



Chandler - Arizona
Where Values Make The Difference

**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CA08-220**

1. Agenda Item Number:

20

2. Council Meeting Date:

March 27, 2008

TO: MAYOR & COUNCIL

3. Date Prepared: March 10, 2008

THROUGH: CITY MANAGER

4. Requesting Department: Public Works

5. **SUBJECT:** Award an engineering services contract to Entellus for the design of roadway and utility improvements for Gilbert Road from Queen Creek Road to Hunt Highway, Project No. ST0809-201, in an amount not to exceed \$2,534,106.

6. **RECOMMENDATION:** Staff recommends that Council award an engineering services contract to Entellus for the design of roadway and utility improvements for Gilbert Road from Queen Creek Road to Hunt Highway, Project No. ST0809-201, in an amount not to exceed \$2,534,106.

7. **BACKGROUND/DISCUSSION:** Gilbert Road from Queen Creek Road to Hunt Highway is a major arterial corridor that carries high volumes of traffic between the Santan Freeway and southeast Chandler. The current roadway section varies, consisting of both unimproved two lane segments as well as fully improved six lane sections adjacent to commercial and residential development. This project will improve the entire corridor to full six lane arterial design standards, with a landscaped median, bike lanes, curb, gutter, and sidewalk, right and left turn lanes, bus pullouts, and extensive water, reclaimed water, and sewer infill work. The project is slated to start construction in Summer 2009, with a phased construction sequence to accommodate the real estate acquisition and utility relocation schedule.

8. **EVALUATION:** The City selection process was developed in accordance with the state law for selecting design services. Seven Statements of Qualifications were received from qualified firms on August 2, 2006. The selection committee included the following members:

- Paul Young, Senior Engineer
- Tim Krawczyk, Engineer Assistant
- William Fay, Public Works Engineer
- Bob Upham, Senior Engineer
- Bob Carter, Registered Contractor
- Henry Seager, Resident

The committee interviewed Kirkham Michael, Stanley, and Entellus on August 16, 2006. Entellus was selected based on qualifications, design capability, current workload, and experience, and is recommended for approval for this contract. The costs proposed for this project are comparable to staff estimates and historical design services prices. The estimated roadway and utility construction budget for this project is currently \$25,000,000.

9. FINANCIAL IMPLICATIONS:

Cost: \$2,534,106

Savings: N/A

Long Term Costs: N/A

Fund Source:

<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
415.3310.0000.6517.8ST596	Impact Fees	Gilbert Road (Queen Creek to Hunt Highway)	FY07/08	\$1,954,363
603.3820.0000.6712.8WA076	Water Bond	Transmission Mains	FY07/08	\$ 579,743

10. **PROPOSED MOTION:** Move that Council award an engineering services contract to Entellus for the design of roadway and utility improvements for Gilbert Road from Queen Creek Road to Hunt Highway, Project No. ST0809-201, in an amount not to exceed \$2,534,106, and authorize the Mayor to sign the contract documents.

ATTACHMENTS: Location Map, Contract

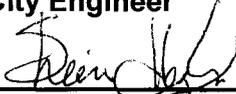
APPROVALS

11. Requesting Department



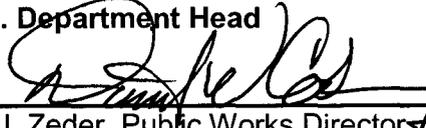
Daniel W. Cook, Deputy Public Works Director

12. City Engineer



Sheina Hughes, Assistant Public Works
Director/City Engineer

13. Department Head



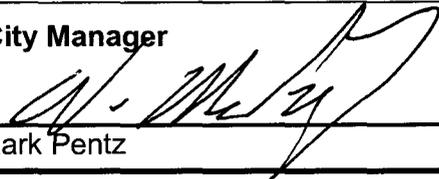
R.J. Zeder, Public Works Director *for*

14. Department Head



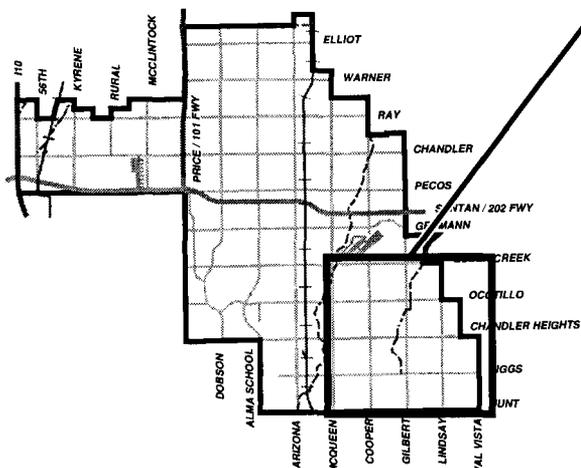
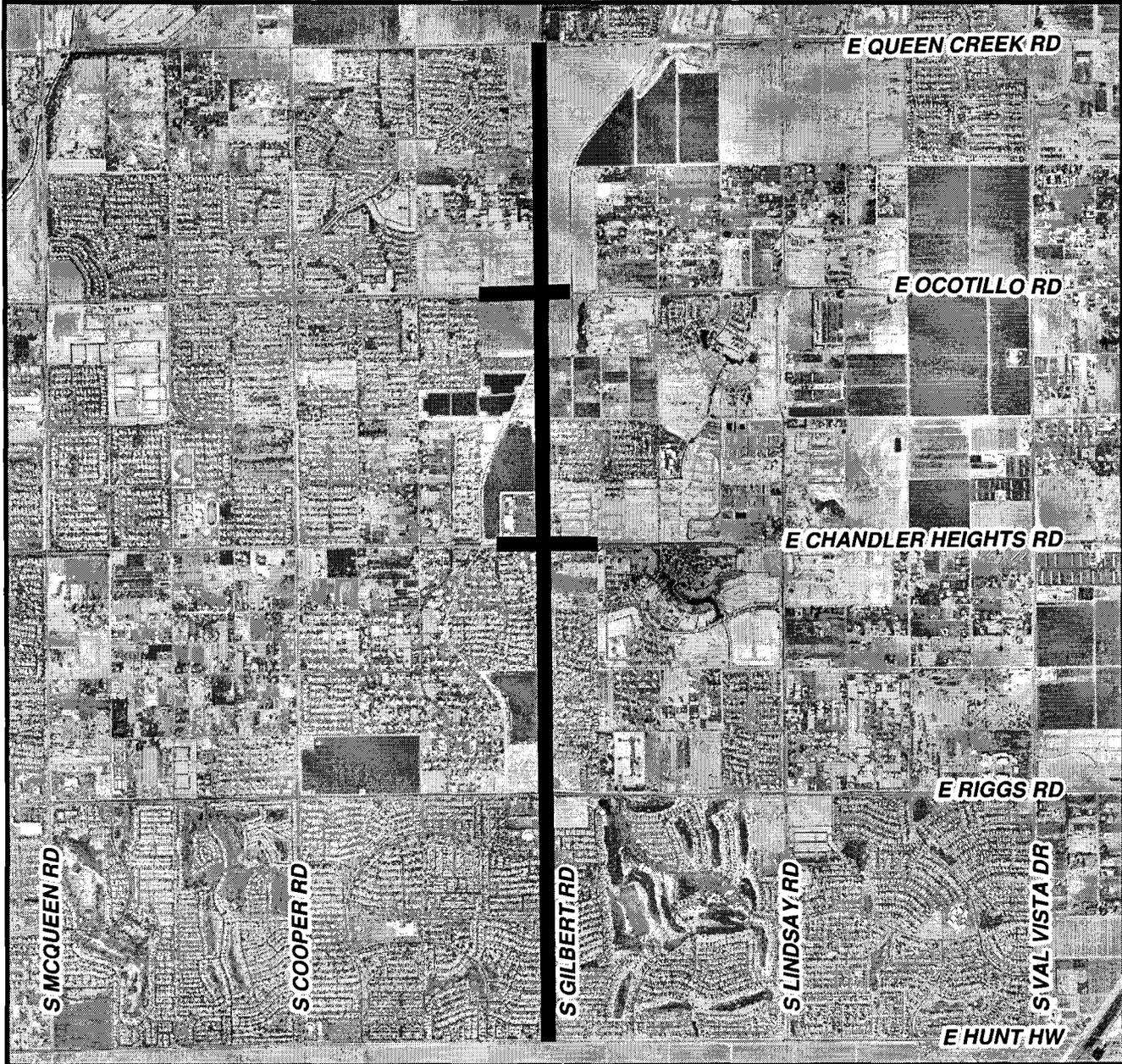
Dave Siegel, Municipal Utilities Director

15. City Manager



W. Mark Pentz

GILBERT ROAD IMPROVEMENTS PROJECT NO. ST0809-201



MEMO NO. CA08-220

DESIGN LIMITS



**CONSTRUCTION MANAGER AT RISK
DESIGN CONSULTANT CONTRACT**

PROJECT TITLE: **Gilbert Road (Queen Creek Road to Hunt Highway)**

PROJECT NO: **ST0809-201**

This Agreement is made and entered into by and between the City of Chandler, Arizona, a municipal Corporation, hereinafter called the CITY, and **Entellus, Inc., a Corporation of 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 Agreement; 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 Agreements for Professional Services; and

WHEREAS, the Parties intend to have this Project designed and constructed using a Construction Manager at Risk method with DESIGN CONSULTANT being a part of a Design Team; and

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 known as **Gilbert Road (Queen Creek Road to Hunt Highway)**. The improvements will include a six-lane arterial section with new asphalt pavement, continuous curb and gutter, raised median, sidewalks, bus bays, water and waste water pipe installation and/or replacement, street drainage, retention basins, street lights, traffic signal upgrades, landscaping and coordination. The work includes dry and wet utility coordination and relocation, preparation of plans, drainage report, right-of-way and legal descriptions, specifications package and cost estimate. . The Project is more specifically described in Exhibit A attached hereto and incorporated herein by reference.
2. **DEFINITIONS:** **DEFINITIONS:** The CITY's General Conditions for Construction apply to this contract and take priority over any conflicting provisions between the Contract and the General Conditions. Words used in this Agreement 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.
3. **SCOPE OF WORK:** DESIGN CONSULTANT shall design the Project all as more specifically described in Exhibit A attached hereto and incorporated herein by reference.
4. **DESIGN TEAM:** DESIGN CONSULTANT shall be a part of and participate together with the Design Team and shall attend meetings with, provide information to and cooperate with the person retained by CITY to be the Construction Manager at Risk (CM@RISK).
5. **FEE FOR SERVICES:** For services described in paragraph 3 of this Agreement, the CITY shall pay DESIGN CONSULTANT a fee not to exceed the sum of **Two Million Five Hundred Thirty Four Thousand One Hundred Six** dollars (**\$2,534,106**) at the rates shown in and in accordance with the fee schedule attached hereto as Exhibit B and made a part hereof by reference. Payment will be made monthly on the basis of progress reports corresponding with the rates and charges listed on the fee schedule and showing the number of hours or other basis to determine the fee earned to that date. An Application and Certification for Payment Sheet must be provided. In addition, the following must also be included with each application for payment: a clear, detailed invoice reflecting items being billed for, reimbursables; a summary sheet showing percentage of work completed to date; amount/percent billed to date; current status of all tasks within a project; and any/all backup documentation supporting the above items. Work schedule updates shall also be included in the monthly progress payment requests.

Gilbert Road (Queen Creek Road to Hunt Highway)
ST0809-201

6. PERIOD OF SERVICE:

- A. Following receipt of a "Notice to Proceed" with the design work, DESIGN CONSULTANT shall complete the design and have all documents ready for construction or bidding within **610** calendar days of the date indicated on the Notice to Proceed.
- B. DESIGN CONSULTANT shall prepare and deliver to CITY record documents within **30** days of the date of receipt of the red line drawings from the CM@Risk.
- C. DESIGN CONSULTANT shall complete all services specified herein in accordance with the Production Schedule and progress milestones included in Exhibit A and as discussed with the CM@Risk for meeting schedule attached herein. 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.

7. 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 best judgement as an experienced, licensed and qualified professional. 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. The DESIGN CONSULTANT is responsible for advising and consulting with the City on cost. DESIGN CONSULTANT is not responsible for providing for formal estimates, this is the CM@Risk responsibility.

8. REPORTS & APPROVALS: All work shall be subject to the approval by CITY and each phase of the work will be submitted to CITY in accordance with schedule included in Exhibit A and in the format prescribed by CITY. When requested by 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. STANDARD 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 responsible for the technical accuracy of its services and documents resulting therefrom, and CITY shall not be responsible for discovering deficiencies therein. DESIGN CONSULTANT shall correct any such deficiencies without additional compensation or cost to CITY, except to the extent any such deficiency is directly attributable to deficiencies in CITY-furnished information.
- C. DESIGN CONSULTANT shall be familiar with CITY's Standard Details and Specifications and other relevant CITY regulations. 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. The DESIGN CONSULTANT is responsible, along with his designers, for attesting to the design correctness and scaling the design documents.
- D. DESIGN CONSULTANT shall be responsible for the completeness and accuracy of his/her work prepared or compiled under obligation for this project and shall correct, at his/her 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 engineering drawings and specifications shall be accomplished by the DESIGN CONSULTANT. The cost of the design necessary to correct those errors attributable to the DESIGN CONSULTANT and any damage incurred by the City as a result of additional construction costs caused by

such engineering and/or architectural errors shall be chargeable to the DESIGN CONSULTANT. The fact that the City has reviewed or approved the DESIGN CONSULTANT's work shall in no way relieve the DESIGN CONSULTANT of any of DESIGN CONSULTANT's responsibilities.

10. INDEMNIFICATION

A. For Professional Liability:

To the fullest extent permitted by law, DESIGN CONSULTANT shall defend, indemnify and hold harmless the City of Chandler, its agents, representatives, officers, directors, officials and employees, individually and collectively, (hereinafter CoC) from and against all losses, claims, damages, suits, actions, payments, judgments, demands, expenses, and costs, including but not limited to, attorney's fees, defense costs, court costs, and the cost of appellate proceedings, or actions of any kind and nature related to, arising out of, or alleged to have resulted from the errors, mistakes or omissions relating to professional services by DESIGN CONSULTANT, its employees, agents, or any tier of subcontractors in the performance of this Contract or of any other person for whose errors, mistakes or omissions DESIGN CONSULTANT may be legally liable. This indemnity shall not be construed to include losses, claims, damages, suits, or actions of any kind and nature, to the extent arising from or alleged to have resulted from the errors, mistakes or omissions of CoC (other than DESIGN CONSULTANT, its employees, agents, or any tier of subcontractors). The provisions of this paragraph shall survive termination of this Contract.

B. For all Other Liabilities, Hazards and Exposures:

To the fullest extent permitted by law, DESIGN CONSULTANT shall defend, indemnify and hold harmless the City of Chandler, its agents, representatives, officers, directors, officials and employees, individually and collectively, (hereinafter CoC) from and against all losses, claims, damages, suits, actions, payments, judgments, demands, expenses, and costs, including but not limited to, attorney's fees, defense costs, court costs, and the cost of appellate proceedings, or actions of any kind and nature, wages or overtime compensation due employees in rendering service under this Contract and whether to any person or property, including natural resources and any claim made under the Fair Labor Standards Act or any other federal or state laws, related to, arising out of, or alleged to have resulted from the actions of DESIGN CONSULTANT and alleged to have been caused in whole or in part by any act or omission of DESIGN CONSULTANT, anyone directly or indirectly employed by them or anyone for whose acts DESIGN CONSULTANT may be legally liable, and from any claims or amounts arising or recovered under Workers' Compensation laws or any other law, bylaw, or ordinance, order or decree or any failure on the part of DESIGN CONSULTANT, its agents, employees or representatives to fulfill DESIGN CONSULTANT's obligations under this Contract. This indemnity shall not be construed to include losses, claims, damages, suits, or actions of any kind and nature, to the extent arising from or alleged to have resulted from the errors, mistakes or omissions of CoC, (other than DESIGN CONSULTANT, its employees, agents, or any tier of subcontractors). The provisions of this paragraph shall survive termination of this Contract.

C. Consequential Damages:

The parties intend that damages and/or costs and all other terms implying an amount tied to liability shall include consequential damages and loss of productivity limited to the total value of this contract in dollars as payable by the City of Chandler or twice the amount of aggregate insurance required by this Contract, whichever is greater.

D. Insurance does not limit liability:

The amount and type of insurance coverage requirements set forth herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

11. INSURANCE REQUIREMENTS:

11.1 General Requirements:

- A. DESIGN CONSULTANT, at its own expense, shall purchase and maintain insurance of the types and amounts required in this section, with companies possessing a current A.M. Best, Inc. rating of B++6, or better and legally authorized to do business in the State of Arizona with policies and forms satisfactory to CITY.

- B. Policies written on a "Claims made" basis are not acceptable without written permission from the City's Risk Manager
- C. All insurance required herein shall be maintained in full force and effect until all work or services required to be performed under the terms of this Agreement is satisfactorily completed and formally accepted. Failure to do so may, at the sole discretion of CITY, constitute a material breach of this Agreement and may result in termination of this contract.
- D. If any of the insurance policies are not renewed prior to expiration, payments to the DESIGN CONSULTANT may be withheld until these requirements have been met, or at the option of the City, the City may pay the Renewal Premium and withhold such payments from any monies due the DESIGN CONSULTANT.
- E. All insurance policies, except Workers' Compensation and Professional Liability required by this Agreement, and self-insured retention or deductible portions, shall name, to the fullest extent permitted by law for claims arising out of the performance of this contract, the City of Chandler, its agents, representatives, officers, directors, officials and employees as Additional Insureds.
- F. DESIGN CONSULTANT's insurance shall be primary insurance over any insurance available to the CITY and as to any claims resulting from this contract, it being the intention of the parties that the insurance policies so effected shall protect both parties and be primary coverage for any and all losses covered by the described insurance.
- G. The insurance policies, except Workers' Compensation and Professional Liability, shall contain a waiver of transfer rights of recovery (subrogation) against CITY, its agents, representatives, officers, directors, officials and employees for any claims arising out of DESIGN CONSULTANT's acts, errors, mistakes, omissions, work or service.
- H. The insurance policies may provide coverage which contain deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall be assumed by and be for the account of, and at the sole risk of DESIGN CONSULTANT. DESIGN CONSULTANT shall be solely responsible for the deductible and/or self-insured retention. The amounts of any self-insured retentions shall be noted on the Certificate of Insurance. CITY, at its option, may require DESIGN CONSULTANT to secure payment of such deductibles or self-insured retentions by a Surety Bond or an irrevocable and unconditional letter of credit. Self-insured retentions (SIR) in excess of \$25,000 will not be accepted except with permission of the Management Services Director/designee.
- I. All policies and certificates shall contain an endorsement providing that the coverage afforded under such policies shall not be reduced, canceled or allowed to expire until at least thirty (30) days prior written notice has been given to CITY.
- J. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the DESIGN CONSULTANT with reasonable promptness in accordance with the DESIGN CONSULTANT's information and belief.
- K. In the event that claims in excess of the insured amounts provided herein, are filed by reason of any operations under this contract, the amount of excess of such claims, or any portion thereof, may be withheld from payment due or to become due the DESIGN CONSULTANT until such time as the DESIGN CONSULTANT shall furnish such additional security covering such claims as may be determined by the CITY.

11.2 Proof of Insurance - Certificates of Insurance

- A. Prior to commencing work or services under this Agreement, DESIGN CONSULTANT shall furnish to CITY Certificates of Insurance, issued by DESIGN CONSULTANT's insurer(s), as evidence that policies providing the required coverages, conditions and limits required by this Agreement are in full force and effect and obtain from the City's Risk Management Division approval of such Certificates.
- B. If a policy does expire during the life of this Agreement, a renewal certificate must be sent to the City of Chandler five (5) days prior to the expiration date.

- C. All Certificates of Insurance shall identify the policies in effect on behalf of DESIGN CONSULTANT, their policy period(s), and limits of liability. Each Certificate shall include the job site and project number and title. Coverage shown on the Certificate of Insurance must coincide with the requirements in the text of the contract documents. Information required to be on the certificate of Insurance may be typed on the reverse of the Certificate and countersigned by an authorized representative of the insurance company.
- D. CITY reserves the right to request and to receive, within 10 working days, certified copies of any or all of the herein required insurance policies and/or endorsements. CITY shall not be obligated, however, to review same or to advise DESIGN CONSULTANT of any deficiencies in such policies and endorsements, and such receipt shall not relieve DESIGN CONSULTANT from, or be deemed a waiver of CITY's right to insist on, strict fulfillment of DESIGN CONSULTANT's obligations under this Agreement.

11.3 Required Coverage

Such insurance shall protect DESIGN CONSULTANT from claims set forth below which may arise out of or result from the operations of DESIGN CONSULTANT under this Contract and for which DESIGN CONSULTANT may be legally liable, whether such operations be by the DESIGN CONSULTANT or by a Sub-consultant or subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Coverage under the policy will be at least as broad as Insurance Services Office, Inc., policy form CG00011093 or equivalent thereof, including but not limited to severability of interest and waiver of subrogation clauses.

- A. Claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
- B. Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- C. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the DESIGN CONSULTANT's employees;
- D. Claims for damages insured by usual personal injury liability coverage;
- E. Claims for damages, other than to Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- F. Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; Coverage will be at least as broad as Insurance Service Office, Inc., coverage Code "I" "any auto" policy form CA00011293 or equivalent thereof.
- G. Claims for bodily injury or property damage arising out of completed operations;
- H. Claims involving contractual liability insurance applicable to the Contractor's obligations under the Indemnification Agreement;
- I. Claims for injury or damages in connection with one's professional services;
- J. Claims involving construction projects while they are in progress. Such insurance shall include coverage for loading and off loading hazards. If any hazardous material, as defined by any local, state or federal authorities are to be transported, MCS 90 endorsement shall be included;

11.3.1 Commercial General Liability - Minimum Coverage Limits:

The Commercial General Liability insurance required herein shall be written for not less than \$1,000,000 limits of liability or ten percent (10%) of the Contract Price, whichever coverage is greater. Any combination between general liability and excess general liability alone amounting to a minimum of \$1,000,000 per occurrence (or 10% per occurrence) and an aggregate of \$2,000,000 (or 20% whichever is greater) in coverage will be acceptable. The Commercial General Liability additional insured endorsement shall be as broad as the Insurance Services, Inc's

(ISO) Additional Insured, Form B, CG 20101001, and shall include coverage for DESIGN CONSULTANT's operations and products, and completed operations.

11.3.2 General Liability - Minimum Coverage Limits

- A. The General Liability insurance required herein, including, Comprehensive Form, Premises-Operations, Explosion and Collapse, Underground Hazard, Products/Completed Operations, Contractual Insurance, Broad Form Property Damage, Independent Contractors, and Personal Injury shall be written for Bodily Injury and Property Damage Combined shall be written for not less than \$1,000,000 or 10% of the contract cost and with a \$2,000,000 aggregate.
- B. Automobile Liability: DESIGN CONSULTANT shall maintain Commercial/Business Automobile Liability insurance with a combined single limit for bodily injury and property damage of not less than \$1,000,000 each occurrence with respect to any owned, hired, and non-owned vehicles assigned to or used in performance of the DESIGN CONSULTANT's work. Coverage shall be at least as broad as coverage code 1, "any auto", (Insurance Service Office, Inc. Policy Form CA 00011293, or any replacements thereof). Such insurance shall include coverage for loading and off loading hazards if hazardous substances, materials or wastes are to be transported and a MCS 90 endorsement shall be included with coverage limits of \$5,000,000 per accident for bodily injury and property damage.

11.3.3 Worker's Compensation and Employer's Liability:

DESIGN CONSULTANT shall maintain Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over DESIGN CONSULTANT's employees engaged in the performance of the work or services; and, Employer's Liability insurance of not less than \$1,000,000 for each accident, \$1,000,000 disease coverage for each employee, and \$1,000,000 disease policy limit. In case any work is subcontracted, DESIGN CONSULTANT will require the Subcontractor to provide Workers' Compensation and Employer's Liability to at least the same extent as required of DESIGN CONSULTANT.

11.3.4 Professional Liability:

DESIGN CONSULTANT shall maintain Professional Liability insurance covering acts, errors, mistakes and omissions arising out of the work or services performed by DESIGN CONSULTANT, or any person employed by DESIGN CONSULTANT, with a claims made policy limit of not less than \$1,000,000.

12. DISPUTE RESOLUTION:

- A. Disputed Invoices. In the event of a disputed or contested invoice, only that portion so contested may be withheld from payment, and the undisputed portion will be paid.
- B. Disputed Items. CITY may temporarily delete any disputed items contained in DESIGN CONSULTANT's invoice, including items disputed due to lack of supporting documentation, and pay the remaining amount of the invoice. CITY shall promptly notify DESIGN CONSULTANT of the dispute and request clarification and/or remedial action. CITY may withhold payment on all disputed items until the issues are resolved. After any dispute has been settled, DESIGN CONSULTANT shall include the disputed item on a subsequent regularly scheduled invoice or on a special invoice for the disputed item only.
- C. Good Faith Negotiation. CITY and DESIGN CONSULTANT agree to negotiate all disputes between them in good faith prior to exercising their rights under law.
- D. Binding Special Arbitration. All claims, disputes and other matters in question between CITY and DESIGN CONSULTANT arising out of, or relating to this Agreement, or the breach thereof (except for claims which have been resolved pursuant to paragraphs 9 or 12 A, B and C herein) above shall be decided by binding, unappealable special arbitration, as described below, if the claim for compensation, costs or expenses, damages or reimbursement is equal to or less than \$50,000. Claims over \$50,000 shall have non-binding mediation as the first step to settling the dispute or claim.
- E. Special Arbitration. All arbitration of claims shall be conducted in Chandler, Arizona, in accordance with the following rules:

1) Any time after the parties have attempted in good faith but without success to resolve one or more disputes, a party may notify the other in writing that they are at impasse (Notice of Impasse) and request immediate arbitration in accordance with the terms herein.

2) Within ten (10) days after the date of such Notice of Impasse, each party shall select an impartial intermediary, who shall, together, agree upon a third impartial person who will be the arbitrator. To be considered impartial an intermediary or arbitrator shall not have any previous or current relationship which would be considered a conflict of interest with either party, including, but not limited to, current or previous employment or contractual relationship, indebtedness or ownership interest.

3) The parties shall immediately cooperate with each other to draft together a short summary of the facts and a list of questions or issues to be resolved by the arbitrator. If the facts are in dispute, such disputed facts shall be listed as contentions by the party asserting them. In the event the parties are unable to agree upon a summary of the facts or a list of questions or issues, each party shall instead include a statement of facts and list of issues in that party's Position Paper submitted to the arbitrator. Such summary of facts and list of questions or issues shall be completed by the parties and submitted to the arbitrator within twenty (20) days of the date of the Notice of Impasse.

4) The parties shall cooperate to gather any documents and exhibits necessary to resolve the issues and provide them jointly to the arbitrator. In the event of a dispute between the parties regarding whether a document should be provided, the disputed document shall be submitted to the impartial intermediaries who will determine its appropriateness for submittal. Correspondence between the parties which discusses settlement or resolution of the issues shall be submitted. All such evidence shall be submitted to the arbitrator within twenty (20) days of the date of the Notice of Impasse.

5) Each party may submit a written Position Paper of no more than ten (10) pages, supporting or explaining that party's position and providing citations to relevant law. Any such Position Paper shall be submitted to the arbitrator within thirty (30) days of the date of the Notice of Impasse.

6) There shall be no hearing, no witnesses, no argument nor contact by the parties or their representatives with the arbitrator except for the joint submittals and each party's Position Paper.

7) The arbitrator may request additional information and may make any other orders necessary to resolve the entire matter.

8) The arbitrator shall issue a written decision resolving all the submitted issues within 30 days after receiving the Position Papers.

F. Nothing herein contained shall be so construed as to preclude DESIGN CONSULTANT or CITY from commencing a legal action in relation to claims in excess of \$50,000, but the sole legal remedy in relation to claims of \$50,000 or less shall be binding, unappealable special arbitration as described above.

13. AMENDMENTS: Whenever a change in the Scope of Work contemplated in this Agreement is determined to be necessary, the work will be performed in accordance with this Agreement provided, however, that BEFORE such work is started, an Amendment shall be executed by 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 CITY except as provided herein, nor shall DESIGN CONSULTANT do any work not covered by this Agreement unless such work is authorized through an executed amendment.

14. TERMINATION WITHOUT CAUSE: CITY may at any time and for any or no reason, at its convenience, terminate this Agreement or any part of the services to be rendered pursuant thereto by ten (10) day written notice to DESIGN CONSULTANT specifying the termination date. Immediately after receiving such notice, DESIGN CONSULTANT shall discontinue advancing the work under this Agreement and shall deliver to CITY all drawings, notes, calculations, sketches and other materials entirely or partially completed, together with all unused materials supplied by 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 Agreement under paragraph 4 and shall be in an amount to be agreed mutually by DESIGN CONSULTANT and CITY. CITY shall make this final payment within sixty (60) days after DESIGN CONSULTANT has delivered the last of the partially completed items.

15. TERMINATION WITH CAUSE

This Agreement may be terminated by CITY for cause should the DESIGN CONSULTANT fail to perform any provision of this Agreement, 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 Agreement 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 Agreement, 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 Agreement.

The CITY'S right of termination for cause as set forth herein shall be in addition to, and not a limitation of, any and all other remedies available to CITY at law, in equity, or under the terms and provisions of this Agreement.

- 16. OWNERSHIP OF DOCUMENTS: All documents, including, but not limited to, preliminary designs, tracings, drawings, original mylars, estimates, field notes, investigations, design analysis, communications (e-mail, minutes, telephone, memos, etc.) and studies which are prepared in the performance of this Agreement are to be, and shall remain the property of CITY. DESIGN CONSULTANT shall furnish CITY, upon its request, originals or reproducible copies 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 it.
- 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 Agreement upon an agreement 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 CONSULTANT firm.

For breach or violation of this warranty, CITY shall have the right to annul this Agreement without liability, or at its discretion to deduct from the Agreement 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 Agreement.

Pursuant to A.R.S. Section 38-511, CITY may cancel this Agreement within three (3) years after its execution, without penalty or further obligation by CITY if any person significantly involved in initiating, negotiating, securing, drafting or creating this Agreement on behalf of CITY is, at any time while this Agreement is in effect, an employee

of any other party to this Agreement in any capacity, or a consultant to any other party of this Agreement with respect to the subject matter of this Agreement.

20. **CONTROLLING LAW:** The laws of the State of Arizona shall govern this agreement.

21. **NO ASSIGNMENT:** DESIGN CONSULTANT shall not assign, transfer, convey or subcontract this Agreement or the services to be rendered pursuant thereto without the prior written consent of CITY.

22. **NOTICES:** Any notice required under this Agreement 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 this _____ day of _____, 2008.

CITY OF CHANDLER

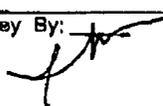
MAYOR Date

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

ATTEST:

City Clerk

APPROVED AS TO FORM:

City Attorney By: 

DESIGN CONSULTANT
By: 
Signature

ADDRESS FOR NOTICE
Entellus, Inc.
2255 N. 44th Street, #125
Phoenix, AZ 85008-3279
Phone: 602-244-2566
FAX: 602-244-8947

ATTEST: If Corporation

Secretary

SEAL

**EXHIBIT A
DETAILED DESCRIPTION OF CITY'S CONCEPT**

I. PROJECT DESCRIPTION & SCOPE OF DESIGN:

A. BACKGROUND

1. Gilbert Road from Queen Creek Road to Hunt Highway will be improved to six lane arterial standards. The improvements will include new asphalt pavement, continuous curb and gutter, raised median, sidewalks, bus bays, water and waste water pipe installation and/or replacement, street drainage, retention basins, street lights, new traffic signals at the Ocotillo Road and Chandler Heights Road intersections, landscaping and coordination. The work includes dry and wet utility coordination and relocation, preparation of plans, drainage report, right-of-way and legal descriptions, specifications package and cost estimate. Ocotillo Road and Chandler Heights Roads will be improved for short distances both east and west of Gilbert Road to accommodate the improvements that will be done at the respective intersections. The Hunt Highway intersection will require partial improvements to tie into the existing improvements that have been constructed on Hunt Highway.
2. Gilbert Road will be designed for six lanes with a raised median and will be striped to include bicycle lanes. The intersections at Queen Creek Road and Ryan Road are either improved or will be improved prior to this work going to construction. They are/will be improved with the necessary curbing, sidewalks and traffic signals. The new improvements to Gilbert Road will match improvements at these intersections. Some of the alignment and geometrics for Gilbert Road have been established by the existing subdivision improvements and by approved development plans for new subdivisions that are to be constructed adjacent to Gilbert Road.
3. Some improvements have been made within the corridor by commercial and private developers. Improvements are required within the corridor for those areas where the roadway needs to be widened and where curb and gutter; sidewalk, streetlights, raised medians and landscaping have not yet been established. The new improvements will match the existing facilities where feasible. Improvements will be made in the corridor in the following areas:
 - a. **Queen Creek Road Intersection to Ocotillo Road:** The west side of Gilbert Road including the southwest corner of the Queen Creek Road Intersection has been improved in conjunction with a commercial development. These improvements extend south for approximately one-fourth (1/4) mile to the Appleby Road intersection. Design will complete the improvements on the west side of Gilbert Road between Appleby and Ocotillo Roads.

The southeast corner of the Queen Creek Road intersection will be improved prior to this project going to construction. Improvements have been initiated for the Layton Lakes housing development that include as their offsite improvements, the initial design for the east side of Gilbert Road from Queen Creek Road to Ocotillo Road including the north side of Ocotillo Road between Gilbert Road and the RWCD Canal. This area is currently undeveloped agricultural land.

Immediately west of the RWCD canal, there is a private well site on the north side of Ocotillo Road. No improvements are anticipated at this well site. Should improvements be required, it is anticipated that they will be provided by the owner of the pump station or their designated engineer.

Improvements on Ocotillo Road will extend to the east and west of Gilbert Road to match existing improvements in both directions. East of Gilbert Road the improvements on the north side will extend approximately 1100 feet, and on the south side improvements will extend approximately 900 feet. Improvement to the RWCD bridge located east of Gilbert Road will also be required. West of Gilbert Road, improvements will extend for approximately 900 feet on the north side of Ocotillo Road and 4000 feet on the south side.

- b. **Ocotillo Road Intersection to Chandler Heights Road:** On the east side of Gilbert Road, improvements will occur between the two intersections including the street corners at both of the two major intersections and any interim intersections that are identified in the initial design process including access to an existing housing development. Except for this housing development, the

adjacent property is undeveloped agricultural land. The roadway will need to be widened in this area to full width as described above and signals improved at both intersections.

A combination of existing temporary traffic signals and improved signals exist at the two intersections and require upgrading. Improvements will extend east of Chandler Heights Road for approximately 400 feet on the north side of Chandler Heights Road and approximately 1100 feet on the south side to match existing improvements to the east.

On the west side of Gilbert Road, the Chandler Heights Road Intersection has been improved on both the north- and southwest corners. No other improvements will be made west of this intersection. These improvements extend west and also south for approximately 1000 feet. Medians have also been installed west and north of the intersection. The median location and configuration will be reviewed in conjunction with the ultimate intersection. The design will extend improvements between the Ocotillo and Chandler Heights Roads intersections to the improvements already in place north of Chandler Heights Road. Included in this segment of Gilbert Road is an RWCD bridge.

Because of the proximity of an existing RWCD recharge pond on the west side of the roadway, horizontal alignment options will be needed, with the goal to minimize right-of-way needs adjacent to the RWCD pond.

- c. **Chandler Heights Road to Riggs Road:** The adjacent property in this corridor is primarily characterized by housing developments. Construction of these developments did not include improvements to Gilbert Road, however right-of-way was dedicated for the ultimate roadway. On the west side of Gilbert Road, existing improvements extend south of Chandler Heights Road to an existing RWCD recharge pond. Horizontal alignment options will be provided with the goal to minimize right-of-way needs adjacent to the RWCD pond. South of the pond, Gilbert Road has been improved to the Riggs Road intersection.

Improvements have been made to all four corners of the Riggs Road intersection including signals and medians. These improvements extend to both the north and south of Riggs Road. The median locations and configurations will be reviewed in conjunction with the ultimate intersection and roadway alignment requirements.

Roadway design will be provided for the east side of Gilbert Road between Chandler Heights Road and the improved area north of Riggs Road. There is a subdivision that has been constructed on the east side for approximately 3000 feet but the only improvements adjacent to Gilbert Road is landscaping. No street improvements have been constructed on Gilbert Road adjacent to the subdivision.

- d. **Riggs Road to Hunt Highway:** South of Riggs Road, existing improvements extend for \pm 1000 feet on both sides of Gilbert Road. Beyond this improved area, Gilbert Road is flanked by residential developments with corresponding retention basins. Improvements will be designed for Gilbert Road in this area.

At the Hunt Highway intersection, Gilbert Road will be designed for the ultimate six-lane cross section with raised medians, but it will be striped for four lanes. The two outside lanes will be added/dropped so that the Gilbert Road will match up to the two-lane roadway that extends south of Gilbert Road through the adjacent Indian Reservation. Curb, gutter and sidewalk will be matched up to the similar improvements on Hunt Highway. Traffic at the intersection is controlled by a four-way stop sign configuration. While no signalization will be provided at this intersection at this time, conduit is required for future signalization.

4. A geotechnical survey will be performed on Gilbert Road from Queen Creek Road to Hunt Highway and along Ocotillo Road and Chandler Heights Road in those areas where improvements will be designed in conjunction with this project. Additionally, existing pavement through corridor will be reviewed to determine the adequacy of the existing pavement structure.
5. As part of these improvements, water lines and sewer lines will be installed to service adjacent properties. Sewer and water service stub outs will need to be provided to undeveloped property. As-built plans will be

obtained to determine the location of the underground municipal utilities and the type of pipe material used for utilities will be reviewed. If it is determined that the pipe materials such as asbestos cement pipe for waterlines has been used, replacement pipe will be designed upon direction from the City Municipal Utilities Department. Reclaimed waterline, potable waterline and sanitary sewer mainline extensions will be designed as described in this scope of services under Section B 18.0.

6. Street drainage in the City is typically addressed by requiring developments to retain the half-street drainage adjacent to the development. A drainage plan will be developed that will utilize existing retention basins with provisions for new temporary retention basins on undeveloped property.
7. There are overhead power lines located adjacent to Gilbert Road in the north 2 miles of the project. These overhead lines serve the existing homes and commercial properties fronting on Gilbert Road. South of Chandler Heights Road, the power lines have been undergrounded in most of the corridor. There are other utilities such as telephone, cable TV and southwest gas in the corridor. There is irrigation in the area consisting of a small concrete lined ditch parallel to Gilbert Road. These irrigation ditches are used to irrigate the undeveloped property in the corridor and adjacent to the corridor. This ditch may need to be put in a pipe outside of the proposed new right-of-way. Coordination with RWCD will be necessary to determine the service area, irrigation supply point and need for the irrigation facilities. Modifications to the RWCD irrigation ditches will be provided by RWCD's design consultant.

B. GENERAL TASKS

B 1.0 GENERAL REQUIREMENTS – The design and all work will 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
- MAG Uniform Standard Specifications and Details
- 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

B 2.0 DATA COLLECTION

1. City will provide at no cost to DESIGN CONSULTANT existing information as available, not necessarily 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 will keep a log of all documents and information provided by City staff and related stakeholders.
3. DESIGN CONSULTANT will obtain aerial photography for Gilbert Road from Queen Creek Road to Hunt Highway.
4. DESIGN CONSULTANT will perform a topographic survey for Gilbert Road from Queen Creek Road to Hunt Highway.
5. City will obtain litigation/title reports for each parcel along the Gilbert Road corridor from Queen Creek Road to Hunt Highway and provide copies to DESIGN CONSULTANT.

6. DESIGN CONSULTANT will obtain a geotechnical report and pavement structure recommendations.
7. As a subconsultant to DESIGN CONSULTANT, Ninyo and Moore will obtain Phase I Environmental Site Assessment (ESA) documentation for properties where right-of-way or easements is to be acquired.
8. DESIGN CONSULTANT will obtain all utility quarter section maps and as-built maps along the Gilbert Road corridor from Queen Creek Road to Hunt Highway.

B 3.0 PUBLIC UTILITY COORDINATION

1. DESIGN CONSULTANT will coordinate with utility companies, private development, and the City to incorporate existing and proposed utilities into the construction plans, in accordance with the latest version of the Arizona Utility Coordinating Committee "Public Improvement Project Guide" (PIPG.) DESIGN CONSULTANT will show all existing and proposed utilities on the paving plan and profile sheets.
2. DESIGN CONSULTANT will coordinate with each utility company to determine if the utilities have any need to upgrade their facilities before or during the project's construction.
3. DESIGN CONSULTANT will work with the City's Utility Coordinator to coordinate the early determination of facilities that may be abandoned or deactivated.
4. DESIGN CONSULTANT will be responsible for field verifying the horizontal locations of all utilities within the project limits prior to the Preliminary (15%) design submittal. DESIGN CONSULTANT will prepare base maps detailing all existing utility data and transmit them to the utility companies for verification and comment concerning the utility locations. DESIGN CONSULTANT will incorporate the utility company comments into the base maps.
5. DESIGN CONSULTANT will identify utility conflicts, with input from utility companies, which might affect alignment or grade and recommend utility alignment alternatives.
6. Prior to the 30% plan submittal, DESIGN CONSULTANT will obtain title reports for affected properties for SRP Water Users, SRP Power and Roosevelt Water Conservation District (RWCD).
7. DESIGN CONSULTANT will send a letter to each utility company notifying them of the project and defining the project scope and timeline, and will also send one set 15% plans and two sets each 30%, 60%, 95%, and Final plans to each utility company 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. DESIGN CONSULTANT will incorporate the utility company and private developer construction requirements into the bid documents.
8. DESIGN CONSULTANT will provide the utility companies with electronic base files or other pertinent information necessary for the utility companies to design the relocation of their facilities. DESIGN CONSULTANT will not be responsible for converting AutoCAD drawing format to other drawing formats. DESIGN CONSULTANT will coordinate with the utilities to facilitate the design to relocate their facilities. DESIGN CONSULTANT will 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 will develop preliminary alignments of any utilities requiring relocation for which the City's Utility Coordinator has requested an alignment design. DESIGN CONSULTANT will submit preliminary locations to each utility for review along with a request for written response from each utility. DESIGN CONSULTANT will make joint trenching recommendations for underground utilities, and submit those recommendations to the City's Utility Coordinator for approval.
10. DESIGN CONSULTANT will, with the aide of the utility company, identify utility easements and provide legal descriptions to the City, between the 30% and 60% design completion, to facilitate land acquisition during the design phase.

11. At the 30% design submittal, DESIGN CONSULTANT will develop a utility strip map showing all existing and proposed utilities, and existing and proposed easements for each utility, to include parcel numbers and addresses, at a scale of 1"=20' H.
12. For each submittal to the utility companies, DESIGN CONSULTANT will provide the City's Project Manager and Utility Coordinator each with a written record of receipt.
13. DESIGN CONSULTANT will work with the City's Utility Coordinator to facilitate utility coordination meetings upon notice to proceed, at each submittal (30%, 60%, and 95%), and on regular intervals between the 30% and Final submittals.
14. DESIGN CONSULTANT will review all utility plans for constructability within the project limits.
15. Prior to submittal of Final (100%) construction documents, along with CM@R, DESIGN CONSULTANT will be responsible for documenting 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.

B 4.0 PROGRESS MEETINGS

1. DESIGN CONSULTANT will hold the following progress meetings at the City of Chandler offices or project site.
 - a. Bi-Weekly Progress Meetings will be held up to the 95% plan submittal and will be held every four (4) weeks or as needed after the 95% plan submittal.
 - b. Comment Resolution Meetings will be held, in lieu of the schedule Bi-Weekly Progress Meetings, no later than two weeks after redlines are returned to DESIGN CONSULTANT at each plan submittal.
 - c. Utility Coordination Meetings will be held at project kickoff and monthly thereafter through the 100% plan submittal as discussed above.
2. DESIGN CONSULTANT will prepare and distribute meeting minutes for each Progress, Comment Resolution, and Utility Coordination Meetings including Action Items to be reviewed and updated at each respective meeting.

B 5.0 PUBLIC MEETINGS

1. DESIGN CONSULTANT will prepare for and participate in six Public Information Meetings. DESIGN CONSULTANT will 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 will be responsible for the following:
 - a. Develop and setup display boards
 - b. Give a brief presentation and answer questions as needed
3. City will be responsible for the following:
 - a. Secure a location and time for each public meeting
 - b. Prepare and make available a public comment sheet at each meeting
 - c. Provide snack foods and beverages for each public meeting
 - d. Prepare and distribute mailers/flyers to those residents within and adjacent to the project corridor, if required
 - e. Prepare newspaper notice of meeting, if required

B 6.0 STAKEHOLDER MEETINGS

1. DESIGN CONSULTANT will prepare for and participate in bi-monthly Stakeholder Meetings for the duration of the project. DESIGN CONSULTANT will 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. Eight stakeholder meetings are anticipated.
2. DESIGN CONSULTANT will 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 distribute meeting minutes, including Action Items to be reviewed and updated at each Stakeholder Meeting
3. City will be responsible for the following:
 - a. Secure a location and time for each Stakeholder Meeting
 - b. Send invitations to stakeholders

B 7.0 PROJECT MANAGEMENT

1. DESIGN CONSULTANT will prepare regular progress reports; perform regular budget and schedule monitoring; coordinate with utilities, City representatives and other project stakeholders; and manage sub-consultants.
2. DESIGN CONSULTANT will coordinate with CM@R which will include coordination meetings, provide plans and specifications to aid in the preparation of the GMP, and review of GMP and provide comments to City.

B 8.0 DESIGN SURVEY

DESIGN CONSULTANT will perform all project survey as detailed below:

1. DESIGN CONSULTANT will 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 will be in accordance with City requirements. The coordinate system used for the project will be the City of Chandler Coordinate System. Vertical datum will be NAVD 88. Existing roadway centerline will be established through Maricopa County Recorder's maps and land surveys in conjunction with existing street monuments.
2. DESIGN CONSULTANT will perform a full topographic survey of all existing features including but not limited to:
 - a. 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.
 - b. DESIGN CONSULTANT will survey the project corridor beginning at the center point of the Queen Creek Road Intersection and extending 500 feet south of the Hunt Highway Intersection. The survey will extend 200 feet east and west of all collector street intersections. At the Ocotillo Road and Chandler Heights Road Intersections the field survey will extend 200 feet beyond the existing improved areas that have been described above.
 - c. DESIGN CONSULTANT will take elevations at the gutter flow line and top of curb for all existing curb and gutter, at the pavement adjacent to median curb, top of median curbs, at the outside edge of pavement where there is no curb and at existing ground at a maximum of 25-foot intervals beyond the edge of pavement or back of curb to a distance of 100 feet from the centerline or subdivision wall, whichever is reached first, of Gilbert Road.

- d. DESIGN CONSULTANT will take elevations along the centerline and edges of each driveway beginning at the gutter flow line for a distance of 30 feet. DESIGN CONSULTANT will take ground elevations at all grade breaks along each driveway centerline and edges.
 - e. DESIGN CONSULTANT will take elevations at the inverts of all catch basins, manholes, pipes and all water valve nuts within the project limits. DESIGN CONSULTANT will establish benchmarks at 500-foot intervals along Gilbert Road for the length of the project.
 - f. DESIGN CONSULTANT will provide a sketch showing each benchmark with a minimum of 3 ties to features that should not be disturbed by construction.
 - g. DESIGN CONSULTANT will provide a digital photo log of the project. The photos will be taken looking up-station at no less than 50-foot increments along the proposed curb line. The photos will 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 will provide station, offset and/or direction of the picture, or other identifying description, for each picture. DESIGN CONSULTANT will provide the City with CDs of the photo log.
3. DESIGN CONSULTANT will set panels and provide photogrammetric services and aerial mapping, through Cooper Aerials, of Gilbert Road along the full limits of the topographic survey. The result will provide planimetric detail, including pavement striping. DESIGN CONSULTANT will provide digital orthophoto with a pixel resolution of 0.15 on a CD ROM.

B 9.0 RIGHT-OF-WAY

1. At Preliminary (15%) Design, DESIGN CONSULTANT will prepare a right-of-way strip map overlain on an aerial photograph of the project limits, showing existing property rights for right-of-way, easements, and utilities on Gilbert Road 200 feet north of Queen Creek Road to 200 feet south of Hunt Highway. The strip map will also extend east and west of Ocotillo Road and east of Chandler Heights Road for 500 feet beyond the improvements as described above. 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 will include a list of identified properties and property rights. City will obtain litigation reports for the parcels where property acquisition is needed and provide DESIGN CONSULTANT with copies.
2. DESIGN CONSULTANT will provide legal descriptions and exhibits for the acquisition of new right-of-way, temporary construction easements, drainage tracts, and drainage easements. DESIGN CONSULTANT will 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 will provide closure data for all written legal descriptions and exhibits. The scope of work includes, but is not limited to:
 - a. The preparation of 21 written legal descriptions and exhibits, or as many as needed, for the acquisition of permanent right-of-way on Gilbert Road from Queen Creek Road to Hunt Highway. If more than 21 legal descriptions are necessary for right-of-way acquisition, the cost for such additional work will be paid from the allowance included in the Contract Price.
 - b. The preparation of 15 written legal descriptions and exhibits, or as many as needed for permanent drainage easements on Gilbert Road from Queen Creek Road to Hunt Highway. If more than 15 legal descriptions are necessary for drainage easements, the cost for such additional work will be paid from the allowance included in the Contract Price. Legal descriptions and exhibits will be accompanied by volumetric calculations, and will 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 temporary construction easements (10 estimated). The cost for such work will be paid from the allowance included in the Contract Price.

- d. The preparation of written legal descriptions and exhibits, as needed, for utility easements (16 Estimated). The cost for such work will be paid from the allowance included in the Contract Price.
 - e. The preparation of the legal descriptions will include a parcel exhibit and one revision to the original legal description excluding any revisions due to errors by the preparer. The fee for additional legal descriptions will be at the rate of \$900 per legal description.
3. DESIGN CONSULTANT will submit final right-of-way documents to the City between 30% and 60% design completion. These documents will include legal descriptions, parcel maps, right-of-way strip maps, a final drainage report, and 30% design plans for all acquisitions and easements.
 4. DESIGN CONSULTANT will field stake right-of-way twice at a time to be set by the City's Project Manager.

B 10.0 PLANS, SPECIFICATIONS AND ESTIMATES

1. DESIGN CONSULTANT will prepare 1plans, specifications and estimates for Gilbert Road from Queen Creek Road to Hunt Highway in accordance with City standards. The plans will include a variation of the following, depending on the stage of the submittal:
 - Cover Sheet
 - General Notes Sheets
 - Standard Sections Sheet
 - Paving Plans/Profiles (1"=20'H/1"=2' V) – See Task 11 for additional information
 - Drainage Plans – See Task 12 for additional information
 - Striping and Signing Plans (1"=40') – See Task 13 for additional information
 - Traffic Signal Plans – See Task 14 for additional information
 - Lighting Plans – See Task 15 for additional information
 - Bridge Construction Plans and Details -
 - Other Utility New and/or Relocation Plans (if required, by others)
 - Landscape and Irrigation Plans – See Task 16 for additional information
 - Storm Water Pollution Plans – see Task 17 for additional information
 - Waterline Plans (1"=20' H/1"=2' V) – See Task 18 for additional information (contingency)
 - Sewer Plans (1"=20' H/1"=2' V) – See Task 18 for additional information (contingency)
2. DESIGN CONSULTANT will submit plans at the 30%, 60%, 95% and 100% stages. The plan submittals will follow the checklists provided by the City.
3. At the 30%, 60% and 95% plan submittals, DESIGN CONSULTANT will submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.
4. At the completion of the design, DESIGN CONSULTANT will submit a CD containing complete improvement base files in AutoCAD .DWG format and scanned .TIF images of each plan sheet (signature set.)
5. Specifications will be in accordance with the MAG Standard Specifications and City of Chandler Standard Specifications. DESIGN CONSULTANT will supply special provisions for all items not adequately covered by the standard specifications.
6. DESIGN CONSULTANT will prepare cost estimates for all pay items per the standard specifications and special provisions, except that volumetric measurements will not be used for pay items.
7. Following each review, DESIGN CONSULTANT will review the City's comments and complete the comment resolution forms provided by the City. DESIGN CONSULTANT will 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 will provide the

comment matrix to the City one week prior to the Comment Resolution Meeting. All comments will be incorporated unless otherwise authorized by the City.

8. DESIGN CONSULTANT will return redline comments with each plan submittal.
9. DESIGN CONSULTANT will be responsible for delivering to the City a complete set of constructible plans and will be responsible for ensuring constructability of such plans, including, but not limited to, completion of right-of-way, TCE, and drainage easement acquisitions, and completion of utility relocation design.

B 11.0 PAVING PLAN/PROFILES

1. DESIGN CONSULTANT will perform work necessary to create Typical Roadway Sections, Geometric Layout and Paving Plan & Profile Sheets using design right-of-way needs for a major arterial (City of Chandler Standard Detail C-203.)
2. DESIGN CONSULTANT will 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 will show centerline stationing, existing ground, proposed curb and gutter grades, benchmarks and underground utilities.

B 12.0 DRAINAGE PLANS

1. DESIGN CONSULTANT will prepare a drainage analysis to define the new runoff expected as a result of the Gilbert Road construction and recommend the drainage improvements required.
2. DESIGN CONSULTANT will perform drainage calculations and incorporate them into a Draft Drainage Report to accompany the 30% plan submittal. The limits of analysis will be to existing improvements. DESIGN CONSULTANT will verify that the existing basins constructed along Gilbert Road within the project limits match the as-built plans. The Draft Drainage Report will identify proposed retention basins and any required drainage easements. This report will document all calculations certifying that the proposed design meets the design criteria.
3. DESIGN CONSULTANT will incorporate comments received from the Draft Drainage Report into a Final Drainage Report between the 30% and 60% plan submittals.
4. DESIGN CONSULTANT will size and design new drainage structures, catch basins, and retention basins based on the design flows established in the Final Drainage Report.
5. DESIGN CONSULTANT will submit legal descriptions and exhibits for drainage easements, including volumetric calculations, to the City between 30% and 60% plan submittals.

B 13.0 STRUCTURAL IMPROVEMENTS

1. The existing bridges at the RWCD Canal will be extended on both sides of Gilbert and Ocotillo Roads. Because both bridges are identical in construction, pipe culverts with large headwalls, it is anticipated that the bridges will be replaced to provide adequate headboard between the high water level and the bottom of the bridge, and to eliminate the possibility of obstructions impacting the integrity of the structure. Improvements for the bridges will be provided by PB Americas as a subconsultant to DESIGN CONSULTANT. A scope of their services is attached.
2. DESIGN CONSULTANT will provide designs for retaining walls at the following locations:
 - a. Along the west side of Gilbert Road adjacent to the RWCD Surge Pond north of Chandler Heights Road – approximately 1000 LF.
 - b. Along the west side of Gilbert Road adjacent to the RWCD Surge Pond north of Riggs Road – approximately 1400 LF.
 - c. Along the east side of Gilbert Road between Hunt Highway and Riggs Road – approximately 1200 LF.

Gilbert Road (Queen Creek Road to Hunt Highway)

ST0809-201

Page 18 of 32

B 14.0 TRAFFIC SIGNAL AND STREE LIGHTING PLANS

1. As a subconsultant to DESIGN CONSULTANT, Southwest Traffic Engineers (SWTE) will design traffic signals:
 - a. For the intersections at Ocotillo Road and Chandler Heights Road in accordance with applicable City of Chandler Traffic Signal Standards and Specifications.
 - b. SWTE will 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.
 - c. SWTE will coordinate traffic signal design with Salt River Project (SRP) to define a power source to serve the new traffic signals.
 - d. SWTE will design the layout of the signal pole and controller locations for the intersection described above at the 30% plan stage. The Signal Design Plans will be produced at a 1" = 20' scale and include the following sheets:
 - General Signal Layout Sheet
 - Signal Interconnect/Fiber Optic Layout Plan Sheet
 - Traffic Signal Quantity and Detail Sheet including Phasing Diagram, Cameras and Wiring Diagram
 - e. SWTE will design the missing sections or extensions of fiber interconnect within the project limits along Gilbert Road.
2. As a subconsultant to DESIGN CONSULTANT, Southwest Traffic Engineers (SWTE) will design street lighting along Gilbert Road from Queen Creek Road to Hunt Highway in accordance with applicable City of Chandler Street Light Standards and Specifications. The street light design will match the existing street lights. SWTE will include digital photos of existing streetlights in the photo log.
 - a. SWTE will 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.
 - b. SWTE will coordinate lighting design with Salt River Project (SRP) to define a power source to serve the lighting system.
 - c. SWTE will provide a computer generated point-to-point foot-candle grid for Gilbert Road, and submit documents to City for approval.
 - d. SWTE will provide detail drawings for the following:
 - Pole details (Pole illustration, pole schedule and general notes)
 - Electrical details (Control center, wiring schematic, cable schedule)
 - Foundation details
 - Miscellaneous details (Pole grounding, connectors)

B 15.0 STRIPING AND SIGNING PLANS

1. DESIGN CONSULTANT will develop preliminary traffic signing and striping plans for this project at the 30% plan stage. DESIGN CONSULTANT will finalize the traffic signing and striping plans at the 60% plan stage. The Signing and Striping Design Plans will be produced at 1"= 40' scale and will include the following sheets:
 - a. General Striping Notes sheet (including all striping quantities)
 - b. General Signing Summary and Notes
 - c. Striping and Signing plan sheets

Gilbert Road (Queen Creek Road to Hunt Highway)

ST0809-201

Page 19 of 32

B 16.0 LANDSCAPE & IRRIGATION PLANS

1. DESIGN CONSULTANT will inventory existing trees, located via GPS survey and catalogue to assist Waibel and Associates determine if they are to remain in place, be salvaged for reuse, or demolished.
2. As a subconsultant to DESIGN CONSULTANT, Waibel and Associates will identify the tree species, record the caliper, ascertain the general health, and record the viability for transplant. City will provide an existing tree inventory and salvage plan.
 - a. Waibel will review existing irrigation water meters, valves, mainline, controllers, and other major irrigation infrastructure locations to determine potential for salvage. Locations will be derived from as-built and design plans provided by the City. Waibel will provide irrigation designs for the existing median irrigation that is to be changed over to reclaimed water. Existing irrigation facilities will be compared to the paving plan sheets.
 - b. Waibel will coordinate with the City's Landscape Architect to determine the desired types of plant material and irrigation equipment.
 - c. Waibel will develop 30% Landscape plans showing location and species of proposed new trees, existing trees to remain, and salvaged and relocated trees. Shrub massing will be shown. Specific shrub species will be shown at the 60% plan submittal. Plant schedule, landscape notes, and City of Chandler standard landscape details will be shown. Plant quantities will be shown at the 90% plan submittal.
 - d. Waibel will develop 30% 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.
 - e. Waibel will provide a table of contents identifying the specifications that will be used at the 30% plan submittal, and develop an opinion of probable cost for each plan submittal.
 - f. Waibel will identify individual shrubs and develop irrigation laterals for the 60% plan submittal.
 - g. Waibel will generate Landscape and Irrigation specifications at the 60% plan stage.
 - h. Waibel will show the water taps for irrigation equipment on the utility plans or roadway plans, as appropriate. Waibel will provide the complete design and all necessary details for these water taps and power for the irrigation controllers.
 - i. Bioassay testing, archeology, soil fertility, and other tests to determine plant viability in existing conditions are not considered part of this scope of work.

B 17.0 STORMWATER POLLUTION PREVENTION PLANS

1. Storm Water Pollution Prevention Plan (SWPPP) are not a part of the design scope of services for this contract.

B 18.0 WATERLINE, RECLAIMED WATER AND SANITARY SEWER PLANS

1. DESIGN CONSULTANT will provide designs for reclaimed water, sanitary sewer and potable water lines as a separate set of documents that can be issued to the CM@R under a separate GMP from that of the roadway improvement plans. The work on the wet utilities will begin after the alignment has been accepted by the City at the 15% Phase.
2. DESIGN CONSULTANT will provide designs for in-fill approximately 7,200 LF. of 12-inch reclaimed water lines in the following areas:
 - a. In Gilbert Road from Queen Creek Road south for approximately ½ mile – approximately 2,600 LF.
 - b. In Gilbert Road from Riggs Road north for approximately ½ mile – 2,600 LF.

Gilbert Road (Queen Creek Road to Hunt Highway)

ST0809-201

Page 20 of 32

- c. In Ocotillo Road from approximately ¼ mile west of Gilbert Road, east to the RWCD canal – approximately 2,000 LF. This includes extending the line under the RWCD canal.
3. DESIGN CONSULTANT will provide a design to install approximately 1,100 LF of sanitary sewer main in the areas listed below. The size of the mains will be identified by the City after NTP.
 - a. Identify all manholes that are to be replaced and/or repaired within the project limits as identified by a Citywide inspection project. Details and specifications will be provided by the City for inclusion in the plans.
 - b. In Chandler Heights Road for approximately ¼ mile east of Gilbert Road – approximately 1,100 LF.
 4. DESIGN CONSULTANT will provide a design to install approximately 13,700 LF of potable water in the following areas:
 - a. 16-inch in-fill water line in Gilbert Road in the following areas:
 1. From Queen Creek Road to approximately ½ mile to the south – approximately 2,600 LF.
 2. From the Alamosa Well site to Chandler Heights Road. This includes crossing the RWCD canal – approximately 4,000 LF.
 3. From Chandler Heights Road to approximately ¼ mile south – approximately 1,300 LF.
 4. From Riggs Road to approximately ½ mile to the north – approximately 2,600 LF.
 - b. A 24-inch gravity water line (low pressure) from Alamosa Well Station to Gilbert Well Station fill line. This includes crossing the RWCD canal – approximately 10,000 LF.
 - c. 12-inch well transmission line in the following areas in Gilbert Road:
 1. From south of the RWCD canal to Wood Drive and stub to the east – approximately 5,200 LF.
 2. From south of Ocotillo Road to ¼ mile north of Ocotillo and stub to the west – approximately 5,200 LF.
 - d. A purge line from the Gilbert Station to the existing reclaimed water line on the west side of Gilbert Road – approximately 200 LF.
 - e. At the intersection of Gilbert Road and Ocotillo Road and at the entrance to the Alamosa Station, there will be miscellaneous connections and piping which will be coordinated with the City and its DESIGN CONSULTANT.
 5. DESIGN CONSULTANT will design sewer, reclaimed and potable water laterals from the main lines to the property line of each undeveloped parcel along Gilbert Road from Queen Creek Road to Hunt Highway, and in the portions of Ocotillo Road and Chandler Heights Road that are within the project limits.
 6. It is anticipated that existing sewer, reclaimed water and potable water lines will not require replacement within the project limits.

B 19.0 GEOTECHNICAL

1. As a subconsultant to DESIGN CONSULTANT, Ninyo and Moore will provide geotechnical investigation including percolation tests and pavement design tasks. An associated scope and fee for their work is attached.

B 20.0 PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

1. As a subconsultant to DESIGN CONSULTANT, Ninyo and Moore will conduct a Phase I Environmental Site Assessment (ESA) and submit a final Phase I ESA report inclusive of each property requiring new right-of-way to the City's project manager no more than forty-five (45) calendar days after the 30% plan submittal. Phase I ESA reports will document findings and provide opinions and recommendations regarding possible environmental impacts at the sites. DESIGN CONSULTANT will provide color photographs and figures in each report.
2. Following review by the City's Environmental Program Specialist, DESIGN CONSULTANT will review the City's comments and address those comments in a final Phase I ESA.

3. Ninyo and Moore will also provide two updates to the Phase I ESA report. The City of Chandler will dictate the timing for these updates which are expected to occur near the time when right of way has been acquired and construction begins.

B 21.0 UTILITY LOCATING SERVICES (POTHOLING)

1. DESIGN CONSULTANT will contract with TBE Group to 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 C".
2. TBE Group will locate all utilities in the Ocotillo Road intersection. The limits of this investigation will extend for approximately 1000 feet to the west and to the Alamosa Station to the south.
3. During the 30% design phase, DESIGN CONSULTANT will develop a suggested pothole list that identifies stationing and offset. DESIGN CONSULTANT will provide the list to utility companies affected by the project, and facilitate coordination of a master pothole list. The locating company will provide pothole information for those areas that are not serviced by any of the utility companies.
 - a. Prior to completion of the 30% plans, the locating company will provide vacuum excavation potholes (testholes) on existing subsurface utilities at locations identified on the master pothole list. Pertinent pothole data will be presented in spreadsheet format on a standard "Testhole Data Summary" form that includes the depth, horizontal and vertical location, size and material composition of the utility line exposed. Approximately 40 potholes are anticipated.
 - b. TBE Group will 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. The locating company will identify the pothole number, northing, easting and elevation of the staked location. DESIGN CONSULTANT will measure and record adjustments from the surveyed location to the steel reference pin set above the centerline of each exposed utility.
 - c. Vacuum excavation potholing will include mobilization, set-up, traffic control (excluding uniformed police officer, special barricading, permit fees or inspections required by any governmental agencies), pavement cut and removal (if any), pavement patch as specified in Street Cut Permit (if any), excavation, backfill and compaction, all information requested, and clean up. The locating company will apply for and obtain City of Chandler permit for potholing.
 - d. For identified water and sewer lines, while the pothole is excavated, representatives from the City's Water and Sewer Department and DESIGN CONSULTANT will perform visual inspection of the condition of the lines. Formal recommendations for potential rehabilitation or replacement will be developed by the City's Water and Sewer representatives and DESIGN CONSULTANT and provided to the City's project manager in memorandum form.
4. DESIGN CONSULTANT will transpose the pothole information onto the plans and adjust street and utility designs to minimize impacts to utilities where feasible.

C. CONSTRUCTION DOCUMENTS

DESIGN CONSULTANT will prepare the construction documents for each design submittal listed in the table below.

Construction Document	30% Stage	ROW	60% Stage	95% Stage	100% Stage	No. of Sheets
Face Sheet	P		F	F	S	1
Design Sheet/Index			P	F	S	3
Special Detail Drawings			P	F	S	4
Typical Roadway Sections	P		F	F	S	3
Geometric Configuration	P		F	F	S	2
Paving Plan & Profile Sheets	P		F	F	S	48
Drainage Plans & Details	P		F	F	S	25

Bridge Plans & Details	P		F	F	S	12
Retaining Wall Plans & Details			P	F	S	12
Intersection Plans & Details	P		F	F	S	6
Traffic Signal Plans & Details	P		P	F	S	19
Signing and Pavement Marking Plans & Details	P		P	F	S	12
Lighting Plans & Details	P		P	F	S	28
Landscape Plans & Details			P	F	S	42
Stormwater Pollution Prevention Plans			P	F	S	6
Utility Plan/Profile/Details (Separate Set)						
Face Sheet, Design Sheet & Index Sheet	P		F	F	S	3
Reclaimed Water Plans & Details	P		F	F	S	18
Sanitary Sewer Plans & Details	P		F	F	S	5
Potable Water Plans & Details	P		F	F	S	64
Quantity & Cost Estimate	P		P	F	F	
Special Provisions	P		P	F	S	
Drainage Report	P	F	S			
Water Line Pressure Analysis	P			F	S	
Geotechnical Report	P		S			
Environmental Site Assessment Report	P	S				
Right-of-way Legal Descriptions		S				
Right-of-way Strip Map	F	F	F	F	F	3
Utility Strip Map	P	P	F	F	F	3
TOTAL NO. OF SHEETS						319

P – Denotes Preliminary, F – Denotes Final, S – Denotes Sealed

C 1.0 ALIGNMENT (15%) PLANS

- DESIGN CONSULTANT will prepare alignment plans that address specific issues within the corridor and provide options that minimize right-of-way requirements and take advantage of the existing street improvements within the corridor. These alternatives will be discussed with City staff. At the City's request, the alternatives will be presented at an initial public meeting. The goal of the 15% alignment plans will be to finalize a viable alignment that can be carried forward as the ultimate design alternative for preparing utility and street improvement plans.
- DESIGN CONSULTANT will submit to the City three (3) full size sets of alignment plans, three (3) copies of the right-of-way strip map, and two (2) copies of the litigation reports. In addition, DESIGN CONSULTANT will send one (1) full size set of alignment plans, along with a matrix of DESIGN CONSULTANT detailing all identified utility conflicts to each utility company affected by the project.

C 2.0 PRELIMINARY (30%) PLANS

- DESIGN CONSULTANT will submit to the City eight (8) full size sets of construction plans, eight (8) half size sets of construction plans, five (5) copies of the draft drainage report, five (5) copies of the draft geotechnical report, two (2) copies of the "Testhole Data Summary Sheet", ten (10) copies of the construction cost estimate, ten (10) copies of the outline special provisions, two (2) copies of the final right-of-way strip map, two (2) copies of the utility strip map, and plan checklists. In addition, DESIGN CONSULTANT will send two (2) full size sets of construction plans, along with conflict letters and a copy of the "Testhole Data Summary Sheet" to each utility company affected by the project.
- DESIGN CONSULTANT will submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

C 3.0 RIGHT-OF-WAY SUBMITTAL

- DESIGN CONSULTANT will submit five (5) copies of the final drainage reports, the final legal descriptions for acquisitions, drainage easements, utility easements, and TCEs, two (2) copies of the final right-of-way

strip map, two (2) copies of the utility strip map, and one (1) copy of the draft Phase I Environmental Assessment.

C 4.0 PRELIMINARY (60%) PLANS

1. DESIGN CONSULTANT will incorporate any changes, corrections and/or additions as a result of the preliminary plan review. DESIGN CONSULTANT will submit to the City 30% redlines, ten (10) copies of 30% plan comments and annotated comment sheet, eight (8) full size sets of construction plans, eight (8) half-size sets of construction plans, one (1) copy of the sealed drainage report, five (5) copies of the final geotechnical report, six (6) copies of the construction cost estimate, six (6) copies of the technical special provisions, plan checklists, one (1) copy of the final right-of-way strip map, two (2) copies of the utility strip map, and three (3) copies of the final Phase I ESA. In addition, DESIGN CONSULTANT will send two (2) full size sets of construction plans, along with conflict letters to each utility company affected by the project.
2. DESIGN CONSULTANT will submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

C 5.0 PRE-FINAL (95%) PLANS

1. DESIGN CONSULTANT will incorporate any changes, corrections and/or additions as a result of the preliminary plan review. DESIGN CONSULTANT will submit to the City 60% redlines, ten (10) copies of 60% plan comments and annotated comment sheets, eight (8) full size sets of construction plans, eight (8) half size sets of construction plans, six (6) copies of the construction cost estimate, six (6) copies of the final technical special provisions, plan checklists, one (1) copy of the final right-of-way strip map, and two (2) copies of the utility strip map. In addition, DESIGN CONSULTANT will send two (2) full size sets of construction plans, along with conflict letters to each utility company affected by the project.
2. DESIGN CONSULTANT will submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

C 6.0 FINAL (100%) CONSTRUCTION DOCUMENTS

1. DESIGN CONSULTANT will incorporate any changes, corrections and/or additions as a result of the pre-final plan review. DESIGN CONSULTANT will submit to the City 95% redlines, one (1) copy of 95% plan comments and annotated comment sheets, one (1) sealed set of specifications including technical special provisions, one (1) full size set of sealed construction plans on reproducible 4 mil Mylar with cover sheet signed by ADEQ or Maricopa Environmental Services, if applicable, one (1) copy of the final construction cost estimate and bid schedule, one (1) copy of the final right-of-way strip map, and two (2) copies of the final utility strip map.
2. DESIGN CONSULTANT will submit a CD containing complete improvement base files in AutoCAD .DWG format, and AutoCAD .DWF (Design Web Format) exports of each plan sheet or scanned .TIF images of each plan sheet.

D. POST DESIGN SERVICES

1. DESIGN CONSULTANT will assist the City during construction by answering RFIs.
2. Construction management or observation / inspection, or participation in construction meetings are not included in this scope of work.
3. DESIGN CONSULTANT will prepare as-built drawings from redlined plans provided by the City after the construction is complete.
4. DESIGN CONSULTANT will provide photogrammetric services and aerial mapping along the full limits of construction. The result will provide planimetric detail, including pavement striping, one-foot contours and

DTM of the project limits described above. DESIGN CONSULTANT will provide digital orthophoto with a pixel resolution of 0.15 on a CD ROM.

E. PROJECT SCHEDULE

A proposed schedule is attached for your review. It was developed based on past experience and is indexed to the notice to proceed date. It has been assumed that all agencies have a combined three week review period.

1. DESIGN CONSULTANT will adhere to the production schedule established for the project and such schedule may not be modified or deviated from without written consent by the City. DESIGN CONSULTANT will 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 will include a written explanation stating the reasons for the schedule change and a plan for getting back on schedule. DESIGN CONSULTANT will take all reasonable action necessary to get the project back on schedule and City will cooperate to assist DESIGN CONSULTANT.

F. QUALITY CONTROL

DESIGN CONSULTANT will institute and comply with the Design Quality Control Plan established for the project.

**EXHIBIT A-2
DESIGN TEAM AND THEIR ASSIGNMENTS**

Design Consultant's design team and their assignments are as follows:

- | | |
|----------------------------|---|
| ○ Michael J. Bonar, P.E. | Project Principal |
| ○ Denis Howe, P.E. | Project Manager |
| ○ Bill Linck, P.E. | Asst. Project Manager / QA/QC |
| ○ Urmas Grossthal, P.E. | Design Engineer Team Lead |
| ○ Gabe Prusak, EIT | Designer |
| ○ Alberto Gonzales, EIT | Designer |
| ○ George Toot | Designer / CADD Technician |
| ○ Jeff Schorey | Designer / CADD Technician |
| ○ Shaun Laub | CADD Technician |
| ○ Jesus Arzaga | CADD Technician |
| ○ Hernan Aristizabal, P.E. | Drainage Engineer |
| ○ Shawn Berkram, R.L.S. | Project Surveyor |
| ○ Dan Francetic, R.L.S. | Project Surveyor |
| ○ Mike Colland | Constructability Review / Construction Administration |
| ○ Henry Sung, P.E. | Structural Engineer |
| ○ Steve Nowaczyk, P.E. | Geotechnical Engineer |
| ○ Janet Waibel, L.A. | Landscape Architect |
| ○ John Willett, P.E., PTOE | Traffic Engineer |

**EXHIBIT A-3
PRODUCTION SCHEDULE**

ROADWAY DESIGN PLANS	MILESTONE DATE
15% Plans	Notice to Proceed (NTP) + 14 Weeks
30% Plans	NTP + 36 Weeks
60% Plans	NTP + 58 Weeks
95% Plans	NTP + 74 Weeks
Final Plans	NTP + 87 Weeks

UTILITY DESIGN PLANS	MILESTONE DATE
15% Plans	Notice to Proceed (NTP) + 14 Weeks
30% Plans	NTP + 24 Weeks
60% Plans	NTP + 40 Weeks
95% Plans	NTP + 52 Weeks
Final Plans	NTP + 64 Weeks

EXHIBIT A-4 QUALITY CONTROL PLAN

PROJECT CONTROLS, QUALITY ASSURANCE, COST MANAGEMENT AND SCHEDULE

Inherent in all types of projects are the consultant's capability to conduct work effort that will result in the most cost-effective solution to achieve the desired project objectives.

- **Quality assurance/control.** DESIGN CONSULTANT has an established and on-going quality control program that is an integral part of its project management commitment. Its program subscribes to the idea that each member of the production team has direct definable responsibilities in producing a quality product for the client. Key elements of DESIGN CONSULTANT quality control process emphasize management controls, checklists, and project element responsibility identification which is identified through DESIGN CONSULTANT project specific "Project Manager's Manual." DESIGN CONSULTANT internal review system provides an orderly and scheduled approach to checking document preparation at specific intervals. Our quality management objectives, monitored in weekly projects meetings, are: (1) to reduce costly change orders and liability claims through the development of accurate and concise documents; (2) constantly focus on project goals and objectives; and (3) to take immediate action to correct any part of the work that is not proceeding according to the pre-defined work plan.
- **Schedule control.** Entellus uses a "level of effort" forecasting procedure that regularly updates manpower estimates by task as well as provides project data printouts to aid the project manager in ensuring timely completion. Entellus designates the project manager as being responsible for project staffing requirements, schedule adherence, and for instituting the following procedures to insure that a project's progress toward completion is maintained according to a pre-determined schedule:
 - developing a complete scope of work
 - identifying work task level of effort
 - measuring actual task completion against anticipated completion
 - monitoring changes in work scope as a result of unforeseen conditions to determine their impact to the critical work path
 - holding weekly project team meetings
 - maintaining agency representative interface throughout the work progression
- **Cost management.** DESIGN CONSULTANT focus on cost control, linked with our QC process, originates from defining and scheduling work activities which are tied directly to baseline budgets. Project managers are supported by DESIGN CONSULTANT job cost monitoring computer program.

CONTINGENT PLAN FOR MAINTAINING PROJECT CONTINUITY. Loss of continuity leads to the potential for gaps in data, inaccuracies, and increased costs in the project budget. As such DESIGN CONSULTANT contingent plan for project continuity includes the following elements:

- **Active firm principal participation.** Principal participation will assure that no data gaps will result from the loss of another team member. In addition, because the firm principal is acutely aware of the importance of customer satisfaction as the prerequisite for future work, high level output is always the governing concern.
- **Depth of team resource support.** DESIGN CONSULTANT has identified a full complement of key team disciplines supported by an in-depth level of other personnel resources to support this project. Our reasoning for this is to make sure that the loss of a team member would not be a detriment to the successful achievement of project objectives.
- **Frequent team "project status" meetings.** These meetings are effective yet efficient "stand up" reviews to determine project status, identify team member responsibilities and their impacts on the continued progress of other team members' responsibilities, and the opportunities to ask "What if..." questions.
- Assignment of specific team members who have evidenced a long-term employee relationship with DESIGN CONSULTANT.

EXHIBIT B

FEE SCHEDULE - NOT TO EXCEED – HOURLY RATE

PROJECT TITLE: **Gilbert Road (Queen Creek Road to Hunt Highway)**
PROJECT NO. **ST0809-201**
Chandler, AZ.

For services described in paragraph 3 of this Agreement, the CITY shall pay DESIGN CONSULTANT a fee not to exceed the sum of **Two Million Five Hundred Thirty Four Thousand One Hundred Thirty Six dollars (\$2,534,106)** in accordance with the schedule set forth in exhibits B-1 and B-2 attached hereto and incorporated herein by reference.

1. **PAYMENT SCHEDULE:** Payments to Design Consultant will be based on the hourly rates and expense costs shown on the fee schedule attached as Exhibit B-1 and will be made in accordance with the estimated payment schedule attached as Exhibit B-2 which is based on the production schedule shown on Exhibit A-3. If the production schedule is amended, Exhibit B-2 shall also be modified to be consistent with Exhibit A-3.
2. The not to exceed fee listed above is the total authorized fee and includes "reimbursables".
3. Payment will be made monthly on the basis of time and costs expended as reported in progress reports and deliverables. Work schedule updates will be included in the monthly progress payment requests.
4. An application and certification for payment must be provided by Design Consultant. Such application must provide a clear, detailed invoice reflecting all items billed for. The summary sheet will show, in addition to hours, rates and costs, the percentage of work completed to date, previous payment invoiced/received and current fee requested.
5. Such application shall also include any/all backup documentation (i.e.: receipts, invoices, logs, etc) supporting reimbursable expenses and consultant fees.

**EXHIBIT B-1
DESIGN TEAM HOURLY RATES AND OTHER CHARGES**

		SR	PM	Project		Cler	Survey	Survey	SUB	REIMB	TOTAL
		PE		Engineer	CADD		Field	Entellus			FEE
		\$163	\$150	\$110	\$88	\$55	\$150	\$117	LABOR	FEEES	FEE
A.	BACKGROUND										
B 1.0	GENERAL TASKS										
B 2.0	DATA COLLECTION										
	1 City As-built Drawings			16	16				\$3,168.00		\$3,168
	2 Data Log			8		8			\$1,320.00		\$1,320
	3 Aerial Photography			8					\$880.00		\$880
	4 City Survey Control		4						\$600.00		\$600
	5 Title Reports (21 Assumed)		8	16		4			\$3,180.00	\$6,900	\$10,080
	6 Geotechnical Reports		4	24	8	16			\$4,824.00		\$4,824
	7 Phase I Environmental Assessments (9 Assumed)		8	16					\$2,960.00		\$2,960
	8 Utility Quarter Section Maps		4	12	12				\$2,976.00	\$200	\$3,176
B 3.0	PUBLIC UTILITY COORDINATION										
	1 Utility Coordination		24	48	48	24	16		\$19,384.00		\$19,384
	2 Utility Coordination for pending upgrades to respective systems		24	48	48		24		\$17,712.00	\$360	\$18,072
	3 Utility Coordination for abandonments & deactivations		8	24	32	32	12		\$11,900.00		\$11,900
	4 Field verify horizontal locations of existing utilities		8	16	24	32			\$9,160.00		\$9,160
	5 Identify potential alignment conflicts		8	16	24	40			\$9,864.00		\$9,864
	6 Requests for title reports for affected properties			8	16		4		\$3,180.00	\$4,900	\$8,080
	7 Notify utility companies of intent to improve roadway corridor		4	12	12		12		\$4,432.00		\$4,432
	8 Provided base files to utility companies				16	24			\$3,872.00		\$3,872
	9 Develop preliminary utility alignments		8	20	40	60			\$13,984.00		\$13,984
	10 Identify utility easements		2	20	48	40		40	\$16,806.00		\$16,806
	11 Develop Utility Strip Map		2	8	16	40			\$6,806.00		\$6,806
	12 Copies of utility communications to the City		12	20	24		24		\$8,916.00		\$8,916
	13 Utility Coordination Meetings (16 meetings)		20	60	60		32		\$20,620.00		\$20,620
	14 Constructability Review of Utility Plans		20	40	40		4		\$13,880.00		\$13,880
	15 Documentation and project construction schedule impacts		2	20	20				\$5,526.00		\$5,526
B 4.0	PROGRESS MEETINGS										
	1 Team Meetings & Comment Resolution Meetings (38 meetings)		24	76	76		76		\$27,852.00	\$540	\$28,392
	2 Meeting minutes		12	40	76		76		\$20,496.00		\$20,496
B 5.0	PUBLIC MEETINGS										
	1 Public Meetings (6 Meetings)		24	24	24	8	8		\$11,296.00	\$120	\$11,416
	2 Display Boards and other materials		8	16	24	36	12		\$10,172.00	\$750	\$10,922
B 6.0	STAKEHOLDER MEETINGS										
	1 Stakeholder Meetings (8 meetings)		24	32	40		8		\$13,552.00	\$240	\$13,792
	2 Display Boards and other materials		8	24	32	40	16		\$12,824.00	\$300	\$13,124
B 7.0	PROJECT MANAGEMENT										
	1 Progress Reports, Budget Monitoring, & Management		120	180	120		36		\$61,740.00		\$61,740
	2 CM@R Coordination		48	80	80	80	36		\$37,644.00		\$37,644
B 8.0	DESIGN SURVEY										
	1 Establish Horizontal and Vertical Control					16		40	8		\$8,344
	2 Topographic Survey					100		280	60		\$57,820.00
	3 Digital Photo Log			4	20	60	8		8		\$9,456.00
	4 Aerial Photography Targets and Coordination					16		80	8	\$13,725	\$28,069
B 9.0	RIGHT-OF-WAY SURVEY										
	1 Right-of-way Strip Map		8	20	40	60		40	\$18,664.00		\$18,664
	2 Prepare Legal Descriptions & Exhibits (See Allowances)								\$0.00		\$0
	3 Right-of-way Documents and interim submittals			4	8	24	8		40		\$8,712.00
	4 Field Stake right-of-way (See Allowances)								\$0.00		\$0
B10.0	PLANS SPECIFICATIONS AND ESTIMATES										
	1 15% Plan Submittal & Plan Set Format		16	180	360	720	8		\$133,008.00	\$85	\$133,093
	2 30% Plan Submittal		8	200	400	800	40		\$147,904.00	\$1,425	\$149,329
	60% Plan Submittal		6	160	300	600	24		\$112,098.00	\$1,425	\$113,523

Gilbert Road (Queen Creek Road to Hunt Highway)

ST0809-201

Page 30 of 32

(20790) 8-22-03Rev 3/27/06

CM@Risk Design Consultant Agreement

Entellus Project No. 615.055A

	95% Plan Submittal	4	160	240	480	24			\$94,612.00		\$1,425	\$96,037
3	Prepare CD & Project Web Site Maintenance			100	80	16			\$18,920.00		\$100	\$19,020
4	100% Plan Submittal & CD	12	80	120	20	16			\$38,596.00		\$100	\$38,696
5	Specifications	4	40	60	4	32			\$15,364.00		\$75	\$15,439
6	Cost Estimates	8	32	40	60	16			\$16,664.00			\$16,664
7	Prepare Comment Resolution Forms	4	40	40	16	16			\$13,340.00			\$13,340
B11.0	PAVING PLAN AND PROFILES											
1	Cover, Detail, General Note and Typical Section Sheets		16	40	80				\$13,840.00			\$13,840
2	Plan & Profile Sheets	4	24	48	200				\$27,132.00			\$27,132
B12.0	DRAINAGE PLANS											
1	Drainage Analysis	12	40	160	40				\$29,076.00			\$29,076
2	Draft Drainage Report	8	24	40	20	24			\$12,384.00			\$12,384
3	Final Drainage Report	4	16	24	20	8			\$7,892.00		\$125	\$8,017
4	Design Drainage Structures & Retention Basin	4	32	56	40				\$15,132.00			\$15,132
5	Legal descriptions and exhibits (See Allowances)								\$0.00			\$0
B13.0	STRUCTURAL IMPROVEMENTS											
1	Bridge Design Coordination with PB Americas	4	40	40	80	8			\$18,532.00	\$169,303		\$187,835
2	Design Retaining Walls	40	88	120	40				\$45,240.00			\$45,240
B14.0	TRAFFIC SIGNAL & STREET LIGHT PLANS											
1	Coordination with SWTE	4	16	40	80	8			\$14,932.00	\$156,039		\$170,971
B15.0	STIPING AND SIGNING PLANS											
1	Prepare Plans, Notes and Summary Sheets	16	40	80	120				\$27,968.00			\$27,968
B16.0	LANDSCAPING & IRRIGATION PLANS											
1	Inventory Existing Trees & Salvageable Plants	4	8	16	48	80			\$19,836.00	\$70,000		\$89,836
2	Coordinate Landscape & Irrigation Plans	8	16	16	48	8			\$10,128.00			\$10,128
B17.0	STORM WATER POLLUTION PREVENTION PLANS											
1	Not a part of this scope								\$0.00			\$0
B18.0	WATERLINE RECLAIMED AND SANITARY SEWER PLANS											
1	Prepare separate set of documents including specs & estimate	12	20	40	60				\$14,636.00			\$14,636
2	Prepare Reclaimed Water Plans	20	60	200	400	4			\$69,680.00			\$69,680
3	Prepare Sanitary Sewer Plans	8	16	60	100	2			\$19,214.00			\$19,214
4	Prepare Potable Water Plans	60	200	600	900	8			\$185,420.00			\$185,420
5	Design Utility Laterals to adjacent properties	12	48	100	40				\$32,476.00			\$32,476
6	Provide Plans and details to rehab wet utilities	1	4	8	8				\$2,347.00			\$2,347
B19.0	GEOTECHNICAL											
1	Coordinate Geotechnical Investigation & Reports	8	20	24	24	8			\$9,496.00	\$69,000		\$78,496
B20.0	PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)											
1	Coordinate ESA & Prepare Reports	4	4	12	4				\$2,924.00			\$2,924
B21.0	UTILITY LOCATING SERVICES (POTHOLING)											
1	Develop Pothole List & Submit for Approval (200 Potholes)	8	20	40	40				\$12,224.00			\$12,224
2	Coordinate Pothole Exploration & Coordination		8	8					\$2,080.00	\$125,000		\$127,080
3	Plot Potholes on Plans & Distribute	8	12	40	60				\$12,784.00			\$12,784
4	Utility designation in Gilbert Road	4	24	24	12	8			\$8,388.00	\$33,000		\$41,388
C	CONSTRUCTION DOCUMENTS											
D	POST DESIGN SERVICES											
1	Address RFIs	12	40	40	80				\$19,396.00			\$19,396
2	Prepare As-built Drawings	4	8	60	320				\$36,612.00		\$120	\$36,732
	Total Design Fee	749	2624	4704	6712	718	480	204	\$1,759,141	\$636,067	\$23,898	\$2,419,106

SUBTOTAL DESIGN FEE

\$2,419,106

ALLOWANCES

Legal Descriptions (Assume 60) \$45,000
Field Stake Right-of-Way (Assume 10) \$20,000
Phase I Assessments & Updates \$50,000

TOTAL DESIGN FEE

\$2,534,106

Gilbert Road (Queen Creek Road to Hunt Highway)

ST0809-201

Page 31 of 32

(20790) 8-22-03Rev 3/27/06

CM@Risk Design Consultant Agreement

Entellus Project No. 615.055A

**EXHIBIT B-2
ESTIMATED PAYMENT SCHEDULE**

PAYMENT APPLICATION	SUBMITTAL DATE
5% Completion	April 30, 2008
10% Completion	May 31, 2008
15% Completion	June 30, 2008
20% Completion	July 31, 2008
25% Completion	August 31, 2008
30% Completion	September 30, 2008
35% Completion	October 31, 2008
40% Completion	November 30, 2008
45% Completion	December 31, 2008
50% Completion	January 31, 2009
55% Completion	February 28, 2009
60% Completion	March 31, 2009
65% Completion	April 30, 2009
70% Completion	May 31, 2009
75% Completion	June 30, 2009
80% Completion	July 31, 2009
85% Completion	August 31, 2009
90% Completion	September 30, 2009
95% Completion	October 31, 2009
100% Completion	November 30, 2009