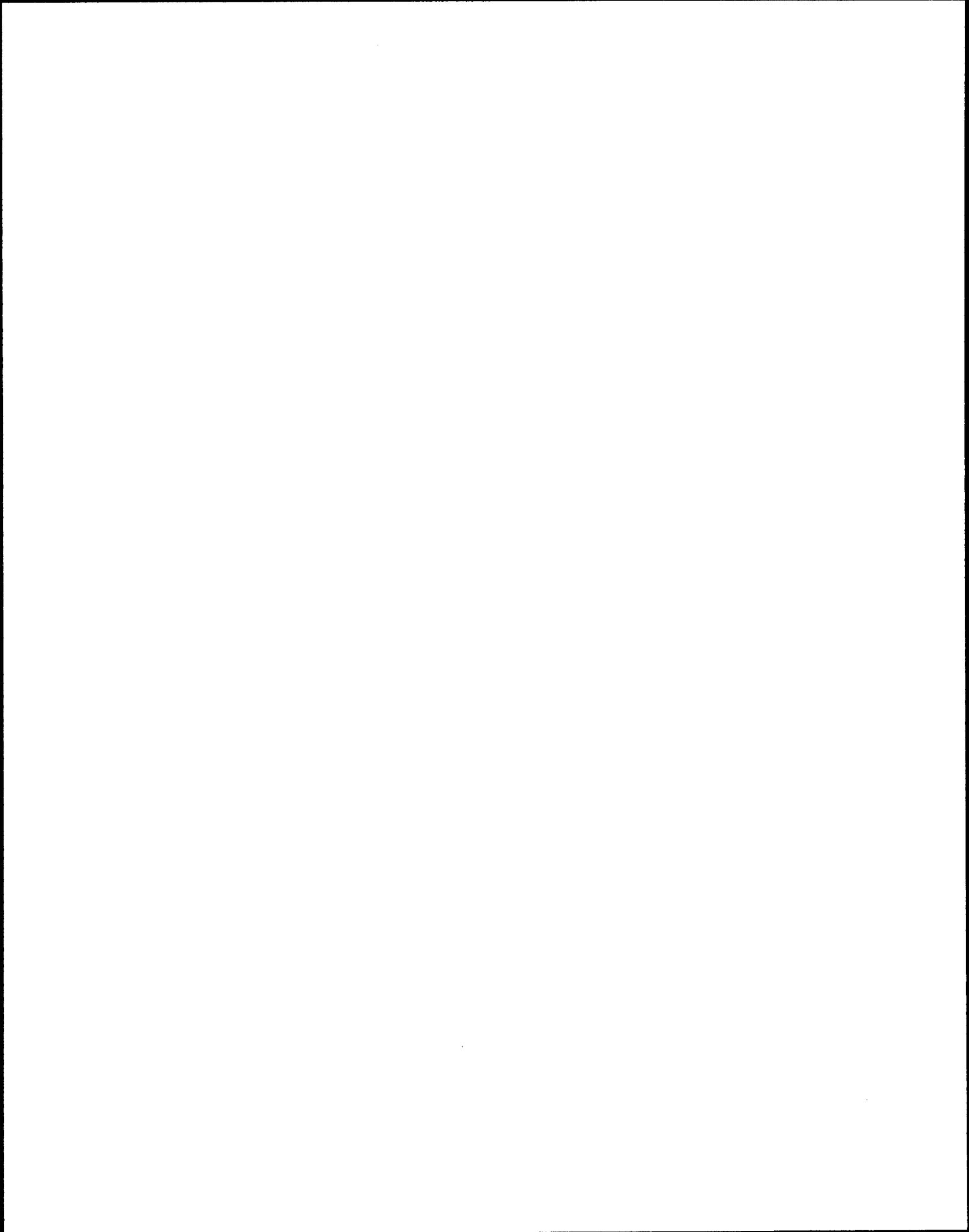
c. Furnish Consultant with all technical data in Company's possession including, but not limited to, maps, surveys, drawings, soils or geotechnical reports and any other information required by or useful to Consultant in performance of the Services under this Agreement.

d. Notify Consultant of any known or potential health or safety hazards existing at or near the project site.

e. Provide access to and/or obtain permission for Consultant to enter upon project related property during normal business hours, whether or not owned by Company, as required to perform and complete the Services.

4. Americans with Disabilities Act

Any other provision of this Agreement to the contrary notwithstanding, unless otherwise specified in the Scope of Services, Company's contractors shall have sole responsibility as between Company and Consultant for compliance with the Americans With Disabilities Act ("ADA") 42 U.S.C. 12101 et. Seq. and the related regulations. Consultant shall provide Company with applicable ADA criteria, which may be required.



5. Authorization and Completion

In signing this Agreement Company grants Consultant specific authorization to proceed with work as described in Scope of Work and under the terms of this Agreement.

6. Compensation

a. Amount: For the Services described in Exhibit A, Company agrees to pay, and Consultant agrees to accept compensation in accordance with Exhibit B, attached hereto and incorporated herein. Where Consultant has provided Company with a breakdown of the total compensation into subtasks, such breakdowns are estimates only. Consultant may reallocate compensation between tasks, provided total compensation is not exceeded without the prior written approval of Company.

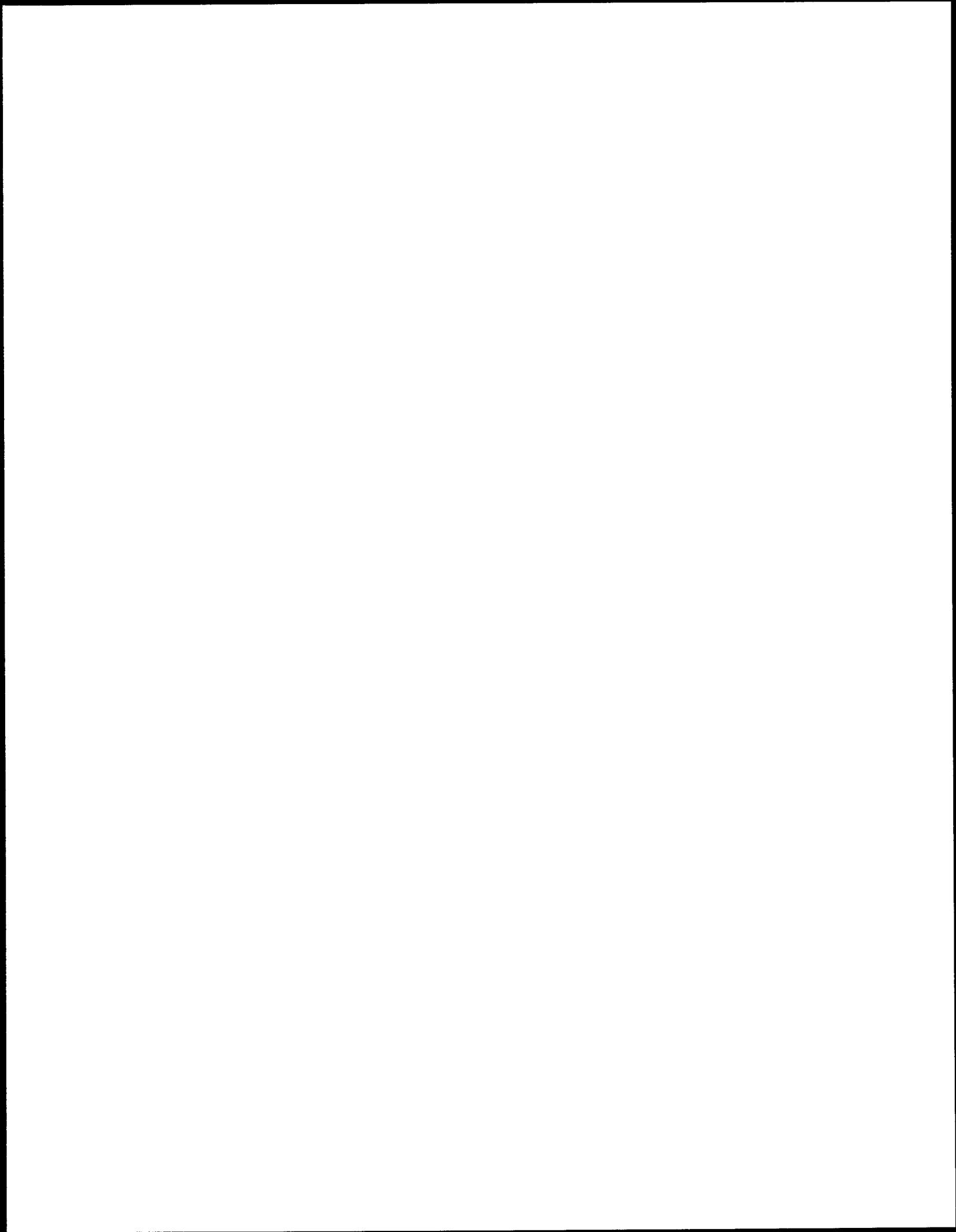
b. Payment: As long as Consultant has not defaulted under this Agreement, Company shall pay Consultant within thirty (30) days of the date of Consultant's invoices for services performed and reimbursable expenses incurred under this Agreement. If Company has reason to question or contest any portion of any such invoice, amounts questioned or contested shall be identified and notice given to Consultant within thirty (30) days of the date of the invoice. Any portion of any invoice not contested shall be deemed to be accepted and approved for payment and shall be paid to Consultant within thirty (30) days of the date of the invoice. Company agrees to cooperate with Consultant in a mutual effort to resolve promptly any contested portions of Consultant's invoices.

In the event any uncontested portions of any invoice are not paid within thirty (30) days of the date of Consultant's invoice, interest on the unpaid balance shall accrue beginning with the 31st day at the rate of 1.5% per month, and Consultant shall have the right to suspend work per Article XV, Suspension of Work.

7. Responsibility of Consultant

a. Standard of Care Professional Services: Subject to the limitations inherent in the agreed scope of work as to the degree of care, amount of time and expenses to be incurred, and subject to any other limitations contained in this Agreement, Consultant shall perform the Services and any Additional Services in accordance with generally accepted standards and practices customarily utilized by competent engineering firms in effect at the time Services and any Additional Services are rendered. Consultant does not expressly or impliedly warrant or guarantee its Services.

b. Reliance upon Information Provided by Others: If Consultant's performance of services hereunder requires Consultant to rely on information provided by other parties (excepting Consultant's subcontractors), Consultant shall not independently verify the validity, completeness, or accuracy of such information unless otherwise expressly engaged to do so in writing by Company.



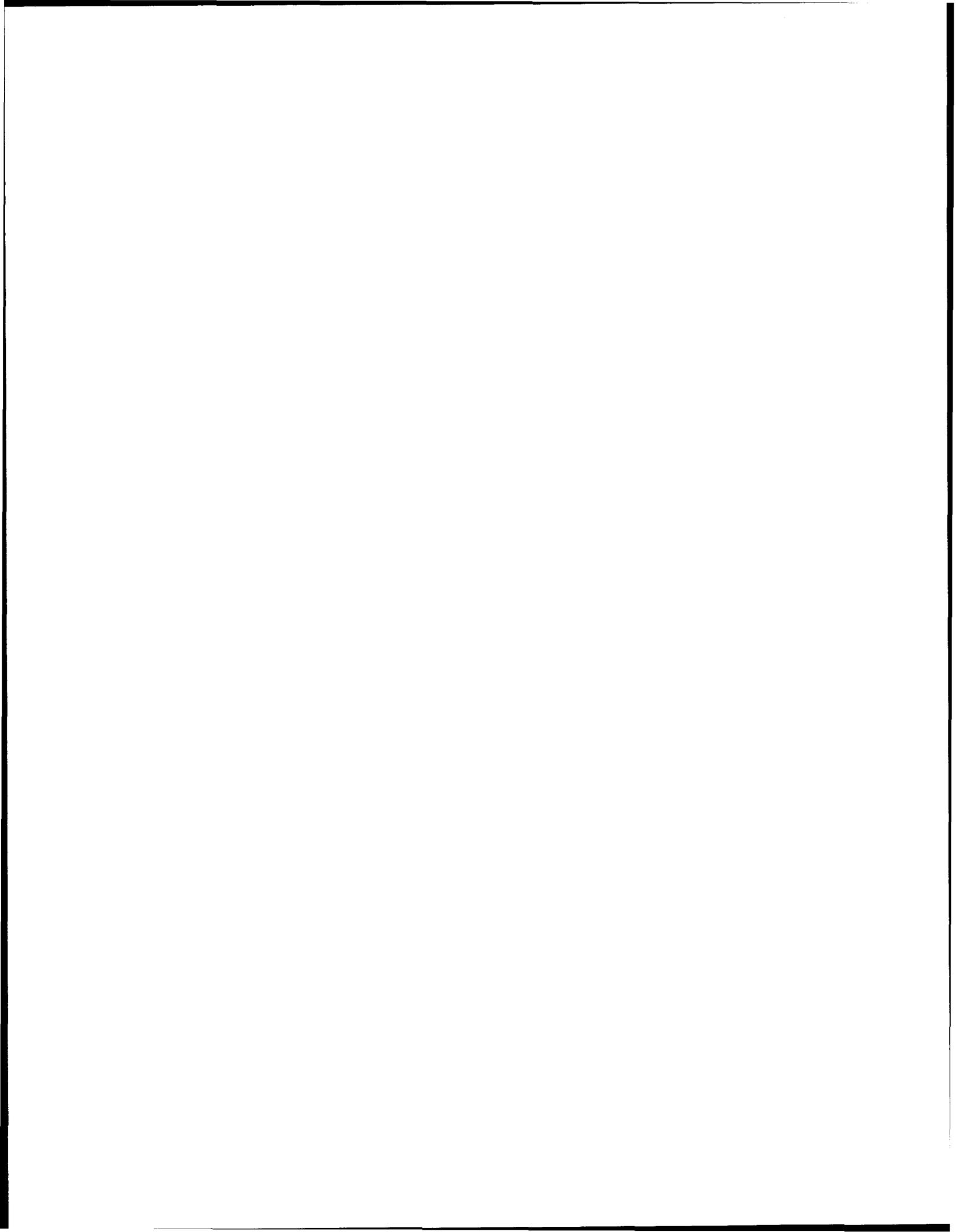
c. Consultant's Opinion of Costs: Company acknowledges that construction cost estimates, financial analyses and feasibility projections are subject to many influences including, but not limited to, price of labor and materials, unknown or latent conditions of existing equipment or structures, and time or quality of performance by third parties. Company acknowledges that such influences may not be precisely forecasted and are beyond the control of Consultant and that actual costs incurred may vary substantially from the estimates prepared by Consultant. Consultant does not warrant or guarantee the accuracy of construction or development cost estimates, however, Consultant agrees to exercise its best Professional Judgment in rendering its opinions.

d. Construction Phase Services

i. Consultant's Activities at Construction Site: The presence of Consultant's personnel at a construction site, whether as on-site representative, resident engineer, construction manager, or otherwise, does not make Consultant responsible for those duties that belong to Company and/or construction contractors or others, and does not relieve construction contractors or others of their obligations, duties, and responsibilities, including, but not limited to, construction methods, means, techniques, sequences, and procedures necessary for completing all portions of the construction work in accordance with the contract documents, any health or safety programs and precautions required by such construction work, and any compliance with applicable laws and regulations. Any inspection or observation of the contractor's work is for the purpose of determining that the work is proceeding in conformance with the intent of the project specifications and contract documents. Consultant has no authority to exercise control over any construction contractor in connection with their work or health or safety programs and precautions. Except to protect Consultant's own personnel and except as may be expressly required elsewhere in the Scope of Work, Consultant has no duty to inspect, observe, correct, or report on health or safety deficiencies of the construction contractor.

ii. Shop Drawing and Submittal Review: If required by Consultant's Scope of Services, Consultant shall review shop drawings or other contractor submittals for general conformance with the intent of the contract documents. Except for services completed under direct contract to Consultant, Consultant shall not be required to verify dimensions, to engineer contractor's shop drawings or submittals, nor to coordinate shop drawings or other submittals with other shop drawings or submittals provided by contractor.

iii. Record Drawings: Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Except for services completed under direct contract to Consultant, Consultant is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.



e. Scope of Work: Before preparing the scope of work, Consultant specifically acknowledges and agrees that it has inspected and familiarized itself with Company's site. The Consultant has received, or had the opportunity to inquire about and/or request all relevant information concerning the Scope of Work from Company or any other source Consultant deems necessary. The Scope of Work has been prepared by the Consultant and to the best of its knowledge includes all applicable work required to successfully complete coating inspection and consulting for Cottonwood Lane 1MG Water Storage Tank Rehabilitation.

8. Asbestos/Hazardous Material

Consultant and Consultant's subcontractors shall have no responsibility for the discovery, handling, removal, or disposal of, or exposure of persons to asbestos or hazardous or toxic materials that are present in any form at the Project site. Professional services related to or in any way connected with the investigation, detection, abatement, replacement, use, specification, or removal of products, materials, or processes containing asbestos or hazardous or toxic materials are beyond the scope of this Agreement.

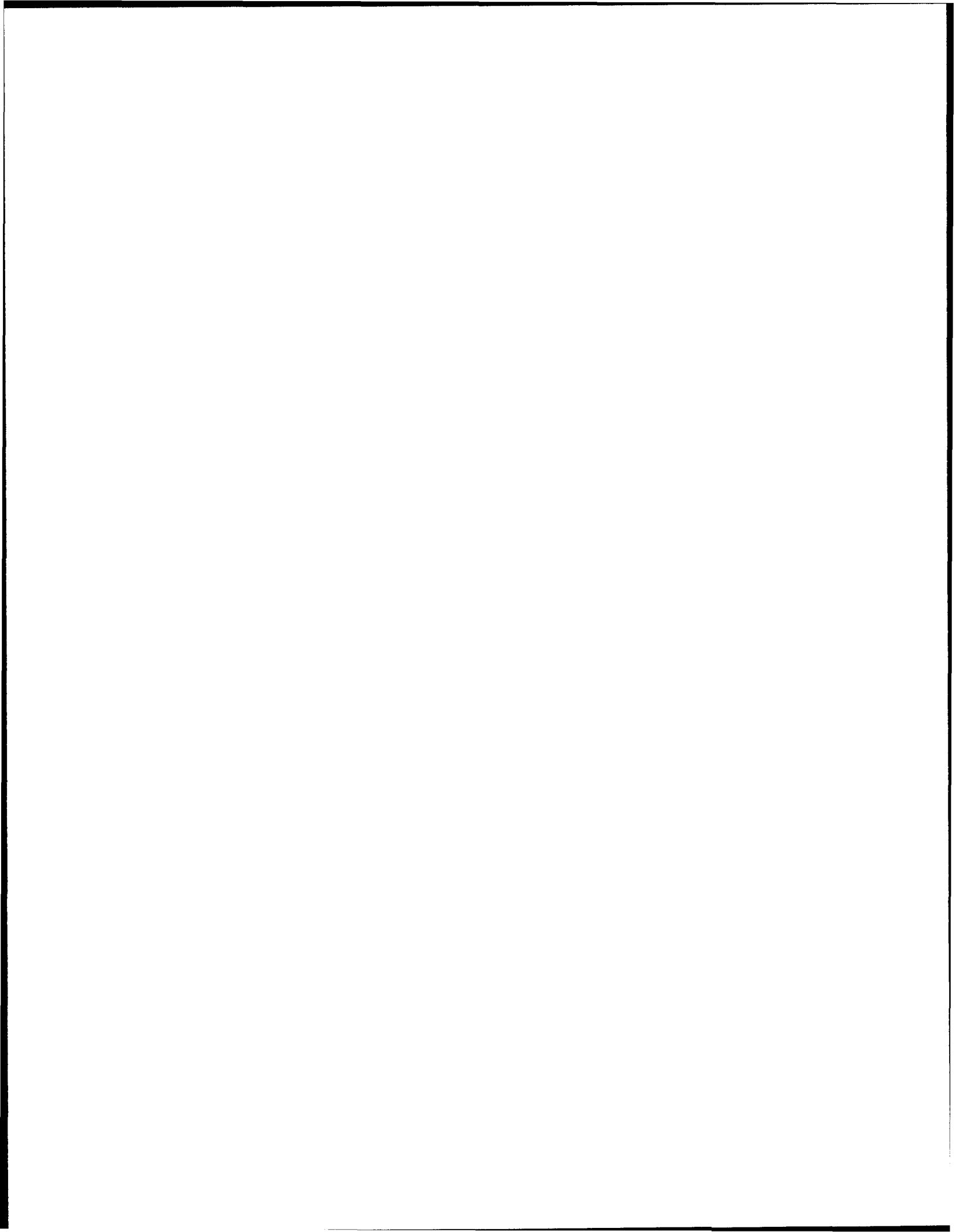
In the event Consultant encounters asbestos or hazardous materials at the jobsite, Consultant may, at its option and without liability for damages, suspend the performance of services on the Project until such time as Company and Consultant mutually agree on an amendment to this Agreement to address the issue, or Company retains another specialist consultant or contractor to identify, classify, abate and/or remove the asbestos and/or hazardous materials.

9. Consultant's Work Product

a. Scope: Consultant's work product which is prepared solely for the purposes of this Agreement, including, but not limited to, drawings, test results, recommendations and technical specifications, whether in hard copy or electronic form, shall become the property of Company when Consultant has been fully compensated as set forth herein. Consultant may keep copies of all work product(s) for its records.

Consultant and Company recognize that Consultant's work product submitted in performance of this Agreement is intended only for the project described in this Agreement. Company's alteration of Consultant's work product or its use by Company for any other purpose shall be at Company's sole risk.

b. Electronic Copies: If requested, solely as an aid and accommodation to Company, Consultant may provide copies of its work product documents in computer-readable media ("electronic copies", "CADD"). These documents will duplicate the documents provided as work product, but will not bear the signature and professional seals of the registered professionals responsible for the work. Company is cautioned that the accuracy of electronic copies and CADD documents may be compromised by electronic media degradation, errors in format translation, file corruption, printing errors and incompatibilities, operator inexperience and file modification. Consultant will maintain



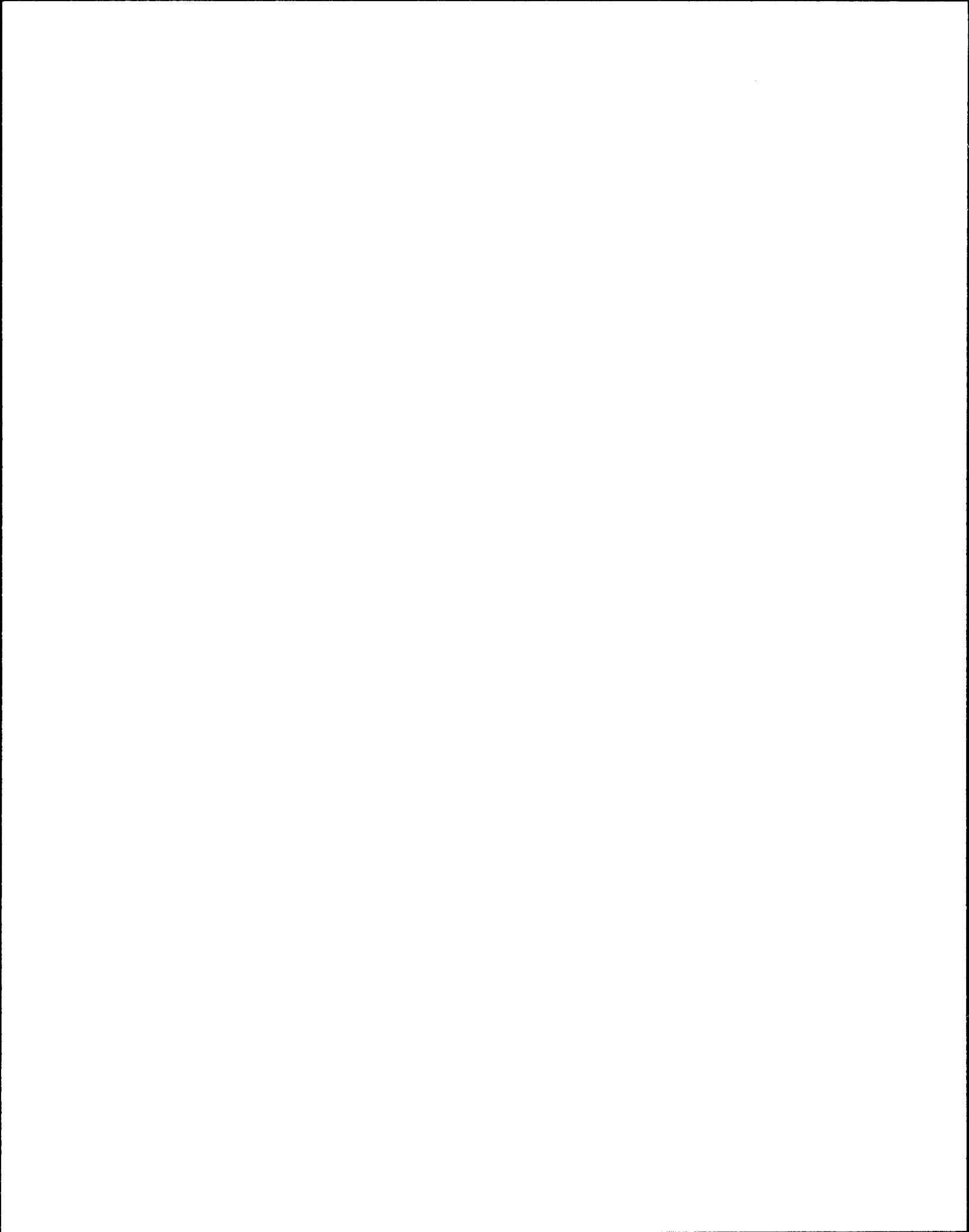
the original copy, which shall serve as the official, archived record of the electronic and CADD documents.

10. Indemnification

a. The Consultant shall indemnify the Company against, and save and hold it harmless from, any and all liability, claims, demands, loss, actions, causes of action, expense, penalties, fines, assessments, damages and costs of every kind and nature for injury to or death of any and all persons, including, without limitation, employees or representatives of the Company or of the Consultant or of any subcontractor, or any other person or persons, and for damage, destruction or loss, consequential or otherwise, to or of any and all property, real or personal, including, without limitation, property of the Company or of the Consultant or of any subcontractor, or of any other person or persons, and the violation of any law, ordinance, rule, regulation, standard, or order resulting from, or in any manner arising out of, or in connection with, the performance of the work under the Contract, howsoever same may be caused, including, without limitation, the Company's active or passive negligence. The Consultant shall also, upon request by the Company, and at no expense to the Company, defend the Company in any and all suits, concerning such injury to or death of any and all persons, and concerning such damage, destruction or loss, consequential or otherwise, to or of any and all property, real or personal, including, without limitation, suits by employees or representatives of the Company or of the Consultant or of any subcontractor, or any other person or persons, or concerning any court or administrative proceeding concerning the violation of any law, ordinance, rule, regulation, standard, or order. Excluded from this paragraph are only those injuries to or deaths of persons and damage, destruction or loss, to or of property arising from the sole negligence or willful misconduct of the Company.

b. Consultant shall indemnify the Company against, and save and hold it harmless from, any and all liability, claims, demands, damages, costs, expenses and attorney's fees, suffered or incurred on account of any breach of any obligation, covenant or other provision of this contract, including without limitation, breach of the indemnity provisions of subsection A of this Section 10.

c. Consultant further agrees to defend, indemnify and hold harmless the Company, its directors, officers, employees, and agents, from and against any and all costs, damages, claims, expenses, violations, notices of violations, penalties, liens, assessments, and liabilities of every kind and nature, foreseeable or unforeseeable, directly or indirectly, arising from any release, removal, generation, use, storage or disposal on, under, around, or from the site of any material, substance, or waste, hazardous or nonhazardous, including, without limitation, drilling fluids, mud, cuttings and development and test water howsoever same may be caused, including, without limitation, the Company's active or passive negligence.



11. Consultant's Insurance

Consultant shall procure and maintain the following minimum insurance:

a. Commercial general liability insurance, including personal injury liability, blanket contractual liability and broad-form property damage liability coverage. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

b. Automobile bodily injury and property damage liability insurance covering owned, non-owned, rented, and hired cars. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

c. Statutory workers' compensation and employer's liability insurance as required by state law.

d. Professional liability insurance. The policy limit shall be not less than \$1,000,000.

Consultant shall either require each of its subconsultants to procure and to maintain the insurance specified in this section or insure its subconsultants in the Consultants own policy, in like amounts.

Company shall be named as additional insured on policies a and b above. Upon execution of this Agreement, Consultant will provide a certificate of insurance to Company. Consultant will keep the certificate current at all times while this Agreement is in effect. The Consultant will provide a 30-day written notice in the event the above policies are cancelled.

12. Confidentiality

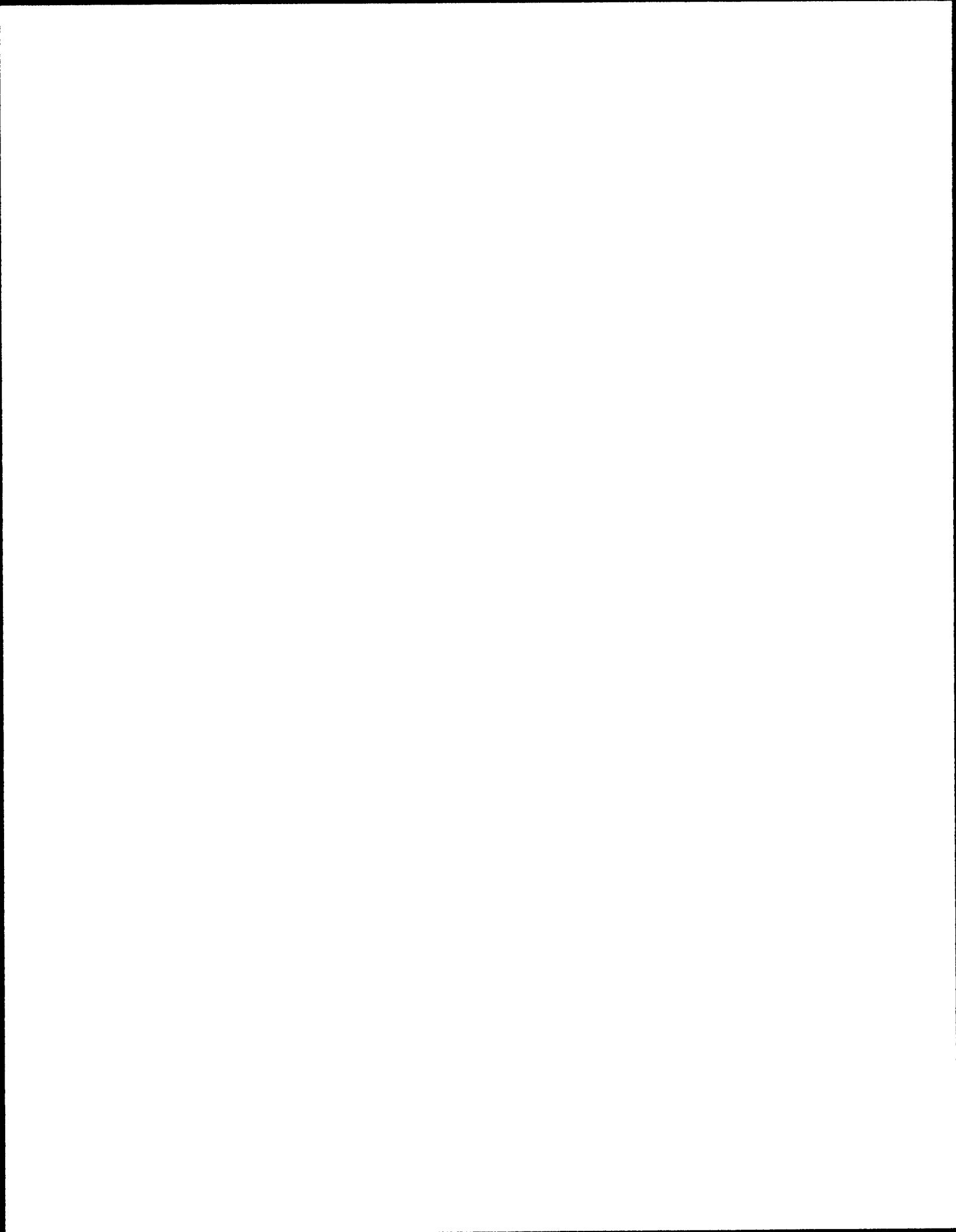
Consultant agrees it will maintain the confidentiality of all material it receives from Company and will not disclose, distribute, or publish to any third party such information without the prior permission of Company. Notwithstanding the foregoing, Consultant shall have no confidentiality obligation with respect to information that:

a. becomes generally available to the public other than as a result of disclosure by Consultant or its agents or employees;

b. was available to Consultant prior to its disclosure by Company;

c. becomes available to Consultant from a third party who is not, to the knowledge of Consultant, bound to retain such information in confidence.

In the event Consultant is compelled by subpoena, court order, or administrative order to disclose any confidential information, Consultant shall promptly notify Company



and shall cooperate with Company prior to disclosure so that Company may take necessary actions to protect such confidential information from disclosure.

13. Subcontracts

Consultant shall be entitled, to the extent determined appropriate by Consultant, to subcontract any portion of the services to be performed under this Agreement.

14. Suspension of Work

Work under this Agreement may be suspended as follows:

a. By Company: By written notice to Consultant, Company may suspend all or a portion of the Work under this Agreement if unforeseen circumstances beyond Company's control make normal progress of the Work impracticable.

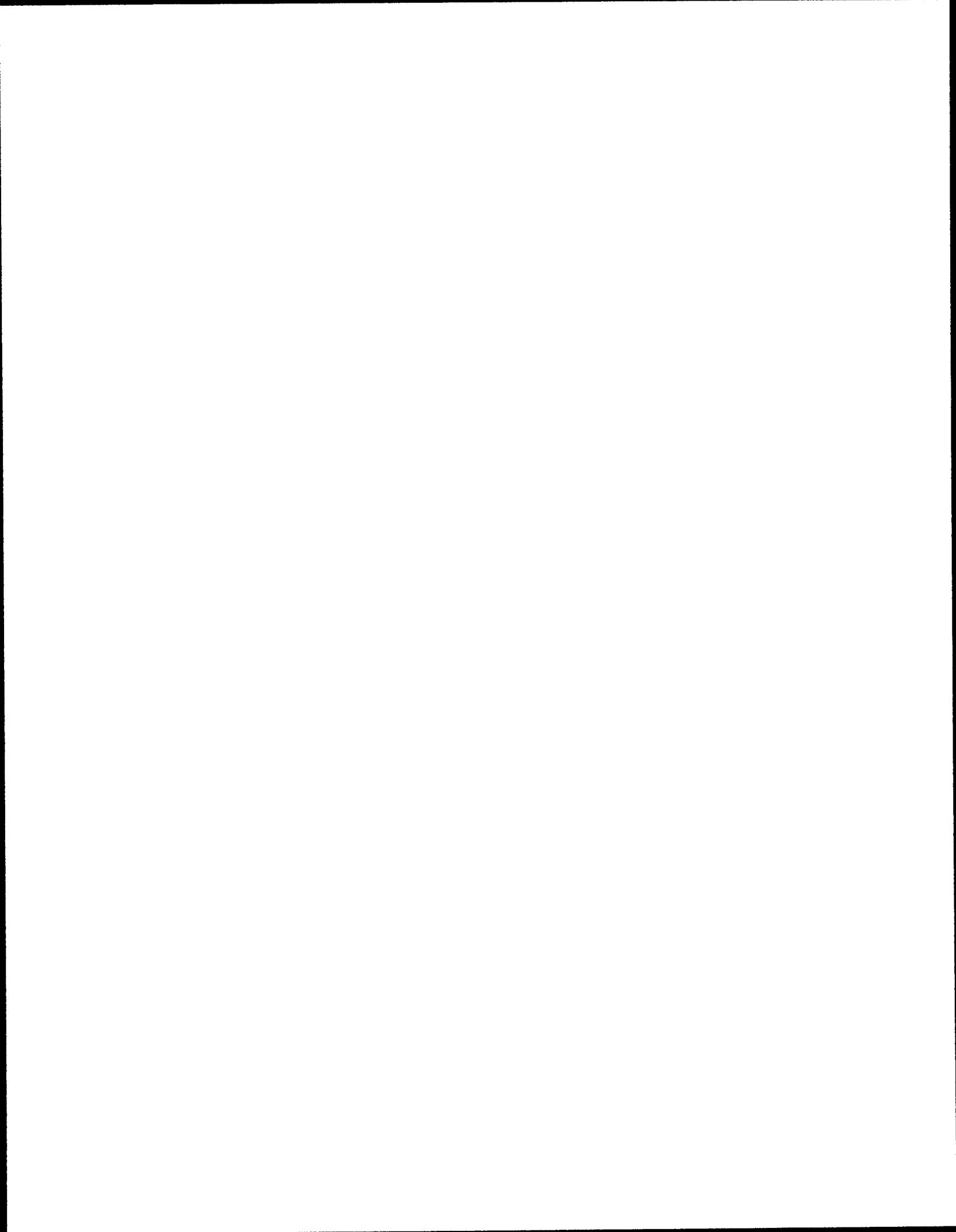
b. By Consultant: By written notice to Company, Consultant may suspend the work if Consultant reasonably determines that working conditions at the Site (outside Consultant's control) are unsafe, or in violation of applicable laws, or in the event Company has not made timely payment in accordance with Article VI, compensation.

15. Termination of Work

a. This Agreement may be terminated by Company as follows: (1) for its convenience on thirty (30) days' notice to Consultant, or (2) for cause, if Consultant materially breaches this Agreement through no fault of Company and Consultant neither cures such material breach nor makes reasonable progress toward cure within fifteen (15) days after Company has given written notice of the alleged breach to Consultant.

b. This Agreement may be terminated by Consultant as follows: (1) for cause, if Company materially breaches this Agreement through no fault of Consultant and Company neither cures such material breach nor makes reasonable progress toward cure within thirty (30) days after Consultant has given written notice of the alleged breach to Company.

c. Payment upon Termination: In the event of termination, Consultant shall perform such additional work as is reasonably necessary for the orderly closing of the work. Consultant shall be compensated for all work performed prior to the effective date of termination, plus work required for the orderly closing of the work, including: (1) authorized work performed up to the termination date plus termination expenses, including all labor and expenses, at Consultant's standard billing rates, directly attributable to termination; (2) all efforts necessary to document the work completed or in progress; and (3) any termination reports requested by Company.



16. Assignment

This Agreement is binding on the heirs, successors, and assigns of the parties hereto. Except as otherwise set forth under Article VIII, Assignment of Tasks to Affiliates, this Agreement may not be assigned by Company or Consultant without prior, written consent of the other.

17. No Benefit for Third Parties

The services to be performed by Consultant are intended solely for the benefit of Company, and no benefit is conferred on, nor contractual relationship established with any person or entity not a party to this Agreement. No such person or entity shall be entitled to rely on Consultant's services, opinions, recommendations, plans, or specifications without the express written consent of Consultant. No right to assert a claim against the Consultant, its officers, employees, agents, or consultants shall accrue to the construction Contractor or to any subcontractor, supplier, manufacturer, lender, insurer, surety, or any other third party as a result of this Agreement or the performance or nonperformance of the Consultant's services hereunder.

18. Force Majeure

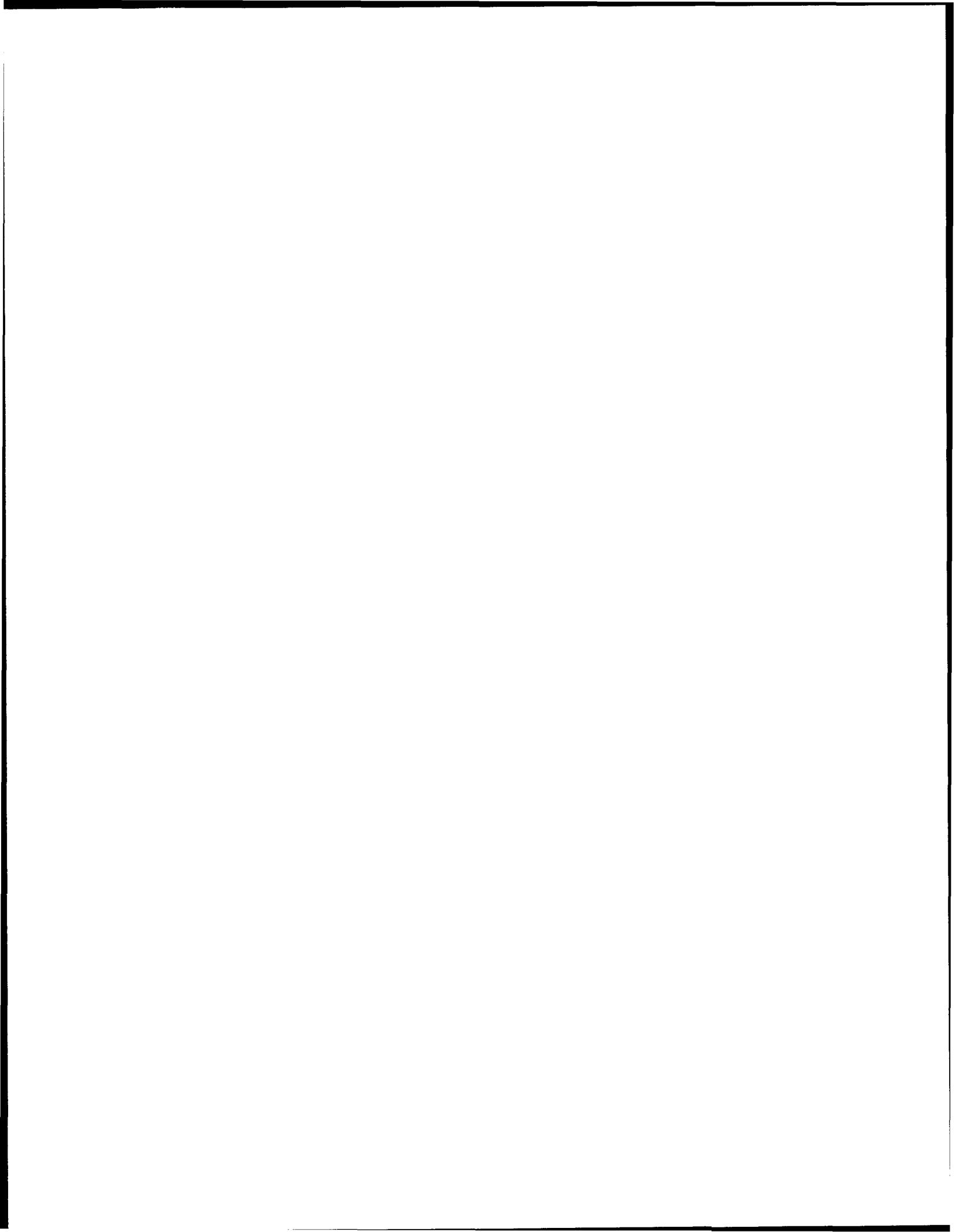
Consultant and Company shall not be responsible for delays caused by circumstances beyond their reasonable control, including, but not limited to: (1) strikes, lockouts, work slowdowns or stoppages, or accidents; (2) acts of God; (3) failure of Company to furnish timely information or to approve or disapprove Consultant's instruments of service promptly; and (4) faulty performance or nonperformance by Consultant or Company, Company's or Consultant independent consultants or contractors, or governmental agencies. Consultant and Company shall not be liable for damages arising out of any such delay, nor shall the Consultant or Company be deemed to be in breach of this Agreement as a result thereof.

19. Integration

This Agreement represents the entire understanding of Company and Consultant as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. This Agreement may not be modified or altered except in writing signed by both parties.

20. Severability

If any part of this Agreement is found unenforceable under applicable laws, such part shall be inoperative, null, and void insofar as it conflicts with said laws, but the remainder of this Agreement shall be in full force and effect.



21. Choice of Law/Jurisdiction

This Agreement shall be administered and interpreted under the laws of the State of Arizona. Jurisdiction of litigation arising from the Agreement shall be in The State of Arizona.

22. Attorneys' Fees

In the event any claim, controversy, or legal action arises under this Agreement, the prevailing party shall be entitled to recover from the other party all attorneys' fees, costs, expenses and other fees incurred by the prevailing party.

23. Notice Provisions

Notices concerning this Agreement shall be in writing and sent by certified mail or by courier (such as Federal Express), or by hand-delivery addressed as follows:

To the Company: Arizona Water Company
 3805 North Black Canyon Highway
 Phoenix, AZ 85015-5351
 Attention: President

or

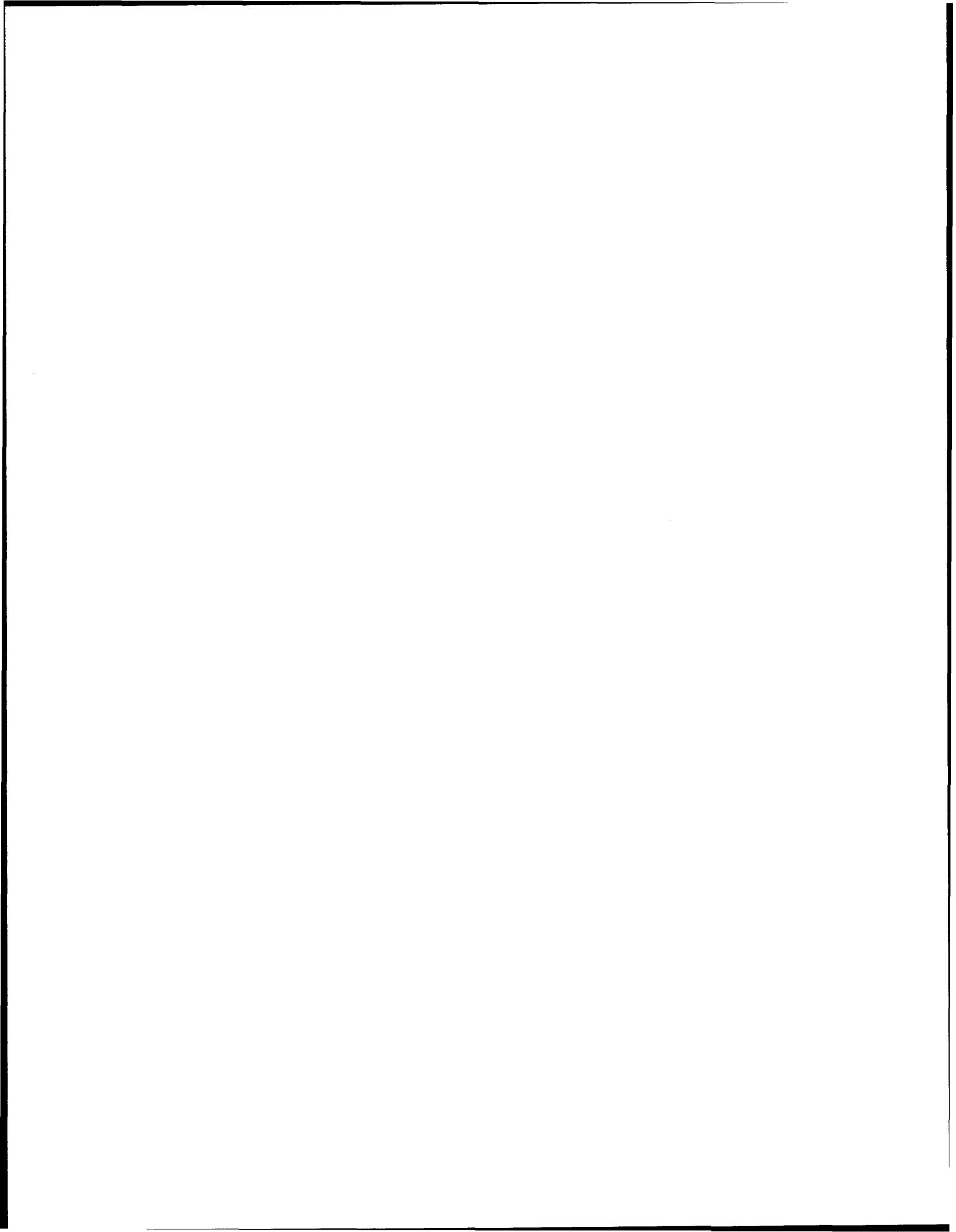
Arizona Water Company
Post Office Box 29006
Phoenix, AZ 85038-9006
Attention: President

To Consultant: Industrial Inspection and Consulting, LLC
 P. O. Box 51026
 Phoenix, AZ 85076
 Attention: President

Either party may change its address for purposes of this Section by giving written notice of such change of address to the other party.

24. Authorization

The persons executing this Agreement on behalf of the parties hereto represent and warrant that the parties have all legal authority and authorization necessary to enter into this Agreement, and that such persons have been duly authorized to execute this Agreement on their behalf.



IN WITNESS WHEREOF, each of the parties hereto has caused this instrument to be executed by their respective duly authorized officers as of the date first written above.

^{AND}
INDUSTRIAL INSPECTION CONSULTING
an limited liability company

ARIZONA WATER COMPANY,
an Arizona corporation

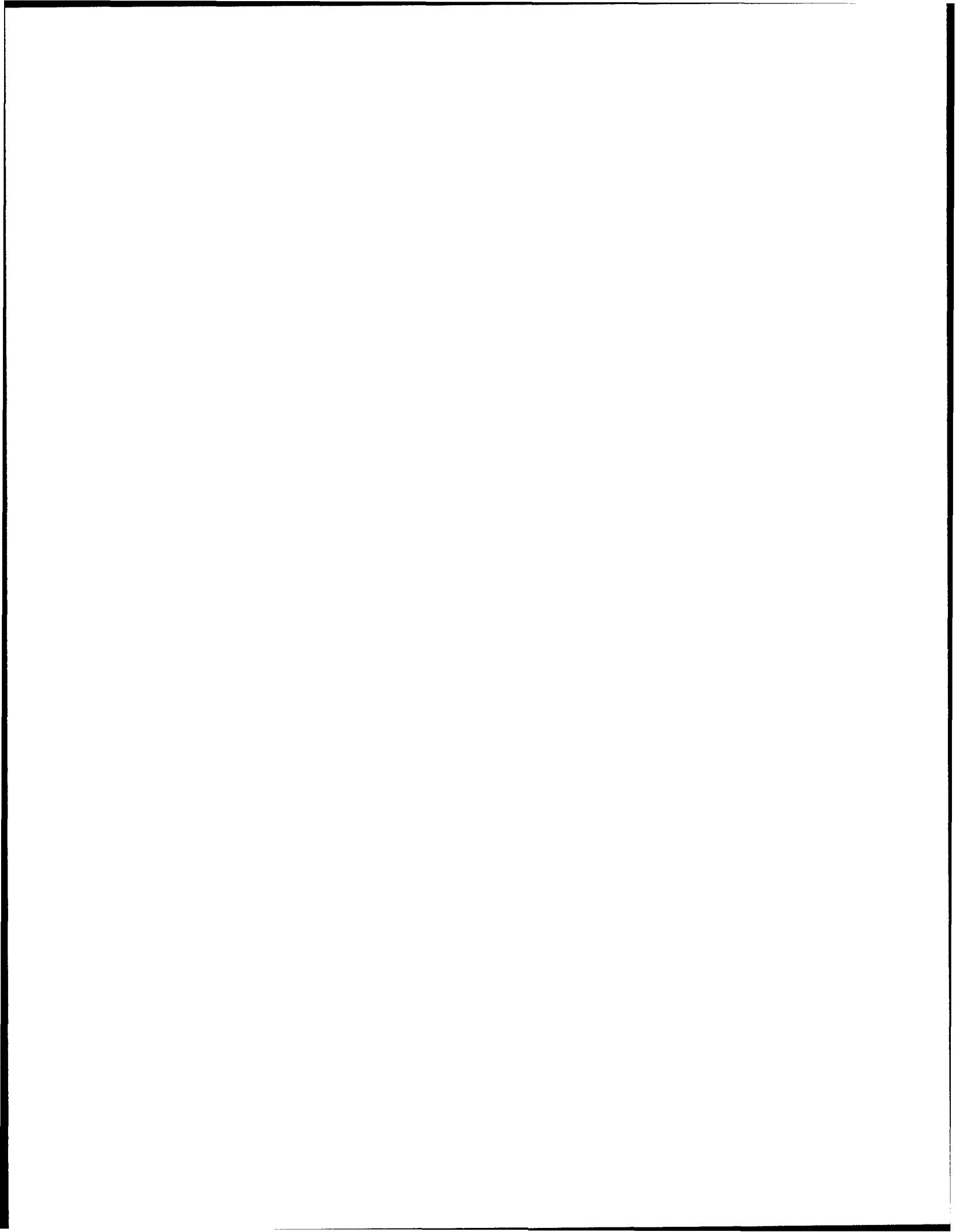
By: *Gabe [Signature]*

By: *[Signature]*

Its: *PAUL [Signature]*

Its: *Vice President - Company*

1/9/15



INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

January 13, 2015

James Wilson. P.E.
Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038-9006

Project: Cottonwood Lane IMG Water Storage Tank Rehabilitation Project

Mr. Wilson,

Per your request the following quote is for providing NACE Certified coating inspection and consulting for the above-mentioned project. The project will be inspected and consulted by a NACE Inspector in good standing. A full PDF report will follow the project completion for your review.

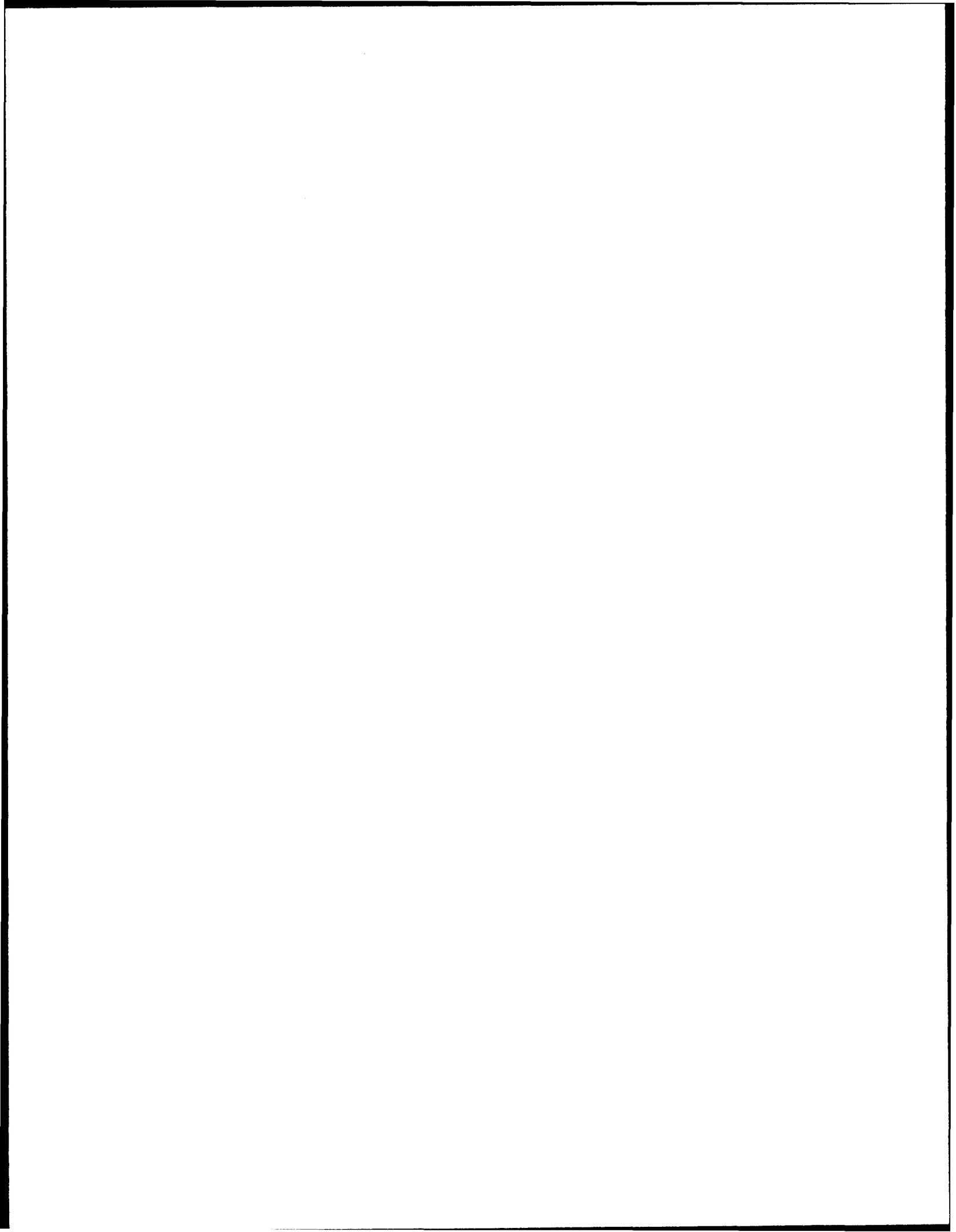
Respectfully,
Greg Sprinkle
Greg Sprinkle CE
Certified NACE Level III Inspector #5417
Certified SSPC Protective Coatings Inspector

AMC

PO BOX 51026 PHOENIX, ARIZONA 85076-1026

gregsprinkle@hotmail.com

Phone 480-993-8999



INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

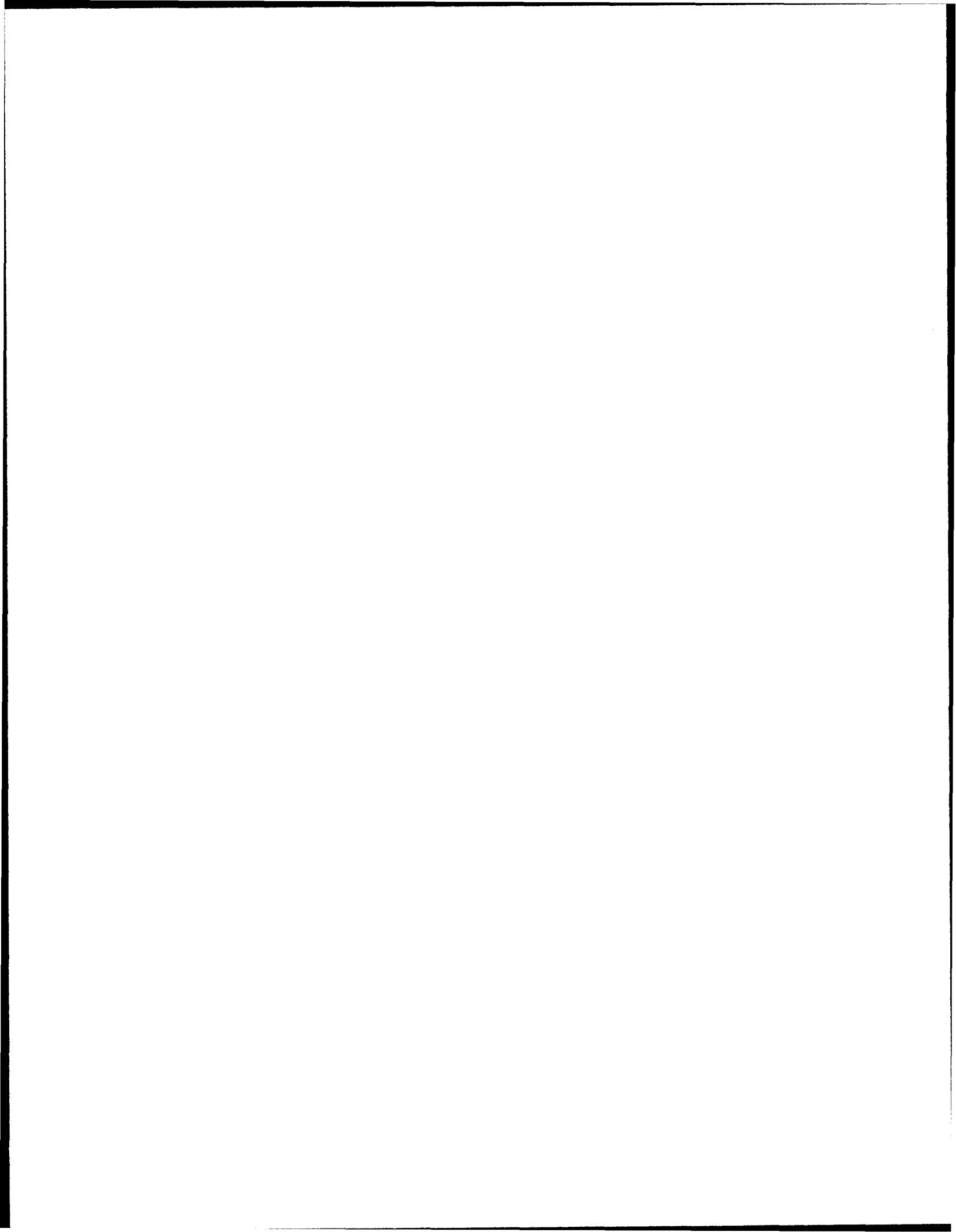
EXHIBIT "A"

IMG Water Storage Tank: Provide inspection and consulting support for the Cottonwood Lane IMG Water Storage Tank rehabilitation project. This work includes onsite and shop inspections for surface preparation, dry film thickness compliance, holiday detection, and final coating approval. A Full Pdf report will follow to document the system and specification compliance.

PO BOX 51026 PHOENIX, ARIZONA 85076-1026

gregsprinkle@hotmail.com

Phone 480-993-8999



INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

EXHIBIT "B"

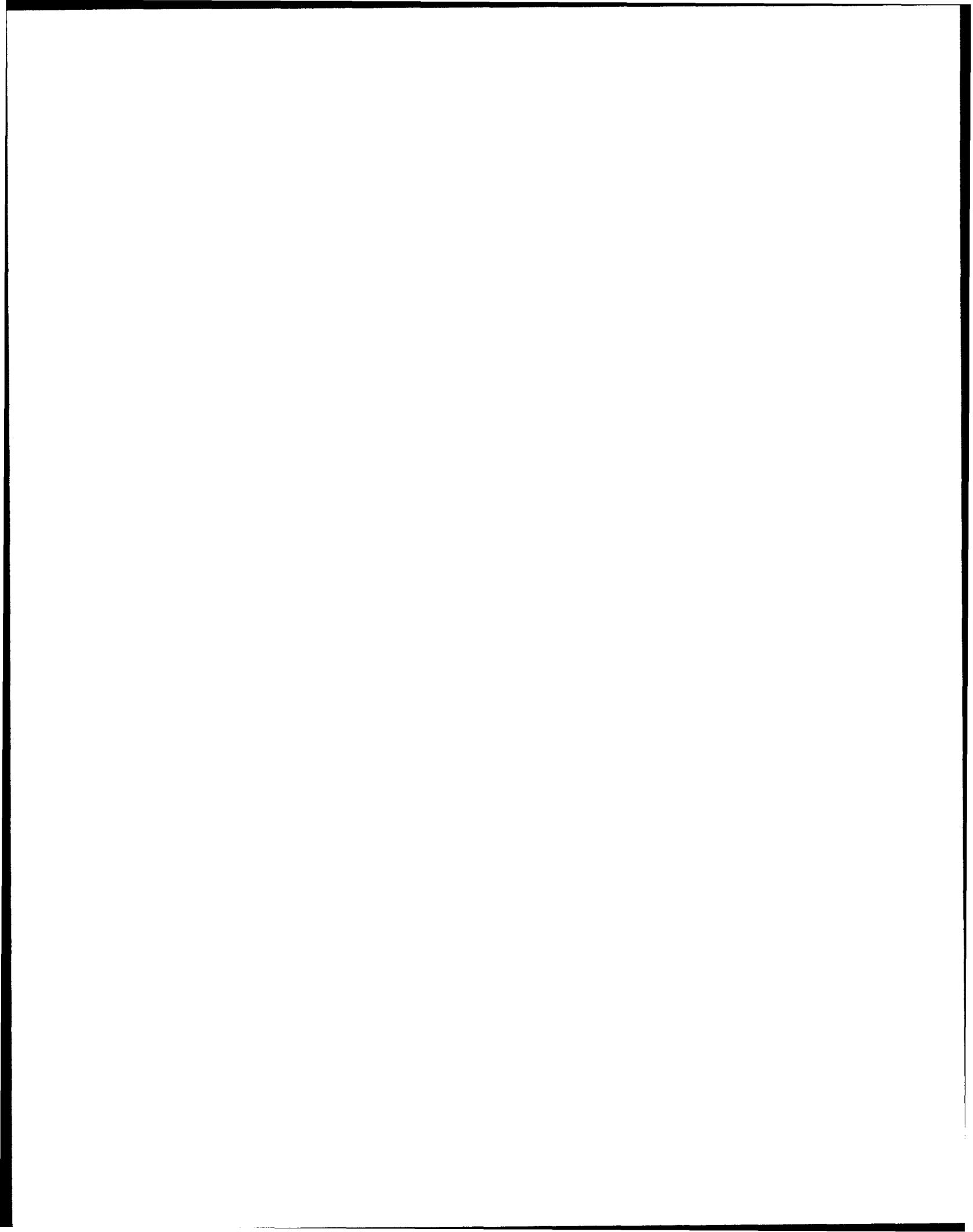
1MG Water Storage Tank: Cost for the scope as described in Exhibit "A"

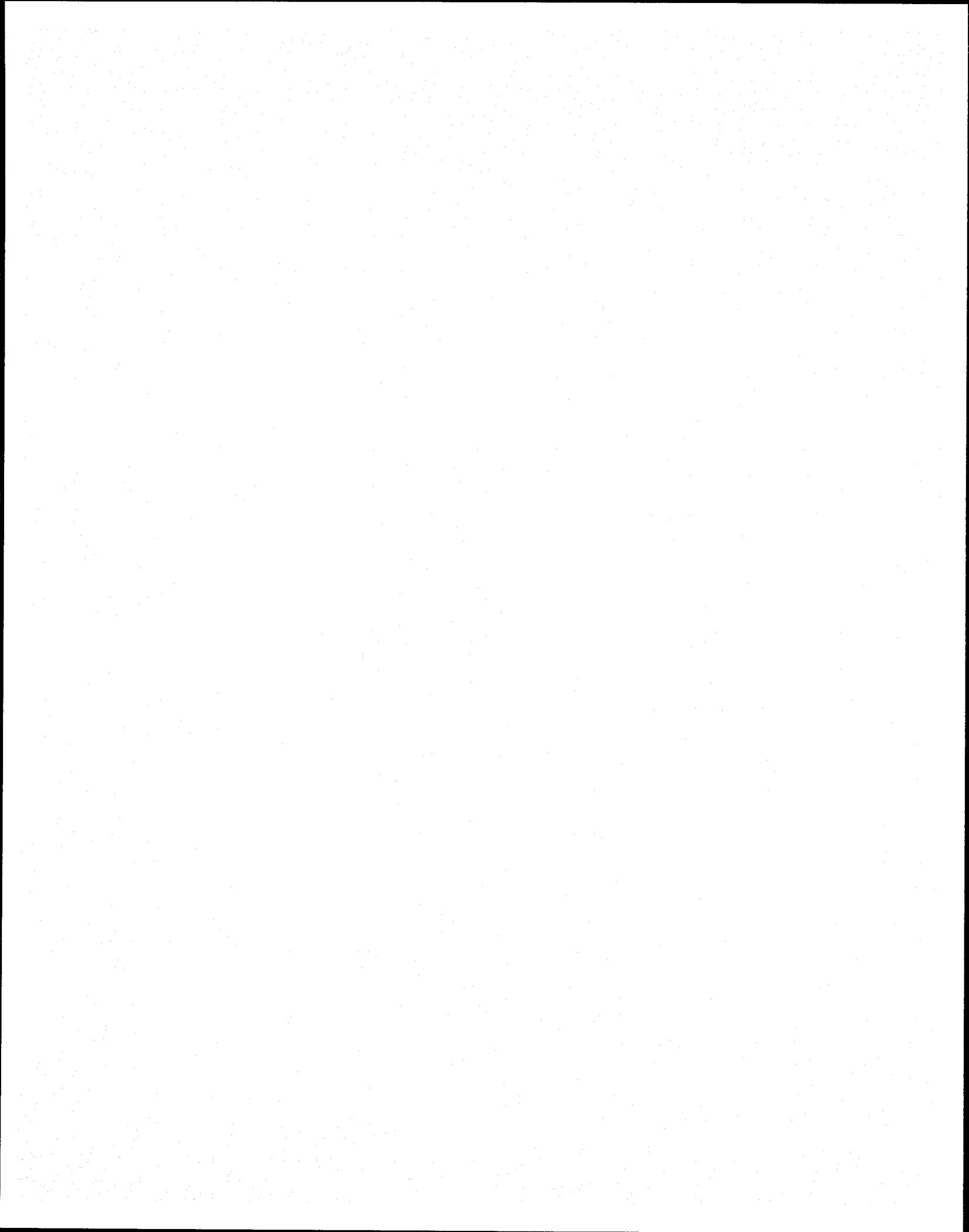
Total: \$13,250

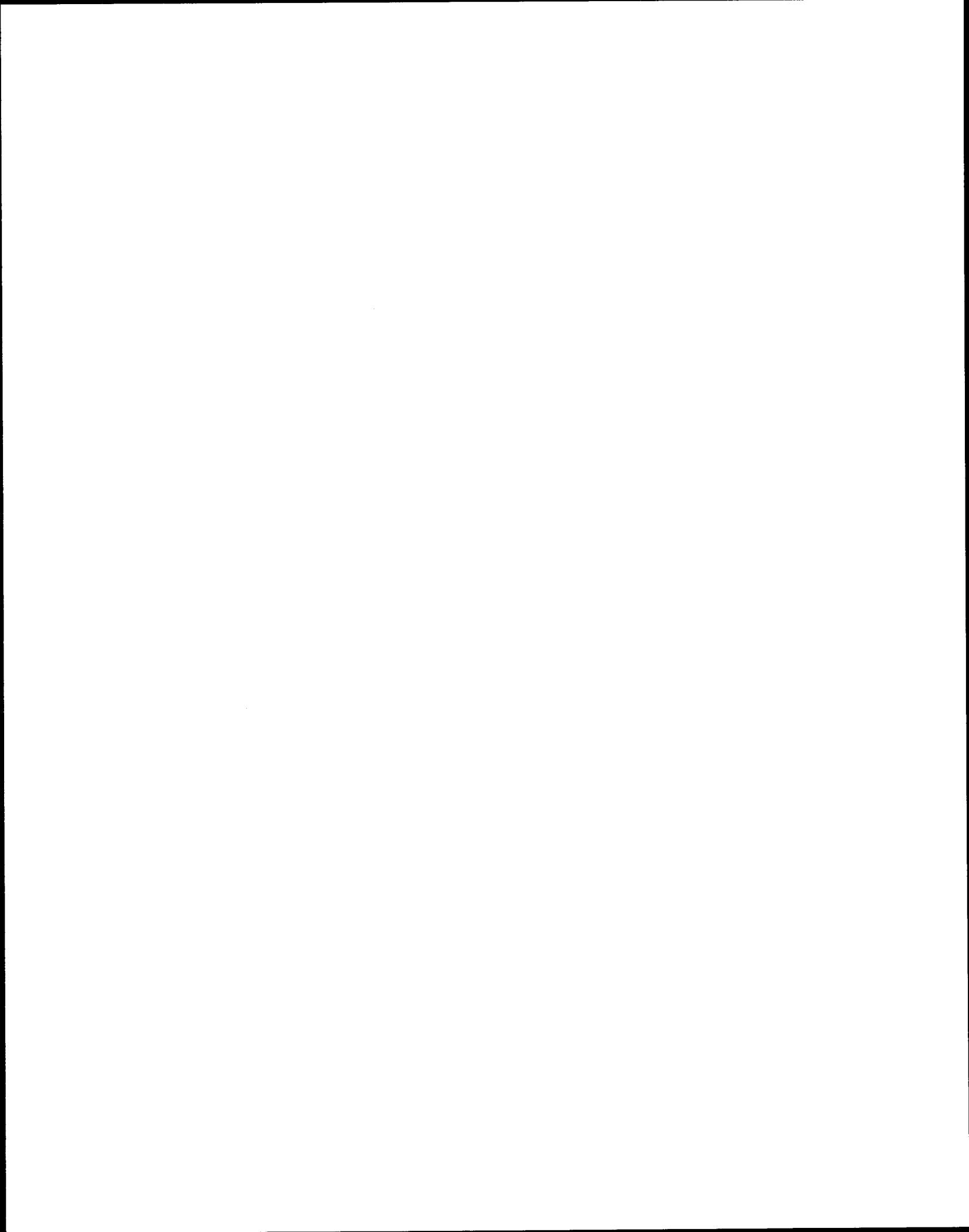
PO BOX 51026 PHOENIX, ARIZONA 85076-1026

gregsprinkle@hotmail.com

Phone 480-993-8999







AGREEMENT FOR GENERAL ENGINEERING SERVICES BETWEEN ARIZONA WATER COMPANY AND DELTA SYSTEMS ENGINEERING, INC.

TASK ORDER AUTHORIZATION

Delta Systems Engineering, Inc. Project Number 1612.00

AWC Project Number 1-5170 Cottonwood Ln. Temporary BPS

Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038-9006

Effective Date of Authorization January 20, 2015

Upon execution of this Task Order, and effective as of the date shown above, the parties agree that Delta Systems Engineering, Inc. shall perform the following services:

SCOPE OF SERVICES

Existing SCADA/PLC monitoring, alarming, and control will be disabled. The general fault for Booster No. 1 will be configured as a general fault for the temporary booster pump skid. The alarm will be displayed on SCADA screen and called out through the WIN911 system. Once the upgrade is complete and the system is ready to be brought online again, DeltaSE will make a 2nd trip to enable the original SCADA/PLC monitoring, alarming, and control (without any modification).

COMPENSATION

Labor = \$ 4,288 [32hrs @ S. Int. Rate 3 (\$134/hr)], Expenses = \$ 203, Time and materials not to exceed \$ 4,491

GENERAL TERMS AND CONDITIONS

Delta Systems Engineering, Inc.'s services shall be governed by the Master Agreement dated March 17, 2010 together with this Task Order and any Exhibits attached hereto.

The services performed within this Task Order shall commence on or about January 20, 2015, and shall be complete on or before June 1, 2015.

Delta Systems Engineering, Inc.'s Representative in charge of the services is Arun Ramamoorthy, who may be contacted at 602-266-4658 and ARamamoorthy@deltaseinc.com. Client's Representative in charge of the services is James Wilson, who may be contacted at 602-240-6860 and jwilson@azwater.com.

Arizona Water Company

Delta Systems Engineering, Inc.

By _____

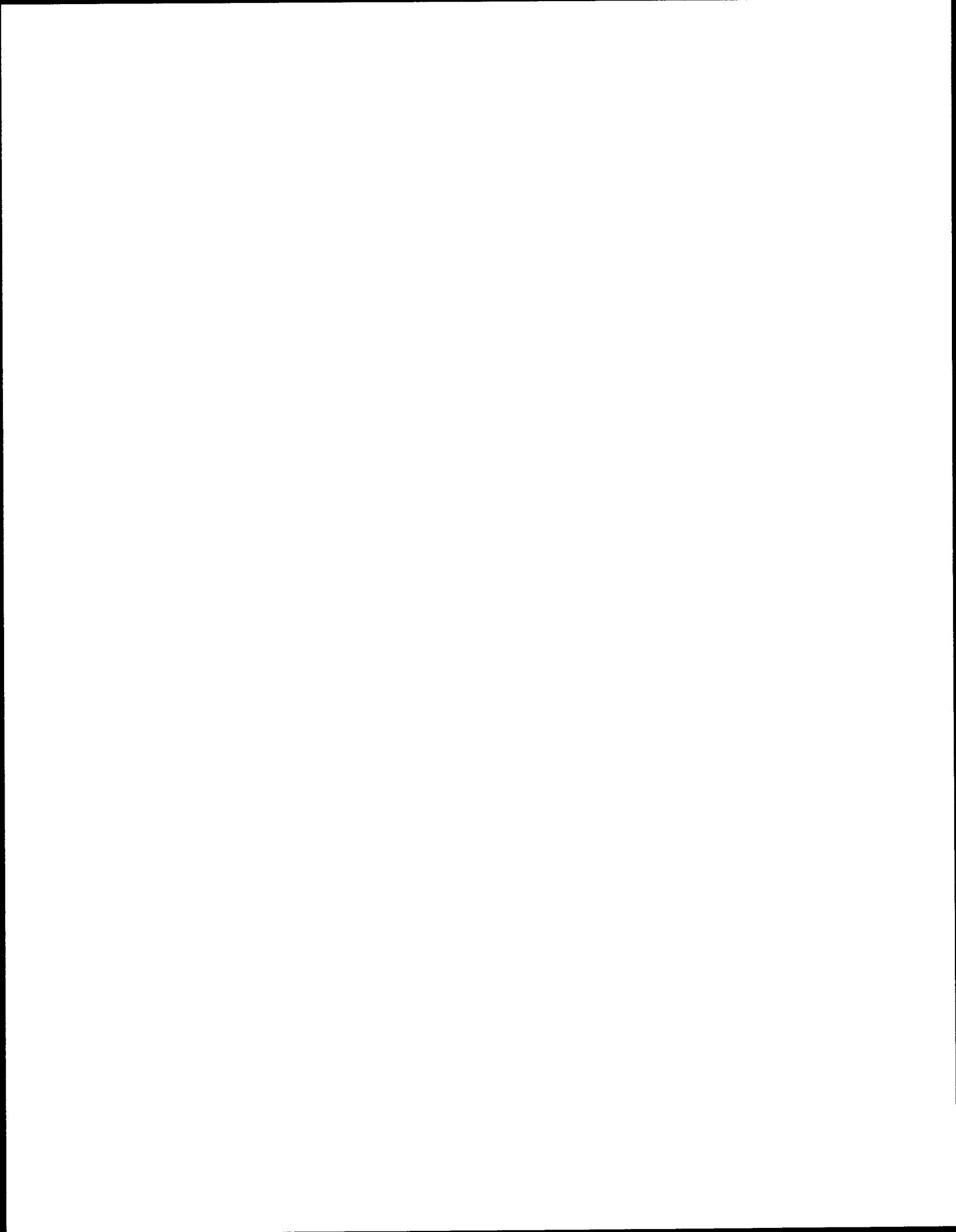
By _____

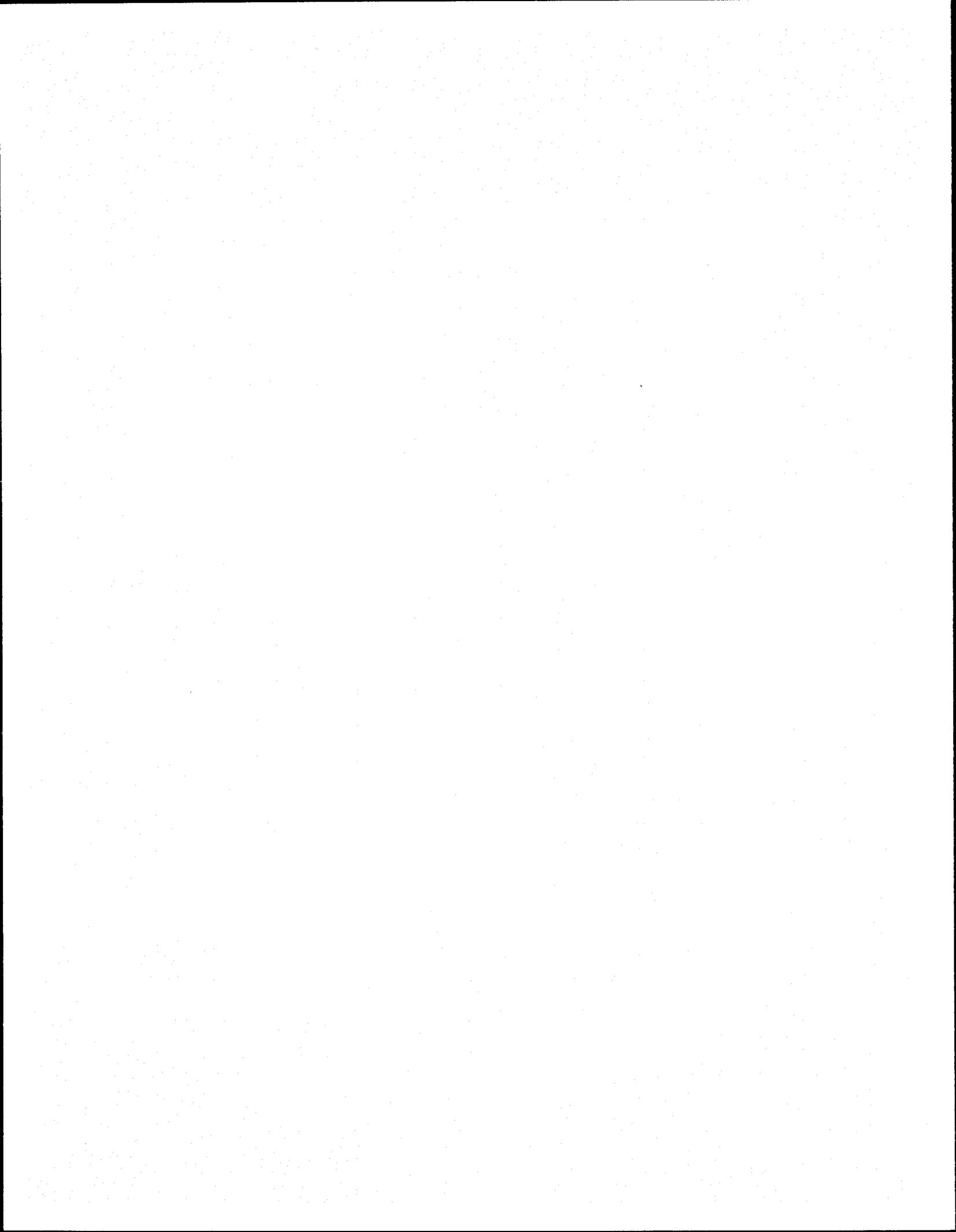
Title SR. ENGINEER

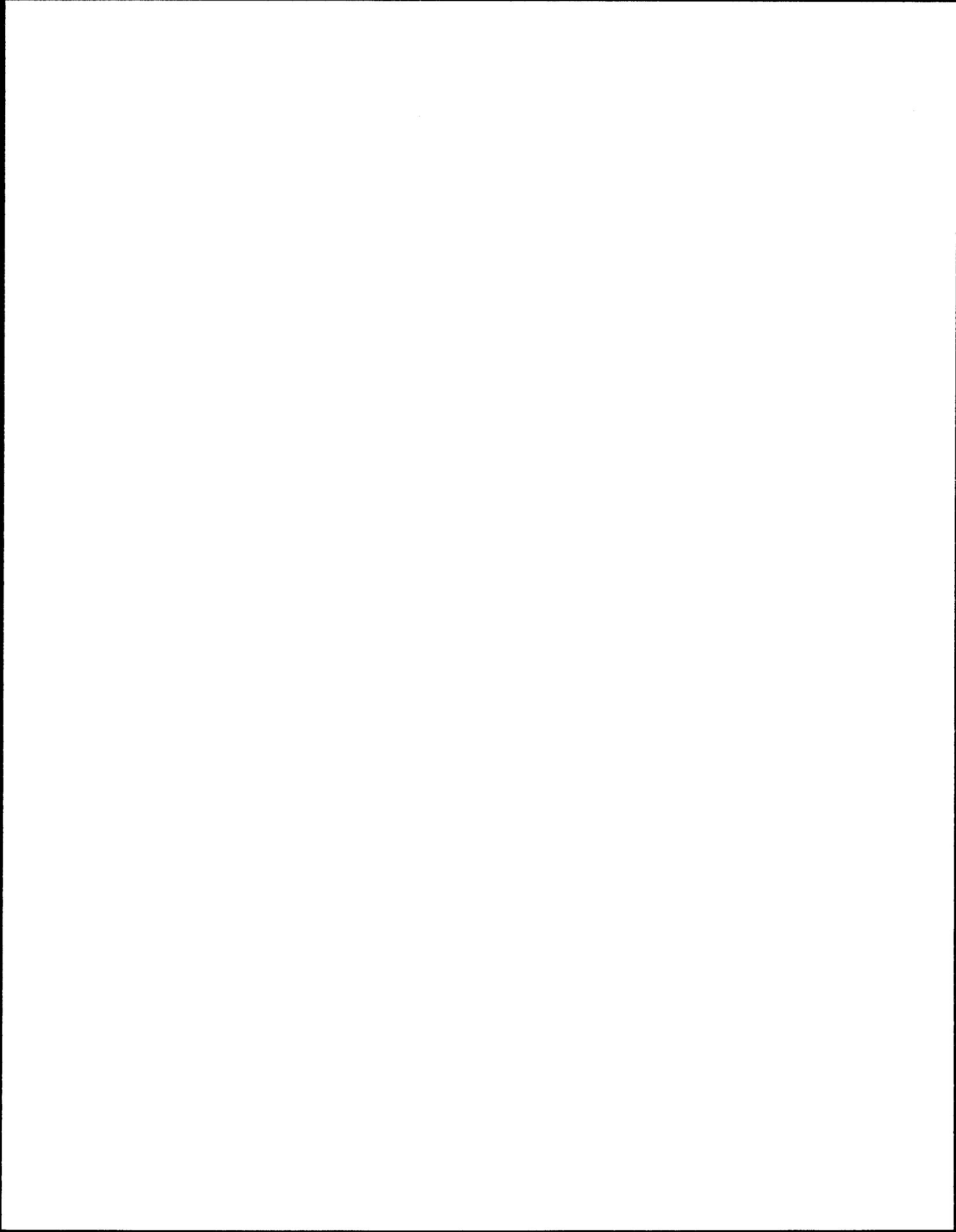
Title PRESIDENT

Date 4/10/15

Date 3/31/15







INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

Arizona Water Company

Cottonwood Lane

WATER STORAGE TANK REHABILITATION

CASA GRANDE, ARIZONA

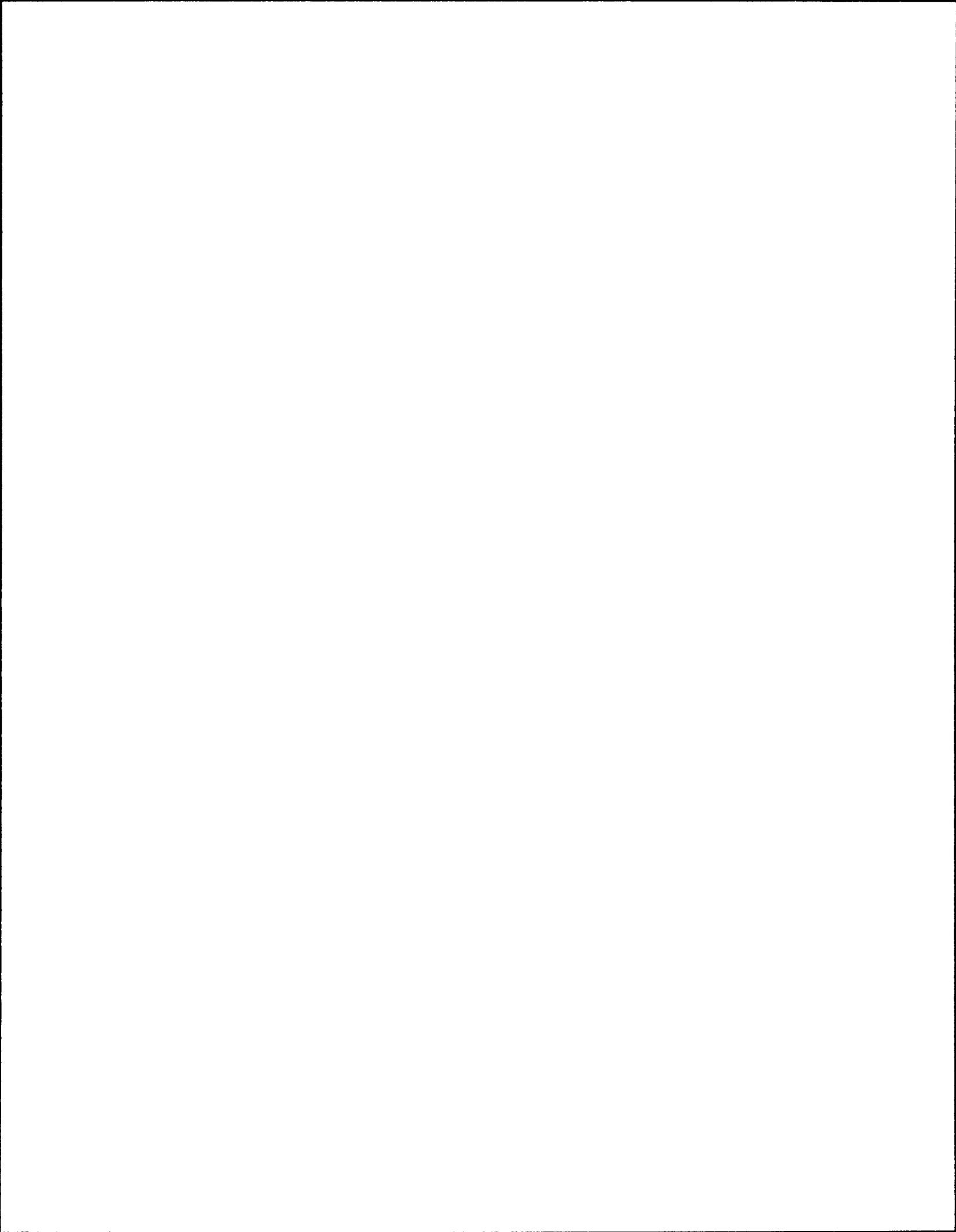
SURFACE PREPARATION & COATING INSPECTION REPORT

Prepared For Arizona Water Company

PO BOX 51026 PHOENIX, ARIZONA 85076-1026

gregsprinkle@hotmail.com

Phone 480-993-8999



INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

January 23rd, 24th, 28th 2015

James T. Wilson, P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

Surface preparation inspections were conducted on these dates. The rafter system beams and roof sheets were inspected for surface preparation compliance. All items had been abrasive blasted. There were three beams inspected which required further abrasive blasting. Milscale and rust was found on the web of these three beams. The correction of these areas was witnessed during inspection. The blast media used for surface preparation was Sharpshot 30X60 copper slag. After abrasive blasting, all items were found to be in accordance with an SSPC-SP10 Near White Metal Blast Cleaning. Surface profile measurements were conducted using a micrometer with Testex Extra Course Replica Tape. The surface profiles are as follows.

3.6, 3.5, 3.3, 3.5, 3.5, 3.6, 3.6, 3.5, 3.4, 3.3, 3.3, 3.1, 3.5, 3.6, 3.4, 3.6, 3.5, 3.4

The specified coating system for the prime coat is Carboline Carbozinc 859. Product batch numbers were recorded. Environmental conditions were documented during inspection. Surface temperatures were documented.

Respectfully,



Frank Rowland
Certified NACE Level III Coating Inspector #20,692

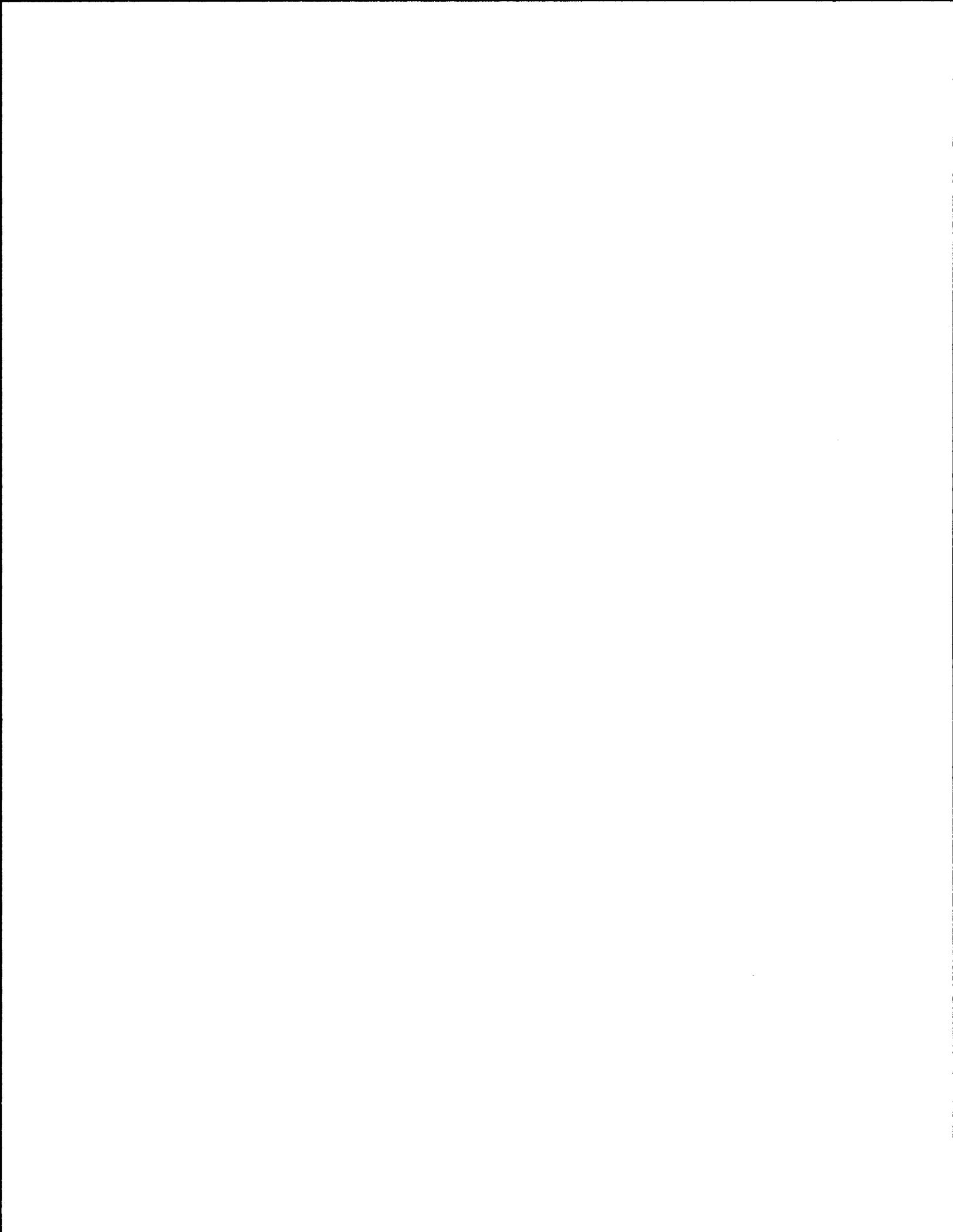


Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

PO BOX 51026 PHOENIX, ARIZONA 85076-1026

gregsprinkle@hotmail.com

Phone 480-993-8999



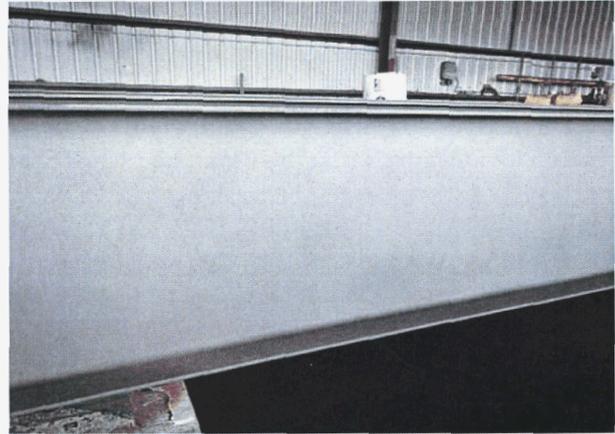
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Surface Preparation In Accordance With An SSPC-SP10 Near White Metal Blast Cleaning



Company:	Arizona Water Company	Report No.	1	Page	2
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	January 23rd, 24th, 28th 2015		

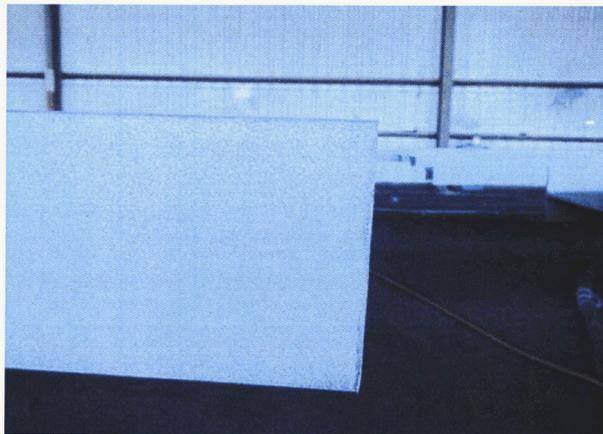
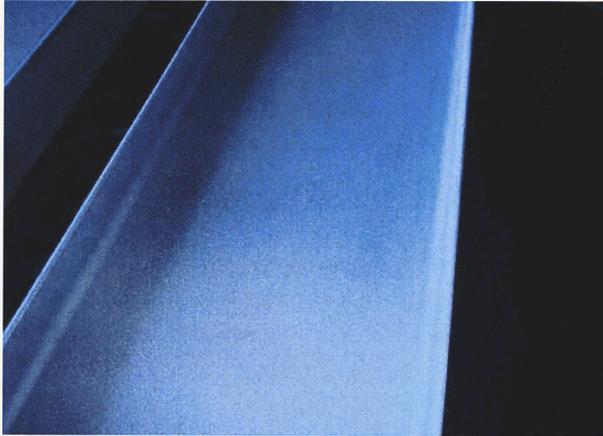
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Surface Preparation In Accordance With An SSPC-SP10 Near White Metal Blast Cleaning



Company:	Arizona Water Company	Report No.	1	Page	3
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	January 23rd, 24th, 28th 2015		

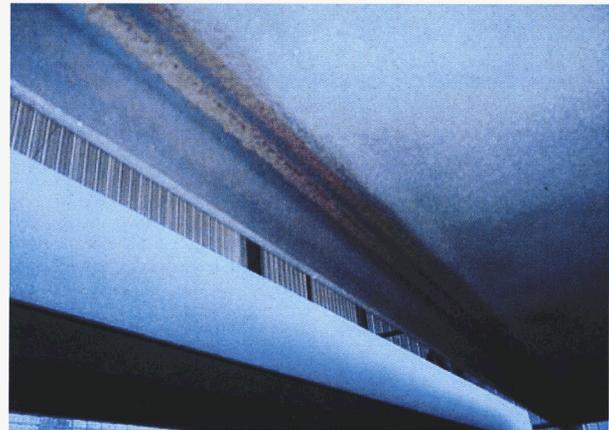
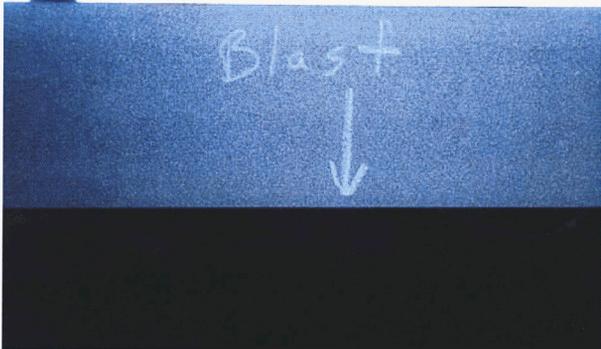
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Surface Preparation In Not Accordance With An SSPC-SP10 Near White Metal Blast Cleaning



Company:	Arizona Water Company	Report No.	1	Page	4
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	January 23rd, 24th, 28th 2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Abrasive Blasting Repairs In Process



Company:	Arizona Water Company	Report No.	1	Page	5
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	January 23rd, 24th, 28th 2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Completed Surface Preparation Repairs

Before



After



Company:	Arizona Water Company	Report No.	1	Page	6
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	January 23rd, 24th, 28th 2015		

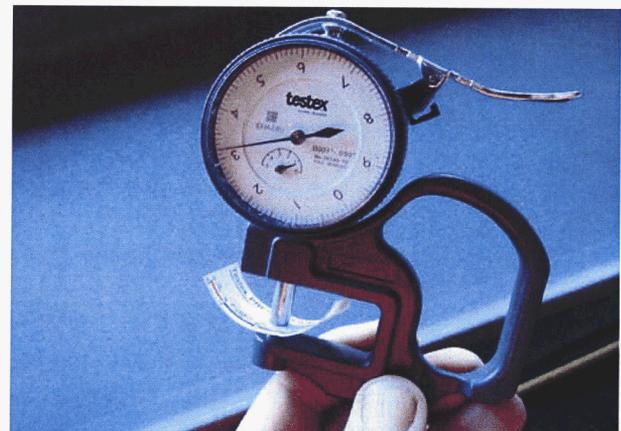
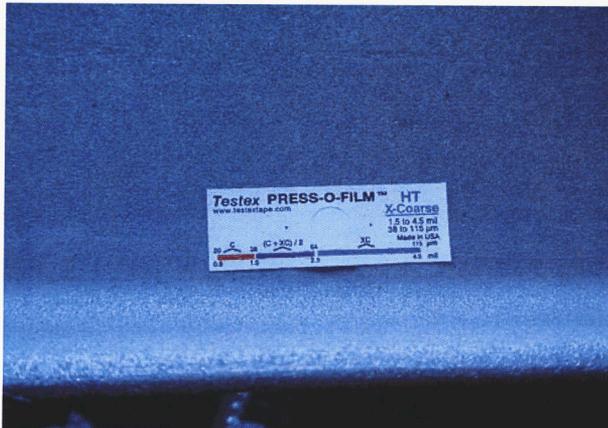
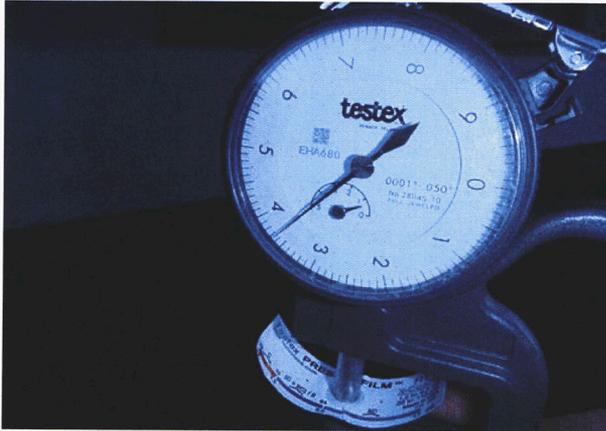
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Surface Profile Measurements - Testex Extra Course Replica Tape



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Location:	Phoenix, Arizona	Date:	January 23rd, 24th, 28th 2015		

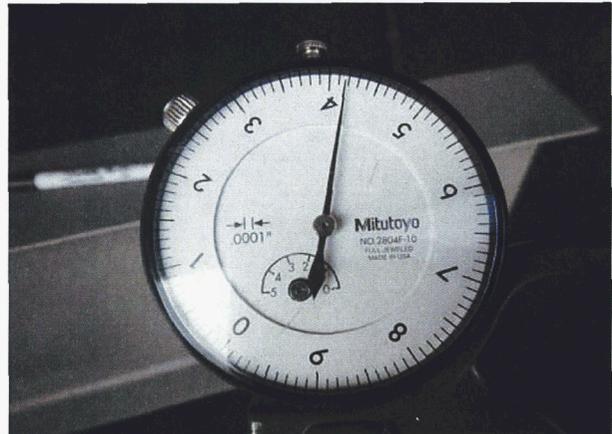
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Surface Profile Measurements - Testex Extra Course Replica Tape



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Location:	Phoenix, Arizona	Date:	January 23rd, 24th, 28th 2015		

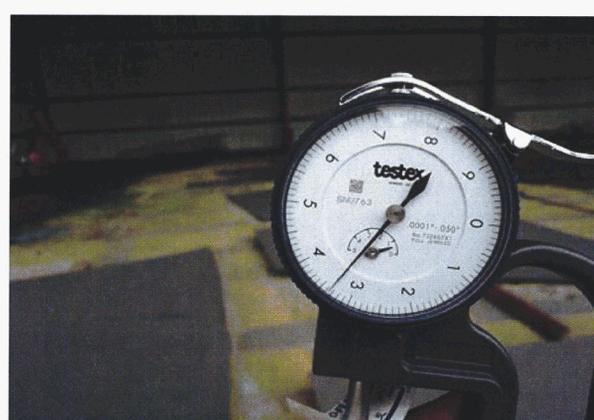
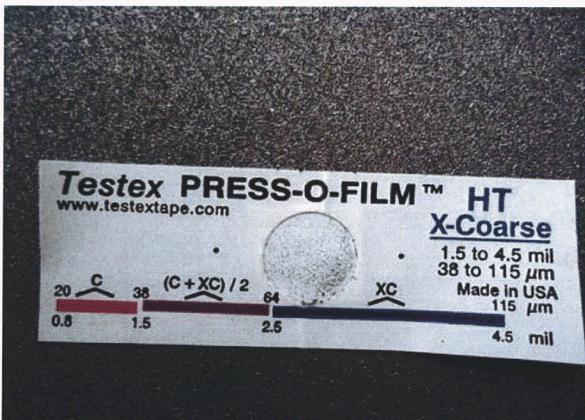
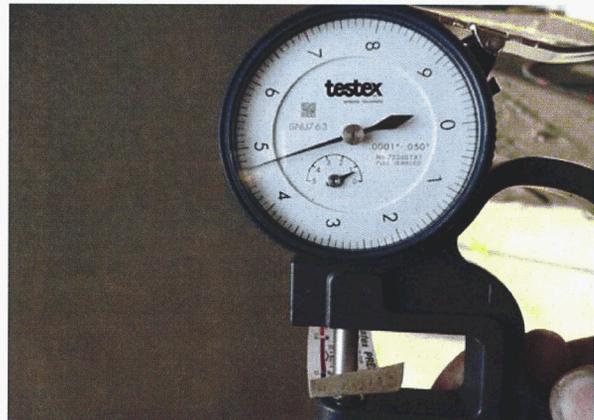
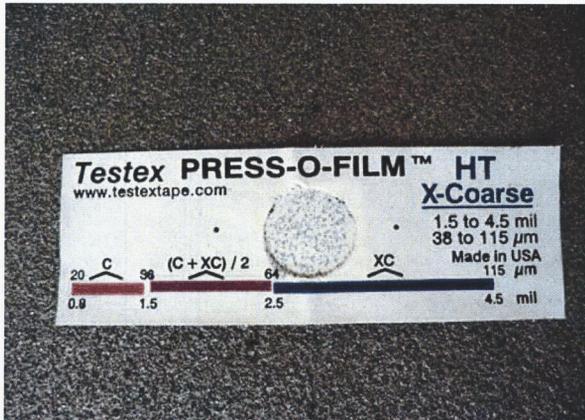
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Surface Profile Measurements - Testex Extra Course Replica Tape



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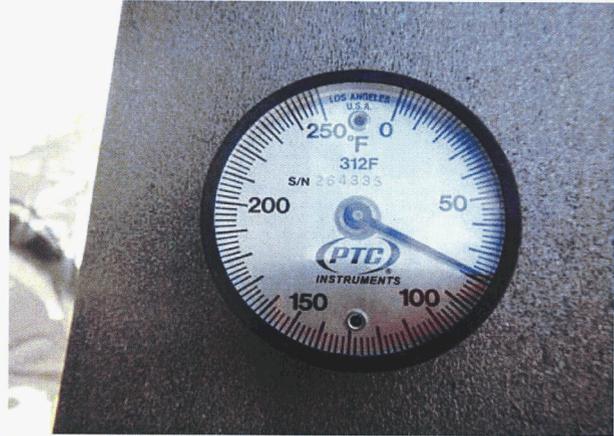
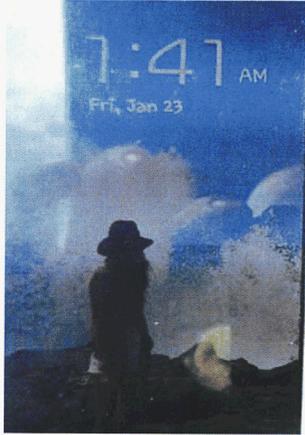
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Environmental Conditions - Surface Temperatures



Company:	Arizona Water Company	Report No.	1	Page	10
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Location:	Phoenix, Arizona	Date:	January 23rd, 24th, 28th 2015		

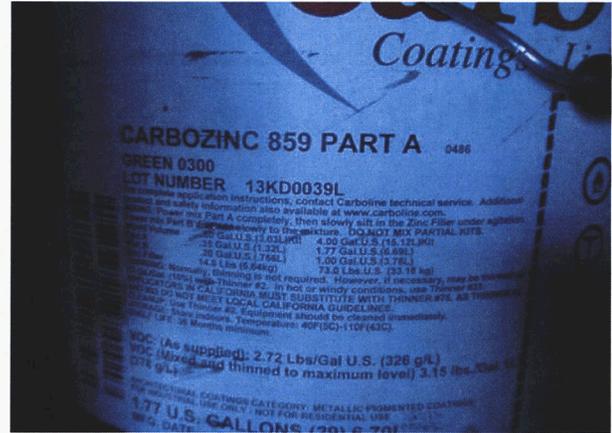
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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Rafter Beams - Roof Sheets

Carboline Carbozinc 859 - Prime Coat System



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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

February 27th, 2015

James T. Wilson P. E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

I performed a surface preparation inspection for this project on the above-mentioned date. This report documents the work activities of my site visit.

A surface preparation inspection was done on a section of the roof sheets and seams of the south side of the tank. The areas inspected were blasted to an SSPC-SP 10 Near White Metal Blast Cleaning. Surface profile measurements were conducted using a micrometer with Testex Extra Course Replica Tape. A small area was inspected and five profile measurements were taken. Immediately after inspection, contractors were going to mix Carboline Carboguard 891 and start to stripe coat the area inspected. Paint temperatures, mixing and ambient conditions were documented. Photo documentation will follow in this report.

Surface Profile Measurements: 3.2, 3.6, 2.9, 3.3, 3.0,

Respectfully,



Kevin Osterhaus
Certified NACE Level II Coating Inspector #51,484



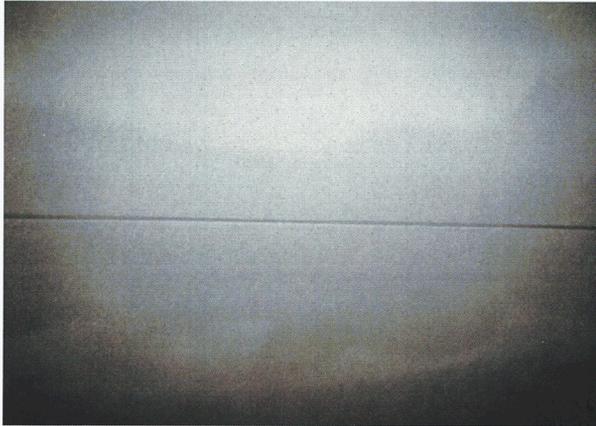
Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Roof Seams (SSPC-SP 10 Near White Metal Blast Cleaning)



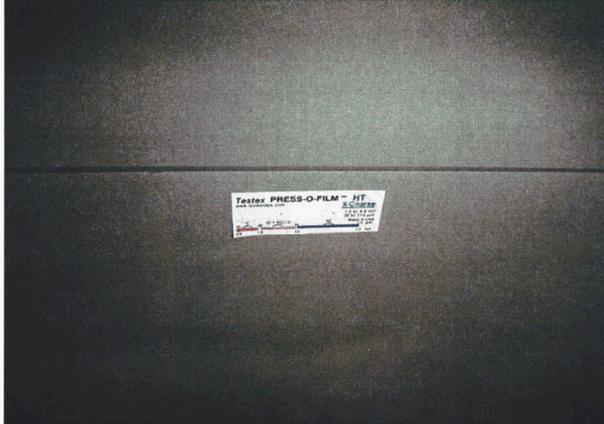
Company:	Arizona Water Company	Report No.	2	Page	2
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	2/27/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Surface Profile Measurements With Testex Xtra-Coarse Replica Tape



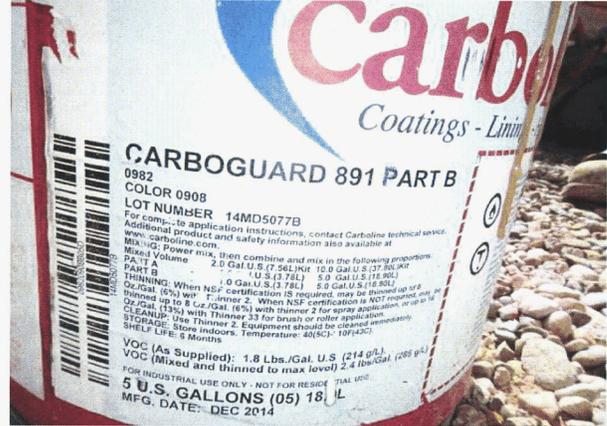
Company:	Arizona Water Company	Report No.	2	Page	3
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Carboline Carboguard 891 Part A&B For Stripe Coat Application



Paint Temperature



Ambient Conditions

Company:	Arizona Water Company	Report No.	2	Page	4
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Location:	Casa Grande, Arizona	Date:	2/27/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

March 18th 2015

James T. Wilson, P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

A surface preparation inspection was conducted on the weld seams, roof sheet overlaps of the interior roof. Abrasive blasting was completed on these areas. All areas inspected were found to be in compliance with an SSPC-SP10 Near White Metal Blast Cleaning. Surface profile measurements were taken using Testex Extra Course Replica Tape. All measurements were within the specified 2.5-3.0 or above profile range. The measurements are as follows. 3.2, 3.1, 3.4, 3.2, 3.3. Stripe coat application was verified from the previous visit. Carboline Carboguard 891 is the coating system for the roof and all stripe coat applications. Product batch numbers were documented.

Respectfully,



Frank Rowland
Certified NACE Level III Coating Inspector #20,692



Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

PO BOX 51026 PHOENIX, ARIZONA 85076-1026

gregsprinkle@hotmail.com

Phone 480-993-8999

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Interior Roof Seams - Prime Coat Application - Carboline Carboguard 891



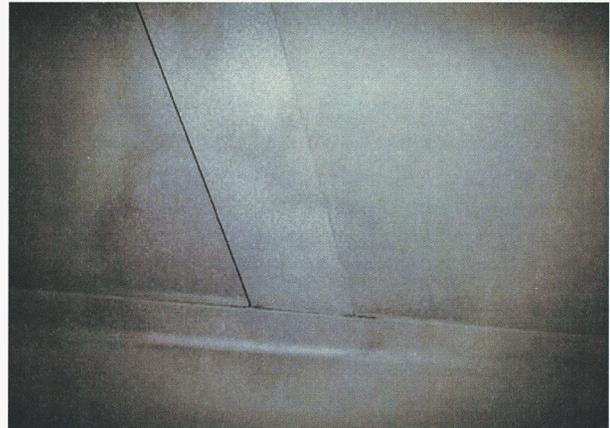
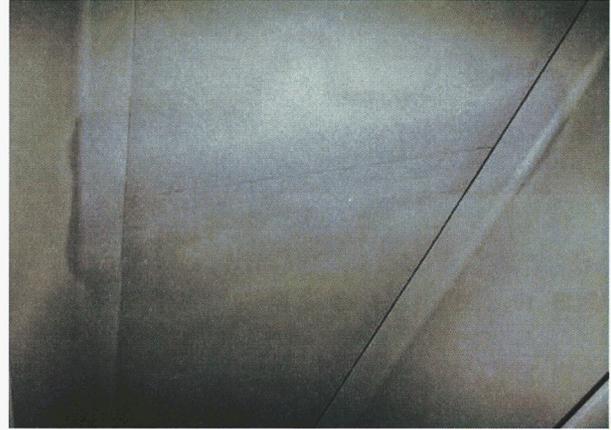
Company:	Arizona Water Company	Report No.	3	Page	2
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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Surface Preparation In Accordance With An SSPC-SP10 Near White Metal Blast Cleaning



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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Surface Profile Measurements - Testex Extra Course Replica Tape



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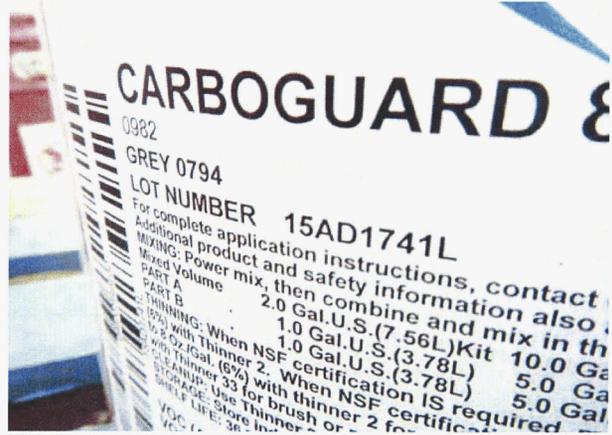
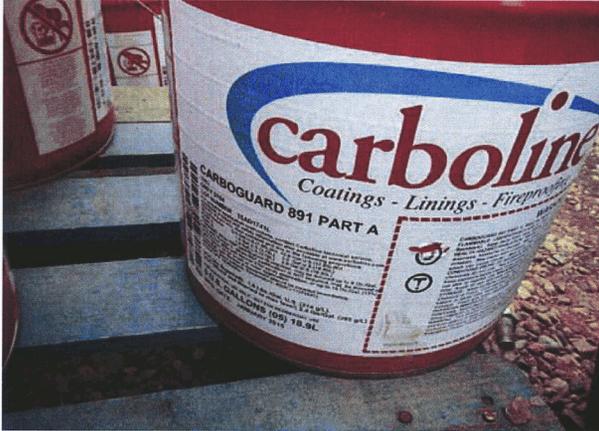
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CERTIFIED NACE INSPECTORS

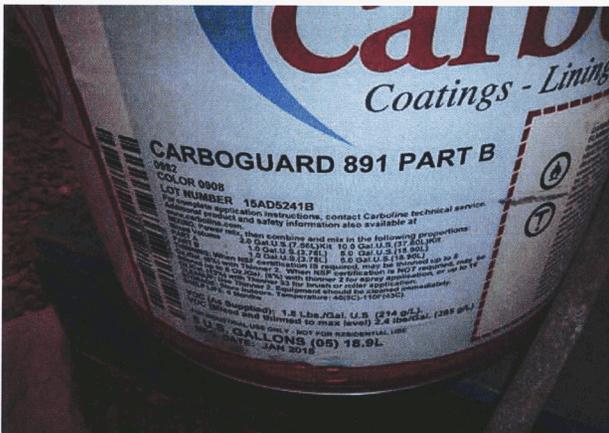
Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation Interior Roof Coating System - Product Batch Numbers

Carboline CarboGuard 891 - Part A



Carboline CarboGuard 891 - Part B



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INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

March 23rd, 2015

James T. Wilson P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

I performed a surface preparation inspection for this project on the above-mentioned date. This report documents the work activities of my site visit.

A surface preparation inspection was done on the upper, middle and lower rings of the interior of the tank. The upper and lower rings were blasted to an SSPC-SP 10 Near White Metal Blast Cleaning. The lower ring did not pass inspection. Flash rust remained on the surface and needed to be re-blasted. Surface profile measurements were conducted on the upper and middle ring using a micrometer with Testex Extra Course Replica Tape. Coating application with Carboline Reactamine 760 will start after re-blasting is complete. Photo documentation will follow in this report.

Surface Profile Measurements: 3.4, 3.6, 3.3, 3.8, 3.6, 3.3, 3.0, 3.1, 2.9, 3.2

Respectfully,



Kevin Osterhaus
Certified NACE Level II Coating Inspector #51,484



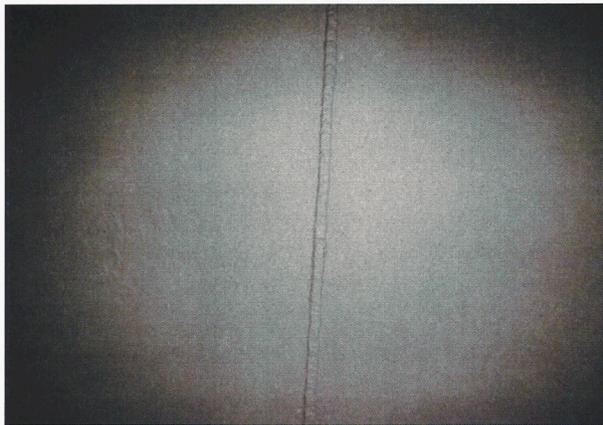
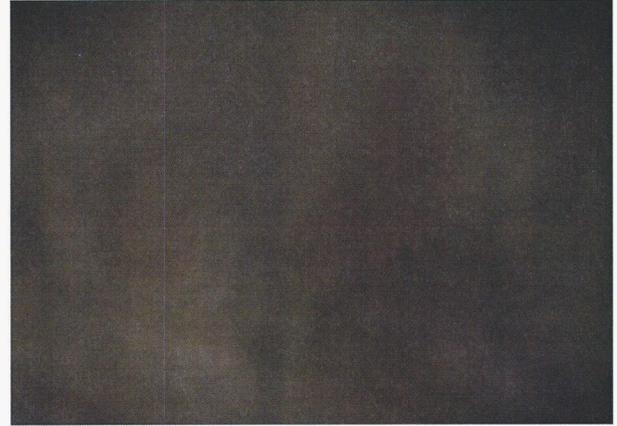
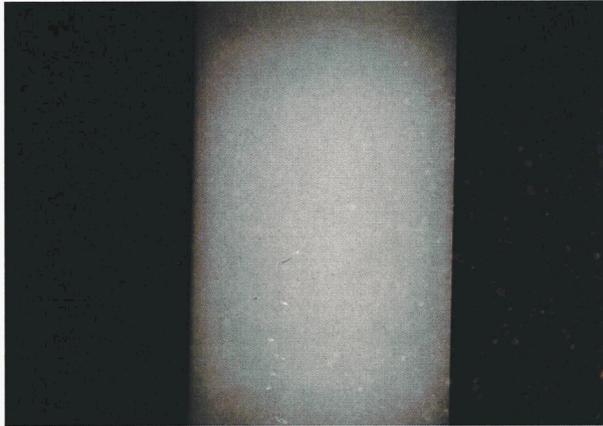
Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Upper & Middle Rings (SSPC-SP 10 Near White Metal Blast Cleaning)



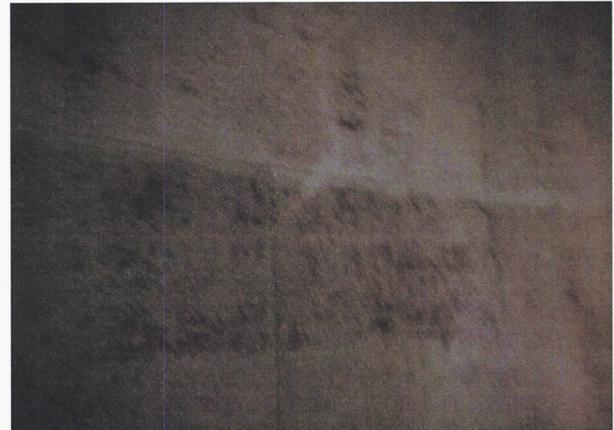
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Location:	Casa Grande, Arizona	Date:	3/23/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Abrasive Blast (Not In Accordance SSPC-SP 10 Near White Metal Blast Cleaning)



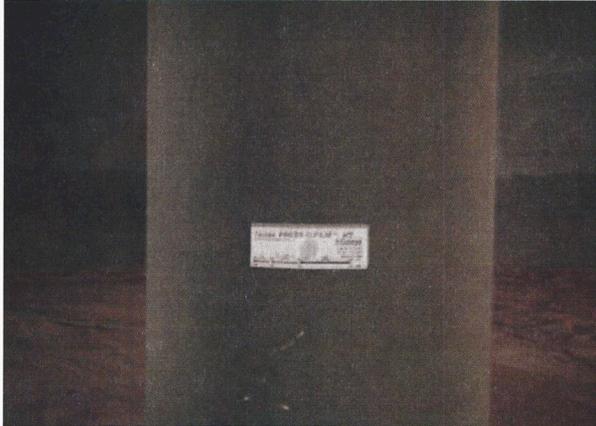
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Location:	Casa Grande, Arizona	Date:	3/23/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Surface Profile Measurements Utilizing Testex Xtra-Course Replica Tape



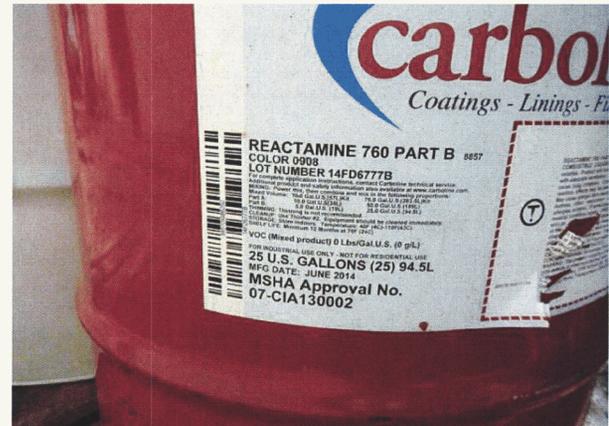
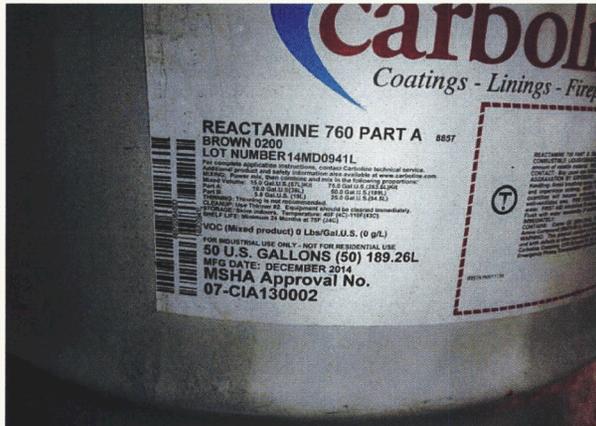
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Location:	Casa Grande, Arizona	Date:	3/23/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Reactamine 760 Utilizing A Graco T2 Transfer Pump (Plural Component)



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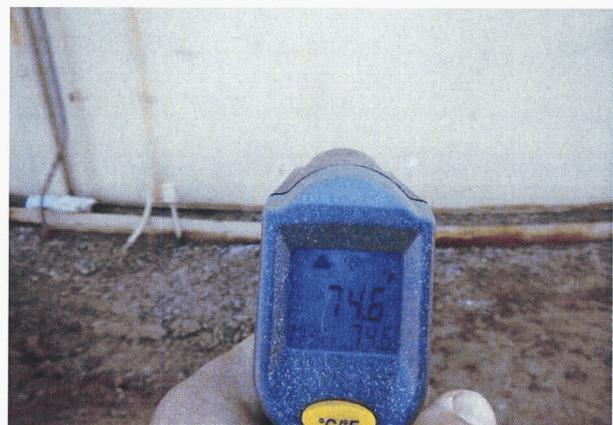
CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Environmental Conditions & Surface Temperatures



South Side



North Side

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Location:	Casa Grande, Arizona	Date:	3/26/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

March 25th 2015

James T. Wilson, P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

A surface preparation inspection was completed on the interior shell. All interior surface area was found to be in compliance with an SSPC-SP10 Near White Metal Blast Cleaning. All equipment, plural pump, spray gun, tip size were documented for the report. The product, Carboline Reactamine 760 was documented for the batch numbers. Surface profile measurements were documented utilizing Testex Extra Course Replica Tape. A total of 15 readings were taken, 5 per ring. All readings were found to be in compliance with the manufacturer's recommendation. Surface profile measurements are as follows.

Interior Ring 1 (Upper): 3.5, 3.4, 3.5, 3.3, 3.4

Interior Ring 2: 3.3, 3.3, 3.4, 3.5, 3.3

Interior Ring 3: 3.4, 3.6, 3.3, 3.4, 3.4.

Masking was completed during inspection. This is coming down 6" from the roof terminating at the rafter clips. All coating below the masking line was abraded via SSPC-SP 2 Hand Tool Cleaning. 80 grit sandpaper was used to scarify the coating to aid in adhesion. I attempted to do dry film thickness measurements on the roof/rafter coating system during this time. This testing was abandoned upon discovery of coating defects in the rafters. The contractor had not blown down the rafter beams. There was blast media (sand) on all of the rafter beams. The sand was painted over and embedded into the coating. Remediation of all the rafters will be necessary prior to any further testing. This will be done after the shell coating system has been applied.

Respectfully,

Frank Rowland

Frank Rowland
Certified NACE Level III Coating Inspector #20,692

gregory scott sprinkle

Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

PO BOX 51026 PHOENIX, ARIZONA 85076-1026

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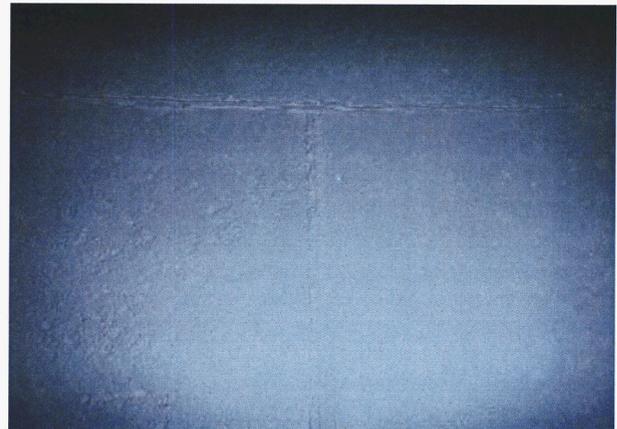
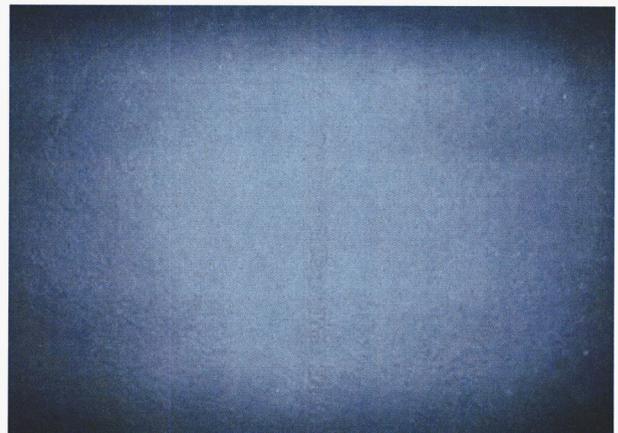
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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation - Tank Shell

Surface Preparation In Accordance With An SSPC-SP10 Near White Metal Blast Cleaning



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Location:	Phoenix, Arizona	Date:	March 25th 2015		

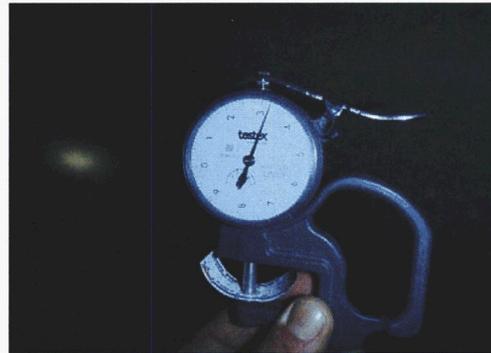
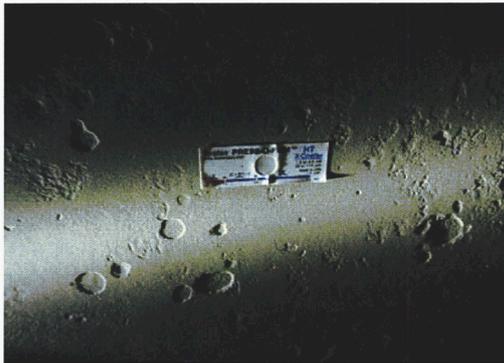
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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Surface Preparation In Accordance With An SSPC-SP10 Near White Metal Blast Cleaning



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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Masking 6" Down From The Roof Shell Intersect



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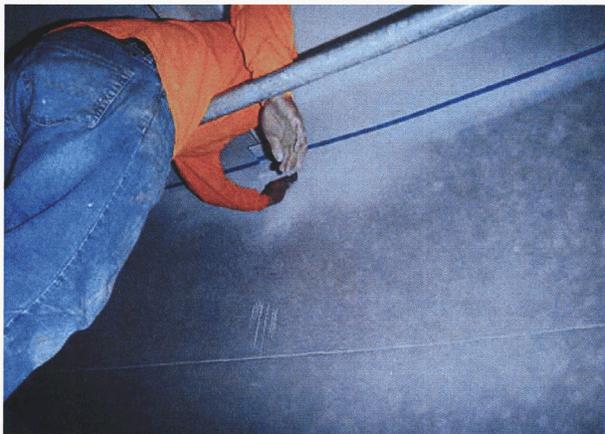
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

SSPS-SP2 Hand Tool Cleaning In Process - Termination Point



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INDUSTRIAL INSPECTION AND CONSULTING, LLC

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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Coating Application Equipment - Components

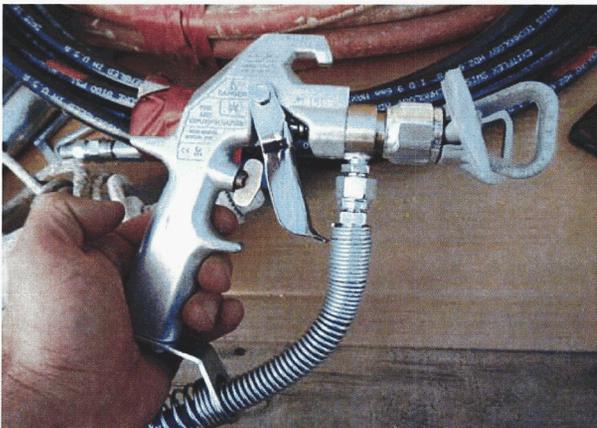
Plural Pump



Fluid Pressure Gauge



Spray Gun



Spray Tip



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Location:	Phoenix, Arizona	Date:	March 25th 2015		

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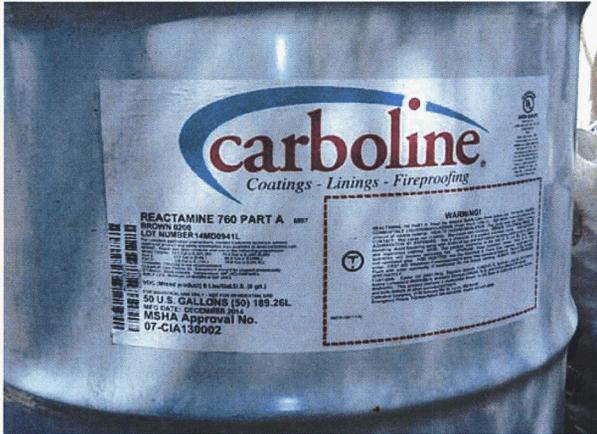
CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

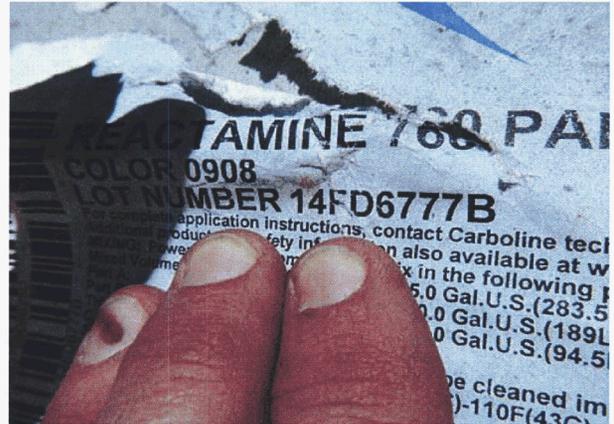
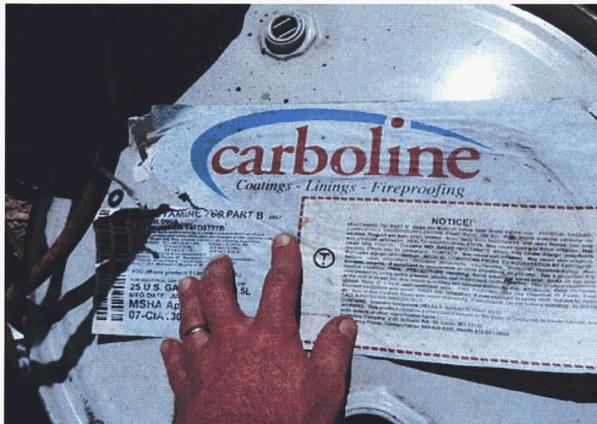
Cottonwood Lane Tank Rehabilitation

Interior Coating System - Carboline Reactamine 760

Part A - Product Batch Numbers



Part A - Product Batch Numbers



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Location:	Phoenix, Arizona	Date:	March 25th 2015		

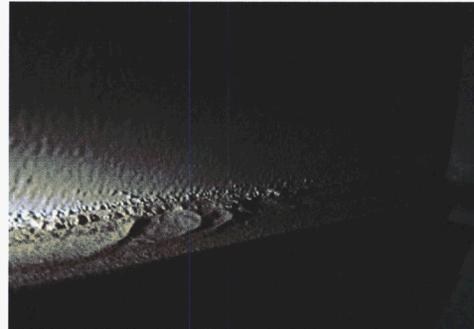
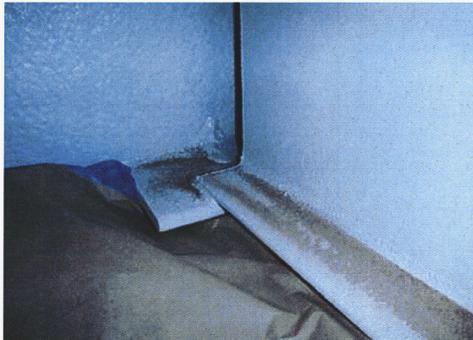
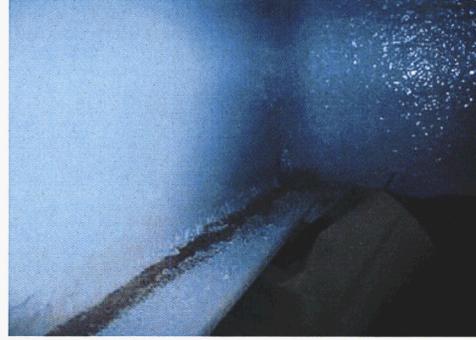
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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Coating Defects - Rafter System - Embedded Blast Media



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Location:	Phoenix, Arizona	Date:	March 25th 2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

March 26th 2015

James T. Wilson, P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

Today's inspection was on the interior shell. Carboline Reactamine 760 coating system had been applied in a professional manner. Visually it appeared to be a uniform consistent application. Holiday Detection was completed on the shell utilizing a Tinker & Razor Model AP-W set at 2500 volts. The voltage was determined by mil thickness at about 100 volts per mil. Approximately 35 pinholes were found within the weld seams and pitted areas of the shell. Low mils were found on the overflow and backside weld seam. Dry film thickness measurements were recorded utilizing a DeFesko Positector 6000. The mil thickness measurements were found to be compliant with the specified 20 mil minimum. There were a few small areas on the shell where low mils could be seen as a blue translucent look to the coating system. The contractor masked the deficient areas. The coating application was completed last evening around 7:00pm. A solvent rub test was conducted to determine whether the re-coat had lapsed. There was still a bit of tackiness, however as a cautionary measure, these areas were sanded, solvent wiped, followed by an application of Reactamine 760. The coating application method used was called "hot pot". Due to how fast the coating sets up, small amounts of Part A and Part B were mixed in small cups to apply to these areas as quickly as possible. Repairs were completed in the presence of the inspector.

Respectfully,



Frank Rowland
Certified NACE Level III Coating Inspector #20,692



Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

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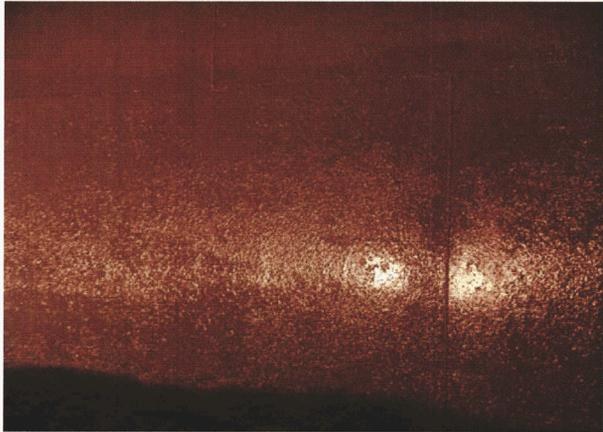
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Completed Interior Coating System - Tank Shell



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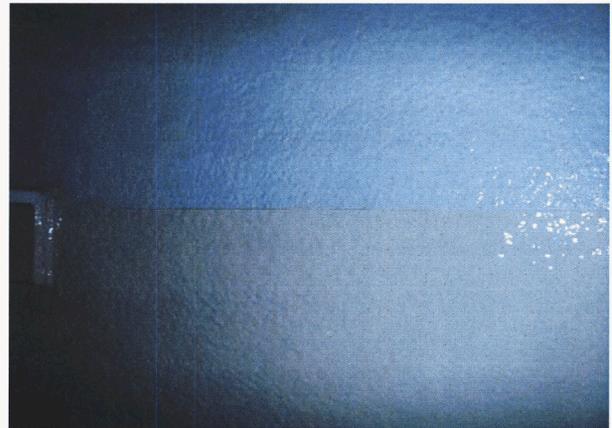
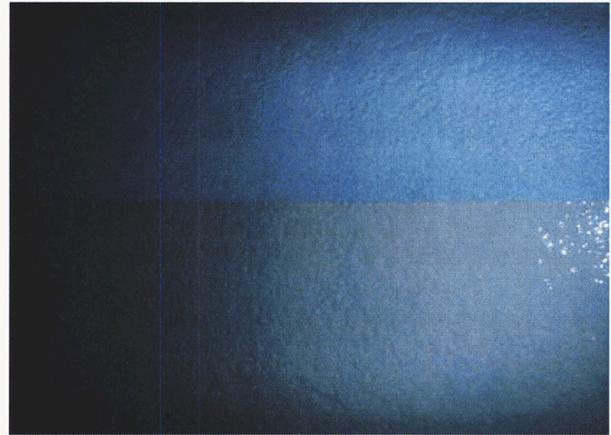
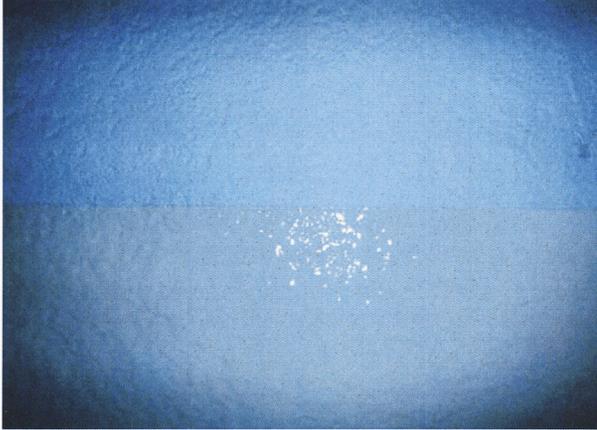
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Cottonwood Lane Tank Rehabilitation

Completed Interior Coating System - Termination Point



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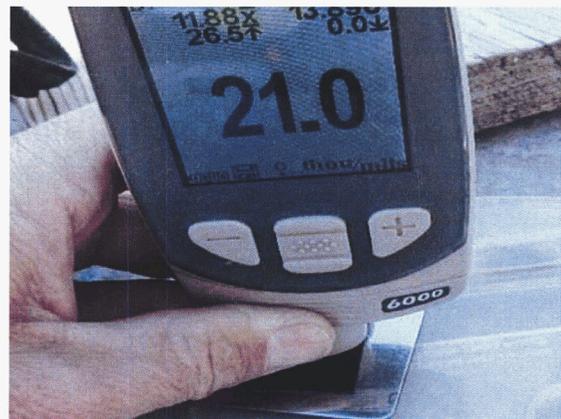
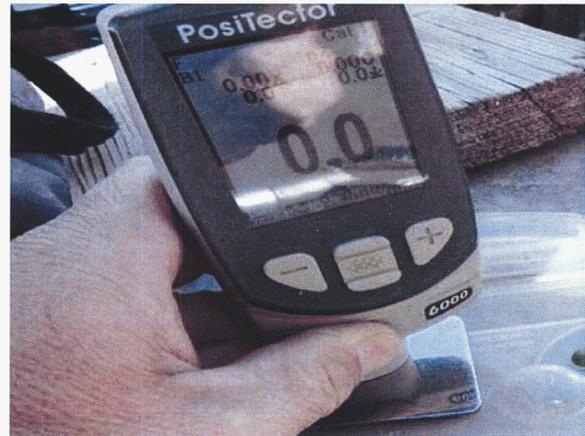
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Cottonwood Lane Tank Rehabilitation

Dry Film Thickness Measurements - DeFesko Positector 6000 Verification of Calibration



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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Dry Film Thickness Measurements - DeFesko Positector 6000



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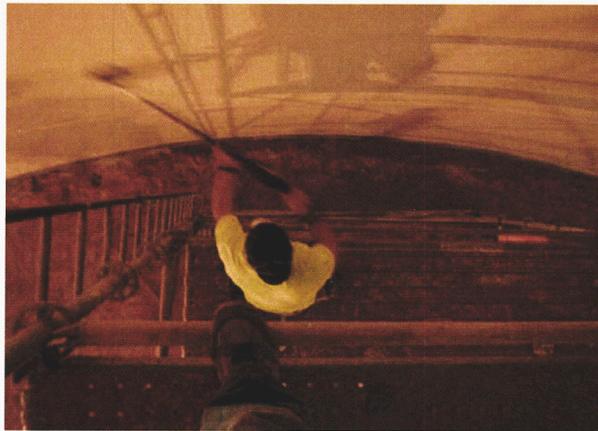
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Cottonwood Lane Tank Rehabilitation

High Voltage Holiday Detection - Tinker & Razor Model AP/W



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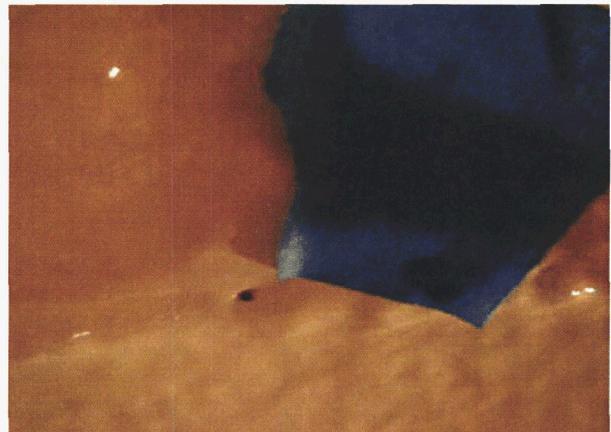
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Coating Defects Marked For Repair - Pinholes, Missed Coating



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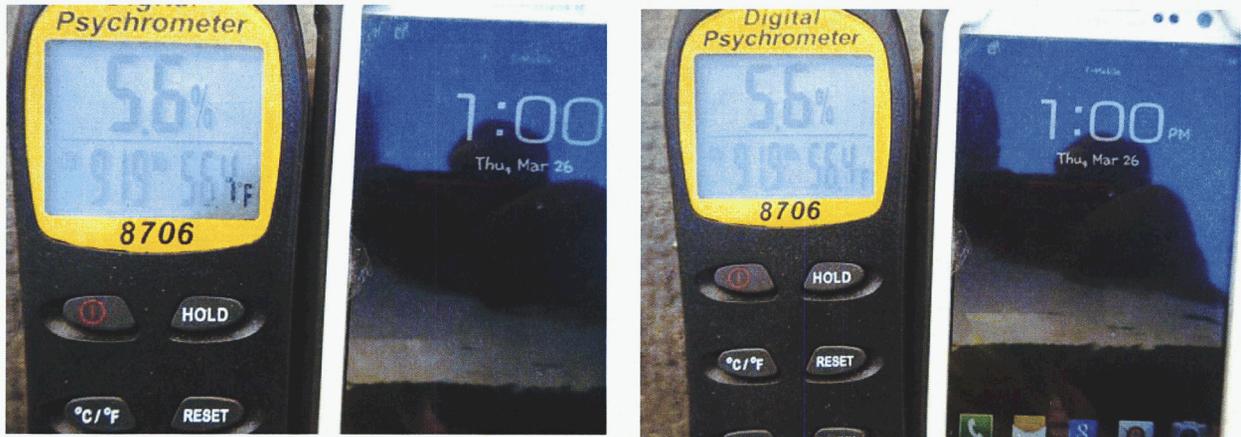
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Environmental Conditions - Surface Temperature



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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Coating System Repair - Product Mixture



SSPC-SP2 Hand Tool Cleaning (80 Grit)



Coating Application In Process



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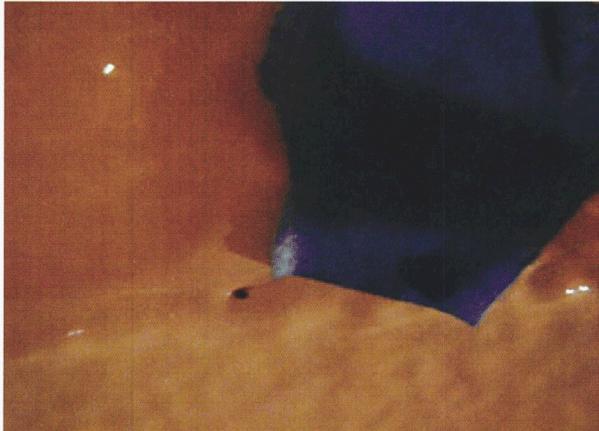
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Paint Inspection Photo Documentation

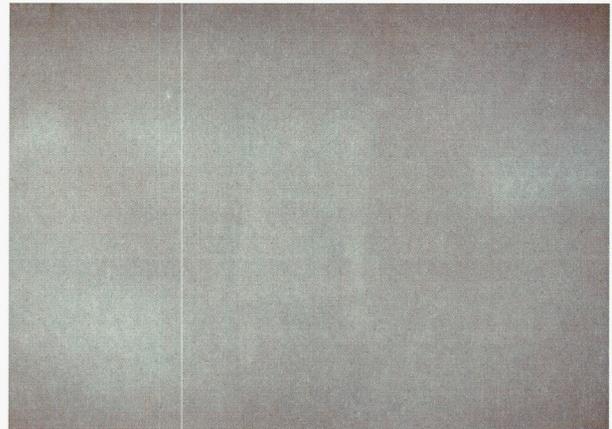
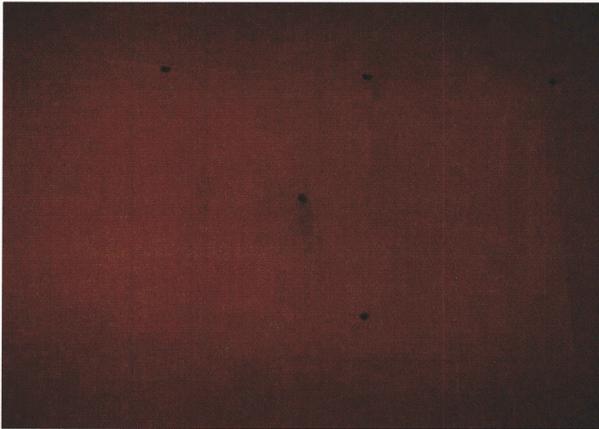
Cottonwood Lane Tank Rehabilitation

Completed Interior Coating System Repairs - Pinholes, Low Mills

Before



After



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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

March 30th 2015

James T. Wilson, P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

A coating inspection was conducted on the interior roof and rafter system. Remediation had been completed on the rafter beams. The embedded sand had been removed. A sanding and re-application of Carboline Carboguard 891 was completed.

Dry film thickness measurements were taken using a Positector 6000. Dry film thickness measurements were found to be compliant with the specified 12 mil system. The average of the readings for the roof and rafters was 14-18 mil range. The dry film thickness measurements will be found at the end of this report.

Respectfully,



Frank Rowland
Certified NACE Level III Coating Inspector #20,692



Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

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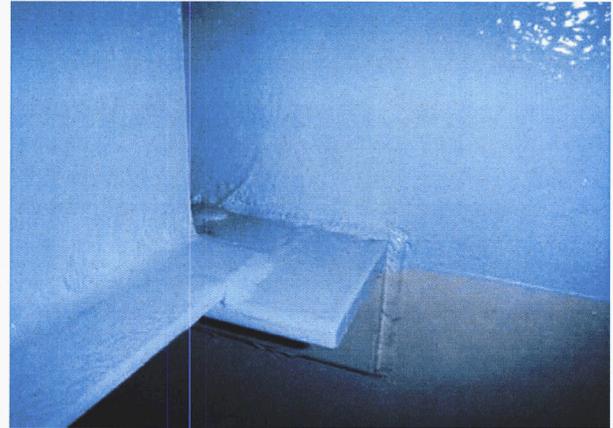
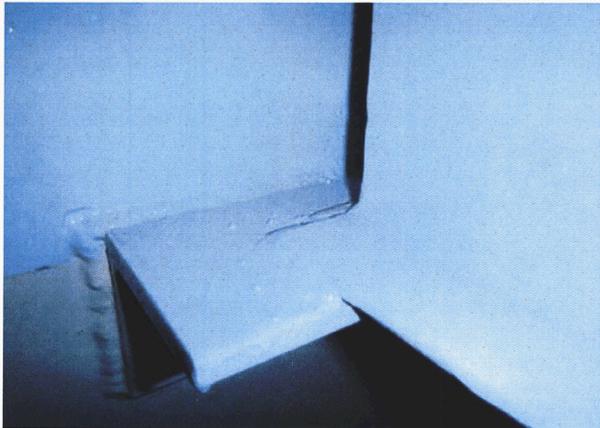
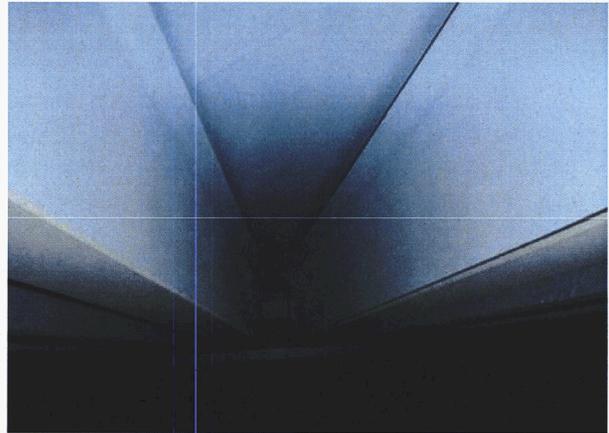
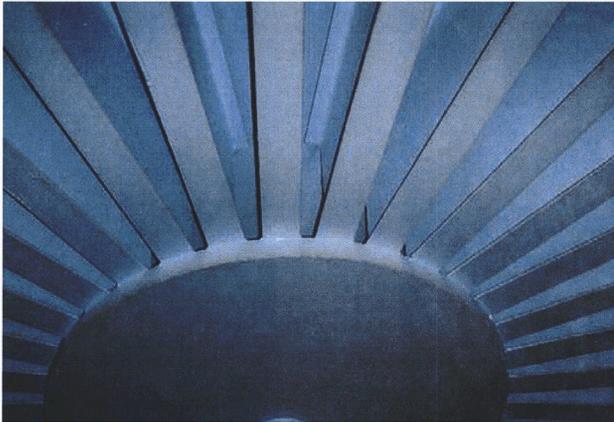
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Interior Roof /Rafter System



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Paint Inspection Photo Documentation

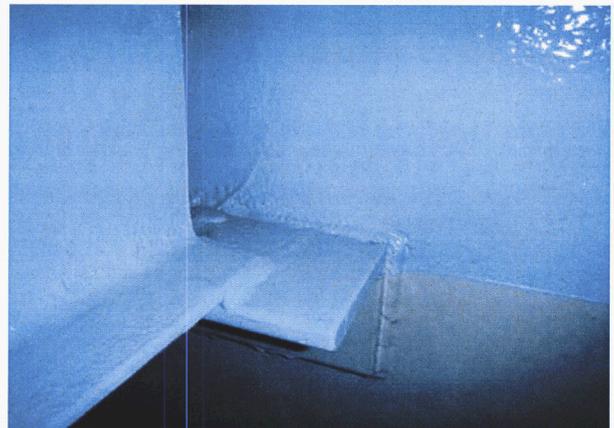
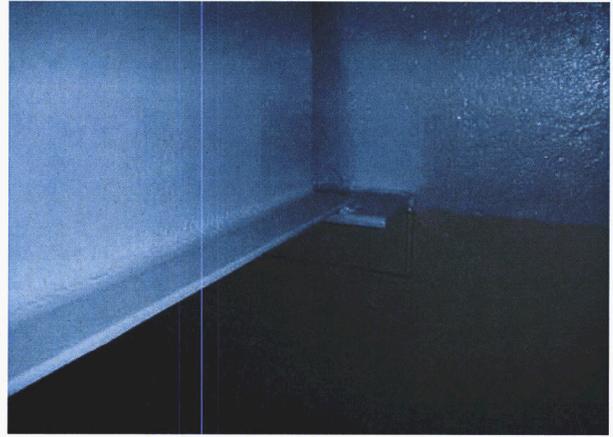
Cottonwood Lane Tank Rehabilitation

Completed Coating System Repairs

Before



After



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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Dry Film Thickness Measurements - DeFesko Positector 6000



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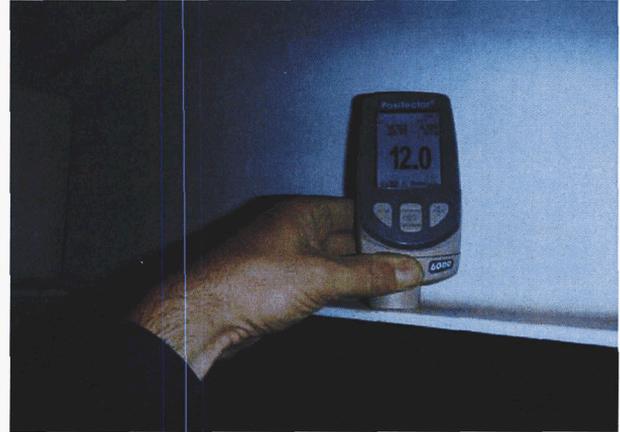
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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Dry Film Thickness Measurements - DeFesko Positector 6000



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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

April 1st 2015

James T. Wilson, P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

An inspection was conducted today on the interior floor. Excessive pitting of the floor sheets was noted. There were 3 holes found, as well as severely pitted areas which were identified for repair. Small plates will be welded over these areas. A void around the entire circumference of the inlet penetration will be welded. All sharp edges and weld spatter will be grinded away via SSPC-SP3 Power Tool Cleaning. An abrasive blast cleaning will occur to have the repair plates meet the specified surface preparation of an SSPC-SP10 Near White Metal Blast Cleaning.

Respectfully,



Frank Rowland
Certified NACE Level III Coating Inspector #20,692



Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

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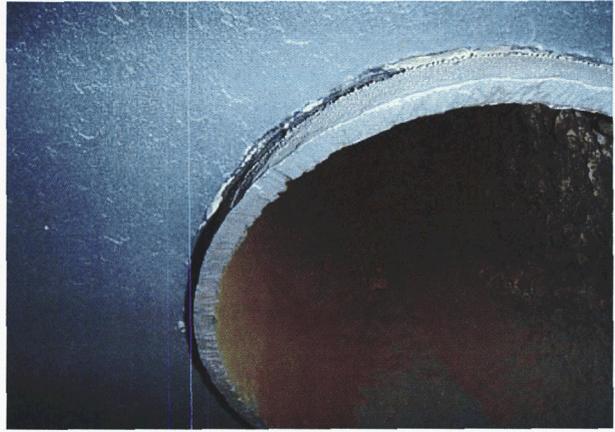
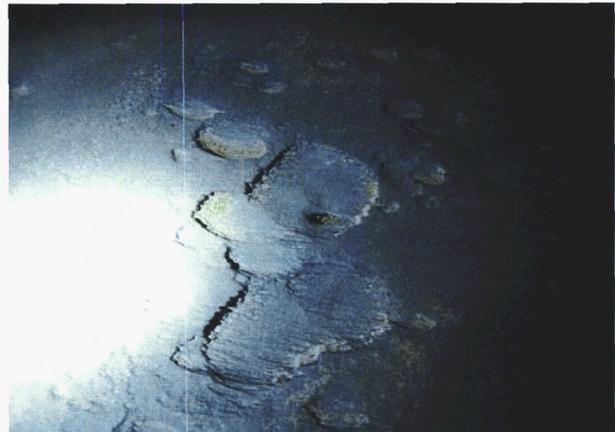
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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Interior Floor - Steel Repair - Voids, Pitting, Holes



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Location:	Phoenix, Arizona	Date:	April 1st 2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

April 7th 2015

James T. Wilson, P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

A coating inspection was completed on the interior lower ring and floor. Dry film thickness measurements were conducted using a DeFesko Positector 6000. A 60 mil minimum coating thickness for the floor was agreed upon. The north side of the tank floor had a mil range from 45.0 mils–103.5 mils. The average of 90 readings on the north side was 71.06 mils. The south side of the interior floor had mil range from 9.5 mils – 68.0 mils. The average of 90 readings was 28.38 mils.

High voltage holiday detection was completed on the interior floor and lower ring. Due to the insufficient mil thickness on the south side of the tank, many holidays were found. These were found mostly as pinholes in the pitted areas. Pinholes were also found on the lower ring, mostly in the lower 12". The ladder was coated with Carboline Carboguard 891.

Coating repair to the lower ring and floor were in process and verified during inspection.

Respectfully,



Frank Rowland
Certified NACE Level III Coating Inspector #20,692



Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

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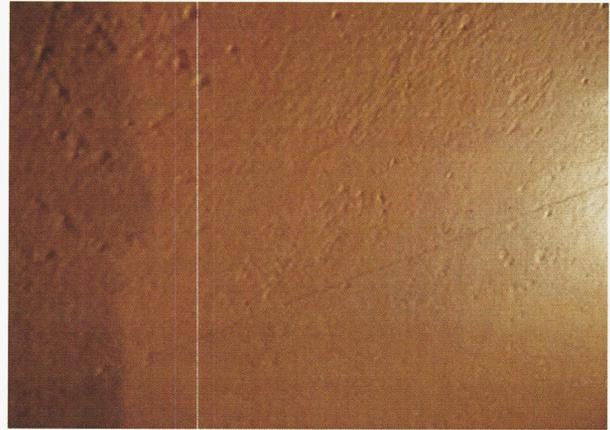
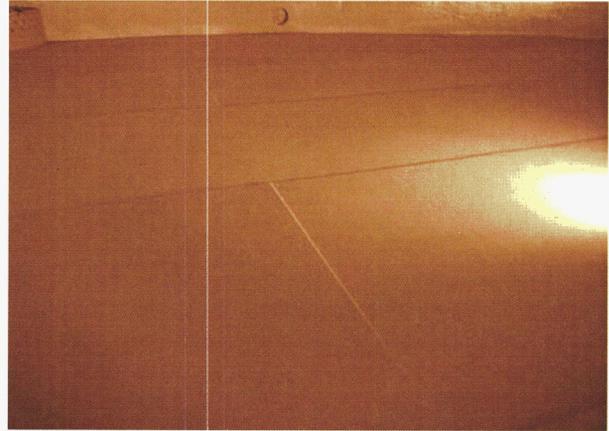
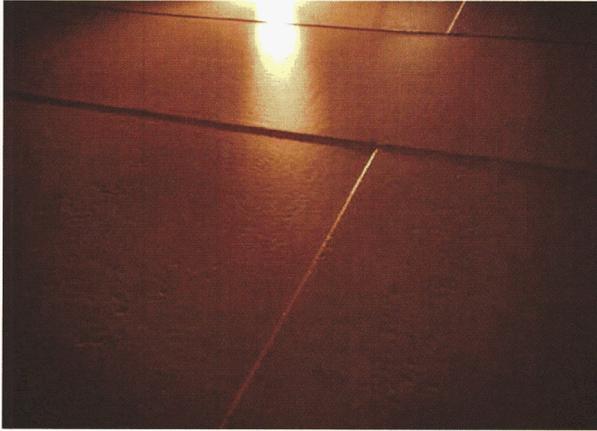
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Interior Coating System - Carboline Reactimine 760



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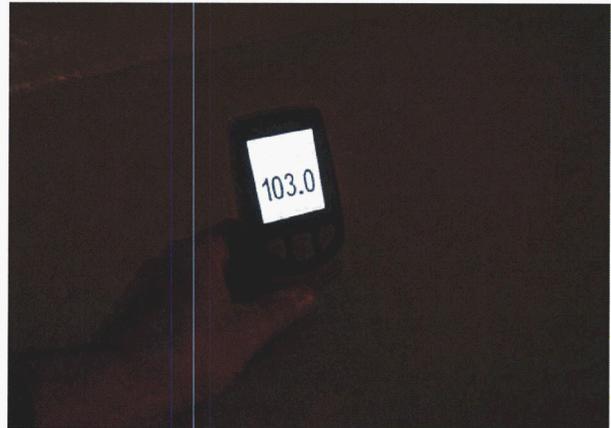
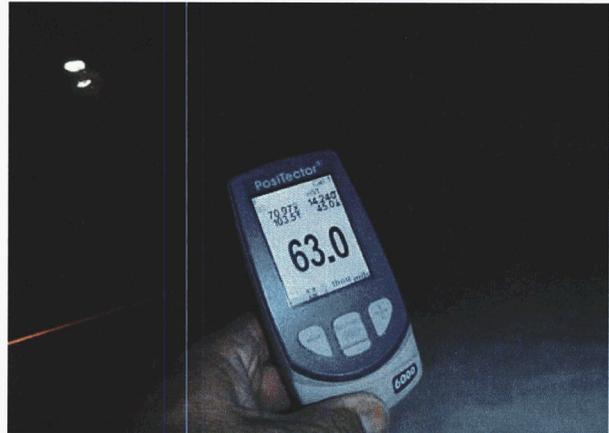
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Dry Film Thickness Measurements - DeFesko Positector 6000 Coating System Thickness - North Interior Floor



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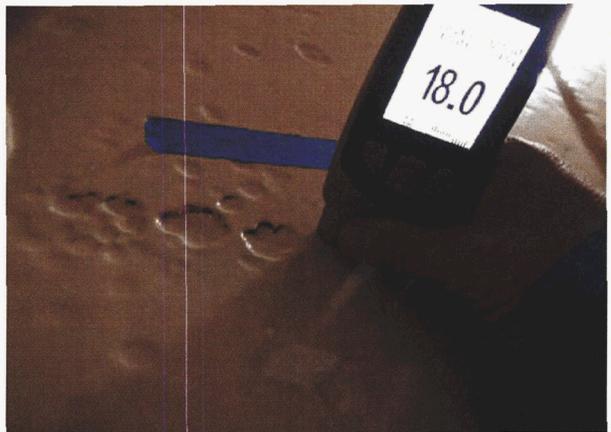
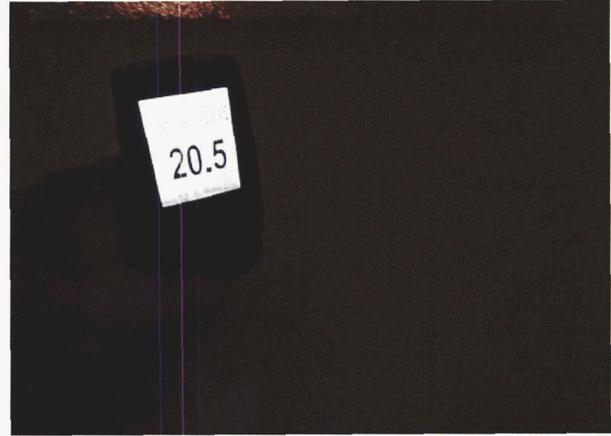
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Cottonwood Lane Tank Rehabilitation

Dry Film Thickness Measurements - DeFesko Positector 6000
Coating System Thickness - South Side Interior Floor - Insufficient Mills



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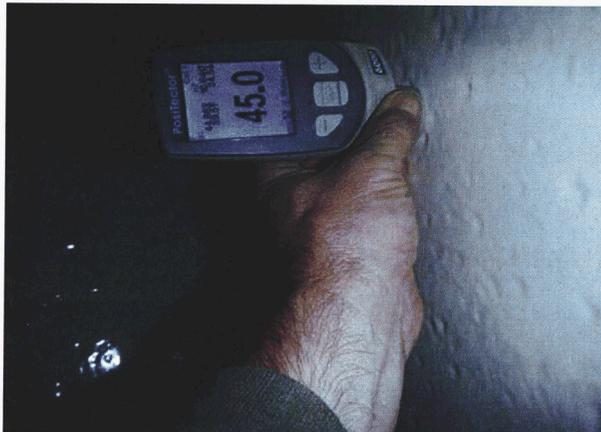
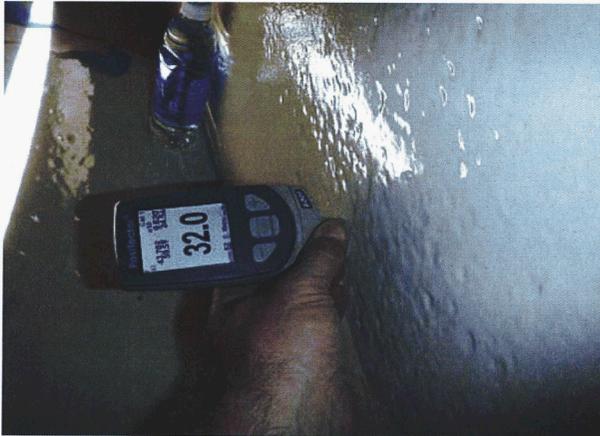
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Cottonwood Lane Tank Rehabilitation

Dry Film Thickness Measurements - DeFesko Positector 6000 Coating System Mil Thickness - Lower Shell



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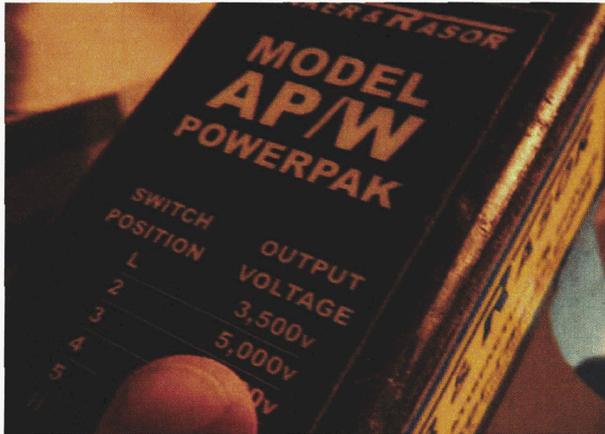
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Cottonwood Lane Tank Rehabilitation

High Voltage Holiday Detection - Tinker & Rasor Model AP/W



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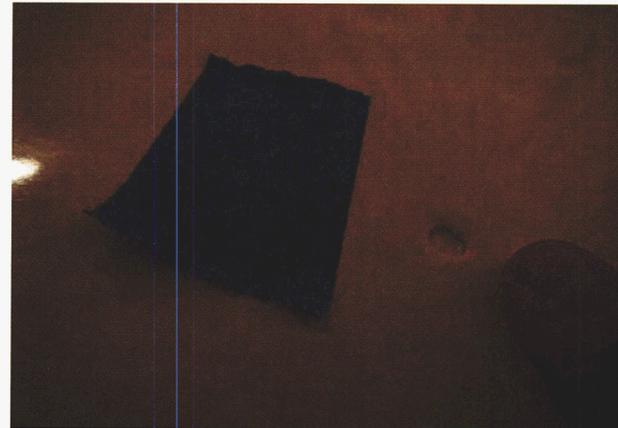
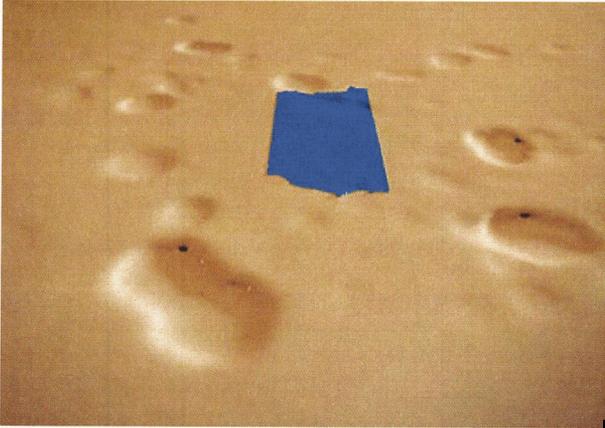
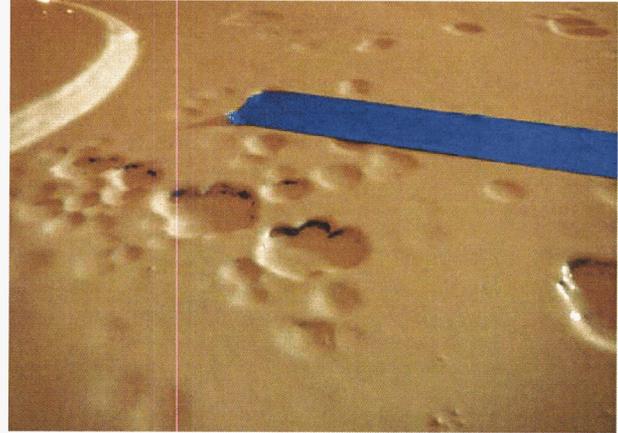
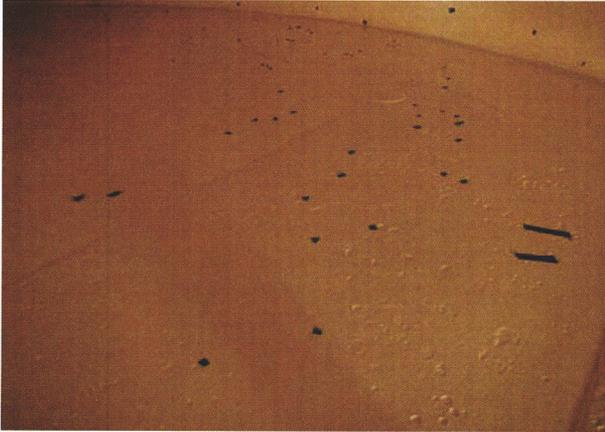
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Coating System Defects Marked For Repair



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Location:	Phoenix, Arizona	Date:	April 7th 2015		

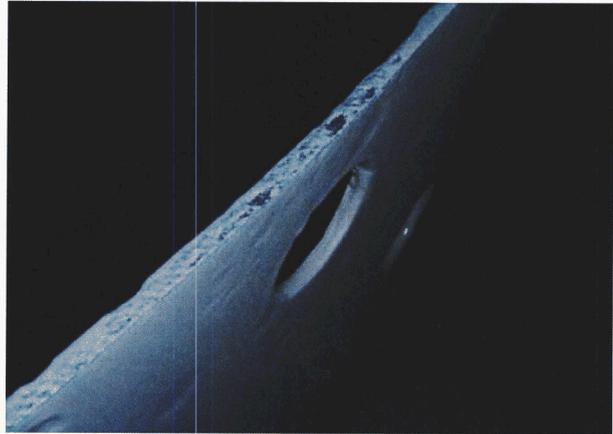
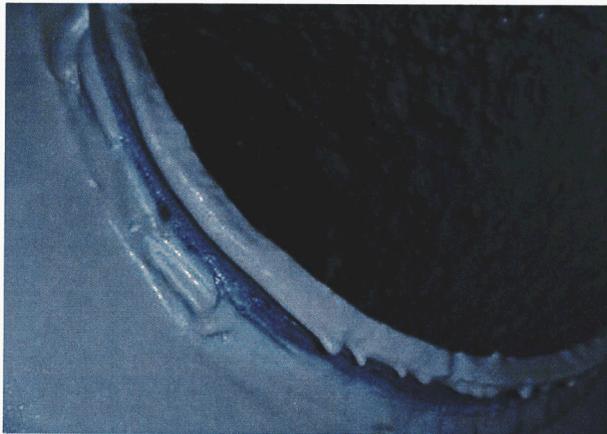
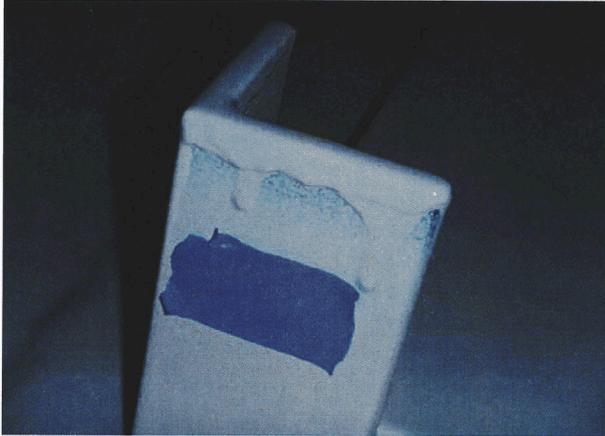
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Coating System Defects Marked For Repair



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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Coating System Repairs - Product Mixture



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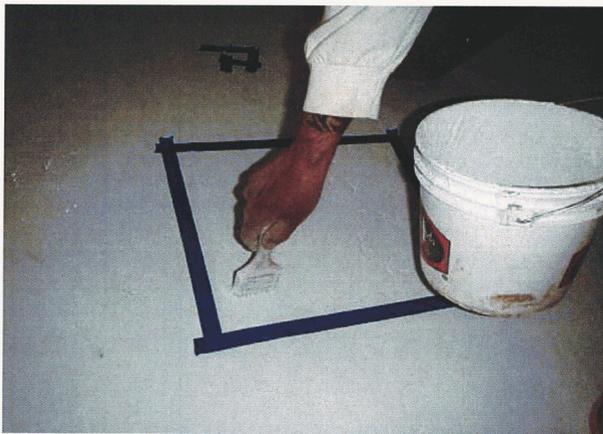
Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

SSPC-SP2 Hand Tool Cleaning - Abrading Coating Prior To Repair Application



Coating Repair Application In Process



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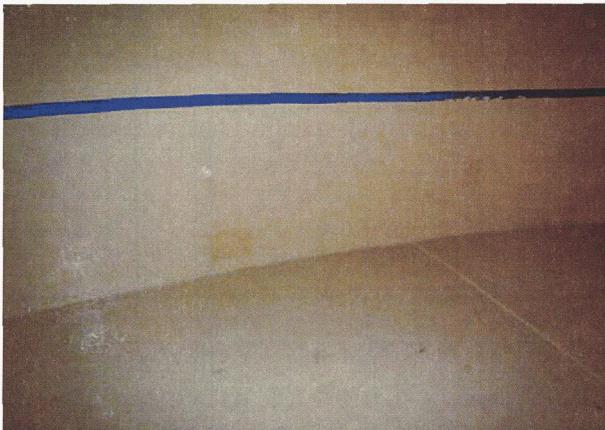
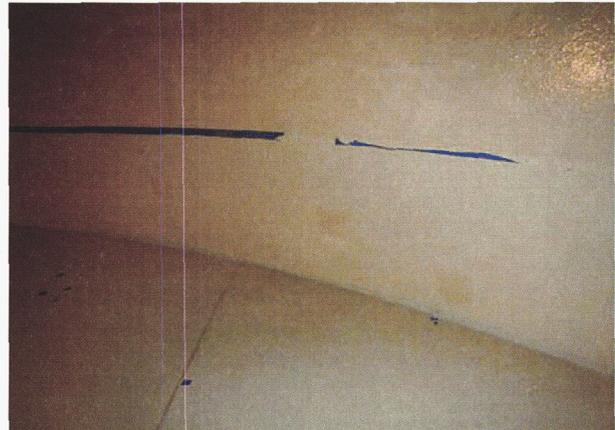
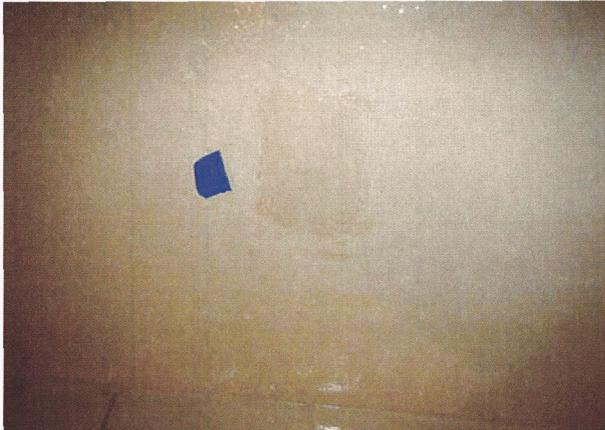
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Completed Interior Coating System Repairs



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INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

April 6th 2015

James T. Wilson, P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

A surface preparation inspection consisted of the interior floor and lower ring. The interior surface preparation was found to be in compliance with an SSPC-SP10 Near White Metal Blast Cleaning. There were a total of 9 plates that had been welded for the floor repairs. The void around the circumference of the inlet penetration was welded and complete. Surface profile measurements were documented utilizing Testex Extra Course Replica Tape. The surface profile was found to be in compliance with the specification. Surface profile measurements are as follows:

Lower Ring: 3.2, 3.3, 3.3, 3.2, 3.1

Floor: 3.6, 3.5, 3.5, 3.7, 3.3, 3.6, 3.4, 3.3, 3.7, 3.5

Masking was completed around the lower ring. The coating system below the masking was abrasive blasted in accordance with an SSPC-SP7 Brush Off Blast. There were still remaining areas at the termination point requiring surface preparation. There was a shiny appearance to these areas where the new applied coating would need to adhere to. The repair process was to scarify these shiny spots via SSPC-SP3 Power Tool Cleaning. Further vacuuming was requested inside for remaining abrasives.

Respectfully,

Frank Rowland

Frank Rowland

Certified NACE Level III Coating Inspector #20,692

gregory scott sprinkle

Greg Sprinkle

Certified NACE Level III Coating Inspector #5417

Certified Special Protective Coatings Inspector

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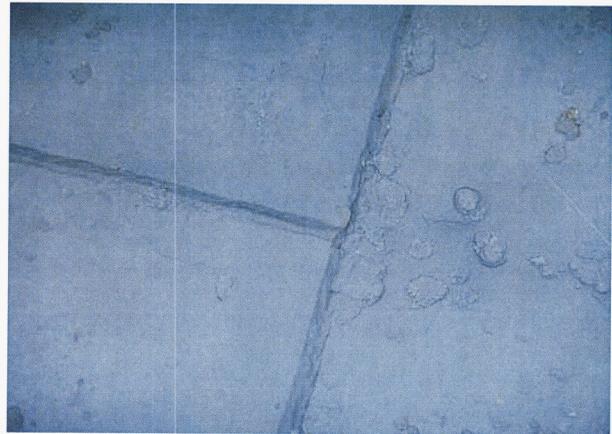
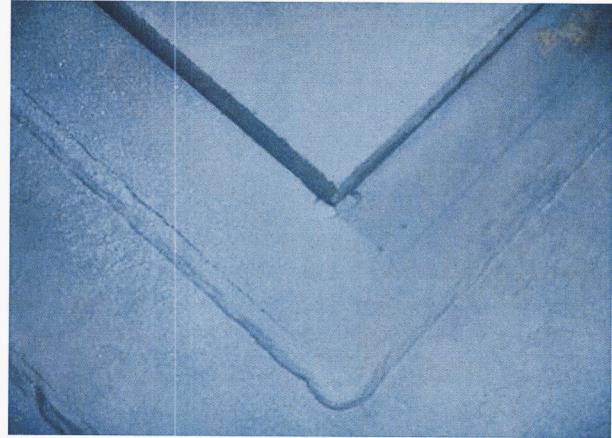
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Surface Preparation In Accordance With An SSPC-SP10 Near White Metal Blast Cleaning
Interior Floor



Company:	Arizona Water Company	Report No.	9	Page	2
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	April 6th 2015		