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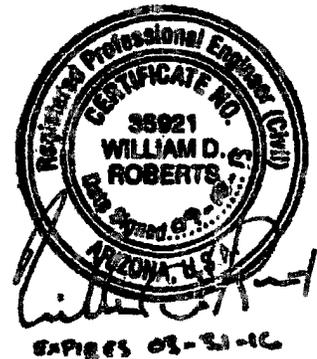
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PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

PROJECT NO. 121309

WEST AREA WATER RECLAMATION FACILITY (WAWRF) SLIDE
GATES CHAIN REPLACEMENT

OCTOBER 2013



CITY OF GLENDALE

ENGINEERING DEPARTMENT

5850 W. Glendale Avenue, Glendale, Arizona 85301 (623) 930-3630



Engineering Department

Memorandum

DATE: October 3, 2013
TO: All Plan and Specification Holders
FROM: Community Development/Engineering
SUBJECT: PROJECT NO. 121309 – WEST AREA WATER RECLAMATION FACILITY
(WAWRF) SLIDE GATES-CHAIN REPLACEMENT

ADDENDUM NO. 1

In accordance with the contract documents, "Information for Bidders," Page 4, Section 12, CHANGES TO PLANS AND DOCUMENTS, the following revisions to the plans and specifications and clarifications shall become a part of the contract documents and the bidder shall acknowledge receipt thereof as directed in Section 13 of the Information for Bidders section.

SPECIFICATION ITEMS:

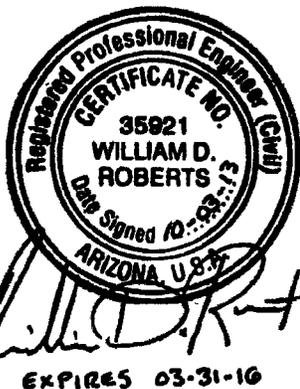
1. Page 5: TIME OF COMPLETION:
Revise the time of completion from one hundred and twenty (120) consecutive calendar days to one hundred and eighty (180) consecutive calendar days.
2. Page 8: BID SCHEDULE:
Remove and replace the original bid schedule with the revised bid schedule provided in this addendum.
3. SECTION 011000-1 – SUMMARY

1.5 CONTRACTOR'S USE OF SITE Add the following subsections:

- E. Basin Shut Downs: The City will remove one aeration basin and one secondary sedimentation basin from service for the project at a time. These closures do not have a duration limit. To place one of these basins back into service and take another out of service, the Contractor must request the change in writing at least two weeks in advance.

When returning an aeration basin into service, an existing or new sluice gate must be in place and operational. This will require the contractor to reinstall the existing sluice gates after they have been removed to measure and inspect their thimbles while the new gates are being ordered and fabricated.

- F. Basin Cleaning: The Contractor shall be responsible for cleaning any basins taken out of service. The cleaning will consist of flushing the basins with water to the satisfaction of the City inspector. The Contractor may use the plant's reclaimed water system as a water source but will be responsible for all labor, equipment, and materials needed. The Contractor shall push the flushing water to sumps within the basins specified by City staff. The City will pump the sumps out. The Contractor must clean any basin, taken off line, within one day of its closure.



3. SECTION 11291-1 – SLUICE GATES

2.11 Wall Thimbles: Revise and replace the following section

A.1. The existing cast iron wall thimble improvements may include modifications to the existing thimbles as determined by the Structural Engineer following field inspections. The modifications shall include cleaning the existing thimble and welding a new fabricated thimble insert inside it. The new thimble insert will be welded to all four interior walls of the existing thimble and its flange. The new insert will include a flange that overlays the existing flange and includes openings for the bolts on the existing flange. The Contractor will provide measurements to verify the addition of the new flange does not create conflicts between the new gate and the existing structure.

2.11 Wall Thimbles: Add the following subsection

A.7. Coatings: The Contractor shall clean, prepare, and coat the exposed surfaces of the existing and/or modified wall thimbles and any damaged surrounding concrete coating with Tnemec Series N69 epoxy. The surfaces shall be brush blasted. The coating will be applied with two coats that are 6-8 mils thick each.

2.11 Wall Thimbles: Add the following subsection

A.8. Insulation: Provide phenolic insulating washers and sleeves on the existing thimble bolts.

RESPONSE FOR CLARIFICATIONS:

1. Question: How many flight scrapers are there per secondary sedimentation basin?

Answer: Per the quantities provided on Drawing C001, there are 34 flight scrapers per basin and a total of 102 flights for all three basins. A revised bid schedule reflecting this quantity is attached to this addendum. The Contractor shall verify this quantity at the beginning of construction. Should there be more or less flight scrapers than the number specified; the contract amount will be adjusted based on the unit cost provided on the schedule.

2. Question: Since the extent of the flight and wear strip replacements specified in Specification Section 11292-2, Part 3.1, Section A is unknown and must be determined in the field, can that work be bid as an alternative?

Answer: This item will be included in the base bid. Bid items have been included for this work in the revised bid schedule that is part of this addendum. If the potential work is not performed, that item would not be invoiced to the City. If the potential work is partially performed, it will be partially invoiced to the City based on the unit cost from the bid schedule and quantities confirmed in the field.

3. Question: Since the extent of the thimble modifications specified in Specification Section 11291-2, Part 2.11, Section A is unknown and must be determined in the field, can that work be bid as an alternative?

Answer: The modifications will be included in the base bid for the gates in Basins 1 and 2 and in the alternative bid for the gates in Basins 3 and 4. Bid items have been included for this work in the revised base and alternative bid schedules that are part of this addendum. If

the potential work is not performed and the thimbles are in good condition, those items will not be invoiced to the City. If one or more of the thimbles requires the modifications to the extent described above, the work will be invoiced to the City based on the unit cost from the bid schedule. If lesser modifications than those described above are recommended by the Structural Engineer during the field inspection, the Contractor will proceed with the work on a time and material basis using hourly rates and material costs that are agreed upon with City staff prior to the work beginning. The modification cost for each thimble for these lesser modifications shall not exceed the unit cost provided on the bid schedule.

4. Question: Does any salvaged materials or equipment need delivered outside the plant?

Answer: The Contractor will place all salvaged materials and equipment at a location within the existing plant specified by City staff.

5. Question: Are there any survey requirements on the project?

Answer: No survey services are required on this project.

6. Question: Can equivalent gate and flight scrapper products be incorporated into the bid?

Answer: Since the flight scrapper components are being installed on an existing Polychem system, no equivalents will be allowed. The City may consider an equal slide gate model but its approval is not guaranteed. With this in mind, the Contractor's bid must include the cost of the Fontaine gates specified.

7. Question: The delivery time for the gates could require 12 weeks. Can the contract time be extended to accommodate this duration?

Answer: The contract duration has been extended to 180 days.

**THIS ADDENDUM CONSISTS OF THE COVER PLUS FIVE (5) PAGES, WHICH
INCLUDES THE ATTACHED REVISED BID SCHEDULE**

BASE BID SCHEDULE (REVISED)					
PROJECT 121309 – West Area Water Reclamation Facility Slide Gates – Chain Replacement Project					
Item No.	Description	Quantity	Unit	Unit cost	Total Cost
1	Removal of Existing Flight and Drive Chains	1	LS	\$	\$
2	Remove Existing Wearing Shoes	1	LS	\$	\$
3	Remove, Protect, and Reinstall Flights	102	EA	\$	\$
4	9.5 ft Strand NCS-720-S, 6" Pitch Chain	204	EA	\$	\$
5	Attachment Link & Pin & Clip Kit NCS-720-S	204	EA	\$	\$
6	NH-8, 2.609" Pitch Drive Chain w/ PA6-6 Links and 303 SS Pin	75	FT	\$	\$
7	Wearing Shoe, Carrying, Blue Nylon 6-6	204	EA	\$	\$
8	Wearing Shoe, Return, w/ lug, , Blue Nylon 6-6	204	EA	\$	\$
9	Chain Flight hardware Kit, 10-hole set, English, 316 SS	102	EA	\$	\$
10	Flight and Shoes Freight & Tax	1	LS	\$	\$
11	Removal of the Existing Cast Iron Sluice Gates	2	EA	\$	\$
12	Wall and Thimble Cleaning and Coating	2	EA	\$	\$
13	72" x 36" Fontaine Model 203, Wall Mounted SS Sluice Gates	2	EA	\$	\$
14	Replace Odor Control Gaskets	2	EA	\$	\$
15	Sluice Gate Thimble Modifications	2	EA	\$	\$
16	Remove and Replace Flight Scrapper Wearing Strips	990	LF	\$	\$
17	Replace Damaged Flights	10	EA	\$	\$
18	Mobilization / Demobilization	1	LS	\$	\$
19	Owner's Allowance for Construction Contingency	1	LS	\$ 25,000	\$ 25,000
TOTAL BASE BID					\$

BID ALTERNATIVE SCHEDULE 1 (REVISED)**PROJECT 121309 – West Area Water Reclamation Facility Slide Gates – Chain Replacement Project**

Item No.	Description	Quantity	Unit	Unit cost	Total Cost
1	Removal of the Existing Cast Iron Sluice Gates	2	EA	\$	\$
2	Wall and Thimble Cleaning and Coating	2	EA	\$	\$
3	72" x 36" Fontaine Model 203, Wall Mounted SS Sluice Gates	2	EA	\$	\$
4	Replace Odor Control Gaskets	2	EA	\$	\$
5	Sluice Gate Thimble Modifications	2	EA	\$	\$
6	Owner's Allowance for Construction Contingency	1	LS	\$ 5,000	\$ 5,000
TOTAL ALTERNATIVE BID					\$

PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

MAYOR

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Ian Hugh

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Manuel D. Martinez

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TECHNICAL SPECIFICATIONS

NOTICE TO CONTRACTORS

Sealed bids shall be either mailed to the City of Glendale Engineering Department, 5850 West Glendale Avenue, Glendale, Arizona, 85301, or hand-delivered to the Engineering Department office, third floor, 5850 West Glendale Avenue, Glendale, Arizona, for furnishing all plant, material, equipment and labor, and to complete construction of: **PROJECT NO. 121309 WEST AREA WATER RECLAMATION FACILITY (WAWRF) SLIDE GATES-CHAIN REPLACEMENT**. The proposed project includes the replacement of equipment within the WAWRF. Replacements include the plants existing sluice gates at the inlets of aeration basins 1-2 with basins 3-4 as bid alternates. The existing chains and wear shoes on the scrapers within the plant's secondary sedimentation basins will also be replaced.

Bids must be received by the Engineering Department of the City of Glendale no later than 10:00a.m., October 10, 2013. Any bid received after that time will not be considered and will be returned to the bidder. At that time, the bids will be publicly opened and read aloud in the Engineering Department Conference Room, 5850 West Glendale Avenue, Glendale, Arizona.

A pre-bid conference will be held on September 27, 2013, at 10:00a.m., in the Engineering Department Conference Room, 5850 West Glendale Avenue, Glendale, Arizona. Bidders, contractors, and other interested parties are invited to attend this conference which will be conducted by the Owner and Engineer to answer any questions.

Plans, specifications and contract documents may be examined, and copies may be obtained at City of Glendale Engineering Department, 5850 West Glendale Avenue, Glendale, Arizona. A non-refundable charge of \$20.00 shall be paid for each set of plans and specifications issued from this office.

Each bid shall be in accordance with the plans, specifications and contract documents, and shall be set forth and submitted on the BID DOCUMENTS included with the project specifications book. The BID DOCUMENTS may be removed from the project specifications book and submitted independently of such book. Each bid shall be accompanied by a proposal guarantee, in the form of a certified or cashier's check or bid bond for ten percent (10%) of the amount of bid, made payable to the order of the City of Glendale, Arizona, to insure that the successful bidder will enter into the contract if awarded to him and submit the required Certificate of Insurance, Payment Bond and Performance Bond. All proposal guarantees, except those of the three lowest qualified bidders, will be returned immediately following the opening and checking of proposals. The proposal guarantees of the three lowest qualified bidders will be returned immediately after the contract documents have been executed by the successful bidder. The proposal guarantee shall be declared forfeited as liquidated damages if the successful bidder refuses to enter into said contract or submit the Certificate of Insurance, Payment Bond and Performance Bond after being requested to do so by the City of Glendale, Arizona.

The City of Glendale reserves the right to reject any or all bids or waive any informality or irregularity in a bid. No bidder may withdraw his bid for a period of fifty (50) days after opening and reading of the bids.

The City of Glendale is an equal opportunity employer and minority business enterprises and women's business enterprises are encouraged to submit bids.

CITY OF GLENDALE, ARIZONA

INFORMATION FOR BIDDERS

1 ELIGIBILITY OF CONTRACTORS: When calling for bids for contracts for public work to be performed on behalf of the State or any political subdivision thereof, which will be paid for from public funds, no bid shall be considered for performance of a contract, including construction work which is not submitted by a bidder duly licensed as a contractor in this State. No bid shall be awarded to any contractor or entity not authorized to do business in the State of Arizona by the Arizona Corporation Commission, as required by statute.

2. PROPOSAL: Bids to receive consideration shall be made in accordance with the following instructions:

(a) Before submitting a bid, bidders shall carefully examine the plans and specifications and contract documents, visit the site of the work, fully inform themselves as to all existing conditions and limitations.

(b) Bids shall be submitted on the "PROPOSAL" forms provided and delivered to the City of Glendale Engineering Department on or before the day and hour set in the "NOTICE TO CONTRACTORS," as published. Bids shall be enclosed in a sealed envelope marked on the outside lower right-hand corner indicating:

1. The bidder's name and address.
2. The project number.
3. The title of the project.
4. The time and date the bids are to be received.

(c) It is the sole responsibility of the bidder to see that his bid is received in proper time. Any bids received after the scheduled closing time for receipt of bids will be returned to the bidder unopened.

(d) The signatures of all persons shall be in longhand. Any interlineations, alterations, or erasures must be initialed by the signer of the bid.

(e) Bids shall not contain any recapitulations of the work to be done. No oral, telegraphic, telephonic, or modified proposals will be considered.

3. BID SECURITY: Each proposal shall be accompanied by a proposal guarantee in the form of a certified or cashier's check or bid bond, with a properly executed Power of Attorney attached, in an amount equal at least to ten percent (10%) of the proposal payable without condition to the City. If a bid bond is submitted with the bid it shall be issued by a company licensed with the Arizona Department of Insurance and authorized to issue such bonds in this state. **NO BONDS ISSUED BY INDIVIDUAL SURETIES WILL BE ACCEPTED. The company issuing the bid bond shall have a rating of not less than A- in the BEST rating available at the time this project was let to bid.** The proposal guarantee shall guarantee that the bidder, if awarded the contract, will, within ten (10) working days after the award, execute such contract in accordance with the proposal and in manner and form required by the contract documents, and will furnish good and sufficient bond for the faithful performance of the same, a payment bond and a certificate of insurance. The bid securities of the three (3) lowest bidders will be retained until the contract is awarded, or other disposition made thereof. The bid securities of all bidders, except the three (3) lowest, will be returned promptly after the canvass of bids. In the event the Contractor fails, within ten (10)

working days after the award, to execute said Contract and deliver the Performance and Labor and Material Payment Bonds and the Certificate of Insurance, the Bid Security shall become the property of the City.

4. **WITHDRAWAL OF BID:** Any bidder may withdraw his bid, either personally, by telegram or by written request, at any time prior to the scheduled closing time for receipt of bids. No bid may be withdrawn by telephone. Any bid withdrawn will not be opened and will be returned to the bidder. After opening and reading of the bids, no bidder may withdraw his bid for a period of fifty (50) days from the date of opening and reading.

5. **LATE BIDS:** Bids received after the scheduled closing time for receipt of bids, as contained in the "Notice to Contractors," will not be considered and will be returned to the bidder.

6. **AWARD OR REJECTION OF BIDS:** The contract will be awarded to the lowest and best qualified responsive bidder complying with these instructions and with the "NOTICE TO CONTRACTORS." The City of Glendale, Arizona, however, reserves the right to accept or reject any or all bids or to waive any or all informalities or irregularities in the bid. Alternates may be accepted depending upon the availability of City funds. Accepted alternates will be considered in determining the lowest responsive and responsible bidder.

7. **BIDDERS INTERESTED IN MORE THAN ONE BID:** No person, firm or corporation shall be allowed to make, file, or be interested in more than one (1) bid for the same work unless alternate bids are called for in the specifications or any addenda. A person, firm, or corporation who has submitted a sub-proposal to a bidder, or who has quoted prices on materials to a bidder is not thereby disqualified from submitting a sub-proposal or quoting prices to other bidders.

8. **CONTRACT AND BONDS:** The form of contract, which the successful bidder as Contractor will be required to execute and the forms of bonds which he shall be required to furnish are included in the contract documents and should be carefully examined by the bidder. The successful bidder shall use the forms provided or such other forms as are acceptable by the City. The Contract and Performance and Labor and Material Payment Bonds will be executed in three (3) original counterparts. All bonds shall be issued by companies licensed with the Arizona Department of Insurance and authorized to issue such bonds in this state. **NO BONDS ISSUED BY INDIVIDUAL SURETIES WILL BE ACCEPTED.** The company issuing any bond shall have a rating of not less than A- in the BEST rating available at the time this project was let to bid.

9. **INSURANCE REQUIREMENTS:** Contractor, and each Sub-contractor performing work or providing materials related to this Agreement must procure and maintain the insurance coverages described (collectively, "Contractor's Policies"), until each Parties' obligations under this Agreement are completed. Contractor must at all times relevant hereto carry a commercial general liability policy with a combined single limit of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate. **Contracts in excess of \$250,000 shall require \$2,000,000 single occurrence/\$5,000,000 annual aggregate.**

Sub-contractors must at all times relevant hereto carry a general commercial liability policy with a combined single limit of at least \$1,000,000 per occurrence.

This commercial general liability insurance must include independent contractors' liability, contractual liability, broad form property coverage, products and completed operations, XCU hazards if requested by the City, and a separation of insurance provision.

These limits may be met through a combination of primary and excess liability coverage.

Auto. A business auto policy providing a liability limit of at least \$1,000,000 per accident for Contractor and \$1,000,000 per accident for Sub-contractors and covering owned, non-owned and hired automobiles.

Workers' Compensation and Employer's Liability. A workers' compensation and employer's liability policy providing at least the minimum benefits required by Arizona law.

Equipment Insurance. Contractor must secure, pay for, and maintain all-risk insurance as necessary to protect the City against loss of owned, non-owned, rented or leased capital equipment and tools, equipment and scaffolding, staging, towers and forms owned or rented by Contractor or its Sub-contractors.

10. **SUBCONTRACTORS LISTING AND CERTIFICATION OF CONTRACT COMPLIANCE:** The contractor will be required to furnish the form of subcontractors listing and certification of contract compliance with the executed contract documents. This information is requested for tracking and insurance purposes only.

11. **INTERPRETATION OF PLANS AND DOCUMENTS:** If any person contemplating a bid for proposed contract is in doubt as to the true meaning of any part of the plans, specifications, or other proposed contract documents, or finds discrepancies in or omissions from the plans and specifications, he may submit to the Engineering Department, a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Questions received less than ninety-six (96) hours before the bid opening time may not be answered. Any interpretation or correction of the documents will be made only by Addendum, duly issued and a copy of such Addendum will be mailed or delivered to each person receiving a set of such documents. The City of Glendale will not be responsible for any other explanations or interpretations of the proposed documents.

12. **CHANGES TO PLANS AND DOCUMENTS:** Any changes to the plans and documents shall be made only by Addendum. No verbal or other changes to the plans and documents will be valid. A copy of each Addendum will be mailed or delivered as provided in Section 13 below.

13. **ADDENDUM:** Any addenda will be faxed, mailed or delivered to all who are known by the City to have received a complete set of bid documents, and to offices where bid documents have been filed for review purposes. It is the responsibility of each bidder to ascertain that he has received all addenda issued by telephoning the office identified in the NOTICE TO CONTRACTORS as the location where bid documents are available prior to submitting his bid.

Bidders shall acknowledge all addenda in the appropriate location on the "PROPOSAL" form. Failure to acknowledge receipt of Addenda shall render the bid proposal non-responsive and it will be rejected.

14. **ASSIGNMENT OF CONTRACT:** No assignment by the Contractor of any contract to be entered into hereunder, or any part thereof, or of funds to be received thereunder by the Contractor,

will be recognized by the Owner by the Owner unless such assignment has had prior approval of the Owner, and the Surety has been given due notice of such assignment in writing and has consented thereto in writing.

15. PLANS AND SPECIFICATIONS TO SUCCESSFUL BIDDER: The successful bidder may obtain five (5) sets of plans and specifications for this project from the City.

16. TIME OF COMPLETION: The Contractor shall commence work under this project on or before the tenth day following receipt of the Notice to Proceed for that project from the City of Glendale and shall fully complete all work under the project within one hundred twenty (120) consecutive calendar days from and including the date of receipt of such Notice to Proceed. Time is of the essence in the completion of all work required under this contract. The Contractor shall, at all times, during the continuance of the contract, prosecute the work with such force and equipment as is sufficient to complete all work within the time specified.

17 CITY OF GLENDALE TRANSACTION PRIVILEGE TAX. The City of Glendale transaction privilege tax shall **NOT** be waived under the provisions of this contract. The current privilege tax rate can be obtained from the City of Glendale Sales Tax and Licenses Department. The Contractor shall be responsible for reporting and payment of all city, county, state or federal taxes.

18. PRE-BID CONFERENCE: A pre-bid conference will be held on September 27, 2013, at 10:00a.m., in the Engineering Department Conference Room, 5850 West Glendale Avenue, Glendale, Arizona Bidders, contractors, and other interested parties are invited to attend this conference which will be conducted by the Owner and Engineer to answer any questions.

19. ALTERNATES: Alternate proposals will not be considered unless called for in the documents or any addenda thereto. When alternates are requested, all requested alternates or alternate bid items, unless otherwise stated, shall be bid. If no change in the base bid will occur with the alternate, enter "No Change."

20. APPROVAL OF SUBSTITUTIONS: The materials, products and equipment described in the Documents and Addenda establish a standard or required function, dimension, appearance and quality to be met by any proposed substitution. No substitute will be considered, before bid opening, unless written request for approval has been received by the City Engineer at least ten (10) working days prior to the scheduled closing time for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including any drawings, cuts, performance and test data and any other information necessary for evaluation of the substitute. Bidder shall not be entitled to approval of a substitute.

If a substitute is approved, the approval shall be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

21. USE OF "EQUALS": When the specifications for materials, articles, products and equipment state "or equal," contractor may bid upon, and use materials, articles, products and equipment which will perform equally the duties imposed by the general design. The City Engineering Department will have the final approval of all materials, articles, products and equipment proposed to be used as an "equal." It shall not be purchased or installed without the prior written approval from the City Engineering Department.

Approvals for "equals," before bid opening, may be requested in writing to the City Engineering Department for approval. Requests must be received at least ten (10) days prior to the date set for opening the Bid Proposals. The request shall state the name of the material, article, product or equipment for which the item is sought to be considered an equal and a complete description of the proposed equal including any drawings, cuts, performance and test data and any other information necessary for approval of the equal. All approvals will be issued in the form of an addendum.

22. EXAMINATION OF CONTRACT DOCUMENTS AND VISIT SITE: Before submitting a Bid Proposal, bidders should carefully examine the Contract Documents, visit the site of the work, fully inform themselves as to all existing conditions and limitations. No consideration will be granted for any alleged misunderstanding of the material, articles or piece of equipment to be furnished or work to be done. It is understood that the tender of the Bid Proposal carries with it the agreement to all items and conditions referred to herein or indicated in the Contract Documents.

23. BIDDERS IN DEFAULT: No bid will be awarded to any person, firm or corporation that is not authorized by the Arizona Corporation Commission to do business in the State of Arizona, in arrears or is in default to the City of Glendale upon any debt or contract, or that is a defaulter as surety or otherwise upon any obligation to the City of Glendale, or has failed to faithfully perform any previous contract with the City of Glendale.

END OF INFORMATION FOR BIDDERS

PROPOSALPlace Glendale, AZDate October 10, 2013

Proposal of Garney Companies, Inc., a Corporation organized and existing under the laws of
the State of ^{Missouri}~~Arizona~~, a partnership consisting of _____; or an
individual trading as _____.

TO THE HONORABLE MAYOR AND COUNCIL
CITY OF GLENDALE
GLENDALE, ARIZONA

Gentlemen:

The undersigned hereby proposes and agrees to furnish any and all required labor, materials, construction equipment, transportation and services for the construction of: **PROJECT 121309 - WEST AREA WATER RECLAMATION FACILITY (WAWRF) SLIDE GATES-CHAIN REPLACEMENT**, in strict conformity with the plans and specifications for the following unit prices:

(Extension of these unit prices on the basis of estimated quantities and the totaling of these extensions are for the purpose of comparing bids only. The mathematics of such extensions and totaling will be checked and corrected by the Engineering Department, before evaluating the bids, and the lowest of such corrected and checked totals will determine the lowest bids.)

Project 121309

BASE BID SCHEDULE (REVISED)					
PROJECT 121309 – West Area Water Reclamation Facility Slide Gates – Chain Replacement Project					
Item No.	Description	Quantity	Unit	Unit cost	Total Cost
1	Removal of Existing Flight and Drive Chains	1	LS	\$ 18,000.00	\$ 18,000.00
2	Remove Existing Wearing Shoes	1	LS	\$ 7,800.00	\$ 7,800.00
3	Remove, Protect, and Reinstall Flights	102	EA	\$ 200.00	\$ 20,400.00
4	9.5 ft Strand NCS-720-S, 6" Pitch Chain	204	EA	\$ 135.00	\$ 27,540.00
5	Attachment Link & Pin & Clip Kit NCS-720-S	204	EA	\$ 24.00	\$ 4,896.00
6	NH-8, 2.609" Pitch Drive Chain w/ PA6-6 Links and 303 SS Pin	75	FT	\$ 60.00	\$ 4,500.00
7	Wearing Shoe, Carrying, Blue Nylon 6-6	204	EA	\$ 13.00	\$ 2,652.00
8	Wearing Shoe, Return, w/ lug, , Blue Nylon 6-6	204	EA	\$ 13.00	\$ 2,652.00
9	Chain Flight hardware Kit, 10-hole set, English, 316 SS	102	EA	\$ 25.00	\$ 2,550.00
10	Flight and Shoes Freight & Tax	1	LS	\$ 3,900.00	\$ 3,900.00
11	Removal of the Existing Cast Iron Sluice Gates	2	EA	\$ 18,000.00	\$ 36,000.00
12	Wall and Thimble Cleaning and Coating	2	EA	\$ 1,750.00	\$ 3,500.00
13	72" x 36" Fontaine Model 203, Wall Mounted SS Sluice Gates	2	EA	\$ 25,000.00	\$ 50,000.00
14	Replace Odor Control Gaskets	2	EA	\$ 450.00	\$ 900.00
15	Sluice Gate Thimble Modifications	2	EA	\$ 12,500.00	\$ 25,000.00
16	Remove and Replace Flight Scrapper Wearing Strips	990	LF	\$ 8.00	\$ 7,920.00
17	Replace Damaged Flights	10	EA	\$ 250.00	\$ 2,500.00
18	Mobilization / Demobilization	1	LS	\$ 1,900	\$ 1,900
19	Owner's Allowance for Construction Contingency	1	LS	\$ 25,000	\$ 25,000
TOTAL BASE BID					\$ 247,610

Project 121309

BID ALTERNATIVE SCHEDULE 1 (REVISED)					
PROJECT 121309 – West Area Water Reclamation Facility Slide Gates – Chain Replacement Project					
Item No.	Description	Quantity	Unit	Unit cost	Total Cost
1	Removal of the Existing Cast Iron Sluice Gates	2	EA	\$12,500.00	\$25,000.00
2	Wall and Thimble Cleaning and Coating	2	EA	\$700.00	\$1,400.00
3	72" x 36" Fontaine Model 203, Wall Mounted SS Sluice Gates	2	EA	\$31,400.00	\$62,800.00
4	Replace Odor Control Gaskets	2	EA	\$250.00	\$500.00
5	Sluice Gate Thimble Modifications	2	EA	\$12,500.00	\$25,000.00
6	Owner's Allowance for Construction Contingency	1	LS	\$5,000	\$5,000
TOTAL ALTERNATIVE BID					\$119,700.00

The undersigned hereby declares that he has visited the site(s) and has carefully examined the contract documents relating to the work covered by the above bid or bids.

Upon receipt of notice of the acceptance of this bid, we will execute the formal contract attached within ten (10) days, and will deliver a one hundred percent (100%) Performance Bond for the faithful performance of this Contract, together with a one hundred percent (100%) Payment Bond and Certificate of Insurance.

The bid security attached, with endorsement, in the sum of ten percent (10%) of the total bid, is to become the property of the City of Glendale, Arizona, in the event the Contract and Bonds are not executed within the time set forth, as liquidated damages for the delay and additional work caused thereby.

The undersigned has checked carefully all the above figures and understands that the City of Glendale, Arizona, will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

The undersigned understands that the Mayor and Council of the City of Glendale, Arizona, reserves the right to reject any or all bids or to waive any informalities or irregularities in the bid.

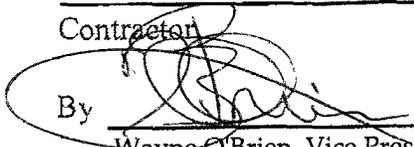
Respectfully submitted,

Arizona Contractor's
Classification and
License No.

ROC074957 - A

Garney Companies, Inc.

Contractor

By 

Wayne O'Brien, Vice President

60 E. Rio Salado Parkway, #900, Tempe, AZ 85281

1333 NW Vivion Rd., Kansas City, MO 64118 (Corporate Office)
(Complete business address)

Telephone Number: 602.470.0001

Fax Number 602.470.0025

Bidder shall signify receipt of all Addenda here (if any):

Addendum 1, dated 10/3/2013

Failure to acknowledge receipt of all Addenda shall render the bid proposal non-responsive and will be rejected.

Acknowledged by 

Wayne O'Brien, Vice President

CONSTRUCTION AGREEMENT

This Construction Agreement ("Agreement") is entered into and effective between the CITY OF GLENDALE, an Arizona municipal corporation ("City"), and Garney Companies, Inc , a Missouri corporation authorized to do business in Arizona ("Contractor") as of the 26 day of November, 2013

RECITALS

- A. City intends to undertake a project for the benefit of the public and with public funds that is more fully set forth in the **Notice to Contractors** and the attached **Exhibit A** ("Project"),
- B. City desires to retain the services of Contractor to perform those specific duties and produce the specific work as set forth in the Project, the plans and specifications, the **Information for Bidders**, and the **Maricopa Association of Governments ("MAG") General and Supplemental Conditions and Provisions**,
- C. City and Contractor desire to memorialize their agreement with this document

AGREEMENT

In consideration of the Recitals, which are confirmed as true and correct and incorporated by this reference, the mutual promises and covenants contained in this Agreement, and other good and valuable consideration, City and Contractor agree as follows:

1. Project.

1.1 **Scope.** Contractor will provide all services and material necessary to assure the Project is completed timely and efficiently consistent with Project requirements, including, but not limited to, working in close interaction and interfacing with City and its designated employees, and working closely with others, including other contractors, providers or consultants retained by City.

1.2 **Documents.** The following documents are, by this reference, entirely incorporated into this Agreement and attached Exhibits as though fully set forth herein:

- (A) Notice to Contractors,
- (B) Information for Bidders;
- (C) MAG General Conditions, Supplemental General Conditions, Special and Technical Provisions,
- (D) Proposal,
- (E) Bid Bond;
- (F) Payment Bond,
- (G) Performance Bond;
- (H) Certificate of Insurance;
- (I) Appendix; and
- (J) Plans and Addenda thereto.

Should a conflict exist between this Agreement (and its attachments), and any of the incorporated documents as listed above, the provisions of this Agreement shall govern

1.3 Project Team.

(A) Project Manager Contractor will designate an employee as Project Manager with sufficient training, knowledge, and experience to, in the City's opinion, to complete the project and handle all aspects of the Project such that the work produced by Contractor is consistent with applicable standards as detailed in this Agreement.

(B) Project Team.

- (1) The Project manager and all other employees assigned to the project by Contractor will comprise the "Project Team "
- (2) Project Manager will have responsibility for and will supervise all other employees assigned to the project by Contractor

(C) Sub-contractors

Project 121309

- (1) Contractor may engage specific technical contractor (each a "Sub-contractor") to furnish certain service functions
- (2) Contractor will remain fully responsible for Sub-contractor's services
- (3) Sub-contractors must be approved by the City, unless the Sub-contractor was previously mentioned in the response to the solicitation
- (4) Contractor shall certify by letter that contracts with Sub-contractors have been executed incorporating requirements and standards as set forth in this Agreement.

2. **Schedule.** The Project will be undertaken in a manner that ensures it is completed in a timely and efficient manner. If not otherwise stated in **Exhibit A**, the Project shall be completed by no later than within one hundred twenty (120) consecutive calendar days consecutive calendar days from and including the date of receipt of the Notice to Proceed

3. **Contractor's Work.**

3.1 **Standard.** Contractor must perform services in accordance with the standards of due diligence, care, and quality prevailing among contractors having substantial experience with the successful furnishing of services and materials for projects that are equivalent in size, scope, quality, and other criteria under the Project and identified in this Agreement.

3.2 **Licensing.** Contractor warrants that

- (A) Contractor and Sub-contractors will hold all appropriate and required licenses, registrations and other approvals necessary for the lawful furnishing of services ("Approvals"); and
- (B) Neither Contractor nor any Sub-contractor has been debarred or otherwise legally excluded from contracting with any federal, state, or local governmental entity ("Debarment").
 - (1) City is under no obligation to ascertain or confirm the existence or issuance of any Approvals or Debarments or to examine Contractor's contracting ability
 - (2) Contractor must notify City immediately if any Approvals or Debarment changes during the Agreement's duration and the failure of the Contractor to notify City as required will constitute a material default of this Agreement

3.3 **Compliance.** Services and materials will be furnished in compliance with applicable federal, state, county and local statutes, rules, regulations, ordinances, building codes, life safety codes, or other standards and criteria designated by City

3.4 **Coordination; Interaction.**

- (A) If the City determines that the Project requires the coordination of professional services or other providers, Contractor will work in close consultation with City to proactively interact with any other contractors retained by City on the Project ("Coordinating Entities")
- (B) Subject to any limitations expressly stated in the budget, Contractor will meet to review the Project, schedules, budget, and in-progress work with Coordinating Entities and the City as often and for durations as City reasonably considers necessary in order to ensure the timely work delivery and Project completion
- (C) If the Project does not involve Coordinating Entities, Contractor will proactively interact with any other contractors when directed by City to obtain or disseminate timely information for the proper execution of the Project

3.5 **Hazardous Substances.** Contractor is responsible for the appropriate handling, disposal of, and if necessary, any remediation and all losses and damages to the City, associated with the use or release of hazardous substances by Contractor in connection with completion of the Project

Project 121309

3.6 Warranties. At any time within two years after completion of the Project, Contractor must, at Contractor's sole expense and within 20 days of written notice from the City, uncover, correct and remedy all defects in Contractor's work. City will accept a manufacturer's warranty on approved equipment as satisfaction of the Contractor's warranty under this subsection.

3.7. Bonds. Upon execution of this Agreement, and if applicable, Contractor must furnish Payment and Performance bonds as required under A.R.S. § 34-608.

4. Compensation for the Project.

4.1 Compensation. Contractor's compensation for the Project, including those furnished by its Sub-contractors will not exceed \$367,310, as specifically detailed in the Contractor's bid and set forth in **Exhibit B** ("Compensation").

4.2 Change in Scope of Project. The Compensation may be equitably adjusted if the originally contemplated scope of services as outlined in the Project is significantly modified by the City.

(A) Adjustments to the Scope or Compensation require a written amendment to this Agreement and may require City Council approval.

(B) Additional services which are outside the scope of the Project and not contained in this Agreement may not be performed by the Contractor without prior written authorization from the City.

5. Billings and Payment.

5.1 Applications.

(A) The Contractor will submit monthly invoices (each, a "Payment Application") to City's Project Manager and City will remit payments based upon the Payment Application as stated below.

(B) The period covered by each Payment Application will be one calendar month ending on the last day of the month.

5.2 Payment.

(A) After a full and complete Payment Application is received, City will process and remit payment within 30 days.

(B) Payment may be subject to or conditioned upon City's receipt of

(1) Completed work generated by Contractor and its Sub-contractors, and

(2) Unconditional waivers and releases on final payment from Sub-contractors as City may reasonably request to assure the Project will be free of claims arising from required performances under this Agreement.

5.3 Review and Withholding.

City's Project Manager will timely review and certify Payment Applications.

(A) If the Payment Application is rejected, the Project Manager will issue a written listing of the items not approved for payment.

(B) City may withhold an amount sufficient to pay expenses that City reasonably expects to incur in correcting the deficiency or deficiencies rejected for payment.

(C) Contractor will provide, by separate cover, and concurrent with the execution of this Agreement, all required financial information to the City, including City of Glendale Transaction Privilege License and Federal Taxpayer identification numbers.

(D) City will temporarily withhold Compensation amounts as required by A.R.S. 34-221(C).

6. Termination.

6.1 For Convenience. City may terminate this Agreement for convenience, without cause, by delivering a written termination notice stating the effective termination date, which may not be less than 15 days following the date of delivery

- (A) Contractor will be equitably compensated any services and materials furnished prior to receipt of the termination notice and for reasonable costs incurred
- (B) Contractor will also be similarly compensated for any approved effort expended and approved costs incurred that are directly associated with Project closeout and delivery of the required items to the City

6.2 For Cause. City may terminate this Agreement for cause if Contractor fails to cure any breach of this Agreement within seven days after receipt of written notice specifying the breach

- (A) Contractor will not be entitled to further payment until after City has determined its damages. If City's damages resulting from the breach, as determined by City, are less than the equitable amount due but not paid Contractor for Service and Repair furnished, City will pay the amount due to Contractor, less City's damages
- (B) If City's direct damages exceed amounts otherwise due to Contractor, Contractor must pay the difference to City immediately upon demand, however, Contractor will not be subject to consequential damages more than \$1,000,000 or the amount of this Agreement, whichever is greater

7. Insurance.

7.1 Requirements. Contractor must obtain and maintain the following insurance ("Required Insurance")

- (A) Contractor and Sub-contractors Contractor, and each Sub-contractor performing work or providing materials related to this Agreement must procure and maintain the insurance coverages described below (collectively, "Contractor's Policies"), until each Parties' obligations under this Agreement are completed
- (B) General Liability
 - (1) Contractor must at all times relevant hereto carry a commercial general liability policy with a combined single limit of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
 - (2) Sub-contractors must at all times relevant hereto carry a general commercial liability policy with a combined single limit of at least \$1,000,000 per occurrence
 - (3) This commercial general liability insurance must include independent contractors' liability, contractual liability, broad form property coverage, products and completed operations, XCU hazards if requested by the City, and a separation of insurance provision
 - (4) These limits may be met through a combination of primary and excess liability coverage
- (C) Auto A business auto policy providing a liability limit of at least \$1,000,000 per accident for Contractor and 1,000,000 per accident for Sub-contractors and covering owned, non-owned and hired automobiles
- (D) Workers' Compensation and Employer's Liability A workers' compensation and employer's liability policy providing at least the minimum benefits required by Arizona law.
- (E) Equipment Insurance Contractor must secure, pay for, and maintain all-risk insurance as necessary to protect the City against loss of owned, non-owned, rented or leased capital equipment and tools, equipment and scaffolding, staging, towers and forms owned or rented by Contractor or its Sub-contractors

Project 121309

- (F) Notice of Changes Contractor's Policies must provide for not less than 30 days' advance written notice to City Representative of
 - (1) Cancellation or termination of Contractor or Sub-contractor's Policies,
 - (2) Reduction of the coverage limits of any of Contractor or and Sub-contractor's Policies, and
 - (3) Any other material modification of Contractor or Sub-contractor's Policies related to this Agreement

- (G) Certificates of Insurance
 - (1) Within 10 business days after the execution of the Agreement, Contractor must deliver to City Representative certificates of insurance for each of Contractor and Sub-contractor's Policies, which will confirm the existence or issuance of Contractor and Sub-contractor's Policies in accordance with the provisions of this section, and copies of the endorsements of Contractor and Sub-contractor's Policies in accordance with the provisions of this section
 - (2) City is and will be under no obligation either to ascertain or confirm the existence or issuance of Contractor and Sub-contractor's Policies, or to examine Contractor and Sub-contractor's Policies, or to inform Contractor or Sub-contractor in the event that any coverage does not comply with the requirements of this section
 - (3) Contractor's failure to secure and maintain Contractor Policies and to assure Sub-contractor policies as required will constitute a material default under this Agreement

- (H) Other Contractors or Vendors
 - (1) Other contractors or vendors that may be contracted by Contractor with in connection with the Project must procure and maintain insurance coverage as is appropriate to their particular agreement
 - (2) This insurance coverage must comply with the requirements set forth above for Contractor's Policies (e g , the requirements pertaining to endorsements to name the parties as additional insured parties and certificates of insurance)

- (I) Policies Except with respect to workers' compensation and employer's liability coverages, the City must be named and properly endorsed as additional insureds on all liability policies required by this section
 - (1) The coverage extended to additional insureds must be primary and must not contribute with any insurance or self insurance policies or programs maintained by the additional insureds
 - (2) All insurance policies obtained pursuant to this section must be with companies legally authorized to do business in the State of Arizona and acceptable to all parties

7.2 Sub-contractors.

- (A) Contractor must also cause its Sub-contractors to obtain and maintain the Required Insurance
- (B) City may consider waiving these insurance requirements for a specific Sub-contractor if City is satisfied the amounts required are not commercially available to the Sub-contractor and the insurance the Sub-contractor does have is appropriate for the Sub-contractor's work under this Agreement
- (C) Contractor and Sub-contractors must provide to the City proof of Required Insurance whenever requested

7.3 Indemnification.

- (A) To the fullest extent permitted by law, Contractor must defend, indemnify, and hold harmless City and its elected officials, officers, employees and agents (each, an "Indemnified Party," collectively, the

"Indemnified Parties"), for, from, and against any and all claims, demands, actions, damages, judgments, settlements, personal injury (including sickness, disease, death, and bodily harm), property damage (including loss of use), infringement, governmental action and all other losses and expenses, including attorneys' fees and litigation expenses (each, a "Demand or Expense", collectively, "Demands or Expenses") asserted by a third-party (i.e. a person or entity other than City or Contractor) and that arises out of or results from the breach of this Agreement by the Contractor or the Contractor's negligent actions, errors or omissions (including any Sub-contractor or other person or firm employed by Contractor), whether sustained before or after completion of the Project

- (B) This indemnity and hold harmless policy applies even if a Demand or Expense is in part due to the Indemnified Party's negligence or breach of a responsibility under this Agreement, but in that event, Contractor shall be liable only to the extent the Demand or Expense results from the negligence or breach of a responsibility of Contractor or of any person or entity for whom Contractor is responsible.
- (C) Contractor is not required to indemnify any Indemnified Parties for, from, or against any Demand or Expense resulting from the Indemnified Party's sole negligence or other fault solely attributable to the Indemnified Party

7.4 **Waiver of Subrogation.** Contractor waives, and will require any Subcontractor to waive, all rights of subrogation against the City to the extent of all losses or damages covered by any policy of insurance

8. Immigration Law Compliance.

8 1 Contractor, and on behalf any subcontractor, warrants, to the extent applicable under A R S § 41-4401, compliance with all federal immigration laws and regulations that relate to their employees as well as compliance with A R S § 23-214(A) which requires registration and participation with the E-Verify Program

8 2 Any breach of warranty under subsection 8 1 above is considered a material breach of this Agreement and is subject to penalties up to and including termination of this Agreement

8 3 City retains the legal right to inspect the papers of any Contractor or subcontractor employee who performs work under this Agreement to ensure that the Contractor or any subcontractor is compliant with the warranty under subsection 8 1 above

8.4 City may conduct random inspections, and upon request of City, Contractor shall provide copies of papers and records of Contractor demonstrating continued compliance with the warranty under subsection 8 1 above Contractor agrees to keep papers and records available for inspection by the City during normal business hours and will cooperate with City in exercise of its statutory duties and not deny access to its business premises or applicable papers or records for the purposes of enforcement of this section 8

8 5 Contractor agrees to incorporate into any subcontracts under this Agreement the same obligations imposed upon Contractor and expressly accrue those obligations directly to the benefit of the City Contractor also agrees to require any subcontractor to incorporate into each of its own subcontracts under this Agreement the same obligations above and expressly accrue those obligations to the benefit of the City

8 6 Contractor's warranty and obligations under this section to the City is continuing throughout the term of this Agreement or until such time as the City determines, in its sole discretion, that Arizona law has been modified in that compliance with this section is no longer a requirement

8 7 The "E-Verify Program" above means the employment verification program administered by the United States Department of Homeland Security, the Social Security Administration, or any successor program

9. **Conflict.** Contractor acknowledges this Agreement is subject to A R S § 38-511, which allows for cancellation of this Agreement in the event any person who is significantly involved in initiating, negotiating, securing, drafting, or creating the Agreement on City's behalf is also an employee, agent, or consultant of any other party to this Agreement

10. **Prohibitions.** Contractor certifies under A R S §§ 35-391 *et seq* and 35-393 *et seq*, that it does not have, and during the term of this Agreement will not have "scrutinized" business operations, as defined in the preceding statutes, in the countries of Sudan or Iran

Project 121309

11. **Non-Discrimination Policies.** Contractor must not discriminate against any employee or applicant for employment on the basis of race, religion, color sex or national origin Contractor must develop, implement and maintain non-discrimination policies and post the policies in conspicuous places visible to employees and applicants for employment Contractor will require any Sub-contractor to be bound to the same requirements as stated within this section

12. **Notices.**

12.1 A notice, request or other communication that is required or permitted under this Agreement (each a "Notice") will be effective only if

- (A) The Notice is in writing, and
- (B) Delivered in person or by private express overnight delivery service (delivery charges prepaid), certified or registered mail (return receipt requested)
- (C) Notice will be deemed to have been delivered to the person to whom it is addressed as of the date of receipt, if
 - (1) Received on a business day, or before 5 00 p.m., at the address for Notices identified for the Party in this Agreement by U.S. Mail, hand delivery, or overnight courier on or before 5 00 p.m., or
 - (2) As of the next business day after receipt, if received after 5 00 p.m.
- (D) The burden of proof of the place and time of delivery is upon the Party giving the Notice
- (E) Digitalized signatures and copies of signatures will have the same effect as original signatures

12.2 **Representatives.**

(A) Contractor. Contractor's representative ("Contractor's Representative") authorized to act on Contractor's behalf with respect to the Project, and his or her address for Notice delivery is

Garney Companies, Inc
Attn: Wayne O'Brien
60 E. Rio Saldo Parkway, Suite 900
Tempe, Arizona 85281

(B) City. City's representative ("City's Representative") authorized to act on City's behalf, and his or her address for Notice delivery is

City of Glendale
Attn: Tom Kaczmarowski
5850 West Glendale Avenue
Glendale, Arizona 85301

With required copies to:

City of Glendale
City Manager
5850 West Glendale Avenue
Glendale, Arizona 85301

City of Glendale
City Attorney
5850 West Glendale Avenue
Glendale, Arizona 85301

(C) Concurrent Notices.

- (1) All notices to City's representative must be given concurrently to City Manager and City Attorney
- (2) A notice will not be considered to have been received by City's representative until the time that it has also been received by City Manager and City Attorney

(3) City may appoint one or more designees for the purpose of receiving notice by delivery of a written notice to Contractor identifying the designee(s) and their respective addresses for notices

(D) **Changes.** Contractor or City may change its representative or information on Notice, by giving Notice of the change in accordance with this section at least ten days prior to the change

13. **Financing Assignment.** City may assign this Agreement to any City-affiliated entity, including a non-profit corporation or other entity whose primary purpose is to own or manage the Project

14. **Entire Agreement; Survival; Counterparts; Signatures.**

14.1 **Integration.** This Agreement contains, except as stated below, the entire agreement between City and Contractor and supersedes all prior conversations and negotiations between the parties regarding the Project or this Agreement

(A) Neither Party has made any representations, warranties or agreements as to any matters concerning the Agreement's subject matter

(B) Representations, statements, conditions, or warranties not contained in this Agreement will not be binding on the parties

(C) Any solicitation, addendums and responses submitted by the Contractor are incorporated fully into this Agreement as Exhibit A Any inconsistency between Exhibit A and this Agreement will be resolved by the terms and conditions stated in this Agreement

14.2 **Interpretation.**

(A) The parties fairly negotiated the Agreement's provisions to the extent they believed necessary and with the legal representation they deemed appropriate

(B) The parties are of equal bargaining position and this Agreement must be construed equally between the parties without consideration of which of the parties may have drafted this Agreement

(C) The Agreement will be interpreted in accordance with the laws of the State of Arizona.

14.3 **Survival.** Except as specifically provided otherwise in this Agreement each warranty, representation, indemnification and hold harmless provision, insurance requirement, and every other right, remedy and responsibility of a Party, will survive completion of the Project, or the earlier termination of this Agreement

14.4 **Amendment.** No amendment to this Agreement will be binding unless in writing and executed by the parties Any amendment may be subject to City Council approval

14.5 **Remedies.** All rights and remedies provided in this Agreement are cumulative and the exercise of any one or more right or remedy will not affect any other rights or remedies under this Agreement or applicable law

14.6 **Severability.** If any provision of this Agreement is voided or found unenforceable, that determination will not affect the validity of the other provisions, and the voided or unenforceable provision will be reformed to conform to applicable law

14.7 **Counterparts.** This Agreement may be executed in counterparts, and all counterparts will together comprise one instrument

15. **Dispute Resolution.** Each claim, controversy and dispute ("Dispute") between Contractor and City will be resolved in accordance with Exhibit C The final determination will be made by the City

Project 121309

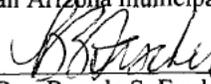
16. **Exhibits.** The following exhibits, with reference to the term in which they are first referenced, are incorporated by this reference

Exhibit A	Project
Exhibit B	Compensation
Exhibit C	Dispute Resolution

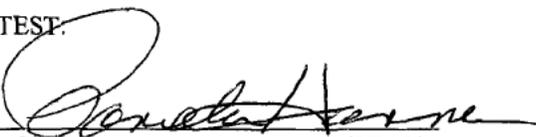
Project 121309

The parties enter into this Agreement as of the date shown above

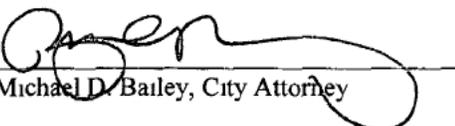
City of Glendale,
an Arizona municipal corporation


By Brenda S Fischer
Its City Manager

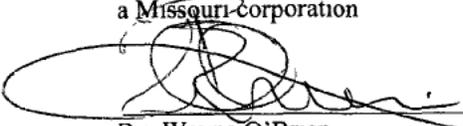
ATTEST:


City Clerk (SEAL)

APPROVED AS TO FORM


Michael D. Bailey, City Attorney

Garney Companies, Inc
a Missouri corporation


By Wayne O'Brien
Its Vice President

WOMEN-OWNED/MINORITY BUSINESS [] YES [X] NO
CITY OF GLENDALE TRANSACTION PRIVILEGE TAX NO [REDACTED]
FEDERAL TAXPAYER IDENTIFICATION NO [REDACTED]



Project 121309

**EXHIBIT A
CONSTRUCTION AGREEMENT**

PROJECT

The project includes the replacement of equipment within the WAWRF. Replacements include the plant's existing sluice gates at the inlets of aeration basins 1-2 with basins 3-4 as bid alternates. The existing chains and wear shoes on the scrapers within the plant's secondary sedimentation basins will also be replaced.

Project 121309

**EXHIBIT B
CONSTRUCTION AGREEMENT**

COMPENSATION

METHOD AND AMOUNT OF COMPENSATION

By bid, including all services, materials and costs

NOT-TO-EXCEED AMOUNT

The total amount of compensation paid to Contractor for full completion of all work required by the Project during the entire term of the Project must not exceed \$367,310

DETAILED PROJECT COMPENSATION

Base Bid	\$247,610
Bid Alternate	<u>\$119,700</u>
Total Contract Amount	\$367,310

Bid items shown in detail on Bid Schedule

EXHIBIT C

CONSTRUCTION AGREEMENT

DISPUTE RESOLUTION

1. Disputes.

- 1 1 Commitment. The parties commit to resolving all disputes promptly, equitably, and in a good-faith, cost-effective manner
- 1 2 Application The provisions of this Exhibit will be used by the parties to resolve all controversies, claims, or disputes ("Dispute") arising out of or related to this Agreement-including Disputes regarding any alleged breaches of this Agreement
- 1 3 Initiation A party may initiate a Dispute by delivery of written notice of the Dispute, including the specifics of the Dispute, to the Representative of the other party as required in this Agreement
- 1 4 Informal Resolution When a Dispute notice is given, the parties will designate a member of their senior management who will be authorized to expeditiously resolve the Dispute
- (A) The parties will provide each other with reasonable access during normal business hours to any and all non-privileged records, information and data pertaining to any Dispute in order to assist in resolving the Dispute as expeditiously and cost effectively as possible,
- (B) The parties' senior managers will meet within 10 business days to discuss and attempt to resolve the Dispute promptly, equitably, and in a good faith manner, and
- (C) The Senior Managers will agree to subsequent meetings if both parties agree that further meetings are necessary to reach a resolution of the Dispute

2. Arbitration.

- 2 1 Rules If the parties are unable to resolve the Dispute by negotiation within 30 days from the Dispute notice, and unless otherwise informal discussions are extended by the mutual agreement, the Dispute will be decided by binding arbitration in accordance with Construction Industry Rules of the AAA, as amended herein. Although the arbitration will be conducted in accordance with AAA Rules, it will not be administered by the AAA, but will be heard independently
- (A) The parties will exercise best efforts to select an arbitrator within 5 business days after agreement for arbitration. If the parties have not agreed upon an arbitrator within this period, the parties will submit the selection of the arbitrator to one of the principals of the mediation firm of Scott & Skelly, LLC, who will then select the arbitrator. The parties will equally share the fees and costs incurred in the selection of the arbitrator
- (B) The arbitrator selected must be an attorney with at least 15 years experience with commercial construction legal matters in Maricopa County, Arizona, be independent, impartial, and not have engaged in any business for or adverse to either Party for at least 10 years
- 2 2 Discovery The extent and the time set for discovery will be as determined by the arbitrator. Each Party must, however, within ten (10) days of selection of an arbitrator deliver to the other Party copies of all documents in the delivering party's possession that are relevant to the dispute
- 2 3 Hearing The arbitration hearing will be held within 90 days of the appointment of the arbitrator. The arbitration hearing, all proceedings, and all discovery will be conducted in Glendale, Arizona unless otherwise agreed by the parties or required as a result of witness location. Telephonic hearings and other reasonable arrangements may be used to minimize costs
- 2 4 Award At the arbitration hearing, each Party will submit its position to the arbitrator, evidence to support that position, and the exact award sought in this matter with specificity. The arbitrator must select the award sought

Project 121309

by one of the parties as the final judgment and may not independently alter or modify the awards sought by the parties, fashion any remedy, or make any equitable order. The arbitrator has no authority to consider or award punitive damages.

2.5 Final Decision. The Arbitrator's decision should be rendered within 15 days after the arbitration hearing is concluded. This decision will be final and binding on the Parties.

2.6 Costs. The prevailing party may enter the arbitration in any court having jurisdiction in order to convert it to a judgment. The non-prevailing party shall pay all of the prevailing party's arbitration costs and expenses, including reasonable attorney's fees and costs.

3. **Services to Continue Pending Dispute.** Unless otherwise agreed to in writing, Contractor must continue to perform and maintain progress of required services during any Dispute resolution or arbitration proceedings, and City will continue to make payment to Contractor in accordance with this Agreement.

4. **Exceptions.**

4.1 Third Party Claims. City and Contractor are not required to arbitrate any third-party claim, cross-claim, counter claim, or other claim or defense of a third-party who is not obligated by contract to arbitrate disputes with City and Contractor.

4.2 Liens. City or Contractor may commence and prosecute a civil action to contest a lien or stop notice, or enforce any lien or stop notice, but only to the extent the lien or stop notice the Party seeks to enforce is enforceable under Arizona Law, including, without limitation, an action under A.R.S. § 33-420, without the necessity of initiating or exhausting the procedures of this Exhibit.

4.3 Governmental Actions. This Exhibit does not apply to, and must not be construed to require arbitration of, any claims, actions or other process filed or issued by City of Glendale Building Safety Department or any other agency of City acting in its governmental permitting or other regulatory capacity.

INDIVIDUAL SURETIES WILL NOT BE ACCEPTED
STATUTORY PERFORMANCE BOND PURSUANT TO TITLE 34,
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES

(Penalty of this bond must be 100% of the Contract Amount)

*Western Surety Company, PO Box 5077, Sioux Falls, SD 57117-5077 & Liberty Mutual Insurance Company,
450 Plymouth Rd., #400, Plymouth Meeting, PA 19462, as Co-Sureties

KNOW ALL MEN BY THESE PRESENTS:

*SEE Above That Garney Companies, Inc. (hereinafter called the Principal), as Principal, and
, a corporation organized and existing under the laws of the State of SD & MA with its principal office in the
City of *see above, (hereinafter called the Surety), as Surety, are held and firmly bound unto the City of
Glendale, a municipal corporation, (hereinafter called the Oblige), in the amount of
Three Hundred Sixty Seven Thousand Three Hundred Ten & no/100—Dollars (\$ 367,310.00—), for the
payment whereof; the said Principal and Surety bind themselves, and their heirs, administrators, successors and
assigns, jointly and severally, firmly by these presents.

WHEREAS, The Principal has entered into a certain written contract with the Oblige, dated the 26 day of
November, 20 13, to construct **PROJECT 121309 - WEST AREA WATER RECLAMATION FACILITY**
(WAWRF) SLIDE GATES-CHAIN REPLACEMENT, which contract is hereby referred to and made a
part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall
faithfully perform and fulfill all undertakings, covenants, terms, conditions and agreements of said contract
during the original term of said contract any extension thereof, with or without notice to the Surety, and during
the life of any guaranty required under the contract and shall also perform and fulfill all the undertakings,
covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that
may hereafter be made, notice of which modifications to the Surety being hereby waived, then the above
obligation shall be void, otherwise to remain in full force and effect.

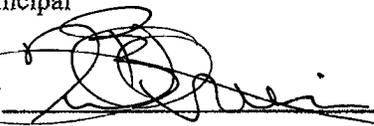
PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article
2, of the Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the
provisions of said Title, Chapter, and Article, to the extent as if it were copied at length herein.

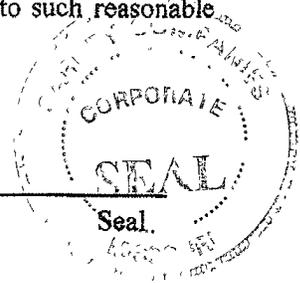
The prevailing party or any party which recovers judgment on this bond shall be entitled to such reasonable
attorney's fees as may be fixed by the court or a judge thereof.

Witness our hands this 10 day of December, 2013.

Garney Companies, Inc.

Principal

By 



Western Surety Company & Liberty Mutual Insurance Company, as Co-Sureties

Surety Linda L. Nutt Seal
by:  Linda L. Nutt
Agency of Record Attorney-in-Fact

Agency Address **THOMAS MCGEE, L.C.**
920 MAIN ST., STE. 1700
KANSAS CITY, MO 64105
Telephone Number: **816/842/4800**

INDIVIDUAL SURETIES WILL NOT BE ACCEPTED
STATUTORY PAYMENT BOND PURSUANT TO TITLE 34,
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES

(Penalty of this bond must be 100% of the Contract Amount)

*Western Surety Company, PO Box 5077, Sioux Falls, SD 57117-5077 & Liberty Mutual Insurance Company, 450 Plymouth Rd., Ste. 400, Plymouth Meeting, PA 19462, as Co-Sureties

KNOW ALL MEN BY THESE PRESENTS:

*See above That, Garney Companies, Inc. (hereinafter called the Principal), as Principal, and
, a corporation organized and existing under the laws of the State of SD & MA with its principal
office in the City of *SEE ABOVE, (hereinafter called the Surety), as Surety, are held and firmly
bound unto the City of Glendale, a municipal corporation, (hereinafter called the Obligee), in the
amount of **See below Dollars (\$367,310.00), for the payment whereof; the said Principal and
Surety bind themselves, and their heirs, administrators, successors and assigns, jointly and severally,
firmly by these presents. *Three Hundred Sixty Seven Thousand Three Hundred Ten & no/100 Dollars—

26 WHEREAS, The Principal has entered into a certain written contract with the Obligee, dated the
day of November, 20 13, to construct **PROJECT 121309 - WEST AREA WATER
RECLAMATION FACILITY (WAWRF) SLIDE GATES-CHAIN REPLACEMENT** which
contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at
length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said
Principal shall promptly pay all monies due to all persons supplying labor or materials to him or his
subcontractors in the prosecution of the work provided for in said Contract, then this obligation shall
be void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond having been required of the said Principal in order to
comply with the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes, all
rights and remedies on this bond shall inure solely to such persons and shall be determined in
accordance with the provisions, conditions, and limitations of said Title, Chapter and Article, to the
same extent as if they were copied at length herein.

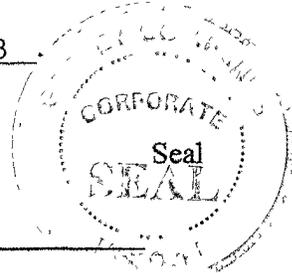
The prevailing party or any party which recovers judgment on this bond shall be entitled to such
reasonable attorney's fees as may be fixed by the court or a judge thereof.

Witness our hands this 10 day of December, 20 13

Garney Companies, Inc.

Principal

By [Signature]



Western Surety Company & Liberty Mutual Insurance Company, as Co-Sureties

Surety

Seal

[Signature]

Linda L. Nutt
Attorney-in-Fact

Agency of Record

Agency

THOMAS MCGEE, L.C.
920 MAIN ST., STE. 1700
KANSAS CITY, MO 64105
816/842/4800

Address

Telephone

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Linda L. Nutt , Individually

of Kansas City, MO its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

Surety Bond No · 58711413
Principal Garney Companies, Inc
Obligee: City of Glendale

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 10th day of August, 2012



WESTERN SURETY COMPANY

Paul T. Bruflat

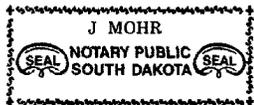
Paul T Bruflat, Vice President

State of South Dakota }
County of Minnehaha } ss

On this 10th day of August, 2012, before me personally came Paul T Bruflat, to me known, who, being by me duly sworn, did depose and say that he resides in the City of Sioux Falls, State of South Dakota, that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument, that he knows the seal of said corporation, that the seal affixed to the said instrument is such corporate seal, that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation

My commission expires

June 23, 2015



J. Mohr

J Mohr, Notary Public

CERTIFICATE

I, I Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 10th day of December, 2013



WESTERN SURETY COMPANY

L. Nelson

L Nelson, Assistant Secretary

Authorizing By-Law

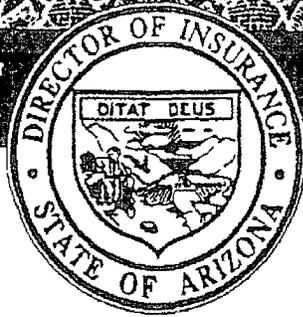
ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

STATE OF

ARIZONA



DEPARTMENT

OF INSURANCE

Phoenix, Arizona

CERTIFICATE OF AUTHORITY

IT IS HEREBY CERTIFIED, That

WESTERN SURETY COMPANY
Sioux Falls, South Dakota

has complied with the requirements of the Arizona Revised Statutes and is hereby authorized, subject to the provisions thereof and the Charter Powers of said Company, to transact the following kinds of insurance, to-wit:

SURETY
CASUALTY (EXCLUDING WORKMEN'S COMPENSATION)

within the State of Arizona until terminated at the request of the insurer or suspended or revoked by the Director of Insurance.

Arizona Revised Statute 20-217 (C) states:

A Certificate of Authority remains the property of this state. Upon termination at the request of the insurer or revocation by the Director, the insurer shall immediately deliver the Certificate of Authority to the Director.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Director of Insurance at the City of Phoenix, this 21st day of July, 1979



[Handwritten Signature]

Director of Insurance

125758

E-146 7/79

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees. To confirm the validity of this Power of Attorney call 610-832-8240 between 9.00 am and 4:30 pm EST on any business day.

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Linda L. Nutt of the city of Kansas City, state of MO its true and lawful attorney-in-fact, with full power and authority hereby conferred to sign, execute and acknowledge the following surety bond.

Principal Name: Garney Companies, Inc

Obligee Name: City of Glendale

Surety Bond Number: 674022038

Bond Amount: See Bond Form

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 1st day of December, 2012.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this 1st day of December, 2012, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute 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 have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, Notary Public, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, 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 10th day of December, 2013.



By: David M. Carey

STATE OF ARIZONA



DEPARTMENT OF INSURANCE CERTIFICATE OF AUTHORITY

I, CHARLES R. COHEN, Director of Insurance of the State of Arizona, do hereby certify that

LIBERTY MUTUAL INSURANCE COMPANY

Domiciled in Massachusetts

NAIC NO: 23043

has complied with the requirements of the Arizona Revised Statutes and is hereby authorized, subject to the provisions thereof and the Charter Powers of said Company, to transact the following kinds of insurance:

CASUALTY WITH WORKERS' COMPENSATION
DISABILITY
MARINE AND TRANSPORTATION
PROPERTY
SURETY
VEHICLE

within the State of Arizona until terminated at the request of the insurer or suspended or revoked by the Director of Insurance.

Arizona Revised Statutes § 20-217(C) states:

A Certificate of Authority remains the property of the State of Arizona. Upon termination at the request of the insurer or revocation by the Director of Insurance, the insurer shall immediately deliver the Certificate of Authority to the Director of Insurance.

In TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Director of Insurance at the City of Phoenix. The effective date of this Certificate is November 28, 2001.



Charles R. Cohen
Charles R. Cohen
Director of Insurance

E146(01A2)

0002110

CITY OF GLENDALE, ARIZONA
ENGINEERING DEPARTMENT CERTIFICATE OF INSURANCE

The Liberty Mutual Insurance

Certifies that the following insurance policies have been issued on behalf of:

Name of Insured Garney Companies, Inc.

Address of Insured 1333 NW Vivion Road, Kansas City, MO 64118

Name and Address of Additional Named Insured:

City of Glendale, Arizona
 Attention Engineering Dept.
 5850 West Glendale Avenue
 Glendale, Arizona 85301

Type of Insurance	Carrier Name	Policy No.	Effective Date	Expiration Date	Minimum Limits of Liability
(1) Workmen's Compensation and Employers Liability	Liberty Mutual Fire Ins Co	WA2-64D-426942-733	10/1/13	10/1/14	Statutory \$100,000 per occurrence
(2) Commercial General Liability including: - Explosion, Collapse & - Underground - Blanket contractual - Personal Injury - Broad Form Property Damage - Products Completed Operations	Liberty Mutual Fire Ins Co	TB2-641 426942-723	10/1/13	10/1/14	\$1,000,000 Each Occurrence Bodily Injury \$500,000 Each Occurrence Property Damage \$2,000,000 annual aggregate products completed operations
(3) Commercial Auto Liability including owned, non-owned and hired vehicles	Liberty Mutual Fire Ins Co	AS2-641 426942-713	10/1/13	10/1/14	1,000,000 Each Occurrence Bodily Injury \$500,000 Each Occurrence Property Damage
(4) Other					Each Occurrence

When the project includes construction of a new, or modification of an existing building (In addition to the above coverage) property coverage shall be maintained in the full amount of the contract naming City of Glendale as a loss payee as their interests may appear.

Type of Insurance	Carrier Name	Policy No.	Effective Date	Expiration Date	Policy Limit
(5) Fire, extended coverage, vandalism and malicious mischief					

Certificate holder is an additional insured per insurance requirements and indemnification in signed agreement, but only for the sole negligence of the insured; and/or subrogation rights are waived in favor of certificate holder.

All policies shall remain in effect after until all work has been completed, the City has issued final acceptance and until the time limit for filing against the project has passed. If any policy expires during the life of the Contract, a renewal Certificate of the required coverage shall be sent to the City of Glendale not less than five (5) days prior to expiration date. Failure of the Contractor to provide renewal certificates or the failure of the City to request renewal of certificates shall not waive the requirement and the City shall retain all rights to coverage as if the policy(ies) had not expired or been non-renewed.

It is agreed that none of these policies will be canceled or changed so as to affect this certificate until ten (10) days written notice of such cancellation or change has been delivered to the City of Glendale.

It is further agreed that:

This certificate is not valid unless countersigned by an authorized representative of the Insurance Company.

Date:

January 6, 2014

Countersigned by:

Stacy Spieker

Stacy Spieker
Signature

6800 College Blvd., Ste. 700

Overland Park, KS 66210

Agency Address

Contact Name: Stacy Spieker

Telephone # 913-681-1700

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Not applicable in KY.

Schedule

Where required by contract or written agreement prior to loss and allowed by law.

In the states of Alabama, Arizona, Arkansas, Colorado, Georgia, Indiana, Kansas, Mississippi, Missouri, New Mexico, Oklahoma, South Carolina, West Virginia the premium charge is 0.00% of the total manual premium, subject to a minimum premium of \$0 per policy.

In the states of Florida, Iowa, Nebraska the premium charge is 1% of the total manual premium subject to a minimum premium of \$250 per policy.

In the state of North Carolina the premium charge is 2% of the total manual premium subject to a minimum premium of \$100 per policy.

In the state of Tennessee No Premium Charge

In the state of Virginia the premium charge is 5.00% of the total manual premium, subject to a minimum premium of \$250 per policy.

Issued by Liberty Mutual Fire Insurance Company 16586

For attachment to Policy No. WA2-64D-426942-733 Effective Date Premium \$

Issued to Garney Companies, Inc.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

**COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART**

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

SCHEDULE

**Name Of Additional Insured Person(s)
Or Organization(s):**

Location And Description Of Completed Operations

Any owner, lessee, or contractor for whom you have agreed in writing prior to a loss to provide liability insurance

Any location listed in such agreement

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):

Location(s) Of Covered Operations

Any owner, lessee, or contractor for whom you have agreed in writing prior to a loss to provide liability insurance

Any location listed in such agreement

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED FOR COVERED AUTOS LIABILITY COVERAGE

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" for Covered Autos Liability Coverage under the Who Is An Insured provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

SCHEDULE

Name Of Person(s) Or Organization(s):

Any person or organization whom you have agreed in writing to add as an additional insured, but only to coverage and minimum limits of insurance required by the written agreement, and in no event to exceed either the scope of coverage or the limits of insurance provided in this policy.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Each person or organization shown in the Schedule is an "insured" for Covered Autos Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Paragraph A.1. of Section II - Covered Autos Liability Coverage in the Business Auto and Motor Carrier Coverage Forms and Paragraph D.2. of Section I - Covered Autos Coverages of the Auto Dealers Coverage Form.

Policy Number TB2-641-426942-723
issued by Liberty Mutual Fire Insurance Co.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET ADDITIONAL INSURED

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

SECTION II - WHO IS AN INSURED is amended to include as an insured any person or organization for whom you have agreed in writing to provide liability insurance. But:

The insurance provided by this amendment:

1. Applies only to "bodily injury" or "property damage" arising out of (a) "your work" or (b) premises or other property owned by or rented to you;
2. Applies only to coverage and minimum limits of insurance required by the written agreement, but in no event exceeds either the scope of coverage or the limits of insurance provided by this policy; and
3. Does not apply to any person or organization for whom you have procured separate liability insurance while such insurance is in effect, regardless of whether the scope of coverage or limits of insurance of this policy exceed those of such other insurance or whether such other insurance is valid and collectible.

The following provisions also apply:

1. Where the applicable written agreement requires the insured to provide liability insurance on a primary, excess, contingent, or any other basis, this policy will apply solely on the basis required by such written agreement and Item 4. Other insurance of SECTION IV of this policy will not apply.
2. Where the applicable written agreement does not specify on what basis the liability insurance will apply, the provisions of Item 4. Other insurance of SECTION IV of this policy will govern.
3. This endorsement shall not apply to any person or organization for any "bodily injury" or "property damage" if any other additional insured endorsement on this policy applies to that person or organization with regard to the "bodily injury" or "property damage".
4. If any other additional insured endorsement applies to any person or organization and you are obligated under a written agreement to provide liability insurance on a primary, excess, contingent, or any other basis for that additional insured, this policy will apply solely on the basis required by such written agreement and Item 4. Other insurance of SECTION IV of this policy will not apply, regardless of whether the person or organization has available other valid and collectible insurance. If the applicable written agreement does not specify on what basis the liability insurance will apply, the provisions of Item 4. Other insurance of SECTION IV of this policy will govern.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

The following is added to Paragraph 8. Transfer Of Rights Of Recovery Against Others To Us of Section IV - Conditions:

We waive any right of recovery we may have against the person or organization shown in the Schedule below because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule below.

SCHEDULE

Name Of Person Or Organization:

As required by written contract or agreement entered into prior to loss

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Policy Number: AS2-641-426942-713
Issued by: Liberty Mutual Fire Insurance Co.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED - NONCONTRIBUTING

This endorsement modifies insurance provided under the following:

**BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIERS COVERAGE FORM
TRUCKERS COVERAGE FORM**

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage form.

Schedule

Name of Person(s) or Organizations(s):

Any person or organization whom you have agreed in writing to add as an additional insured, but only to coverage and minimum limits of insurance required by the written agreement, and in no event to exceed either the scope of coverage or the limits of insurance provided in this policy.

Regarding Designated Contract or Project:

Each person or organization shown in the Schedule of this endorsement is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in Section II of the Coverage Form.

The following is added to the Other Insurance Condition:

If you have agreed in a written agreement that this policy will be primary and without right of contribution from any insurance in force for an Additional Insured for liability arising out of your operations, and the agreement was executed prior to the "bodily injury" or "property damage", then this insurance will be primary and we will not seek contribution from such insurance.

CITY OF GLENDALE, ARIZONA
PUBLIC WORKS/ENGINEERING DEPARTMENT

CONTRACTOR'S AFFIDAVIT
REGARDING
SETTLEMENT OF CLAIMS

**PROJECT 121309 - WEST AREA WATER RECLAMATION FACILITY (WAWRF) SLIDE
GATES-CHAIN REPLACEMENT**

To the City of Glendale, Arizona

Gentlemen:

This is to certify that all lawful claims for materials, rental of equipment and labor used in connection with the construction of the above project, whether by subcontractor or claimant in person, have been duly discharged.

The undersigned, for the consideration of \$ _____, as set out in the final pay estimate, as full and complete payment under the terms of the contract, hereby waives and relinquishes any and all further claims or right of lien under, in connection with, or as a result of the above described project. The undersigned further agrees to indemnify and save harmless the City of Glendale against any and all liens, claims of liens, suits, actions, damages, charges, costs, litigation expenses, attorneys' fees and any other and expenses whatsoever, which said City may suffer arising out of the failure of the undersigned to pay for all labor performance and materials furnished for the performance of said installation.

Signed and dated at _____, this ____ day of _____, 20__.

Contractor

By _____

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

The foregoing instrument was subscribed and sworn to before me this ____ day of _____, 20

Notary Public

My Commission Expires: _____

SUPPLEMENTAL GENERAL CONDITIONS

1. GENERAL: By Ordinance No. 1110 New Series, the City of Glendale adopted the "Uniform Standard Specifications for Public Works Construction," which are sponsored and distributed by the Maricopa Association of Governments. Copies of these documents, with revisions, are on file in the office of the City Engineer of the City of Glendale, and are hereby made a part of these Contract Documents.

Whenever in the Uniform Standard Specifications, the words "The Contracting Agency" are used, the meaning shall be the City of Glendale.

In all cases where ASTM, AASHTO, AWWA, USAG, Federal, City of Phoenix, MAG Specifications, Maricopa County, Arizona State Highway, City of Glendale or other standard specifications are referred to, unless otherwise stated, revisions, supplements or addenda issued on or before the date of this contract, shall prevail. In the event of any conflict between these project specifications and the requirements of the plans, detail drawings, MAG Standard Details and Specifications, these project specifications shall prevail.

2. DEFINITIONS: The following terms, as used in or pertaining to the Contract Documents, are defined as follows:

CITY: The word "City" refers to the City of Glendale, Arizona. The official representative of said City in these proceedings shall be the City Engineer.

CONTRACTOR: The word "Contractor" means the person, firm, or corporation with whom the Contract is made by the City.

MATERIALS: The term "Materials" includes, in addition to materials incorporated in the project, equipment and other material used and/or consumed in the performance of the work.

SUBCONTRACTOR: The word "Subcontractor" includes those having a direct contract with the Contractor and those who furnish material worked to a special design according to the plans and/or specifications for this work, but does not include those who merely furnish materials not so worked.

ENGINEER: The word "Engineer" means a person, firm or corporation duly authorized by the City, to act for the City in staking out the work, inspecting materials and construction, and interpreting plans and specifications.

CONTRACT DOCUMENTS: The words "Contract Documents" mean the Notice to Contractors, Information for Bidders, "Uniform Standard Specifications for Public Works Construction," MAG General Conditions, Supplemental General Conditions, Special Provisions, Supplemental Specifications, Proposal, Contract, Payment Bond, Performance Bond, Certificates of Insurance, Plans and Addenda thereto.

3. PROPOSAL QUANTITIES: It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and material to be furnished under this Contract, which have been estimated as stated in the Proposal, are only approximate and are to be used SOLELY for the purpose of comparing, on a consistent basis, the proposals offered for the work under this Contract; and the Contractor further agrees that the City will not be held responsible if any of the quantities shall be found incorrect; and the Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or mis-statement is found to occur in the estimated quantities, the same shall not invalidate this Contract or release the Contractor from the execution and completion of the whole or any part of the work in accordance with the specifications and the plans herein mentioned, or for the prices herein agreed upon and fixed therefore, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation except as may be provided for in this Contract.

4. WITHDRAWAL OF PROPOSALS: No proposal shall be withdrawn following the opening and reading of the bids for a period of 50 days from the date of opening without the consent of the contracting agency through the body or agent duly authorized to accept or reject the proposal.

5. LOSSES AND DAMAGES: All loss or damage arising out of the nature of the work to be done or from the action of the elements, or from any unforeseen circumstances in the prosecution of the same, or from any unusual obstructions or difficulties which may be encountered in and/or during the prosecution of the work, or from any casualty whatsoever of every description, shall be sustained and borne by the Contractor at his own cost and expense except as otherwise provided by the contract documents or the laws of the State of Arizona.

6. DUST PREVENTION: The Contractor shall take whatever steps, procedures or means required to prevent abnormal dust conditions due to his construction operations in connection with this contract. The dust control measures shall be maintained at all times during construction of the project, to the satisfaction of the Engineer, in accordance with the requirements of the "Maricopa County Health Department Air Pollution Control Regulations" which have been adopted pursuant to A.R.S. § 36-779.

The Contractor shall be required to obtain the necessary permit from the Maricopa County Air Pollution Control Bureau, 1001 N. Central Ave., Phoenix, Arizona 85004 - telephone (602) 506-6727.

7. EXCESS MATERIAL: Excess material shall be removed from the work site and wasted at a location approved by the Engineer. Broken concrete and asphalt may be delivered to the Glendale Sanitary Landfill located at 115th Avenue and Glendale Avenue. The prevailing regulations and fee schedule will not be waived for work under this project. All materials, to be disposed of at the landfill, shall be weighed and disposed of at the prevailing rate.

8. STOCKPILE OF MATERIALS: The Contractor may place or stockpile materials in the public right-of-way, if approved by the Engineer, provided they do not prevent access to adjacent properties or prevent compliance with traffic regulations.

Traffic shall not be required to travel over stockpiled materials, and proper dust control shall be maintained.

9. REFUSE COLLECTION ACCESS: At any time the project construction shall require the closure or disruption of traffic in any roadway, alley, or refuse collection easement such that normal refuse collection will be interfered with, the Contractor shall, at least 48 hours prior to causing such closure or disruption, make arrangements with the Field Operations Department in order that refuse collection service can be maintained.

10. CLEAN-UP: After all work under this contract is completed, the Contractor shall remove all loose concrete, lumber, wire, reinforcing, debris, and other materials not incorporated in the work, from the site of the work. Clean-up shall include the removal of all excess pointing mortar materials within pipes and removal of over-size rocks and boulders left after finish grading. The contractor shall provide for the legal disposal of all waste products, debris, etc., and shall make necessary arrangements for such disposal.

11. SHOP DRAWINGS: The Contractor shall provide shop drawings as may be necessary for the prosecution of the work as required by the contract documents. The Engineer shall promptly review all shop drawings. The Engineer's approval of any shop drawing shall not release the Contractor from responsibility for deviations from the contract documents. The approval of any shop drawing which substantially deviates from the requirements of the contract documents shall be evidenced by a change order.

When submitted for the Engineer's review, shop drawings shall bear the contractor's certification that he has reviewed, checked, and approved the shop drawings and that they are in conformance with the requirements of the contract documents.

Portions of the work requiring a shop drawing or sample submission shall not begin until the shop drawing or sample submission has been approved by the Engineer. A copy of each approved shop drawing and each approved sample shall be kept in good order by the Contractor at the site and shall be available to the Engineer.

12. PROTECTION OF FINISHED OR PARTIALLY FINISHED WORK: The Contractor shall properly guard and protect all finished or partially finished work, and shall be responsible for the same until the entire contract is completed and accepted, in writing, by the City. The Contractor shall turn over the entire work in full accordance with the specifications before final settlement shall be made.

13. STATUS OF EMPLOYEES: Contractor shall be responsible for assuring the legal working status of its employees and its subcontractor's employees.

14. LAWS AND REGULATIONS: This Contract shall be governed by and constructed in accordance with the laws of the State of Arizona. The Contractor shall keep himself fully informed of all existing and future City and County Ordinances and Regulations and State and Federal Laws and Occupational Safety and Health Standards (OSHA) in any manner affecting the work herein specified. He shall at all times observe and comply with said Ordinances, Regulations, or Laws.

15. PERMITS: The City has obtained certain required permits which are included in the project specifications, but it will be the duty of the Contractor to determine that all the necessary permits have been obtained. The Contractor shall, at his own expense, obtain all required permits which have not been furnished by the City. A no-fee permit will be issued for work in the City of Glendale right-of-way and easement. (Also see Paragraph 7. Dust Prevention.)

16. ELECTRIC POWER AND WATER: The Contractor shall make his own arrangements for electric power and water. Subject to the convenience of the City, he may be permitted to connect to existing facilities where available, but he shall meter and bear the cost of such power or water. Fire hydrant meters may be obtained from the City of Glendale. Installation and removal of meters should be scheduled through the City's Water Services/Utilities Division at 930-2700. For details and current rates, please visit <http://www.glendaleaz.com/CrossConnection/firehydrantmeterprogram.cfm>.

17. SURVEY CONTROL POINTS AND MONUMENTS: Existing survey monuments indicated on the plans or found during construction shall be protected by the Contractor, and in the event removal is necessary, removal and replacement shall be performed by permission of the Engineer, under direct supervision of the Engineer or his authorized representative. Survey monuments shall be constructed to conform to the requirements of MAG Specifications, Section 405, and Standard Details.

18. EXISTING UTILITIES: The Contractor is hereby advised that the location of all utilities, as shown on the plans, may not be complete nor exact and the Contractor shall satisfy himself as to the exact location of the utilities by contacting Blue Stake or the utility companies before proceeding with the work. After the underground utilities are located by Blue Stake or the utility company, the contractor shall excavate in a careful and prudent manner to prevent unwillful damage to the underground utilities.

In the event the Contractor or its Subcontractor damages an existing, properly identified underground City of Glendale water or sewer line, the Contractor shall be responsible for the repairs at its expense.

The exact location of all existing underground service utilities, whether or not indicated on the plans, shall be determined by the Contractor at no expense to the City, and he shall conduct his work so as to prevent interruption of service or damage to them.

The Contractor shall protect existing utility services and be responsible for their replacement if damaged by him, or to make necessary adjustment in their location, if required, in order to complete the work for his Contract.

Utility companies and other interested parties have been provided with construction plans and the

construction schedule for this project. The Contractor shall comply with MAG Specifications 105.6 to cooperate with the utility companies.

19. MAINTENANCE OF IRRIGATION FACILITIES: Where irrigation facilities interfere with construction, the Contractor shall remove and replace the affected irrigation facilities to its original condition. Final acceptance of replaced facilities will depend upon final approval of the Engineer

20. OVERHEAD UTILITY LINES AND POLES: Contractor is advised that when work around overhead lines and poles is required on a project the Contractor is required to coordinate with Utility Companies who own and operate overhead lines and poles. The coordination may include, but not be limited to the following activities: pole bracing, de-energizing of lines, and temporary relocations. Contractor is responsible to contact the applicable Utility Company representative and discuss his proposed construction methods; in order to determine what actions the Utility Company must take and the costs related to those actions. The Contractor shall include these costs in the applicable bid items for this project.

The primary and the backup representatives for this review and cost determinations are as follows:

Arizona Public Service:	Mr. Bobby Garza	602-371-7989
Qwest:	Mr. Ron Floyd	602-630-1932
Salt River Project:	Mr. Tim Rinn	602-236-8694
Salt River Project:	Ms. Mariann Ward	602-236-6389
Cox Communications:	Mr. Ron Pint	623-328-3529
Cox Communications:	Ms. Linda Facio	623-328-3500

21. SOUTHWEST GAS FACILITIES EXPOSED DURING CONSTRUCTION: The Contractor, upon exposing a gas line during construction, shall call SOUTHWEST GAS at 602-271-4277. The Southwest Gas patrolman will respond, usually within an hour, to inspect the line. Minor cuts or abrasions to the pipe coating will be rewrapped and tracer wire will be reconnected at no cost to the City.

22. UNDERGROUND UTILITIES' BEDDING: All water, sewer, storm drain, irrigation and other conduits installed within the City of Glendale shall be bedded from bottom of excavation to one foot above the pipe with granular bedding material meeting the requirements of Section 601.4.6 of MAG Uniform Standard Specifications. The initial bedding under the pipe shall follow City of Glendale Detail G-690.

23. SEWER SERVICE LINES: The Contractor shall be responsible for locating, and protecting from damage during construction, all sewer service lines within the project which are not owned by the City. Contractor will be permitted to review the "as-builts" to assist Contractor in locating the non-City owned sewer service lines. These "as-builts" were prepared, and supplied to the City, by private developers or contractors who installed the non-City owned sewer service lines. Therefore, the City does not guarantee or warranty the accuracy of such "as-builts" and the contractor, as a condition for being allowed to review such "as-builts", hereby agrees to hold the City harmless for any and all damages or other expenses contractor may incur as a result of any inaccuracies or incorrect information in these "as-builts".

24. RIGHTS-OF-WAY: The City will provide rights-of-way and easements for all work specified in this Contract, and the Contractor shall not enter or occupy with man, tools, equipment or materials any private ground outside the property of the City of Glendale, Maricopa County, Arizona, without the consent of the property owner.

25. SUBCONTRACTS: Subcontracts shall be in accordance with, and the Contractor shall be bound by, the following provisions:

All subcontracts shall be subject to the approval of the City.

All subcontracts shall be in writing and shall provide that all work to be performed thereunder shall be performed in accordance with the terms of the Contract.

Certified copies of any and all subcontracts shall be furnished to the City Engineering Department; however, prices may be omitted.

Subcontracts shall conform to the regulations governing employment of labor.

The subcontracting of any part of the work will in no way relieve the Contractor of his responsibility under the Contract.

26. **PRE-CONSTRUCTION CONFERENCE:** After completion of the Contract Documents, to include bonds, insurance and signatures, and prior to the commencement of any work on the project, the Engineer will schedule a Pre-Construction Conference. This will be held at the City of Glendale, 5850 West Glendale Avenue, Glendale, Arizona.

The purpose of this Conference is to establish a working relationship between the Contractor, Utility Companies, and the Engineer. The agenda will include critical elements of the construction schedule, procedures for handling shop drawings and other submittals, cost breakdown of major lump sum items, payment application and processing, coordination with the involved utility companies, emergency telephone numbers for all representatives involved in the course of construction, and establishment of the Notice to Proceed date.

Minimum attendance by the Contractor shall be a responsible official of the company/corporation, who is authorized to execute and sign documents on behalf of the company/corporation.

27. **OVERTIME:**

Regular Work Hours: The work required to be performed by the Plans and Specifications for the Project shall be performed only during regular working hours, unless the City has authorized overtime work in accordance with the procedures set forth below. Regular working hours shall be defined as one 8-1/2 hour shift per day, Monday through Friday, or, upon prior approval of the City, one 10-1/2 hour shift per day on a compressed four day work week during Monday through Friday. Regular working hours shall not include Saturdays, Sundays or City recognized legal holidays.

Authorization and Costs: If the Contractor desires to schedule work for times other than regular work hours (overtime), the Contractor shall make a written request to the City at least two business days prior to the scheduled overtime. The City reserves the right to deny the request to work overtime based on the best interest and needs of the City. If an overtime request is denied, the City may, at its sole discretion, extend the contract time at no additional costs to the City.

In the event the Contractor does perform work overtime, with or without the prior approval of the City, the Contractor shall be responsible to the City for all additional costs that may be incurred by the City as a result of the Contractor's overtime work, including costs for engineering, inspections, testing, surveying and construction administration, all in accordance with MAG Section 108.5. However, the Contractor shall not be responsible for City's costs incurred as a result of overtime work requested by the City or overtime work resulting from an emergency which is not the responsibility of the Contractor or its employees, subcontractors or suppliers. The City's cost will be billed directly to the Contractor or may, at the City's option, be deducted from monies due the Contractor.

28. **CONTRACTOR'S CONSTRUCTION SCHEDULE:** Concurrently, with the execution of the contract and prior to the pre construction conference, the Contractor shall submit a preliminary schedule for the Engineer's review and acceptance. The schedule shall be in sufficient detail to allow the Engineer to determine if the proposed schedule will conform to an acceptable program of construction operations, as determined by the contracting agency. Within ten calendar days after the preliminary schedule, described above, has been accepted by the Engineer, the Contractor shall submit a progress schedule, utilizing the critical path method scheduling technique, showing the order in which he proposes to carry out the work, the dates on which he will start each phase of the work, and the contemplated date for completion of each phase. The Contractor shall not be permitted to commence construction until the schedule complying with this paragraph has been submitted to the

City. The Contractor will not be granted any extension to the contract time or compensation for any damages as a result of the City's refusal to allow Contractor to commence construction until the critical path method progress schedule has been submitted and accepted by the Engineer.

The critical path method (CPM) scheduling technique requires a breakdown of the entire work into individual tasks and an analysis of the number of days required to perform each task. The schedule submitted to the City should highlight and identify the critical path for the project. After the work is in progress, the Contractor shall submit supplementary progress schedules, using the critical path method technique, of the progress to date and projection for completion. The supplementary progress schedules shall be submitted with each pay request in accordance with the paragraph, "Payments to Contractors," of these Supplemental General Conditions. The progress schedules shall be subject to the acceptance of the Engineer. In the event the Contractor fails to submit a supplementary progress schedule acceptable to the Engineer, the City may withhold further progress payments to the Contractor until the Contractor submits an acceptable supplementary progress schedule, which is accepted by the Engineer, to the City. Schedule changes requiring an increase in the City's engineering personnel on the project shall not be put into effect until the Engineer has approved such increase and made arrangements for the required additional personnel.

29. CHARACTER OF WORKMEN: None but skilled foremen and workmen shall be employed on work requiring special qualifications. When required by the Engineer, the Contractor shall discharge any person who is, in the opinion of the Engineer, disorderly, dangerous, insubordinate, incompetent, or otherwise objectionable. The Contractor shall keep the City harmless from damages or claims for compensation that may occur in the enforcement of this section of the specifications.

30. HINDRANCES AND DELAYS: Except as otherwise provided herein, no charge shall be made by the Contractor for hindrances or delays from any cause during the progress of the work embraced in this Contract; but such delays, if due to no fault or neglect of the Contractor, shall entitle the Contractor to an extension of time allowed for completing the work, sufficient to compensate for the delay, the amount of the delay to be determined by the Engineer, provided the Contractor shall give said Engineer immediate notice in writing of the cause of such delay.

30.1 Delay: In the event of a delay for which the City is solely responsible, which is unreasonable under the circumstances and which was not within the contemplation of City and Contractor at the time this Contract is executed, City and Contractor shall negotiate, in good faith, a payment by the City to Contractor for the expenses incurred by Contractor as a result of such delay, in accordance with the City of Glendale Engineering Department's POLICY STATEMENT FOR CALCULATING DELAYS AND DAMAGES. This provision shall not be construed to void any provision in the contract which requires notice of delay or provides for liquidated damages. However, if the delay is the result of any act or neglect of a third party, including the architect, engineer or other contractor employed by the City, or by labor disputes, fire, unusual delay in transportation, adverse weather conditions not reasonably foreseeable, unavoidable casualties, or any causes beyond the Contractor's control, the Contractor shall not be entitled to any payments or compensation for expenses incurred as a result of such delay, but the Contract Time shall be extended by Change Order for such reasonable time as the Engineer may determine. No extension or compensation will be granted for any delay which is the result, wholly or partially, of any act or neglect of Contractor or any Subcontractor hired by Contractor.

31. LIQUIDATED DAMAGES:

31.1 Should the contractor fail to substantially complete the work under this contract within the time for completion stated in the paragraph "Time of Completion," in the Information for Bidders, then the contractor shall pay the City of Glendale, Arizona, liquidated damages, pursuant to the provisions of Section 108.9, Standard Specifications for Public Works Construction, Maricopa Association of Governments, until the work is substantially complete.

31.2 Should the contractor fail to fully and finally complete the work under this contract within the time for completion set forth in the paragraph "Time of Completion," in the Information for Bidders, even though the contractor has achieved substantial completion of the work within such time, then the

contractor shall pay the City of Glendale, liquidated damages (pursuant to the provisions of Section 108.9, Standard Specifications for Public Works Construction, Maricopa Association of Governments), in an amount equal to 100% of the applicable liquidated damage rate set forth in MAG Section 108.9 for each and every calendar day of delay until the work is fully and finally complete and accepted.

31.3 The date of substantial completion shall be the date when the work is sufficiently complete, in accordance with the contract documents, so the owner can fully occupy and utilize the work or designated portion thereof for the use for which it is intended, with all the project's parts and systems operable as required by the contract documents and all the work is complete, accessible, operable, and usable by the owner for its intended purpose(s), and all parts, systems and sitework are 100% complete and cleaned for the owner's use. Only incidental corrective work and final cleaning (if required), beyond cleaning needed for the owner's full use, may remain for final completion.

31.4 Full and final completion shall be that date when all work under the project, including incidental corrective work under punch list and final cleaning, has been completed and the entire project is accepted by the owner.

32. PAYMENTS TO CONTRACTOR: The measurements of quantities and the payments to the Contractor shall be in accordance with MAG Uniform Standard Specifications for Public Works Construction, Part 100 - General Conditions, Section 109 - Measurements and Payments.

Payments will be made on the basis of itemized, monthly statements prepared by the City and signed by the Contractor. The Contractor shall submit an itemized, duly certified and approved estimate for work completed through the last day of the preceding month in accordance with MAG Specifications, as amended by these Supplemental General Conditions. Upon approval of the pay estimate, the City will mail the check directly to the Contractor.

The pay estimate shall be accompanied by an updated progress schedule as required by these Supplemental General Conditions and a cash flow report when required by the Special Provisions. Approval of progress payments shall be conditional upon submittal of progress schedules and cash flow reports, when required, which are acceptable to the Engineer.

Upon 100% completion and acceptance of the project, and with the request for final payment, the Contractor shall complete and submit the "Contractor's Affidavit Regarding Settlement of Claims" form which is included in these specifications. Before final payment and release of retention, Contractor must arrange for its Surety to provide the City with a fully executed AIA Consent of Surety form. To avoid delays in the final payment, the Surety may send the Consent of Surety directly to the City via fax at (623) 915-2861, and mail the original to the City of Glendale Engineering Department, 5850 West Glendale Avenue, Glendale, Arizona 85301. Should any ambiguity arise between the Contract and these Conditions, the provisions of the Contract shall prevail.

33. WARRANTY: This project shall have a 2 year warranty. The warranty period shall begin upon final acceptance of the work by the City of Glendale.

END OF SUPPLEMENTAL GENERAL CONDITIONS

SPECIAL PROVISIONS

1. **SCOPE OF WORK:** The proposed project includes the replacement of equipment within the WAWRF. Replacements include the plants existing sluice gates at the inlets of aeration basins 1-2 with basins 3-4 as bid alternates. The existing chains and wear shoes on the scrapers within the plant's secondary sedimentation basins will also be replaced.

2. **DEFINITIONS:**

A. Section: Reference to a Section on the plans or in these Specifications shall mean a Section of the Uniform Standard Specifications for Public Works Construction, sponsored and distributed by Maricopa Association of Governments (MAG), latest revision. The provisions of MAG Uniform Standard Specifications and Details for Public Works Construction, which are not altered or modified by the drawings or by these Special Provisions or by any subsequently issued Addendum, shall apply to the contract even though the Contractor's attention is not specifically drawn to such provisions.

B. Standard Detail: Reference to a MAG Standard Detail (MAG S.D.) on the plans or in these specifications shall mean a standard detail drawing in the latest revision of the Uniform Standard Specifications for Public Works Construction, sponsored and distributed by Maricopa Association of Governments. City of Glendale Standard Detail (C.O.G. S.D.) shall mean a standard detail drawing in the City of Glendale's Engineering Design and Construction Standards, latest revision. City of Phoenix Standard Detail (C.O.P. S.D.) shall mean a standard detail drawing in the Phoenix Supplemental Standard Details for Public Works Construction, latest revision.

3. **CONSTRUCTION SURVEYING AND LAYOUT:** The work under this item shall consist of furnishing all materials, personnel, equipment, and traffic control necessary to perform all surveying, staking, and verification of the accuracy of all control points per the plans and as directed by the Engineer. Included in this work shall be all calculations required for the satisfactory completion of the project in conformance with the plans and these Special Provisions. The work shall be done under the direction of a registered professional engineer or a registered land surveyor employed by the Contractor. The crew chief shall be NICET Certified Level III or a registered land surveyor. The Contractor shall furnish all equipment, materials and other devices necessary for establishing, checking, marking and maintaining points, lines, grades and layouts

Throughout the work, the Contractor shall set all stakes including, but not limited to; centerline stakes; offset stakes; reference point stakes; slope stakes; pavement lines, curb lines and grade stakes at intervals not greater than 25 feet; stakes for sewers, roadway drainage, pipe, under drains, clearing, paved gutter, fence, right of way markers, and survey monuments; blue tops of subgrade, subbase and base courses at intervals not greater than 50 feet, permanent as-built elevation marks; and all other horizontal or vertical controls necessary for complete and accurate layout and construction of the work. Stakes for horizontal and vertical curves shall be set at intervals appropriate for the length of curve. The coordinates of any new control points established by the Contractor during the course of the work shall be given to the Engineer within five working days of control point establishment.

Field notes shall be kept in standard field notebooks furnished by the Contractor. Field notes shall be kept in a clear, orderly and neat manner consistent with standard surveying practices. The standard field notebooks or copies of, shall be made available to the Engineer upon request at any time during the prosecution of the work.

When utility adjustments are a part of the contract, the Contractor shall perform all layout work and set all control points, stakes and references necessary for carrying out all such adjustments.

The Contractor shall cross-section all fill areas for monthly, quantity estimates and as directed by the Engineer. The Engineer may verify the accuracy of same. The Engineer shall check all measurements that involve determination of final quantities.

Any errors, omissions or discrepancies in the project plans shall be immediately brought to the attention of the Engineer. The Contractor shall promptly notify the Engineer in writing, explaining the problem in detail. The Engineer will advise the Contractor within three working days of any corrective actions deemed necessary. No changes in the project plans will be allowed without the approval of the Engineer.

The Contractor shall be compensated for additional work associated with survey and layout when:

- A. The project plans do not provide sufficient information and new calculations must be performed.
- B. The Contractor performs survey work based on erroneous plan information, which results in the duplication of work.
- C. Changes by the Engineer to the plan information for which the Contractor has already performed the work and results in the duplication of such work.

The Contractor shall not be due compensation for any survey work when:

- A. Information provided on the plans is sufficiently complete to allow any additional information necessary for the complete layout of the work to be routinely calculated.
- B. The Contractor fails to inform the Engineer of discovered plan errors before the performance of any extra survey work.
- C. Work is included in any other pay item.

The Contractor shall inform the Engineer in a timely manner of any omissions, ambiguities, or errors which the Contractor feels may result in extra calculations or survey work, so as not to delay the project or create any unnecessary calculations.

All additional survey work shall be documented by the Contractor and verified by the Engineer before compensation may be granted. Documentation shall consist of a detailed diary specifically addressing the work involved in the alleged problem area. The Contractor may be required to provide calculations, charts, graphs, drawings, or any other physical evidence, which will verify additional work.

The Contractor shall be responsible for verifying curb and gutter grades before placement of concrete using a steel straightedge, string line or other method approved by the Engineer. The field verification shall be performed in the presence of the Engineer or designated representative.

The Engineer reserves the right to make inspections and random checks of the staking and layout. Inspection or acceptance of all or any part of the Contractor's staking and layout by the Engineer does not relieve the Contractor of full responsibility to secure the proper dimensions, grades and elevations of the work.

If, in the Engineer's opinion, the work is not being performed in a manner that will assure proper controls and accuracy, the Engineer will order any or all of the staking and layout work redone at no additional cost to the City. If any portion of the Contractor's staking and layout work is ordered

redone and requires additional rechecking by the Engineer, the City shall be reimbursed for all costs for such additional checking. The amount of such costs will be deducted from the Contractor's monthly estimate.

The Contractor shall provide final "as-constructed" field surveying, including both vertical and horizontal data based on the finished work. The Contractor shall also furnish final Record Drawings for all improvements. The Record Drawings shall be prepared by a Registered Land Surveyor and submitted to the Owner for approval prior to final acceptance of the project. The Record Drawings shall be prepared on a set of reproducible copies of the construction plans. The completed drawings shall be signed and sealed by the Registered Land Surveyor responsible for obtaining the As-built information and preparing the Record Drawings.

All survey field books and documentation shall be available for inspection by the Engineer.

Payment for this item will be made at the contract lump sum price fully complete for **M1058000 CONSTRUCTION SURVEYING AND LAYOUT.**

4. **SUSPENSION OF WORK:** The Engineer reserves the right to suspend the work wholly or in part if deemed necessary for the best interest of the City. This suspension will be without compensation to the Contractor, other than to adjust the contract time in accordance with MAG Section 108.

5. **COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS:** In all instances wherein the item and/or specifications require installation or construction in accordance with either manufacturer's or supplier's recommendations and/or instructions, said recommendations and/or instructions shall be submitted with the applicable portions clearly marked for approval prior to the commencement of work on that item or portion of the contract.

6. **ENERGIZED AERIAL ELECTRICAL POWER LINES:** The utility company maintains energized aerial electrical power lines in the immediate vicinity of this project. Do not consider these lines to be insulated. Construction personnel working in proximity to these lines are exposed to an extreme hazard from electrical shock. Contractors, their employees, and all other construction personnel working on this project must be warned of the danger and instructed to take adequate protective measures, including maintaining a minimum ten (10) feet clearance between the lines and all construction equipment and personnel. (See: OSHA Standard 1926.550(a)15.) As an additional safety precaution, Contractors should also be instructed to call the utility company to arrange, if possible, to have these lines de-energized or relocated when the work reaches their immediate vicinity. The cost of such temporary arrangements would be borne by the Contractor. The utility company can often respond to such requests if two days advance notice is given, but some situations may require up to sixty (60) days lead time for relocation or other arrangements.

7. **RECORD DRAWINGS.** The Contractor shall maintain one set of contract drawings with all changes, deviations, additions and deletions clearly marked thereon. Upon completion of the work, this set of drawings, shall be marked "RECORD DRAWINGS," dated, and delivered to the Engineer prior to approval of the Contractor's final payment request.

8. **CASH FLOW REPORT:** The Contractor shall prepare a Cash Flow Report for projected monthly project cash flow on a City provided form and submit it for approval prior to issuance of the Notice to Proceed. The accumulation of monthly pay estimate costs shall be plotted versus time in accordance with the proposed construction schedule. After approval, the Contractor shall submit an updated Cash Flow Report prior to the receipt of each Progress Payment. Each updated Cash Flow Report shall reflect the Contractor's actual monthly payment versus the actual elapsed contract time.

At the City's request, if the projected quarterly project cash flow varies by more than ten percent of the total contract price, the Contractor shall prepare a revised Cash Flow Report. Each revised Cash Flow Report is subject to approval by the City prior to issuance of the progress payment.

Revisions to the report resulting from Contractor initiated delays or work schedule changes shall be at no cost to the City. Any revisions required by City initiated delays or changes to the work shall be paid as an integral part of the approved Change Order.

9. ALLOWANCE FOR CONSTRUCTION CONTINGENCIES: Bid schedule includes a lump sum contingency allowance. This allowance is at all times the property of the City and is for the sole purpose of reimbursing Contractor for any unforeseen work not apparent at the time of bidding or additional work requested by the CITY OF GLENDALE.

No work anticipated for reimbursement under this Bid Item shall be initiated by Contractor until Contractor, City of Glendale Representative and City of Glendale agree on the scope and cost to perform the additional work. The Contractor shall prepare and submit to City of Glendale Representative a cost itemization and summary for the additional work. City of Glendale Representative and City of Glendale shall review and approve prior to Contractor proceeding with any additional work. Any portion of the stated sum not expended remains the property of the City of Glendale.

Work under this section shall consist of any additional work identified by the owner and contractor due to construction activity. All work under this item shall be itemized as per MAG requirements and deducted from the set amount of \$25,000 (and additional \$5,000 if Bid Alternative is awarded for a total of \$30,000). All work under this section shall include but is not limited to all necessary materials, tools, layout, survey and labor required to complete each task.

Measurement and payment for this item shall be made on an individual basis per task and as described above. Limit for this item is set at \$25,000 on the bid form (and additional \$5,000 for the Bid Alternative), under line items ALLOWANCE FOR CONSTRUCTION CONTINGENCY.

END OF SPECIAL PROVISIONS

**CITY OF GLENDALE
WEST AREA WATER RECLAMATION FACILITY
WAWRF SLIDE GATES – CHAIN REPLACEMENT PROJECT
PROJECT NO. 121309
TECHNICAL SPECIFICATIONS - DIVISIONS 1, 2 & 11**

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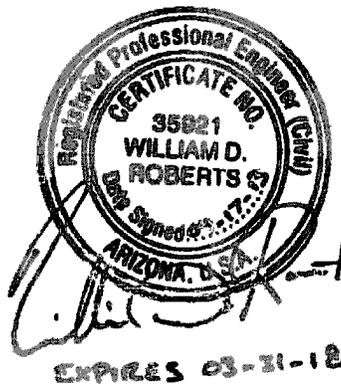
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SECTION 01100

SUMMARY

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1 Contract description.
 - 2 Work by Owner or other Work at the Site
 - 3 Contractor-furnished products
 - 4 Contractor's use of Site
 - 5 Work sequence.

1.2 CONTRACT DESCRIPTION

- A. Work of the Project includes demolition of existing equipment, salvage of existing equipment and installation of replacement equipment

1.3 WORK BY OWNER OR OTHERS

- A. Owner will award a contract for demolition, salvage, supply and installation of work defined on the plans and in the specifications herein
- B. If Owner-awarded contracts interfere with each other due to work being performed at the same time or at the same Site, Owner will determine the sequence of work under all contracts according to "Work Sequence" and "Contractor's Use of Site" Articles in this Section.
- C. Coordinate Work with utilities of Owner and public or private agencies.

1.4 CONTRACTOR-FURNISHED PRODUCTS

- A. Contractor's Responsibilities:
 - 1 Arrange for and deliver Shop Drawings, Product Data, and Samples
 - 2. Arrange and pay for equipment delivery to Site.
 - 3. Upon delivery, inspect products jointly with Owner
 - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 5. Arrange for manufacturers' warranties, inspections, and service.
 - 6. Receive and unload products at Site, inspect for completeness or damage jointly with Owner.
 - 7. Handle, store, install, and finish products.
 - 8. Repair or replace items damaged after receipt.

1.5 CONTRACTOR'S USE OF SITE

- A. Access to Site: Limited to designated working days and times provided by the Owner in writing
- B. Construction Operations: Limited to areas indicated on Drawings.
- C. Utility Outages and Shutdown

1. Coordinate and schedule electrical and other utility outages with Owner.
 2. At least one week before scheduled outage, submit Outage Request Plan to Owner itemizing the dates, times, and duration of each requested outage.
- D. Construction Plan: Before start of construction, submit two copies of construction plan regarding access to Work, use of Site, and utility outages for acceptance by Owner. After acceptance of plan, construction operations shall comply with accepted plan unless deviations are accepted by Owner in writing. One copy shall be kept on-site.

1.6 WORK SEQUENCE

- A. Sequencing of Construction Plan: Before start of construction, submit two copies of construction plan regarding phasing of demolition, salvage and installation for acceptance by Owner. After acceptance of plan, construction sequencing shall comply with accepted plan unless deviations are accepted by Owner in writing.

1.7 SPECIFICATION CONVENTIONS

- A. These Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01300

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Coordination and Project conditions.
- B. Preconstruction meeting.
- C. Site mobilization meeting.
- D. Progress meetings.
- E. Closeout meeting

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify that utility requirements and characteristics of operating equipment are compatible with facility utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing operating equipment in service.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Use spaces efficiently to maximize accessibility for maintenance, and for repairs.
 - 1. Coordination Drawings: Prepare as required to coordinate all portions of Work. Show relationship and integration of different construction elements that require coordination during fabrication or installation to fit in space provided or to function as intended. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are important.
- D. Coordination Meetings: In addition to other meetings specified in this Section, hold at least one (1) coordination meetings with personnel and Subcontractors to ensure coordination of Work.
- E. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.

1.3 PRECONSTRUCTION MEETING

- A. Owner will schedule and preside over meeting after Notice of Award
- B. Attendance Required. Owner, Construction Manager if applicable and Contractor.
- C. Minimum Agenda:
 - 1. Execution of Owner-Contractor Agreement
 - 2. Submission of executed bonds and insurance certificates.

- 3 Distribution of Contract Documents.
4. Submission of list of products and Progress Schedule.
5. Designation of personnel representing parties in Contract.
6. Communication procedures.
- 7 Procedures and processing of requests for interpretations, field decisions, submittals, substitutions, Applications for Payments, proposal request, Change Orders, and Contract closeout procedures.
8. Scheduling.
9. Critical Work sequencing.

- D. Owner to record minutes and distribute one (1) copy to participants within two (2) days after meeting, with one (1) to Owner, and those affected by decisions made

1.4 SITE MOBILIZATION MEETING

- A. Owner will schedule and preside over meeting at Project Site prior to Contractor occupancy

- B. Attendance Required Owner, Contractor, and Construction Manager if applicable

- C. Minimum Agenda:

1. Use of premises by Owner and Contractor
2. Owner's requirements.
- 3 Construction facilities and controls.
4. Temporary utilities provided by Owner
5. Facilities layout.
6. Security and housekeeping procedures
7. Schedules.
8. Procedures for testing
- 9 Procedures for maintaining record documents.
10. Requirements for startup of equipment.
11. Inspection and acceptance of equipment put into service during construction period

- D Owner to record minutes and distribute one (1) copy to participants within two (2) days after meeting, with one (1) to Owner, and those affected by decisions made.

1.5 PROGRESS MEETINGS

- A Schedule and administer meetings throughout progress of the Work at maximum monthly intervals

- B. Contractor will make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings

- C. Attendance Required Contractor and Owner, as appropriate to agenda topics for each meeting.

- D Minimum Agenda:

1. Review minutes of previous meetings
2. Review of Work progress.
3. Field observations, problems, and decisions.
- 4 Identification of problems impeding planned progress.
5. Review of submittal schedule and status of submittals.

- 6 Maintenance of Progress Schedule.
7. Corrective measures to regain projected schedules.
- 8 Planned progress during succeeding work period.
- 9 Coordination of projected progress
- 10 Maintenance of quality and work standards
11. Effect of proposed changes on Progress Schedule and coordination
12. Other business relating to Work.

E Contractor to record minutes and distribute one (1) copy to participants within two (2) days after meeting, with one (1) to Owner, and those affected by decisions made.

1.6 CLOSEOUT MEETING

A Schedule Project closeout meeting with sufficient time to prepare for requesting Substantial Completion. Owner will preside over meeting and be responsible for minutes.

B. Attendance Required: Owner, Construction Manager if applicable and Contractor.

C Minimum Agenda:

- 1 Start-up of facilities and systems.
2. Operations and maintenance manuals.
3. Testing, adjusting, and balancing.
4. System demonstration and observation.
- 5 Operation and maintenance instructions for Owner's personnel
6. Contractor's inspection of Work.
7. Contractor's preparation of an initial "punch list "
8. Procedure to request Owner inspection to determine date of Substantial Completion.
9. Completion time for correcting deficiencies
- 10 Inspections by authorities having jurisdiction.
- 11 Transfer of insurance responsibilities.
12. Partial release of retainage.
13. Final cleaning.
14. Preparation for final inspection
- 15 Closeout Submittals:
 - a Project record documents
 - b Operating and maintenance documents.
 - c. Operating and maintenance materials
 - d Affidavits.
- 16 Final Application for Payment.
17. Contractor's demobilization of Site.
- 18 Maintenance.

D Contractor to record minutes and distribute one (1) copy to participants within two (2) days after meeting, with one (1) to Owner, and those affected by decisions made.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01330
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Definitions.
- B. Submittal procedures.
- C. Proposed product list.
- D. Product data.
- E. Shop Drawings
- F. Confined Space Permit
- G. Other submittals.
- H. Certificates.
- I. Manufacturer's instructions.
- J. Contractor review.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Contractor or Construction Manager's responsive action
- B. Informational Submittals: Written and graphic information and physical Samples that do not require Contractor or Construction Manager's responsive action. Submittals may be rejected for not complying with requirements

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Owner accepted form.
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix
- C. Identify Project, Contractor, Subcontractor and supplier, pertinent Drawing and detail number, and Specification Section number appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.

- E For each submittal for review, allow 15 days excluding delivery time to and from Contractor.
- F. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
- G. Allow space on submittals for Contractor and Owner or Engineer review stamps.
- H. When revised for resubmission, identify changes made since previous submission.
- I. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- J. Submittals not requested will not be recognized nor processed.
- K. Incomplete Submittals: Owner or Engineer will not review. Complete submittals for each item are required. Delays resulting from incomplete submittals are not the responsibility of Owner or Engineer.

1.4 PROPOSED PRODUCT LIST

- A. Within 15 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, indicate manufacturer, trade name, model or catalog designation, and reference standards

1.5 PRODUCT DATA

- A. Product Data. Action Submittal: Submit to Architect/Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Submit number of copies Contractor requires, plus two (2) copies Owner will retain.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 1700 - Execution Requirements.

1.6 SHOP DRAWINGS

- A. Shop Drawings. Action Submittal: Submit to Owner for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. When required by individual Specification Sections, provide Shop Drawings signed and sealed by a professional Engineer responsible for designing components shown on Shop Drawings.

1. Include signed and sealed calculations to support design.
2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
3. Make revisions and provide additional information when required by authorities having jurisdiction.

D. After review, produce copies and distribute according to "Submittal Procedures" Article and for record documents described in Section 01700 - Execution Requirements

E. Section 01700 - Execution Requirements

1.7 CONFINED SPACE PERMIT

A. A confined space permit is to be prepared by the Contractor and submitted to the City of Glendale for review and approval.

1. The permit shall identify all anticipated site activities associated with the construction and define and assess the potential hazards and will provide the steps required to best mitigate the identified hazards.

2. The permit shall describe all chemical characteristics proposed to be utilized during construction.

3. The permit shall explicitly identify the emergency contacts as coordinated with the Owner.

B. All subcontractors are to meet the requirements set forth in the approved Confined Space Permit

1.8 Shop Drawings OTHER SUBMITTALS

A. Closeout Submittals Comply with Section 01700 - Execution Requirements.

1.9 CERTIFICATES

A. Informational Submittal: Submit certification by manufacturer, installation/application Subcontractor, or Contractor to Owner, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or product but must be acceptable to Owner.

1.10 MANUFACTURER'S INSTRUCTIONS

A. Informational Submittal: Submit manufacturer's installation instructions for Owner's knowledge

B. Submit printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, to Owner in quantities specified for Product Data.

C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1 11 CONTRACTOR REVIEW

- A Review for compliance with Contract Documents and approve submittals before transmitting to Construction Manager or Contractor.
- B. Contractor: Responsible for:
 - 1 Determination and verification of materials including manufacturer's catalog numbers.
 - 2 Determination and verification of field measurements and field construction criteria
 - 3. Checking and coordinating information in submittal with requirements of Work and of Contract Documents.
 - 4 Determination of accuracy and completeness of dimensions and quantities
 - 5. Confirmation and coordination of dimensions and field conditions at Site.
 - 6. Construction means, techniques, sequences, and procedures
 - 7. Safety precautions.
 - 8 Coordination and performance of Work of all trades.
- C. Stamp, sign or initial, and date each submittal to certify compliance with requirements of Contract Documents
- D Do not fabricate products or begin Work for which submittals are required until approved submittals have been received from Architect/Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01700

EXECUTION REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A Closeout procedures.
- B Starting of systems
- C Demonstration and instructions.
- D Project record documents.
- E Operation and maintenance data
- F. Product warranties and product bonds.
- G. Execution.
- H. Protecting installed construction.
- I Final cleaning

1.2 CLOSEOUT PROCEDURES

- A. Prerequisites to Substantial Completion: Complete following items before requesting Certification of Substantial Completion, either for entire Work or for portions of Work:
 - 1. Submit maintenance manuals, Project record documents, and other similar final record data in compliance with this Section.
 - 2. Complete facility startup, testing, adjusting, balancing of systems and equipment, demonstrations, and instructions to Owner or Owner's Designee's operating and maintenance personnel as specified in compliance with this Section.
 - 3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to be completed or corrected, value of incomplete or nonconforming Work, reason for being incomplete, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion
 - 4. Obtain and submit releases enabling Owner or Owner's Designee's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
 - 5. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner or Owner's Designee.
 - 6. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
 - 7. Perform final cleaning according to this Section
- B. Substantial Completion Inspection:

- 1 When Contractor considers Work to be substantially complete, submit to Owner or Owner's Designee:
 - a. Written certificate that Work, or designated portion, is substantially complete.
 - b. List of items to be completed or corrected (initial punch list).
 2. Within seven (7) days after receipt of request for Substantial Completion, Owner or Owner's Designee will make inspection to determine whether Work or designated portion is substantially complete
 3. Should Owner or Owner's Designee determine that Work is not substantially complete:
 - a. Owner or Owner's Designee will promptly notify Contractor in writing, stating reasons for its opinion.
 - b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Owner or Owner's Designee.
 - c. Owner or Owner's Designee will re-inspect Work.
 - d. Redo and Inspection of Deficient Work: Repeated until Work passes Owner or Owner's Designee's inspection.
 - 4 When Owner or Owner's Designee finds that Work is substantially complete, Owner or Owner's Designee will:
 - a. Prepare Certificate of Substantial Completion accompanied by Contractor's list of items to be completed or corrected as verified and amended by Architect/Engineer and Owner or Owner's Designee (final punch list)
 - b. Submit Certificate to Owner or Owner's Designee and Contractor for their written acceptance of responsibilities assigned to them in Certificate
 5. After Work is substantially complete, Contractor shall:
 - a. Allow Owner or Owner's Designee occupancy of Project under provisions stated in Certificate of Substantial Completion.
 - b. Complete Work listed for completion or correction within time period stipulated.
- C Prerequisites for Final Completion. Complete following items before requesting final acceptance and final payment.
1. When Contractor considers Work to be complete, submit written certification that:
 - a. Contract Documents have been reviewed.
 - b. Work has been examined for compliance with Contract Documents.
 - c. Work has been completed according to Contract Documents.
 - d. Work is completed and ready for final inspection.
 2. Submittals: Submit following:
 - a. Final punch list indicating all items have been completed or corrected.
 - b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 - c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
 - d. Accounting statement for final changes to Contract Sum.
 - e. Consent of surety to final payment.
 - 3 Perform final cleaning for Contractor-soiled areas according to this Section.
- D. Final Completion Inspection:
- 1 Within seven (7) days after receipt of request for final inspection, Owner or Owner's Designee will make inspection to determine whether Work or designated portion is complete.
 2. Should Owner or Owner's Designee consider Work to be incomplete or defective:

- a. Owner or Owner's Designee will promptly notify Contractor in writing, listing incomplete or defective Work.
- b. Contractor shall remedy stated deficiencies and send second written request to Owner or Owner's Designee that Work is complete.
- c. Owner will re-inspect Work
- d. Redo and Inspection of Deficient Work. Repeated until Work passes Owner or Owner's Designee's inspection.

1.3 STARTING OF SYSTEMS

- A. Coordinate schedule for startup of various equipment and systems.
- B. Notify Owner or Owner's Designee, seven (7) days prior to startup of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, chain tension, control sequence, and for conditions which may cause damage.
- D. Verify that tests, meter readings, and electrical characteristics agree with those required by equipment or system manufacturer
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute startup under supervision of manufacturer's representative or Contractors' personnel according to manufacturer's instructions.
- G. When specified in individual Specification Sections, require manufacturer to provide authorized representative who will be present at Site to inspect, check, and approve equipment or system installation prior to startup and will supervise placing equipment or system in operation.
- H. Submit a written report according to 01330 - Submittal Procedures that equipment or system has been properly installed and is functioning correctly.

1.4 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner or Owner's Designee's personnel one week prior to date of final inspection.
- B. Demonstrate Project equipment to Owner or Owner's Designee.
- C. Use operation and maintenance manuals as basis for instruction. Review contents of manual with Owner or Owner's Designee's personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at location and times agreed upon with Owner or Owner's Designee.
- E. Contractor to provide required instruction time for each item of equipment and system is specified in individual Specification Sections.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain on Site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, product data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner or Owner's Designee.
- C. Store record documents separate from documents used for construction
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates used.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction as follows:
 - 1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in the Work, and change orders.
 - 2. Include locations of concealed elements of the Work.
 - 3. Field changes of dimension and detail.
 - 4. Details not on original Drawings.
- G. Submit marked-up paper copy documents to Owner or Owner's Designee with claim for final Application for Payment.

1.6 OPERATION AND MAINTENANCE DATA

- A. Submit in PDF composite electronic indexed file.
- B. Prepare 3 binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of Project.
- C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs

1.7 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed by responsible Subcontractors, suppliers, and manufacturers within ten (10) days after completion of applicable item of Work
- B. Execute and assemble transferable warranty documents and bonds from Subcontractors, suppliers, and manufacturers.

- C. Verify documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required
- E. Submit prior to final Application for Payment.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXECUTION

- A. Comply with manufacturer's installation instructions, performing each step in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until completion of construction.
- B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Owner or Owner's Designee before proceeding.
- C. Verify that field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.
- D. Adjust operating products and equipment to ensure smooth and unhindered operation.
- E. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction period. Lubricate operable components as recommended by manufacturer.

3.2 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual Specification Sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.

3.3 FINAL CLEANING

- A. Owner or Owner's Designee will provide final cleaning after final acceptance.
- B. Remove waste and surplus materials, rubbish, and construction facilities from Site

END OF SECTION

SECTION 02225

MINOR DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removing designated items for disposal.
 - 2. Removing designated items for reuse.
 - 3. Removing items for Owner's retention (salvage).
 - 4. Protecting items designated to remain

1.2 SUBMITTALS

- A. Section 01330 - Submittal Procedures: Requirements for submittals.
- B. Demolition Schedule. Indicate overall schedule and interruptions required for demolition and installation.
- C. Shop Drawings:
 - 1. Indicate demolition and removal sequence.
 - 2. Indicate location of items designated for reuse and Owner's retention.
 - 3. Indicate location and construction of temporary work.

1.3 CLOSEOUT SUBMITTALS

- A. Section 01700 - Execution Requirements: Requirements for submittals.

1.4 QUALITY ASSURANCE

- A. Conform to Arizona Department of Environmental Quality (ADEQ) permits and procedures per A.R.S. § 49-922.B.5., when hazardous or contaminated materials are to be disposed
- B. Obtain required permits from authorities having jurisdiction.
- C. Perform Work in accordance with Arizona and the City of Glendale standards
- D. Maintain one copy of the plans and specifications on site.

1.5 PRE-CONSTRUCTION MEETINGS

- A. Section 01300 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.

1.6 SEQUENCING

- A. Section 01100 - Summary: Requirements for sequencing.

- B. Coordinate with Owner for the scheduling of salvage operations before demolition begins to remove materials Owner chooses to retain.

1.7 SCHEDULING

- A Section 01300 - Administrative Requirements for scheduling.
- B Cooperate with Owner in scheduling work that may interrupt operations and waste removal that may impact Owners operations.
- C. Coordinate utility and building service interruptions with Owner.

1.8 PROJECT CONDITIONS

- A. Cease operations immediately if structure or components to remain appear to be in danger and notify Owner and Engineer. Do not resume operations until directed.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PREPARATION

- A. Erect, and maintain temporary barriers at the access points to the aeration basins and secondary sediment basins including warning signs for protection of the Owner.
- B. Do not disable or disrupt building fire or life safety systems without 3 days prior written notice to Owner.

3.2 SALVAGE REQUIREMENTS

- A. Coordinate with Owner to identify components and equipment required to be removed and delivered to Owner.
- B. Tag components and equipment Owner designates for salvage.
- C. Protect designated salvage items from demolition operations until items can be removed.
- D. Carefully remove components and equipment indicated to be salvaged.
- E. Disassemble as required to permit removal from structure.
- F. Package small and loose parts to avoid loss
- G. Mark equipment and packaged parts to permit identification and consolidation of components of each salvaged item
- H. Deliver salvaged items to a location designated by the Owner. Obtain signed receipt from Owner.

3.3 SCHEDULES

- A. Remove, store and protect the following materials and equipment:
 - 1 Flight scrappers.

- B. Protect the following materials and equipment in place:
 - 1. Carrying tracks.
 - 2 Return tracks.
 - 3. Flight chain sprockets
 - 4. All piping and valves.
 - 5. Air diffusers
 - 6. Wooden baffles.
 - 7. Wall Thimbles
 - 8 Existing Thimble, sluice gate, bolts and studs.

- C. Demolish the following materials and equipment if Owner decides not to salvage them:
 - 1. Flight chains.
 - 2. Drive chains.
 - 3. Wearing shoes
 - 4. Cast Iron sluice gates and frames.

END OF SECTION

SECTION 11291

SLUICE GATES

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required to install, ready for operation and field test stainless steel gates and appurtenances as shown on the Gate Schedule and/or Contract Drawings and as specified.
- B. The equipment provided under this section shall be fabricated, factory tested, assembled, erected, and placed in proper operating condition in full conformity with the drawings, specifications, engineering data, instructions and recommendations of the equipment manufacturer unless exceptions are noted by the Engineer.
- C. Existing gates are to be removed in accordance with the plans prepared and issued with this specification.
- D. Gates and operators shall be supplied by the gate manufacturer with all the necessary parts and accessories indicated on the drawings, specified or otherwise required for a complete, properly operating installation, and shall be the latest standard product of a manufacturer regularly engaged in the production of fabricated gates
- E. Except as modified or supplemented herein, all gates and operators shall conform to the applicable requirements of AWWA C561, latest edition.

1.2 REFERENCES

- A. ASTM A36 –Structural
- B. AWWA C513
- C. AWWA C561

1.3 PERFORMANCE REQUIREMENTS

- A. All gates shall meet the leakage requirements of AWWA Standard C513, latest edition.

1.4 QUALITY ASSURANCE

- A. All of the equipment specified under this Section shall be furnished by a single manufacturer with a minimum of 10-years' experience designing and manufacturing water control gates in North America
- B. The manufacturer's shop welds, welding procedures and welders shall be qualified and certified in accordance with the requirement of the latest edition of ASME, Section IX.
- C. The manufacturer shall be ISO 9001: 2008 certified

- D. Gates supplied under this section shall be Series 20 Stainless Steel Flow Control Sluice Gates as manufactured by Fontaine Industries Ltd 46 Mill Street Orange, MA 01364, PH 978-544-2511

1.5 SUBMITTALS

- A The manufacturer shall submit the following drawings and data for approval by the purchaser
 - 1 Certified general arrangement drawings showing principal dimensions, details of construction, materials list, and details required for installation and operation.
 - 2 Design calculations confirming stress and deflection of the slide, yoke, and stem
 - 3 Shop calculations confirming stress and deflection of the slide, yoke, and stem.

PART 2 PRODUCTS

2.1 PRODUCTS

- A Sluice Gates
 - 1. Fontaine.

2.2 GENERAL DESIGN

- A Gates shall be self-contained of the rising stem configuration as indicated on the schedule and on the contract drawings.
- B Sluice gates shall be substantially watertight under the design head conditions. Under the design seating and unseating head, the leakage shall not exceed 0.05 U.S gallons per minute per foot of seating perimeter.
 - 1. Manufacturer shall provide test data basis historical test results of 10 gates within the last twelve months to demonstrate that 85% of gates shall meet a leakage rate less than 0.025 gallon per minute per foot of sealing perimeter for gates less than 20 ft head
 - 2. The gate's sealing system should have been tested through a cycle test in an abrasive environment and should show that the leakage requirements are still obtained after 25,000 cycles with a minimum deterioration.
- C The sluice gates shall be designed to withstand the design head shown in the schedule and on the contract drawings.
- D. The gate shall utilize self-adjusting seals Due to the difficulty of accessing gates when they are in service, gates that utilize adjustable wedges, wedging devices or pressure pads are not acceptable
- E. All structural components of the frame and slide shall be fabricated of stainless steel having a minimum thickness of 1/4-inch and shall have adequate strength to prevent distortion during normal handling, during installation and while in service.
- F Welds shall be sandblasted to remove weld burn and scale. Gates shall be thoroughly cleaned to remove any contamination prior to shipment All iron and steel components shall be properly prepared and shop coated with a primer.

2.3 FRAME

- A The frame shall be made of wrought stainless steel of the specified commercial grade or from commercially available structural shapes. The minimum material thickness of all members except seal retainers shall be 1/4-inch.
1. The gate frame shall be constructed of structural members or formed plate welded to form a rigid one-piece frame. The frame shall be of the flange back design suitable for mounting on a wall thimble (WT). The guide slot shall be made of UHMWPE (ultra-high molecular weight polyethylene). Mounting style shall be as shown on the gate schedule and the contract drawings.
 2. The gates shall have a flanged back design frame. Flat back design frames are not acceptable.
 3. The gates shall be suitable for mounting with a 1/2" thick resilient gasket between the gate frame and the concrete wall. Mounting with grout pads will not be acceptable.
 4. A rigid stainless steel invert member shall be provided across the bottom of the opening. The invert member shall be of the flush bottom type on upward opening gates.
 5. A rigid stainless steel top seal member shall be provided across the top of the opening on gates designed to cover submerged openings.
 6. A rigid stainless steel member shall be provided across the invert of the opening on downward opening gates.

2.4 SLIDE

- A The slide and reinforcing stiffeners shall be constructed of stainless steel plate. All structural components shall have a minimum thickness of 1/4-inch.
1. The slide shall be designed for the minimum safety factor of 4 with regard to ultimate tensile, compressive, and shear strength, and a minimum safety factor of 2 with regard to the tensile, compressive, and shear yield strength. The slide shall consist of a flat plate reinforced with formed plates or structural members to limit its deflection to 1/720 of the gate's span under the design head.

2.5 GUIDES AND SEALS

- A All gates shall be provided with a self-adjusting seal system utilizing UHMWPE seals and resilient compression cord to restrict leakage in accordance with the requirements listed in this specification.
1. The self-adjusting seals shall be designed with a continuous compression cord to ensure contact between the UHMWPE guide and the gate in all positions.
 - a. The sealing system shall maintain efficient sealing in any position of the slide and allow the water to flow only in the opened part of the gate.
 2. The guides shall be made of virgin UHMWPE (ultra-high molecular weight polyethylene) to restrict leakage, prevent metal-to-metal contact between the frame and the slide, and provide long-term maintenance free operation.
 3. The guides/seals shall extend to accommodate minimum 1-2/3 x the height of the slide.

4. The top seal shall be the self-adjusting type, utilizing a cup shaped UHMWPE seal with twin contact surfaces and compression cord. The cup shaped seal with twin contact surfaces shall be designed with the outer seal acting as a wiper to remove debris from the slide when raising the gate thereby protecting the primary seal.
5. All upward opening gates shall be provided with a resilient seal made of neoprene set into the bottom frame member to seal the bottom portion of the gate and form a flush-bottom. Gates designed with bottom seals attached to the slide shall not be acceptable.
6. All downward opening gates shall be provided with self-adjusting type seals, utilizing a cup shaped UHMWPE seal with twin contact surfaces and compression cord. The cup shaped seal with twin contact surfaces shall be designed with the outer seal acting as a wiper to remove debris from the slide when raising the gate thereby protecting the primary seal
7. All UHMWPE seals must be bolted or otherwise mechanically fastened to the frame.
8. Gates that utilize rubber "J" seals or "P" seals are not acceptable.

2.6 STEM AND COUPLINGS

- A. The operating stem shall be constructed of stainless steel of the specified grade designed to transmit in compression at least 2 times the rated output of the operating manual mechanism with a 40 lbs effort on the handcrank
 1. The stem shall have a slenderness ratio (L/r) less than 200. The threaded portion of the stem shall have machined cut threads of the Acme type.
 2. In compression, the stem shall be designed for a critical buckling load caused by a 40 lb effort on the handcrank with a safety factor of 2.4, using the Euler column formula
 3. Where a hydraulic, pneumatic or electric operator is used, the stem design force shall not be less than 1.25 times the output thrust of the hydraulic or pneumatic cylinder with a pressure equal to the maximum working pressure of the supply, or 1.25 times the output thrust of the electric motor in the stalled condition. The Contractor shall coordinate with the Owner and verify the proposed gate can withstand the output of the Owner's portable operator.
 4. For stems in more than one piece and with a diameter of $1\frac{3}{4}$ inches (45 mm) and larger, the different sections shall be joined together by solid bronze couplings. Stems with a diameter smaller than $1\frac{3}{4}$ inches shall be pinned to an extension tube.
 5. The couplings shall be grooved and keyed and shall be of greater strength than the stem
 6. Gates having a width greater than two times their height shall be provided with two lifting mechanisms connected by a tandem shaft.

2.7 STEM GUIDE

- A. Stem guides shall be furnished when necessary to ensure that the L/r ratio shall not be greater than 200.
 1. Stem guides shall be fabricated from type 316L stainless steel. The guide shall be equipped with an UHMWPE bushing.
 2. Guides shall be adjustable in two directions and spaced in accordance with the manufacturer's recommendation.

2.8 STEM COVER

- A Rising stem gates shall be provided with a clear PVC stem cover.
 - 1 The stem cover shall have a cap and condensation vents and a clear mylar position indicating tape. The tape shall be field applied to the stem cover after the gate has been installed and positioned.

2.9 LIFTING MECHANISM

- A Manual operators of the types listed in the schedule or shown on the contract drawings shall be provided by the gate manufacturer.
 - 1. Operation. The manual actuator shall be crank-actuated with single reduction gearing to meet lifting capacity required. The actuator shall be sized to permit slide operation with an effort of not more than 40-lb pull on the handcrank. Maximum pull or torque to start the slide in motion must not exceed one and one-half times this amount. Components of the actuator shall be designed to withstand these input efforts or torques with a minimum safety factor of 5 with regard to ultimate tensile, compressive, and shear strength.
 - 2. General Design. The actuator shall have a bronze lift nut threaded to fit the operating stem. Lift nuts shall be of high strength bronze having a minimum tensile of 65 ksi, and a minimum hardness of 94 BHN. Threads shall be Acme type and shall have a PV (pressure velocity) factor not exceeding 50,000 (pressure velocity factor is surface feet per minute times contact pressure in PSI [SFPM x PSI]) for open/close service and 30,000 for modulating service with lubrication as specified by the manufacturer. Maximum pressure on the projected area of thread contact shall not exceed 2,000 psi at normal maximum operating load. Roller, needle or ball bearings shall be provided above and below the flange on the lift nut to take the thrust developed during gate operation. Bearings (and gears) shall be enclosed in a cast aluminum housing with oil seals and O-rings used to seal the unit. Fittings shall be provided so that bearings (and gears) can be periodically lubricated, unless permanently lubricated. The actuator shall be supplied with a pedestal machined and drilled for mounting the lift housing and ready for bolting to the gate yoke, as required.
 - 3. Gear reducing actuators. The drive gears used in gear reduction actuators shall be of steel and accurately machined, with cut teeth to provide smooth and proper operation. Input shafts shall be stainless steel and supported by tapered roller or other roller-type bearings designed to withstand the radial and thrust loads generated during operation. Geared actuators shall be suitable for operation by use of a portable motor apparatus.
 - 4. Crank. The handcrank shall be removable and fitted with a corrosion-resistant rotating handle. The maximum crank radius shall be 15 in.
 - 5. Opening direction. The direction of handcrank rotation to open the gate shall be indicated on the actuator. Actuator shall be single-speed and shall open counterclockwise as to accommodate a portable operator. Contractor to verify with the Owner the preferred actuator speed.

2.10 YOKE

- A Self-contained gates shall be provided with a yoke made of structural members or formed plates fastened to the side frame members to provide a one-piece rigid assembly.
 - 1 Yoke shall be designed to withstand the thrust of the actuator when a 80-lb effort is placed on the handcrank, with a minimum safety factor of 4 with regard to ultimate tensile,

compressive, and shear strength and a minimum safety factor of 2 with regard to the tensile, compressive, and shear yield strength.

2. Yokes for hydraulic cylinders shall meet the above criteria at the output thrust at maximum working pressure (pressure relief valve setting)
3. Yokes for electric actuators shall be designed for a safety factor of 1.5 with regard to yield strength at the locked-rotor torque of the actuator
4. The yoke shall be designed to allow removal of the slide
5. The maximum deflection of the yoke shall be 1/360 of the gate's span.

2.11 WALL THIMBLES

- A. The existing wall thimble shall be protected in place during the removal of the existing gate and shall be cleaned by the Contractor and inspected by the Owners Structural Engineer. Any repair or additional materials or components recommended by the Engineer shall be the responsibility of the Contractor.
 1. Wall thimble improvements may include structural repair or replacement of the existing cast iron wall thimble
 - a. Replacement procedures would include cleaning and coating requirements for the existing thimbles are to be coordinated with the Structural Engineer and manufacturer after the inspection of the existing thimbles.
 - b. Repair procedures would include cutting and removing the existing thimble, installing a new thimble, and a water stop ring or flange welded around the outside of the thimble as coordinated with the Structural Engineer and manufacturer.
 2. After the removal of the existing gate and frames, a template shall be prepared of the existing bolt pattern and thimble flange. This shall be provided to the manufacturer prior to ordering the new gate.
 3. The face of the wall and the front of the mounting flange of the wall thimble shall be cleaned and finished to provide a suitable mounting surface. The gate bolt pattern shall incorporate drilled and tapped inserts matching the existing bolt pattern of the wall thimble
 4. A water stop ring or flange shall be welded around the outside of the thimble.
 5. A resilient 1/2-inch thick gasket shall be provided to seal between the gate frame and the wall thimble.
 6. Cleaning and coating requirements are to be coordinated with the Structural Engineer and manufacturer after the inspection of the existing thimbles.
- B. The Contractor is to coordinate the confined space entry and permit requirements with the Owner, and submit the confined space entry plan and permit to the Owner and the Owner's Structural Engineer for review and approval prior to entry into any basin. The Contractor will provide and install ladders, scaffolding, harnesses, lighting, air monitoring equipment and any other equipment needed to meet the requirements of the confined space entry plan, and to provide access for the Owner's Structural Engineer to inspect the existing wall thimble and the anchor bolts after the existing gates have been removed. The Contractor shall meet the same requirements following the repair or replacement of the thimbles.

2.12 ANCHOR BOLTS

- A The existing stainless steel anchor bolts are to be protected in place and reused. An inspection shall be performed after removal of the existing gate by the Owner's Structural Engineer to verify they can be reused.
 - 1. A template shall be prepared of the existing bolt pattern and thimble flange. This shall be provided to the manufacturer prior to ordering the new gate, including the size and location of each bolt.
 - 2. Gate frame anchor bolts shall have a minimum diameter of 1/2-inch.

2.13 MATERIALS

PART	MATERIAL
Frame	Stainless steel ASTM A - 316L
Guide	Ultra high molecular weight polyethylene (UHMWPE) ASTM D-4020
Compression chord	Nitrile ASTM D2000 M6BG 708, A14, B14, E014, E034
Bottom seal	Neoprene ASTM D2000 Grade 2 BC 510
Slide	Stainless steel ASTM A - 316L
Top seal	Ultra high molecular weight polyethylene (UHMWPE) ASTM D-4020
Yoke	Stainless steel ASTM A - 316L
Stem	Stainless steel ASTM A - 316L
EDPM gasket	Extrusion ½ x 3 » EPDM sponge duro 20
Enclosed gear lift	Tenzaloy aluminum
Removable handcrank	Tenzaloy aluminum
Stem protector	Polycarbonate with 304 stainless steel cap
Coupling	Manganese bronze ASTM B584 UNS-C86500
Stem guide	Stainless steel ASTM A - 316L
Guide bushing	Ultra high molecular weight polyethylene (UHMWPE) ASTM D-4020
Lift nut housing	Stainless steel ASTM A - 316L
Square nut	Tenzaloy aluminum
Pedestal bracket	Stainless steel ASTM A - 316L
Pedestal	Tenzaloy aluminum
Adjustment nut	Stainless steel ASTM A - 316L

2.14 SCHEDULE

GATE IDENTIFICATION	Aeration Basin No. 1	Aeration Basin No. 2
Gate Type	Self-contained	Self-contained
Size Width x Height	72 x 36	72 x 36
Head (Seating, Unseating)	10 ft , 10 ft.	10 ft., 10 ft.
Mounting	WT - Mounted on a wall thimble	WT - Mounted on a wall thimble
Rising/Non-Rising	Rising	Rising
Operator	Handcrank	Handcrank
Gate Type	Series 20	Series 20
Opening Width	72 in.	72 in.
Opening Height	36 in.	36 in.

2.15 BID ALTERNATIVE SCHEDULE

The alternative bid may be enacted by the Owner, after the existing gates and frames are removed in Aeration Basin 1 and Aeration Basin 2, and the Owner's Structural Engineer completes an inspection of the gates, thimbles and basin walls.

GATE IDENTIFICATION	Aeration Basin No. 3	Aeration Basin No. 4
Gate Type	Self-contained	Self-contained
Size Width x Height	72 in x 36 in	72 in. x 36 in.
Head (Seating, Unseating)	10 ft., 10 ft.	10 ft., 10 ft.
Mounting	WT - Mounted on a wall thimble	WT - Mounted on a wall thimble
Rising/Non-Rising	Rising	Rising
Operator	Handcrank	Handcrank
Gate Type	Series 20	Series 20
Opening Width	72 in.	72 in
Opening Height	36 in	36 in.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Gates and appurtenances shall be handled and installed in accordance with the manufacturer's recommendations.
- B. Manufacturer shall furnish an authorized service technician to inspect and verify proper installation, assist with field testing, startup and commissioning. The minimum number of days/trips shall be one (1).

3.2 FIELD TESTS

- A. Following the completion of each gate installation, the gates shall be operated through at least two complete open/close cycles. Field test new gates with the Owner's portable operators.
- B. Gates shall be checked for leakage by the Contractor. Refer to section 2.2 "General Design", Part B for approval criteria. Contractor will coordinate with the Owner's operators regarding the testing procedures.

END OF SECTION

SECTION 11292

FLIGHT AND DRIVE CHAIN AND WEARING SHOES

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required to install, ready for operation and field test the flight chain, drive chain and wearing shoes as shown on the Schedule and/or Contract Drawings and as specified.
- B. The equipment provided under this section shall be fabricated, factory tested, assembled, erected, and placed in proper operating condition in full conformity with the drawings, specifications, engineering data, instructions and recommendations of the equipment manufacturer unless exceptions are noted by the Engineer.

1.2 QUALITY ASSURANCE

- A. All of the equipment specified under this Section shall be furnished by a single manufacturer with a minimum of 10-years' experience designing and manufacturing flight and drive chains and wearing shoes in North America. The manufacturer shall show evidence of satisfactory operation in at least 50 installations
- B. Chains and wearing shoes supplied under this section shall be manufactured by PolychemSystems, a Division of Brentwood Industries. No equals or equivalents will be considered for these products.

1.3 SUBMITTALS

- A. The manufacturer shall submit the following drawings and data for approval by the purchaser.
 - 1. Certified general arrangement drawings showing principal dimensions, details of construction, materials list, and details required for installation and operation.
 - 2. Design calculations supporting the tension require and limitations of the drive and flight chain.
 - 3. Shop calculations confirming stress and stretch of the drive and flight chain.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Flight and Drive Chain
 - 1. PolychemSystems, a Division of Brentwood Industries
- B. Wearing Shoes.
 - 1. PolychemSystems, a Division of Brentwood Industries

2.2 GENERAL DESIGN

- A. The drive chain shall be designed with a polypropylene sleeve, bearing for NH-78, with 303 stainless steel knurled pin, 2.910-inch, chain NH-78 and a pintle link 2.609-inch pitch diameter that is reinforced nylon-6/6 and for a working load of at least 1700 pounds
- B. The flight chain shall be designed with a NCS-720S glass reinforced thermoplastic polyester chain link, with glass reinforced polyamide thermoplastic connecting pins and polyoxymethylene thermoplastic type 4 retainer clips that are 0.236-inches thick.
- C. The wearing shoes shall be a high-grade polyethylene material which will be a minimum of 0.5-inches thick and is to be fastened to the flights.
- D. Four wearing shoes are to be installed on each flight. Two pieces are carrying wearing shoes and two pieces are return wearing shoes.
- E. Wearing shoes shall be connected with AISI 316 stainless steel bolts at the locations specified by the manufacturer.
- F. The existing filler blocks are to be salvaged and reused in the flights.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Flight chains, drive chains and wearing shoes and appurtenances shall be handled and installed in accordance with the manufacturer's recommendations. All of the Contractor's installation staff shall view the manufacturer's installation video prior to installation. Prior to beginning the work, the Contractor shall inspect the existing flights and wear strips and notify the Owner or the Owner's Designee of any recommended repairs or replacements.
- B. Manufacturer shall furnish an authorized service technician to inspect and verify proper installation, assist with field testing, startup and commissioning. The minimum number of days/trips shall be one (1).

3.2 FIELD TESTS

- A. Following the completion of each chain and wearing shoe installation, the flights shall be operated through at least two complete cycles. All manufacturers' instructions are to be followed during the operations.

END OF SECTION