



**PURCHASING ITEM
FOR
COUNCIL AGENDA
CP15-164**

1. Agenda Item Number:
26
2. Council Meeting Date:
March 26, 2015

TO: MAYOR & COUNCIL
THROUGH: CITY MANAGER

3. Date Prepared: February 5, 2015
4. Requesting Department: Transportation & Development

5. SUBJECT: Professional Services Contract award to Kimley-Horn and Associates, Inc., for Chandler Heights Road Improvements, Arizona Avenue to McQueen Road

6. RECOMMENDATION: Staff recommends City Council award a Professional Services Contract to Kimley-Horn and Associates, Inc., for Design Consultant Services for Chandler Heights Road Improvements, Arizona Avenue to McQueen Road, Contract No. ST1502.201, in an amount not to exceed \$1,183,843.

7. BACKGROUND/DISCUSSION: This project is to improve Chandler Heights Road from Arizona Avenue to McQueen Road. Chandler Heights Road will be improved to four (4) traffic lanes. Portions of these roadways have been constructed by private developments. This project will complete the half street areas with raised medians, bike lanes, turn lanes, sidewalks, curbs, gutters, street lighting, traffic signals, traffic signal interconnect, storm drainage, landscaping and irrigation, right-of-way acquisition, and utility relocations. Additionally, this project will add or extend public systems to outside the new roadway to provide water, sewer, and reclaimed lines to all undeveloped parcels. The project will include coordination with Union Pacific Railroad and Arizona Corporation Commission for widening the roadway at the railroad crossing to the ultimate six-lane configuration. This project will also include design and coordination with Salt River Project Irrigation for their Consolidated Canal structure widening to the ultimate six-lane configuration.

8. EVALUATION PROCESS: A Request for Qualifications was issued on September 18, 2014. On October 21, 2014, Staff received Statements of Qualifications from seven (7) firms for Design Consultant Services. On November 3, 2014, the Consultant was selected in accordance with state law. Staff reviewed the scope of work, billing rates, and total fee for this project, compared them to historical costs, and determined they are reasonable. Project completion is 550 calendar days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$1,183,843
Savings:
Long Term Costs:

Fund Source:

<u>Account No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
411.3310.6517.0.6ST608	GO Bonds	Chandler Heights Rd (Arizona Ave to McQueen Rd)	Yes	\$1,183,843

10. PROPOSED MOTION: Move City Council award a Professional Services Contract to Kimley-Horn and Associates, Inc., for Design Consultant Services for Chandler Heights Road Improvements, Arizona Avenue to McQueen Road, Contract No. ST1502.201, in an amount not to exceed \$1,183,843.

ATTACHMENTS: Contract, Location Map

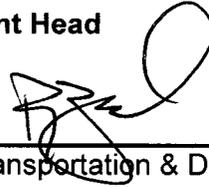
APPROVALS

11. Requesting Department



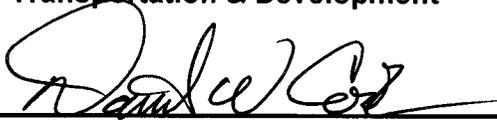
Bob Fortier, Capital Projects Manager

13. Department Head



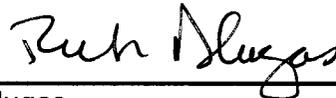
R.J. Zeder, Transportation & Development
Director

12. Transportation & Development



Daniel W. Cook, City Engineer

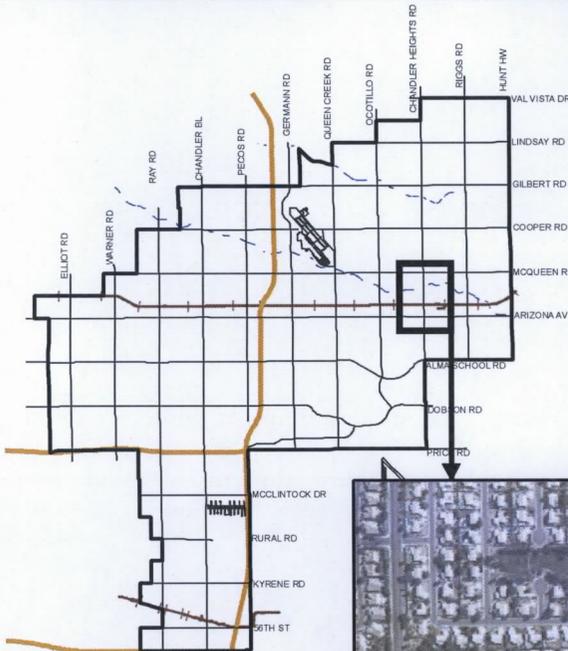
14. City Manager



Rich Dlugas



**CHANDLER HEIGHTS RD
ARIZONA AVE TO MCQUEEN RD
PROJECT NO. ST1502.201**



MEMO NO. CP15-164

 PROJECT SITE



DESIGN CONSULTANT SERVICES CONTRACT

PROJECT TITLE: **Chandler Heights Road Improvements, Arizona Avenue to McQueen Road**
PROJECT NO: **ST1502.201**

This Contract is made and entered into by and between the City of Chandler, Arizona, a municipal Corporation, hereinafter called the CITY, and **Kimley-Horn and Associates, Inc., a North Carolina Corporation, licensed to do business in the State of Arizona**, hereinafter called DESIGN CONSULTANT.

WHEREAS, DESIGN CONSULTANT represents DESIGN CONSULTANT has the expertise and is qualified to perform the services described in this Contract; and

WHEREAS, the Mayor and City Council/City Manager of the City of Chandler are authorized and empowered by the provisions of the City Charter to execute contracts for Professional Services;

NOW THEREFORE, for and in consideration of the mutual covenants and conditions hereinafter contained, it is agreed by and between the CITY and DESIGN CONSULTANT, as follows:

1. DESCRIPTION OF PROJECT:

The Project consists of design of Chandler Heights Road Improvements (1/4 mile west of Arizona Avenue to McQueen Road) approximately 6,600 L.F. in the City of Chandler. The project design phase is not federally funded; however, the project must be designed to meet federal standards. The construction phase of this project is federally funded, using Surface Transportation Program (STP) funds, and is currently programmed for construction in FY 2019.

2. DEFINITIONS:

Words used in this Contract which are defined in CITY's General Conditions for Construction Contracts shall have the meaning stated therein. DESIGN CONSULTANT is the Project Designer as defined in said General Conditions (chandleraz.gov).

3. SCOPE OF WORK:

DESIGN CONSULTANT shall provide those services described in Exhibit A attached hereto and made a part hereof by reference.

4. PAYMENT SCHEDULE:

For services described in paragraph 3 of this Contract, the CITY shall pay DESIGN CONSULTANT a fee based on the fee schedule attached hereto and made a part hereof by reference Exhibit B not to exceed the sum **One Million One Hundred Eighty Three Thousand Eight Hundred Forty Three dollars (\$1,183,843)**. Payment will be made monthly on the basis of progress reports. An Application and Certification for Payment Sheet must be provided. In addition, the following must also be included: a clear, detailed invoice reflecting items being billed for, a summary sheet showing percentage of work completed to date, amount/percent billed to date and current status of all tasks within a project; any/all backup documentation supporting the above items. Work schedule updates will be included in the monthly progress payment requests.

5. PERIOD OF SERVICE:

DESIGN CONSULTANT shall complete all services described in paragraph 3 within **Five Hundred Fifty (550)** calendar days after "Notice to Proceed" is issued by the CITY. In the event delays are experienced

beyond the control of DESIGN CONSULTANT, the completion date may be extended as mutually agreed upon by CITY and DESIGN CONSULTANT.

6. OPINIONS OF PROBABLE COSTS (ESTIMATES):

Any opinions of probable project cost or probable construction cost provided by DESIGN CONSULTANT are made on the basis of information available to DESIGN CONSULTANT and on the basis of DESIGN CONSULTANT's experience and qualifications, and represents its judgment as an experienced and qualified professional architect. However, since DESIGN CONSULTANT has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s) methods of determining prices, or over competitive bidding or market conditions, DESIGN CONSULTANT does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost DESIGN CONSULTANT prepares.

7. APPROVALS:

All work shall be subject to the approval by the City Engineer.

DESIGN CONSULTANT agrees to exercise the skill and care which would be exercised by comparable professional architect performing similar services at the time and in the locality such services are performed. If the failure to meet these standards results in faulty work, DESIGN CONSULTANT shall undertake at its own expense, the corrective adjustments or modifications:

8. REPORTING:

Written monthly reports, along with updated work schedules, will be made by DESIGN CONSULTANT in the format prescribed by the CITY. These reports will be delivered to the CITY per schedule. When requested by the CITY, DESIGN CONSULTANT will attend Council meetings and provide finished documents including correspondence for Council action, supporting charts, graphs, drawings and colored slides of same.

9. STANDARDS OF PERFORMANCE:

A. This design contract has been awarded to DESIGN CONSULTANT based on their proposal that those personnel and consultants listed in Exhibit A attached hereto will perform the portions of the work listed on said Exhibit A. DESIGN CONSULTANT shall not deviate nor substitute any of these team members without prior written approval by CITY.

B. DESIGN CONSULTANT shall be familiar with CITY's Standard Details and Specifications and other relevant CITY regulations http://www.chandleraz.gov/content/UDM_SDnSpecs.pdf. DESIGN CONSULTANT shall ensure there are no conflicts among the Contract Documents including, but not limited to, the CITY's General and Supplementary Conditions for Construction Contracts, the plans and specifications prepared by DESIGN CONSULTANT, any standard details or specifications incorporated therein by reference, and the Construction Contract.

C. Correction of Mistakes: DESIGN CONSULTANT shall be responsible for the completeness and accuracy of the work prepared or compiled under DESIGN CONSULTANT's obligation for this project and shall correct, at DESIGN CONSULTANT's expense, all errors or omissions therein which may be disclosed. Correction of errors disclosed and determined to exist during any construction of the project on architectural or DESIGN CONSULTANTing drawings and specifications shall be accomplished by DESIGN CONSULTANT. The cost of the design necessary to correct those errors attributable to DESIGN CONSULTANT and any damage incurred by CITY as a result of additional construction costs caused by such engineering or architectural errors shall be chargeable to DESIGN CONSULTANT and shall not be considered a cost of the Work. The fact that CITY has reviewed or approved DESIGN CONSULTANT's work shall in no way relieve DESIGN CONSULTANT of any of its responsibilities.

10. INDEMNIFICATION:

To the fullest extent permitted by law, but only to the extent caused by the negligence, recklessness or intentional wrong conduct, DESIGN CONSULTANT, its successors, assigns and guarantors, shall defend, indemnify and hold harmless City and any of its elected or appointed officials, officers, directors, commissioners, board members, agents or employees from and against any and all allegations, demands, claims, proceedings, suits, actions, damages, including, without limitation, property damage, environmental damages, personal injury and wrongful death claims, losses, expenses (including claim adjusting and handling expenses), penalties and fines (including, but not limited to, attorney fees, court costs, and the cost of appellate proceedings), judgments or obligations, which may be imposed upon or incurred by or asserted against the City by reason of this Contract or the services performed or permissions granted under it, or related to, arising from or out of, or resulting from any negligent or intentional actions, acts, errors, mistakes or omissions caused in whole or part by DESIGN CONSULTANT, or any of its subcontractors, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, relating to the discharge of any duties or the exercise of any rights or privileges arising from or incidental to this Contract, including but not limited to, any injury or damages claimed by any of DESIGN CONSULTANT's and subcontractor's employees. The amount and type of insurance coverage requirements set forth in the Agreement will in no way be construed as limiting the scope of indemnity in this paragraph.

11. INSURANCE:

1. General

A. At the same time as execution of this Contract, DESIGN CONSULTANT shall furnish the City of Chandler a certificate of insurance on a standard insurance industry ACORD form. The ACORD form must be issued by an insurance company authorized to transact business in the State of Arizona possessing a current A.M. Best, Inc. rating of A-7, or better and legally authorized to do business in the State of Arizona with policies and forms satisfactory to CITY. Provided, however, the A.M. Best rating requirement shall not be deemed to apply to required Worker's Compensation coverage.

B. DESIGN CONSULTANT and any of its subcontractors, subconsultants or sublicensees shall procure and maintain, until all of their obligations have been discharged, including any warranty periods under this Contract are satisfied, the insurances set forth below.

C. The insurance requirements set forth below are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract.

D. The City in no way warrants that the minimum insurance limits contained in this Contract are sufficient to protect DESIGN CONSULTANT from liabilities that might arise out of the performance of the Contract services under this Contract by DESIGN CONSULTANT, its agents, representatives, employees, subcontractors, sublicensees or subconsultants and DESIGN CONSULTANT is free to purchase any additional insurance as may be determined necessary.

E. Failure to demand evidence of full compliance with the insurance requirements in this Contract or failure to identify any insurance deficiency will not relieve the DESIGN CONSULTANT from, nor will it be considered a waiver of its obligation to maintain the required insurance at all times during the performance of this Contract.

F. Use of SubContractors: If any work is subcontracted in any way, DESIGN CONSULTANT shall execute a written Contract with Subcontractor containing the same Indemnification Clause and Insurance Requirements as the City requires of DESIGN CONSULTANT in this Contract. DESIGN CONSULTANT is responsible for executing the Contract with the Subcontractor and obtaining Certificates of Insurance and verifying the insurance requirements.

2. Minimum Scope and Limits Of Insurance. DESIGN CONSULTANT shall provide coverage with limits of liability not less than those stated below.

A. Commercial General Liability-Occurrence Form. DESIGN CONSULTANT must maintain "occurrence" form Commercial General Liability insurance with a limit of not less than \$2,000,000 for each occurrence, \$4,000,000 aggregate. Said insurance must also include coverage for products and completed operations, independent contractors, personal injury and advertising injury. If any Excess insurance is utilized to fulfill the requirements of this paragraph, the Excess insurance must be "follow form" equal or broader in coverage scope than underlying insurance.

B. Automobile Liability-Any Auto or Owned, Hired and Non-Owned Vehicles
Vehicle Liability: DESIGN CONSULTANT must maintain Business/Automobile Liability insurance with a limit of \$1,000,000 each accident on DESIGN CONSULTANT owned, hired, and non-owned vehicles assigned to or used in the performance of DESIGN CONSULTANT's work or services under this Contract. If any Excess or Umbrella insurance is utilized to fulfill the requirements of this paragraph, the Excess or Umbrella insurance must be "follow form" equal or broader in coverage scope than underlying insurance.

C. Workers Compensation and Employers Liability Insurance: DESIGN CONSULTANT must maintain Workers Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of DESIGN CONSULTANT employees engaged in the performance of work or services under this Contract and must also maintain Employers' Liability insurance of not less than \$1,000,000 for each accident and \$1,000,000 disease for each employee.

D. Professional Liability. If the Contract is the subject of any professional services or work performed by DESIGN CONSULTANT, or if DESIGN CONSULTANT engages in any professional services or work adjunct or residual to performing the work under this Contract, DESIGN CONSULTANT must maintain Professional Liability insurance covering errors and omissions arising out of the work or services performed by the DESIGN CONSULTANT, or anyone employed by DESIGN CONSULTANT, or anyone whose acts, mistakes, errors and omissions the DESIGN CONSULTANT is legally liable, with a liability limit of \$1,000,000 each claim and \$2,000,000 all claims. In the event the Professional Liability insurance policy is written on a "claims made" basis, coverage must extend for 3 years past completion and acceptance of the work or services, and DESIGN CONSULTANT, or its selected Design Professional will submit Certificates of Insurance as evidence the required coverage is in effect. The Design Professional must annually submit Certificates of Insurance citing that the applicable coverage is in force and contains the required provisions for a 3 year period.

3. Additional Policy Provisions Required.

A. Self-Insured Retentions Or Deductibles. Any self-insured retentions and deductibles must be declared and approved by the City. If not approved, the City may require that the insurer reduce or eliminate any deductible or self-insured retentions with respect to the City, its officers, officials, agents, employees, and volunteers.

B. City as Additional Insured. The policies are to contain, or be endorsed to contain, the following provisions:

1. The Commercial General Liability and Automobile Liability policies are to contain, or be endorsed to contain, the following provisions: The City, its officers, officials, agents, and employees are additional insureds with respect to liability arising out of activities performed by, or on behalf of, DESIGN CONSULTANT including the City's general supervision of the DESIGN CONSULTANT; Products and Completed operations of DESIGN CONSULTANT; and automobiles owned, leased, hired, or borrowed by DESIGN CONSULTANT.

2. DESIGN CONSULTANT's insurance must contain broad form contractual liability coverage and must not exclude liability arising out of explosion, collapse, or underground property damage hazards ("XCU") coverage.

3. The City, its officers, officials, agents, and employees must be additional insureds to the full limits of liability purchased by DESIGN CONSULTANT even if those limits of liability are in excess of those required by this Contract.

4. DESIGN CONSULTANT's insurance coverage must be primary insurance with respect to the City, its officers, officials, agents, and employees. Any insurance or self-insurance maintained by the City, its officers, officials, agents, and employees shall be in excess of the coverage provided by DESIGN CONSULTANT and must not contribute to it.

5. DESIGN CONSULTANT's insurance must apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

6. Coverage provided by DESIGN CONSULTANT must not be limited to the liability assumed under the indemnification provisions of this Contract.

7. The policies must contain a severability of interest clause and waiver of subrogation against the City, its officers, officials, agents, and employees, for losses arising from Work performed by DESIGN CONSULTANT for the City.

8. DESIGN CONSULTANT, its successors and or assigns, are required to maintain Commercial General Liability insurance as specified in this Contract for a minimum period of 3 years following completion and acceptance of the Work. DESIGN CONSULTANT must submit a Certificate of Insurance evidencing Commercial General Liability insurance during this 3 year period containing all the Contract insurance requirements, including naming the City of Chandler, its agents, representatives, officers, directors, officials and employees as Additional Insured as required.

9. If a Certificate of Insurance is submitted as verification of coverage, the City will reasonably rely upon the Certificate of Insurance as evidence of coverage but this acceptance and reliance will not waive or alter in any way the insurance requirements or obligations of this Contract. If any of the required policies expire during the life of this Contract, the DESIGN CONSULTANT must forward renewal or replacement Certificates to the City within 10 days after the renewal date containing all the necessary insurance provisions.

12. AMENDMENTS:

Whenever a change in the scope of work contemplated in this Contract is determined to be necessary, the work will be performed in accordance with the Contract provided, however, that BEFORE such work is started, a Contract Amendment shall be executed by the CITY and DESIGN CONSULTANT. Additions to, modifications of, or deletions from the project provided herein may be made and the compensation to be paid to DESIGN CONSULTANT may be adjusted accordingly by mutual agreement of the contracting parties. It is agreed that no claim for extra work by DESIGN CONSULTANT will be allowed by the CITY except as provided herein, nor shall DESIGN CONSULTANT do any work not covered by this Contract unless such work is authorized through an executed amendment.

13. TERMINATION FOR CAUSE:

This Contract may be terminated by CITY for cause should the DESIGN CONSULTANT fail to perform any provision of this Contract, including without limitation, for any of the following reasons:

- (a) DESIGN CONSULTANT abandons Work;
- (b) DESIGN CONSULTANT assigns or attempts to assign its rights or obligations under this Contract or any part thereof to any third-party (without the prior written consent of CITY);
- (c) DESIGN CONSULTANT is adjudged bankrupt or insolvent, makes a general assignment for the benefit of creditors, has a trustee or receiver appointed for its property, or files a petition to take advantage of any debtor's act;

- (d) DESIGN CONSULTANT fails or refuses to perform any obligation under the Contract, or fails to remedy such nonperformance within seven (7) days after its occurrence;
- (e) DESIGN CONSULTANT fails to comply with any applicable Laws and fails to remedy such nonperformance within seven (7) days after its occurrence;
- (f) DESIGN CONSULTANT fails to achieve the required dates for performance required pursuant to the Contract.

14. TERMINATION FOR CONVENIENCE:

CITY may at any time and for any or no reason, at its convenience, terminate this contract or any part of the services to be rendered pursuant thereto by written notice to DESIGN CONSULTANT specifying the termination date. Immediately after receiving such notice, DESIGN CONSULTANT shall discontinue advancing the work under this Contract and shall deliver to the CITY all drawings, notes, calculations, sketches and other materials entirely or partially completed, together with all unused materials supplied by the CITY.

DESIGN CONSULTANT shall receive as compensation in full for services performed to date of such termination, a fee for the percentage of work actually completed. This fee shall be a percentage of DESIGN CONSULTANT (S) fee described in this Contract under paragraph 3 and shall be in the amount to be agreed mutually by DESIGN CONSULTANT and the CITY. The CITY shall make this final payment within sixty (60) days after DESIGN CONSULTANT has delivered the last of the partially completed items.

15. OWNERSHIP OF INSTRUMENTS OF SERVICE UPON TERMINATION FOR CAUSE AND/OR FOR CONVENIENCE:

Upon Termination for Cause or for Convenience, the CITY shall have ownership of the Instruments of Service.

16. OWNERSHIP OF DOCUMENTS:

All documents, including, but not limited to, tracings, drawings, original mylars, estimates, field notes, investigations, design analysis and studies which are prepared in the performance of this Contract are to be, and remain the property of, the CITY. DESIGN CONSULTANT shall furnish the CITY, upon its request, originals or reproducible of technical specifications and copies of all other documents listed above. DESIGN CONSULTANT shall endorse, by his professional seal, all plans and engineering data furnished by him.

17. RE- USE OF DOCUMENTS:

The parties agree the documents, drawings, specifications and designs, although the property of CITY, are prepared for this specific project and are not intended nor represented by DESIGN CONSULTANT to be suitable for re-use for any other project. Any reuse without written verification or adaptation by DESIGN CONSULTANT for the specific purpose intended will be at CITY's sole risk and without liability or legal exposure to DESIGN CONSULTANT.

18. NO KICK-BACK CERTIFICATION:

DESIGN CONSULTANT warrants that no person has been employed or retained to solicit or secure this Contract upon a Contract or understanding for a commission, percentage, brokerage or contingent fee; and that no member of the City Council or any employee of the CITY has any interest, financially or otherwise, in the DESIGN CONSULTANTING firm.

For breach or violation of this warranty, the CITY shall have the right to annul this Contract without liability, or at its discretion to deduct from the Contract Price or consideration, the full amount of such commission, percentage, brokerage or contingent fee.

19. CONFLICT OF INTEREST:

DESIGN CONSULTANT stipulates that its officers and employees do not now have a conflict of interest and it further agrees for itself, its officers and its employees that it will not contract for or accept employment for the performance of any work or services with any individual business, corporation or government unit that would create a conflict of interest in the performance of its obligations pursuant to this Contract.

Pursuant to A.R.S. Section 38-511, the City may cancel this contract within three (3) years after its execution, without penalty or further obligation by the City if any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the City of Chandler is, at any time while the contract is in effect, an employee of any other party to the contract in any capacity or a consultant to any other party of the contract with respect to the subject matter of the contract.

20. ARIZONA LAW, JURISDICTION AND VENUE, AND FEES AND COSTS:

20.1 Arizona Law. This Contract shall be governed and interpreted according to the laws of the State of Arizona.

20.2 Jurisdiction and Venue. The parties agree that this Contract is made in and shall be performed in Maricopa County. Any lawsuits between the Parties arising out of this Contract shall be brought and concluded in the courts of Maricopa County in the State of Arizona, which shall have exclusive jurisdiction over such lawsuits.

20.3 Fees and Costs. Except as otherwise agreed by the parties, the prevailing party in any adjudicated dispute relating to this Contract is entitled to an award of reasonable attorney's fees, expert witness fees and costs including, as applicable, arbitrator fees; provided, however, that no award of attorney's fees shall exceed ten percent (10%) of the damages awarded the prevailing party unless the non-prevailing party has been determined to have acted in bad faith or in a frivolous manner during the adjudication.

21. CONTROLLING LAW:

The law of the state of Arizona shall govern this Contract.

22. REQUIRED COMPLIANCE WITH ARIZONA PROCUREMENT LAW:

Compliance with A.R.S. § 41-4401. Pursuant to the provisions of A.R.S. § 41-4401, the Design Consultant hereby warrants to the City that the Design Consultant and each of its subcontractors ("Subcontractors") will comply with all Federal Immigration laws and regulations that relate to the immigration status of their employees and the requirement to use E-Verify set forth in A.R.S. §23-214(A) (hereinafter "Design Consultant Immigration Warranty").

A breach of the Design Consultant Immigration Warranty (Exhibit C) shall constitute a material breach of this Contract that is subject to penalties up to and including termination of the contract.

The City retains the legal right to inspect the papers of any Design Consultant or Subcontractor employee who works on this Contract to ensure that the Design Consultant or Subcontractor is complying with the Design Consultant Immigration Warranty. The Design Consultant agrees to assist the City in the conduct of any such inspections.

The City may, at its sole discretion, conduct random verifications of the employment records of the Design Consultant and any Subcontractors to ensure compliance with Design Consultants Immigration Warranty. The Design Consultant agrees to assist the City in performing any such random verifications.

The provisions of this Article must be included in any contract the Design Consultant enters into with any and all of its subcontractors who provide services under this Contract or any subcontract. "Services" are defined as furnishing labor, time or effort in the State of Arizona by a Design Consultant or subcontractor. Services include construction or maintenance of any structure, building or transportation facility or improvement to real property.

23. NO ASSIGNMENT:

DESIGN CONSULTANT shall not assign, transfer, convey or subcontract this contract or the services to be rendered pursuant thereto without the prior written consent of CITY.

24. NOTICES:

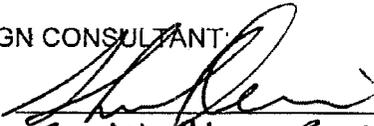
Any notice required under this Contract shall be in writing, addressed to the appropriate party at its address on the signature page and given personally or by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

IN WITNESS WHEREOF, the parties have hereunto subscribed their names to this _____ day of _____, 2015.

CITY OF CHANDLER

DESIGN CONSULTANT:

MAYOR Date

By: 
Title: Senior Vice President

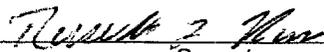
ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

ADDRESS FOR NOTICE
7740 N. 16th St, Ste 300
Phoenix, AZ 85020
Phone: 602 906-1328

APPROVED AS TO FORM:

ATTEST: If Corporation

City Attorney by: 



Secretary

ATTEST:

City Clerk

SEAL

**KHAMT
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EXHIBIT A SCOPE OF WORK

Design Consultant shall provide the following services:

I. PROJECT DESCRIPTION & SCOPE OF CONSTRUCTION:

A. BACKGROUND

The Chandler Heights Road Improvements project consists of improving Chandler Heights Road to a four-lane roadway as per City Standard Detail C-205, from ¼ mile west of Arizona Ave to western radius returns of Chandler Heights Road and McQueen Road intersection. Improvements include a raised median; left and right turn lanes; curb and gutter; vertical curb; sidewalks; drainage features; traffic signals; signal interconnects; street lighting; irrigation and landscaping; utility relocations; and right of way acquisitions. The project will comply with Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) requirements to be eligible for federal funding.

The project will also include coordination with Union Pacific Railroad (UPRR) and Arizona Corporation Commission (ACC) for widening the roadway at railroad crossing to the ultimate six lane configuration.

The project will include design and coordination with SRP for their Consolidated Canal structure widening to the ultimate six lane configuration.

The project will also include improvements in Arizona Avenue. A third southbound (SB) lane as well as a new raised median island and an exclusive northbound (NB) right turn lane will be added in south leg of Chandler Heights Road and Arizona Avenue intersection. Existing pavement striping in north leg of the intersection will be modified to accommodate the third SB lane.

Environmental clearance limits will include additional ¼ mile of Chandler Heights Road east of McQueen Road.

The proposed improvements include:

- Widening Chandler Heights Road to four (4) thru lanes with a raised median, curb, gutter, and sidewalks
- Add a raised median island, third southbound (SB) thru lane and an exclusive northbound (NB) right turn lane in the southern leg of the Arizona Ave intersection
- Modify pavement striping in the northern leg of the Arizona Ave intersection to accommodate the third southbound (SB) thru lane
- Storm water drainage
- Traffic signal modifications at Chandler Heights/Arizona Ave and Chandler Heights/Crossbow Way intersections
- Signal interconnect, and street light improvements
- Widen roadway to ultimate six-lane configuration at UPRR crossing
- Widen roadway to ultimate six-lane configuration at SRP Consolidated Canal crossing
- Modify Paseo Trail crossing as needed to accommodate widened roadway; existing solar lights will remain in place
- Private utility coordination and relocation
- New and/or restored landscaping and irrigation
- New and/or rehabilitated public water, sanitary sewer, reclaimed water systems
- Right-of-way (ROW) and/or easement acquisition

B. GENERAL TASKS

GENERAL REQUIREMENTS – The design and all work shall conform to the latest edition and amendments of the following:

- City of Chandler Standard Details and Specifications
- City of Chandler Technical Design Manual #1: Water System Design
- City of Chandler Technical Design Manual #2: Wastewater and Reclaimed Water System Design
- City of Chandler Technical Design Manual # 3: Storm Drainage System Design
- City of Chandler Technical Design Manual #4: Street Design and Access Control
- City of Chandler Technical Design Manual #5: Traffic Signal Design
- City of Chandler Technical Design Manual #6: Street Light Design
- City of Chandler Technical Design Manual #7: Traffic Barricade Design
- City of Chandler Technical Design Manual #8: Landscape and Irrigation Design of Right Of Ways, Retention Basins and Parks
- Maricopa Association of Governments (MAG) Uniform Standard Specifications and Details for Public Works Construction
- Manual of Uniform Traffic Control Devices for Streets and Highways (MUTCD)
- AASHTO *Policy on Geometric Design of Highways and Streets*
- The Code of the City of Chandler
- Arizona Department of Transportation Utility and Railroad Engineering Section Utility Coordination Guide For Design Consultants (UCGDC)
- Arizona Utility Coordinating Committee (AUCC) Public Improvement Project Guide (PIPG)
- City of Chandler Unified Development Manual
- City of Chandler General Plan
- City of Chandler Transportation Master Plan Update (April 2010)
- Americans with Disabilities Act (ADA) requirements

1. DATA COLLECTION

1. CITY shall provide at no cost to DESIGN CONSULTANT the following existing information as available, not limited to, as-built drawings, related design studies and reports, geotechnical investigations, traffic data and projections, maintenance records, and drawings of developments planned within the project area.
2. DESIGN CONSULTANT shall keep a log and copy of all information collected through the duration of the project, including photos, as-builts, reports, and other documents provided from CITY, stakeholders, utility companies, external agencies, and developers.

2. UTILITY AND RAILROAD COORDINATION

A. GENERAL UTILITY COORDINATION

1. DESIGN CONSULANT shall perform utility coordination in conformance with City Design Standards and the City's Certificated Acceptance plan for Arizona Department of Transportation (ADOT).
2. DESIGN CONSULTANT shall show all existing and proposed utilities on the paving plan and profile sheets.
3. DESIGN CONSULTANT shall coordinate with each utility company to determine if the utilities have any need to upgrade their facilities before or during the project's construction.

4. DESIGN CONSULTANT shall work with the CITY's Utility Coordinator to coordinate the early determination of facilities that may be abandoned or deactivated.
5. DESIGN CONSULTANT shall specifically identify utility conflicts, with input from utility companies and CITY, which might affect alignment or grade and recommend alignment alternatives.
6. Prior to the 30% plan submittal, DESIGN CONSULTANT shall submit title reports for affected properties to SRP Water Users and SRP Power.
7. DESIGN CONSULTANT shall send Utility Conflict Review letters to each utility company notifying them of the project and defining the project scope and timeline along with Project Plans at each submittal (30%, 60%, 95% and Final) for their review along with a request for written response from each company to determine the disposition of their utility as it relates to the planned roadway improvements.
8. DESIGN CONSULTANT shall coordinate with the utilities to facilitate the design to relocate their facilities. DESIGN CONSULTANT shall request a letter from each utility impacted by the planned roadway improvement identifying a time line for relocating their facilities.
9. Prior to 30% plan submittal, DESIGN CONSULTANT shall develop preliminary alignments of any utilities requiring relocation for which the CITY's Utility Coordinator has requested an alignment design. DESIGN CONSULTANT shall submit preliminary locations to each utility for review along with a request for written response from each utility. DESIGN CONSULTANT shall make joint trenching recommendations for underground utilities, and submit those recommendations to the CITY's Utility Coordinator for approval.
10. For each submittal to the utility companies, DESIGN CONSULTANT shall provide the CITY's Project Manager and Utility Coordinator each with a written record of receipt.
11. DESIGN CONSULTANT shall work with the CITY's Utility Coordinator to facilitate up to ten (10) utility coordination meetings upon notice to proceed and at each submittal (30%, 60%, 95%) and provide a strip map showing proposed City and private installations, and existing and proposed easements.
12. DESIGN CONSULTANT shall work with the CITY to facilitate utility land coordination meetings and at each submittal (30%, 60%, 95%, Final) and provide a strip map showing proposed City and private installations. It is assumed that these meetings shall be concurrent to the utility coordination meetings.
13. DESIGN CONSULTANT shall review all utility plans for constructability within the project limits. This task includes up to 2 reviews of private utility relocation plans per utility.
14. Prior to submittal of Final (100%) construction documents, DESIGN CONSULTANT shall be responsible for ensuring all utility relocations have been designed and coordinated with proposed City and private installations, and that such relocations will not impact the proposed construction schedule of the CITY's project.
15. DESIGN CONSULTANT shall prepare a utility clearance letter, providing a review of proposed utility plans, including conflict evaluation, and general considerations.

B. UNION PACIFIC RAILROAD (UPRR) COORDINATION

1. DESIGN CONSULTANT shall coordinate with UPRR for the railroad crossing agreement that will be needed for work that will be performed by UPRR and work that will be performed by

the CITY within the UPRR right-of-way. This scope includes up to two (2) meetings with UPRR including meeting notes.

2. DESIGN CONSULTANT shall prepare exhibits needed by UPRR for preparation of the draft and final license agreement. This will include an 8.5"x11" exhibit showing the railroad crossing, proposed improvements, and the associated dimensions.
3. DESIGN CONSULTANT shall prepare project specifications that address contractor responsibilities during construction as it relates to the necessary coordination between the contractor and UPRR including any needed flagging, insurance requirements, right of entry, and all other UPRR requirements for working within the UPRR right-of-way.
4. DESIGN CONSULTANT shall review the estimate and draft agreement as prepared by UPRR to confirm that the estimate reflects the needed improvements.
5. DESIGN CONSULTANT shall prepare construction phasing diagrams to allow work by UPRR forces and by City forces to be done without the need for placement of a temporary gate.

C. ARIZONA CORPORATION COMMISSION (ACC) COORDINATION

1. DESIGN CONSULTANT shall prepare the application to the ACC which will include the following: Location of crossing; Why crossing is needed; Why the existing crossing cannot be grade separated; Type of warning devices to be installed; Types of warning devices currently installed at crossing; Who will maintain the crossing warning devices; Who is funding the project; Average daily traffic counts; Current and proposed levels of service; Distance to next public crossing on either side of crossing; Reason for not using a grade separation; Evaluation of potential economic benefit factors; Cost estimate for grade separation scenario; Zoning of existing area; Number of daily train movements through the crossing; Listing of schools within the area; Bus routes that cross the railroad; Hospitals in the area; Costs of improvements; Hazardous material information; and Posted speed limit.
2. DESIGN CONSULTANT shall attend and document the on-site meeting that will be scheduled by UPRR and the ACC at the proposed railroad crossing.
3. DESIGN CONSULTANT shall testify before the Administrative Law Judge on behalf of the CITY. This will include preparation of exhibits for Hearing and meetings with the CITY attorney to prepare for the hearing. It is anticipated that up to four exhibits will need to be prepared in preparation of the ACC hearing.

D. SRP IRRIGATION (SRPI) – CONSOLIDATED CANAL COORDINATION

1. DESIGN CONSULTANT shall meet on-site at the Canal location to kick-off the coordination efforts with SRPI,
2. DESIGN CONSULTANT shall hold up to two (2) individual meetings with SRPI to coordinate the design of the box culvert extension, the removal of the obsolete irrigation facilities near the canal, and for the roadway improvements that will be constructed over the canal.

3. PROGRESS MEETINGS

1. DESIGN CONSULTANT shall hold the following progress meetings at the City of Chandler offices.

- a. Monthly Progress Meetings shall be held with City staff. This task includes up to 10 general progress meetings. DESIGN CONSULTANT anticipates a maximum of three personnel attending the Progress Meetings.
 - b. Comment Resolution Meetings will be combined with project progress meetings. Comments Resolution Meetings are for both internal and external agency reviews. External agencies include ADOT and Maricopa County.
 - c. Utility Coordination Meetings shall be held per Task 2 above.
 - d. Public meetings shall be held per Task 4A below.
2. DESIGN CONSULTANT shall prepare meeting agenda, sign-in sheet and handouts/exhibits necessary for meeting discussions. DESIGN CONSULTANT shall prepare and distribute meeting notes for each Progress Meeting, including Action Items to be reviewed and updated at each Progress Meeting.

4. MISCELLANEOUS MEETINGS

A. PUBLIC MEETINGS

1. DESIGN CONSULTANT shall prepare for and participate in up to two (2) Public Information Meetings. DESIGN CONSULTANT shall prepare display boards that feature the horizontal alignment and depict both existing and proposed right-of-way from the most recent plan submittal, and also a display board depicting the proposed typical roadway section.
2. DESIGN CONSULTANT shall be responsible for the following:
 - a. Assist CITY in preparing information for mailers/flyers
 - b. Develop and setup display boards
 - c. Prepare a meeting sign-in sheet
 - d. Prepare project facts sheet/agenda handout for meeting
 - e. Give a brief presentation and answer questions as needed
 - f. Prepare and make available a public comment sheet at each meeting
 - g. Provide snack foods and beverages for each public meeting
3. CITY shall be responsible for the following:
 - a. Secure a location and time for each public meeting
 - b. Prepare and distribute mailers/flyers to those residents within and adjacent to the project corridor, if required
 - c. Prepare newspaper notice of meeting, if required

Public Outreach services associated with Task 4A above to be performed by sub-consultant, MakPro Services, consist of the following:

- a. Conduct site research to understand project stakeholders and compile key community contact information.
- b. Prepare, plan, and participate in up to two (2) public meetings. The City will coordinate all communications related to the public meeting to include participant notification and media releases.
- c. Respond to inquiries and coordinate discussions with community, property owners, businesses or residents to provide information related to the project.
- d. Schedule, coordinate and attend approximately ten (10) meetings with project stakeholders during design (allowance).

- e. Participate in progress meetings, as necessary, during design to identify community and business impacts and be able to discuss potential impacts with project stakeholders.

B. STAKEHOLDER MEETINGS

1. DESIGN CONSULTANT shall prepare for and participate in up to five (5) Stakeholder Meetings for the duration of the project. DESIGN CONSULTANT shall prepare display boards that feature the horizontal alignment and depict both existing and proposed right-of-way, and also a display board depicting the proposed typical roadway section. This task includes meetings. DESIGN CONSULTANT anticipates a maximum of two personnel attending the Stakeholder Meetings.
2. DESIGN CONSULTANT shall be responsible for the following:
 - a. Develop and setup display boards
 - b. Prepare a meeting sign-in sheet
 - c. Give a brief presentation and answer questions as needed
 - d. Prepare and distribute meeting minutes, including Action Items to be reviewed and updated at each Stakeholder Meeting
3. CITY shall be responsible for the following:
 - a. Secure a location and time for each Stakeholder Meeting
 - b. Send invitations to stakeholders

C. TRANSPORTATION COMMISSION MEETING

DESIGN CONSULTANT shall prepare for and participate in up to one (1) Transportation Commission Meeting for alignment approval prior to 30% submittal. DESIGN CONSULTANT shall prepare half size exhibits that feature the horizontal alignment and depict both existing and proposed right-of-way, and the proposed typical roadway section. DESIGN CONSULTANT anticipates a maximum of one personnel attending this meeting.

D. CITY COUNCIL MEETING

DESIGN CONSULTANT shall prepare for and participate in up to one (1) City Council Meeting. DESIGN CONSULTANT shall prepare a power point that feature the horizontal alignment and depict both existing and proposed right-of-way, and the proposed typical roadway section. DESIGN CONSULTANT anticipates a maximum of one personnel attending this meeting.

5. PROJECT MANAGEMENT

1. DESIGN CONSULTANT shall be responsible for the following:
 - a. Preparer regular progress reports;
 - b. Perform regular budget and schedule monitoring;
 - c. Coordinate with the CITY and other project stakeholders;
 - d. Manage sub-consultants.
2. DESIGN CONSULTANT shall institute and comply with the Design Quality Control Plan established for the project. DESIGN CONSULTANT shall adhere to the production schedule established for the project and such schedule may not be modified or deviated from without written consent of the CITY.

3. It is anticipated that the widening of SRP Consolidated Canal structure will be a stand-alone project and will be constructed during SRP's anticipated dry-up in December 2016. DESIGN CONSULTANT will prepare a separate bid package as included under Task 12 of this scope of work.
4. The DESIGN CONSULTANT shall manage and maintain the following anticipated project schedule. It is anticipated that the project construction may be advanced from the current planned construction in FY 2019-2020. The DESIGN CONSULTANT shall complete the final bid documents as per the schedule below.

a.	Notice To Proceed (NTP)	0
b.	Data Collection/Survey/Aerial Mapping	NTP + 6 Weeks
c.	Submit ADOT Initial Scoping Document (15% Plans)	NTP + 10 Weeks
d.	Geotechnical Environmental Clearance	NTP + 12 Weeks
e.	Geotechnical Investigation & Report	NTP + 16 Weeks
f.	Submit Final Scoping Doc, 30% Plans and Estimate	NTP + 20 Weeks
g.	Public Meeting #1	NTP + 22 Weeks
h.	Submit Environmental Document for approval	NTP + 26 Weeks
i.	Submit 60% Plans, Specifications, and Estimate	NTP + 30 Weeks
j.	Legal Descriptions	NTP + 34 Weeks
k.	Environmental Clearance	NTP + 36 Weeks
l.	Submit 95% Plans, Specifications, and Estimate	NTP + 38 Weeks
m.	Submit ROW Acquisition Documents	NTP + 40 Weeks
n.	Final Plans, Specifications, and Estimate	NTP + 44 Weeks
o.	Bidding	TBD

5. DESIGN CONSULTANT shall revise and submit for review an updated schedule whenever completion of the project design, or any of the partial completion points listed in the schedule are delayed by one week or more. Such adjusted schedule shall include a written explanation stating the reasons for the schedule change and a plan for getting back on schedule. DESIGN CONSULTANT shall take all reasonable action necessary to get the project back on schedule and CITY shall cooperate to assist DESIGN CONSULTANT.

6. DESIGN SURVEY / AERIAL MAPPING

DESIGN CONSULTANT shall perform all project survey as detailed below:

1. DESIGN CONSULTANT shall perform ground survey to establish horizontal and vertical control throughout the project limits based on the datum specified by the CITY. Survey control for the project shall be in accordance with CITY requirements. The horizontal survey data used for the project shall be presented in State Plane Coordinates, North American Datum of 1983 (NAD 83) 1992 epoch, and Arizona Central Zone, International Foot. Vertical datum shall be referenced to the North American Vertical Datum of 1988 (NAVD 88), International Foot. Existing roadway centerline shall be established through Maricopa County Recorder's maps and land surveys in conjunction with existing street monuments.
2. DESIGN CONSULTANT shall perform a full topographic survey of all existing features including but not limited to curb and gutter, median curb, catch basins, scuppers, water meter boxes, water and gas valves, manholes, utility poles and guy wires, traffic signal poles, utility boxes, fences, trees, mailboxes, public and private irrigation, plants and shrubs.

3. The east to west limits of the Chandler Heights Road survey shall begin ¼ mile west of the Arizona Avenue centerline and end at eastern radius returns of Chandler Heights Road and McQueen Road intersection.
4. The north to south survey limits on Arizona Avenue shall be 200 feet north and 1,200 feet south of the Chandler Heights Road centerline. Limited pavement striping survey will be performed 1,000 feet north of the Chandler Heights Road centerline.
5. No survey will be performed on McQueen Road north and south of the Chandler Heights Road centerline.
6. AeroTech Mapping (AeroTech) (see attached scope) will perform design level aerial photogrammetric mapping consisting of the production of 1:240, one-half (0.50') foot topographical information, planimetric detail and color digital orthophoto covering a three-hundred (300') foot wide corridor along Chandler Heights Road.
7. Trace Consulting, LLC (Trace) shall perform supplemental topographic survey (see attached scope) within the project survey limits described above. CONSULTANT shall take pavement elevations at the centerline and edge of pavement of Chandler Heights Road at 100 foot intervals. In addition, CONSULTANT shall take elevations at the gutter flow line and top of curb for all existing curb and gutter.
8. Trace shall take elevations along the centerline and edges of each driveway beginning at the gutter flow line for a distance of 20 feet back of R/W. Trace shall take ground elevations at all grade breaks along each driveway centerline and edges.
9. Trace shall take elevations at the inverts of all catch basins, manholes, pipes and all water valve nuts within the project limits. Trace shall establish benchmarks at 500 foot intervals along Chandler Heights Road for the length of the project.
10. DESIGN CONSULTANT shall provide a sketch showing each benchmark with a minimum of 3 ties to features that will not be disturbed by construction.
11. DESIGN CONSULTANT shall provide a digital photo log of the project. The photos shall be taken looking upstation at no less than 50-foot increments along the proposed curb line. The photos shall also include intersections at all cross/intersecting streets, driveways, curb ramps, existing above-ground utilities, existing obstructions, drainage features, ditches, railroads, roadway signage, private signage, existing landscaping, streetlights, existing miscellaneous structures, walls and any other features that may impact the design of the project. The photo log shall provide station, offset and/or direction of the picture, or other identifying description, for each picture. DESIGN CONSULTANT shall provide the City two CDs of the photo log.

Design Survey and Aerial Mapping services associated with Task 6 to be performed by sub-consultants, AeroTech and TRACE, consist of the following:

- a. Design Survey / Aerial Mapping – Task 6
 - i. AeroTech Mapping (AeroTech) (see attached scope) will perform design level aerial photogrammetric mapping consisting of the production of 1:240, one-half (0.50') foot topographical information, planimetric detail and color digital orthophoto covering a three-hundred (300') foot wide corridor along Chandler Heights Road.
 - ii. Perform ground survey to establish horizontal and vertical control and provide surface file
 - iii. Obtain photogrammetric aerial mapping

- iv. Perform topographic survey of all existing features including locations for soil borings and provide CAD base file
- v. Obtain pavement elevations
- vi. Obtain centerline and edge of driveway elevations
- vii. Obtain inverts of all catch basins, manholes, pipes and all water valve nut elevations and tie into project control with benchmark sketches with minimum of 3 ties to features that are not anticipated to be disturbed
- viii. Perform digital photo log

7. RIGHT-OF-WAY SURVEY

1. At Preliminary (15%) Design, DESIGN CONSULTANT shall prepare a right-of-way strip map overlaid on an aerial photograph of the project limits, showing existing property rights for right-of-way, easements, and utilities on Chandler Heights Road from ¼ mile west of the Arizona Avenue to McQueen Road. The right-of-way strip map is for the purpose of identifying property boundaries to prepare legal descriptions and exhibits for property acquisition, permanent drainage easements, temporary construction easements, and utility easements and shall include a list of identified properties and property rights. The City shall provide litigation reports for the parcels where property acquisition is needed.
2. DESIGN CONSULTANT shall provide legal descriptions and exhibits for the acquisition of new right-of-way, temporary construction easements, drainage tracts, drainage easements, and utility easements. DESIGN CONSULTANT shall provide right-of-way research and a survey to define the boundaries of adjacent properties where new right-of-way or easements are anticipated. DESIGN CONSULTANT shall provide closure data for all written legal descriptions and exhibits. The scope of work includes:
 - a. The preparation of nine (9) written legal descriptions and exhibits, or as many as needed, for the acquisition of permanent right of way. If more than 9 legal descriptions necessary for right of way acquisition, the cost for such additional work will be paid from the owner's allowance.
 - b. The preparation of five (5) written legal descriptions and exhibits, or as many as needed for permanent and/or temporary drainage easements. If more than 5 legal descriptions necessary for drainage easements, the cost for such additional work will be paid from the allowance for legal descriptions. Legal descriptions and exhibits shall be accompanied by volumetric calculations, and shall define that portion of the retention which is required to be retained by the subject property and that portion which is retained for adjacent properties.
 - c. The preparation of written legal descriptions and exhibits, as needed, for up to 15 parcels for temporary construction easements. The cost for such work will be paid from the owner's allowance.
 - d. The preparation of written legal descriptions and exhibits, as needed, for up to 6 parcels for utility easements. The cost for such work will be paid from the owner's allowance.

3. DESIGN CONSULTANT shall submit final right-of-way documents to the CITY between 60% and 95% design completion. These documents shall include legal descriptions, parcel maps, right-of-way strip maps, a draft drainage report, and 60% design plans for all acquisitions and easements.
4. DESIGN CONSULTANT shall field stake right-of-way twice, at the direction of the CITY's Project Manager. This shall be done using nails and stakes every 100 feet and at angle points within project limits on Chandler Heights Road.

Right-of-Way Survey associated with Task 7 to be performed by sub-consultants, TRACE, consist of the following:

- a. Right-of-Way Coordination – Task 7
 - i. Prepare right-of-way strip map overlaid with aerial photograph and show existing property rights for right-of-way, easements, and utilities
 - ii. Prepare legal descriptions and exhibits
 - iii. Provide field staking of right-of-way, using nails and stakes every 100 feet and at angle points.

8. UTILITY LOCATING SERVICES (POTHOLING)

1. DESIGN CONSULTANT shall conduct Subsurface Utility Engineering (SUE) per American Society of Civil Engineering (ASCE) publication CI/ASCE 38-02 "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" at a "Quality Level C" for public water, sewer, reclaimed water and overhead utilities.
2. DESIGN CONSULTANT shall conduct Subsurface Utility Engineering (SUE) per ASCE publication CI/ASCE 38-02 "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" at a "Quality Level A" for locatable existing underground utilities including private water, private sewer, private reclaimed water, gas, cable TV, telephone, fiber, and power.
3. At the 30% design submittal, DESIGN CONSULTANT shall provide a suggested pothole list that identifies stationing and offset. DESIGN CONSULTANT shall provide the list to utility companies affected by the project, and facilitate coordination of a master pothole list.
4. Prior to completion of the 60% plans, DESIGN CONSULTANT shall provide up to sixty (60) vacuum excavation potholes (testholes) on existing subsurface utilities at locations identified on the master pothole list. Pertinent pothole data shall be presented in spreadsheet format on a standard "Testhole Data Summary" form that includes the utility found, depth, horizontal and vertical location, size and material composition, and top and bottom elevation of the utility line exposed. Potholes shall be patched back with hot mix and backfilled with half sack slurry per MAG Detail 212.
5. DESIGN CONSULTANT shall be responsible for field survey to initially stake the pothole location in white paint or white flagging for Blue Stake notification and as a reference point for the surveyed location of each pothole. DESIGN CONSULTANT shall identify the pothole number, northing, easting and elevation of the staked location. DESIGN CONSULTANT shall measure and record adjustments from the surveyed location to the steel reference pin set above the centerline of each exposed utility.
6. Vacuum excavation potholing shall include mobilization, set-up, traffic control, uniformed police officer, special barricading, pavement cut and removal (if any), pavement patch as specified in Streetcut Permit (if any), excavation, backfill and compaction, all information requested, and

clean up as provided in attached sub-consultant scope of work. DESIGN CONSULTANT shall apply for and obtain permits for potholing.

7. For identified water and sewer lines, while the pothole is excavated, representatives from the CITY and DESIGN CONSULTANT shall perform visual inspection of the condition of the lines. Upon inspection, DESIGN CONSULTANT shall provide evaluation of existing condition of lines. If evaluation determines that the existing conditions is of concern, then DESIGN CONSULTANT shall coordinate with City and provide recommendations for additional rehabilitation or replacement beyond that already included within this project.

Subsurface Utility Engineering (SUE) services associated with Task 8 to be performed by sub-consultant, RT Underground LLC (RTU), consist of the following:

- a. Perform subsurface utility designation of all locatable dry utilities
Perform vacuum excavation potholes of up to one hundred testholes

9. GEOTECHNICAL REPORT

1. DESIGN CONSULTANT shall conduct a visual geologic reconnaissance of the project area and review available geologic literature and aerial photographs of the project site and shall conduct a visual pavement reconnaissance of the roadway segment in question.
2. DESIGN CONSULTANT shall obtain City and Maricopa County Encroachment permits, as necessary, to conduct work in the Right-of-Way. If needed, DESIGN CONSULTANT shall arrange for off-duty police officers.
3. DESIGN CONSULTANT shall establish test locations in the field and arrange for the mark-out of underground utilities through Arizona Blue Stake.
4. DESIGN CONSULTANT shall core the existing pavement of the roadway segment in question at up to ten (10) locations to determine the existing structural (asphalt and aggregate base) section.
5. DESIGN CONSULTANT shall Drill ten (10) hollow-stem auger borings using a truck-mounted two-wheel drive drill rig. These borings shall be located within the existing roadway or in the shoulder whichever is more appropriate and shall extend five feet deep and one boring shall extend up to 20 feet deep for the proposed sewer line. DESIGN CONSULTANT shall collect ring samples and bulk samples for laboratory testing and shall be responsible for preparation of field boring logs.
6. DESIGN CONSULTANT shall perform six (6) double ring infiltrometer percolation tests three feet in depth for proposed drainage retention areas.
7. DESIGN CONSULTANT shall perform laboratory testing to evaluate the index, compressibility, expansion and chemical characteristics of the subsurface soils encountered.
8. DESIGN CONSULTANT shall prepare a draft geotechnical report, to accompany the 30% submittal, which shall contain the results of the field and laboratory analyses, with presentations of the engineering parameters for design of the new pavement and recommendations for construction and existing pavement that can be overlaid without reconstruction. In addition, the reports shall contain vicinity maps depicting the project limits, plans showing the boring locations, narrative descriptions of the surface and subsurface conditions, laboratory test results and geotechnical recommendations related to excavation characteristics, bedding material, backfilling guidelines, subgrade support for new pavements, pavement design recommendations, pavement rehabilitation recommendations, and the re-use of on-site soils for engineered fill.

9. DESIGN CONSULTANT shall incorporate comments received on the draft geotechnical report into a final geotechnical report to accompany the 60% submittal.

Geotechnical Report services associated with Task 9 to be performed by sub-consultant, Ricker Atkinson Mcbee Morman & Associates, Inc. (RAMM), consist of the following:

- a. Perform test borings to determine subsurface conditions and obtain representative samples for laboratory analyses. Perform laboratory analyses of test borings including: Moisture Content, Dry Density, Direct Shear, Swell, Minus No. 200 Sieve and Plasticity Index, Standard Proctor, and pH/Minimum Resistivity
- b. Provide geotechnical engineering report including findings and recommendations

10. ENVIRONMENTAL CLEARANCE / TRAFFIC ANALYSIS

A. ENVIRONMENTAL SITE ASSESSMENT

1. DESIGN CONSULTANT shall conduct a Phase I Environmental Site Assessment (ESA) in accordance with ASTM-1527-13 and submit a draft Phase I ESA report inclusive of each property requiring new right-of-way to the CITY's project manager at a reasonable timeframe prior to closing on the properties. A Phase I ESA - The Phase I ESA report will document findings and provide opinions and recommendations regarding possible environmental impacts at the sites. DESIGN CONSULTANT shall provide color photographs and figures in each report.
2. Following review by the CITY's Environmental Program Specialist, DESIGN CONSULTANT shall review the CITY's comments and address those comments in the final Phase I ESA.
3. DESIGN CONSULTANT shall review lease records for the sites, to evaluate probable past site uses and their possible impact on the current environmental status of the sites.
4. DESIGN CONSULTANT shall review readily available maps and reports pertaining to the sites.
5. CITY shall obtain title commitments (including Schedule B to show liens) and a chain-of-title report for ownership back to 1940 or earlier for each property to be acquired and provide to DESIGN CONSULTANT.
6. DESIGN CONSULTANT shall conduct interviews with the property representatives regarding the environmental status of the sites.
7. DESIGN CONSULTANT shall perform a site reconnaissance to visually identify areas of possibly contaminated surficial soil or surface water, improperly stored hazardous materials, possible sources of polychlorinated biphenyls (PCBs), and possible risks of contamination from activities at the sites and adjacent properties.
8. DESIGN CONSULTANT shall review readily available local regulatory agency files for the sites and shall make requests to the County Environmental Services Department and the local Fire and Building Departments.
9. DESIGN CONSULTANT shall review available regulatory agency databases for the sites and for properties located within a specified radius of the sites to evaluate the possible environmental impact to the site. Databases will identify locations of known hazardous waste sites, landfills, and leaking underground storage tanks, permitted facilities that utilize underground storage tanks, and facilities that use, store or dispose of hazardous materials.

10. DESIGN CONSULTANT shall review readily available historical documents, including aerial photographs (site and adjacent properties), Sanborn Insurance Maps (site and available adjacent properties), Building Department Records (site only), and reverse city directories (site and available adjacent properties), as appropriate.
11. DESIGN CONSULTANT shall review Arizona Department of Environmental Quality databases for deed restrictions such as Declaration of Environmental Use Restrictions and Voluntary Environmental Mitigation Use Restrictions.
12. DESIGN CONSULTANT shall discuss site observations as they relate to the possible presence of asbestos-containing materials. DESIGN CONSULTANT is not required to collect asbestos samples within this scope of work.
13. Visual observations made by DESIGN CONSULTANT shall be limited to the surface area of the property and contiguous sites. Subsurface explorations, soil sampling, surface and groundwater sampling, and chemical analyses are not included in this proposal. The reports will be based solely on information gained from direct observation, personal interviews, and examinations of regulatory records.
14. DESIGN CONSULTANT shall allow for 1 (one) update to the Phase I ESA report. Any additional updates beyond this will require new Phase I ESA report as only one update is allowed for an ESA. This can be provided as an additional service if required.
15. DESIGN CONSULTANT shall conduct lead-based paint (LBP) testing for stripe obliteration associated with the project. Up to 15 LBP samples will be collected.
16. DESIGN CONSULTANT shall conduct Asbestos Containing Material (ACM) testing for concrete removal associated with the project. Up to 15 ACM samples will be collected.

B. FEDERAL ENVIRONMENTAL PROCESS

1. DESIGN CONSULTANT shall prepare a Preliminary Initial Site Assessment (PISA) for the project area and submit to ADOT EPG for review and approval. DESIGN CONSULTANT shall account for 2 (two) updates to the PISA.
2. DESIGN CONSULTANT shall prepare an Urban Project Biological Evaluation for the project area and submit to ADOT Environmental Planning Group (EPG) for review and approval.
3. DESIGN CONSULTANT shall conduct a Class I and Class III cultural resources survey and report for the project area. DESIGN CONSULTANT shall also prepare draft consultation letters for EPG use in complying with Section 106 of the National Historic Preservation Act.
4. DESIGN CONSULTANT shall conduct a noise analysis in compliance with ADOT EPG policy for the project area and recommend any applicable mitigation measures.
5. DESIGN CONSULTANT shall conduct an air quality analysis including computer modeling for carbon monoxide and a qualitative analysis of PM10 and a Level 2 MSAT analysis.
6. DESIGN CONSULTANT shall prepare a Section 4(f) *de minimis* letter for ROW take of the Bear Creek Municipal Golf Course and for impacts to the Paseo Trail within the project. If the FHWA determines that further 4(f) evaluation beyond the *de minimis* determination is required, a contract amendment will be required to provide those additional services.

7. DESIGN CONSULTANT shall prepare a Group II Categorical Exclusion (CE) per ADOT EPG guidelines for the project area. The CE shall be submitted to the City for their approval prior to submission to ADOT for their ultimate review and approval.
8. DESIGN CONSULTANT shall prepare an Environmental Geotechnical Clearance for approval by ADOT EPG. PISA and Cultural reports prepared for the overall CE will be utilized for the geotechnical clearance.

C. TRAFFIC ANALYSIS

DESIGN CONSULTANT shall develop traffic data for the required air quality analysis (carbon monoxide/PM10 and MSAT Level 2 analysis). The needed traffic data includes existing and future (both Build and No-Build conditions for the years 2030 and 2040) p.m. peak hour intersection movement volumes and level of service values, along with average daily traffic volumes, heavy vehicle percentages, and signal timing parameters. To develop the needed traffic data, the DESIGN CONSULTANT will conduct intersection movement p.m. peak period counts (including heavy vehicles) along the corridor and will coordinate with City and Maricopa Association of Governments (MAG) staff to develop 2030 and 2040 volumes based on the MAG travel demand model projections. Signal timing parameters will be obtained from City staff. DESIGN CONSULTANT will develop Synchro models for the existing and future p.m. peak hour scenarios to calculate the needed level of service values.

Cultural resource assessment services to perform Class I literature review and Class III pedestrian survey associated with Task 10 to be performed by sub-consultant, Paleo West consist of the following:

- a. Perform Class I Literature Review background research, site file check of project area and half mile area beyond project area from and
 - i. State/National Register of Historic Places files at the Arizona SHPO
 - ii. AZSITE Cultural Resource Database
 - iii. Maricopa County Assessor's Office and Recorder (for historic research only)
 - iv. Arizona Department of Transportation (ADOT) Historic Preservation Team (HPT) Portal
 - v. Arizona State University Noble Science Library and Hayden Library
 - vi. Arizona State Library and Archives
 - vii. General Land Office
- b. Perform fieldwork examination and data collection by an archeologist, 100 percent intensive survey, walking parallel transects spaced not more than 20 meters apart.
- c. Prepare and provide draft and final cultural report conforming SHPO specifications including:
 - i. a brief culture history of the review area;
 - ii. a summary of previous research;
 - iii. a brief context of Chandler, Arizona Avenue (SR 87), historic Southern Pacific Railroad, the historic cotton gin, and the Consolidated Canal East Branch;
 - iv. Class III and historic building inventory results, including site and eligibility recommendations;
 - v. management summary and recommendations for any additional cultural resources work; and
 - vi. an appendix of the Arizona HPIFs for the historic structures.

11. PLANS, SPECIFICATIONS AND ESTIMATES

1. DESIGN CONSULTANT shall prepare plans, specifications and estimates for the project in accordance with City Standards and the City's Certificated Acceptance plan with ADOT to administer federally funded projects. The plans shall include:
 - Cover Sheet
 - General Notes Sheets
 - Standard Sections Sheet
 - Paving Plans – See subtask A
 - Drainage Plans – See subtask B
 - Traffic Signal And Traffic Signal Interconnect Plans – See subtask C
 - Street Light Plans – See subtask D
 - Striping and Signing Plans – See subtask E
 - Landscape and Irrigation Plans – See subtask F
 - Erosion Sediment Control Plans – see subtask G
 - Water, Sanitary Sewer, and Reclaimed Plans – See subtask H
 - SRPI Canal Structure Plans – See subtask I
 - Construction Sequencing Plans – See subtask J
2. DESIGN CONSULTANT shall submit plans on CD in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet and reference files and PDF of each plan sheet and PDFs of complete plans set at the 30%, 60%, 95% and 100%/Final submittals. Payment for this task shall be directly correlated with submittal percentage. Word and PDF format of Specifications shall be provided with delivery each submittal. Excel and PDF format of Estimates shall be provided with each submittal. Following each review, DESIGN CONSULTANT shall review the CITY's comments and complete the comment resolution forms. DESIGN CONSULTANT shall provide a matrix that summarizes the comments and indicates whether the comment was incorporated or provides justification for not implementing the change noted in the plan review comments. DESIGN CONSULTANT shall provide the comment matrix to the CITY one week prior to the Comment Resolution Meeting.
3. DESIGN CONSULTANT shall provide project plans to external agencies such as Maricopa County Department of Environmental Services, Arizona Department of Transportation, and Flood Control District of Maricopa County, and upon direction from City to adjacent project consultants and contractors as appropriate to ensure construction activities are permitted and coordinated for construction to start immediately after award of City's construction contract.
4. DESIGN CONSULTANT shall prepare cost estimates for all pay items per the standard specifications and special provisions, except that volumetric measurements shall not be used for pay items, unless approved by the City.
5. DESIGN CONSULTANT shall prepare cross sections and determine earthwork quantities.
6. DESIGN CONSULTANT shall prepare technical specifications at the 60%, 95%, and Final plans stages. Specifications shall be in accordance with City of Chandler Standard Specifications, MAG Standard Specifications, Arizona Department of Transportation (ADOT) Standard Specifications, and ADOT (stored) standard special provisions. DESIGN CONSULTANT shall create special provisions for all items not adequately covered by these standard specifications.
7. DESIGN CONSULTANT shall provide the following at the **30% submittal** to the City:

- a. City Plan review and construction permit applications
 - b. Eight (8) half size plan (11" x 17" to scale) sets of 30% preliminary plans including:
 - i. Cover sheet
 - ii. Typical Roadway Sections
 - iii. Geometric Configurations
 - iv. Paving Plan and Profiles
 - v. Drainage Plan and Profiles
 - vi. Intersection Plans
 - vii. Utility (Water, Sanitary Sewer) Plans
 - viii. Traffic Signal and Traffic Signal Inner Connect Plans
 - ix. Signing and Stripping Plans
 - x. Street Light Plans
 - xi. SRP Canal Structure Plans
 - c. One (1) copy of the construction cost estimate
 - d. One (1) copy of the draft/preliminary drainage report
 - e. One (1) copy of the draft/preliminary geotechnical report
 - f. One (1) copy of the "Testhole Data Summary Sheet"
 - g. One (1) copy of the right-of-way strip map
 - h. One (1) copy of the utility strip map
 - i. One (1) copy of the preliminary Phase I ESA
8. DESIGN CONSULTANT shall send sets of 30% preliminary plans, along with conflict review letters, and a copy of the "Testhole Data Summary Sheet" to each utility company affected by the project.
9. DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the previous submission. DESIGN CONSULTANT shall provide the following at the **60% submittal** to the CITY:
- a. City Plan review and construction permit applications
 - b. 30% submittal redlines and comments
 - c. Eight (8) full size and eight (8) half-size sets of 60% plans to scale including:
 - i. Cover sheet
 - ii. Index, Key Map, and General Notes
 - iii. Typical Roadway Sections
 - iv. Geometric Configurations
 - v. Roadway Cross Sections
 - vi. Paving Plan and Profiles
 - vii. Drainage Plan and Profiles
 - viii. Intersection Plans and Details
 - ix. Utility (Water, Sanitary Sewer) Plan and Profile
 - x. Traffic Signal and Traffic Signal Inner Connect Plans and Details
 - xi. Signing and Stripping Plans and Details
 - xii. Street Light Plans and Details
 - xiii. Landscape & Irrigation Plans
 - xiv. Erosion and Sediment Control Plans
 - xv. SRP Canal Structure Plans and Details
 - xvi. Special Details
 - d. One (1) copy of the 60% technical specifications
 - e. One (1) copy of the 60% construction cost estimate
 - f. One (1) copy of the draft final drainage report
 - g. One (1) copy of the final/sealed geotechnical report
 - h. One (1) copy of the right-of-way strip map with legal descriptions
 - i. One (1) copy of the utility strip map with legal descriptions
 - j. One (1) copy of the draft final Phase I ESA

10. DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the previous submission. DESIGN CONSULTANT shall send sets of 60% plans, along with conflict review letters, and a copy of the "Testhole Data Summary Sheet" to each utility company affected by the project.
11. DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the previous submission. DESIGN CONSULTANT shall provide the following at **95% submittal**:
- a. City Plan review and construction permit applications
 - b. 60% submittal redlines and comments
 - c. Sixteen (16) full size and eight (8) half size sets of 95% plans to scale including:
 - i. Cover sheet
 - ii. Index, Key Map, and General Notes
 - iii. Typical Roadway Sections
 - iv. Geometric Configurations
 - v. Roadway Cross Sections
 - vi. Paving Plan and Profiles
 - vii. Drainage Plan and Profiles
 - viii. Intersection Plans and Details
 - ix. Utility (Water, Sanitary Sewer) Plan and Profile
 - x. Traffic Signal and Traffic Signal Inner Connect Plans and Details
 - xi. Signing and Stripping Plans and Details
 - xii. Street Light Plans and Details
 - xvii. Landscape & Irrigation Plans
 - xviii. Erosion and Sediment Control Plans
 - xix. SRP Canal Structure Plans and Details
 - xiii. Special Details
 - d. Three (3) copies of the final/sealed drainage report
 - e. Eight (8) copies of the 95% technical special
 - f. Eight (8) copies of the 95% construction cost estimate
 - g. Two (2) copies of the right-of-way strip map with new or revised legal descriptions
 - h. Two (2) copies of the utility strip map with new or revised legal descriptions
 - i. Three (3) copies of the final Phase I ESA
12. DESIGN CONSULTANT shall provide sets of 95% plans, along with conflict letters, and a copy of the "Testhole Data Summary Sheet" to each utility company affected by the project.
13. DESIGN CONSULTANT shall incorporate any changes, corrections and/or additions as a result of the previous submission. Upon acquisition of all right-of-way and easements necessary for construction, DESIGN CONSULTANT shall provide the following with the **100% submittal**:
- a. City plan review and construction permit applications
 - b. 95% submittal redlines and comments
 - c. Three (3) full size and Eight (8) half size sets of sealed construction plans to scale including:
 - i. Cover sheet
 - ii. Index, Key Map, and General Notes
 - iii. Typical Roadway Sections
 - iv. Geometric Configurations
 - v. Roadway Cross Sections
 - vi. Paving Plan and Profiles
 - vii. Drainage Plan and Profiles
 - viii. Intersection Plans and Details

- ix. Utility (Water, Sanitary Sewer) Plan and Profile
 - x. Traffic Signal and Traffic Signal Inner Connect Plans and Details
 - xi. Signing and Stripping Plans and Details
 - xii. Street Light Plans and Details
 - xiii. Landscape & Irrigation Plans
 - xiv. Erosion and Sediment Control Plans
 - xv. Special Details
- d. One (1) cover sheet on 4 mil Mylar
 - e. Eight (8) copies of final specification
 - f. Eight (8) copies of the final construction cost estimate and bid schedule
 - g. Two (2) copies of the right-of-way strip map with new or revised legal descriptions
 - h. Two (2) copies of the utility strip map with new or revised legal descriptions
 - i. One (1) Materials Compliance and Pavement Certification Letter
14. DESIGN CONSULTANT shall provide sets of 100% plans, along with conflict letters, and a copy of the "Testhole Data Summary Sheet" to each utility company affected by the project.
15. Upon receipt of response from utility companies and construction contractor Disadvantaged Business Enterprise (DBE) goal assignment by ADOT, DESIGN CONSULTANT shall provide following as the Final submittal: Full payment for this task shall not be made until City acceptance, not just delivery, of all items on this final submittal list.
- a. One (1) copy of construction plans including any private utility plans such as SRP plans to be performed by City's contractor
 - b. Eight (8) copies of final specifications
 - c. Eight (8) copies of the final construction cost estimate and bid schedule
 - d. Utility Clearance Letter per Task 2
16. DESIGN CONSULTANT shall be responsible for delivering to the CITY a complete set of constructible plans and shall be responsible for constructability of such plans, including, but not limited to, completion of right-of-way documentation acquiring all necessary easements, and completion of utility relocation design. DESIGN CONSULTANT shall be responsible for preparing and obtaining written approval of any design exceptions and/or variances to Design Standards.
17. DESIGN CONSULTANT shall provide the following on the specific plan sheets:
- A. PAVING PLANS/PROFILES**
- 1. DESIGN CONSULTANT shall perform work necessary to create Typical Roadway Sections, Geometric Layout and Paving Plan & Profile Sheets using design needs for a minor arterial (City of Chandler Standard Detail C-205).
 - 2. DESIGN CONSULTANT shall prepare paving and profile plans at a scale of 1"=20' horizontal and 1"=2' vertical, to include base sheet preparation including survey control, topographic mapping, centerline stationing, curb and gutter, sidewalk, handicap ramps, driveways, turn lanes, intersecting streets, utilities, existing right-of-way, proposed right-of-way, existing utilities, construction notes, etc. Profiles shall show centerline stationing, existing ground, proposed curb and gutter grades, benchmarks and underground utilities.
- B. DRAINAGE REPORT & PLANS**
- 1. DESIGN CONSULTANT shall review the existing drainage reports and as-builts for the adjacent developments. The reports and as-builts shall be provided by the CITY. The

DESIGN CONSULTANT shall also review the pertinent drainage reports and as-builts for the existing culvert under Chandler Heights Road near the Bear Creek Golf Course and related drainage retention.

2. DESIGN CONSULTANT shall prepare a drainage analysis to determine the effects of the roadway improvements from this project. DESIGN CONSULTANT shall perform hydrologic calculations per the CITY standards to estimate half-street runoff. The DESIGN CONSULTANT shall determine the need for additional storage capacity within the project limits. Existing retention basins shall be modified to accommodate any additional half-street pavement runoff. The DESIGN CONSULTANT shall perform hydraulic calculations for proposed scuppers, catch basins and storm drain systems. The hydrologic and hydraulic calculations shall meet the CITY criteria.
3. DESIGN CONSULTANT shall investigate possibility of the Bear Creek Golf Course retaining their half street drainage runoff. It may be difficult due to significant elevation differences between the roadway and the golf course.
4. DESIGN CONSULTANT shall prepare a Drainage Report to accompany the drainage design for roadway improvements. The Draft Drainage Report shall be submitted with the 30% submittal. The Final Drainage Report shall be submitted with the 60% submittal. DESIGN CONSULTANT shall incorporate comments received at each submittal.
5. DESIGN CONSULTANT shall prepare drainage plans that include but is not limited to storm drain profiles, retention basin grading plans and drainage details.

C. TRAFFIC SIGNAL AND TRAFFIC SIGNAL INTERCONNECT PLANS

1. DESIGN CONSULTANT shall design traffic signal modifications for the intersections of Chandler Heights and Crossbow Way and Chandler Heights and Arizona Avenue in accordance with applicable City of Chandler Traffic Signal Standards and Specifications.
2. DESIGN CONSULTANT shall perform a site visit and document to the extent possible the equipment and conditions related to the existing traffic signals, traffic control equipment, existing underground conduit, etc.
3. DESIGN CONSULTANT shall coordinate traffic signal design with SRP Power to define a power source to serve the new traffic signals.
4. DESIGN CONSULTANT shall design the layout of the signal pole and controller locations for the two intersections described above at the 30% plan stage. The Signal Design Plans shall be produced at a 1" = 20' scale and include the following sheets:
 - a. General Signal Layout Sheet with pole locations, conduit runs, and pull boxes
 - b. Pole schedule with pole type, mast arm length, signal heads, mounts pedestrian heads, luminaire type, and pedestrian push buttons
 - c. Conductor Schedule with wire size, conduit size and phasing.
 - d. Signal Interconnect/Fiber Optic Layout Plan Sheet
 - e. Traffic Signal Quantity and Detail Sheet including Phasing Diagram, Cameras and Wiring Diagram
5. DESIGN CONSULTANT shall design the missing sections or extensions of fiber interconnect within the project limits along Chandler Heights from Arizona Avenue to McQueen Rd at a scale of 1"=40'. Plan sheets shall show conduit runs and pull boxes.

D. STRIPING AND SIGNING PLANS

1. DESIGN CONSULTANT shall develop preliminary traffic signing and striping plans for this project at the 30% plan stage. DESIGN CONSULTANT shall finalize the traffic signing and striping plans at the 100% plan stage. The Signing and Striping Design Plans shall be produced at 1"= 40' scale and shall include the following sheets:
 - a. General Striping Notes sheet (including striping quantities)
 - b. General Signing Summary, Notes, and Index
 - c. Striping and Signing plan sheets

E. STREET LIGHT PLANS

1. DESIGN CONSULTANT shall design street lighting along Chandler Heights Road within the project limits in accordance with applicable City of Chandler Street Light Standards and Specifications.
2. DESIGN CONSULTANT shall perform a site visit and document to the extent possible the equipment and conditions related to the existing street lighting, the existing lighting control equipment, existing underground conduit and conductor routes.
3. DESIGN CONSULTANT shall coordinate lighting design with Salt River Project (SRP) to define a power source to serve the lighting system.
4. DESIGN CONSULTANT shall provide a computer generated point-to-point foot-candle grid for Chandler Heights Road within the project limits, and submit documents to CITY for approval as exhibits along with the 60% and 95% submittals. It is assumed that the street lighting will be based on City of Chandler 2014 illumination standards utilizing LED light fixtures.
5. DESIGN CONSULTANT shall prepare complete street lighting plans for the project including new and relocated pole locations, at the 30% 65%, 95%, and final plan stage. The street light design shall match the existing streetlights. The first existing streetlight on each side of the roadway beyond the limit of the paving shall be shown on the plans. DESIGN CONSULTANT shall include digital photos of existing streetlights in the photo log. Existing street lights within the project limits that are to remain shall be replaced with LED. The Lighting Plans shall be (1"=40'). and consist of the following:
 - a. Street lighting general notes and key map
 - b. Street lighting plans showing pole locations with station and offset
6. DESIGN CONSULTANT will reference the TDM #6 standard details and drawings for the following:
 - a. Pole Assembly Detail (Pole, foundation, mast arm)
 - b. Junction Box detail
 - c. Trench detail
 - d. Connection details
7. SRP shall be responsible for providing design drawings for the electrical details (Control center, wiring schematic, and cable schedule).
8. Existing Paseo Trail solar lighting would not be impacted and could remain in place, if required, any removal and replacement work is included in this scope of work.

F. LANDSCAPE & IRRIGATION PLANS

1. DESIGN CONSULTANT shall Inventory existing trees within the project limits, located via GPS survey and catalogue to determine if they are to remain in place, be salvaged for reuse, or demolished. DESIGN CONSULTANT shall identify the tree species, record the caliper, ascertain the general health, and record the viability for transplant. DESIGN CONSULTANT shall prepare plant inventory and salvage plans.
2. DESIGN CONSULTANT shall review existing irrigation water meters, valves, mainline, controllers, and other major irrigation infrastructure locations to determine potential for salvage. Locations shall be derived from as-built and design plans provided by the CITY. DESIGN CONSULTANT shall include the existing irrigation locations on the plant inventory plan sheets.
3. DESIGN CONSULTANT shall coordinate with the CITY's Landscape Architect to determine the desired types of plant material and irrigation equipment.
4. DESIGN CONSULTANT shall develop Landscape plans showing location and species of proposed new trees, existing trees to remain, and salvaged and relocated trees. Shrub massing shall be shown. Specific shrub species shall be shown at the 60% plan submittal. Plant schedule, landscape notes, and CITY of Chandler standard landscape details shall be shown.
5. DESIGN CONSULTANT shall develop Irrigation plans showing locations of existing infrastructure to remain in place and new locations of water meter(s), mainline, and valves. Reclaimed water will be used for irrigation.
6. DESIGN CONSULTANT shall provide a table of contents identifying the specifications that shall be used at the 60% plan submittal, and develop an opinion of probable cost for each plan submittal.
7. DESIGN CONSULTANT shall identify individual shrubs and develop irrigation laterals for the 60% plan submittal.
8. DESIGN CONSULTANT shall generate Landscape and Irrigation specifications at the 60% plan stage.
9. DESIGN CONSULTANT shall show the water taps for irrigation equipment on the utility plans or roadway plans, as appropriate. DESIGN CONSULTANT shall provide the complete design and all necessary details for these water taps and power for the irrigation controllers.
10. Up to three (3) coordination meetings will be attended by project Landscape Architect. Meetings can be progress meetings, specific discipline meetings, or meetings with area stakeholders.
11. Bioassay testing, archeology, soil fertility, and other tests to determine plant viability in existing conditions are not considered part of this scope of work.

G. EROSION AND SEDIMENT CONTROL PLANS

1. DESIGN CONSULTANT shall develop Erosion and Sediment Control Plans (ESCPs) that may be utilized by a contractor during construction as Storm Water Pollution and Prevention Plans (SWPPP), as required on all projects that have the potential to impact any adjacent drainage system, under the provisions of section 402(p) of the Clean Water Act (CWA) and

regulations 40 CFR 121, to secure a cost for the Arizona Pollutant Discharge Elimination System (AZPDES) permit and to ensure that the contractor is held responsible for this effort.

2. ESCPs shall include coversheet and index sheet in conformance with City requirements, erosion control details and erosion control plans in conformance with Arizona Department of Environmental Quality (ADEQ) and Environmental Protection Agency (EPA) requirements.

H. WATERLINE AND SANITARY SEWER PLANS

1. DESIGN CONSULTANT shall design an 8" sanitary sewer lateral from the UPRR right-of-way line to Arizona Avenue (approximately a quarter mile) within the project limits.
2. DESIGN CONSULTANT shall prepare water and sewer plans for miscellaneous relocations and stubs for future development. This work includes up to three plan/profile sheets.
3. DESIGN CONSULTANT shall prepare the water and sewer Approval to Construct Applications for the Maricopa County Environmental Services Department approval. County review fees will be paid for by CITY.
4. DESIGN CONSULTANT shall evaluate and design for upsizing and upgrading of water and sewer services for existing properties for potential redevelopment.

I. SRPI CONSOLIDATED CANAL STRUCTURE PLANS

1. It is anticipated that the structure widening over SRPI Consolidated Canal will be constructed during December 2016 dry-up as a stand-alone project (see Task 12 below for preparing a separate construction bid package)
2. DESIGN CONSULTANT shall design Consolidated Canal Box Culvert Structure widening to support the proposed ultimate roadway cross section.
3. DESIGN CONSULTANT shall coordinate structure design with Salt River Project Irrigation (SRPI) to define construction sequencing and requirements regarding canal dry-up for construction.
4. Structure design will be completed in accordance with SRPI Design Guidelines and Specifications for Bridge Crossings of Salt River Project Canals, November 2013; AASHTO LRFD Bridge Design Specifications, 2012; and ADOT Bridge Design Guidelines.
5. It is assumed that the existing box culvert structure will remain and be widened to the north and south to accommodate the proposed ultimate roadway cross section.
6. Per meeting with SRP, the existing turnout structure on the south side of the road will be abandoned as part of this project and will not require replacement with the box culvert structure widening.
7. Channel re-construction details to tie into the proposed box culvert structure widening will be provided as part of the Bridge Design.

J. CONSTRUCTION SEQUENCING PLANS

1. DESIGN CONSULTANT shall coordinate with City staff to prepare a construction sequencing plan for project.
2. It is anticipated that project would be constructed in up to five different phases:
 - a. Phase 1 - Construct New Utility/Relocations
 - b. Phase 2 - Construct Southside widening west of Arizona Ave to Crossbow way
 - c. Phase 3 - Construct Northside Widening from Arizona Ave to South shore village, and UPRR widening
 - d. Phase 4 - Construct Northside widening from Crossbow Way to McQueen
 - e. Phase 5 - Construct pavement marking, Traffic Signals, and Interconnect
3. DESIGN CONSULTANT shall prepare plans for each of the five construction phases and will be submitted with each project plans submittals including 60%, 95% and 100%.
4. This scope does not include preparing detailed traffic control plans.

12. SRPI CONSOLIDATED CANAL STRUCTURE – BID PACKAGE

2. It is anticipated that the structure widening over SRPI Consolidated Canal will be constructed during December 2016 dry-up as a stand-alone project. DESIGN CONSULTANT shall prepare a stand-alone construction bid package for the box culvert (or bridge) extension work.

Work anticipated for this packaging includes the following:

- a. Separate cover sheet and notes sheet
- b. Separate removal items sheet for removal of obsolete SRP facilities
- c. Separate specifications and construction estimate
- d. Attendance to the pre-bid meeting
- e. Response to contractor questions
- f. Construction sequencing
- g. Response to RFIs and review of shop drawing submittals will be done through allowance

13. POST DESIGN SERVICES

1. DESIGN CONSULTANT shall attend and actively participate in a pre-bid meeting. DESIGN CONSULTANT shall give a brief overview of the project and address questions related to the construction documents. DESIGN CONSULTANT shall prepare and deliver to CITY to issue any necessary Addenda for clarification or correction of the construction documents.
2. DESIGN CONSULTANT shall prepare and assist the CITY with the Approval of Construct (AOC) application and waterline design report. Application fees shall be paid for by the City.

ASSUMPTION, CLARIFICATIONS, AND EXCLUSIONS

1. Determination of plant viability in existing conditions to be based on professional opinions with considerations of typical construction activity impacts.
2. Application fees for City reviews and permits shall be paid by City.
3. It has been assumed that all agencies have a three week review period.
4. Application fees for other agencies other than the City shall be paid utilizing the Owner's Allowance.
5. Construction management or observation / inspection, or participation in construction meetings is not included in this scope of work. However the Consultant will attend construction meetings or other meetings to address any errors or omissions in the plans.
6. It is assumed that the Construction Manager will address Request for Information (RFIs) during construction and will prepare sealed as-built plans. Consultant will address any RFIs pertaining to any errors or omissions in the plans.
7. Post construction photogrammetric services and aerial mapping along the full limits of construction are not included in this scope of work.

**EXHIBIT B
FEE SCHEDULE**

TASK DESCRIPTION	SUBTOTAL
Task 1 - Data Collection	\$ 4,140
As-Built and Past Report Research	\$ 1,110
Utility Data Collection - Collect and Log As-Built	\$ 1,146
Review, PDF and Log As-Built/Past Reports	\$ 1,884
Task 2 - Utility & Railroad Coordination	\$ 94,355
A. GENERAL UTILITY COORDINATION	\$ -
Prepare utility base file	\$ 4,730
Develop and maintain utility inventory and conflict log	\$ 1,468
Utility coordination meetings - up to ten (10)	\$ 14,670
Utility coordination meeting notes	\$ 4,010
Review Prior Rights Documentation (Up to 3 reviews)	\$ 978
Utility notification letters (30%, 60%, 95%)	\$ 1,521
Utility relocation concept development	\$ 3,090
Individual utility field meetings - up to two (2) - (SRPP, Cox, SWG, CenturyLink, Western)	\$ 2,268
Utility coordination meeting notes	\$ 716
Prepare utility strip map for utility review and use	\$ 816
Prepare CADD files to Transmit to Utilities	\$ 1,044
Review utility relocation plans (up to five reviews)	\$ 3,115
Prepare utility clearance letter	\$ 1,708
Calculations for Blow Out Clearance Requirements for Lighting	\$ 2,328
B. UNION PACIFIC RAILROAD (UPRR) COORDINATION	\$ -
UPRR coordination meetings - up to two (2)	\$ 2,268
UPRR meeting notes	\$ 1,114
UPRR exhibits	\$ 2,668
UPRR specifications	\$ 4,575
Review UPRR estimate/draft agreement	\$ 3,083
Prepare UPRR construction phasing exhibits	\$ 3,188
C. ARIZONA CORPORATION COMMISSION (ACC) COORDINATION	\$ -
Prepare ACC application	\$ 7,576
Attend on-site meeting	\$ 1,512
Prepare on-site meeting notes	\$ 378
Testify prep. before Admin. Law Judge w/exhibits	\$ 9,844
Testify before Admin. Law Judge	\$ 2,268
D. SRP IRRIGATION (SRPI) - CONSOLIDATED CANAL COORDINATION	\$ -

	On-site meeting with notes	\$	1,800
	SRPI coordination meetings - up to two (2)	\$	3,312
	SRPI coordination meetings notes	\$	1,810
	SRPI coord. for dry-up, de-activation, removals etc.	\$	6,497
		\$	-
Task 3 - Progress Meetings		\$	34,348
	Monthly Progress Meetings (10 mtgs) (Includes Comment Resolution Mtgs)	\$	15,750
	Prepare Meeting Agenda/Exhibits/Handouts	\$	4,580
	Monthly Progress Meeting Notes	\$	6,720
	Prepare Summary of Comments for Comment Resolution Mtgs.	\$	3,354
	Maintain Action Item Log	\$	3,944
		\$	-
Task 4 - Miscellaneous Meetings		\$	22,664
A. PUBLIC MEETINGS		\$	-
	Attend Public Meetings (2 Mtgs)	\$	4,200
	Prepare Public Meeting Notes	\$	986
	Develop Display Boards & Handouts	\$	3,840
		\$	-
B. STAKEHOLDERS' MEETINGS		\$	-
	Stakeholders' Meetings (5 mtgs)	\$	5,670
	Prepare Meeting Agenda/Exhibits/Handouts	\$	1,805
	Meeting Notes	\$	2,387
		\$	-
C. TRANSPORTATION COMMISSION MEETING		\$	-
	Transportation Commission Meeting (1 mtg)	\$	796
	Prepare Meeting Agenda/Exhibits/Handouts	\$	841
	Meeting Notes	\$	199
		\$	-
D. CITY COUNCIL MEETING		\$	-
	City Council Meeting (1 mtg)	\$	796
	Prepare Powerpoint	\$	1,144
		\$	-
Task 5 - Project Management		\$	51,556
	Monthly Progress Reports (18 Rpts) (Include w/ Invoice)	\$	4,824
	Project Accounting Setup/Invoicing/Insurance	\$	4,044
	Contract Management (18 Months @ 2.5 hrs/Month)	\$	8,955
	Prepare/Update Project Schedule	\$	2,388
	Subconsultant Management	\$	6,540
	Prepare and Maintain Project Workplan	\$	2,474
	Project Quality Control Plan	\$	2,474
	Project Documentation/Email/Document Filing (18 Months @ 2 hrs/Month)	\$	8,409
	Internal Team Meetings/Coordination	\$	11,448
		\$	-
Task 6 - Survey/Aerial Mapping Coordination		\$	2,255

	Develop Survey Request	\$	623
	Review and Update Topo Survey CADD Files	\$	1,632
Task 7 - Right-of-Way Survey		\$	4,438
	Research/Input Ownership from Title Reports/Assessor's Website on Plans	\$	444
	QC Existing R/W File	\$	588
	Prepare Proposed R/W & Easement Strip Map	\$	1,642
	QC Proposed R/W and Easement Documents	\$	1,764
		\$	-
Task 8 - Utility Locating Services (Potholing)		\$	1,944
	Coordination of Potholes (See Sub-consultant RT Underground)	\$	1,944
Task 9 - Geotechnical		\$	1,558
	Coordination of Geotech Rpt (See Sub-Consultant RAMM)	\$	1,558
Task 10 - Environmental Clearance/Traffic Analysis		\$	58,229
A. Environmental		\$	-
	ADOT Coordination	\$	1,972
	Scoping letters and lists	\$	4,012
	Phase I ESA	\$	4,502
	Update Phase I ESA	\$	1,941
	Urban Project Biological Evaluation Form (entire project)	\$	1,842
	Preliminary Initial Site Assessment (entire project)	\$	1,620
	Update Preliminary Initial Site Assessment	\$	699
	Update Preliminary Initial Site Assessment	\$	699
	LBP and ACM Testing	\$	1,581
	Cultural Resources Coordination	\$	1,470
	Noise Analysis	\$	18,222
	Air Quality Coordination	\$	735
	4(f) de minimis determination	\$	1,470
	Geotechnical Environmental Clearance	\$	2,162
	Draft and Final Categorical Exclusion and Environmental Clearance	\$	11,224
B. Traffic Analysis		\$	-
	Obtain traffic count data and MAG projections	\$	580
	Develop pm peak hour volumes	\$	1,493
	Develop Synchro models and determine LOS	\$	2,005
		\$	-
Task 11 - Plans, Specs and Estimates		\$	617,737
	ADOT Project Assessment (Pre-30% Plans)	\$	55,595
	Cost Estimate	\$	12,355
	Project Assessment with Alignment Plans	\$	43,240
	30% Submittal	\$	135,901
	Cost Estimate	\$	12,355
	Drainage Report	\$	30,887
	Plans	\$	92,659
	60% Submittal	\$	210,027
	Cost Estimate	\$	12,355

	Technical Specifications	\$	30,887
	Plans	\$	166,786
	95% Submittal	\$	129,722
	Cost Estimate	\$	12,355
	Technical Specifications	\$	12,354
	Plans	\$	105,013
	100% Submittal	\$	43,246
	Cost Estimate	\$	6,179
	Technical Specifications	\$	6,179
	Plans	\$	30,888
	Final Submittal	\$	43,246
	Cost Estimate	\$	6,179
	Technical Specifications	\$	6,179
	Plans	\$	30,888
			-
Task 12 - SRP!		\$	24,596
Canal Structure -			
Bid Package	Cover and notes sheets	\$	2,158
	Removal sheet	\$	3,046
	Specifications, estimate and bid packaging	\$	7,942
	SRP coordination for bid	\$	7,942
	Pre-bid meeting	\$	1,512
	Respond to contractor questions	\$	1,996
		\$	-
Task 13 - Post		\$	1,956
Design Services	Pre-bid Meeting	\$	1,956
		\$	-
SUBTOTAL		\$	919,776
DIRECT LABOR			
SUBCONSULTANTS TASKS			
	SUBCONSULTANTS TOTAL	\$	128,167
Paleo West - Task		\$	4,485
10 Environmental			
Documentation	Cultural Survey	\$	4,485
AeroTech - Task 6		\$	8,280
Aerial Mapping	Aerial Mapping - Task 6	\$	8,280
Trace - Task 6		\$	43,907
Survey, Task 7			
ROW	Design Survey - Task 6	\$	25,008
	Right-of-Way Coordination - Task 7	\$	18,900
		\$	-
RAMM - Task 9		\$	10,000
Geotechnical Report	Test borings and report	\$	10,000

MakPro - Task 4		\$	5,720
Public and Stakeholder Meetings			
	Site & Stakeholder Orientation	\$	330
	Public Meetings (2)	\$	1,760
	Community Contact and Stakeholder Meetings	\$	2,310
	Progress Meetings	\$	1,320
RT Underground - Task 8 Utility Locating		\$	55,775
	Subsurface Utility Designation	\$	13,750
	Potholes with 1/2 Slurry backfill and hot patch (130 Potholes)	\$	33,000
	Traffic Control	\$	5,400
	Off Duty Officer	\$	2,625
	County Permit	\$	1,000
DIRECT EXPENSES		\$	25,900
	Plotting (4 review sets - 11" x 17")	\$	2,076
	Courier / Delivery	\$	450
	Outside Copying	\$	3,104
	Field Data Services (Traffic Counts)	\$	220
	UPRR Insurance, Permit, License, Flagger, Contingency	\$	6,050
	EDR (Hazmat Database Report)	\$	1,500
	VS) (Air Quality)	\$	12,500
OWNER'S ALLOWANCE		\$	110,000
	Owner's Allowance	\$	110,000
TOTAL		\$	1,183,843

EXHIBIT C

Design Consultant Immigration Warranty
To Be Completed by Design Consultant Prior to Execution of Contract

A.R.S. § 41-4401 requires as a condition of your contract verification of compliance by the Design Consultant and subcontractors with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of its employees.

By completing and signing this form the Design Consultant shall attest that it and all subcontractors performing work under the cited contract meet all conditions contained herein.

Project Number/Division: ST1502.201		
Name (as listed in the contract):		
Street Name and Number:		
City:	State:	Zip Code:

I hereby attest that:

1. The Design Consultant complies with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of those employees performing work under this contract;
2. All subcontractors performing work under this contract comply with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of their employees; and
3. The Design Consultant has identified all Design Consultant and subcontractor employees who perform work under the contract and has verified compliance with Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214.

Signature of Design Consultant (Employer) or Authorized Designee:



Printed Name: AHMAD OMAIS

Title: SENIOR VICE PRESIDENT

Date (month/day/year): 03/17/2015