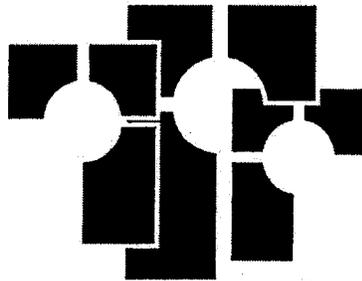


PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

PROJECT NO. 141516

CAMELBACK ROAD - 43RD AVENUE TO 58TH DRIVE-SLURRY TYPE III

APRIL, 2016



GLENDALE



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

Jaime Aldama

Samuel U. Chavira

Ian Hugh

Ray Malnar

Lauren Tolmachoff

Bart Turner

CITY MANAGER

Kevin R. Phelps

CITY ATTORNEY

Michael D. Bailey

CITY CLERK

Pamela Hanna

CITY ENGINEER

David D. Beard





Engineering Department

Memorandum

DATE: April 4, 2016
TO: All Plan and Specification Holders
FROM: Engineering Department
SUBJECT: PROJECT NO. 141516 – 43rd Avenue to 58th Drive – Slurry Type III

ADDENDUM NO. 1

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

- o Technical specification item specifications for pavement markings (page 31 of 41) is modified to add the following:

Water based paint striping shall be installed, complete in place, within **five (5) days** after completion of slurry application for two adjacent lanes between 43rd avenue and 51st avenue (eastbound and westbound) and / or 51st avenue to 59th avenue (eastbound and westbound). During the period between slurry completion and water based striping installation, Contractor shall maintain traffic utilizing appropriate and approved traffic control devices (i.e. vertical panels). Cones are not considered appropriate traffic control devices and will not be approved for use. Contractor shall submit traffic control plan to City for review and approval prior to commencing work.

Contractor is responsible for maintenance of water based striping for the entire period between initial installation and replacement with thermoplastic striping. Should re-installation of water based striping be required during that period due to degradation of the water based striping for any reason, Contractor shall be responsible for completing re-installation at no cost to the City.



Expires 9/30/17

TABLE OF CONTENTS

NOTICE TO CONTRACTORS 1

INFORMATION FOR BIDDERS 2

1. ELIGIBILITY OF CONTRACTORS 2

2. PROPOSAL 2

3. BID SECURITY 2

4. WITHDRAWAL OF BID 3

5. LATE BIDS 3

6. AWARD OR REJECTION OF BIDS 3

7. BIDDERS INTERESTED IN MORE THAN ONE BID 3

8. CONTRACT AND BONDS 3

9. INSURANCE REQUIREMENTS 3

10. SUBCONTRACTORS' LISTING AND CERTIFICATION OF CONTRACT COMPLIANCE 4

11. INTERPRETATION OF PLANS AND DOCUMENTS 4

12. CHANGES TO PLANS AND DOCUMENTS 4

13. ADDENDUM 4

14. ASSIGNMENT OF CONTRACT 4

15. PLANS AND SPECIFICATIONS TO SUCCESSFUL BIDDER 5

16. TIME OF COMPLETION 5

17. CITY OF GLENDALE TRANSACTION PRIVILEGE TAX 5

18. PRE-BID CONFERENCE 5

19. ALTERNATES 5

20. APPROVAL OF SUBSTITUTIONS 5

21. USE OF "EQUALS" 5

22. EXAMINATION OF CONTRACT DOCUMENTS AND VISIT SITE 6

23. BIDDERS IN DEFAULT 6

PROPOSAL 7

BID BOND 11

SUBCONTRACTOR LISTING AND CERTIFICATION OF CONTRACT COMPLIANCE 12

CONSTRUCTION AGREEMENT 13

PERFORMANCE BOND 26

PAYMENT BOND 27

CERTIFICATE OF INSURANCE 28

CONTRACTOR'S AFFIDAVIT/LIEN WAIVER 30

SUPPLEMENTAL GENERAL CONDITIONS 31

1. GENERAL 31

2. DEFINITIONS 31

3. PROPOSAL QUANTITIES 31

4. WITHDRAWAL OF PROPOSALS

5. LOSSES AND DAMAGES 32

6. DUST PREVENTION 32

7. EXCESS MATERIAL 32

8. STOCKPILE OF MATERIALS 32

9. REFUSE COLLECTION ACCESS 32

10. CLEAN-UP 32

11.	SHOP DRAWINGS.....	32
12.	PROTECTION OF FINISHED OR PARTIALLY FINISHED WORK.....	33
13.	STATUS OF EMPLOYEES.....	33
14.	LAWS AND REGULATIONS.....	33
15.	PERMITS.....	33
16.	ELECTRIC POWER AND WATER.....	33
17.	SURVEY CONTROL POINTS AND MONUMENTS	33
18.	EXISTING UTILITIES.....	33
19.	MAINTENANCE OF IRRIGATION FACILITIES	34
20.	OVERHEAD UTILITY LINES AND POLES	34
21.	SOUTHWEST GAS FACILITIES EXPOSED DURING CONSTRUCTION.....	34
22.	UNDERGROUND UTILITIES' BEDDING.....	34
23.	SEWER SERVICE LINES	34
24.	RIGHTS-OF-WAY	34
25.	SUBCONTRACTS.....	34
26.	PRE-CONSTRUCTION CONFERENCE	35
27.	OVERTIME.....	35
28.	CONTRACTOR'S CONSTRUCTION SCHEDULE	35
29.	CHARACTER OF WORKMEN	36
30.	HINDRANCES AND DELAYS.....	36
31.	LIQUIDATED DAMAGES.....	36
32.	PAYMENTS TO CONTRACTOR.....	37
33.	WARRANTY	37
SPECIAL PROVISIONS		38
1.	SCOPE OF WORK.....	38
2.	DEFINITIONS	38
3.	CONSTRUCTION SURVEYING AND LAYOUT.....	38
4.	SUSPENSION OF WORK.....	40
5.	COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS	40
6.	TRAFFIC REGULATIONS	40
7.	ENERGIZED AERIAL ELECTRICAL POWER LINES	42
8.	WEEKLY NEWSLETTER.....	42
9.	CONCRETE GUTTER WATER TESTING.....	42
10.	RECORD DRAWINGS.....	42
11.	SOILS REPORT	42
12.	AZPDES PERMIT REQUIREMENTS	42
13.	CONSTRUCTION MATERIALS SAMPLING AND TESTING.....	43
14.	CASH FLOW REPORT	45
15.	CONSTRUCTION.....	45
16.	ALLOWANCE FOR CONSTRUCTION CONTINGENCIES	46
CASH FLOW REPORT (EXAMPLE).....		47
CONSTRUCTION SIGN DETAIL		48

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. 141516 CAMELBACK ROAD-43RD AVNUE TO 58TH DRIVE - SLURRY TYPE III.** Project includes approximately 77,344 SY of Slurry Seal Type III surface treatment of Camelback Road (Arterial) from approximately 43rd Avenue to 58th Drive. Project also includes necessary utility adjustments, miscellaneous concrete improvements, repairs, obliteration and application of striping, traffic control and additional related work.

Bids must be received by the Engineering Department of the City of Glendale no later than 10:00 AM, APRIL 8, 2016. 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 MARCH 25, 2016, at 10:00 AM, in the Engineering Department Conference Room, 5850 West Glendale Avenue, Glendale, Arizona. Bidders, contractors, and other interested parties are invited to attend this conference which will be conducted by the Owner and Engineer to answer any questions.

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

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

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

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

CITY OF GLENDALE, ARIZONA

INFORMATION FOR BIDDERS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

This commercial general liability insurance must include independent contractors' liability, contractual liability, broad form property coverage, products and completed operations, XCU

hazards if requested by the City, and a separation of insurance provision.

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

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

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

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

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

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

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

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

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

14. ASSIGNMENT OF CONTRACT: No assignment by the Contractor of any contract to be entered into hereunder, or any part thereof, or of funds to be received thereunder by the Contractor, will be recognized by the Owner unless such assignment has had prior approval of the Owner, and the Surety has been given due notice of such assignment in writing and has consented thereto in

writing.

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

16. **TIME OF COMPLETION:** The Contractor shall commence work under this project on or before the tenth day following receipt of the Notice to Proceed for that project from the City of Glendale and shall fully complete all work under the project within ONE-HUNDRED TWENTY (120 DAYS) 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 MARCH 25, 2016, at 10:00 AM, 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 City of Glendale

Date April 8, 2016

Proposal of Viasun Corporation, a Corporation organized and existing under the laws of the State of Arizona. a partnership consisting of _____; or an individual trading as _____.

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

Gentlemen:

The undersigned hereby proposes and agrees to furnish any and all required labor, materials, construction equipment, transportation and services for the construction of: **PROJECT 141516 - CAMELBACK ROAD-43RD AVNUE TO 58TH DRIVE - SLURRY TYPE III**, 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.)

BID SCHEDULE
2014/2015 PAVEMENT MANAGEMENT PROGRAM - SLURRY SEAL PHASE 2
CITY OF GLENDALE PROJECT NO. 141514

BID ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL BID
1	Mobilization / Demobilization	1	LS	\$18,500	\$18,500
2	Project Signs	1	LS	\$1,000	\$1,000
3	Slurry Seal (Type III)	77,344	SY	\$1.65	\$127,617.60
4	Obliterate Existing Pavement Markings (Stripe)	30,300	LF	\$.30	\$9,090
5	Obliterate Existing Pavement Markings (Symbol)	11	EA	\$45	\$495
6	Reset Sewer Manhole Frame and Cover per MAG Std Dtl 422	28	EA	\$350	\$9800
7	Reset Storm Drain Manhole Frame and Cover per MAG Std Dtl 422	1	EA	\$350	\$350
8	Reset Water Manhole Frame and Cover per MAG Std Dtl 422	3	EA	\$350	\$1050
9	Reset Telecommunications Manhole Frame and Cover per MAG Std Dtl 422	1	EA	\$350	\$350
10	Reset Water Valve Frame and Cover per MAG Std Dtl 391-1, Type A	74	EA	\$325	\$24,050
11	Reset Gas Valve Frame and Cover per MAG Std Dtl 270	6	EA	\$325	\$1,950
12	White Stripe (Paint) 4" Equivalent	13,809	LF	\$.11	\$1,518.99
13	Yellow Stripe (Paint) 4" Equivalent	21,421	LF	\$.11	\$2,356.31
14	Pavement Marking Arrow (Paint)	8	EA	\$35	\$280
15	Preformed Pavement Marking Arrow (90 MIL)	8	EA	\$100	\$800
16	White Stripe (60 MIL Thermoplastic) 4" Equivalent	9,183	LF	\$.32	\$2,938.56

17	White Stripe (90 MIL Thermoplastic) 4" Equivalent	4,626	LF	\$.50	\$2,313
18	Yellow Stripe (60 MIL Thermoplastic) 4" Equivalent	21,421	LF	\$.32	\$6,854.72
19	Raised Pavement Marker (Type D or Type G)	978	EA	\$3	\$2,934
20	Raised Pavement Marker (Hydrant Marker, Type BB, Blue)	68	EA	\$10	\$680
21	Traffic Control	1	LS	\$25,000	\$25,000
22	Uniformed, Off-duty Law Enforcement Officer Contingency	100	HR	\$50	\$5,000
23	Allowance for Asphalt Repair (Remove/Replace), 12.5mm	800	SY	\$54	\$43,200
24	Allowance for Concrete Curb and Gutter Remove and Replace	450	LF	\$23	\$10,350
25	Allowance for Concrete Sidewalk Remove and Replace	200	SF	\$6	\$1,200
26	Allowance for Concrete Valley Gutter Remove and Replace	800	SF	\$8	\$6,400
27	Construction Material Sampling and Testing	1	LS	\$7,500	\$7,500
28	Construction Surveying and Layout	1	LS	\$7,500	\$7,500
29	Owners Allowance for Construction Contingencies	1	LS	\$ 50,000.00	\$ 50,000.00
TOTAL BASE BID					\$ 371,078.18

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.

297383

Viasun Corporation

Contractor

By Rolando Perez

731 N. 19th Ave.

Phoenix, AZ. 85009

(Complete business address)

Telephone Number: (480) 268-9669

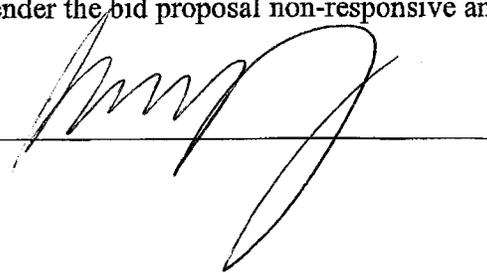
Fax Number (480) 223-6295

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

Addendum #1

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

Acknowledged by



STATUTORY BID BOND
PURSUANT TO TITLE 34, CHAPTER 2, ARTICLE 1
OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must not be less than 10% of the bid amount)

KNOW ALL MEN BY THESE PRESENTS:

That we, _____ (hereinafter "Principal")
as Principal, and _____, (hereinafter called the
Surety) a corporation organized and existing under the laws of the State of _____, with its
principal offices in the City of _____, as Surety, are held and firmly bound unto the City of
Glendale (hereinafter "Obligee") in the amount of _____ Dollars
(\$ _____) 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 said Principal has submitted a bid for: **PROJECT 141516 - CAMELBACK
ROAD-43RD AVNUE TO 58TH DRIVE - SLURRY TYPE III**

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

Witness our hands this ____ day of _____, 20__.

PRINCIPAL

By: _____

SURETY SEAL

AGENCY OF RECORD

CONSTRUCTION AGREEMENT

This Construction Agreement ("Agreement") is entered into and effective between the CITY OF GLENDALE, an Arizona municipal corporation ("City"), and Viasun Corporation, an Arizona corporation ("Contractor") as of the 14 day of June, 2016.

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.

Project 141516

(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 one hundred twenty (120) 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.

Project 141516

- 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 \$371,078.18, 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 thirty (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.

Project 141516

- (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 fifteen (15) days following the date of delivery.

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

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

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

7. Insurance.

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

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

Project 141516

- (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 thirty (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 ten (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.

Project 141516

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:

Viasun Corporation
Attn: Rolando Perez
731 North 19th Avenue
Phoenix, Arizona 85009

- (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.

Project 141516

- (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.

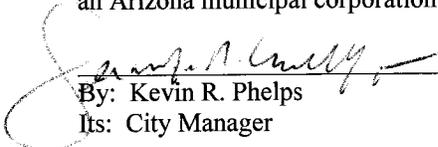
Project 141516

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

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

City of Glendale,
an Arizona municipal corporation


By: Kevin R. Phelps
Its: City Manager

ATTEST:

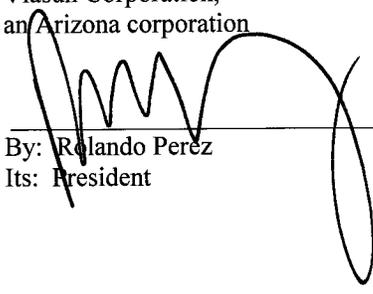

City Clerk

(SEAL)

APPROVED AS TO FORM:


City Attorney

Viasun Corporation,
an Arizona corporation


By: Rolando Perez
Its: President

WOMEN-OWNED/MINORITY BUSINESS [] YES [] NO

CITY OF GLENDALE TRANSACTION PRIVILEGE TAX NO. _____

FEDERAL TAXPAYER IDENTIFICATION NO. _____

Project 141516

**EXHIBIT A
CONSTRUCTION AGREEMENT**

PROJECT

Project includes approximately 77,344 SY of Slurry Seal Type III surface treatment of Camelback Road (Arterial) from approximately 43rd Avenue to 58th Drive. Project also includes necessary utility adjustments, miscellaneous concrete improvements, repairs, obliteration and application of striping, traffic control and additional related work.

Project 141516

**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 \$371,078.18.

DETAILED PROJECT COMPENSATION

As shown in detail on Pages 8 & 9 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 ten (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 thirty (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 five (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 fifteen (15) years of 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 ten (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 ninety (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.

Project 141516

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 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 fifteen (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.

Bond Number 24787

INDIVIDUAL SURETIES WILL NOT BE ACCEPTED
STATUTORY PERFORMANCE BOND PURSUANT TO TITLE 34,
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract Amount)

KNOW ALL MEN BY THESE PRESENTS:

That ViaSun Corporation (hereinafter called the Principal), as Principal, and
, a corporation organized and existing under the laws of the State of MN with its principal office in the
City of Edina, (hereinafter called the Surety), as Surety, are held and firmly bound unto the City of
Glendale, a municipal corporation, (hereinafter called the Obligee), in the amount of
Three Hundred Seventy One Thousand Seventy Eight Dollars and 18/100 Dollars (\$371,078.18), 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 24th day of
June, 2016, to construct **PROJECT 141516 - CAMELBACK ROAD-43RD AVNUE TO 58TH DRIVE -
SLURRY TYPE III**, which contract is hereby referred to and made a part hereof as fully and to the same
extent as if copied at length herein.

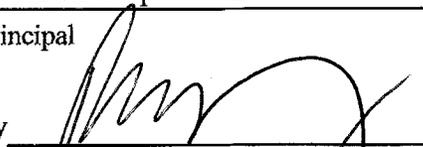
NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall
faithfully perform and fulfill all undertakings, covenants, terms, conditions and agreements of said contract
during the original term of said contract any extension thereof, with or without notice to the Surety,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

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

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

Witness our hands this 1st day of July, 20 16.

ViaSun Corporation
Principal _____ Seal

By  _____

Western
National
Mutual
Insurance
Company
Surety Deborah E. Williams, Attorney-In-Fact Seal

DEWCO, LLC
Agency of Record

4645 S. Lakeshore Drive, Ste. 14, Tempe, AZ 85282
Agency Address

Telephone Number: 480-897-1154

Bond Number 24787

INDIVIDUAL SURETIES WILL NOT BE ACCEPTED
STATUTORY PAYMENT BOND PURSUANT TO TITLE 34,
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract Amount)

KNOW ALL MEN BY THESE PRESENTS:

That, ViaSun Corporation (hereinafter called the Principal), as Principal, and
, a corporation organized and existing under the laws of the State of MN with its principal
office in the City of Edina, (hereinafter called the Surety), as Surety, are held and firmly
bound unto the City of Glendale, a municipal corporation, (hereinafter called the Oblige), in the
amount of *** See Below Dollars (\$ 371,078.18), 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
day of June 24, 2016, to construct **PROJECT 141516 - CAMELBACK ROAD-43RD
AVNUE TO 58TH DRIVE - SLURRY TYPE III** which contract is hereby referred to and made a
part hereof as fully and to the same extent as if copied at length herein.

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

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

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

Witness our hands this 1st day of July, 20 16.

***Three Hundred Seventy One Thousand
Seventy Eight Dollars and 18/100

Principal ViaSun Corporation Seal

By [Signature]

Western [Signature]
National Surety Deborah E. Williams, Attorney-In-Fact Seal

Mutual Insurance DEWCO, LLC

Company Agency of Record

Agency Address
4645 S. Lakeshore Drive, Ste. 14, Tempe, AZ 85282

Telephone 480-897-1154

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Western National Mutual Insurance Company, a Minnesota mutual insurance company, does make, constitute and appoint: Deborah E. Williams, Roman E. Ruiz

DEWCO, L.L.C. (Agency Code #9414)

Its true and lawful Attorney(s)-in-Fact, with full power and authority for and on behalf of the Company as surety, to execute and deliver and affix the seal of the Company thereto (if a seal is required) bond, undertakings recognizances or other written obligations in the nature thereof, (other than ball bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance workers compensation bonds guaranteeing payment of benefits, hazardous waste remediation bonds or black lung bonds), as follows:

All written instruments in an amount not to exceed an aggregate of Seven Million Five Hundred Thousand and 00/100 (\$7,500,000) for any single obligation, regardless of the number of instruments issued for the obligation.

and to bind Western National Mutual Insurance Company thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. This appointment is made under and by authority of the board of directors at a meeting held on September 28, 2010. This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of Western National Mutual Insurance Company on September 28, 2010:

RESOLVED that the president, any vice president, or assistant vice president in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the Company to bonds, undertakings, recognizances, and suretyship obligations of all kinds, and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company

- (i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
- (ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
- (iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the Company to such person or persons.

RESOLVED FURTHER 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, recognizance, or other suretyship obligations of the Company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, Western National Mutual Insurance Company has caused these presents to be signed by its proper officer and its corporate seal to be affixed this 16th day of December, 2015.



Jon R. Hebeisen, Secretary

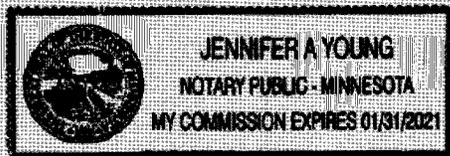




Larry A. Byers, Sr. Vice President

STATE OF MINNESOTA, COUNTY OF DAKOTA

On this 16th day of December, 2015, personally came before me, Jon R. Hebeisen and Larry A. Byers and to me known to be the individuals and officers of the Western National Mutual Insurance Company who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally dispose and say: that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.



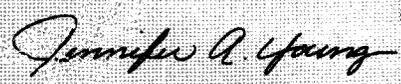


Jennifer A. Young, Notary Public
My commission expires January 31, 2021

CERTIFICATE

I, the undersigned, assistant secretary of the Western National Mutual Insurance Company, a Minnesota corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked, and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.

Signed and sealed at the City of Edina, MN this 1st day of JULY, 2016



Jennifer A. Young, Assistant Secretary



**Kant's Kopy® K2
Prescription Paper**

- Hidden Pantograph
- Color Match
- Artificial Watermark
- Anti-Copy Coin Rub
- Security Features Box
- Thermochromic Ink
- Erasure Protection
- UV Fiber Glow
- UV Paper Dull
- Tamper Alert
- Toner Grip
- Microprint Protection
- Acid Free

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CITY OF GLENDALE, ARIZONA
PUBLIC WORKS/ENGINEERING DEPARTMENT

CONTRACTOR'S AFFIDAVIT
REGARDING
SETTLEMENT OF CLAIMS

PROJECT 141516 - CAMELBACK ROAD-43RD AVNUE TO 58TH DRIVE - SLURRY TYPE III

To the City of Glendale, Arizona

Gentlemen:

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

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

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

Contractor

By _____

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

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

Notary Public

My Commission Expires: _____

SUPPLEMENTAL GENERAL CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Subcontracts shall conform to the regulations governing employment of labor.

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

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

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

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

27. **OVERTIME:**

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

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

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

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

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

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

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

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

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

31. LIQUIDATED DAMAGES:

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

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

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

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

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

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

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

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

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

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

END OF SUPPLEMENTAL GENERAL CONDITIONS

SPECIAL PROVISIONS

1. **SCOPE OF WORK:** Project includes approximately 77,344 SY of Slurry Seal Type III surface treatment of Camelback Road (Arterial) from approximately 43rd Avenue to 58th Drive. Project also includes necessary utility adjustments, miscellaneous concrete improvements, repairs, obliteration and application of striping, traffic control and additional related work.

2. **DEFINITIONS:**

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

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

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

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

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

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

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

that involve determination of final quantities.

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

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

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

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

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

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

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

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

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

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

for such additional checking. The amount of such costs will be deducted from the Contractor's monthly estimate.

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

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

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

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

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

6. **TRAFFIC REGULATIONS:**

6.1 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:

6.1.1 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.

6.1.2 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.

6.1.3 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.

6.1.4 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.

6.1.5 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.

6.1.6 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.

- 6.1.7 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.
- 6.1.8 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.
- 6.1.9 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.

- 6.1.10 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. 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.

- 6.1.11 It is the City's desire to maintain one lane of traffic in each direction on minor streets whenever possible. Should it become imperative for the Contractor to close off a portion of any minor street or reduce the travel way to a single lane, he/she must obtain approval

from the City Transportation Director or Designee Seventy-Two (72) hours prior to implementing a traffic control change. He/she must provide all the necessary signs to detour traffic and/or flag person to control traffic for a single lane. The maximum amount of time that the street may be closed is from 9:00 a.m. until 4:00 p.m.

6.1.12 **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.

7. **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.

8. **WEEKLY NEWSLETTER:** The Contractor shall prepare, subject to the approval of the Engineer, on a weekly basis by U.S. Mail, a one page newsletter containing a brief description of the work completed during the past week and work expected to be accomplished during the next week. Information such as, but not limited to, detours or hotline telephone numbers shall be included as required. Payment shall be made as a proportionate share of the lump sum as based on original calendar completion date, however, the Contractor shall continue preparation until one week after the date of substantial completion.

9. **CONCRETE GUTTER WATER TESTING:** The MAG Uniform Standard Specifications, Section 340.3, **CONSTRUCTION METHODS**, shall be modified as follows: The 1/2 inch referenced in Paragraph 16 beginning, "When required by the Engineer, gutter having a slope of 0.8 foot...", shall be changed to 1/4 inch.

10. **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.

11. **SOILS REPORT:** The boring logs and soils report for this project are available for review at the City Engineering Office upon request. The boring logs and soils report are provided only as a courtesy. The logs and soils reports are not incorporated into, or part of, the contract and the City of Glendale makes no warranties, express or implied, as to the accuracy of the information contained therein. The Contractor should not rely on the information contained therein and should perform its own investigation as to the subsurface conditions of the project. The logs and soils reports are not intended, nor should they be relied upon by the Contractor as, a representation of the true soil conditions of the project. If there is a conflict between this provision and any other provision of the contract documents, this provision will prevail. The Contractor will accomplish the project under whatever condition he finds at the contract price.

12. **AZPDES Permit Requirements:**

A. This project is subject to Arizona Pollutant Discharge Elimination System (AZPDES) stormwater requirements. The contractor shall assure compliance with the AZPDES, other Federal, State and local laws, ordinances, statues rules and regulations pertaining to stormwater

discharge. The contractor is responsible for preparing all documents required by these regulations.

- B. 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 (ADEQ) in connection with AZPDES practices, requirements, laws and regulations pertaining to air, groundwater and surface water quality.
- C. Any fines and penalties imposed by ADEQ, EPA or any other agency against the City of Glendale or the Contractor, for Contractors failure to comply with any requirements, shall be borne by the Contractor.

13. 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) 4XB 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*
<p>NOTE: This table is based on the approximate <u>minimum</u> 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.</p> <p>* All Asphaltic Concrete Laboratory Tests are covered on another sheet provided upon request.</p>				

Revised 01/07/2013

14. **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.

15. **CONSTRUCTION SIGN:** The project type to be indicated on the sign shall be 141516 - CAMELBACK ROAD-43RD AVNUE TO 58TH DRIVE - SLURRY TYPE III . See "Construction Sign Detail."

16. 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 \$50,000.00. 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 \$50,000.00 on the bid form, under line item ALLOWANCE FOR CONSTRUCTION CONTINGENCY.

END OF SPECIAL PROVISIONS



Project Life Cycle Cash Flow Schedule

Project No.: 0 Date: _____

Project Name: 0

Company Name: _____

Project Start Date: 0 Project Completion Date: 0

Original Updated Revised

Qtr.	Fiscal Yr.	Estimated		Actual	
		Amount	Accum.	Amount	Accum.
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	\$ -	\$ -		
1st	07/16 - 09/16	\$ -	\$ -	\$ -	\$ -
2nd	10/16 - 12/16				
3rd	01/17 - 03/17				
4th	04/17 - 06/17				
1st	07/17 - 09/17				
2nd	10/17 - 12/17				
3rd	01/18 - 03/18	\$ -	\$ -	\$ -	\$ -
4th	04/18 - 06/18				
Totals		\$ -		\$ -	\$ -

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

For Engineering Use Only:	
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

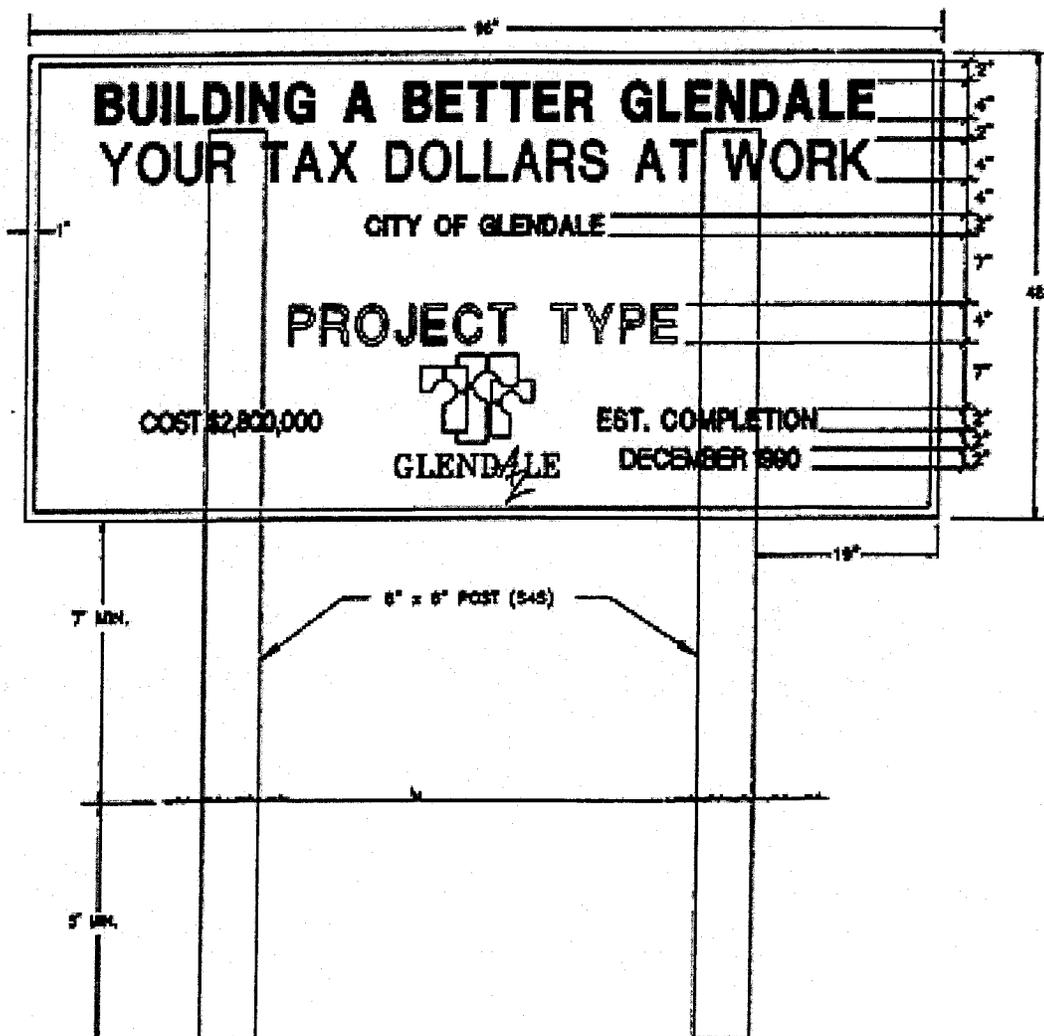
BACKGROUND TO BE PAINTED WHITE WITH STENCIL BLACK LETTERS, NUMERALS AND BORDER.

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 12" X 13" TWO COLOR GLENDALE LOGO IS AVAILABLE BY CONTACTING THE CITY OF GLENDALE ENGINEERING DEPT. AT 623-930-3630. COST \$18.00



TECHNICAL SPECIFICATIONS
2014/2015 PAVEMENT MANAGEMENT PROGRAM - CAMELBACK SLURRY

Table of Contents

PART A: GENERAL INFORMATION 2

PART B: BID ITEMS 12

ITEM 1 MOBILIZATION/DEMobilIZATION 12

ITEM 2 PROJECT SIGNS 12

ITEM 3 SLURRY SEAL (TYPE III) 12

ITEM 4 OBLITERATE EXISTING PAVEMENT MARKINGS (STRIPE) 25

ITEM 5 OBLITERATE EXISTING PAVEMENT MARKINGS (SYMBOL) 25

ITEM 6 RESET FRAME & COVER FOR SEWER MANHOLE PER MAG DTL 422 26

ITEM 7 RESET STORM DRAIN MANHOLE FRAME & COVER PER MAG DTL 422 28

ITEM 8 RESET WATER MANHOLE FRAME & COVER PER MAG DTL 422 28

ITEM 9 RESET TELECOMMUNICATIONS MANHOLE FRAME & COVER PER MAG DTL 422 28

ITEM 10 RESET WATER VALVE FRAME & COVER PER MAG DTL 391-1, TYPE A 29

ITEM 11 RESET GAS VALVE FRAME & COVER PER MAG DTL 270 29

ITEM 12 WHITE STRIPE (PAINT) 4" EQUIVALENT 30

ITEM 13 YELLOW STRIPE (PAINT) 4" EQUIVALENT 30

ITEM 14 PAVEMENT MARKING ARROW (PAINT) 30

ITEM 15 PREFORMED PAVEMENT MARKING ARROW (90 MIL) 30

ITEM 16 PAVEMENT MARKING RAILROAD SYMBOL (PAINT) 30

ITEM 17 PREFORMED PAVEMENT MARKING ARROW (90 MIL) 30

ITEM 18 WHITE STRIPE (60 MIL THERMOPLASTIC) 4" EQUIVALENT 30

ITEM 19 WHITE STRIPE (90 MIL THERMOPLASTIC) 4" EQUIVALENT 30

ITEM 20 YELLOW STRIPE 60 MIL THERMOPLASTIC 4" EQUIVALENT 30

ITEM 21 RAISED PAVEMENT MARKER (TYPE D OR TYPE G) 30

ITEM 22 RAISED PAVMENT MARKER (HYDRANT MAKER, TYPE BB, BLUE) 30

ITEM 23 TRAFFIC CONTROL 36

ITEM 24 UNIFORMED, OFF DUTY LAW ENFORCEMENT OFFICER CONTINGENCY 37

ITEM 25 ALLOWANCE FOR ASPHALT REPAIR (REMOVE/REPLACE), 12.5mm 37

ITEM 26 ALLOWANCE FOR CONCRETE CURB AND GUTTER REMOVE AND REPLACE 39

ITEM 27 ALLOWANCE FOR CONCRETE SIDEWALK REMOVE AND REPLACE 39

ITEM 28 ALLOWANCE FOR CONCRETE VALLEY GUTTER REMOVE AND REPLACE 40

ITEM 29 CONSTRUCTION MATERIALS SAMPLING AND TESTING 41

ITEM 30 CONSTRUCTION SURVEYING AND LAYOUT 41

ITEM 31 OWNERS ALLOWANCE FOR CONSTRUCTION CONTINGENCY 41

APPENDIX A – QUALIFICATION FORM

APPENDIX B – CITY OF PHOENIX TRAFFIC REGULATIONS CHECKLIST

APPENDIX C – PLAN SHEETS

PART A: GENERAL INFORMATION

The following Information for Bidders is added:

QUALIFICATIONS OF BIDDERS: To ensure a safe, efficient, high quality project, the City shall require the Prime contractor to meet minimum qualifications for the application of polymer modified slurry seal. As evidence of competency to perform the work, bidder shall submit the prime contractor qualification form verifying experience herein. All reference experience shall be for projects of similar size, scope, and quantity successfully completed by the Prime Contractor within the United States within the last 48 months. projects See Appendix A for qualification form.

The following Supplemental General Conditions are modified or added as follows:

8. STOCKPILE OF MATERIALS is revised to add:

The Contractor shall be responsible for securing and maintaining a marshalling yard as specified in MAG Standard Specification Sections 104.1.3, 104.1.4, and 107.6.1.

- A. MAG 107.6.1 "**Contractor's Marshaling Yard:** If the Contractor or his subcontractor utilizes property outside the limits of the project in the performance of the contract, the Contractor/subcontractor shall comply with the following:

107.6.1.1 Contractor's Marshaling Yard when the Agency is the Contracting Party:

(A) Prior to occupying the property, the Contractor shall provide written notification as to the number and location of all properties to be used. The notification shall specify in detail how the Contractor proposes to use each property and how he proposes to comply with (B) through (D) below. Also, the Contractor shall provide a statement, signed by the property owner(s), which gives the Contractor permission to use the property. (B) The property(s) shall be adequately maintained to control dust, mud, trash and other pollutants from leaving the property. (C) Work on the property(s) shall be scheduled so as to comply with the City of Glendale Noise Ordinance. (D) Use of the property(s) such as location of stored materials, service of equipment, etc., shall be conducted to minimize impact on adjacent properties. (E) The Contractor shall leave the property in a condition, as determined by the Engineer, equivalent to that which existed prior to entry. In no case shall any use cause, or allow to remain, any negative impact to adjoining properties or right-of-way unless such impact existed prior to the Contractors' use. (F) The Contractor shall obtain a written release signed and dated from each property owner after completion of use. Each release shall state that, at the time of signing, the owner accepts the

property in its present condition from the Contractor and relieves the Contractor and the Agency from any or all claims for the use or damage to said property. A copy of each release shall be submitted to the Engineer. (G) This Subsection also applies to all levels of subcontractors who will need to obtain marshaling yards for the project, which will be separate from that of the Contractor. It will be the responsibility of the Contractor to obtain copies of the various documents from the subcontractors, as required above, and provide them to the Engineer.

- B. MAG 107.6.1.2 Contractor's Marshaling Yard when the City of Glendale is not the Contracting Party (private development, utility work, subdivision construction, etc): All conditions will apply as in Subsection 107.6. 1.1 except that the permit holder will be responsible for obtaining all documents. The permit holder will retain the documents and make them available to the Agency upon request.
- C. MAG 107.6.2 The Contractor shall comply with the City of Glendale Code concerning work hours and noise level during construction.

10. **CLEAN-UP** is revised to add:

SAFETY AND DAILY CLEANUP: The contractor shall remove all debris and other deleterious construction material materials from the worksite on a daily basis. The Contractor shall at all times so conduct his work as to assure the least possible obstruction to traffic and adjacent residents. The Contractor shall provide for the safety, convenience, and the protection of persons and property, of the general public, and residents along the street and areas adjacent to the work area.

SWEEPING: The contractor shall provide weekly sweeping through the project limits commencing 4 days after the final slurry application. The following minimum sweeping schedule shall be adhered to:

- First two week period following final application: twice per week
- Second two week period following final application: once per week

15. **PERMITS** is revised to add:

PERMITS: The following permits will be the responsibility of the Contractor:

ADOT ENCROACHMENT PERMIT: The Contractor shall procure an ADOT Encroachment Permit; pay all charges, fees, and taxes; and provide all notices necessary and incidental to the lawful prosecution of the work (including traffic control setups) within ADOT right-of-way.

CITY OF PHOENIX PERMIT: The Contractor shall procure a barricade permit from the City of Phoenix's Transportation Department prior to any traffic control restrictions or modifications. Any restrictions or modifications must follow the most current versions of the City of Phoenix Barricade Manual and the MUTCD. The Contractor will also be required to coordinate with the City of Phoenix Transportation and/or Traffic Departments prior to any

restrictions or modifications necessary within the City of Phoenix city limits.

BURLINGTON NORTHERN SANTA FE (BNSF) RAILWAY RIGHT-OF-WAY PERMIT:

The Contractor shall obtain the necessary right of entry agreements and/or permits and coordinate his work schedule with BNSF in order to construct the project features affecting BNSF right-of-way in accordance with MAG Standard Specification Section 107.11.

The Contractor is hereby informed that part of the work will be within the right-of-way (ROW) of the BNSF Railway Company (BNSF). The Contractor shall contact the BNSF Manager Industry and Public Projects at the phone number listed below, making reference to BNSF File Numbers listed below, and requests an Exhibit Form C & C-1 for the project and provides any essential information so that he is made aware of key stages of the Contractor's progress. The Contractor shall obtain an executed Contractor's Exhibit C-1 Agreement with BNSF.

When approved by BNSF, the executed Contractor's C & C-1 forms will become the Contractor's Temporary Occupancy Permit (TOP). The Contractor shall not enter into, or commence work within, the railroad's ROW until the Contractor has provided a copy of the executed Contractor's TOP to the City project Engineer. The Contractor shall also provide at least thirty (30) days prior written notice to BNSF Manager Industry and Public Projects about the time when the operations for construction shall commence on BNSF right of way, making a reference of BNSF File Number referenced below.

Per Form C-1, the Contractor shall take full responsibility for their subcontractors through such C and C-1 forms and naming such subcontractors as insured under the Railroad Protective Policy. However, at BNSF's request, a subcontractor may be required to execute their own C & C-1 forms to include the purchase of their own Railroad Protective Policy.

The Contractor is advised that several weeks are required for review and approval of the Contractor's C & C-1 forms. The Contractor shall anticipate the required time necessary to obtain the TOP and schedule his work accordingly. No adjustment to the contract time will be allowed for delays in obtaining a fully executed TOP. The Contractor is directed to samples of the Railroad C & C-1 documents included within these Special Provisions that contain specific BNSF requirements associated with being on its property. The application fee for the C & C-1 forms is currently \$XXX per information provided by the BNSF. The Contractor shall submit the application for TOP and make payment of the fee as provided under Section 107.2 of the MAG Standard Specifications.

The Contractor shall comply with all requirements of the railroad concerning access, insurance, inspection, flagging requirements, and protection of its property, including, when required, a plan for erosion control. Following award of the contract, the Contractor must contact Matthew Keim, BNSF Manager Public Projects to begin the Temporary Occupancy application process. All communications with BNSF shall respect its requirements for lead time to respond. All correspondence and formal communications must be directed to Matthew Keim, with copy to the City's Engineer, and daily coordination and communications

established with Skylar Lempinen, Facilities Supervisor:

Skylar Lempinen
Facilities Supervisor - Southwest
BNSF Railway Co
7120 North 60th Ave
Glendale AZ, 85301
Skylar.Lempinen@BNSF.com
(623) 463-4018

Matthew Keim
Manager – Public Projects
BNSF Railway Co.
740 E Carnegie Drive
Bernardino CA, 92408
Matthew.Keim@BNSF.com
1-909-386-4472

When communicating with the BNSF, please reference the following information:

FY 2014/2015 Pavement Management Program
Design and Construction Administration Services
City of Glendale
Engineering Department
City of Glendale Project No. 141516

The Contractor is advised that the daily coordination necessary to comply with the requirements of the TOP and these Special Provisions may be extensive and that prior to beginning their construction activities it is in his best interest to meet with the Railroad Representative and the Roadmaster in order to establish the command hierarchy and the necessary approval protocols for their day-to-day activities.

Pursuant to FRA Regulation 49 CFR Part 214, flagging protection is required in accordance with the railroad's standard safety procedures. The necessity for flagging protection is determined by the railroad and, when necessary, the railroad may require one, or more, flaggers to be present when the Contractor is on the railroad ROW. The Contractor is required to communicate to BNSF his activities that may affect safety or railroad operations. Any work to be performed by the Contractor that requires flagging protection shall be deferred until flagging protection is available at the job site. The Contractor is required to coordinate with BNSF with respect to construction schedule and work-related items for the safe and effective progress of the work.

The City will directly reimburse the BNSF for all railroad flagging costs. The City has estimated a total of 4 days of railroad flagging and 4 days of inspection will be required for this project. The Contractor is not to exceed this amount without written permission of the City's Engineer.

Railroad-provided flagging service will be required during construction of any element of the project, either temporary or permanent, that occurs when Contractor's personnel or equipment will be within 25-feet of the track centerline, when cranes or similar equipment are positioned outside of 25-feet horizontally from track centerline but could tip and foul the track, or as specified in the TOP. There is a minimum 15-foot horizontal clearance requirement for any temporary construction. Temporary vertical clearances as measured

from the top of the highest rail shall not be less than 22-feet. Examples of activities which could trigger railroad notification include (but are not limited to) crane boom violations, the placement and removal of the temporary shoring or formwork, grading of the south side access roads and their subsequent removal, regrading and revegetation, track crossings and pier construction.

The Contractor shall notify BNSF's Manager of Track Maintenance, or Designated Representative, at least thirty (30) calendar days in advance of commencing work on BNSF property or near BNSF's tracks, when requesting a BNSF flagger in accordance with the requirements of the Temporary Occupancy documents in order to protect BNSF from damage or interference to BNSF's trains and property. No excavation within BNSF ROW is permitted without the approval of the railroad. The Contractor shall provide written notice to BNSF Manager Industry and Public Projects, BNSF Road Master and to the City's Engineer when flagging services are no longer needed.

The Contractor is required to communicate those of his or his subcontractor's activities to the Road Master that may affect safety or railroad operations. Any work to be performed by the Contractor, which requires flagging protection, shall be deferred until flagging protection is available at the job site.

The Contractor is required to procure Railroad Protective Liability Insurance (RPLI) for the duration of the project. In addition to the Certificate of Insurance form, the Contractor must provide an Insurance Binder, or a copy of the policy, that designates the specific RPLI coverage. The Contractor is not required to purchase this coverage from the BNSF and is encouraged to shop the market for the best available rate.

The Contractor shall conduct the work in a safe and orderly manner and according to the plans and specifications. The Contractor shall at no times hinder the safe and timely operation of BNSF facilities, nor shall it allow the BNSF- required insurance to lapse at any time. If the Contractor shall prosecute the project work in a manner that BNSF deems to be hazardous to its property, facilities or the safe and expeditious movement of its traffic, or the insurance described in the C & C-1 documents shall be canceled during the course of the project, then BNSF shall have the right to stop the work, within BNSF right of way, until the acts or omissions of the Contractor have been fully rectified to the satisfaction of BNSF's Manager – Industry & Public Projects, or additional insurance has been delivered to and accepted by BNSF. Such work stoppage shall not give rise to or impose upon BNSF any liability to the Contractor.

When the Contractor receives the executed TOP from BNSF, the Contractor shall begin a dialog with the BNSF Roadmaster to mutually schedule and coordinate their respective work. BNSF may require portions of the Contractor's work that may affect railroad operations to be performed during designated hours. Contractor shall coordinate with BNSF each day's construction activities that may affect BNSF operations. The Contractor's construction schedule shall identify the time frames for the completion of the Contractor's and BNSF's activities, always recognizing that the Contractor's activities shall be scheduled

around train movements. Construction activities within twenty five (25) feet of the operational tracks, or activities (such crane operations) that may foul the tracks will occur only with the approval of BNSF's Roadmaster, or his designated representative. All essential communications between the Contractor and BNSF are to be communicated promptly to the City's Engineer.

All existing BNSF maintenance roadways shall remain open at all times during construction. The Contractor shall not deposit any material or debris onto railroad property that, in the opinion of BNSF, would hinder railroad operation, or be unsafe to railroad operations. Contractor will not store material within BNSF's right of way. When Contractor personnel and equipment are not working, they shall be at least twenty-five (25) feet from the centerline of the nearest track. The Contractor shall maintain all ditches and drainage structures free of silt or other obstructions which may result from the Contractor's operations and to repair promptly eroded areas within BNSF property. The construction site shall be restored as indicated in the Contractor's Temporary Occupancy Agreement and cleaned during the progress of the work to the satisfaction of BNSF. Any ballast material contaminated by the Contractor's operations will be replaced by BNSF at the Contractor's expense.

All workers, including those employed by subcontractors, will be required to complete the BNSF Contractor Safety Orientation Program prior to entering the property and to complete and submit a photo for the photo identification card. All workers will be required to have in their possession the photo identification card indicating that the worker has taken and passed the course. The course may be taken via the Internet at:

www.contractororientation.com

There is an \$11 fee for the course and an additional \$15 for each photo card per person, the cost of which is to be borne by contractor.

BNSF requires protection of fiber optic cable systems which may cross or run parallel to the BNSF corridor. The Contractor shall be responsible to contact BNSF and/or the telecommunications companies to determine whether there is any fiber optic cable systems located within the PROJECT boundaries that could be damaged, or their service disrupted, due to the construction of the PROJECT. The Contractor shall also pothole all lines either shown on the PLANS or marked in the field in order to verify their locations. The Contractor shall also use all reasonable methods when working in the BNSF rail corridor to determine if any other fiber optic lines may exist. Failure to notify, pothole or identify these lines shall be sufficient cause for the City's Engineer to stop construction at no cost to the City or BNSF until these items are completed. Costs for repairs and loss of revenues and profits due to damage to these facilities through negligent acts by the Contractor shall be the sole responsibility of the Contractor. The Contractor shall indemnify and hold the City and BNSF harmless against and from all cost, liability and expense arising out of or in any way contributed to these negligent acts of the Contractor. The telecommunication companies, at the City's expense if prior rights are demonstrated, shall be responsible for the rearrangement of any facilities determined to interfere with the construction. The Contractor shall cooperate fully with any company performing these rearrangements. The Contractor

shall make any and all arrangements to secure the location or relocation of wire lines, pipe lines and other facilities owned by private persons, companies, corporations, political subdivisions or public utilities other than BNSF which may be found necessary to locate or relocate in any manner whatsoever due to the construction of the PROJECT. BNSF "call before you dig" 1-800-336-9193.

NOTE: It is the Contractor's responsibility to coordinate effectively his operations to minimize, if not eliminate, any impact of the project upon BNSF operations. Any loss of service, or revenue, to BNSF beyond that covered by these specifications that is in any way caused by the Contractor's actions shall be the sole responsibility of the Contractor, at no cost to the project.

BNSF prohibits crossing of railroad tracks. If the Contractor desires a temporary or permanent BNSF track crossing for hauling equipment and material across the tracks, a separate agreement must be concluded with BNSF, and such agreement with BNSF must be concurred in by the Engineer. The Contractor is hereby advised that the City has not and will not negotiate with BNSF for any temporary or permanent crossing of the tracks. A track crossing permit is required and a blank form with instructions is available at:

<http://www.BNSF.com/reus/roadxing/roadform.pdf>

Assuming a road crossing permit would be granted, the crossing would be constructed by BNSF forces. The City assumes no responsibility for railroad crossings and they are considered initiatives of the Contractor. No additional payment will be made for the construction of railroad crossings.

No direct payment will be made for adhering to BNSF requirements or coordinating with BNSF representatives. Costs for this work shall be considered as included in other bid items.

27. **OVERTIME** is revised to add:

See Supplemental Special Provision 6.1.13 for additional stipulations and restrictions on night and weekend work hours.

28. **CONTRACTOR'S CONSTRUCTION SCHEDULE** is revised to add:

The Contractor shall complete all work in a logical sequence to complete the project in an efficient manner. Contractor construction sequencing schedule shall be approved by the City of Glendale prior to commencing construction. Additionally, the Contractor shall schedule traffic closures or restrictions around the schedule of all local schools.

34. **CONSTRUCTION QUANTITIES** is added:

The Contractor shall accompany the City of Glendale engineer or their representative during measurement of all construction quantities.

35. **SAWCUTTING & REMOVALS** is added:

Sawcutting, as well as removal and disposal of any and all asphalt and/or concrete is incidental to the project construction scope.

36. **PUNCH LIST ITEMS** is added:

The Contractor shall complete all punch list items 30 days after punch list is received by Contractor from the City.

The following Special Provisions are modified or added as follows:

6. **TRAFFIC REGULATIONS:**

Section 6.1.3 is revised to read:

A travel lane shall be defined as twelve (12) feet of roadway not obstructed by traffic control devices with a safe motor vehicle operating speed of twenty-five (25) miles per hour.

Section 6.1.4 is revised to read:

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 or as approved by the Transportation Director. This shall be considered temporary pavement and shall be removed completely before proceeding with final surfacing.

Section 6.1.6 is revised to read:

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. If requested by the Contractor and reviewed and approved by the City, the City may allow weekend intersection closures. The Contractor must coordinate any closure schedule and approval through the City's Transportation Director and Project Manager.

Section 6.1.8 is revised to add:

The Contractor shall restore the access as soon as possible. If the primary access cannot be restored in a timely manner, the Contractor shall provide an alternative which shall be predetermined with the residents prior to imposing any restrictions. Any local street restrictions imposed shall be such that local area traffic circulation is maintained.

Access shall be maintained to adjacent businesses at all times during their hours of operation. Properties having more than one point of access shall not have more than

one access restricted for more than fourteen (14) calendar days at any given time. Access to adjacent driveways shall be provided during all non-working hours. Any business restrictions shall be coordinated with the affected business at least 72 hours prior to imposing restrictions.

Section 6.1.9 is revised to add:

Overtime pay for the off-duty Glendale police officer shall be paid for any time over 8 hours in a continuous shift. Overtime pay rate shall be the contract unit price bid per hour x 1.5. A work shift over 8 hours must be approved by the Engineer before overtime pay calculation can commence.

Section 6.1.13 is added:

It is the preference of the City to avoid weekend and night construction work. Contractor must request one (1) week in advance from the City of any intended weekend work. The City's Transportation Director and Project Manager will determine if such work shall be permitted. Contractor shall notify the public a minimum of three (3) days prior to performing any authorized weekend or night work. All public notifications shall be coordinated through the public outreach consultant.

Section 6.1.14 is added:

The Contractor shall maintain emergency vehicle access at all times.

Section 6.1.15 is added:

Contractor shall coordinate slurry operations so as to not impact sanitation services by sequencing slurry operations to occur on any given roadway segments with sanitation service scheduled for that day. Should slurry operations be scheduled for any given roadway segment with sanitation service scheduled for that day, the Contractor shall coordinate and provide sanitation pick up for affected residents by relocating trash containers, or by providing alternative measures acceptable to the Solid Waste Division of the City Public Works Department. At any time 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 interrupted, the Contractor shall, prior to causing such closure or disruption, make arrangements with the City of Glendale Solid Waste Division in order that refuse collection Service can be maintained.

Section 6.1.16 is added:

The Contractor shall maintain all existing bus stop locations on this project in a safe manner, or provide alternate bus stop locations and related directional signage as required by the Public Works Operations Manager or her designee.

Section 6.1.17 is added:

The Contractor shall maintain pedestrian paths that meet ADA requirements at all times during the entire length of the project. The Contractor shall ensure that all pedestrian walking areas on this project remain in compliance with all the requirements outlined by all current American Disabilities Act regulations. All pedestrian-walking areas, whether paved or unpaved, shall be maintained open and safely usable at all times. Such measures as backfilling or ramping at a 12:1 slope to existing sidewalks, or providing alternate sidewalk areas adjacent to existing sidewalks may be used. In high pedestrian use areas, the Transportation Director or her designee may request temporary hard-surface walkways, and/or covered pedestrian walkways to be installed at no additional cost to the City.

Section 6.1.17 is added:

The Contractor shall adhere to the City of Phoenix traffic regulation checklist (see appendix B) for any traffic restrictions within City of Phoenix right-of-way. Roque Reggie Espinosa (602-260-6772 cell, 602-495-7315 office) is the right-of-way agent for the project area and will be the primary contact for any traffic control concerns within City of Phoenix right-of-way.

END OF SUPPLEMENTAL SPECIAL PROVISIONS

PART B: BID ITEMS

The following bid items are numbered to correspond to the Schedule of Bid Items. They are included to explain details of work not covered by applicable Standard Specifications and to relate work and pay quantities to the specific Bid Item. Any work shown on the plans and not included in a bid item shall be considered incidental to the project.

ITEM 1 MOBILIZATION/DEMobilIZATION**Description:**

Mobilization/demobilization shall include movement of Contractor's personnel, equipment, supplies and incidentals, including establishment of offices, buildings and other facilities required for the performance of the work on the project, as well as preparatory work and operations prior to the commencement of the work on the project locations.

Measurements and Payment:

Mobilization/demobilization will be measured for payment by the lump sum as a single complete unit of work. Payment for mobilization/demobilization will be made at the contract lump sum price. Payment shall be made in equal one-third portions. The first payment will be paid with the Contractor's initial billing. The second payment will be made when the total payments to the Contractor for the pay items; exclusive of payments for mobilization/demobilization, equal greater than one-half of the initial contracted amount, exclusive of mobilization/demobilization. The remaining one-third will be paid as part of the final payment due to the Contractor.

ITEM 2 PROJECT SIGNS**Description:**

The contractor shall provide a minimum of two (2) portable signs, minimum size 48" x 30" with the following information – City of Glendale 2015 Slurry Seal Program, Project Hotline XXX-XXX-XXXX. (Phone number to be provided by the City at Preconstruction Conference). Signs shall be in place prior to the start of construction, placed to be visible to motorists and kept clean.

Measurement and Payment:

Project signs will be measured for payment on lump sum basis and paid at the price established in the Bid Schedule for all labor, materials, tools and equipment to complete the work.

ITEM 3 SLURRY SEAL (TYPE III)**Description:**

Polymer Modified Slurry Seal shall consist of mixing a polymer modified cationic asphalt emulsion (LMCQS-1h or PMCQS-1h), aggregate, mineral filler (as needed), set-control additives

(as needed), and water, spreading the mixture on a pavement surface where shown on the plans, in conformance with the provisions in these special provisions, and as directed by the Engineer. The completed Slurry Seal shall leave a homogeneous mat, adhere firmly to the prepared surface, have a uniform appearance and have a skid-resistant surface. The completed Polymer Modified Slurry Seal shall support controlled traffic in 60 minutes.

All streets identified in these bid documents and improvement plans shall have Type III Slurry (as described in this specification) applied. See the attached improvement plans for slurry application areas.

The work performed and materials used in this project shall be in accordance with the Uniform Standard Specifications and Details for Public Works Construction sponsored and distributed by the Maricopa Association of Governments (MAG) with the following additions:

Location of Work:

The areas to have polymer modified slurry seal applied are indicated on the project plans. The slurry seal shall be applied from lip or face of gutter to lip or face of gutter and across the full pavement width on all streets. The City reserves the right to make additions or deletions to the original quantity amount, and/or to the streets or number of streets, at the price bid per square yard.

Slurry seal application limits shall begin from the point of curvature (PC)/curb return of the intersecting arterial, collector or local street, or the valley gutter (where applicable).

Non-Compliance:

If any two successive tests fail on the stockpile material, the job shall be stopped. It is the responsibility of the Contractor, at his own expense, to prove to the City of Glendale that the conditions have been corrected. If any two successive tests on the mix from the same machine fail, the use of the machine shall be suspended. It will be the responsibility of the Contractor, at his own expense, to prove to the City of Glendale that the problems have been corrected and that the machine is working properly.

- Test report and certifications will be made in accordance with MAG Specifications and these special provisions.
- Particular Section of the MAG Specifications which Apply.
- Specification for Polymer Modified Slurry Seal (Type III)

Materials:

The materials for polymer modified slurry seal shall conform to the following requirements

Emulsified Asphalt: The polymer modified cationic asphalt emulsion shall be homogenous and shall conform to the requirements of these special provisions. The polymer shall be either solid polymer milled or blended into the asphalt or latex blended

into the emulsifier solution prior to the emulsification process. The polymer modified cationic asphalt emulsion shall contain a minimum of two (2) percent polymer and be either grade LMCQS-1h or PMCQS-1h as shown in these special provisions and shall conform to the following requirements when tested in conformance with the following test methods:

Latex Modified Cationic Quick Set (LMCQS-1h)		
Tests on Emulsion		
Specification Designation	Test Method	Requirement
Viscosity, SFS, 77°F, seconds	AASHTO T 59	15-100
Sieve Test, %	AASHTO T 59	0.10 max.
Storage Stability, 24 hr, %	AASHTO T 59	1.0 max
Particle Charge	AASHTO T 59	Positive
Residue by Evaporation, %	AASHTO T 59	60 min.

Tests on Residue from Vacuum Distillation (Ariz. 504)		
Specification Designation	Test Method	Requirement
Penetration, 77°F, 100g, 5s, dmm	AASHTO T 49	20-90
Ring and Ball Softening Point, °F	AASHTO T 53	130 min.
Ductility, 77°F, 5cm/min, cm	AASHTO T 51	40 min.
Solubility in TCE, %	AASHTO T 44	97.5 min.
Elastic Recovery, %	AASHTO T 301	55 min.

A sample of the emulsion left undisturbed for a period of 24 hours shall show no evidence of latex separation.

Polymer Modified Cationic Quick Set (PMCQS-1h)		
Tests on Emulsion		
Specification Designation	Test Method	Requirement
Viscosity, SFS, 77°F, seconds	AASHTO T 59	15-100
Sieve Test, %	AASHTO T 59	0.10 max.
Storage Stability, 24 hr, %	AASHTO T 59	1.0 max
Particle Charge	AASHTO T 59	Positive
pH Test	AASHTO T 200	6.7 max
Density, 60 °F, lbs/gallon	AASHTO T 59	Report
Residue by Evaporation, %	AASHTO T 59	57 min.

Tests on Residue from Vacuum Distillation (Ariz. 504)		
Specification Designation	Test Method	Requirement
Penetration, 77°F, 100g, 5s, dmm	AASHTO T 49	35-75
Penetration, 39.2°F, 200g, 60s, dmm	AASHTO T 49	15 min.
Absolute Viscosity, 140 °F, Poise	AASHTO T 202	3000 max.
Ring and Ball Softening Point, °F	AASHTO T 53	130 min.
Ductility, 77°F, 5cm/min, cm	AASHTO T 51	100 min.
Solubility in TCE, %	AASHTO T 44	97.5 min.
Elastic Recovery, %	AASHTO T 301	55 min.

Water and Additives: Water shall be of such quality to be miscible with the polymer modified cationic asphalt emulsion. Additives may be used to accelerate or retard the break and set such as to insure that the applied Slurry mixture can support controlled vehicular traffic within four (4) hours after application. The kind and amount shall be determined based on the approved job mix formula and field test results as required by the Engineer. Set-control additives shall not adversely affect the polymer modified slurry seal.

Mineral filler: Mineral filler shall be Portland cement or hydrated lime that is free of lumps. Portland cement shall be Type I, Type II, or combination thereof. The type of mineral filler shall be determined by the Contractor based on laboratory evaluation to develop the job mix formula.

Aggregate: The mineral aggregate used shall be of the type and grade specified for the particular use of the polymer modified slurry seal. Mineral aggregate shall consist of sound and durable crushed gravel or crushed stone. The material shall be free from organic matter and other deleterious materials. Aggregates shall be 100% crushed material with no rounded particles. All aggregate shall be free of caked lumps and oversize particles. No natural sand will be allowed.

The aggregate, prior to the addition of emulsion shall conform to the requirements of this section. If aggregates are blended each component aggregate shall meet the sand equivalency and abrasion resistance and shall be 100% crushed. The percentage composition by mass of the aggregate shall conform to the following grading requirements when tested in conformance with AASHTO T 11 and T 27.

TYPE III	
Sieve Sizes	Percentage Passing
3/8" (9.5-mm)	100
No. 4 (4.75-mm)	70-90
No. 8 (2.36-mm)	45-70
No. 16 (1.18-mm)	28-50
No. 30 (600- μ m)	19-34
No. 50 (300- μ m)	12-25
No. 100 (150- μ m)	7-18
No. 200 (75- μ m)	5-15

The aggregate shall conform to the following quality requirements:

Test	Test Method	Requirement
Sand Equivalent	AASHTO T 176	60 min.
Plastic Limit	AASHTO T 89/T90	Non-Plastic
Percentage of Crushed Particles	Ariz. 212	100% min.
Los Angeles Abrasion Loss at 500 Rev.	AASHTO T 96	35% max.

Notes: Los Angeles Abrasion shall be performed on the source aggregate before crushing.

Source testing performed within the last 12 months may be provided by the aggregate supplier.

Job Mix Formula

All materials shall be pre-tested in a certified laboratory, approved by the City, as to the materials suitability for use in the Polymer Modified Slurry Seal. The cost for pre-testing shall be borne by the Contractor. At least seven (7) working days before the polymer modified slurry seal placement commences, the contractor shall submit for approval of the Engineer a laboratory report of tests and a proposed Job Mix Formula covering the specific materials proposed for use on the project. The Job Mix Formula proposed shall be reviewed and sealed by a registered Professional Engineer in the State of Arizona, seal date shall be within previous 12 months.

The percentages of each individual material proposed in the Job Mix Formula shall be shown in the laboratory report. Individual materials shall be within the following limits:

Material	Limit
Residual Asphalt (Type III)	6.5% to 12.0% by Dry Mass of Aggregate
Mineral Filler	0% to 3% By Dry Mass of Aggregate
Additive	As Needed
Water	As Needed

Adjustments may be required during construction based on field conditions.

Specifications: The Job Mix Formula and aggregate tests shall be performed by a laboratory capable of performing the applicable International Slurry Surfacing Association (ISSA) tests. The proposed polymer modified slurry seal mixture shall conform to the specified requirements when tested in conformance with the following tests:

Test	ISSA Test Method	Requirements
Wet Cohesion, kg-cm @ 30 Minute (Set) @ 60 Minute (Traffic)	TB* 139	12 min. 20 min.
Excess Asphalt by Monolayer Loaded Wheel Test, g/ft ²	TB* 109	50 max.
Wet Stripping, %	TB* 114	90 min.
Consistency, cm	TB* 106	2-3
Wet Track Abrasion, g/ft ² 1-hour Soak Loss 6-day Soak Loss	TB* 100	50 max. 75 max.
Mix Time @ 77°F, seconds	TB* 113	180 min.

TB* = Technical Bulletin

The laboratory that performed the tests and designed the mixture shall sign and seal the laboratory Job Mix Formula report. The report shall show the results of the tests on individual materials and shall compare their values to those required by these special provisions. The report shall clearly show the proportions of aggregate, filler, water, set

control additive, and polymer modified cationic asphalt emulsion solids content (minimum and maximum) based on the dry mass of aggregate. The laboratory shall report the quantitative effects of moisture content on the unit mass of the aggregate (bulking effect) in conformance with the requirements of ASTM Designation C 29M. Previous laboratory reports covering the same materials may be accepted provided the material test reports were completed within the previous 12 months as well as sealed within the previous 12 months.

The component materials used in the Job Mix Formula shall be representative of the polymer modified slurry seal materials proposed by the Contractor for use on the project. Once the Job Mix Formula is approved by the Engineer, no substitution of other material will be permitted unless the materials proposed for substitution are first tested and a laboratory report is submitted for the substituted design in conformance with these special provisions. Substituted materials shall not be used until the Job Mix Formula for those materials has been approved by the Engineer.

The completed mixture, after addition of water and set control additives, if used, shall be such that the polymer modified slurry seal mixture has proper workability. At the expiration of the road closure time, in conformance these special provisions, the polymer modified slurry seal mixture shall be sufficiently cured to support unrestricted traffic.

Material Sampling and Quality Acceptance

The sampling and testing shall be at the Engineers direction and expense. The minimum acceptable sampling frequency shall be at the Engineers direction but be no less than one (1) sample during the test strip and one (1) sample per week of production and shall include sampling of:

- Polymer Modified Cationic Asphalt Emulsion
- Mineral Aggregate
- Polymer Modified Slurry Seal Mixture

1. Polymer Modified Cationic Asphalt Emulsion shall be tested for compliance to the applicable specification in this special provision. At the Engineers discretion the polymer modified cationic asphalt emulsion can be tested for compliance with selected performance indicating portions of the specification.
2. The mineral aggregate shall be tested for gradation and Sand Equivalent in accordance with these special provisions
3. The polymer modified slurry seal mixture shall be tested for Wet Cohesion, Wet Track Abrasion Loss (1-hour and 6-day soaks) and Excess Asphalt. Additional testing for residential asphalt content may be requested by the Engineer.

Test	ISSA Test Method	Requirements
Wet Cohesion, kg-cm @ 30 Minute (Set)	TB* 139	12 min.

Excess Asphalt by Monolayer Loaded Wheel Test, g/ft ²	TB* 109	50 max.
Wet Track Abrasion, g/ft ² 1-hour Soak Loss 6-day Soak Loss	TB* 100	50 max. 75 max.
Residue Asphalt Content	AASHTO T164	Range from Job Mix Formula

TB* = Technical Bulletin

4. Sampling: Samples of polymer modified cationic asphalt emulsion shall be obtained from the job site storage tank or the polymer modified slurry seal application truck. Aggregate samples shall be obtained from the project stockpile. Inspector shall observe the sampling of one (1) gallon of the emulsion and a representative sample of slurry seal aggregate. Contractor shall provide the samples and container to the inspector. Sampling of the polymer modified cationic asphalt emulsion shall be in accordance with AASHTO T40. Sampling of the mineral aggregate shall be in accordance with AASHTO T2.

Samples of the polymer modified slurry seal mixture shall be obtained from the pug mill discharge prior to the polymer modified slurry seal entering the lay down box and shall be of adequate size to fabricate all test specimens from one sample.

The Engineer or his representative shall be permitted to take samples of materials from the project at any time. The City may elect to perform testing on the samples to verify compliance of the materials with the Specifications.

5. Testing shall be under taken by the Engineer whenever deemed necessary. The Engineer, or his representative, may suspend the application of the polymer modified slurry seal whenever changes in the materials or quality of the applied polymer modified slurry seal are noted. Work shall resume only when the noted deficiencies are corrected to the satisfaction of the Engineer. When work is suspended for this reason, samples will be taken immediately.

The Engineer may send samples to a testing laboratory. Testing will be at the City's expense unless deficiencies are verified by the testing. The contractor shall reimburse the City for the cost of any testing required by deficient materials or application of the polymer modified slurry seal.

Proportioning

Aggregate, mineral filler, polymer modified cationic asphalt emulsion, water, and additives, including the set-control agent, if used, shall be proportioned by volume utilizing the Job Mix Formula approved by the Engineer. If more than one kind of aggregate is used, the collect amount of each kind of aggregate to produce the required grading shall be proportioned separately, prior to adding the other materials of the mixture, in a manner that will result in a uniform and homogeneous blend.

1. The aggregate shall be proportioned using a belt feeder operated with an adjustable cutoff gate. The height of the gate opening shall be determinable. The polymer modified

cationic asphalt emulsion shall be proportioned by a positive displacement pump. Variable rate emulsion pumps, if used, shall be calibrated and sealed in the pump's calibrated condition in conformance with ISSA MA-I standards

The delivery rate of aggregate and polymer modified cationic asphalt emulsion per revolution of the aggregate feeder shall be calibrated at the appropriate gate settings for each mixer-spreader truck used on the project in conformance with ISSA MA-I and in conformance with the provisions of these special provisions.

The aggregate belt feeder shall deliver aggregate to the pugmill with such volumetric consistency that the deviation for any individual aggregate delivery rate check-run shall not exceed 2.0 percent of the mathematical average of 3 runs of at least three tons each. The emulsion pump shall deliver polymer modified cationic asphalt emulsion to the pugmill with such volumetric consistency that the deviation for any individual delivery rate check-run shall be within 2.0 percent of the mathematical average of 3 runs of at least 300 gallons each. The water pump shall deliver water to the pugmill with such volumetric consistency that the deviation for any individual delivery rate check-run shall be within 2.0 percent of the mathematical average of 3 runs of at least 300 gallons each.

2. The polymer modified cationic asphalt emulsion storage tank shall be located immediately before the emulsion pump and shall be equipped with a device which will automatically shut down the power to the emulsion pump and aggregate belt feeder when the polymer modified cationic asphalt emulsion level is lowered to a point where the pump suction line is exposed.

A temperature-indicating device shall be installed in the emulsion storage tank at the pump suction level. The device shall indicate the temperature of the polymer modified cationic asphalt emulsion and shall be accurate to within 10°F.

3. The belt delivering the aggregate to the pugmill shall be equipped with a device to monitor the depth of aggregate being delivered to the pugmill. The device for monitoring the depth of aggregate shall automatically shut down the power to the aggregate belt feeder whenever the depth of aggregate is less than the target depth of flow. A second device shall be located where the device will monitor the movement of the aggregate belt by detecting revolutions of the belt feeder. The devices for monitoring no flow or belt movement shall automatically shut down the power to the aggregate belt when the aggregate belt movement is interrupted. The device to detect revolutions of the belt feeder will not be required where the aggregate delivery belt is an integral part of the drive chain. To avoid erroneous shutdown by normal fluctuation, a delay of 3 seconds will be permitted between sensing and shutdown of the operation.

Mixing and Spreading Equipment

The polymer modified slurry seal shall be mixed in a continuous flow pugmill mixer of adequate size and power for the type of polymer modified slurry seal to be placed. The aggregate shall be

pre-wet immediately prior to mixing with the emulsion. The mixing unit of the mixing chamber shall be capable of thoroughly blending all ingredients together. No violent mixing shall be permitted. An approved fines feeder that provides an accurate metering device or method to introduce a predetermined amount of mineral filler into the mixer at the same time and location that the aggregate is fed will be required. The mixing machine shall be equipped with a water pressure system and fog type spray bar, adequate for complete water fogging of the surface preceding the spreading equipment. The rate of application of the water shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement surface to insure that the entire surface is damp with no apparent flowing water in front of the slurry box. Indicators shall be in conformance with the provisions of these special provisions and shall be in working order prior to commencing mixing and spreading operations.

Mixer-spreader trucks shall be equipped to proportion the polymer modified cationic asphalt emulsion, water, aggregate, mineral filler, and set-control additives by volume. Rotating and reciprocating equipment on mixer-spreader trucks shall be covered with metal guards.

The mixer-spreader truck shall not be operated unless low-flow and no-flow devices and revolution counters are in good working condition and functioning and metal guards are in place. Indicators required by these special provisions shall be visible while walking alongside the mixer-spreader truck.

Aggregate feeders shall be connected directly to the drive on the emulsion pump. The drive shaft of the aggregate feeder shall be equipped with a revolution counter reading to the nearest one-tenth of a revolution.

Calibration: Each slurry mixing unit to be used in performance of the work shall be calibrated specifically for the contract prior to construction. Previous calibration documentation covering the exact materials to be used will not be accepted. The documentation shall include an individual calibration of each material at various setting, which shall be related to the machine metering device(s). No machine will be allowed to work on the project until the calibration has been witnessed by the Engineer or their designated representative and is deemed complete and/or accepted.

Spreader Box: The polymer modified slurry seal mixture shall be spread by means of a spreader box conforming to the following requirements:

The spreader box shall be capable of placing the polymer modified slurry seal a minimum of 12 feet wide and shall have strips of flexible rubber belting or similar material on each side of the spreader box and in contact with the pavement to prevent the loss of polymer modified slurry seal from the box. Spreader box skids shall be maintained in such manner as to prevent chatter (wash boarding) in the finished mat. The spreader box in use shall be clean and free of polymer modified slurry seal and polymer modified cationic asphalt emulsion at the start of each work shift.

1. The spreader box shall have a series of strike-off devices at the rear of the box. The leading strike-off device shall be fabricated of steel, stiff rubber or other suitable material. The number of strike-off devices shall

be determined by the Contractor. The first strike-off device shall be designed to maintain close contact with the pavement during the spreading operations, shall obtain the thickness required, and shall be capable of being adjusted to the various pavement cross sections for application of a uniform polymer modified slurry seal finished surface. The final strike-off device shall be fabricated of flexible material suitable for the intended use and shall be designed and operated to ensure a uniform texture is achieved in the finished surface of the polymer modified slurry seal. The final strike-off device shall be cleaned or changed daily if problems with longitudinal scouring occur.

2. Hand Work: Areas which cannot be reached with the slurry seal machine shall be surfaced using hand squeegees (36-inches wide) to provide complete and uniform slurry seal coverage and finish in the direction as applied with a burlap mop. Contractor shall provide the necessary hand tools and any support equipment which is exclusive to the slurry seal operation

Preparation for Polymer Modified Slurry Sealing:

Before placing the polymer modified slurry seal, The Contractor shall be responsible for clearing the street of any obstruction (low hanging tree limbs, trash piles, etc.) interfering with the completion of the contract. The pavement surface shall be cleaned by sweeping with PM-10 efficient type self-propelled pick up sweeper, flushing or by other means necessary to remove loose particles of paving, dirt, vegetation and other objectionable material.

All areas will be swept to the satisfaction of the inspector.

A paint binder (tack coat) of asphaltic emulsion shall be applied to all Portland cement concrete surfaces when there is a contract item for the work or when the work is required in these special provisions. The asphaltic emulsion for paint binder (tack coat) shall be grade SS1, SS1h, CSS1 or CSS1h and shall conform to the provisions of AASHTO M-140 or AASHTO M 208 "Emulsified Asphalts". The asphaltic emulsion shall be mixed in the proportion of one part of emulsion (which contains up to 43 percent water) to 3 parts water. The mixture shall be applied at the approximate rate of 0.04 -0.08 g/sqyd. When asphaltic emulsion is used as a paint binder (tack coat), polymer modified slurry seal shall not be placed until the asphaltic emulsion has cured.

Placing:

The polymer modified slurry seal mixture shall be uniformly spread on the existing surfacing within the rate specified without spotting, re-handling or otherwise shifting of the mixture.

1. The polymer modified slurry seal mixture shall not be placed when the ambient temperature is below 50 °F or during unsuitable weather. Polymer modified slurry seal shall not be placed if rain IS imminent or if there is the possibility that there will be freezing temperatures within 24 hours.

2. Polymer modified slurry seal shall be spread at a rate within the following ranges of pound of dry aggregate per square yard.

Aggregate Type	Location	Spread Rate (lbs/yd ²)
Type III	Full Traffic Width	23 Minimum

Longitudinal joints shall correspond with the edges of the traffic lanes. The Engineer may permit other patterns of longitudinal joints if the patterns will not adversely affect the quality of the finished product.

3. Through traffic lanes shall be spread in full lane widths only. Longitudinal joints common to 2 traffic lanes shall be butt joints with overlaps not to exceed 3 inches. Building paper shall be placed at the transverse joints to avoid double placement of the polymer modified slurry seal. Other suitable methods to avoid double placement of the polymer modified slurry seal will be allowed. No excessive buildup, uncovered areas, or unsightly appearance shall be determined on longitudinal or transverse joints. Hand tools shall be available to remove spillage.
4. The mixture shall be uniform and homogeneous after placing on the surfacing and shall not show separation of the polymer modified cationic asphalt emulsion and aggregate after setting. The completed surface shall be of uniform texture and free from ruts, humps, depressions, or irregularities. No streaks, such as those caused by oversize aggregate, will be left in the finished surface. If excess oversized aggregate develops, the job will be stopped until the contractor can prove the situation has been corrected. Adequate means shall be provided to protect the polymer modified slurry seal from damage by traffic until such time that the mixture has cured sufficiently so that the polymer modified slurry seal will not adhere to or be picked up by the tires of vehicles.

Placement of the polymer modified slurry seal shall cease a minimum of one hour before the expiration of the road closure hours as specified in "Traffic Regulations" of the project special provisions, unless the Contractor proves to the satisfaction of the Engineer that the surface will be ready for unrestricted traffic at the expiration of the road closure hours.

Test Strip:

The Contractor shall construct a test strip at the discretion of the Engineer. If required, the test strip shall be 300 feet to 500 feet long and shall consist of the application courses specified. The test strip shall be constructed either at night time or early morning and shall cure and be open to traffic within 240 minutes (4 hours) of application.

The Engineer will evaluate the completed test strip after 12 hours of traffic on the completed test strip to determine if the mix design and placement procedure are acceptable. If the mix design

or the placement procedure is determined by the Engineer to be unacceptable, the test strip will be rejected, the Contractor shall make modifications, and a new test strip shall be constructed and evaluated by the Engineer. The cost of materials and placement of the test strips, which have been rejected, shall be borne by the Contractor and will not be considered as part of the contract work. If ordered by the Engineer, rejected test strips shall be removed at the Contractors expense.

Procedure:

The contractor shall perform the service in a safe, acceptable, workman like manner. Personnel shall be experienced, knowledgeable and capable in all aspects of performing the service. The same key personnel that start the project shall remain on the project for the life of the project.

1. The equipment shall be in good repair and serviceable to operate in a reliable and safe manner.
2. The contractor shall place polymer modified slurry seal to the beginning and ending limits of the work as directed by the Engineer.
3. The contractor shall be responsible for providing the street cleaning, "No Parking" posting, and traffic control. Contractor shall place signs as directed by the Engineer to notify residents of any scheduled street closures. Signs shall be constructed per plans.
4. The City will provide the services of a Public Relations Firm (PRF) under a separate contract to directly 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.

When it is necessary to temporarily obstruct access to a 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.

Utilities and other concerned agencies shall be notified at least 48 hour prior to cutting or restricting streets or other traffic areas or excavating near underground utilities or pole lines.

It shall be the responsibility of the Contractor to coordinate and work with the PRF in providing adequate notification to the Public. The Contractors efforts for

the required coordination shall be considered incidental to all work and will not be reimbursed by the City.

5. Contractor shall sand intersections as directed by the Engineer to allow traffic to cross freshly placed polymer modified slurry seal at intersections, business entrances/exits and other locations that cannot, in the estimation of the Engineer, be completely closed to traffic. Sand material will be the same aggregate used in the polymer modified slurry seal mixture.
6. The Contractor shall be responsible for all clean-up of the work areas and staging areas. The Contractor shall be responsible for covering and uncovering all structure covers, such as man holes, valves, monument covers and all structures as necessary. All street (full width and gutters) shall be swept by PM-10 efficient type self-propelled pick up sweeper no sooner than 24hrs after polymer modified slurry seal placement is complete and re-swept as necessary.
7. At the end of each day's and each week's production, the contractor will provide to the Inspector a report containing the following information:
 - a. Tons of dry aggregate consumed that day/week
 - b. Tons of emulsion consumed that day/week; and
 - c. Square yardage covered that day/week.

This report shall be received no later than 10:00 a.m. of the following day for daily reports and by 10:00 a.m. the following Monday for weekly reports.

Area Omissions:

All areas temporarily omitted by the Contractor during normal operations shall be logged and a list of the missed areas (addresses or intersections) given the inspector before the start of the next day's work.

Clean Up:

All areas, such as sidewalks, gutters, and intersections, shall have slurry seal removed as specified by the City. The Contractor shall sweep, with PM-10 efficient type self-propelled pick up sweeper, all areas surfaced not less than 24 hours after application. All areas will be swept to the satisfaction of the inspector.

Repair of Early Distress:

If bleeding, raveling, delamination, rutting, or wash boarding occurs within 60 days after placing the polymer modified slurry seal, the Contractor shall diligently pursue repairs by any method approved by the Engineer. The Contractor shall not be relieved from maintenance until repairs have been completed.

Patching: Areas that require patching shall be full lane width or as directed by the inspector

Patching will be limited to one side of the street at a time

Measurement:

Single Slurry, Type III shall be measured by the Square Yard. The quantity shall include the full pavement width area (lip or face of gutter to lip or face of gutter).

Payment:

The accepted quantities of Slurry Seal Type III, measured as provided above, will be paid for at the contract unit price per square yard, which price shall be full compensation for the work, complete in place, with no allowance for waste, and shall include labor, equipment, tools, and incidentals to complete the work as prescribed and as directed by the Engineer.

The cost of testing for and furnishing mix design, cleaning the surface, furnishing added water and set-control additives, and protecting the polymer modified slurry seal (i.e. sanding) until it has set is considered incidental to this item of work.

No payment will be made for materials rejected due to improper placement, improper proportions of materials, or material found to be defective or out of specifications.

ITEM 4 OBLITERATE EXISTING PAVEMENT MARKINGS (STRIPE)
ITEM 5 OBLITERATE EXISTING PAVEMENT MARKINGS (SYMBOL)

General:

The work under this section consists of the contractor furnishing all labor, materials, tools, and equipment to obliterate existing pavement markings prior to slurry operations as shown on the project plans and required by these technical specifications.

Construction Requirements:

The contractor shall remove all existing pavement markings and striping in conflict with the final striping plan prior to commencing slurry operations, by ultra high pressure water (36,000 PSI). This removal method shall be done in conformance with EPA requirements. If the removal of striping causes a depression of 1/8 inch or greater in depth in the pavement surface, the contractor shall seal the area with slurry per MAG standard Specifications 713 and 715, Type II. Covering existing markings with black paint, tar or any other substance does not constitute line removal and will not be approved.

Measurement and Payment:

Obliterate existing pavement markings (stripe) shall be measured per linear foot and paid at the linear foot price (regardless of marking width) indicated on the Bid Schedule, which price shall

be full compensation for the work as described herein and required to obliterate required pavement markings (stripe).

Obliterate existing pavement markings (symbol) shall be measured per each and paid at the unit price indicated on the Bid Schedule, which price shall be full compensation for the work as described herein and required to obliterate required pavement markings (symbol).

No payment in excess of 100% of the contract bid price shall be made, unless authorized by the Engineer as a result of extra work authorized in accordance with Section 109.4 of the MAG Uniform Standard Specifications. The bid item shall be considered to include any additional costs for sealing depressions greater than 1/8".

Contractor is encouraged to review existing site conditions to determine exact obliteration required.

ITEM 6 RESET FRAME & COVER FOR SEWER MANHOLE PER MAG DTL 422

Description:

The work under this item shall consist of furnishing all labor, tools, and equipment to adjust manhole frames and covers at all locations indicated in the contract documents. The work under this item also include furnishing all materials not provided by City of Glendale.

All frames and covers shall be made available for inspection by City staff prior to re-setting, any frame and cover determined to be unacceptable for re-setting shall be replaced. All replacement frames and covers shall be provided by the City.

Materials:

All materials shall conform to MAG Uniform Standard Specifications Section 345.

The City of Glendale will provide replacement Sewer Manhole frames and covers to the contractor during construction if required. Contractor shall perform the work necessary to install city provided manhole frames and covers conforming to City of Glendale Std. Det. G-704 and MAG Std. Det. 422 at all manhole adjustment locations. Existing manhole frame and covers shall be salvaged and delivered to City maintenance yard. Contractor shall contact City of Glendale representative to be identified at the Preconstruction Conference to coordinate pick up of materials and equipment supplied by the City and drop-off of salvaged materials.

Construction Requirements:

All work shall be completed in accordance with MAG Uniform Standard Specifications Section 345.

During the adjusting of manholes, the contractor shall strictly adhere to the O.S.H.A. requirements, (29 CFR Part 1910) Subsection 146 "Permit Required Confined Spaces" Subpart J. All atmospheric testing and safety equipment must be utilized with permits available for inspection.

The Contractor will be responsible for the tie-out of all manholes and shall provide to the

Inspector, prior to the milling, a map clearly locating all frames and covers to be adjusted after paving. The methods used shall be approved by the Engineer prior to starting work.

The Contractor shall locate all existing frames and covers within the project area prior to performing milling operations. The Contractor shall then adjust all existing frames and covers in the project area to the new pavement elevation and slopes with the possible exception of utility company manholes and valve boxes. The Contractor will only adjust the facilities to new surface elevation after the surface course paving is complete.

All manholes will be marked with paint on the same day as the paving. Adjustments to frames and covers will be accomplished within seven (7) days after completion of the paving in a specific location unless otherwise approved in writing by the Engineer. Under no circumstances shall utility manhole be completed until after water-based-paint striping is finalized.

The Contractor shall remove all debris that falls into any manhole or any other utility provider's structure as a result of any activity related to the construction activities of this project and the cost shall be at the Contractor's expense.

Prior to pouring the concrete after setting manhole frames, a 10-foot straight edge shall be used to ensure the proper slope and elevation. The concrete to be used shall attain a minimum strength of 2,000 psi within 4 hours of placement. The Contractor may use a site-added set accelerating admixture such as Daraset, by W.R. Grace; Pozzutec20, by Master Builders or approved equivalent. In no case, shall the Contractor use a chloride containing accelerator. Mix design shall be submitted to the Engineer for approval one week prior minimum to the commencement of the adjustments. Protection of all utilities is the responsibility of the Contractor. All crack exposed aggregate, and adjustments with graffiti will be subject to removal. No concrete patching is acceptable.

A utility company representative MUST be present at all times when the Contractor is adjusting utility company's facilities. The Contractor shall coordinate with the Engineer and representatives of the various utilities regarding the adjustment and inspection of their manholes. Utility company's specifications shall be adhered to during adjustment. The Contractor shall be responsible for obtaining any additional specifications or requirements from the utility company.

Measurement:

Reset Frame and Cover for Manhole will be measured as a unit for each.

Payment:

The accepted quantities of reset frame and cover for manhole, measured as provided above, will be paid for at the contract unit price each which price shall be full compensation for the work, complete in place.

ITEM 7	RESET STORM DRAIN MANHOLE FRAME & COVER PER MAG DTL 422
ITEM 8	RESET WATER MANHOLE FRAME & COVER PER MAG DTL 422
ITEM 9	RESET TELECOMMUNICATIONS MANHOLE FRAME & COVER PER MAG DTL 422

Description:

The work under this item shall consist of furnishing all labor, materials, tools, and equipment to adjust manhole frames and covers at all locations indicated in the contract documents.

Materials:

All materials shall conform to MAG Uniform Standard Specifications Section 345.

Existing manhole frame and covers shall be salvaged and delivered to City maintenance yard. Contractor shall contact City of Glendale representative to be identified at the Preconstruction Conference to coordinate drop-off of salvaged materials.

Construction Requirements:

All work shall be completed in accordance with MAG Uniform Standard Specifications Section 345.

During the adjusting of manholes, the contractor shall strictly adhere to the O.S.H.A. requirements, (29 CFR Part 1910) Subsection 146 "Permit Required Confined Spaces" Subpart J. All atmospheric testing and safety equipment must be utilized with permits available for inspection.

The Contractor will be responsible for the tie-out of all manholes and shall provide to the Inspector, prior to the milling, a map clearly locating all frames and covers to be adjusted after paving. The methods used shall be approved by the Engineer prior to starting work.

The Contractor shall locate all existing frames and covers within the project area prior to performing milling operations. The Contractor shall then adjust all existing frames and covers in the project area to the new pavement elevation and slopes with the possible exception of utility company manholes and valve boxes. The Contractor will only adjust the facilities to new surface elevation after the surface course paving is complete.

All manholes will be marked with paint on the same day as the paving. Adjustments to frames and covers will be accomplished within seven (7) days after completion of the paving in a specific location unless otherwise approved in writing by the Engineer. Under no circumstances shall utility manhole be completed until after water-based-paint striping is finalized.

The Contractor shall remove all debris that falls into any manhole or any other utility provider's structure as a result of any activity related to the construction activities of this project and the cost shall be at the Contractor's expense.

Prior to pouring the concrete after setting manhole frames, a 10-foot straight edge shall be used to ensure the proper slope and elevation. The concrete to be used shall attain a minimum strength of 2,000 psi within 4 hours of placement: The Contractor may use a site-added set accelerating admixture such as Daraset, by W.R. Grace; Pozzutec20, by Master Builders or approved equivalent. In no case, shall the Contractor use a chloride containing accelerator. Mix

design shall be submitted to the Engineer for approval one week prior minimum to the commencement of the adjustments. Protection of all utilities is the responsibility of the Contractor. All crack exposed aggregate, and adjustments with graffiti will be subject to removal. No concrete patching is acceptable.

A utility company representative MUST be present at all times when the Contractor is adjusting utility company's facilities. The Contractor shall coordinate with the Engineer and representatives of the various utilities regarding the adjustment and inspection of their manholes. Utility company's specifications shall be adhered to during adjustment. The Contractor shall be responsible for obtaining any additional specifications or requirements from the utility company.

Measurement:

Reset Manhole Frame and Cover will be measured as a unit for each.

Payment:

The accepted quantities of reset manhole frame and cover, measured as provided above, will be paid for at the contract unit price each which price shall be full compensation for the work, complete in place.

ITEM 10 RESET WATER VALVE FRAME & COVER PER MAG DTL 391-1, TYPE A

ITEM 11 RESET GAS VALVE FRAME & COVER PER MAG DTL 270

Description:

The work under these items shall consist of furnishing all labor, materials, tools, and equipment to adjust frames and covers at all locations indicated in the contract documents.

Materials:

All materials shall conform to MAG Uniform Standard Specifications Sections 610 and 630.

Construction Requirements:

All work shall be completed in accordance with MAG Uniform Standard Specifications sections 345 and 610.

The Contractor will be responsible for the tie-out of all water valves and gas valves and shall provide to the Inspector, prior to the milling, a map clearly locating all frames and covers to be adjusted after paving. The methods used shall be approved by the Engineer prior to starting work.

The Contractor shall locate all existing frames and covers within the project area prior to performing milling operations. The Contractor shall then adjust all existing frames and covers in the project area to the new pavement elevation and slopes with the possible exception of valve boxes. The Contractor will only adjust the facilities to new surface elevation after the surface course paving is complete.

All valves will be marked with paint on the same day as the paving and adjustments to frames will be accomplished within seven (7) days after completion of the paving in a specific location

unless otherwise approved in writing by the Engineer. Under no circumstances shall valve adjustments be completed until after water-based-paint striping is finalized. Contractor shall keep matched and shall replace them to their original locations. The contractor shall notify the engineer of any missing valve covers for replacement.

The Contractor shall remove asphalt, chip seal and other material from all metal covers encountered within the limits of this project. The method for removal of this material must be approved by the Engineer prior to being used. This work shall be completed prior to adjusting the frame and shall be performed with the adjustment and/or installation. The Contractor shall remove all debris that falls into any valve box as a result of any activity related to the construction activities of this project and the cost shall be at the Contractor's expense.

A utility company representative MUST be present at all times when adjusting utility company facilities. The Contractor shall coordinate with the Engineer and with representatives of the various utilities regarding the adjustment and inspection of their valve boxes. Utility company's specifications shall be adhered to during adjustment. The Contractor shall be responsible for obtaining any additional specifications or requirements from the utility company.

Measurement:

Reset Frame and Cover for Valve Box will be measured as a unit for each.

Payment:

The accepted quantities of reset frame and cover for valve box, measured as provided above, will be paid for at the contract unit price each which price shall be full compensation for the work, complete in place.

ITEM 12	WHITE STRIPE (PAINT) 4" EQUIVALENT
ITEM 13	YELLOW STRIPE (PAINT) 4" EQUIVALENT
ITEM 14	PAVEMENT MARKING ARROW (PAINT)
ITEM 15	PREFORMED PAVEMENT MARKING ARROW (90 MIL)
ITEM 16	PAVEMENT MARKING RAILROAD SYMBOL (PAINT)
ITEM 17	PREFORMED PAVEMENT MARKING ARROW (90 MIL)
ITEM 18	WHITE STRIPE (60 MIL THERMOPLASTIC) 4" EQUIVALENT
ITEM 19	WHITE STRIPE (90 MIL THERMOPLASTIC) 4" EQUIVALENT
ITEM 20	YELLOW STRIPE 60 MIL THERMOPLASTIC 4" EQUIVALENT
ITEM 21	RAISED PAVEMENT MARKER (TYPE D OR TYPE G)
ITEM 22	RAISED PAVMENT MARKER (HYDRANT MAKER, TYPE BB, BLUE)

General:

The work under this section consists of the contractor furnishing all labor materials, tools, and equipment required to prepare the pavement surface and install the pavement markings shown on the project plans or disturbed by the project.

All pavement marking materials shall be approved by the City of Glendale Traffic Engineering Department prior to installation. The contractor shall contact the City of Glendale Traffic Engineering Department (phone number 623-930-2940) a minimum of 72 hours in advance of striping lay-out to obtain the necessary lane closure permits.

The contractor shall lay-out all striping and markings for the City of Glendale Traffic Engineering

Department review and approval, a minimum of two (2) working days before installation.

All slurried roadways shall first be striped in water based paint and then re-striped with thermoplastic markings a minimum of 60 days after final paving. (See City of Glendale water based paint specifications for material type and installation).

Roadway striping shall not be done on weekends or holidays unless permission is granted in advance by the City Transportation Director, a minimum of two (2) working days before installation.

All pavement striping dimensions are to face of curb and center of stripe, or to the center of double stripes.

ADOT Specifications:

The work under this section references Arizona Department of Transportation (ADOT) *Standard Specifications for Road and Bridge Construction*, 2008 edition, (ADOT Standard Specifications) except as modified herein.

(704THRMO, 8/24/11)

SECTION 704 - THERMOPLASTIC PAVEMENT MARKINGS:

704-1 Description: of the ADOT Standard Specifications is revised to read:

The work under this section shall consist of cleaning and preparing pavement surfaces and furnishing and applying either white or yellow thermoplastic reflectorized pavement markings using extrusion or ribbon dispensing devices of the required shape and thickness to the prepared pavement surface at the locations and in accordance with the details shown on the project plans, the manufacturer's specifications, and the requirements of these specifications.

704-2.02 Composition: of the ADOT Standard Specifications is revised to read:

(A) General:

The thermoplastic composition shall conform to the following requirements:

Component	Percent by Weight	
	White	Yellow
Binder (Min.)	20	20
Titanium dioxide (Min.)	10	-----
Yellow Lead-Free Pigment (Min.)	-----	1.5
Reflective glass inter-mix beads	30 - 45	30 - 45
Calcium carbonate or equivalent filler	20 - 42	20 - 42

The ingredients of the thermoplastic composition shall be thoroughly mixed and in a solid or sectionalized block, or free-flowing granular form. When heated in a melting apparatus, the material shall readily liquefy into a uniform solution. This solution shall be free from all skins,

dirt, foreign objects or any other ingredient which would cause bleeding, staining, blotting, or discoloration when applied to the bituminous or concrete pavement surfaces.

The thermoplastic formulation shall utilize an alkyd binder. The alkyd binder shall consist of a mixture of synthetic resins, at least one of which is solid at room temperature, and of high-boiling-point plasticizers. At least one third of the binder composition and no less than eight percent by weight of the entire material formulation shall be solid maleic-modified glycerol ester resin or solid maleic-modified pentaerythritol ester resin. The alkyd binder shall not contain any petroleum-based hydrocarbon resins.

(B) Reflective Glass Beads:

In addition to incorporating glass beads in the thermoplastic mix, glass beads shall be evenly applied to the surface of the molten material as specified in Subsection 704-3.02(G).

(C) Filler:

The filler shall be a white calcium carbonate or equivalent filler with a compressive strength of at least 5,000 pounds per square inch.

(D) Titanium Dioxide:

Titanium Dioxide shall conform to the requirements of ASTM D 476 for Type II (92 percent).

(E) Yellow Pigment:

The yellow pigment shall be heat resistant and lead free. The type of yellow pigment shall be at the option of the manufacturer provided that the material conforms to all color requirements in a stable and durable fashion as specified herein.

704-2.03(C) Retroreflectance: of the ADOT Standard Specifications is revised to read:

The white and yellow thermoplastic materials shall have the following minimum retroreflectance values at 86.5 degrees illumination angle and 1.5 degrees observation angle as measured by the Department, using an LTL-X Delta Retrometer or similar device, within 30 days after application to the roadway surface:

Product	Retroreflectance (millicandelas)
White	350
Yellow	200

704-2.03(E) Water Absorption and Specific Gravity: the last paragraph of the ADOT Standard Specifications is revised to read:

The specific gravity of the material, as determined by Section 16 of AASHTO T 250, shall be

between 1.85 and 2.15.

704-2.03 Physical Characteristics of the Composition: of the ADOT Standard Specifications is modified to add:

(P) Color Stability:

Using accelerated weathering per ASTM G 155, Cycle 1, white color stability shall be measured for no color change after 500 hours of exposure, and yellow color stability shall be measured for no color change after 1000 hours of exposure.

704-2.04 Physical Requirements for Glass Beads: the second paragraph of the ADOT Standard Specifications is revised to read:

The inter-mix beads shall conform to AASHTO M 247 Type I, and may be coated or uncoated as recommended by the manufacturer. If uncoated beads are used, the thermoplastic formulation shall be configured to minimize settling of the intermix beads when the material is heated and applied.

Drop-on beads shall conform to the gradation requirements of AASHTO M 247 for Type I and Type III beads.

704-3.02(B) Material Selection and Compatibility: the second, third, and fourth paragraphs of the ADOT Standard Specifications are revised to read:

All materials shall be properly packaged and stored. Each container to be used on the project shall be clearly labeled to indicate the following information:

Nature, type, and formulation of the material;
Manufacturer, batch number, and date of manufacture;
Application requirements and constraints; and
Compatibility requirements and constraints, particularly those pertaining to equipment, storage, and other materials to be used.

Preparation and application equipment shall be in accordance with the plans and specifications, and shall conform to the recommendations of the materials manufacturer.

704-3.02(G) Thermoplastic Application: the first and second paragraphs of the ADOT Standard Specifications are revised to read:

The thermoplastic pavement marking material shall be extruded on to the pavement surface at a material temperature between 385 and 415 degrees F, depending on manufacturer's recommendations, ambient air and pavement temperatures, and the nature of the pavement surface. The contractor shall verify temperature requirements with a non-contact infrared thermometer as directed by the Engineer.

The thermoplastic material temperatures shall not exceed 450 degrees F. Material temperatures exceeding 440 degrees F shall be allowed for short periods of time; however, in no case shall the material be held for more than four hours at temperatures above 440 degrees F. Total heating time for any batch of material shall not exceed six hours. The contractor shall note in the temperature log the time when each batch of thermoplastic material is first heated. The start of heating time shall also be marked on the side of the kettle to which it applies.

704-3.02(G) Thermoplastic Application: the fifth and sixth paragraphs of the ADOT Standard Specifications are revised to read:

Drop-on glass beads shall be mechanically deposited into the thermoplastic material immediately after the thermoplastic marking is applied, using a double drop method. Each drop shall be comprised of a minimum of six pounds of glass beads per 100 square feet of line (200 linear feet of six-inch stripe). One drop shall be Type I glass beads and the other drop shall be Type III glass beads. The contractor shall determine which type of glass bead is to be applied in each drop; however, both types shall be used. Double drop methods using all Type I or Type III beads will not be allowed.

The dispensers shall evenly distribute the beads in the thermoplastic material. Both Type I and Type III glass beads shall be embedded in the surface of the thermoplastic to a depth of between 50 and 60 percent of the bead diameter. If the glass beads do not adhere to the thermoplastic marking, operations shall be stopped until the problem has been corrected. All markings which do not meet the requirements of Subsection 704-2.03(C), as determined by the Engineer, shall be removed by the contractor and replaced at no additional cost to the Department.

Unless otherwise specified, all thermoplastic pavement markings shall be extruded, and shall be 0.090 ± 0.002 inches thick. The thermoplastic thickness shall be uniform and consistent throughout the total length of the marking project.

704-3.02(G) Thermoplastic Application: the last two paragraphs of the ADOT Standard Specifications are revised to read:

The finished thermoplastic line shall have well defined edges and be free from waviness. Lateral deviation of the thermoplastic line shall not exceed one inch in 100 feet. The longitudinal deviation of a painted segment and gap shall not vary more than six inches in a 40-foot cycle. The actual width of line shall be within the limits specified in the following table, according to the width of line called for on the plans:

Plan Width	Actual Width
4 inches	4 to 4-1/2 inches
8 inches	8 to 9 inches
Over 8 inches	± 1 inch

After application and sufficient drying time, the thermoplastic marking shall show no appreciable deformation or discoloration under local traffic conditions with air and road temperatures ranging from -10 to 180 degrees F. The drying time shall be defined as the minimum elapsed time, after application, when the thermoplastic pavement markings shall have and retain the characteristics required herein, and after which normal traffic will leave no impression or imprint on the newly applied marking. When applied within a temperature range of 400 ± 15 degrees F and thickness of 0.090 inches, the material shall set to bear traffic in not more than two minutes when the air and pavement surface temperatures are approximately $50 \pm$ three degrees F and not more than 10 minutes when the air and road surface temperatures are approximately $90 \pm$ three degrees. The Engineer may conduct field tests in accordance with ASTM D 711 to verify actual drying times.

Construction Requirements:

Lane Lines and Centerline: Application of the white lane line and yellow centerline striping shall be performed in accordance with ADOT Standard Specification 704. The application equipment shall be truck mounted per ADOT Standard Specification 704-3.01.

Materials for white lane line and yellow center line striping shall be in accordance with ADOT Standard Specification 704 with the exception that the material shall be Alkyd Thermoplastic. All long line striping shall be spray type and be applied at a thickness of 60 mils.

All yellow and white broken lane lines shall have a common start point and cycle length, so as to be restriped simultaneously, using a common cycle length on both sides of the truck carriage. The cycle length is to be 40 feet with a 10 foot long line and a 30 foot space between lines.

Crosswalks and Stop Bars: Installation for striping all stop bars and crosswalks shall be in accordance with Section 704 of the ADOT Standard Specifications, with the exception that the material shall be Alkyd Thermoplastic. The crosswalk and stop bars shall be the extruded type and applied at a thickness of 90 mils.

Pavement Turn Arrows and Symbols: Installation and material for left and right turn arrows shall be in accordance with Section 704 of the ADOT Standard Specifications. Turn arrow and symbol material to be thermoplastic and applied at a thickness of 90 mils.

Raised Pavement Markings: Raised pavement markers shall be in accordance with section 706 of the ADOT Standard Specifications. Material to be Stimsonite 911 raised pavement markers with un-tempered glass lens, or approved equal. Install the markers per City of Glendale details M1-5 and M1-6.

A double sided blue raised pavement marker shall be installed at each fire hydrant in accordance with City of Glendale Standard Detail G-650.

Standard Widths of Striping:

Turn bay/Storage	8" white	8SW
Solid double yellow	4" yellow	4DY
Solid/skip centerline	4" yellow (30'/10')	4SBY40
Skips (30'/10')	4" white	4BW40
Turn lanes	8" white	8SW
Crosswalks	12" white	12SW
Stop bars	12" white	12SW
Stop bars (RR)	18" white	18SW
Ladder Crosswalk	24" white	24SW
Railroad warning bar	24" white	24SW

Measurement and Payment:

Painted / Preformed Pavement Marking Arrows shall be measured per each installed and paid at the contract unit cost per each indicated on the Bid Schedule, which price shall be full compensation for the work as described herein and required for installation.

White and Yellow Painted and 60 / 90 Mil Thermoplastic 4" Equivalent Stripe shall be measured per linear foot installed and paid at the contract unit cost per linear foot indicated on the Bid Schedule, which price shall be full compensation for the work as described herein and required for installation.

Raised Pavement Markers shall be measured per each installed and paid at the contract unit cost per each indicated on the Bid Schedule, which price shall be full compensation for the work as described and required for installation.

No payment in excess of 100% of the contract unit prices shall be made, unless authorized by the Engineer as a result of extra work authorized in accordance with Section 109.4 of the MAG Uniform Standard Specifications.

ITEM 23 TRAFFIC CONTROL**Description:**

This item consists of a lump sum contingency allowance for the sole purpose of reimbursing Contractor for any traffic control required to complete construction activities.

Construction Requirements:

See "Traffic Regulations" of the project special provisions.

Measurement and Payment:

Traffic control shall be measured as a single complete item of work and paid at the lump sum price indicated on the Bid Schedule, which price shall be full compensation for the work as described herein and required to provide temporary traffic control.

Twenty five percent of the unit price bid will be paid in the following billing cycle upon conclusion of the pre-construction conference, substantial mobilization to the project and satisfactory initial installation of temporary traffic control devices. The remaining 75 percent will be paid in monthly increments based on the current month's percentage of project completion to include punch list items as calculated by the total payments made to the contractor divided by the total bid amount for the project.

No payment in excess of 100% of the contract lump sum price shall be made, unless authorized by the Engineer as a result of extra work authorized in accordance with Section 109.4 of the MAG Uniform Standard Specifications. The bid item shall be considered to include any additional costs for overtime hours for civilian or local enforcement flaggers, and drivers (Truck mounted Attenuation Device).

ITEM 24 UNIFORMED, OFF DUTY LAW ENFORCEMENT OFFICER CONTINGENCY

General:

See Section 6. Traffic Regulations of the Special Provisions as modified in Part A.

Measurement and Payment:

See Section 6. Traffic Regulations of the Special Provisions as modified in Part A.

ITEM 25 ALLOWANCE FOR ASPHALT REPAIR (REMOVE/REPLACE), 12.5mm

Description:

The work described herein shall consist of sawcutting asphalt to limits marked in the field, removal of full depth asphaltic concrete, cleaning debris from existing sub-grade, remove (as necessary), scarify and re-compact existing subgrade to minimum MAG compaction requirements, and placement of new 1/2" (12.5 mm) asphaltic concrete to match existing depth or minimum 3" depth, whichever is greater. The Engineer will determine if the subgrade requires removal and re-compactation.

All asphalt remove/replace locations shall not extend into curb, gutter, sidewalk, valley gutter or other existing improvements.

Location of Work:

All asphalt repair areas have been marked in the field with white marking paint. All areas shall be field verified by the Contractor prior to commencing construction and any areas unable to be located by Contractor shall be brought to the attention of the City of Glendale prior to proceeding. The City reserves the right to make additions or deletions to the original quantity amount, and/or to the streets or number of streets, at the price bid per square yard.

Twenty five percent of the unit price bid will be paid in the following billing cycle upon conclusion of the pre-construction conference, substantial mobilization to the project and satisfactory initial installation of temporary traffic control devices. The remaining 75 percent will be paid in monthly increments based on the current month's percentage of project completion to include punch list items as calculated by the total payments made to the contractor divided by the total bid amount for the project.

No payment in excess of 100% of the contract lump sum price shall be made, unless authorized by the Engineer as a result of extra work authorized in accordance with Section 109.4 of the MAG Uniform Standard Specifications. The bid item shall be considered to include any additional costs for overtime hours for civilian or local enforcement flaggers, and drivers (Truck mounted Attenuation Device).

ITEM 24 UNIFORMED, OFF DUTY LAW ENFORCEMENT OFFICER CONTINGENCY

General:

See Section 6. Traffic Regulations of the Special Provisions as modified in Part A.

Measurement and Payment:

See Section 6. Traffic Regulations of the Special Provisions as modified in Part A.

ITEM 25 ALLOWANCE FOR ASPHALT REPAIR (REMOVE/REPLACE), 12.5mm

Description:

The work described herein shall consist of sawcutting asphalt to limits marked in the field, removal of full depth asphaltic concrete, cleaning debris from existing sub-grade, remove (as necessary), scarify and re-compact existing subgrade to minimum MAG compaction requirements, and placement of new 1/2" (12.5 mm) asphaltic concrete to match existing depth or minimum 3" depth, whichever is greater. The Engineer will determine if the subgrade requires removal and re-compaction.

All asphalt remove/replace locations shall not extend into curb, gutter, sidewalk, valley gutter or other existing improvements.

Location of Work:

All asphalt repair areas have been marked in the field with white marking paint. All areas shall be field verified by the Contractor prior to commencing construction and any areas unable to be located by Contractor shall be brought to the attention of the City of Glendale prior to proceeding. The City reserves the right to make additions or deletions to the original quantity amount, and/or to the streets or number of streets, at the price bid per square yard.

Asphaltic Concrete Mix Designs:

Asphalt mix designs shall be prepared and submitted for approval in accordance with the current version of MAG Uniform Standard Specifications and Details for Public Works Construction Section 710 "Asphalt Concrete".

Asphalt concrete shall be produced and placed in accordance with MAG Section 321 "Placement and Construction of Asphalt Concrete Pavement".

The designation for asphalt concrete mixes shall be based on the nominal maximum aggregate size of the mix as indicated in the MAG Uniform Standard Specifications. The applicable mix designations are 3/8 inch (9.5mm), 1/2 inch (12.5mm), 3/4 inch (19mm) and Base 1" (25mm) mix.

Gyratory mixes shall be used for high / intermediate traffic conditions, Marshall Mixes for low traffic conditions. High / intermediate traffic conditions are conditions where the asphalt mix will be subject to higher volumes and/or heavier weight vehicle usage such as found on major arterial, collector, and commercial streets. Low traffic conditions are conditions where the asphalt mix will be subject to lower volumes and lower weight vehicle usage. Examples of low traffic conditions are residential streets, most parking lots and residential minor collector streets. When in dispute, street classifications (i.e. minor, collector, major collector) shall be determined by the City of Glendale or as dictated on project plans.

MAG Table 710-1 displays the recommended lift thickness for various asphalt concrete mix designations found within MAG Section 710. Please note that those recommended lift thicknesses are minimums based on each mix designation's "Nominal Aggregate Size" and the relative coarseness of its gradation. The compacted thickness of layers placed shall not exceed 150% of the Minimum Lift Thickness of Table 710-1 except as otherwise provided in the plans and specifications, or if approved in writing by the Engineer.

Asphaltic Concrete Material Sampling & Testing:

The Contractor, at their expense, shall provide adequate personnel for construction materials sampling and testing for asphaltic concrete, as required by the City. Laboratory and field testing and sampling shall adhere to the current City of Glendale minimum frequencies of the Special Provisions. 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.

Measurement:

Asphalt remove/replace shall be measured by the square yard defined by the sawcut lines and existing lip of gutter, face of single curb, or other match location.

Payment:

The accepted quantities of asphalt remove/replace, measured as provided above, will be paid

for at the contract unit price per square yard, which price shall be full compensation for the work, complete in place, with no allowance for waste, and shall include labor, equipment, tools, and incidentals to complete the work as prescribed and as directed by the Engineer. Saw cutting shall be considered incidental to this bid item and will not be paid separately. No separate payment will be made for subgrade r, if deemed necessary by the Engineer, the cost being considered incidental to this bid item.

No payment will be made for materials rejected due to improper placement, improper proportions of materials, or material found to be defective or out of specifications. Contractor shall remove and replace rejected material at their own cost.

ITEM 26 ALLOWANCE FOR CONCRETE CURB AND GUTTER REMOVE AND REPLACE

General:

This item includes an allowance for the sole purpose of reimbursing Contractor for removing, disposing and replacing concrete curb and gutter as identified by City inspection staff during construction.

Construction Requirements:

No work for reimbursement under this Bid Item shall be initiated by Contractor until Contractor, Engineer and the City agree on limits of curb and gutter to be removed and replaced.

Any portion of the stated sum not utilized remains the property of the City of Glendale.

All work shall be completed in accordance with MAG standard detail 220 and shall include, but is not limited to, all necessary materials, tools, layout, survey and labor required to complete each removal and replacement.

Measurement and Payment:

Measurement and payment for this item shall be made on a per linear foot basis and as described above. Limit for this item is set at the price specified on the bid tab under allowance for concrete curb and gutter remove and replace.

No additional payment will be made for the removal and proper disposal of the existing concrete curb and gutter, the cost considered included in this item.

ITEM 27 ALLOWANCE FOR CONCRETE SIDEWALK REMOVE AND REPLACE

General:

This item includes a allowance for the sole purpose of reimbursing Contractor for removing, disposing and replacing concrete sidewalk as identified by City inspection staff during

construction.

Construction Requirements:

No work for reimbursement under this Bid Item shall be initiated by Contractor until Contractor, Engineer and the City agree on limits of sidewalk to be removed and replaced.

Any portion of the stated sum not utilized remains the property of the City of Glendale.

All work shall be completed in accordance with MAG standard detail 230 and shall include, but is not limited to, all necessary materials, tools, layout, survey and labor required to complete each removal and replacement.

Measurement and Payment:

Measurement and payment for this item shall be made on a per square foot basis and as described above. Limit for this item is set at the price specified on the bid tab under allowance for concrete sidewalk remove and replace

No additional payment will be made for the removal and proper disposal of the existing concrete sidewalk, the cost considered included in this item.

ITEM 28 ALLOWANCE FOR CONCRETE VALLEY GUTTER REMOVE AND REPLACE

General:

This item includes a allowance for the sole purpose of reimbursing Contractor for removing, disposing and replacing concrete valley gutter as identified by City inspection staff during construction.

Construction Requirements:

No work for reimbursement under this Bid Item shall be initiated by Contractor until Contractor, Engineer and the City agree on limits of valley gutter to be removed and replaced.

Any portion of the stated sum not utilized remains the property of the City of Glendale.

All work shall be completed in accordance with MAG standard detail 240 and shall include, but is not limited to, all necessary materials, tools, layout, survey and labor required to complete each removal and replacement.

Measurement and Payment:

Measurement and payment for this item shall be made on a per square foot basis and as described above. Limit for this item is set at the price specified on the bid tab under allowance for concrete valley gutter remove and replace

No additional payment will be made for the removal and proper disposal of the existing concrete valley gutter, the cost considered included in this item.

ITEM 29 CONSTRUCTION MATERIALS SAMPLING AND TESTING

General:

See "Construction Materials Sampling and Testing" of the project special provisions.

Measurement and Payment:

See "Construction Materials Sampling and Testing" of the project special provisions.

ITEM 30 CONSTRUCTION SURVEYING AND LAYOUT

General:

See "Construction Surveying and Layout" of the project special provisions.

Measurement and Payment:

See "Construction Surveying and Layout" of the project special provisions.

ITEM 31 OWNERS ALLOWANCE FOR CONSTRUCTION CONTINGENCY

General:

This item includes a lump sum contingency allowance for the sole purpose of reimbursing Contractor for any unforeseen issues not apparent at the time of bidding the work to be performed.

Construction Requirements / Measurement and Payment:

Measurement and payment for this item shall be made on individual basis per task and as described above. Limit for this item is set at the price specified on the bid tab under owner's allowance for construction contingencies. See allowance for construction contingencies in the project special provisions for additional information.

END OF BID ITEMS

APPENDIX A

QUALIFICATION FORM

PRIME CONTRACTOR QUALIFICATION FORM
City of Glendale 2014/2015 Camelback Slurry Project
Project No. 141516

Contractors Name: _____

1. Project Name: _____ Date Completed: _____

Name and Address of Owner: _____

Contact Person: _____ Phone Number: _____

Description/ Square Feet/ Linear Feet/ Location/ Etc.

2. Project Name: _____ Date Completed: _____

Name and Address of Owner: _____

Contact Person: _____ Phone Number: _____

Description/ Square Feet/ Linear Feet/ Location/ Etc.

3. Project Name: _____ Date Completed: _____

Name and Address of Owner: _____

Contact Person: _____ Phone Number: _____

Description/ Square Feet/ Linear Feet/ Location/ Etc.

NOTE: Use additional forms/ back-up documents if necessary.

APPENDIX B

CITY OF PHOENIX
TRAFFIC REGULATIONS CHECKLIST

TRAFFIC RESTRICTION CHECKLIST FOR
Camelback Rd - 43rd Ave to 59th Ave

1. Coordinate with contractors, businesses, and residents in the area before any work starts.
2. Coordinate with City of Phoenix Utility Inspection at 602-534-1400 before any work starts.
3. Downtown District (7th Street/7th Ave/Fillmore St./Lincoln St.), coordinate with City of Phoenix Right-of-Way Management before any work starts at 602-262-6235.
4. Follow all applicable regulations in the 2007 City of Phoenix Traffic Barricade Manual.
5. Provide and maintain pedestrian access per Chapter 3 of the 2007 City of Phoenix Traffic Barricade Manual.
6. Reverse Lane Zone. No traffic restrictions from 6 a.m. to 9 a.m. and 4 p.m. to 7 p.m. weekdays.
7. All traffic lanes open from 6:00 a.m. to 8:30 a.m. and 4:00 p.m. to 7:00 p.m. weekdays.
8. Camelback Road, 43rd Ave, 51st Ave, 59th Ave - Maintain four lanes (two each way) with left turn lane(s) open at signalized intersection(s) from 8:30 a.m. to 4:00 p.m. weekdays.
9. _____ - Maintain three lanes (two peak directional each way) with left turn lane(s) open at signalized intersection(s) from 8:30 a.m. to 4:00 p.m. weekdays.
10. 55th Avenue - Maintain two lanes (one each way) with left turn lane(s) open at signalized intersection(s) from 8:30 a.m. to 4:00 p.m. weekdays.
11. When working near a bus stop location(s), maintain a safe and clear walking area. Any disruptions of the bus location(s) shall be coordinated with Public Transit 602-262-7242 a minimum of 72 hours in advance.
12. When working near a school/pedestrian crosswalk(s) and/or walkway(s), maintain a safe and clear path. If school access and/or school crosswalk is restricted, coordinate with the school's Transportation Director and Principal a minimum of 72 hours in advance before starting any work. To obtain name and phone number of school official, contact School Safety Team at 602-534-2020.
13. When utilizing the existing left turn lane as a thru lane at signalized intersection(s) with a left turn arrow indication, contact the traffic signal shop 602-262-6021 a minimum of 72 hours in advance before starting work.
14. When working at a signalized intersection where thru traffic is reduced to one lane in any direction, a City of Phoenix approved Police Officer is required.
15. Cover all conflicting City of Phoenix post-mounted signs and provide the proper signage.
16. Special event is scheduled for this area. Coordinate with Right-of-Way Management office at 602-262-6235 two weeks in advance before any work starts.
17. No traffic restrictions during the holiday moratorium on major streets serving primary access to major shopping center areas and select shopping centers from November 15 to January 1. Questions, call 602-262-6235.
18. All Access Shall be maintained at all times during construction.
19. ADA/Pedestrian plan and/or written request/explanation is required for all proposed sidewalk restrictions and closures.
20. The City of Phoenix, Right-of-Way Management **reserves** the right to make adjustments to the traffic control plan based on field and traffic conditions.
21. Traffic Signal Head Visibility: If during construction traffic will be positioned such that the driver cannot see a minimum of two signal heads within 20 degrees either side of straight ahead (20 degree cone-of-vision), contact the Signal Engineer at 602-262-4693 before starting any work.
22. Any work within the areas bounded by 19th Avenue, I-17 / Missouri Avenue, Hatcher Road will need to coordinate with City of Phoenix Utility Inspector Bill McGriff (602) 228-2294 prior to the start of any work.
23. **Additional Comments:** _____

Traffic Control Approval: Roque R. EspinosaDate: 2-24-16

APPENDIX C

PLAN SHEETS