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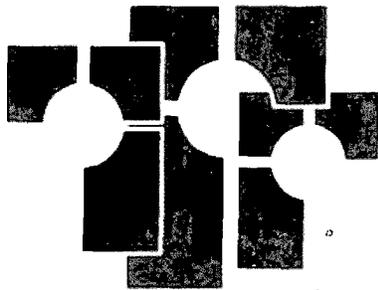
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**PROJECT SPECIFICATIONS AND  
CONTRACT DOCUMENTS**

**PROJECT NO. 121303**

**BELL ROAD MANHOLE REHABILITATION  
(73RD TO 83RD AVES & 67TH AVE N OF BELL RD.).**

**(JANUARY, 2014)**



**GLEND~~A~~LE**



EXPIRES 6-30-2016

**CITY OF GLENDALE**

**ENGINEERING DEPARTMENT**

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

# **PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS**

## **MAYOR**

Jerry P. Weiers

## **COUNCIL MEMBERS**

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## **ACTING CITY ENGINEER**

Craig A. Johnson



**GLEND~~A~~LE**

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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. 121303 - BELL ROAD MANHOLE REHABILITATION (73RD TO 83RD AVES & 67TH AVE N OF BELL RD.)**. Project includes 16 manholes in westbound Bell Road from 73<sup>rd</sup> to 83<sup>rd</sup> Avenues. The manholes range in depth from 14' to 20'. One additional manhole N of Bell Road on 67<sup>th</sup> Avenue will require full reconstruction with a sewer bypass. Traffic control shall be included.

Bids must be received by the Engineering Department of the City of Glendale no later than 10:00 A.M., JANUARY 13, 2014. 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 JANUARY 6, 2014, at 10:00 A.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 seventy-five (75) 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 seventy-five (75) 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 (90) 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 JANUARY 6, 2014, at 10:00 A.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\*\*\*

PROPOSAL

Place 5850 W GLENDALE AVE, GLENDALE, AZ 85301

Date 1/13/14

Proposal of ACTION DIRECT LLC, dba REDPOINT CONTRACTING, a Corporation organized and existing under the laws of

the State of Arizona, a partnership consisting of N/A; or an

individual trading as N/A.

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 121303 - BELL ROAD MANHOLE REHABILITATION (73RD TO 83RD AVES. & 67TH AVE. N OF BELL RD.)**, 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.)

**City of Glendale**  
**BELL ROAD MANHOLE REHABILITATION**  
**Project No. 121303**

**BID SCHEDULE**

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization/Demobilization	1.00	LS	\$ 17,700.00	\$ 17,700.00
2	Traffic Control	1.00	LS	\$ 23,000.00	\$ 23,000.00
3	Diversion of Sewage Flow and Dewatering	1.00	LS	\$ 30,000.00	\$ 30,000.00
4	Rehabilitate Manhole (60")	195	VF	\$ 500.00	\$ 97,500.00
5	Rehabilitate Manhole (48")	79	VF	\$ 680.00	\$ 53,720.00
6	Install and adjust supplied 30" Cast Iron Manhole Frame and Cover per MAG Std Details 420, 422 and 424 and COG Std Detail G-704 - Contractor to provide adjusting rings	12	EA	\$ 1,100.00	\$ 13,200.00
7	Install and adjust supplied 24" Cast Iron Manhole Frame and Cover per MAG Std Details 420, 422 and 424 and COG Std Detail G-704 - Contractor to provide adjusting rings	5	EA	\$ 1,100.00	\$ 5,500.00
8	Night work per Special Provisions Section 13	1	LS	\$ 8,000.00	\$ 8,000.00
9	Off Duty Glendale Police Officer	504.00	HR	\$ 55.00	\$ 27,720.00
10	Public Information Allowance	1.00	LS	\$ 2,500.00	\$ 2,500.00
11	Owner's Allowance for Construction Contingency	1.00	LS	\$ 35,000.00	\$ 35,000.00
<b>TOTAL BASE BID</b>					<b>\$ 313,840.00</b>

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.

ROC #265009

ACTION DIRECT LLC, dba REDPOINT CONTRACTING  
Contractor

By



39506 N DAISY MOUNTAIN DRIVE, STE #122

PHOENIX, AZ 85086

(Complete business address)

Telephone Number: 602-792-0013

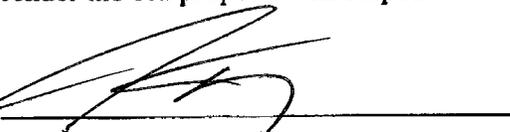
Fax Number 602-792-0016

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

\_\_\_\_\_  
\_\_\_\_\_

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

Acknowledged by



SCOTT MITHCHELL

**CITY OF GLENDALE**

**Subcontractor Listing and Certification of Contract Compliance**

**PROJECT 121303 - BELL ROAD MANHOLE REHABILITATION (73RD TO 83RD AVES & 67TH AVE N OF BELL RD.)**

The undersigned contractor hereby submits the following list of firms to be employed as subcontractors on the above referenced project:

<u>SUBCONTRACTOR</u>	<u>WORK ELEMENTS</u>	<u>CONTRACT VALUE</u>	<u>DBE(Y/N)*</u>	<u>AGENCY**</u>
DeLeon Painting	Coatings	\$ 92,000.00	Y	City of Tucson
Trafficade	Traffic Control	\$ 15,000.00	N	
Rain For Rent	B7- Pass	\$ 10,000.00	N	
Pro-Force	Traffic Officer	\$ 20,000.00	N	

The undersigned hereby certifies that all subcontracts shall be in writing and shall provide that all work to be performed shall be in accordance with the terms of the Contract. All subcontracts shall be subject to approval by the City. Certified copies of all subcontracts shall be furnished to the Engineer; however, prices may be omitted. Subcontracts shall conform to the regulations governing employment of labor.

ACTION DIRECT LLC, dba REDPOINT CONTRACTING

Name of Firm

DBE?(Y/N)\*: N Agency\*\*:

  
Signature

MEMBER

Title

\*Firms certified as Disadvantaged Business Enterprises. \*\*Indicate certifying agency, e.g., ADOT, MCHD, COP, etc. This information is requested for tracking purposes only. The City of Glendale is an equal opportunity employer and minority business enterprises and women's business enterprises are encouraged to submit bids.

## CONSTRUCTION AGREEMENT

This Construction Agreement ("Agreement") is entered into and effective between the CITY OF GLENDALE, an Arizona municipal corporation ("City"), and Action Direct LLC, an Arizona limited liability company, d.b a Redpoint Contracting, authorized to do business in Arizona ("Contractor") as of the 25 day of March, 2014.

### 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

- (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 ninety (90) 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.

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 \$313,840 00, 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-contactors 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

- (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. **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

11. Notices.

11.1 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.

11.2 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

Action Direct LLC  
d.b.a. Redpoint Contracting  
Attn: Scott Mitchell  
39506 N. Daisy Mountain Drive, Suite 122  
Phoenix, Arizona 85086

- (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

12. **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

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

13.1 **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

13.2 **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

13.3 **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

13.4 **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.

13.5 **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

13.6 **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.

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

14. **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.

15. **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 121303

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

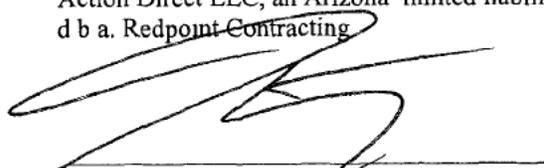
ATTEST.

  
City Clerk (SEAL)

APPROVED AS TO FORM:

  
City Attorney

Action Direct LLC, an Arizona limited liability company  
d b a. Redpoint Contracting

  
By. Scott Mitchell  
Its Manager

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

Project 121303

**EXHIBIT A  
CONSTRUCTION AGREEMENT**

**PROJECT**

Project includes rehabilitation of 16 manholes in westbound Bell Road from 73rd to 83rd Avenues. One additional manhole North of Bell Road on 67th Avenue will need to be fully reconstructed / coated and require a sewer bypass to accommodate the work. The work will consist of rehabilitating the manholes back to their original profile and then lining them with an approved coating system. Work shall include all necessary traffic control and an off-duty police officer when necessary.

Project 121303

**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 \$313,840.00

**DETAILED PROJECT COMPENSATION**

As shown on Page 8 of the 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 121303

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 Contract Amount)

**BOND NO. 70108466**

**KNOW ALL MEN BY THESE PRESENTS**

That Action Direct LLC dba Redpoint Contracting. (hereinafter called Principal), as Principal and The Guarantee Company of North America USA, a corporation organized and existing under the laws of the State of Michigan, with its principal office in the City of Southfield, (hereinafter called the Surety), as Surety, are held and firmly bound unto City of Glendale, a municipal corporation, (hereinafter called the Oblige), in the amount of Three Hundred Thirteen Thousand Eight Hundred Forty Dollars and No Cents (\$313,840.00), 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 25 day of March 2014 to construct PROJECT 121303 – BELL ROAD MANHOLE REHABILITATION (73<sup>RD</sup> TO 83<sup>RD</sup> AVES & 67<sup>TH</sup> AVE N OF BELL RD) which contract is hereby referred to and made a part thereof as fully and to the same extent as if copied at length herein

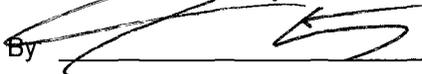
**NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH**, that if the said Principal shall faithfully perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extension thereof, with or without notice of 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 3 day of April, 2014

Action Direct LLC dba Redpoint Contracting  
Principal

By 

The Guarantee Company of North America USA  
Surety

By   
Diane L. Arment (Attorney-in-Fact)

PAFFENBARGER & WALDEN, LLC

Agency Of Record

1819 E. Morten Ave Suite 220

Phoenix, AZ 85020

Agency Address

Telephone Number 602-212-9160

**INDIVIDUAL SURETIES WILL NOT BE ACCEPTED**  
STATUTORY LABOR AND MATERIALS 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)

**BOND NO.70108466**

**KNOW ALL MEN BY THESE PRESENTS**

That Action Direct LLC dba Redpoint Contracting (hereinafter called Principal), as Principal and The Guarantee Company of North America USA, a corporation organized and existing under the laws of the State of Michigan, with its principal office in the City of Southfield, (hereinafter called Surety), as Surety, are held and firmly bound unto City of Glendale a municipal corporation (hereinafter called the Obligee), in the amount of Three Hundred Thirteen Thousand Eight Hundred Forty Dollars and No Cents (\$313,840.00) 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 Obligee, dated the 3 day of April 2014 to construct PROJECT 121303 – BELL ROAD MANHOLE REHABILITATION (73<sup>RD</sup> TO 83<sup>RD</sup> AVES & 67<sup>TH</sup> AVE N OF BELL RD) which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein

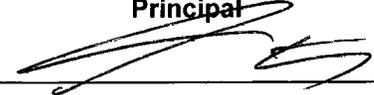
**NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH**, that if the said Principal shall promptly pay all monies due to all persons, supplying labor or materials to him or his subcontractors in the prosecution of the work provided for in said Contract, then this obligation shall be void, otherwise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

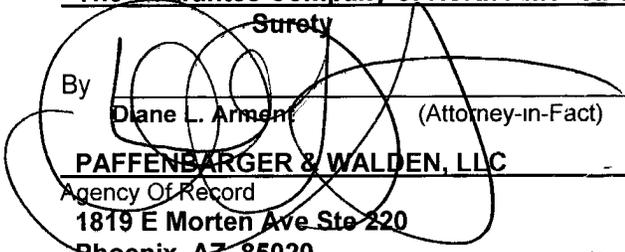
The prevailing party or any party which recovers judgment on this bond shall be entitled to such reasonable attorney's fees as may be fixed by the court or a judge thereof

**WITNESS** our hands this 3 day of April, 2014

Action Direct LLC dba Redpoint Contracting  
Principal

By 

The Guarantee Company of North America USA  
Surety

By   
Diane L. Arment (Attorney-in-Fact)  
PAFFENBARGER & WALDEN, LLC  
Agency Of Record  
1819 E Morten Ave Ste 220  
Phoenix, AZ 85020  
Agency Address

Telephone 602-212-9160



The Guarantee Company of North America USA  
Southfield, Michigan

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS That THE GUARANTEE COMPANY OF NORTH AMERICA USA, a corporation organized and existing under the laws of the State of Michigan, having its principal office in Southfield, Michigan, does hereby constitute and appoint

Andrew J Paffenbarger, Joseph A. Clarken III, Scott Wareing, Diane L. Arment, Jennifer Castillo  
Paffenbarger & Walden, LLC

its true and lawful attorney(s)-in-fact to execute, seal and deliver for and on its behalf as surety, any and all bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof, which are or may be allowed, required or permitted by law, statute, rule, regulation, contract or otherwise

The execution of such instrument(s) in pursuance of these presents, shall be as binding upon THE GUARANTEE COMPANY OF NORTH AMERICA USA as fully and amply, to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at the principal office

The Power of Attorney is executed and may be certified so, and may be revoked, pursuant to and by authority of Article IX, Section 9.03 of the By-Laws adopted by the Board of Directors of THE GUARANTEE COMPANY OF NORTH AMERICA USA at a meeting held on the 31<sup>st</sup> day of December, 2003. The President, or any Vice President, acting with any Secretary or Assistant Secretary, shall have power and authority

- 1 To appoint Attorney(s)-in-fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof, and
- 2 To revoke, at any time, any such Attorney-in-fact and revoke the authority given, except as provided below
- 3 In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond
- 4 In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner – Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation

Further, this Power of Attorney is signed and sealed by facsimile pursuant to resolution of the Board of Directors of the Company adopted at a meeting duly called and held on the 6th day of December 2011, of which the following is a true excerpt

RESOLVED that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, contracts of indemnity and other writings obligatory in the nature thereof, and such signature and seal when so used shall have the same force and effect as though manually affixed



IN WITNESS WHEREOF, THE GUARANTEE COMPANY OF NORTH AMERICA USA has caused this instrument to be signed and its corporate seal to be affixed by its authorized officer, this 23rd day of February, 2012

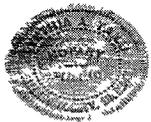
THE GUARANTEE COMPANY OF NORTH AMERICA USA

STATE OF MICHIGAN  
County of Oakland

Stephen C. Ruschak, Sr. Vice President, COO

Randall Musselman, Secretary

On this 23rd day of February, 2012 before me came the individuals who executed the preceding instrument, to me personally known, and being by me duly sworn, said that each is the herein described and authorized officer of The Guarantee Company of North America USA, that the seal affixed to said instrument is the Corporate Seal of said Company, that the Corporate Seal and each signature were duly affixed by order of the Board of Directors of



Cynthia A. Takai  
Notary Public, State of Michigan  
County of Oakland  
My Commission Expires February 27, 2018  
Acting in Oakland County

IN WITNESS WHEREOF, I have hereunto set my hand at The Guarantee Company of North America USA offices the day and year above written

I, Randall Musselman, Secretary of THE GUARANTEE COMPANY OF NORTH AMERICA USA, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by THE GUARANTEE COMPANY OF NORTH AMERICA USA, which is still in full force and effect



IN WITNESS WHEREOF, I have thereunto set my hand and attached the seal of said Company this 3 day of April, 2014

Randall Musselman, Secretary



**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

# CONTRACTORS ENHANCEMENT PLUS ENDORSEMENT

This endorsement modifies insurance provided under the following:

## COMMERCIAL GENERAL LIABILITY COVERAGE FORM

### LOST KEY COVERAGE

SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, coverage is extended to include the following:

If a customer's master or grand key, excluding electronic key card, is lost while in your care, custody or control we will pay the cost of replacing the keys, including the master lock and all keys used in the same lock, the cost of adjusting locks to accept the new keys, or the cost to replace the locks, whichever is less.

**Limit of Insurance** - The most we will pay for "loss" arising out of any one "occurrence" is \$5,000.

SECTION V DEFINITIONS is amended as follows:

The following definition applies to Lost Key Coverage:

"Loss" means unintentional physical damage or destruction to tangible property, including theft or disappearance. Tangible property does not include money or securities.

### VOLUNTARY PROPERTY DAMAGE

SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, coverage is extended to include the following:

At your request, we will pay for "property damage" to property of others caused by you and while in your possession, arising out of your business operations and occurring during the policy period.

**Limit of Insurance** - The most we will pay for "loss" arising out of any one "occurrence" is \$500.

SECTION V – DEFINITIONS is amended as follows:

The following definition applies to Voluntary Property Damage coverage:

"Loss" means unintentional damage or destruction but does not include disappearance, theft, or loss of use.

### NON-OWNED WATERCRAFT

SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions is amended as follows.

**g. Aircraft, Auto Or Watercraft (2) (a)** is replaced with.

**(a)** Less than 51 feet long; and

### EXPANDED PROPERTY DAMAGE COVERAGE

For the purposes of this endorsement only:

SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions is amended as follows:

**a.** Exclusions j.(3), j.(5), and j.(6) are deleted in their entirety.

**b.** Exclusion j.(4) is deleted in its entirety and replaced by the following.

Personal property in the care custody or control of the insured

**1.** for storage or sale at premises you own, rent or occupy; or

**2.** while being transported by any aircraft, "auto" or watercraft owned or operated by or rented to or loaned to any insured.

**c.** The following exclusions are added:

**1.** The coverage provided by this endorsement does not apply to "property damage" arising out of the disappearance or loss of use of personal property

**2.** The coverage provided by this endorsement does not apply to "property damage" included in the "products-completed operations hazard"

**Limit of Insurance** - The most we will pay for "property damage" provided by this coverage in any one "occurrence" is \$5,000.

**Deductible** - Our obligation to pay for a covered loss applies only to the amount of loss in excess of \$250.

This insurance is excess over any other valid and collectible insurance.

**DAMAGE TO PREMISES RENTED TO YOU**

SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, the last paragraph of 2. **Exclusions** of is replaced by the following:

If **Damage to Premises Rented to You** is not otherwise excluded, exclusions c. through n. do not apply to damage by fire, lightning, explosion, smoke or sprinkler leakage to premises while rented to you or temporarily occupied by you with permission of the owner. A separate limit of insurance applies to this coverage as described in Section III-Limits of Insurance.

SECTION III – LIMITS OF INSURANCE, paragraph 6 is replaced with

- 6. Subject to 5. above, the Damage To Premises Rented To You Limit is the most we will pay under Coverage A for damages because of "property damage" to any one premises, while rented to you, or in the case of damage by fire, lightning, explosion, smoke or sprinkler leakage, while rented to you or temporarily occupied by you with permission of the owner. The limit is increased to \$300,000.

SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS, 4 **Other Insurance**,

b. **Excess Insurance (1) (a) (ii)** is replaced with:

- (ii) That is Fire, Lightning, Explosion, Smoke or Sprinkler leakage insurance for premises rented to you or temporarily occupied by you with permission of the owner.

**SUPPLEMENTARY PAYMENTS**

SECTION I – COVERAGES, SUPPLEMENTARY PAYMENTS – COVERAGES A AND B is amended as follows:

- 1. 1. b. replaced with:

- b. Up to \$2,500 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

- 2. 1. d. replaced with.

- d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to \$500 a day because of time off from work.

**NEWLY FORMED AND ACQUIRED ORGANIZATIONS**

SECTION II – WHO IS AN INSURED is amended as follows:

- 1. 3. a. is replaced with:

- a. Coverage under this provision is afforded only until the 180<sup>th</sup> day after you acquire or form the organization or the end of the policy period, whichever is earlier;

**ADDITIONAL INSURED – WHEN REQUIRED IN AN AGREEMENT OR CONTRACT WITH YOU PRIMARY AND NON-CONTRIBUTORY**

The following is added to SECTION II – WHO IS AN INSURED

- 4 Any person(s) or organization(s) with whom you have agreed in a valid written contract or written agreement that such person or organization be added as an additional insured on your policy during the policy period shown in the Declarations. Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury".

The person or organization added as an insured by this endorsement is an insured only to the extent you are held liable due to:

**a. Lessors of Leased Equipment**

Maintenance, operation or use of equipment leased to you by such person or organization. This insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

However, their status as additional insured under this policy ends when their lease, contract or agreement with you for such leased equipment expires.

**b. Managers or Lessors of Premises**

The ownership, maintenance or use of that part of the premises you own, rent, lease or occupy.

This insurance does not apply to

- (1) Any "occurrence" which takes place after you cease to be a tenant in that premises.
- (2) Structural alterations, new construction or demolition operations performed by or on behalf of the person or organization.

However, their status as additional insured under this policy ends when you cease to be a tenant of such premises.

**c. State or Political Subdivision - Permits**

Operations performed by you or on your behalf for which the state or political subdivision has issued a permit

This insurance does not apply to

- (1) "Bodily injury" or "property damage" or "personal or advertising injury" arising out of operations performed for the state or municipality; or
- (2) "Bodily injury" or "property damage" included within the "products-completed operations hazard".

However, such state or political subdivision's status as additional insured under this policy ends when the permit ends.

**d. Owners, Lessees, or Contractors**

"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 performed for that additional insured, whether the work is performed by you or on your behalf

The insurance does not apply to:

- (1) "bodily injury", "property damage", or "personal and advertising injury" arising out of the rendering of or the failure to render any professional architectural, engineering or survey services, including:
  - (a). The preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, survey, field orders, change orders or drawings and specifications; or
  - (b) Supervisory, inspection, architectural or engineering activities
- (2) "Bodily injury" or "property damage" occurring after:
  - (a) 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
  - (b) 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.

However, a person or organization's status as additional insured under this policy ends when your operations for that additional insured are completed.

With respect to paragraph 4 of SECTION II WHO IS AN INSURED, Condition 4. Other Insurance of Section IV – Commercial General Liability Conditions is replaced by the following:

**4. Other Insurance**

If other valid and collectible insurance is available to the insured for a loss we cover under Coverages A or B of this Coverage Part, our obligations are limited as follows:

**a. Primary Insurance**

This insurance is primary if you have agreed in a written contract or written agreement:

- (1) That this insurance be primary. If other insurance is also primary, we will share with all that other insurance as described in c. below; or
- (2) The coverage afforded by this insurance is primary and non-contributory with the additional insured's own insurance.

Paragraphs (1) and (2) do not apply to other insurance to which the additional insured has been added as an additional insured or to other insurance described in paragraph b. below

**b. Excess Insurance**

This insurance is excess over.

- (1) Any of the other insurance, whether primary, excess, contingent or on any other basis:
  - (a) That is Fire, Extended Coverage, Builder's Risk, Installation Risk or similar coverage for "your work";
  - (b) That is fire, lightning, or explosion insurance for premises rented to you or temporarily occupied by you with permission of the owner;
  - (c) That is insurance purchased by you to cover your liability as a tenant for "property damage" to premises rented to you or temporarily occupied by you with permission of the owner; or
  - (d) If the loss arises out of the maintenance or use of aircraft, "autos" or watercraft to the extent not subject to Exclusion g. of Section I – Coverage A – Bodily Injury And Property Damage Liability
  - (e) That is any other insurance available to an additional insured under this endorsement covering liability arising out of the premises or operations, or products completed operations, for which the additional insured has been added as an additional insured by that other insurance

- (2) When this insurance is excess, we will have no duty under Coverages A or B to defend the additional insured against any "suit" if any other insurer has a duty to defend the additional insured against that "suit" If no other insurer defends, we will undertake to do so, but we will be entitled to the additional insured's rights against all those other insurers.
- (3) When this insurance is excess over other insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of:
  - (a) The total amount that all such other insurance would pay for the loss in the absence of this insurance, and
  - (b) The total of all deductible and self-insured amounts under all that other insurance.
- (4) We will share the remaining loss, if any, with any other insurance that is not described in this Excess Insurance provision and was not bought specifically to apply in excess of the Limits of Insurance shown in the Declarations of this Coverage Part.

**c. Method Of Sharing**

If all of the other insurance available to the additional insured permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first

If any of the other insurance available to the additional insured does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

**EMPLOYEE BODILY INJURY TO ANOTHER EMPLOYEE**

SECTION II – WHO IS AN INSURED The following Paragraph is added to **2.a.(1)**

Paragraphs **2.a.(1)(a), (b) and (c)** do not apply to “bodily injury” to a co-“employee” in the course of the co-“employee’s” employment by you, or to “bodily injury” to a co-“volunteer worker” while performing duties related to the conduct of your business

**BROAD FORM NAMED INSURED**

SECTION II – WHO IS AN INSURED The following Paragraph is added to **2.**

- e Any business entity incorporated or organized under the laws of the United State of America (including any State thereof), its territories or possessions or Canada (including any Province thereof) in which the Named Insured shown in the Declarations owns, during the policy period, an interest of more than fifty percent. If other valid collectible insurance is available to any business entity covered by this solely by reason of ownership by the Named Insured shown in the Declarations in excess of fifty percent, this insurance is excess over the other insurance, whether primary, excess, contingent, or on any other basis

**AGGREGATE LIMIT PER LOCATION**

SECTION III – LIMITS OF INSURANCE The following paragraph is added to paragraph **2:**

The General Aggregate Limit under Section **III Limits of Insurance** applies separately to each of your locations owned by or rented to you or temporarily occupied by you with the permission of the owner. For the purposes of this provision, location means premises involving the same or connecting lots, or premises whose connection is interrupted only by a public street, roadway, waterway or railroad right-of-way.

**AGGREGATE LIMIT PER PROJECT**

SECTION III – LIMITS OF INSURANCE The following paragraph is added to paragraph **2:**

The General Aggregate Limit under Section **III Limits of Insurance** applies separately to each of your construction projects away from premises owned by or rented to you.

**MEDICAL PAYMENTS**

SECTION III – LIMITS OF INSURANCE, Paragraph **7.** is replaced:

- 7.** Subject to **5.** above, the higher of:
- \$10,000, or
  - The amount shown in the Declarations for Medical Expense Limit is the most we will pay under Coverage **C** for all medical expenses because of “bodily injury” sustained by one person

This coverage does not apply if Coverage **C – Medical Payments** is excluded either by the provisions of any coverage forms attached to the policy or by endorsement.

**KNOWLEDGE OF AN OCCURRENCE**

SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS, The following is added to **2. Duties In The Event Of Occurrence, Offense, Claim Or Suit condition**

- Knowledge of an occurrence, offense, claim or suit by an agent or employee of any insured shall not in itself constitute knowledge of the insured unless you, a partner, if you are a partnership; or an executive officer or insurance manager, if you are a corporation receives such notice of an occurrence, offense, claim or suit from the agent or employee.
- The requirements in **Section IV – Conditions Paragraph 2.b.** will not be considered breached unless there is knowledge of occurrence as outlined in paragraph **e.** above

**UNINTENTIONAL FAILURE TO DISCLOSE HAZARD**

SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS, **6. Representations** is amended to include:

- Your failure to disclose all hazards or prior “occurrences” or offenses existing as of the inception date of the policy shall not prejudice the coverage afforded by this policy provided such failure to disclose all hazards or prior “occurrences” or offenses is not intentional. This provision does not affect our right to collect additional premium or exercise our right of cancellation or non-renewal

**WAIVER OF SUBROGATION**

SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS, **8. Transfer of Rights of Recovery Against Others to Us** is amended to include:

If required by a written contract executed prior to loss, we waive any right of subrogation we may have against the contracting person or organization 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 hazards".

**LIBERALIZATION**

SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS, **10. Liberalization** is added as follows

If we revise this coverage form to provide more coverage without additional premium charge, your policy will automatically provide the additional coverage as of the day the revision is effective in your state.

**BROADENED BODILY INJURY DEFINITION (MENTAL ANGUISH)**

SECTION V – **DEFINITIONS** is amended as follows:

1. 3. "Bodily injury" is deleted and replaced with the following:

"Bodily injury" means physical injury, sickness or disease to a person and, if arising out of the foregoing, mental anguish, mental injury, shock or humiliation, including death at any time resulting therefrom.

**All terms and conditions of this policy apply unless modified by this endorsement.**

CITY OF GLENDALE, ARIZONA  
PUBLIC WORKS/ENGINEERING DEPARTMENT

CONTRACTOR'S AFFIDAVIT  
REGARDING  
SETTLEMENT OF CLAIMS

**PROJECT 121303 - BELL ROAD MANHOLE REHABILITATION (73RD TO 83RD AVES & 67TH AVE N OF BELL RD.)**

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 75 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:** Project includes rehabilitation of 16 manholes in westbound Bell Road from 73<sup>rd</sup> to 83<sup>rd</sup> Avenues. The manholes are located on a VCP line installed in the early 1990's. The manholes are either 60" or 48" in diameter and range in depth from 14' to 20'. One additional manhole N of Bell Road on 67<sup>th</sup> Avenue (48" – 7.5' depth) will need to be fully reconstructed / coated and require a sewer bypass to accommodate the work. The work will consist of rehabilitating the manholes back to their original profile and then lining them with an approved coating system. Work shall include all necessary traffic control and an off-duty police officer when necessary.

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. **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.

4. **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.

5. **TRAFFIC REGULATIONS:**

5.1 All traffic affected by this construction shall be regulated in accordance with the City of Phoenix "Traffic Barricade Manual," the "Manual of Uniform Traffic Control Devices" and these Special Provisions. The following traffic restrictions are minimum requirements throughout the construction period:

5.1.1 All references in the City of Phoenix "Traffic Barricade Manual" and the "Manual of Uniform Traffic Control Devices" to "arterial" and/or "collector" streets shall mean "arterial and/or major arterial" streets and are referred to as "major" streets in the following sections.

5.1.2 A minimum of two travel lanes (one for each direction) shall be maintained open to traffic at all times on all major streets. All work that enters or crosses a major street must be done at times other than 6:00 a.m. to 8:30 a.m., and 4:00 p.m. to 6:00 p.m. unless approved by the Transportation Director or Designee.

5.1.3 A travel lane shall be defined as ten (10) feet of roadway not obstructed by traffic control devices with a safe motor vehicle operating speed of twenty-five (25) miles per hour.

5.1.4 A travel lane will not be considered as open to traffic until it has been graded reasonably

smooth and is paved with a minimum of two (2) inches of asphalt. This shall be considered temporary pavement and shall be removed completely before proceeding with final surfacing.

- 5.1.5 The Contractor shall provide and maintain all required and requested traffic control devices to protect and guide traffic for all work in the construction area.
- 5.1.6 Intersection area shall be defined as all of the area within the right-of-way of intersecting streets, plus two-hundred fifty (250) feet beyond the center of the intersected streets on all legs of the intersection.
- 5.1.7 The Contractor shall maintain all existing traffic signs erect, clean and in full view of the intended traffic at all times. Street name signs at major street intersections shall be maintained erect at all times. If any signs interfere with construction, the Contractor shall notify the Transportation Department at least 48 hours in advance before covering or removing said signage. The Contractor shall be responsible for reinstalling all signs removed or covered and verifying they are correctly placed. The Transportation Department will inspect all signage prior to completion of the project.
- 5.1.8 Local access to all properties on the subject project shall be maintained at all possible times in the form of a safe and reasonable direct route to at least one of the above defined major streets. Whenever local access cannot be maintained, the Contractor shall notify the affected property owner or user and the Engineer at least Seventy-Two (72) hours in advance.
- 5.1.9 The Contractor shall be required to provide a uniformed off-duty City of Glendale police officer to assist with traffic control whenever traffic in any one direction is restricted to one lane at a signalized major intersection or at other locations if it should become necessary in the opinion of the Transportation Director or Designee. If the Contractor chooses to use a police officer at other locations during peak traffic hours or to assist with his other traffic control operations, the cost shall be included in the lump sum for "Traffic Control" and not paid out of the hours allowed for "Off Duty Glendale Police Officer." All requests for off-duty officers will be made through the Glendale Police Department, Off-Duty Work Administrator. The Contractor must provide evidence of workmen's compensation coverage before any officer will be permitted to work.
- Measurement for payment of the uniformed off-duty Glendale police officer hours will be made by the actual number of man-hours used for traffic control at signalized major intersections or as approved by the Engineer. Because the quantity of hours is dependent on the Contractors schedule of activities, the unit price bid for this item will be administered as a contingency bid item and any adjustment in hours will not be subject to the 20 percent limitation.
- Payment for the off-duty Glendale police officer will be made at the contract unit price bid per hour for OFF DUTY GLENDALE POLICE OFFICER and shall include the net hourly rate of \$35.00 per police officer with a three (3) hour minimum. The net hourly rate shall be increased to include withholding for Federal, State, FICA, Medicare, Workmen's Compensation insurance and any payroll administrative costs.
- 5.1.10 The Contractor shall prepare a traffic control plan for the project and submit it to the City Transportation Director or Designee for review and approval at least fifteen (15) working days prior to the start of construction. The traffic control plan must be submitted through the City of Glendale on-Line Traffic Control Plan application process at [www.glendaleaz.com/transportation/TrafficControlForm.cfm](http://www.glendaleaz.com/transportation/TrafficControlForm.cfm). The traffic control plan shall include message boards installed a minimum of seven (7) working days prior to restrictions when requested by the Transportation Director or Designee, additional public notification shall be required for major restrictions that impact adjacent stakeholders. Any changes to the traffic control plan during construction shall be submitted to the City Transportation Director or Designee for approval at least seventy-two (72) hours before implementation.

Payment for this item shall be made at the contract lump sum price for TRAFFIC CONTROL.

5.1.11 Flagger Requirements: All flaggers shall be properly trained and certified by a recognized source, such as the American Traffic Safety Services Association (ATSSA) or National Safety Council, and shall carry with them at all times proof that training and certification requirements have been completed within the last two years.

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. PUBLIC RELATIONS: The Contractor shall work closely with the Public Relations Firm (PRF) provided by the City in notification of upcoming work in project schedule to surrounding businesses in the Bell Road corridor.

8. 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.

9. AZPDES Requirements:

A. Contractor warrants that its employees and Subcontractors of any tier and their employees shall at all times comply with all applicable laws, ordinances, statutes, rules and regulations set forth by all federal, state and local governments and the Arizona Department of Environmental Quality in connection with AZPDES Permitting requirements and laws and regulations pertaining to air, groundwater and surface water quality.

Fines and penalties imposed by the ADEQ against the City of Glendale or the Contractor, for Contractor's failure to comply with any of the requirements of AZPDES General Permit of Arizona, shall be borne by the Contractor.

10. CONSTRUCTION MATERIALS SAMPLING AND TESTING: The contractor, at their expense, shall provide adequate personnel for construction materials sampling and testing functions as required by the City of Glendale. Proof of certifications of the following requirements shall be provided to the City of Glendale prior to commencement of construction:

- A. LABORATORY TESTING SERVICES: Construction materials testing laboratories must meet the following requirements in order to perform laboratory testing on construction materials samples:
- a. Possess and maintain current AASHTO accreditation (including R18) provided by the AASHTO Materials Reference Laboratory (AMRL), and Cement and Concrete Reference Laboratory (CCRL) in any test methods performed and be currently participating in their respective proficiency programs.

b. Concrete strength testing must be performed by a technician currently certified by the American Concrete Institute (ACI) as a “Concrete Strength Testing Technician”.

B. FIELD TESTING AND SAMPLING SERVICES: Field technicians shall be employed by the construction materials testing laboratory noted above and have current “*Field Technician Certification*” from the Arizona Technical Testing Institute (ATTI) and current “*Concrete Field Testing Technician – Grade I*” certification from the American Concrete Institute.

C. TESTING FREQUENCIES: Laboratory and field testing and sampling shall adhere to the current City of Glendale minimum frequencies (see tables below) formal documentation, records etc. shall be provided to the City in a timely manner and as part of required project documentation for overall project acceptance. The City reserves the right to utilize independent / additional testing to confirm prior results.

Payment for this item will be made at the contract lump sum price fully complete for CONSTRUCTION MATERIALS SAMPLING AND TESTING.

CITY OF GLENDALE - CONSTRUCTION ENGINEERING				
MATERIALS TESTING SECTION				
ASPHALTIC CONCRETE MINIMUM SAMPLING AND TESTING FREQUENCY				
TYPE OF SAMPLE	REQUIRED TEST(S)	TEST METHOD DESIGNATION	MINIMUM SAMPLE FREQUENCY	MINIMUM SIZE OF SAMPLE
COLD FEED AGGREGATE OR COMBINED HOT-BIN AGGREGATE SAMPLES	SIEVE ANALYSIS	A S T.M. C - 136	1 - EVERY 500 TONS	25Kg
	SAND EQUIVALENT	A S T M D - 2419	1 - PER DAY	10Kg
	SPECIFIC GRAVITY (COARSE & FINE)	A S T M C-127 / C-128	1 - PER DAY	12Kg
	SIEVE ANALYSIS	A.S T M. C - 136	1 - PER EACH ADDITIONAL 500 TONS PRODUCED	25Kg
UNCOMPACTED ASPHALTIC CONCRETE MIXTURE	IGNITION-GRADATION	ARIZ 427	1 - PER FIRST 500 TONS PER DAY	9 Kg
	GYRATORY COMPACTION	AASHTO TP4	1 - PER FIRST 500 TONS PER DAY	9 Kg
	MAX THEORETICAL SPECIFIC GRAVITY	A S T M D - 2041	1 - PER FIRST 500 TONS PER DAY	7 Kg
	IGNITION-GRADATION	ARIZ 427	1 - PER EACH ADDITIONAL 500 TONS PRODUCED	9 Kg
	MARSHAL COMPACTION	ASTM D-6926/D6927	1 - PER FIRST 500 TONS PER DAY	9 Kg
COMPACTED ASPHALTIC CONCRETE MIXTURE	NUCLEAR DENSITY	A S T.M D - 2950	1 - PER 750 LINEAR FT PER PASS OR RIBBON	N/A
	SPECIFIC GRAVITY BY CORE SAMPLE	A S T M D - 2726	1 - PER 750 LINEAR FT PER PASS OR RIBBON	N/A

revised 1/07/2013

City of Glendale				
Minimum Construction Materials Field Testing Frequency				
Type of Material	Type of Structure	Minimum Test Frequency	Minimum Test Requirement	Test Method
Native In-Situ	Curb, Gutter & Sidewalk	1-per 500 lin ft	90% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Native In-Situ	Roadway Subgrade	1-per 500 lin ft	95% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Native In-Situ	Trench Backfill	1-per 500 lin ft per 1 ft lift	95% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Native In-Situ	Structural Fill	1-per lift	95% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Native In-Situ	Driveways, Aprons, Valley Gutters	1- per structure	95% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Aggregate Base	Pipe Bedding	1-per 500 lin ft.	95%	ASTM D-698 / D-2922
Aggregate Base	Curb, Gutter & Sidewalk	1-per 500 lin ft	95%	ASTM D-698 / D-2922
Aggregate Base	Roadway Base	1-per 500 lin ft	100%	ASTM D-698 / D-2922
Aggregate Base	Structural Fill	1-per lift	95%	ASTM D-698 / D-2922
Concrete	Curb, Gutter, Sidewalk, Driveways	1 set per 50 yards or 1/2 days pour	1 set of (4) 4X8 Cylinders	ASTM C-71 / C-172
Asphaltic Concrete	Roadway (Arterial)	1-per 750 lin ft. per pass	92% - Nuclear Density	ASTM D-2950 / D-2041
Asphaltic Concrete	Roadway (Arterial)	1-per 750 lin ft per pass	92% - Core Density	ASTM D-2726
Asphaltic Concrete	Roadway (Residential)	1-per 750 lin.ft per pass	95% - Marshall Density	ASTM D-6926/D6927
Asphaltic Concrete	Roadway (Residential)	1-per 750 lin ft. per pass	95% - Core Density	ASTM D-2726
Asphaltic Concrete	Roadway	1 Sample per 500 tons	Uncompacted Field Sample	AC Laboratory Tests*

**NOTE:** This table is based on the approximate minimum number of tests to be performed and requirements may be increased depending on site conditions or other circumstances at the discretion of the City of Glendale

\* All Asphaltic Concrete Laboratory Tests are covered on another sheet provided upon request

Revised 01/07/2013

11. **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.

12. **CONSTRUCTION SIGN:** The project type to be indicated on the sign shall be 121303 - BELL ROAD MANHOLE REHABILITATION (73RD TO 83RD AVES & 67TH AVE N OF BELL RD.). See "Construction Sign Detail."

13. NIGHT WORK: This section shall supersede and replace SECTION 27 – OVERTIME of the Supplemental General Conditions.

Regular Work Hours: The work required to be performed by the Plans and Specifications for the Project shall be performed only during night working hours, unless the City has authorized overtime work in accordance with the procedures set forth below. Regular working hours shall be defined as:

- 1) One 8 ½ hour shift per night, Sunday night (9:00pm Sunday) thru Thursday night (5:30am Friday) on a regular five day work week during Sunday PM thru Friday AM. Regular working hours shall not include after 5:30am Fridays, Saturdays or Sundays (before 9PM) 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.

14. 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 \$35,000.00. 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 \$35,000.00 on the bid form, under line item ALLOWANCE FOR CONSTRUCTION CONTINGENCY.

15. PUBLIC INFORMATION ALLOWANCE: Bid schedule includes a lump sum Public Information Allowance. This allowance is at all times the property of the City and is for the sole purpose of reimbursing the contractor for any unforeseen work not apparent at the time of bidding for supplemental work required by the City provided Public Information Firm (PRF) as part of public notification of the project work approved by the CITY OF GLENDALE.

No work anticipated for reimbursement under this Bid Item shall be initiated by the Contractor until the Contractor, City of Glendale Representative and the City of Glendale agree on the scope and cost to provide the additional public information effort. The contractor shall prepare and submit to the 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 the 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 public information effort 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 \$2500.00. 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 \$2500.00 on the bid form, under item ALLOWANCE FOR PUBLIC INFORMATION.

\*\*\*END OF SPECIAL PROVISIONS\*\*\*



# Project Life Cycle Cash Flow Schedule

Project No \_\_\_\_\_ Date \_\_\_\_\_

Project Name \_\_\_\_\_

Company Name \_\_\_\_\_

Project Start Date \_\_\_\_\_ Project Completion Date \_\_\_\_\_

Original  Updated  Revised

		Estimated		Actual	
Qtr	Fiscal Yr	Amount	Accum	Amount	Accum
1st	07/11 - 09/11				
2nd	10/11 - 12/11				
3rd	01/12 - 03-12				
4th	04/12 - 06/12				
1st	07/12 - 09/12				
2nd	10/12 - 12/12				
3rd	01/13 - 03/13				
4th	04/13 - 06/13				
1st	07/13 - 09/13				
2nd	10/13 - 12/13				
3rd	01/14 - 03/14				
4th	04/14 - 06/14				
1st	07/14 - 09/14				
2nd	10/14 - 12/14				
3rd	01/15 - 03/15				
4th	04/15 - 06/15				
1st	07/15 - 09/15				
2nd	10/15 - 12/15				
3rd	01/16 - 03/16				
4th	04/16 - 06/16				
Totals		\$ -	\$ -	\$ -	\$ -

\* COG's fiscal year is July 1, (current year) through June 30, (following year)

<b>For Engineering Use Only:</b>	
Account No _____	PO No _____

# CONSTRUCTION SIGN DETAIL

CONSTRUCTION SIGNS ARE TO BE IN PLACE BEFORE PHYSICAL CONSTRUCTION BEGINS

SIGNS SHALL BE MADE OF 3/4" AC EXTERIOR PLYWOOD OR OTHER MATERIAL APPROVED BY THE ENGINEER

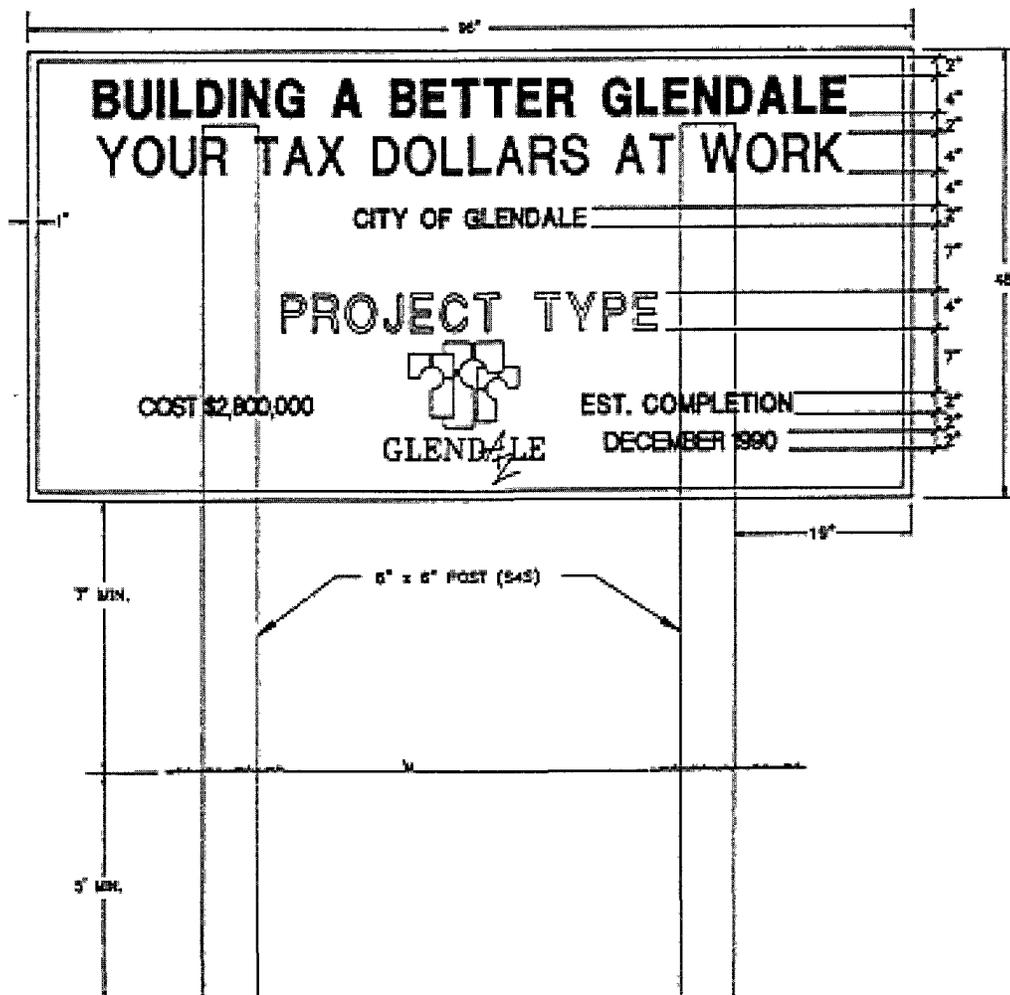
BACKGROUND TO BE PAINTED WHITE WITH STENCIL BLACK LETTERS, NUMERALS AND BORDER

POSTS SHALL BE PAINTED WHITE. ALL MOUNTING HARDWARE TO BE RUST PROOF MATERIAL

SIGNS SHALL BE SO PLACED THAT THEY WILL NOT OBSCURE OR DETRACT FROM OTHER SIGNING.

CONTRACTOR TO FILL IN THE PROJECT TYPE, COMPLETION DATE, AND COST AS DIRECTED.

THE TWO COLOR GLENDALE LOGO IS AVAILABLE BY CONTACTING THE CITY OF GLENDALE ENGINEERING DEPT. AT 623-930-3630.



**Bell Road Manhole Rehabilitation – Project No. 121303  
TECHNICAL SPECIFICATIONS**

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*EXPIRES 06-30-2016*

**Bell Road Manhole Rehabilitation – Project No. 121303**  
**TECHNICAL SPECIFICATIONS**

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## SECTION 1 - SUMMARY OF WORK

### 1.1 LOCATION AND DESCRIPTION OF WORK

Reference the Construction Plans for the following discussion.

- A. The City of Glendale Bell Road Manhole Rehabilitation (Work) is located in City of Glendale right-of-way in westbound Bell Road between 73<sup>rd</sup> and 83<sup>rd</sup> Avenues (16 manholes) and in 67<sup>th</sup> Avenue N of Bell road (1 manhole) for a total of (17) seventeen.

The Work consists of rehabilitating seventeen (17) manholes located in City of Glendale Quarter Sections 37-12, 37-11, 37-10 and 37-9. The manholes are located on 21-inch, 18-inch and 10-inch vitrified clay pipe (VCP) installed approximately in the early 1990's. The manholes are 60 inches in diameter (12 manholes) and 48 inches in diameter (5 manholes) and range in depth from approximately 7.5 feet to approximately 19 feet. One (1) manhole to be rehabilitated is a drop manhole (37-11-012D) and another to be rebuilt / replaced receives sludge from the Arrowhead Ranch Water Treatment Plant (AWTP - 37-12-007).

- B. The following is the list of manholes to be rehabilitated as numbered on the City of Glendale Quarter Section Maps and found on the project plans:

37-09-004	37-10-001	37-10-005	37-11-002
37-09-005	37-10-002	37-10-006	37-11-003
37-09-006	37-10-003	37-10-007	37-11-004
37-09-007	37-10-004	37-11-001	37-11-012D
			37-12-007 (Rebuild)

- C. Major work to be performed under this contract includes, but is not limited to the following:
1. Rehabilitate 16 manholes at the locations indicated on the plans including structural repair and coating system application as indicated in these Technical Specifications and indicated on the project Construction Plans. Reconstruct 1 manhole at the location indicated on the project plans (37-12-007)
  2. Provide all pumping, piping, power, noise control, earthwork and/or flow-through plugs as necessary to divert flows around the rehabilitation work.
  3. Remove all construction material, excess excavation, equipment, and debris remaining on the job site as a result of construction operations, render the job site in a neat and orderly condition and restore the construction site to pre-existing conditions.
  4. Provide traffic control during construction per City of Glendale Transportation Department requirements (SEE Special Provisions – additional requirements below)

5. CONTRACTOR to provide all materials, equipment, and labor necessary to perform the work contained within the contract documents, including, but not limited to, lighting, odor control, personnel facilities, flow diversion, and safety and health equipment.
6. CONTRACTOR to locate and verify the location of all pipelines, and utilities prior to conducting any excavation work.
7. CONTRACTOR to provide all personnel and laboratory support necessary for materials testing services on the project. Services include but are not limited to soils, concrete and hot mix asphalt testing.
8. CONTRACTOR is required to contact Blue Stake, at 602-263-1100, two (2) working days prior to start of work at site if it is determined excavation will be required.
9. CONTRACTOR to work closely and in conjunction with the Public Relations firm (PRF) provided by the CITY in providing timely, adequate and ample notification to all adjacent properties and businesses during the course of the work.

#### 1.2 QUALITY ASSURANCE

The CONTRACTOR is solely responsible for maintaining the quality assurance of his work during the length of the project. The contractor is responsible for any costs associated with the corrective measures required to replace or repair items not meeting the quality standards specified by the CITY.

The Work shall conform to all of the requirements and recommendations of the Plans, Technical Specifications, and the following:

A. Occupational Safety and Health Administration (OSHA)

The CONTRACTOR shall carry out his operations in strict accordance with all applicable OSHA Standards. Particular attention is drawn to those safety requirements involving work entry into confined spaces with potential for existence of hazardous gasses related to the movement of raw sewage. It shall be the CONTRACTOR's responsibility to familiarize himself and his employees with OSHA Standards and regulations pertaining to all aspects of the work.

B. Environmental Protection Agency (EPA)

C. Arizona Department of Environmental Quality (ADEQ)

D. Maricopa County Environmental Services Department (MCESD)

E. Standard Specifications and Details

- a. Uniform Standard Specifications for Public Works Construction by Maricopa Association of Governments (MAG)
- b. City of Glendale Supplements to MAG Uniform Standard Specifications
- c. City of Glendale Engineering Design and Construction Standards
- d. City of Phoenix Traffic Barricade Manual - 2007

Where there is a conflict between the MAG Standard Specifications, MAG Standard Specifications as supplemented by City of Glendale, and these Technical Specifications, the provisions of these Technical Specifications shall govern.

### 1.3 WORK BY CITY

CITY will perform the following work:

- A. The City of Glendale's operating personnel will be responsible for operating the existing sewers and facilities throughout the execution of this Contract. All contact between the CITY operational personnel and the CONTRACTOR on all matters shall be through the CITY's Project Manager or their designee.
- B. The CITY's Project Manager and the CITY's Inspector will provide construction management and inspection services for the Work.
- C. The CITY's Project Manager and the CITY's Inspector will provide acceptance review of field and laboratory results generated by a Materials Testing Laboratory (MTL) retained by the CONTRACTOR.
- D. The CITY will provide the services of a Public Relations Firm (PRF) to interface with all affected businesses in the immediate vicinity of the project. The CONTRACTOR shall work closely and in conjunction with the PRF in providing adequate and ample notification to all adjacent properties and businesses during the course of work.

### 1.4 CONTRACTOR'S USE OF PREMISES

- A. Coordinate use of the premises, for his storage and the operations of his workmen, with CITY and utility service companies.
- B. The full use of the premises for storage, the operations of workmen and for all other construction activities will not be available to CONTRACTOR thru the City. Must operate entirely within the space allowed to him when rights acquired.
- C. Sole responsibility for obtaining and paying all costs in connection with work area, storage sites, access to the site or temporary right-of-way which may be required for proper completion of the Work, belongs to CONTRACTOR.

- D. It shall be understood that responsibility for protection and safe-keeping of equipment and materials on or near the site will be entirely that of CONTRACTOR and that no claim shall be made against the CITY or his authorized representatives by reason of any act. It shall be further understood that should any occasion arise necessitating access to the site occupied by these stored materials or equipment, the CITY shall direct CONTRACTOR owning or responsible for the stored materials and equipment to immediately move the same. No materials or equipment may be placed upon the property of the CITY, unless the CITY has agreed to the location contemplated by CONTRACTOR to be used for storage. All stored materials shall be labeled according to the appropriate contractor or subcontractor with the manufacturer's label as well. Appropriate material safety data sheets (e.g , MSDS) shall be provided.
- E. Required to share use of the premises with other contractors whose services the CITY has obtained or will obtain for construction of other facilities on the site.
- F. CONTRACTOR shall in no way interfere with the operation of existing sewers and pipelines, except as specified herein and shall exercise every precaution to ensure that and debris and material from its operation does not enter the sewer at any time. Any debris or blockage entering into the sewer as a result of the CONTRACTOR'S work shall be immediately removed at the CONTRACTOR's expense. Proposed methods for construction in and around the existing facilities shall be included as part of the construction progress schedule.

#### 1.5 EASEMENTS AND RIGHTS-OF-WAY

Easements and rights-of-way determined by the CITY to be required to perform the Work will be provided by CITY. Confine construction operations within the limits indicated on the Plans. Use due care in placing construction tools, equipment, excavated materials, and pipeline materials and supplies in order to avoid damage to property and interference with traffic. Do not enter any private property outside the designated construction easement boundaries without written permission from the CITY and the owner of the property. Any private property or rights-of-way owned by other than the CITY, which CONTRACTOR wishes to utilize during the performance of the Work, shall be provided by CONTRACTOR.

#### 1.6. EXISTING UTILITIES

No utility investigation was done in association with this project so no above ground or underground utilities are shown on the Plans. If the CONTRACTOR determines that excavation will be required the CONTRACTOR shall locate and verify the location of all pipelines prior to conducting any excavation work. Blue Stake clearances will be required PRIOR to work. The contract shall make no claim against the City for project delays due to Blue Stake clearances

### 1.7 NOTICES TO OWNERS AND AUTHORITIES OF PROPERTIES ADJACENT TO THE WORK

- A. This project is located along the Bell Road retail corridor (67<sup>th</sup> to 83<sup>rd</sup> Avenues). This corridor is the most heavily traveled, heavy retail businesses section within the City of Glendale. 16 manhole rehabilitation locations front the commercial / retail businesses in the WB Bell Road high speed lane thru 5 lighted intersections (2 arterial).
- B. The CITY shall provide the services of a Public Relations Firm (PRF) to work closely with the CONTRACTOR to interface with all affected businesses in the immediate vicinity of the project. The CONTRACTOR shall work closely and in conjunction with the PRF in providing timely, adequate and ample notification to all adjacent properties and businesses during the course of work and in any immediate area when work may directly impact a property or business. All contacts made with the property owners / businesses adjacent to the work will be handled by the PRF.
- C. Work closely to allow the PRF to assist the PRF in notifying owners / business operators of adjacent properties and utilities when prosecution of the work may affect them.
- D. When it is necessary to temporarily obstruct access to property, or when any utility service connection must be interrupted, work with the PRF to give notices sufficiently in advance to enable the affected persons and or businesses to provide for their needs. Notices shall be provided to the City (for approval) prior to incorporation into work.
- E. Utilities and other concerned agencies shall be notified at least 48 hours prior to cutting or restricting streets or other traffic areas or excavating near underground utilities or pole lines.

## SECTION 2 - SUBMITTALS

### PART 1 – GENERAL

#### 1.1 DESCRIPTION

- A. Submittals covered by this section include manufacturers' information, shop drawings, test procedures, test results, samples, requests for substitutions, requests for information, and miscellaneous work-related submittals. The CONTRACTOR shall furnish all submittals as specifically required in the contract documents to demonstrate fully that the materials and equipment to be furnished and the methods of work comply with the provisions and intent of the contract documents.
- B. The term "Shop Drawings" as used herein shall be understood to include detailed design calculations, fabrication and installation drawings, lists, graphs, test data, operating instructions, and other items which shall include, but are not necessarily limited to:

1. Drawings and catalog information and cuts.
  2. Specifications, parts list, suggested spare parts lists, and equipment drawings.
  3. Mechanical, electrical, electronic equipment and system
  4. Applicable certifications
  5. Anchor bolt templates, mounting instructions and mounting design calculations as required.
  6. Other technical, installation, and maintenance data as applicable
  7. Unloading and handling methods and storage requirements.
  8. Note, highlight, and explain proposed changes to the Contract Documents
  9. Drawings showing CONTRACTOR field verifications illustrating all field dimensions. Field verify all dimensions and existing materials shown on the Plans Any modifications required shall be at CONTRACTOR'S expense
  10. Piping and conduit details.
- C. The term "Request for Information" shall be understood when any of the following are required:
1. An interpretation of the Specifications.
  2. Additional details.
  3. Information not shown on the Plans or in the Technical Specifications.
  4. Clarifications of discrepancies.

#### 1.2 CONTRACTOR RESPONSIBILITIES

- A. Responsibility belongs to CONTRACTOR to review submittals made by his suppliers and subcontractors before transmitting them to the CITY to assure proper coordination of the Work and to determine that each submittal is in accordance with CONTRACTOR'S desires and that there is sufficient information about the materials and equipment for CITY to determine compliance with the Contract Documents. Incomplete or inadequate submittals will be returned for revision without review
- B. Submittal documents shall be clearly edited to indicate only those items, models, or series of equipment, which are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated.
- C. The CONTRACTOR shall ensure that there is no conflict with other submittals and notify the CITY in each case where his submittal may affect the work of another contractor or the CITY.

- D. The CONTRACTOR shall coordinate submittals so that work will not be delayed. The CONTRACTOR shall coordinate and schedule different categories of submittals, so that one will not be delayed for lack of coordination with another. No extension of time will be allowed because of failure to properly schedule submittals.
- E. The CONTRACTOR may authorize in writing a material or equipment supplier to deal directly with the CITY with regard to a submittal. These dealings shall be limited to contract interpretations to clarify and expedite the work.
- F. The CONTRACTOR shall consider the nature and complexity of each submittal item and shall allow ample time for review, revision or correction. Submittal will normally be returned to CONTRACTOR within five (5) calendar days following receipt of the submittal.
- G. Furnish required submittals with complete information and accuracy in order to achieve required approval of an item within one submittal.

### 1.3 PROCEDURE

- A. Submit all Shop Drawings to the CITY's Project Manager in PDF format
- B. A letter of transmittal shall accompany each submittal. If data for more than one Section of the Technical Specifications is submitted, a separate transmittal letter shall accompany the data submitted for each Section.
- C. All letters of transmittal shall be submitted electronically in PDF format.
- D. At the beginning of each letter of transmittal, provide a reference heading indicating the following:
  - 1. CITY'S Name
  - 2. Project Name
  - 3. Contract No.
  - 4. Transmittal No.
  - 5. Section No
  - 6. Total Number of Pages
  - 7. Date
  - 8. Item/Description
  - 9. Submitted by:

- B. MEASUREMENT & PAYMENT: Measurement and Payment of Diversion of Sewage Flow and Dewatering shall be on a lump sum basis. Intermediate measurements for payment shall be made by the CITY on a percentage of work completed basis

## PART 2 – PRODUCTS

### 2.1 MATERIALS

- A. CONTRACTOR shall provide temporary pumps, conduits, and other equipment to bypass sewer flow around the CONTRACTOR's work area as required. CONTRACTOR shall furnish all necessary labor and supervision to set up and operate the pumping and bypass system. Critical grade sound attenuated pumps shall be provided for the bypass pumping as required – see Section 3.6 Noise Control. Sound measurements shall be made in accordance with American National Standard S 13-1971. Pumps and bypass lines shall be of adequate capacity and size to handle the required capacity. The bypass system shall be designed to normally maintain the wastewater flow below the top of the pipe without surcharging.
- B. The CONTRACTOR shall maintain on site, sufficient equipment and materials to ensure continuous and successful operation of the bypass and dewatering systems. The standby pumps shall be installed and fully operational at all times including all pumps, equipment and piping being in-place. Standby pumps shall be fueled and operational at all times. The CONTRACTOR shall maintain on site a sufficient number of valves, tees, elbows, connections, tools, sewer plugs, piping, and other parts of the system hardware to ensure immediate repair or modification of any part of the system as necessary.

For bypassing systems with a required capacity equal to or less than 2 MGD and piping lengths greater than 1,000 feet, and for systems with required capacity greater than 2 MGD, the CONTRACTOR shall provide multiple bypass lines to convey 150% of the maximum anticipated flow (as determined by the CONTRACTOR). Redundant lines should be fully connected in the bypass system to allow the system to be switched over quickly in the event of a leak.

- C. All pumps, generators, and other equipment shall be placed on a new plastic tarp to protect against gasoline, oil, and hydraulic fluid spills.
- D. If utilizing flow-through plugs, surcharging upstream of the subject manhole shall not exceed one half the vertical distance from the manhole invert to the ground surface or ten feet, whichever is less. In addition, the surcharging pressure shall not exceed the design capacity of the plug associated with the flow-through tube. Surcharging in the nearest upstream manhole shall be continuously monitored whenever the flow-through tube is in place. The CONTRACTOR shall also note that many of the manholes have several pipes flowing into the manhole with one pipe leaving the manhole. All flows entering the manhole will have to be handled. This may necessitate the fabrication of specialty wye tee, or similar fittings for the flow-through tubes, which shall be provided at no additional cost to the CITY.

- 
- E. If a Shop Drawing deviates from the requirements of the Contract Documents, specifically note each variation in the letter of transmittal
- F. All Shop Drawings submitted for approval shall have a title block with complete identifying information satisfactory to CITY.
1. All Shop Drawings submitted shall bear the approval and signature of CONTRACTOR as evidence that they have been reviewed and verified to the completeness of the submittal by CONTRACTOR. Submittal without this stamp of approval will not be reviewed by CITY and will be returned to CONTRACTOR.
- G. In order to identify and track all submittals as separate and unique items, utilize the submittal identification numbering system as follows:
1. The Submittal Number shall be separate and unique number correlating to each individual submittal that is required to be tracked as a separate and unique item. The Submittal Number shall be a two part, number assigned by CONTRACTOR in the following manner:
    - a. The first part of the Submittal Number shall consist of the applicable Specification Section number.
    - b. The second part of the Submittal Number shall consist of two digits (numbers 01 to 99) to number each separate and unique submittal submitted under each Specification Section.
    - c. A dash shall separate the two parts of the Submittal Number
    - d. A typical Submittal Number for the second Working Drawing submitted under Section 6, Manhole Rehabilitation, would be 6-02.
  2. The Review Cycle shall be a single digit number indicating the initial submission or resubmission of the same submittal. For example:
    - 1 = First (initial) submission
    - 2 = Second submission (first resubmission)
    - 3 = Third submission (second resubmission)
    - a. An example of the typical submittal identification numbers for the first submission of the third submittal submitted under Section 6, Manhole Rehabilitation is 6-03 1
- H. After CITY completes their review, Shop Drawings will be affixed with a stamp and marked with one of the following notations:
1. Approved.

2. Approved as Noted
  3. Approved as Noted, Confirm.
  4. Approved as Noted, Resubmit.
  5. Not Approved.
  6. Comments Attached.
- I. If a submittal is acceptable, it will be marked "Approved" or "Approved as Noted" One electronic PDF copy of the submittal will be returned to CONTRACTOR.
  - J. Upon return of a submittal marked "Approved" or "Approved as Noted", CONTRACTOR may order, ship or fabricate the materials included on the submittal, provided it is in accordance with the corrections indicated.
  - K. If a Shop Drawing marked "Approved as Noted" has extensive corrections or corrections affecting other Shop Drawings or Work, CITY may require that CONTRACTOR make the corrections indicated thereon and resubmit the Shop Drawings for record purposes. Such Shop Drawings will have the notation, "Approved as Noted/Resubmit." The corrected Shop Drawing shall be a pre-condition for payment for the work item of the Shop Drawing.
  - L. If a submittal is unacceptable, an electronic copy will be returned to CONTRACTOR with "Not Approved". The "Not Approved" notation is used to indicate material or equipment that is not acceptable. Upon return of a submittal so marked, repeat the initial approval procedure utilizing acceptable material or equipment.
  - M. Any related Work performed or equipment installed without an "Approved" or "Approved as Noted" Shop Drawing will be at the sole responsibility of CONTRACTOR.
  - N. Shop Drawings shall be submitted well in advance of the need for the material or equipment for construction and with ample allowance for the time required to make deliver of material or equipment after data covering such is approved. Assume the risk for all materials or equipment which are fabricated or delivered prior to the approval of Show Drawings Materials or equipment will not be included in periodic progress payments until approval thereof has been obtained in the specified manner
  - O. CITY will review and process all submittals promptly; a reasonable time shall be allowed for this, for the Shop Drawings being revised and resubmitted, and for time required to return the approved Shop Drawings to CONTRACTOR

### 1.3 MEASUREMENT AND PAYMENT

No measurement or payment for this item. Preparation and submission of submittals shall be considered incidental to the Work

## **SECTION 3 - DIVERSION OF SEWAGE FLOW AND DEWATERING**

### PART 1 – GENERAL

#### 1 1 DESCRIPTION

##### A SCOPE

This section describes the requirements for diverting sewage and dewatering of sewers during the manhole rehabilitation. Temporary diversion of sewage flows is a key aspect of this project when flow thru plugs are not feasible and includes the maintenance of service to the customer connections and/or making alternative arrangements for customers connections.

It may be possible that flows can be handled through the use of flow-through plugs and no aboveground bypass pumping will be required. In that case, any provisions related specifically to aboveground bypass pumping shall not apply.

The CONTRACTOR is made aware that manhole rehabilitation may occur during the monsoon months with severe thunderstorms and possible flash flooding events. Adverse weather conditions may impact the capacity of the diversion system. The CONTRACTOR shall be prepared for these weather conditions and alter procedures accordingly. CONTRACTOR will be responsible for all dewatering of manholes prior to work.

##### B. EXPERIENCE

If the CONTRACTOR chooses to utilize aboveground bypassing he shall utilize staff and/or a subcontractor that has been directly responsible for completion of a sewer rehabilitation or replacement project that required the bypass pumping of sewage flows in excess of 10 mgd.

#### 1 2 QUALITY ASSURANCE

The CONTRACTOR is solely responsible for maintaining the quality assurance of his work during the length of the project. The contractor is responsible for any costs associated with corrective measures required to replace or repair items not meeting the quality standards specified by the CITY.

A. BYPASS DESIGN: The actual design of the bypass arrangement shall be prepared by the CONTRACTOR, and shall be submitted to the CITY to determine conformance to project objectives. Means and methods of accomplishing the bypassing shall be the responsibility of the CONTRACTOR. System redundancy will be required for all designs submitted.

- B. TESTING: The CONTRACTOR shall have the entire bypassing system in place and successfully pressure tested at 1.5 times the maximum operating pressure of the system before bypassing any sewage.

### 1.3 SUBMITTALS

At the Pre-Construction Meeting, the CONTRACTOR shall submit drawings and complete design data showing methods and equipment he proposes to utilize in sewer bypassing for approval by the CITY. The submittal shall include the following information as applicable.

#### A. BYPASS PUMPING

1. Drawings indicating the scheme and location of temporary sewer plugs and bypass discharge lines. The drawings shall also show the method and location for discharging the bypass lines.
2. Capacities of pumps, prime movers, and standby equipment.
3. Design calculations proving adequacy of the system and selected equipment.
4. Standby power source.
5. Staffing plan and duration(s)
6. Show suction and discharge points with elevations and stationing on the design plans
7. Proposed noise control and exhaust control plans for pumping equipment.
8. Proposed plan for disruption of sewer service laterals.
9. Bypass piping inspection plan

#### B. FLOW-THROUGH PLUGS

1. Design calculations for upstream surcharging resulting from the design flow rate and the restriction imposed by a flow thru plug. The calculations shall be stamped by an engineer registered to practice such discipline within the State of Arizona. Bypass piping system shall have a minimum internal diameter of 15-inches for all sewer lines 21-inches or larger and a minimum internal diameter of 8-inches for sewer lines 18-inches and smaller.

### 1.4 JOB CONDITIONS

#### A. AVAILABLE FLOW DATA

It is the responsibility of the CONTRACTOR to verify flow data provided as part of these specifications prior to incorporation into work plan. The available estimated flow data prior to specification development is as follows:

City of Glendale Sewer Lift Station NW Quadrant of Loop 101 and Bell Road	March 2013 data Average daily flow = 562,032 gallons / day
Waste Activated Sludge (WAS) Line into MH 37-12-007 (Planned for full manhole replacement)	November 2013 data Approximately 50,000 gallons / day
MH #5 – WB Bell Road W of 77 <sup>th</sup> Avenue MH 37-10-001	November 2006 data Approximate daily flow = 0.11 mgd Max daily flow = 0.37 mgd Min daily flow 0.01mgd
MH #14 – WB Bell Road W of 73 <sup>rd</sup> Avenue MH 37-11-003	November 2006 data Average daily flow = 0.10 mgd Max daily flow = 0.34mgd Min daily flow = 0.01

Any additional monitoring or gathering of flow data to properly size the bypass system is the responsibility of the CONTRACTOR. The CONTRACTOR shall include considerations for increased flows due to rainfall events, fluctuations of peak flows due to holidays, civic events, etc., equipment failure risks, etc and provide adequate reserve capacity and redundancy to maintain sewer flows within the sewer pipe upstream and downstream of the bypass.

The CONTRACTOR is responsible for obtaining current flow condition information at the time of construction. The CITY is not responsible for any deviations in quantity of sewage flow at any time during the construction period. Higher flows may be encountered depending on weather and other upstream conditions.

**B SERVICE OR COLLECTOR LINES**

Sanitary sewers to be bypassed may include service lines connected to adjacent users or collector pipes at manholes. Service lines and collector lines are shown on the Quarter Section maps available to the contractor upon request, however, the CONTRACTOR shall verify the locations of these lines and any other service lines not shown on the Quarter Sections.

**1.5 MEASUREMENT AND PAYMENT**

**A DEFINITION:** Full compensation for all labor, material, equipment, and monitoring required to temporarily bypass wastewater flows around the rehabilitation and/or dewater pipelines in preparation for cleaning and rehabilitation. Bypass shall include standby pumps and piping. Also includes installation, maintenance and removal of bypass pumps and bypass pipes, noise suppression, odor control, plugging of sewers, vactoring, excavation and backfill of any required trenches, steel plating, saw cut, removal and repair of pavement, construction of suction and discharge structures to facilitate bypass pumping, flow-through plugs, landscape restoration, and all other incidentals necessary to complete the work in conformance with Plans and Specifications.

### PART 3 – EXECUTION

The CONTRACTOR shall notify the CITY 48 hours prior to shutting down of a pipeline and start of bypass pumping.

#### 3.1 SERVICE LINES

Every effort shall be made by the CONTRACTOR to insure that sewer service to customers is maintained during the course of the work. Laterals within business areas shall be addressed on a case by case basis. The CONTRACTOR shall work with the CITY's public information representative in working with customers to discuss bypass pumping of services or making alternative arrangements with the customer for service outages. No matter what the arrangement is made, the CONTRACTOR must cooperate with the CITY's representative to provide documentation that all affected users have been contacted and arrangements made for disruption or alternate accommodations. The documentation must be submitted prior to the start of work on the section of sewer line affected.

#### 3.2 PUBLIC NOTIFICATIONS

This project is located along the Bell Road retail corridor (67<sup>th</sup> to 83<sup>rd</sup> Avenues). This corridor is the most heavily traveled, heavy retail businesses section within the City of Glendale. 16 manhole rehabilitation locations front the commercial / retail businesses in the WB Bell Road high speed lane thru 5 lighted intersections (2 arterial).

The CITY will provide the services of a Public Relations Firm (PRF) to directly interface with all affected businesses in the immediate vicinity of the project. The CONTRACTOR to work closely and in conjunction with the PRF in providing timely, adequate and ample notification to all adjacent properties and businesses during the course of work.

The CONTRACTOR will work closely with the PRF for notification of affected businesses of the day's work to notify all business owners prior to work in their immediate area when work may affect them. Additionally, the contractor shall provide to all affected businesses an available contact (24hr / 7days/week) for questions / concerns of affected businesses.

The CONTRACTOR will work closely with the PRF to notify owners / business operators of adjacent properties and utilities when prosecution of the work may affect them.

When it is necessary to temporarily obstruct access to property, or when any utility service connection must be interrupted, the contractor shall work with the PRF to give notices sufficiently in advance to enable the affected persons and or businesses to provide for their needs. Notices shall be provided to the City (for approval) prior to incorporation into work. If it is determined that the required WORK can be completed without service interruptions, then public / business notification shall not be required. However, if service interruptions will take place, the CONTRACTOR shall notify the CITY of any planned service interruptions at least two weeks prior to the event. At a minimum, the first notification shall be a minimum of 5 days before the interruption of service and at the beginning of the project work. Much greater advance notice may be required (2 weeks) if an alternate to pumping the customer's service is proposed by the CONTRACTOR.

### 3.3 MONITORING

The bypassing system shall not be shut down between shifts, on holidays or weekends, or during work stoppages without written permission from the CITY. The bypass system will have an attendant around the clock whose only duty is to maintain the bypass pumping system until the bypassing of that specific pipeline is no longer required

The CONTRACTOR shall inspect the entire bypass pumping system for leaks or spills on an hourly basis. The CONTRACTOR shall also create an inspection log and shall enter the time of inspection and the condition of the piping and the name of the inspector into the log for review by the CITY.

### 3.4 PUBLIC AND PRIVATE ACCESS

The CONTRACTOR shall maintain public and private access along project routes. Bypass lines shall be protected from damage due to traffic and shall not impede pedestrian or vehicular traffic routes unless otherwise allowed by approved traffic control plans. Bypass lines shall be buried at street crossings and business entrances unless otherwise approved by the CITY. Temporary steel plating with milled edges may be used with approval for buried lines. Ramps protecting bypass lines shall be a minimum level of protection at accesses to private residences unless otherwise approved by the CITY

CONTRACTOR shall maintain pedestrian traffic and comply with ADA regulations for access to all residential and commercial property unless written approval is otherwise obtained from the property owner allowing for reduced access.

### 3.5 DISCHARGE

In areas where flows are bypassed, all bypass flows shall be discharged as approved by the CITY. No bypassing to the ground surface, receiving waters, storm drains, or bypassing which results in soil or groundwater contamination or any potential health hazards shall be permitted. In addition, no backups and overflows onto private property shall be permitted

### 3.6 NOISE CONTROL

The CONTRACTOR shall perform all work in compliance with OSHA standards and in no case will noise levels be permitted which would interfere with the work of the CITY or others. Noise levels shall be in accordance with City of Glendale noise ordinance.

The CONTRACTOR shall utilize sound attenuated bypass pumps with a maximum decibel rating of 70 dB @ 50 feet. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without previously mentioned muffler.

Noisy portable equipment, such as generators or compressors, shall be located as far away from sensitive noise receptor areas as practicable (Sensitive noise receptors are defined as occupied buildings with windows or doors facing the site ) Noise barriers shall be constructed around noisy stationary construction equipment such as compressors or generators that have to be utilized at locations near (within 100 feet of) sensitive noise receptors as defined above. Idling equipment not actively utilized for extended periods of time shall be shutoff.

### 3.7 DAMAGES

The CONTRACTOR shall repair and/or clean-up, without cost to the CITY, any damage that may result from his negligence, inadequate or improper installation, maintenance, and operation of bypassing system, including mechanical or electrical failures.

### 3.8 ODOR CONTROL

The CONTRACTOR shall employ methods and procedures that mitigate the generation and discharge of objectionable odors to the surface environment at all times.

The CONTRACTOR shall add ferric chloride to the wastewater flow upstream of bypass pumping operations to reduce odor. The CONTRACTOR shall make his own determination of flow characteristic for required dosing

The CONTRACTOR shall add the ferric chloride from a location upstream that will allow 10 to 15 minutes reaction time before the flow enters the work area The chemical dosing shall reduce odors generated from the wastewater stream to a level acceptable to the CITY. If this is not accomplished by adding the ferric chloride only, an additional control may be required. If odors are still unacceptable after addition of ferric chloride, the CONTRACTOR may also add hydrogen peroxide. The CONTRACTOR shall add hydrogen peroxide downstream to the flow that has been dosed with ferric chloride. The hydrogen peroxide shall be added to allow a 5-minute reaction time before flow enters the work area. Any dosage combination of the two chemicals may be used to ensure continuous control of odors acceptable to the CITY

### 3.9 SANITARY SEWER OVERFLOWS

The CONTRACTOR shall take any and all precautions necessary to prevent backups and overflows on public or private property from blocked laterals or mainlines during all sewer rehabilitation work Special arrangements or supplemental bypasses may be required for some areas of the project CONTRACTOR is responsible for immediate and proper containment and cleanup should any spill occur, regardless of amount. CONTRACTOR is responsible for ALL sanitary sewer overflows and the CITY will not be held liable in an instances.

### 3.10 TERMINATION OF BYPASS

Bypass operations shall not be terminated until approvals are obtained from the CITY for the Manhole Rehabilitation

### 3.11 REMOVAL OF PLUGS

The CONTRACTOR shall notify the CITY's Wastewater Collections Superintendent (or his assigned representative) prior to removing any plugs so that the Wastewater Collections staff will be prepared for possible surges in the downstream lines and facilities.

## **SECTION 4 - SEWER STRUCTURE CLEANING**

### PART 1 – GENERAL

#### 1.1 DESCRIPTION

##### A SCOPE

This section specifies the requirements for cleaning for the sewer structures prior to CITY's inspection and rehabilitation activities.

##### B REQUIREMENTS

The work to be done under this Contract consists of furnishing all labor and equipment to remove the accumulated sediments and clean the sewer structures as noted on the construction DRAWINGS and specified herein

The CONTRACTOR shall remove existing sediment, debris, pipe supports, roots, scale, encrustations, and grease accumulations from the sewer structures to be inspected, repaired, and rehabilitated. The CONTRACTOR shall adequately prepare the surfaces for the coating system or repair grout. All materials dislodged during cleaning shall be removed from the work area and carried to an approved disposal site

#### 1.2 QUALITY ASSURANCE

The CONTRACTOR is solely responsible for maintaining the quality assurance of his work during the length of the project. The CONTRACTOR is responsible for any costs associated with corrective measures required to replace or repair items not meeting the quality standards specified by the CITY.

#### 1.3 SUBMITTALS

A letter identifying the methods the contractor plans to employ to remove sediment, debris, grease, scale, encrustations, and any encountered roots in the sewer structures to be repaired and coated. The letter shall include a detailed explanation of the cleaning process and a schedule of activities, references where the CONTRACTOR has used the identified cleaning method successfully in the past and a list of the actions he plans to take to mitigate impact to the public during the cleaning operation

## PART 2 – MATERIALS

### 2.1 CHEMICAL ADDITIVES

No chemicals shall be used without written approval of the CITY. In no case shall any chemical additive be used which might be considered hazardous, or might be considered detrimental to organisms or equipment of a wastewater treatment plant receiving flows, downstream lakes or ponds receiving treated flows, or detrimental to old or new pipe materials. The Bell Road sewerline flows are received directly by the Arrowhead Ranch Waste Water Treatment Plant via the 83<sup>rd</sup> Avenue Sewer Lift Station (SLS).

## PART 3 – EXECUTION

### 3.1 GENERAL

The CONTRACTOR shall at all times conduct its work so as to prevent any blockage and minimize surcharging in the sewer manholes and connecting sewer pipelines. Damage to existing facilities as a result of the CONTRACTOR's work shall be promptly repaired in kind at the CONTRACTOR's expense.

### 3.2 SEWER BYPASSING AND DEWATERING

If it is determined that bypassing is required during the cleaning of the manholes, the specifications in Section 3, Diversion of Sewage Flows and Dewatering shall be followed. Contractor shall be responsible for dewatering all manholes prior to work.

### 3.3 CLEANING OF EXISTING SEWER STRUCTURES

Cleaning shall remove all sediment, rocks, debris, roots, grease accumulations and obstructions from the sewer structures to be rehabilitated and coated.

Any sediment or debris from cleaning operations larger than U.S. #8 sieve shall not be deposited downstream in the sewer main. Sedimentation deposited downstream, as determined by the CITY, shall be removed at no cost to the CITY. The CONTRACTOR shall be thoroughly familiar with all phases of sewer and structure cleaning to ensure the completion of this Contract without causing a health hazard or damage to the sewage system, public and private properties.

The CONTRACTOR shall clean the structure to ensure proper installation of coating system and repair work. The CONTRACTOR shall clean all exposed rebar to remove all areas of corrosion down to solid steel.

### 3.4 DISPOSAL OF SEDIMENTS

7The CONTRACTOR shall be responsible for transporting and disposing, including disposal fees, of any sediments and material removed from the sewer or structures

All sediment and debris removed from the sewer shall be disposed off-site in a lawful manner. Hauling containers should be watertight. On-site stockpiling or extended water tight storage of removed material will not be permitted.

The CONTRACTOR is responsible for obtaining all necessary permits, fees, and approval from all regulatory agencies required to perform the work, including transport of sediments. Off-site disposal of all material removed from the sewer and structures shall be the CONTRACTOR's responsibility.

## SECTION 5 - MANHOLES

### PART 1 – GENERAL

#### 1.1 DESCRIPTION

##### C SCOPE

Provide all labor, materials, equipment and incidentals as shown on the Plans, specified and required to furnish and install all precast and cast-in-place manholes.

##### D. GENERAL

1. Manholes shall conform in shape, size, dimensions, material and other respects to the drawings and to MAG Standard Detail 420, 422 and 424 and Standard Specifications and COG Detail G-704
2. All manhole interiors shall be corrosion protected

#### 1.2 REFERENCES

Comply with the applicable provisions and recommendations of the following, unless otherwise shown or specified.

Reference	Title
ACI 318	Building Code Requirements for Concrete and Commentary
ASTM C478	Specification for Precast Reinforced Concrete Manhole Sections
MAG 601	Trench Excavation, Backfilling and Compaction
MAG 625	Manhole Construction and Drop Sewer Connections

#### 1.3 QUALITY ASSURANCE

The completed / cleaned manhole shall be inspected by the CITY prior to coating.

#### 1.4 SUBMITTALS

SHOP DRAWINGS: Submit for approval the following:

- A Drawings showing design and construction details of all precast concrete and cast-in-place manholes, including details of joints between the manhole bases and riser sections and stubs or openings for connections.
- B. Catalog cut sheets and other relevant technical information for all proposed manufactured components.
- C. Concrete Mix Designs.

#### 1.5 MEASUREMENT AND PAYMENT

- A. DEFINITION: Full compensation for furnishing and installing manhole complete, with formed invert, concrete foundation, frame and cover (frame and cover ONLY supplied by CITY), excavation, backfill, pavement cutting, pavement replacement, coating/lining, testing, concrete riser rings and incidentals to complete the work in conformance with the Plans and Special Provisions.
- B. MEASUREMENT AND PAYMENT: Measurement of Manholes will be per manhole installed or rehabilitated, regardless of depth. Payment shall be per unit bid price per each manhole.

### PART 2 – PRODUCTS

#### 2.1 PRECAST CONCRETE MANHOLES

- A Precast manholes shall conform to the details shown on the Plans. Provide cast-in-place concrete bases where shown on the Plans and in accordance with paragraph 3.2.
- B. Except where otherwise specified, precast manhole components shall consist of reinforced concrete pipe sections especially designed for manhole construction and manufactured in accordance with ASTM C478, except as modified herein.
- C. Precast, reinforced concrete manhole bases, riser sections, flat slabs and other components shall be manufactured by wet cast methods only, using forms which will provide smooth surfaces free from irregularities, honeycombing or other imperfections.
- D. Joints between manhole components shall be the tongue and groove type employing a single, continuous rubber O-ring gasket and shall conform to AWWA C302. The circumferential and longitudinal steel reinforcement shall extend into the bell and spigot ends of the joint without breaking the continuity of the steel. Joints between the base sections, riser sections and top slabs of manholes shall be rubber and concrete joints.
- E. All precast manhole components shall be of approved design and of sufficient strength to withstand the loads imposed upon them. They shall be designed for a minimum earth covering loading of 130 pounds per cubic foot, an H-20 wheel loading.

- F. Lifting holes, if used in manhole components, shall be tapered, and no more than two shall be cast in each section. Tapered, solid rubber plugs shall be furnished to seal the lifting holes. The lifting holes shall be made to be sealed by plugs driven from the outside face of the section only.
- G. Mark date of manufacture and name or trademark of manufacturer on inside of barrel.
- H. The barrel of the manhole shall be constructed of various lengths of riser pipe manufactured in increments of one foot to provide the correct height with the fewest joints. Openings in the barrel of the manholes for sewers or drop connections will not be permitted closer than one foot from the nearest joint. Special manhole base or riser sections shall be furnished as necessary to meet this requirement.
- I. A precast or cast-in-place slab or precast eccentric cone, as shown on the Plans or approved by the CITY, shall be provided at the top of the manhole barrel to receive the cast iron frame and cover.

## 2.2 FRAME AND COVER

24-inch and 30-inch cast iron frames and covers shall be Class 35 with weights and dimensions in conformance with MAG Standard Detail 424 and City of Glendale Detail G-704, unless otherwise shown on the Plans. All manhole frame and covers will be supplied to the CONTRACTOR by the CITY and shall be delivered by the CITY to the CONTRACTORS yard for secured storage until installation by the CONTRACTOR. Concrete riser rings to be supplied and installed by the CONTRACTOR.

## 2.3 DROP CONNECTIONS

Drop Connections for manholes shall be constructed where shown on the Plans or directed by the CITY and shall conform to MAG 426.

## 2.4 CORROSION PROTECTION

All manhole interiors shall be corrosion protected per Section 7, Coating Systems.

## PART 3 – EXECUTION

### 3.1 PLASTERING

The outside of grading rings shall be neatly plastered with ½-inch of cement mortar as the Work progresses.

### 3.2 MANHOLE BASES

- A. Cast-in-place bases shall be placed on suitable foundations after the pipes are laid. They shall be cast monolithically to an elevation at least 12-inches above the top of the highest pipe entering the manhole, except

where a drop connection is to be installed. Base, walls and bottom shall be at least of the thickness shown Per MAG and reinforced to withstand the loads to be expected. Connections for sewer pipes shall conform to the details shown on the Plans.

- B Precast bases shall not be allowed
- C. Manhole bases shall be provided as required by MAG 420 and ASTM C478 Manhole base reinforcement shall be constructed per ACI 318.

### 3.3 PRECAST MANHOLE SECTIONS

- A Set sections vertical and in true alignment. The base of the bell or groove end at joints between components shall be buttered with 1:2 cement-sand mortar to provide a uniform bearing between components. All joints shall be sealed with cement mortar inside and out and troweled smooth to the contour of the wall surface. Raised or rough joint finishes will not be accepted.
- B Install sections, joints and gaskets in accordance with manufacturer's recommendations.
- C. Lifting holes shall be sealed tight with a solid rubber plug driven into the hole from the outside of the barrel and the remaining void filled with 1 to 2 cement-sand mortar.

### 3.4 MANHOLE CHANNELS

All invert channels through manholes shall be constructed of Class "A" concrete per MAG Section 725; Portland Cement Concrete. Channels shall be properly formed to the sizes, cross sections, grades and shapes shown on the Plans or as directed by the CITY. Benches shall be built up to the original profile and given a uniform wood float finish. Care shall be taken to slope all benches for proper drainage to the invert channel

### 3.5 GRADING RINGS

- A. Grading rings shall be used for all precast manholes, where required. Grade rings shall be a maximum of 12-inches in height, constructed on the roof slab or cone section on which the manhole frame and cover shall be placed. The height of the grade rings shall be such as is necessary to bring the manhole frame to the proper grade.
- B. Each grading ring shall be laid in full bed of mortar and shall be thoroughly bonded
- C. Grading rings shall be provided by the contractor

### 3.6 GRADING AT MANHOLES

- A All manholes in unpaved areas shall be built, as shown on the Plans or directed by the CITY, to an elevation higher than the original ground The ground surface shall be graded to drain away from the manhole Fill shall be

placed around manholes to the level of the upper rim of the manhole frame, and the surface evenly graded on a 1 to 5 slope to the existing surrounding ground, unless otherwise shown on the Plans or directed by the CITY.

- B. Manholes in paved areas shall be constructed to meet the final surface adjacent grade. Adjustments shall be made per MAG 420 & 422 as all manholes are susceptible to traffic in WB Bell Road.
- C. Sole responsibility for the proper height of all manholes necessary to reach the final grade at all locations belongs to CONTRACTOR. Caution. CITY's review of Shop Drawings for manhole components will be general in nature, provide an adequate supply of random length precast manhole riser sections to adjust any manhole to meet field conditions for final grading.

### 3.7 CORROSION PROTECTION

The interior of new and rehabilitated manholes shall be protected against corrosion with a coating as specified in Section 7, Coating Systems

## **SECTION 6 - MANHOLE REHABILITATION**

### PART 1 – GENERAL

#### 1.1 DESCRIPTION

- A. SCOPE - This section specifies rehabilitation of existing sanitary sewer manholes due to deterioration, corrosion, damage, etc and manholes not specifically scheduled for rehabilitation that are altered with this project for other purposes such as bypass pumping suction/discharge pits. Rehabilitation will restore the manholes and provide protection against infiltration and corrosion to the manhole interior. Corrosion protection of existing manholes in the sewer project consists of coating the manhole interior with the specified coating system. Manholes will be rehabilitated or rebuilt according to the schedule shown on the "Manhole Rehabilitation Summary Table" sheet 7 (seven) of the project plans

Rehabilitation shall also include the replacement of a manhole cone, frame and cover, and pavement replacement, where the CONTRACTOR removes the existing cone to allow for better access

- B. REQUIREMENTS

CONTRACTOR shall furnish all labor, materials, and equipment required to clean, modify and coat the structures indicated on the Plans. CONTRACTOR shall comply with the local authority and all Occupational Safety and Health Administration (OSHA) requirements for confined space entry

All materials specified by name brand or manufacturer shall be delivered unopened to the job in the original containers. All safety precautions recommended by the manufacturer in printed instructions or special bulletins shall be obtained and followed.

Application of the specified coating system shall be performed by a contractor certified and trained by the manufacturer.

## 1.2 REFERENCES

Comply with the applicable provisions and recommendations of the following, unless otherwise shown or specified

Reference	Title
ASTM C478	Standard Specification for Precast Concrete Manhole Sections
ASTM D16	Standard Terminology for Paint, Coatings, Materials, etc
ASTM D3359	Standard Test Methods for Measuring Adhesion by Tape Test
ASTM D3960	Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
MAG 625	Manhole Construction and Drop Sewer Connections

## 1.3 QUALITY ASSURANCE

Rehabilitated or restored manholes must pass the same quality assurance as new manhole construction per MAG 625.

## 1.4 GUARANTEE

All structural rehabilitation work performed by the CONTRACTOR shall be guaranteed against faulty workmanship and/or materials for a period of two (2) years after final acceptance of work.

## 1.5 MEASUREMENT AND PAYMENT

### A MANHOLE REHABILITATION

- 1 DEFINITION Full compensation for all labor, materials, and equipment required to clean manholes, prepare surface of manholes, excavation, saw cutting, removal and replacement of surrounding finish grade materials, removal and replacement of frame and cover (frame and cover only to be provided by the CITY), supply adjusting rings, cone, shaft, repair and rebuilding of bench, reshaping and repair of channel as called for in the project plans and as shown in Table A, remove existing coating or lining, repair manhole walls, grouting, furnish and install coating in accordance with manufacturer's recommendations and these technical specifications, testing as required herein, all safety and support systems required to complete the work as described in these technical specifications, restoration of adjacent site, and including any incidental items necessary to complete the work.

2. MEASUREMENT: Measurement of Manhole Rehabilitation shall be on a unit price per vertical foot for the work, complete in place as described above
3. PAYMENT: Payment for Manhole Rehabilitation shall be on a unit price per vertical foot for the work, complete and in place as described.

## PART 2 – PRODUCTS

The products and materials used for rehabilitated manholes shall be the same as new manhole construction per Section 5, Manholes , and Section 7; Coating Systems.

## PART 3 – EXECUTION

### 3.1 SEQUENCE OF REHABILITATION

Removals, replacements, rebuilding, re-shaping, and adjustment activities shall be completed prior to the interior cleaning and coating of manholes

If the manhole and bench are both coded to be rehabilitated, then cleaning, coating, and testing activities shall be done simultaneously.

### 3.2 MANHOLE REHABILITATION CODES

#### A. CLEAN, REPAIR AND COAT

1. Cleaning and minor repairs of the manhole interior prior to coating shall be per Section 7; Coating Systems.
2. It is anticipated that the CONTRACTOR will have to apply an approved underlayment to a minimum thickness of 0.5 inches on the majority of manholes coated in this project.

The underlayment shall be installed over a clean surface prepared in accordance with the manufacturer's instructions and the requirements of this specification. The CONTRACTOR shall employ whatever means necessary (e.g , humidity control, temperature control, additional blasting, mechanical surface preparation, etc ) to ensure strong adherence of the underlayment layer to the manhole surface

Underlayment shall be spray or trowel applied and in accordance with the manufacturer's recommendations After installation, the underlayment shall be free of trowel marks and irregularities

3. Coating of the manhole interior shall be per Section 7, Coating Systems. The entire manhole interior (100% of all concrete surfaces) shall be coated including the adjustment rings, cone, riser section, bench, and invert. Coating shall include sealing between the adjustment rings and frame.

B REBUILD BENCH AND COAT

1. Cleaning of the manhole bench prior to coating shall be per Section 7; Coating Systems.
2. Rebuilding of the bench shall include grouting as necessary to restore the bench to the original profile utilizing grout or Class A Concrete applied at a minimum thickness of 0.5 inches. If Class A Concrete is used the appropriate underlayment shall be applied over the concrete prior to applying the coating. In order to rebuild the bench, the CONTRACTOR will be required to provide dry working conditions in all manhole benches and invert areas to allow the concrete and other materials to set properly.

C. REPLACE ADJUSTING RINGS

1. Replacement of the adjustment rings shall be per Section 5; Manholes. Adjustment rings to be supplied by the CONTRACTOR.
2. Cleaning of the adjustment rings prior to coating shall be per Section 7; Coating Systems.
3. Coating of the new adjustment rings shall be per Section 7; Coating Systems.

D ADJUST FRAME AND COVER

1. Adjustment of the frame and cover (frame and cover only to be provided by the CITY) to grade shall be per Section 5; Manholes.
2. Cleaning of the frame, cover and adjustment rings prior to coating shall be per Section 7, Coating Systems
3. Coating of the adjustment rings shall be included in adjustment of the frame and cover. Coating of the adjustment rings shall be per Section 7; Coating Systems

E. REPLACE FRAME AND COVER

1. Replacement of the frame and cover shall be per Section 5, Manholes. All manhole frame and covers (only) will be supplied to the CONTRACTOR by the CITY and shall be delivered by the CITY to the CONTRACTORS yard for secured storage until installation by the CONTRACTOR. Concrete riser rings to be supplied, installed and coated by the CONTRACTOR.
2. Cleaning and coating of the adjustment rings shall be included in the replacement of the frame and cover. Cleaning and coating of the adjustment rings shall be per Section 7; Coating Systems.

F. RESHAPE/REBUILD CHANNEL AND COAT INCLUDING INVERT

1. Reshaping of the channel shall be per Section 5, Manholes. If the existing pipe inlet/outlet configuration in the manhole contains a drop or angle that is creating turbulence, then the channel shall be modified to the extent possible to mitigate the turbulence. This may include smoothing out angle points or creating a "slide" from a higher invert to a lower invert.
2. Coating of the invert shall include beginning the coating at the invert (bottom) of the channel to ensure that 100% of concrete surfaces in the manhole are coated. In order to coat the invert, the CONTRACTOR will be required to provide dry working conditions in all manhole benches and invert areas to allow the concrete and other materials to set properly. Allow for proper and required cure time recommended by the manufacturer or as required at the engineers' request. Coating of the channel and invert shall be per Section 7, Coating Systems.

**TABLE A**

Qt. Sect. MH NO.	Plan MH NO.	Address LOCATION	MH DIA (IN)	MH DEPTH (FT)	FIELD NOTES - REMARKS	REHABILITATION CODE*
37-09-004	1	8258 W. Bell	60	18.5	WITHIN MAJOR ARTERIAL INTERSECTION	A, B, C, D, E, F
37-09-005	2	8172 W. Bell	60	18.5	30" Lid, need to create slide for tap	A, B, C, D, E, F
37-09-006	3	8150 W. Bell	60	17.0	30" Lid need to create slide for tap	A, B, C, D, E, F
37-09-007	4	7990 W Bell	60	16.5	30" Lid	A, B, C, D, E, F
37-10-001	5	7869 W. Bell	60	16.5	Extremely high velocity, flowline may need significant rebuilding, bench very degraded, need to create slide for tap	A, B, C, D, E, F
37-10-002	6	7760 W Bell	60	15.3	30" Lid, need to rework inlet to form a slide, bench very degraded	A, B, C, D, E, F
37-10-003	7	7714 W. Bell	60	14.9	30" Lid, need to rework inlet to form a slide, bench very degraded	A, B, C, D, E, F
37-10-004	8	7670 W Bell	60	14.0	30" Lid	A, B, C, D, E, F
37-10-005	9	7606 W. Bell	60	13.9	30" Lid, need to rework inlet to form a slide, aggregate exposed throughout	A, B, C, D, E, F
37-10-006	10	7520 W. Bell	60	15.2	30" Lid, need to rework inlet to form a slide – Barrel relatively clean	A, B, C, D, E, F
37-10-007	11	7500 W. Bell	60	16.2	WITHIN MAJOR ARTERIAL INTERSECTION	A, B, C, D, E, F
37-11-001	12	7450 W. Bell	48	16.5	24" Lid, whole manhole peeling	A, B, C, D, E, F
37-11-002	13	7410 W. Bell	48	16.9	24" Lid, bench and bottom 4ft. degraded but rest of MH appears stable	A, B, C, D, E, F
37-11-003	14	7350 W Bell	48	17.8	24" Lid bench and bottom, , leave 24" lid	A, B, C, D, E, F
37-11-004	15	7300 W. Bell	48	19.8	24" Lid, 48" barrel, leave 24" lid	A, B, C, D, E, F
37-11-012D	16	17025 N73 Ave	60	18.5	30" Lid, NOTE: Drop Manhole	A, B, C, D, E, F
37-12-007	17	17100 N67 Ave	48	7.5	Sludge MH – Current 24" Opening, 48" diameter cone	A, B, C, D, E, F, G

\*Codes and standards for recommended rehabilitation are as follows (SEE Section 6, Item 3.2 for further explanation):

A	Clean, Repair and Coat (per Specifications)	E	Replace Frame and Cover (per MAG Std Dtl 424)
B	Rebuild Bench and Coat (per Specifications)	F	Reshape/Rebuild Channel and Coat Including Invert (per Specifications)
C	Replace Adjusting Rings (per MAG Std Dtl 420)	G	Completely reconstruct manhole – requires sewer bypass / pump around
D	Adjust Frame and Cover (per MAG Std Dtl 422)		

## SECTION 7 - COATING SYSTEMS

### PART 1 – GENERAL

#### 1.1 DESCRIPTION

##### A. SCOPE

This section specifies the coating system used for the lining of the manholes as indicated on the drawings. Refer to Section 6, Manhole Rehabilitation.

The coating shall yield a hard, durable chemical resistant coating and shall be specifically designed to be applied on a dry surface. The finished coating shall provide a watertight seal and shall adhere to PVC and other components of the pipeline liner systems. The system shall also provide a positive seal with all pipe penetrations (inlet, outlet, drop connections, taps).

##### B. DEFINITIONS

Specific coating terminology used in this section is in accordance with definitions contained in ASTM D16, ASTM D3960, and the following definitions:

1. Dry Film Thickness (DFT): The thickness of one fully cured continuous application of coating
2. Field Coat: The application or the completion of application of the coating system after installation of the surface at the site of the work
3. Shop Coat: One or more coats applied in a shop or plant prior to shipment to the site of erection or fabrication, where the field or finishing coat is applied
4. Tie Coat: An intermediate coat used to bond different types of paint coats. Coatings used to improve the adhesion of a succeeding coat.
5. Photo chemically Reactive Organic Material: Any organic material that will react with oxygen, excited oxygen, ozone, or other free radicals generated by the action of sunlight on components in the atmosphere giving rise to secondary contaminants and reaction intermediates in the atmosphere which can have detrimental effects
6. Volatile Organic Compound (VOC) Content: The portion of the coating that is a compound of carbon, is photo chemically reactive, and evaporates during drying or curing, expressed in grams per liter or pounds per gallon

7. Touch-Up Painting: The application of a paint on areas of painted surfaces to repair marks, scratches, and areas where the coating has deteriorated to restore the coating film to an unbroken condition.

## 1.2 REFERENCES

This section contains references to the following documents. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.

Reference	Title
ASTM D16	Standard Terminology Relating for Paint, Related Coatings, Material, and Applications
ASTM D3359	Standard Test Methods for Measuring Adhesion by Tape Test
ASTM D3960	Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
ASTM D4258	Standard Practice for Surface Cleaning Concrete for Coating
ASTM D4262	Standard Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces
ASTM D4541	Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
NACE RP0274	High-Voltage Electrical Inspection of Pipeline Coatings

## 1.3 QUALITY ASSURANCE

### A. CERTIFIED APPLICATOR

The coating system shall be applied by an Applicator certified by the coatings system manufacturer. The CONTRACTOR shall provide evidence that the personnel performing the product application for each project received the manufacturer's training for certification.

The Applicator shall appoint a Quality Assurance Manager to take full responsibility for the quality of the work. The Quality Assurance Manager shall be fully certified and have a minimum of two (2) years of application experience with the particular coating system.

### B. STANDARDIZATION

Materials and supplies provided shall be the standard products of manufacturers. Materials in each coating system shall be the products of a single manufacturer.

C. SPARK TESTING

Spark testing shall be used on all manholes that are coated to detect cracks and thin spots in the coating system. The entire interior surface of the manhole shall be spark tested per NACE RP0274 standard in the presence of the CITY Inspector. Areas that fail the spark test shall be promptly repaired and retested. Subsequent inspections and repair work shall be at the expense of the CONTRACTOR. The spark testing will be performed by the CONTRACTOR and witnessed by the CITY Inspector and shall be completed and any repairs made prior to the final acceptance inspection.

D. ADHESION TESTING

On a minimum of two (2) of the manholes coated with this project, the CONTRACTOR shall perform an adhesion test after proper cure in accordance with ASTM D4541 to demonstrate that the specified field coatings adhere to the substrate. Manholes to be tested will be chosen by the CITY and the adhesion test shall be witnessed by the CITY Inspector. Test results showing an adhesion rating of 400 psi or better for all surfaces shall be considered acceptable provided the test results in failure at or within the substrate. If the test dolly should pull off with failure in the epoxy or coating additional testing will be required. Where unacceptable test results are obtained, the CONTRACTOR shall be responsible for removing and reapplying the specified coatings at no cost to the CITY. A failed test shall require testing two (2) additional manholes at no additional cost to the CITY.

E. INSPECTION HOLD POINTS

At certain stages in the rehabilitation and coating application process, the CONTRACTOR shall request approval from the CITY Inspector to proceed with the next stage of the installation. Failure to receive authorization from the CITY Inspector at one of the designated Inspection Hold Points may prevent the acceptance of the work by the CITY Inspector. The following are the designated Inspection Hold Points for each installation.

1. Completion of the cleaning and surface preparation activities required by these specifications.
2. Completion of new concrete surfaces.
3. Completion of surface repairs, re-profiling, and preparation.
4. Completion of primer application.
5. Completion of each application of final coating.
6. Ready for adhesion testing and retesting.
7. Ready for spark testing and retesting.
8. Final clean-up and inspection.

#### 1.4 DELIVERY AND STORAGE

Materials shall be delivered to the job site in their original, unopened containers. Each container shall bear the manufacturer's name, coating type, batch number, date of manufacture, storage life, and special directions.

Materials shall be stored in enclosed structures and shall be protected from weather and excessive heat or cold. Flammable materials shall be stored in accordance with state and local codes. Materials exceeding storage life recommended by the manufacturer shall be removed from the site.

#### 1.5 SUBMITTALS

The following submittals shall be provided in accordance with Section 2

- A. Coating System Application Plan.
- B. Certificate of responsibility attesting that the CONTRACTOR has assigned and that the Applicator accepts responsibility for installation of the products specified herein
- C. Manufacturer's certification.
- D. Written warranty per paragraph 3.5 F.
- E. Product test results.
- F. Before materials are delivered to the job site, the CONTRACTOR shall provide the following information in accordance with Section 2:
  - 1. Manufacturer's application instructions for all coating system components.
  - 2. List of materials proposed to be used under this section and manufacturer's data for each material

### PART 2 – PRODUCTS

#### 2.1 MATERIALS

##### A COATING

The acceptable products for new or existing manhole coating shall be

- 1. Sauereisen Sewergard Lining No. 210 with Sauereisen Underlayment No. F-121, as manufactured by Sauereisen Cements, Pittsburgh, PA.
- 2. Sewer Shield 150 Epoxy Lining with C120 calcium aluminate cement underlayment as manufactured by Environmental Coatings, Mesa, AZ

3. Raven 405 Epoxy Lining as manufactured by Raven Lining Systems, Tulsa, OK with underlayment as recommended by manufacturer
4. Neopoxy NPR 5300 Series Epoxy Lining, by Neopoxy International, Hayward, CA with underlayment as recommended by manufacturer.

All coatings shall be applied to a minimum thickness of 1/8-inch (125 mils) according to the manufacturer recommended procedures

B. PRIMER

Primer shall be as recommended by the manufacturer for each application.

C. DEFECT FILLER

Defect filler shall be as recommended by the manufacturer for each application

D. INFILTRATION CONTROL

Manhole infiltration control material shall be as recommended by the manufacturer for each installation, and shall be covered under the same warranty as the rest of the coating system.

## 2.2 COATING SYSTEM APPLICATION PLAN

- A. Coating System Application Plan shall be prepared that includes a description of the following:
  1. Quality Assurance Procedures:
    - a. Detailed duties of the Applicator's Quality Assurance Manager.
    - b. Detailed duties of the Manufacturer's Representative
    - c. Training program to qualify personnel in the correct storage and handling of coating materials, and the necessary safety requirements
    - d. List of application and testing equipment to be used, including inspections confirming satisfactory condition of equipment
    - e. Detailed procedures and methods for surface preparation including repair and re-profiling as required, application of primer and final coating and testing.
  2. Criteria for acceptance of the preparation of concrete and other manhole surfaces
  3. Plan for sewage diversion or flow through

4. Method and material for sealing active leaks.
- 5 Detailed plan of surface preparation, including repair and re-profiling.
- 6 Details of application primer and finish coats, including required curing times.
- 7 Detailed environmental provisions such as shading from the sun.
8. Detailed scheduling provisions for environmental considerations such as working at night.
9. Procedures for adhesion testing.
10. Dry film thickness testing

### 2.3 LICENSES AND CERTIFICATIONS

- A. Contractor shall provide a copy of the manufacturer's certification attesting that the Applicator is qualified and approved to install the products specified herein.
- B. Contractor shall provide a copy of the installer's current Arizona contractor's license or equivalent (specifically for the rehabilitation of concrete and brick manholes).

### 2.4 PRODUCT DATA

Before materials are delivered to the job site, the CONTRACTOR shall provide the following information:

- 1 For the filler, primer, and finish coating, the CONTRACTOR shall furnish a Material Safety Data Sheet (MSDS).
2. For the filler and finish coating, the CONTRACTOR shall provide the manufacturer's application instructions, which shall include the following:
  - 2.1 Surface preparation recommendations.
  - 2.2 Primer type, where required.
  - 2.3 Maximum dry and wet mil thickness per coat.
  - 2.4 Minimum and maximum curing time between coats, including atmospheric conditions for each.
  - 2.5 Curing time before submergence in liquid.
  - 2 6 Thinner to be used with coating material
  - 2 7 Ventilation requirements.

2.8 Minimum atmospheric conditions during which the coating shall be applied.

2.9 Allowable application methods

2.10 Maximum allowable moisture content.

3.11 Maximum storage life.

3. List of materials proposed to be used under this section and manufacturer's data for each material.

### PART 3 – EXECUTION

#### 3.1 CLEANING OF SURFACES TO BE COATED

The CONTRACTOR shall clean manholes to be rehabilitated. Existing coating or lining shall be removed prior to other cleaning activities. Before application of the coating system, the surface must be clean and free of all contaminants including oil, grease, existing coatings, existing liners, waxes, form release, curing compounds, efflorescence, sealers, salts, dust, and chemical contaminants. Suitable heaters shall be used as needed to produce a surface-dry condition. The surface will be vacuumed to make sure that loose particles are not present. The entire manhole interior including frame, walls and bench shall be cleaned using either abrasive blasting and/or high pressure water blast as recommended by the coating and/or repair product manufacturer and approved by the CITY. All concrete, brick or mortar that is not sound or has been damaged by chemical exposure shall be removed to a sound, neutralized surface.

The CONTRACTOR shall also remove all dirt, rocks, rust, spalled masonry including mortar, concrete and brick, roots, sludge, grit and other deleterious materials and debris from the interior manhole. The finished interior surface shall consist of sound concrete or brick with adequate profile and porosity to provide a strong bond between the necessary repair materials and/or coating and the substrate.

- A. CONTRACTOR shall also be responsible for any additional surface preparation beyond water blasting as required by the coating system manufacturer. Where additional preparation is required, the CONTRACTOR shall provide all labor, materials, and equipment as necessary, and at no additional cost to the CITY.
- B. CONTRACTOR shall test prepared surfaces after cleaning but prior to application of the coating system to determine the pH and moisture content of the concrete, as required according to manufacturer's recommendations.
- C. The area between the manhole and the manhole ring and any other area that might exhibit movement or cracking due to expansion and contraction shall be grouted with a watertight, expansive grout, approved for use by the manufacturer's representative and the CITY.

- D It is anticipated that the CONTRACTOR will have to apply an approved underlayment to the interior of the manholes on this project. The manholes are highly deteriorated and as such need to have the interior built up prior to coating so that a smooth, uniform coating can be achieved. Underlayment shall be spray or hand troweled and in accordance with the manufacturer's recommendations. After installation, the underlayment shall be free of trowel marks and irregularities

### 3.2 COATING APPLICATION PREPARATION

- A CONTRACTOR shall protect the newly lined sewer from debris, overspray, or any detrimental activity due to restoration of the manholes
- B. The area of the manholes to be coated shall be cleaned in accordance with Section 4, Sewer Structure Cleaning. Loose and protruding brick, mortar, and concrete shall be removed. Missing brick and mortar shall be filled using a grout as recommended by the coating manufacturer, and approved by the CITY. The grout filler shall be used to bring all areas of holes and pitting up to the nominal surface of the manhole so that there is an even interior surface in the manhole without waves, pits, or holes. Any exposed rebar shall be cleaned, and all areas of corrosion removed prior to application of the grout as recommended by the coating manufacturer and approved by the CITY.
- C. After surface preparation is complete, all loose material shall be removed from the sewer and manholes.

### 3.3 COATING SYSTEM INSTALLATION

- A The CONTRACTOR shall install the coating system in the manholes after the installation of the lining of the sewer (if applicable). Quantities of materials may vary significantly based on interior surface and conditions.
- B. COATING TERMINATION. The coating shall be applied to overlap the liner in accordance with the project plans. The CONTRACTOR shall submit shop drawings for approval detailing this work.
- C ATMOSPHERIC CONDITIONS: Maintain sufficient forced air supply to provide and maintain a temperature of 50 to 90 degrees F and a circulating airflow inside the structures during the coating process or per manufacturer's recommendations.
- D REPAIR OF DEFECTS: CONTRACTOR shall repair all defects in the coating system where directed by the CITY Inspector.

### 3.4 COATINGS

#### A. GENERAL

Coating products shall not be used until the CITY has inspected the materials and confirms that they meet the requirements of these specifications.

B. COATING SYSTEMS

Field coats shall consist of one or more finish coats to build up the coating to the specified dry film thickness. Unless otherwise specified, finish coats shall not be applied until other work in the area is complete and until all previous coats have been inspected.

C COATING REQUIREMENTS

All items of equipment, or parts and surfaces of equipment, which are immersed when in service, with the exception of pumps and valves, shall have all surface preparation and coating work performed in the field.

3.5 APPLICATION

A. WORKMANSHIP

Coated surfaces shall be free from runs, drops, ridges, waves, laps, and brush marks. Coats shall be applied so as to produce an even film or uniform thickness completely coating corners and crevices. Painting shall be done in accordance with the requirements of SSPC Paint Application Specification No. 1.

The CONTRACTOR's equipment shall be designed for application of the materials specified. The coating shall be applied using a trowel or spray equipment suitable for obtaining the proper thickness and surface characteristics as recommended by the coating manufacturer

When possible the application of the coating to the required minimum thickness shall be applied in a single coat sharply cut to line. Care shall be exercised to avoid over-coating or spattering on surfaces not to be coated.

B. ATMOSPHERIC CONDITIONS

Coatings shall be applied only to surfaces that are dry, and only under conditions of evaporation rather than condensation. Coatings shall not be applied during rainy, misty weather, or to surfaces upon which there is frost or moisture condensation. During damp weather, when the temperature of the surface to be coated is within 10 degrees F of the dew point, the surfaces shall be heated to prevent moisture condensation thereon. During coating, and for a period of at least 8 hours after the coating has been applied, the temperature of the surfaces to be coated, the coated surfaces, and the atmosphere in contact shall be maintained at or above 40 degrees F and 10 degrees F above the dew point. Paint, when applied, shall be approximately the same temperature as that of the surface on which it is applied. Fans or heaters shall be used inside enclosed areas where conditions causing condensation are severe.

C PROTECTION OF COATED SURFACES

Items which have been coated shall not be handled, worked on, or otherwise disturbed, until the coating is completely dry and hard.

D. FILM THICKNESS AND CONTINUITY

Coating system thickness is the total thickness of finish coats. The coating system shall have a minimum wet film thickness of 125 mils applied in a single application where possible.

The surface area covered for various types of surfaces shall not exceed those recommended by the manufacturer. Coatings shall be applied to the thickness specified, and in accordance with these special provisions.

In testing for continuity of coating about welds, projections (such as bolts and nuts), and crevices, the CITY will determine the minimum conductivity for smooth areas of like coating where the dry mil thickness has been accepted. This conductivity shall then be taken as the minimum required for these rough or irregular areas. Pinholes and holidays shall be repainted to the required coverage.

E. SAFETY AND VENTILATION REQUIREMENTS

Requirements for safety and ventilation shall be in accordance with the Society for Protective Coatings (SSPC) Paint Application Guide No. 3.

F. MANUFACTURER'S WARRANTY

The CONTRACTOR shall provide a written warranty from the coating manufacturer for the entire coating system, including all repair material, defect fillers, primers, intermediate, and finish coats.

This warranty shall state that the coating will not fail for a minimum period of five (5) years. Coating failure is defined as blistering, cracking, embrittlement, or softening, or failure to adhere to the substrate. The warranty shall also apply to any repair materials, primers, or other products used in the application.

3.6 CLEANUP

Upon completion of coating, the CONTRACTOR shall remove surplus materials, protective coverings, and accumulated rubbish, and thoroughly clean all surfaces and repair any overspray or other paint-related damage.

**END OF TECHNICAL SPECIFICATIONS**