Item 8

CITY COUNCIL REPORT

Meeting Date: March 29, 2022
General Plan Element: ***Community Mobility***
General Plan Goal: ***Promote Regional diversity and connectivity of mobility choices***

ACTION

Engineering Services Contract for Design Services for Pima Road: Dynamite Boulevard to Las Piedras. Adopt Resolution 12435 authorizing Engineering Services Contract 2022-042-COS with Michael Baker International, in the amount of $1,274,981 for the design of Pima Road: Dynamite Boulevard to Las Piedras.

BACKGROUND

This project will upgrade Pima Road from Dynamite Boulevard to Las Piedras to a four-lane major arterial complete street. Project features will include a raised landscaped median, increased capacity, safety improvements at critical intersections, improved bike lanes, a new 6' to 8' sidewalk on the west side plus a 10-foot shared-use path and 6' to 8' unpaved trail on the east side. A bridge and/or series of large culvert structures will be required where the road crosses the Rawhide Wash channel and floodplain. In some locations, right of way maybe need to be purchased. The project limits are one-eighth mile north of Las Piedras to the southern edge of the Dynamite Boulevard intersection, for a complete project limit of 1.4 miles.

The project is consistent with the City's Transportation Master Plan and is part of the Regional Transportation Plan. The project is funded through the Arterial Life Cycle Program utilizing 0.5% countywide sales tax and local funds.

ANALYSIS & ASSESSMENT

Recent Staff Action

On October 7, 2021, Capital Project Management staff solicited Requests for Qualifications from engineering firms for the development of preliminary and final design documents for Pima Road: Dynamite Boulevard to Las Piedras. Three responses were received on November 4, 2021. A panel of five City staff members, which included a registered professional engineer, evaluated the responses. Based on the panel's recommendation, Michael Baker International, was selected for contract negotiations.

Community Involvement

Public outreach and community involvement will occur during the design phase through meetings with property owners, stakeholders, and members of the community.

Action Taken _____

RESOURCE IMPACTS

Available funding

Funding is currently available in Capital Improvement Program Project SI01 - Pima Road: Dynamite Boulevard to Las Piedras. This project will have future operating impacts, which will be identified as part of the design process and included in future budget development.

Staffing, Workload Impact

The contract administrator, responsible for enforcing all contract provisions, will be Joe Phillips, Project Manager, Capital Project Management Department, Public Works Division.

OPTIONS & STAFF RECOMMENDATION

Recommended Approach

Adopt Resolution 12435 authorizing Engineering Services Contract 2022-042-COS with Michael Baker International, in the amount of $1,274,981 for the design of Pima Road: Dynamite Boulevard to Las Piedras.

Proposed Next Steps

Upon Council approval, design of the project will begin immediately. Construction is anticipated to be completed by Fall of 2025.

RESPONSIBLE DEPARTMENT(S)

Public Works Division - Capital Project Management Department

STAFF CONTACTS (S)

Joe Phillips, Project Manager, 480-312-2522, jphillips@scottsdaleaz.gov

APPROVED BY

3-15-22

Daniel J. Worth, Director, Public Works
(480) 312-5555, dworth@scottsdaleaz.gov

Date

ATTACHMENTS

1. Resolution 12435
2. Evaluation Matrix
3. Location Map
4. Contract 2022-042-COS

RESOLUTION NO. 12435

A RESOLUTION OF THE COUNCIL OF THE CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA AUTHORIZING THE MAYOR TO EXECUTE ENGINEERING SERVICES CONTRACT NO. 2022-042-COS BETWEEN THE CITY AND MICHAEL BAKER INTERNATIONAL FOR DESIGN OF PIMA ROAD: DYNAMITE BOULEVARD TO LAS PIEDRAS.

WHEREAS, the City desires to design Pima Road: Dynamite Boulevard to Las Piedras, and

WHEREAS, Michael Baker International has been selected by the City through a competitive process to provide the necessary engineering services.

BE IT RESOLVED by the Council of the City of Scottsdale as follows:

Section 1. The Mayor of the City of Scottsdale is authorized and directed to execute engineering services Contract No. 2022-042-COS with Michael Baker International in an amount not to exceed $1,274,981 for the development of design documents for Pima Road: Dynamite Boulevard to Las Piedras.

PASSED AND ADOPTED by the City Council of the City of Scottsdale, Arizona this ____day of _____, 2022.

CITY OF SCOTTSDALE, an Arizona municipal corporation

ATTEST:

_____
Ben Lane, City Clerk

_____
David D. Ortega, Mayor

APPROVED AS TO FORM:

OFFICE OF THE CITY ATTORNEY

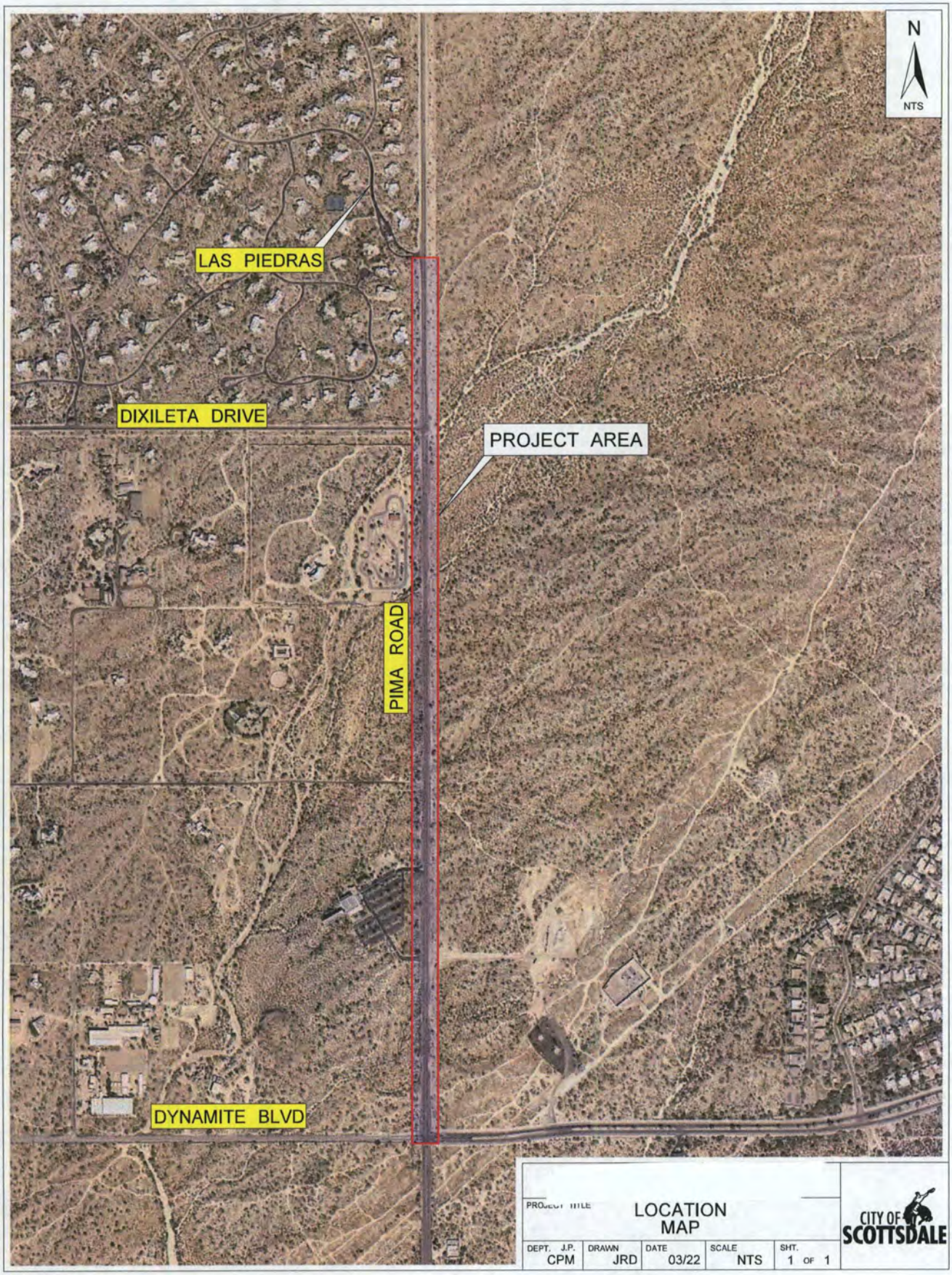
_____
Sherry R. Scott, City Attorney
By: Eric C. Anderson, Senior Assistant City Attorney

Attachment 1

22SQ005 – Design Services for Pima Road: Dynamite Boulevard to Las Piedras

Company	Rank
Michael Baker International	1
Strand	
Ritoch-Powell	

Attachment 2



DESIGN FILE: ...\220311_PIMA DYNAMITE TO LAS PIEDRAS.dgn

PROJECT TITLE: LOCATION MAP

DEPT.	J.P.	DRAWN	DATE	SCALE	SHT.
CPM		JRD	03/22	NTS	1 OF 1

CITY OF SCOTTSDALE

Attachment 3

CITY OF SCOTTSDALE

ENGINEERING SERVICES CONTRACT

PROJECT NO. SI01A/ SOLICITATION NO. 22SQ005

CONTRACT NO. 2022-042-COS

THIS CONTRACT, entered into this ____ day of _____, 2022, between the City of Scottsdale, an Arizona municipal corporation, the "CITY" and Michael Baker International, a Pennsylvania Corporation, the "ENGINEER."

RECITALS

A. The Mayor of the City of Scottsdale is authorized by the City Charter to execute contracts for professional services; and

B. The City intends to contract for Engineering services with Michael Baker International, for the final design of Pima Road: Dynamite Boulevard to Las Piedras and

C. The Engineer is qualified to render the services desired by the City.

FOR AND IN CONSIDERATION of the parties' mutual covenants and conditions, the City and the ENGINEER agree as follows:

1.0 DESCRIPTION, ACCEPTANCE, DOCUMENTATION

1.1 Scope of Services

The Engineer will provide the Engineering services required by this Contract.

The Engineer is assigned the tasks specified in the attached Exhibit A, Project Scope of Work, which is incorporated by reference and made a part of this Contract. If any provision of the Engineer's proposal, including but not limited to any limitation of liability or disclaimer of warranty language, conflicts or is in any way inconsistent with any provision of this Contract, this Contract will control.

The Engineer must obtain all necessary information to complete the tasks specified in Exhibit A, Project Scope of Work.

1.2 Acceptance and Documentation

A. Each task will be reviewed and approved by the Contract Administrator to determine acceptable completion.

B. The City will provide all necessary information to the Engineer for timely completion of the tasks specified in Section 1.1 above.

C. All documents, including but not limited to, data compilations, studies, and reports which are prepared in the performance of this Contract are to be and remain the property of the City and are to be delivered to the Contract Administrator before final payment is made to the Engineer.

2.0 FEES AND PAYMENTS

2.1 Fee Schedule

The amount paid to the Engineer shall not exceed $1,274,981.

The Engineer shall be paid at the hourly rates shown in Exhibit B.

2.2 Payment Approval

The time spent for each task must be recorded and submitted to the Contract Administrator. The Engineer must maintain all necessary documents and accounting records pertaining to time billed and to costs incurred and make these materials available at all reasonable times during the Contract period.

Monthly payments will be made to the Engineer on the basis of a progress report submitted by the Engineer for work completed through the last day of the preceding calendar month. Each task is subject to review and approval by the Contract Administrator to determine acceptable completion.

The Contract Administrator will prepare a partial payment request document for the Engineer's acceptance. However, not more than 90% of the total Contract price will be paid before City's final acceptance of all completed work.

The Contract Administrator reserves the exclusive right to determine the amount of work performed and payment due the Engineer on a monthly basis.

All charges must be approved by the Contract Administrator before payment.

2.2.1 Payment Terms

The City of Scottsdale's payment terms for engineering work under State of Arizona A.R.S. Title 34 requirements is fourteen (14) days after invoice submittal by the Engineer and the work is certified and approved by the City Contract Administrator.

The City has seven (7) days after receipt of the invoice to prepare and issue a written finding setting forth those items in detail which are not approved for payment under the Contract and which are not certified by the City Contract Administrator. Until such time as such issues are resolved and certified by the City the fourteen (14) day payment term will not have commenced.

OR

2.2.1 Payment Terms ()

The City of Scottsdale's payment terms for engineering work that does not qualify under State of Arizona A.R.S. Title 34 requirements is thirty (30) days after invoice submittal by the engineer and the work is approved by the City Contract Administrator.

3.0 GENERAL TERMS AND CONDITIONS

3.1 Contract Administrator

The Contract Administrator for the City will be Joe Phillips, or designee. The Contract Administrator will oversee the performance of this Contract, assist the Engineer in accessing the organization, audit billings, and approve payments. The Engineer must submit all reports and special requests through the Contract Administrator. The Contract Administrator has the authority to authorize Change Orders up to the limits permitted by the City's Procurement Code.

3.2 Term of Contract

The Term of the Contract is for 365 calendar days.

This Contract must be approved by the City Council of the City of Scottsdale, Arizona and signed by its Mayor and attested by the City Clerk.
This Contract is in full force and effect when it is signed by the City and the Engineer.

If any tasks remain incomplete after the Term of the Contract has expired, the Contract Administrator must give written approval to continue the Contract.

The term of this Contract is for a period. This Contract must be approved by the City Council of the City of Scottsdale, Arizona and signed by its Mayor and attested by the City Clerk. The City and Engineer may mutually agree to extend this Contract for upon the recommendation of the Contract Administrator and the

concurrence of the Purchasing Director without further approval of the City Council.

3.3 Termination or Cancellation of Contract

The City may terminate this Contract or abandon any portion of the project that has not been performed by the Engineer.

Termination for Convenience: The City has the right to terminate this Contract or any part of it for its sole convenience with thirty (30) days written notice. If terminated, the Engineer must immediately stop all work and will immediately cause any of its suppliers and Subcontractors to stop all work. As payment in full for services performed to the date of the termination, the Engineer will receive a fee for the percentage of services actually completed. This fee will be in the amount mutually agreed upon by the Engineer and the City, based on the Scope of Work.

If there is no mutual agreement, the Contract Administrator will determine the percentage of completion of each task detailed in the Scope of Work and the Engineer's compensation will be based on this determination. The City will make this final payment within sixty (60) days after the Engineer has delivered the last of the partially completed items. The Engineer will not be paid for any work done after receipt of the notice of termination or for any costs incurred by the Engineer's suppliers or Subcontractors, which the Engineer could reasonably have avoided.

Cancellation for Cause: The City may also cancel this Contract or any part of it with seven (7) days' notice if the Engineer defaults, or if the Engineer fails to comply with any of the terms and conditions of this Contract. Unsatisfactory performance as determined by the Contract Administrator or failure to provide the City, upon request, with adequate assurances of future performance are all causes allowing the City to terminate this Contract for cause. Upon cancellation for cause, the City will not be liable to the Engineer for any amount, and the Engineer will be liable to the City for all damages sustained by the default which caused the cancellation.

If the Engineer is in violation of any Federal, State, County or City law, regulation or ordinance, the City may terminate this Contract immediately after giving notice to the Engineer.

If the City cancels this Contract or any part of the Contract services, the City will notify the Engineer in writing, and upon receiving notice, the Engineer must discontinue advancing the work and proceed to close all operations.

Upon cancellation, the Engineer must deliver to the City all drawings, special provisions, field survey notes, reports, and estimates, entirely or partially completed, in any format, including but not limited to written or electronic media, together with all unused materials supplied by the City. Use of incomplete data will be the City's sole responsibility.

The Engineer must appraise the work it has completed and submit its appraisal to the City for evaluation.

If the Engineer fails to fulfill in a timely and proper manner its obligations, or if the Engineer violates any of the terms of this Contract, the City may withhold any payments to the Engineer for the purpose of setoff until the exact amount of damages due the City from the Engineer is determined by a court of competent jurisdiction.

If the City improperly cancels the Contract for cause; the cancellation for cause will be converted to a termination for convenience in accordance with the provisions of this Section 3.3.

3.4 Funds Appropriation

If the City Council does not appropriate funds to continue this Contract, the City may terminate this Contract at the end of the current fiscal period. The City agrees to give written notice of termination to the Engineer at least thirty (30) days before the end of its current fiscal period and will pay to the Engineer all approved charges incurred through the end of that period.

3.5 Audit

The City may audit all of the Engineer's records, calculations, and working documents pertaining to this work at a mutually agreeable time and place.

The Engineer's records (hard copy, as well as computer readable data), and any other supporting evidence necessary to substantiate any claims related to this Contract must be open to inspection and subject to audit and reproduction by the City's authorized representative as necessary to permit evaluation and verification of the cost of the work, and any invoices, change orders, payments or claims submitted by the Engineer or any of his payees. The City's authorized representative must be afforded access, at reasonable times and places, to all of the Engineer's records and personnel throughout the term of this Contract and for a period of three (3) years after the final payment.

The Engineer must require all Subcontractors and material suppliers (payees) to comply with the provisions of this section by insertion of these requirements in a written Contract between the Engineer and payee. These requirements will apply to all Subcontractors.

If an audit discloses overcharges by the Engineer to the City in excess of 1% of the total Contract billings, the actual cost of the City's audit must be reimbursed to the City by the Engineer. Any adjustments and payments made as a result of the audit or inspection of the Engineer's invoices and records will be made within a period of time not to exceed 90 days from presentation of the City's findings to the Engineer.

This audit provision includes the right to inspect personnel records as required by Section 3.22.

3.6 Ownership of Project Documents

All documents, including but not limited to, field notes, design notes, tracings, data compilations, studies, and reports in any format, including but not limited to, written or electronic media, prepared in the performance of this Contract will remain the property of the City and must be delivered to the Contract Administrator before final payment is made to the Engineer.

When the work detail covers only the preparation of preliminary reports or plans, there will be no limitations upon the City concerning use of the plans or ideas in the reports or plans for the preparation of final construction plans. The City will release the Engineer from any liability for the preparation of final construction plans by others.

3.7 Completeness and Accuracy

The Engineer will be responsible for the completeness and accuracy of its work, including but not limited to, survey work, reports, supporting data, and drawings, sketches, etc. prepared by the Engineer and will correct, at its expense, all errors or omissions which may be disclosed. The cost to correct those errors will be chargeable to the Engineer. Additional construction added to the project will not be the responsibility of the Engineer unless the need for additional construction was created by any error, omission, or negligent act of the Engineer. The City's acceptance of the Engineer's work will not relieve the Engineer of any of its responsibilities.

3.8 Attorney's Fees

Should either party bring any action for relief, declaratory or otherwise, arising out of this Contract, the prevailing party shall be entitled to an award of reasonable attorneys' fees, reasonable costs and expenses as determined by the court. All these fees, costs, and expenses will be considered to have accrued on the commencement of the action.

3.9 Successors and Assigns

This Contract shall be binding upon the Engineer, its successors and assigns, including any individual, or other entity with or into which the Engineer may merge, consolidate, or be liquidated, or any individual or other entity to which the Engineer may sell or assign its assets.

3.10 Assignment

Services covered by this Contract may not be assigned or sublet in whole or in part without first obtaining the written consent of the Purchasing Director and Contract Administrator.

3.11 Subcontractors

The Engineer may engage Subcontractors as required for the timely completion of this Contract. If the Engineer subcontracts any of the work required by the

Contract, the Engineer remains solely responsible for fulfillment of all the terms of this Contract.

The Engineer will pay its Subcontractors within seven (7) calendar days of receipt of each progress payment from the City. The Engineer will pay for the amount of the Work performed by each Subcontractor as accepted and approved by the City with each progress payment. In addition, any reduction of retention, if any, by the City will result in a corresponding reduction to Subcontractors who have performed satisfactory work. The Engineer will pay Subcontractors the reduced retention within fourteen (14) calendar days of the payment of the reduction of the retention to the Engineer. No Contract between the Engineer and its Subcontractors may materially alter the rights of any Subcontractor to receive prompt payment and retention reduction as provided in this Contract.

If the Engineer fails to make payments in accordance with these provisions, the City may take any of one or more of the following actions:

A. To hold the Engineer in default under this Contract;
B. Withhold future payments including retention until proper payment has been made to Subcontractors in accordance with these provisions;
C. Reject all future offers to perform work for the City from the Engineer for a period not to exceed 1 year from the completion date of this project; or
D. Terminate this Contract.

3.12 Alterations or Additions to Scope of Services

The total Scope of the Engineering Services to be performed is stated in this Contract and any exhibits thereto. Any services requested outside the Scope of Work are additional services. The Engineer will not perform these additional services without a written Change Order approved by the City. If the Engineer performs additional services without a written Change Order, the Engineer will not receive any additional compensation.

3.13 Modifications

Any amendment or modification of the terms of this Contract must be in writing and will be effective only after approval of all parties to this Contract.

3.14 Conflict of Interest

The Engineer warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Engineer, to solicit or secure this Contract, and that it has not paid or agreed to pay any person or persons, other than a bona fide employee working solely for the Engineer any fee, commission, percentage, brokerage fee, gifts or any consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, City will have the right to annul this Contract without liability or in its discretion to deduct from the Contract price or consideration, or otherwise recover the full amount of any fee, commission, percentage, brokerage fee, gift or contingent fee, together with costs and attorney's fees.

The City may cancel any Contract or Agreement, without penalty or obligation, if any person significantly involved in initiating, negotiating, securing, drafting, or creating the Contract on behalf of the City's departments or agencies is, at any time while the Contract or any extension of the Contract is in effect, an employee of any other party to the Contract in any capacity or a consultant to any other party to the Contract with respect to the subject matter of the Contract. The cancellation will be effective when written notice from the City is received by all other parties to the Contract, unless the notice specifies a later time (A.R.S. 38-511).

The Engineer will fully reveal in writing any financial or compensatory agreement which it has with a prospective bidder before the City's publication of documents for bidding.

3.15 Force Majeure

Neither party will be responsible for delays or failures in performance resulting from acts beyond their control. These acts will include, but not be limited to, acts of God, riots, acts of war, epidemics, governmental regulations imposed after the fact, fire, communication line failures, or power failures.

3.16 Taxes

The fee listed in this Contract includes all taxes applicable to the services authorized. The City will have no obligation to pay additional amounts for taxes of any type.

3.17 Advertising

No advertising or publicity concerning the City using the Contractor's services shall be undertaken without prior written approval of such advertising or publicity by the City of Scottsdale Contract Administrator and by the City Attorney.

3.18 Counterparts

This Contract may be executed in one or more counterparts, and each executed duplicate counterpart will possess the full force and effect of the original.

3.19 Entire Agreement

This Contract contains the entire understanding of the parties and no representations or agreements, oral or written, made before its execution will vary or modify the terms of this Contract.

3.20 Arizona Law

This Contract must be governed and interpreted according to the laws of the State of Arizona.

3.21 Equal Employment Opportunity

During the performance of this Contract, the Engineer will follow the Federal government's guidelines to ensure that employees or applicants applying for employment will not be discriminated against because of race, color, religion, sex or national origin.

No Preferential Treatment or Discrimination:

In accordance with Article II, Section 36 of the Arizona Constitution, the City will not grant preferential treatment to or discriminate against any individual or group on the basis of race, sex, color, ethnicity or national origin.

3.22 Compliance with Federal and State Laws

The Engineer accepts the applicability to it of the Americans with Disabilities Act, the Immigration Reform and Control Act of 1986 and the Drug Free Workplace Act of 1989. In addition, the Engineer accepts the applicability to it of A.R.S. §34-301 and 34-302. The Engineer shall include the terms of this provision in all contracts and subcontracts for work performed under this Contract, including supervision and oversight.

Under the provisions of A.R.S. §41-4401, the Engineer warrants to the City that the Engineer and all its subcontractors will comply with all Federal Immigration laws and regulations that relate to their employees and that the Engineer and all its subcontractors now comply with the E-Verify Program under A.R.S. §23-214(A).

A breach of this warranty by the Engineer or any of its subcontractors will be considered a material breach of this Contract and may subject the Engineer or Subcontractor to penalties up to and including termination of this Contract or any subcontract.

The City retains the legal right to inspect the papers of any employee of the Engineer or any subcontractor who works on this Contract to ensure that the Engineer or any subcontractor is complying with the warranty given above.

The City may conduct random verification of the employment records of the Engineer and any of its subcontractors to ensure compliance with this warranty. The Engineer agrees to indemnify, defend and hold the City harmless for, from and against all losses and liabilities arising from any and all violations of these statutes.

The City will not consider the Engineer or any of its subcontractors in material breach of this Contract if the Engineer and its subcontractors establish that they have complied with the employment verification provisions prescribed by 8 USCA §1324(a) and (b) of the Federal Immigration and Nationality Act and the E-Verify requirements prescribed by A.R.S. §23-214(A). The "E-Verify Program" means the employment verification pilot program as jointly administered by the United

States Department of Homeland Security and the Social Security Administration or any of its successor programs.

The provisions of this Article must be included in any contract the Engineer enters into with any and all of its subcontractors who provide services under this Contract or any subcontract. "Services" are defined as furnishing labor, time or effort in the State of Arizona by a contractor or subcontractor. Services include construction or maintenance of any structure, building or transportation facility or improvement to real property. The Engineer will take appropriate steps to assure that all subcontractors comply with the requirements of the E-Verify Program. The Engineer's failure to assure compliance by all its' subcontractors with the E-Verify Program may be considered a material breach of this Contract by the City.

3.23 Compliance with Americans with Disabilities Act

Engineer acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. Engineer will provide the services specified in this Contract in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. Engineer agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of Engineer, its employees, agents or assigns will constitute a material breach of this Contract.

3.24 Israel Boycott Prohibition

By executing this contract, [Contractor] certifies that it is not currently engaged in and will not for the duration of this contract engage in boycott activity proscribed by A.R.S. § 35-393 et seq.

3.25 Evaluation of Engineer's Performance

The Engineer will be evaluated regarding its performance of this Contract. This evaluation may include, but not be limited to, the following consideration for:

- Completeness
- Accuracy
- Utility Coordination
- Technical Expertise
- Organization
- Appearance of Plans (line work, lettering, etc.)
- Working Relationship with City Staff and Others
- Availability
- Communication Skills (meetings, correspondence, etc.)

This evaluation will be prepared by the staff and used to evaluate the desirability to proceed with negotiations for additional services.

3.26 Notices

All notices or demands required by this Contract must be given to the other party in writing, delivered by hand or by registered or certified mail at the addresses stated below, or to any other address the parties may substitute by giving written notice as required by this section.

On behalf of the Engineer:

Craig Wenger, Vice President
Michael Baker International
2929 N Central Ave Suite 800
Phoenix, AZ 85012

On behalf of the City:

Joe Phillips
City of Scottsdale
7447 E. Indian School Road, Suite 205
Scottsdale, AZ 85251

If hand delivered, Notices are deemed received on the date delivered. If delivered by certified or registered mail, Notices are deemed received on the date indicated on the receipt. Notice by facsimile or electronic mail is not adequate notice.

3.27 Independent Contractor

The services the Engineer provides to the City are that of an Independent Contractor, not an employee, or agent of the City. The City may report the value paid for these services each year to the Internal Revenue Service (I.R.S.) using Form 1099.

City will not withhold income tax as a deduction from contractual payments unless required under federal or state law. As a result of this, Contractor may be subject to I.R.S. provisions for payment of estimated income tax. Contractor is responsible for consulting the local I.R.S. office for current information on estimated tax requirements.

3.28 Ineligible Bidder

The preparer of bid specifications is not eligible to submit a bid or proposal on the solicitation for which it prepared the specification, nor is the preparer eligible to supply any product to a bidder or offeror on the solicitation for which it prepared the specification.

3.29 Indemnification

To the fullest extent permitted by law, Engineer, its successors, assigns and guarantors, must defend, indemnify and hold harmless City of Scottsdale, its

agents, representatives, officers, directors, officials and employees from and against all allegations, demands, proceedings, suits, actions, claims, damages, losses, expenses, including but not limited to, attorney fees, court costs, and the cost of appellate proceedings, and all claim adjusting and handling expense, related to, arising from or out of, or resulting from any act or omission, negligence, recklessness, or intentional wrongful conduct by Engineer in the performance of this Contract, including but not limited to, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable and any injury or damages claimed by any of Engineer's and Subcontractor's employees.

Insurance provisions in this Contract are separate and independent from the indemnity provisions of this section and shall not be construed in any way to limit the scope and magnitude of the indemnity provisions. The indemnity provisions of this section shall not be construed in any way to limit the scope and magnitude and applicability of the insurance provisions.

4.0 INSURANCE

A current Acord Certificate is acceptable.

Failure to provide an appropriate Certificate of Insurance will result in rejection of your certificate and delay in Contract execution.

Additionally Certificates of Insurance submitted without referencing a Contract number may be subject to rejection and returned or discarded.

4.1 Insurance Representations and Requirements

A. General: The Engineer agrees to comply with all applicable City ordinances and state and federal laws and regulations.

Without limiting any obligations or liabilities of the Engineer, the Engineer must purchase and maintain, at its own expense, the required minimum insurance with insurance companies duly licensed or approved to conduct business in the State of Arizona and with an A.M. Best's rating of B++6 or above with policies and forms satisfactory to City. Failure to maintain insurance as required may result in cancellation of this Contract at the City's option.

B. No Representation of Coverage Adequacy: By requiring insurance, City does not represent that coverage and limits will be adequate to protect the Engineer. The City reserves the right to review any and all of the insurance policies and endorsements cited in this Contract but has no obligation to do so. Failure to demand evidence of full compliance with the insurance requirements in this Contract or failure to identify any insurance deficiency will not relieve the Engineer from, nor may it be considered a waiver of Contractor's obligation to maintain the required insurance at all times during the performance of this Contract.

C. Coverage Term: The Engineer must maintain all required insurance in full force and effect until all work or services are satisfactorily performed and accepted by The City of Scottsdale, unless specified otherwise in this Contract.

D. Claims Made: In the event any insurance policies required by this Contract are written on a "claims made" basis, coverage shall continue uninterrupted throughout the term of this Contract by keeping coverage in force using the effective date of this Contract as the retroactive date on all "claims made" policies. The retroactive date for exclusion of claims must be on or before the effective date of this Contract and can never be after the effective date of this Contract. Upon completion or termination of this Contract, the "claims made" coverage shall be extended for an additional three (3) years using the original retroactive date, either through purchasing an extended reporting option; or by continued renewal of the original insurance policies. Submission of annual Certificates of Insurance, citing the applicable coverages and provisions specified herein, shall continue for three (3) years past the completion or termination of this Contract.

E. Policy Deductibles and or Self-Insured Retentions: The required policies may provide coverage which contain deductibles or self-insured retention amounts. The Engineer is solely responsible for any deductible or self-insured retention amount and the City, at its option, may require the Engineer to secure payment of the deductible or self-insured retention by a surety bond or irrevocable and unconditional Letter of Credit.

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

G. Evidence of Insurance and Required Endorsements: Before commencing any work or services under this Contract, the Engineer must furnish the Contract Administrator with Certificate(s) of Insurance, or formal endorsements issued by the Engineer's insurer(s) as evidence that policies are placed with acceptable insurers and provide the required coverages, conditions, and limits of coverage and that the coverage and provisions are in full force and effect. If a Certificate of Insurance is submitted as verification of coverage, the City will reasonably rely upon the Certificate of Insurance as evidence of coverage, but this acceptance and reliance will not waive or alter in any way the insurance requirements or obligations of this Contract. If any of the required policies expire during the life of this Contract, the Engineer's must forward renewal Certificates

to the City within 10 days after the renewal date containing all the necessary insurance provisions.

Certificates shall specifically cite the following provisions endorsed to the Engineer's policy:

1. The City of Scottsdale, its agents, representatives, officers, directors, officials and employees are named as an Additional Insured under the following policies:

   a) Commercial General Liability
   b) Auto Liability
   c) Excess Liability - Follow Form to underlying insurance as required.

2. The Engineer's insurance must be primary insurance for all performance of work under this Contract.

3. All policies, except Professional Liability insurance if applicable, waive rights of recovery (subrogation) against the City, its agents, representatives, officers, directors, officials and employees for any claims arising out of work or services performed by the Engineer under this Contract.

4. If the Engineer receives notice that any of the required policies of insurance are materially reduced or cancelled, it will be Engineer's responsibility to provide prompt notice of same to the City, unless such coverage is immediately replaced with similar policies.

4.2 Required Coverage

A. Commercial General Liability: The Engineer must maintain "occurrence" form Commercial General Liability insurance with a limit of not less than $1,000,000 for each occurrence, $2,000,000 Products and Completed Operations Annual Aggregate, and a $2,000,000 General Aggregate Limit. The policy must cover liability arising from premises, operations, independent contractors, products-completed operations, and personal injury and advertising injury. If any Excess insurance is utilized to fulfill the requirements of this section, the Excess insurance must be "follow form" equal or broader in coverage scope than the underlying insurance.

B. Professional Liability: The Engineer must maintain Professional Liability insurance covering errors and omissions arising out of the work or services performed by the Engineer, or anyone employed by the Engineer, or anyone for whose acts, mistakes, errors and omissions the Engineer is legally liable, with a liability insurance limit of $1,000,000 each claim and $2,000,000 all claims. If the Professional Liability insurance policy is written on a "claims made" basis, coverage must extend for 3 years past completion and acceptance of the work or services, the Engineer must annually submit Certificates of Insurance citing that the applicable coverage is in force and contains the required provisions for a 3-year period.

4.2 Required Coverage – Cont'd

C. Vehicle Liability: If any vehicle is used in the performance of the Scope of Work that is the subject of this contract, the Engineer must maintain Business Automobile Liability insurance with a limit of $1,000,000 each accident on the Engineer's owned, hired, and non-owned vehicles assigned to or used in the performance of the Engineer's work or services under this Contract. If any Excess insurance is utilized to fulfill the requirements of this paragraph, the Excess insurance must be "follow form" equal or broader in coverage scope than the underlying insurance.

D. Workers Compensation Insurance: Contractor must maintain Workers Compensation insurance to cover obligations imposed by federal and state statutes applicable to Contractor's employees engaged in the performance of work or services under this Contract and must also maintain Employers' Liability Insurance of not less than $100,000 for each accident, $100,000 disease for each employee and $500,000 disease policy limit. If the Contractor is a sole proprietor or a single member limited liability company with no employees and has elected not to purchase Workers' Compensation Insurance; a completed and signed Workers' Compensation Waiver Form will substitute for the insurance requirement.

5.0 SOFTWARE LICENSES

If the Engineer provides to the City any software licenses, the following provisions apply:

5.1 Source Code Availability

A. The Engineer must furnish the City, without charge, a single copy of the Source Code for the Software immediately upon the occurrence of any of the following:

1. The Engineer becomes insolvent; or
2. The Engineer ceases to conduct business; or
3. The Engineer makes a general assignment for the benefit of creditors;
   or
4. A petition is filed in Bankruptcy by or against the Engineer.

B. Use of the Source Code may not be subject to any greater restrictions than use of the Software itself.

C. The City must have the right to modify the Source Code in any manner the City believes is appropriate, provided that the Source Code as modified will remain subject to the restrictions of Section 5.1(B).

5.2 Proprietary Protection

A. The City agrees that if the Engineer informs the City that the Software is confidential information or is a trade secret of the Engineer; the Software

is disclosed on a confidential basis under this Contract and in accordance with the terms of this Contract.

B. The Engineer shall not use or disclose any knowledge, data or proprietary information relating to the City obtained in any manner.

C. As permitted by Arizona Law, the parties agree that during the term of this Contract and of all Licenses granted under this Contract, and for a period of 7 years after termination of this Contract and of all licenses granted by this Contract, to hold each others' confidential information in confidence. The parties agree, unless required by government regulations or order of

Court, not to make each others' confidential information available in any form to any third party or to use each other's confidential information for any purposes other than the implementation of this Contract. However, if the Engineer's confidential information is requested to be divulged under the provisions of the Arizona Public Records Act, A.R.S., Title 39, the Engineer must reimburse the City for the full cost of the City's refusal to release the information, including the costs of litigation, the City's attorney fees, fines, penalties or assessments of the opposing party's attorney fees. Each party agrees to take all reasonable steps to ensure that confidential information is not disclosed or distributed by its employees or agents in violation of the provisions of this Contract.

5.3 Non-Infringement

The Engineer warrants that the Software provided to the City does not and will not infringe upon or violate any patent, copyright, trade secret or other proprietary or property right of any person or entity.

In the event of a claim against the City asserting or involving such an allegation, the Engineer will defend, at the Engineer's expense, and will indemnify and hold harmless the City against any loss, cost, expense (including attorney fees) or liability arising out of the claim, whether or not the claim is successful. In the event an injunction or order is obtained against use of the Software, or if in the Engineer's opinion the Software is likely to become the subject of a claim of infringement, the Engineer will, at its option and its expense:

1. Procure for the City the right to continue using the Software; or
2. Replace or modify the software so that it becomes non-infringing (this modification or replacement must be functionally equivalent to the original); or –
3. If neither 1 nor 2 is practicable, repurchase the Software on a depreciated basis utilizing a straight line 5-year period, commencing on the date of acceptance.

5.4 Third Party License

The Engineer shall sublicense to the City any and all third- party Software required in this Contract. The City reserves the right to accept or reject third party license terms. If the City rejects the terms of a third-party license, the Engineer shall be responsible to negotiate acceptable terms or to supply Software from another source with terms acceptable to the City. The City's acceptance of the third-party license terms will not be unreasonably withheld.

6.0 SEVERABILITY AND AUTHORITY

6.1 Severability

If any term or provision of this Contract is found to be illegal or unenforceable, then notwithstanding such illegality or unenforceability, this Contract will remain in full force and effect and the term or provision will be considered to be deleted.

6.2 Authority

Each party warrants that it has full power and authority to enter into and perform this Contract, and that the person signing on behalf of each party has been properly authorized and empowered to enter into this Contract. Each party acknowledges that it has read, understands, and agrees to be bound by the terms and conditions of this Contract.

7.0 Request for Taxpayer I.D. Number & Certification I.R.S. W-9 Form

Upon request, the Contractor shall provide the required I.R.S. W-9 FORM which is available from the IRS website at www.IRS.gov under its forms section.

8.0 DONATIONS

No donations allowed. To avoid the appearance of impropriety, Contractor shall not make any donation to the City, of any goods or services during the term of this Agreement, unless it has specifically been approved by the City Manager or designee.

[End of contract. Signature page follows]

The City of Scottsdale by its Mayor and City Clerk have subscribed their names this _____ day of _____, 2022.

CITY OF SCOTTSDALE
an Arizona municipal corporation

ATTEST:

_____
David D. Ortega
Mayor

_____
Ben Lane
City Clerk

MICHAEL BAKER INTERNATIONAL, INC.
By: _____
Craig Wenger
Its: Vice President

RECOMMENDED:

_____
Alison Tymkiw
City Engineer

_____
George Woods
Risk Management Director

_____
Joe Phillips
Contract Administrator

APPROVED AS TO FORM:

_____
Sherry R. Scott, City Attorney
By: Eric C. Anderson
Senior Assistant City Attorney

EXHIBIT A
PROJECT DESCRIPTIONS
SCOPE OF WORK

Pima Road from Dynamite Blvd to Las Piedras is in the northern portion of the City of Scottsdale (City). Pima Road is currently two lanes in each direction with separate left and right turn lanes at most existing intersections. The project limits are defined as Pima Road from approximately 500-feet south of Dynamite Blvd to 1/8 mile north of Las Piedras. The project also includes Dynamite Blvd approximately 500-feet east and west of Pima Road and Dixileta Drive approximately 500-feet west of Pima Road. The total distance of the project is approximately 1.4 miles.

This scope if further defined in the consultant's proposal and attached as exhibit A to this contract.

February 23, 2022

Joe Phillips, PE
Project Manager
City of Scottsdale
Capital Project Management
7447 East Indian School Road
Scottsdale, Arizona 85251

DELIVERED BY EMAIL

Subject: **Draft Scope and Fee Derivation (Version 3) for RFQ 22SQ005 Pima Road: Dynamite to Las Piedras**

Dear Mr. Phillips:

Please find our Draft Scope and Fee Derivation (Version 3) for the Pima Road professional services contract. This version 3 document incorporates City comments made on the version 2 draft Scope and Fee derivation submitted to the City on February 9, 2022. We believe the scope of work is comprehensive to what we expect the effort to be for a complete street project like Pima Road and understand that allowances or level of effort is subject to negotiation. We believe that the effort includes approximately 1.4 miles of complete street roadway design and that the most economical solution for conveyance of the Rawhide Wash. The structures scope, sheet count, and fee within this document is based on a multi-cell cast-in-place reinforced concrete box culvert for the Rawhide Wash crossing.

Our estimated fee is $1,274,981 inclusive of allowances and subconsultant fees and we are proposing a schedule of 365 calendar days. We hope that this Scope and Fee Proposal (Version 3) meet your expectations and we look forward to finalizing this scope and fee negotiation. Feel free to contact me or Jim Martin to arrange further discussions and to finalize these documents.

Sincerely,

MICHAEL BAKER INTERNATIONAL

Craig Wenger PE, AICP, CFM
Vice President, Office Executive

Scope of Services

PIMA ROAD – DYNAMITE ROAD TO LAS PIEDRAS DESIGN SERVICES

Consultant: **Michael Baker International, Inc.**

Project No: TBD

COS Contract No.: 2022-XX-COS

Date: February 23, 2022

CITY OF SCOTTSDALE™
ARIZONA

Michael Baker
INTERNATIONAL

TABLE OF CONTENTS

SCOPE OF SERVICES 6
Project Overview 6
Project Allowances 6
Invoicing Terms 7
Length of Services 7
SECTION 100 PROJECT MANAGEMENT 8
100.1 Project Work Plan and Schedule 8
100.2 Communication Plan and Contacts List 8
100.3 Kick-Off Meeting 8
100.4 Design Progress Meetings 8
100.5 Design Criteria 9
100.6 Design Exceptions 9
100.7 Field Visit with Project Team 9
100.8 Project Administration 9
100.9 Safety Plan 10
100.10 Quality Assurance/Quality Control Plan 10
SECTION 200 DATA ACQUISITION 11
200.1 Project Research / Data Collection 11
SECTION 300 SURVEY, MAPPING, AND ALIGNMENT 12
300.1 Survey Control 12
300.2 Photogrammetry and Planimetric Mapping 12
300.3 Supplemental Topographic Surveying 12
300.4 Pima Road Surface Utility Survey 13
300.5 Survey Base Map 13
300.6 Rawhide Wash Supplemental Topographic Surveying 13
SECTION 400 PROJECT COORDINATION 14
400.1 Stakeholder Meetings 14
400.2 Agency Briefings 14
400.3 Virtual Public Open House Meeting 15
400.4 Project Website 15
400.5 Stakeholder Participation Summary Report and Public Engagement Coordination 15
SECTION 500 UTILITIES 16
500.1 Utility Data Acquisition 16
500.2 Prior Rights Determination 16
500.3 Utility Designation and Potholing 16

500.4 Create Utility Base File 16
500.5 Utility Coordination 16
500.5.1 Utility Coordination Meetings 16
500.5.2 Utility Conflicts 17
500.5.3 Utility Plans Review 17
500.5.4 Determine Utility Relocation Right-of-Way Needs 17
500.5.5 Utility Relocations on Private Property 17
500.5.6 Utility Relocation Costs 17
500.5.7 Utility Relocation Design 18
500.5.8 Update Utility Base File 18
500.5.9 Utility Relocation Construction 18
500.5.10 Utility Relocation Special Provisions 18
500.5.11 Utility Agreements 19
500.5.12 Approval to Construct 19
500.5.13 Miscellaneous Exhibits and Correspondence 19
500.5.14 Utility Clearance Letter 20
SECTION 600 ENVIRONMENTAL 21
600.1 Noise Analysis 21
600.2 Biological Evaluation 21
600.3 Preliminary Jurisdictional Delineation (PJD) 21
SECTION 700 ALTERNATIVE ANALYSIS 22
700.1 Alignment Alternatives 22
SECTION 800 TECHNICAL MEMORANDA AND REPORTS 23
800.1 Alignment Alternatives 23
800.2 Cross Section Alternatives 23
800.3 Landscape Architecture Concepts 23
800.4 Traffic Report 23
800.4.1 Data Collection: 23
800.4.2 Traffic Analysis 24
800.4.3 Traffic Memorandum 24
800.4.4 Signal Modifications 24
800.5 Drainage Analysis 25
800.5.1 Rawhide Wash Crossing Drainage Alternatives 25
800.5.2 Off-site Drainage Design 25
800.5.3 On-site Drainage Design 26
800.5.4 Drainage Report 26
800.5.5 Drainage Exclusion Assumptions 27

800.6 Alternatives Analysis & Structure Selection Memorandum (Rawhide Wash) 27
800.7 Geotechnical Memorandum 28
800.8 Noise Analysis Memorandum 28
SECTION 900 PLANS, SPECIFICATIONS AND ESTIMATES 29
900.1 Roadway Plans 30
900.2 Roadway Cross Sections 32
900.3 Signing and Pavement Markings 32
900.4 Sequence of Construction 33
900.5 Traffic Signals 33
900.6 Traffic Signal Interconnect Plans 34
900.7 Lighting 34
900.8 Drainage 34
900.9 Landscape Architectural Design 35
900.10 Structures - Multi-Cell Box Culvert @ Rawhide Wash Crossing 35
900.11 Utilities 36
900.12 Specifications 36
900.13 Quantities and Opinion of Probable Cost Estimates and Bid Schedule 37
900.14 Quality Control 37
SECTION 1000 RIGHT-OF-WAY 38
1000.1 Right of Entry for Field Work 38
1000.2 Right-of-Way Title Reports 38
1000.3 Right-of-Way Mapping 38
1000.4 Right-of-Way and Easement Requirements 38
1000.4.1 Determine Right-of- Way and Easements 38
1000.4.2 Submit Right-of- Way and Easement Requirements 38
1000.4.3 Coordination with City Real Estate 38
1000.5 Provide Preliminary Right-of-Way Costs 38
1000.6 Right-of-Way Strip Maps 39
1000.7 Legal Descriptions 39
1000.8 Appraisals 39
1000.9 Acquisitions 39
1000.10 Right-of-Way Clearance 39
SECTION 1100 VALUE ENGINEERING 40
1100.1 Value Engineering 40
SECTION 1200 SUBMITTALS 41
1200.1 30% Grade and Alignment 41
1200.2 60% Progress Plans 41

1200.3 Design Review Board (DRB) Submittal 42
1200.4 95% Completed Plans 42
1200.5 Encroachment Permit Submittal 42
1200.6 100% Sealed PS&E 42
SECTION 1300 Bidding Phase 43
1300.1 Technical Assistance to Prepare Advertisement 43
1300.2 Pre-Bid Conference 43
1300.3 Preparation of Addenda 43
1300.4 Bid Opening 43
SECTION 1400 Post Design 44
1400.1 Post Design Services 44
SECTION 1500 Exclusions 45

ATTACHMENTS – SUBCONSULTANT SCOPE & FEE PROPOSALS

T2 Utility Engineers ..... A
Cooper Aerial ..... B
Newton Environmental Consulting C
Ecoplan Associates ..... D
DIG Studio ..... E
All Traffic Data Services ..... F
Ethos Engineering ..... G

SCOPE OF SERVICES

Project Overview

Project Location

Pima Road from Dynamite Blvd to Las Piedras is in the northern portion of the City of Scottsdale (**City**). Pima Road is currently two lanes in each direction with separate left and right turn lanes at most existing intersections. The project limits are defined as Pima Road from approximately 500-feet south of Dynamite Blvd to 1/8 mile north of Las Piedras. The project also includes Dynamite Blvd approximately 500-feet east and west of Pima Road and Dixileta Drive approximately 500-feet west of Pima Road. The total distance of the project is approximately 1.4 miles.

Project Background

The original roadway was constructed as a two-lane section in 1990 and has since been widened with left and right turn lanes for various new development driveway and intersection improvements. The existing roadway is classified as a major arterial.

Project Purpose

The purpose of the project is to increase safety, vehicular capacity and provide non-motorized amenities by reconstructing Pima Road from a two-lane roadway to a four-lane major arterial complete street with a raised landscape median.

Generally, the project includes widening Pima Road to two lanes in each direction with bike lanes, turn lanes, raised medians, paved sidewalks and shared use path and equestrian unpaved trails, and curb and gutter. Project improvements also include the following:

- Modification of traffic signals at the Pima Road and Dynamite Blvd intersection
- Potential new signal and/or reestablishment of the Hawk signalized crossing at the Pima Road and Dixileta Blvd intersection
- Possible roundabout or signalized improvements at the Pima Road and Las Piedras intersection; however, it is anticipated that signal warrants will not be met. If a signal is warranted, additional services for a roundabout alternative will be discussed
- Signal-mounted roadway lighting improvements at intersections
- Storm drainage improvements are necessary to comply with local, state and federal regulations, including raising the Pima Road profile to allow a Rawhide Wash drainageway crossing just south of Dixileta Drive. Alternative structure types for the drainageway crossing will be evaluated with a preferred alternative recommended and taken forward to final PS&E documents. Also included is re-establishment of multiple culvert crossings and the addition of new drainage channels parallel to Pima Road
- Landscaping and aesthetic enhancements
- Shared-use path improvements
- Utility protections and/or minor relocations

Construction is planned for 2024.

Project Allowances

The project includes a lump sum Allowance for miscellaneous items and issues identified during project development. The Michael Baker Team (**Consultant**) and the **City** will identify the items and issues that would result in additional effort beyond the noted scope of work and associated fee. The **City** shall concur and approve the allowance work in a timely manner prior to the **Consultant** performing the work.

Invoicing Terms

The contract will be billed hourly, not to exceed the allowable lump sum fee on a monthly invoicing schedule to be determined by the **City**. No additional services will be performed without **City** approval and an executed change order or written authorization is received

Length of Services

The estimated contract time is **365 days** from notice to proceed based on the attached project schedule.

SECTION 100 PROJECT MANAGEMENT

100.1 Project Work Plan and Schedule

The **Consultant** will establish a project management system and work plan for schedule and budget control and will be responsive to input from the **City**. The **Consultant** will maintain a master project documentation file that will be provided to the **City** at the completion of work.

100.2 Communication Plan and Contacts List

The **Consultant** will prepare a written Communication and Stakeholder Involvement Plan. The plan will include a strategy for coordination among project partners and other key stakeholders. The communication plan will be submitted to the City's Project Manager (**Project Manager)** for review and approval within two weeks following the Notice to Proceed (NTP). The plan will include the following elements:

- **City** team members and contact information
- Key stakeholders and point of contact information
- Governmental agencies and point of contact information
- Utility providers, services and contact information
- Identification and timing of critical project decisions

100.3 Kick-Off Meeting

A kick-off meeting will be held virtually and will include the **Project Manager**, the Project Team, the Consultant Design Team (**Consultant**), and any other necessary parties immediately following the NTP. The **Consultant** will be responsible for preparing the kick-off meeting agenda, sign-in sheet, presentation, handout material, attending and facilitating the kick-off meeting, and submitting notes of the meeting to the **City.** The **Consultant** will prepare and send meeting notes to the **Project Manager** within five (5) business days of the meeting for **City** review. The **Consultant** will be responsible for distributing the meeting notes after the **Project Manager's** review and approval. Meeting attendees will have an additional five (5) business days to comment on the submitted meeting notes, after which time the notes will be considered final.

One virtual kick-off meeting is assumed. The estimated effort associated with meeting attendance, preparation, and note compilation time is provided in the attached fee estimate.

100.4 Design Progress Meetings

Three design progress meetings will be held virtually and will be scheduled on a quarterly basis for a twelve (12) month duration of the project. Two virtual technical group meetings and 3 virtual comment resolution meetings will also be scheduled when appropriate. The **Consultant** will be responsible for preparing meeting agendas, sign-in sheet, handout material, attending and facilitating the meetings, and submitting notes of the meeting to the **City**. The **Consultant** will prepare and send meeting notes to the **Project Manager** within five (5) business days of the actual meeting occurrence for review. The **Consultant** will be responsible for distributing the meeting notes after the **Project Manager's** review and approval. Meeting attendees will have an additional five (5) business days to comment on the submitted meeting notes, after which time the notes will be considered final.

The estimated effort associated with meeting attendance, presentation, and note compilation time is

provided in the attached fee estimate. The types of meetings the **Consultant** will attend are as follows:

- Progress Meetings (3)
- Technical Group Meetings (Traffic, Drainage, Structures, Construction Phasing, etc.) (2)
- Comment Resolution Meetings (3)

Subconsultant meeting attendance is as noted in their attached individual scope of services.

Michael Baker recognizes that miscellaneous one-on-one meetings, technical direction and progress calls are necessary for the execution of the work and miscellaneous progress calls are embedded in the actual work category labor. It is anticipated that many of these one-on-one meetings and calls will be virtual to minimize labor costs. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services. The **Consultant** will prepare a formal request for additional services accordingly and will not proceed without the approval of the **Project Manager**.

100.5 Design Criteria

The **Consultant** will prepare a table summarizing the design criteria to be used on the project and submit the design criteria to the **City** for approval. This table will be used as a basis for the project.

100.6 Design Exceptions

Design Exceptions are not anticipated on this project and are excluded from these services.

100.7 Field Visit with Project Team

The Project Team will visit the field site to acquaint key personnel with the details and features of the project and to gather input on issues, concerns and opportunities. The team field visit will be scheduled, and the team notified at least two weeks prior to the visit. For each field visit the **Consultant** will take photos of the project site and compile the photos in a photo log that describes the location and date of each photo. During one of the field visits, the **Consultant** will coordinate with the Sincuidados HOA and the Dream City Church staff to discuss project issues, gain access to fronting properties and to take photos of the existing sightlines to Pima Road.

Two site visits are anticipated periodically throughout the duration of the project. The estimated effort associated with attendance, preparation, and note compilation is provided in the attached fee estimate.

100.8 Project Administration

This task includes the administrative and coordination tasks required for coordinating the work of the team members with **City** and other project stakeholders. This task coordinates and administers the day-to-day operations of the project, including preparing the internal production work plan, organizing and filing project data and communication files, responding to project correspondence including emails, performance of monthly budget updates, schedule monitoring, and monthly project invoicing and progress reports development, compilation, and submissions. This task also includes issue resolution coordination with the **Project Manager,** the management of sub-consultants, and interfacing and communication determined to be reasonably necessary to keep stakeholders informed. The effort for this task is shown within the attached fee estimate based on the attached project schedule. As the full effort for this task is unknown, any efforts determined to be necessary above and beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary,

the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort. The **Consultant** will prepare a formal request for additional services accordingly and will not proceed without the approval of the **Project Manager**.

100.9 Safety Plan

While performing any fieldwork, the **Consultant** will be responsible for maintaining a safety program for its employees and subconsultants on the jobsite(s). The **Consultant's** safety program will comply with applicable local, state and public laws for the safety and health of its employees and subconsultants.

100.10 Quality Assurance/Quality Control Plan

The **Consultant** will develop and provide a written Quality Assurance/Quality Control (QA/QC) plan within five (5) days following NTP. The QA/QC plan will include such elements as checklists of items to be reviewed prior to each submittal, the procedures for conducting QA/QC activities, and the person(s) responsible for QA/QC activities at each stage of project development.

Engineering calculations submitted to the **City** will be complete in detail and will be checked. The person checking the calculations will not be the originator and will be qualified to check the calculations. All calculation sheets will be initialed and dated by both the originator and the checker.

Sub-consultant's work that is submitted will be reviewed by the prime **Consultant** for compliance with the Scope of Services prior to submittal for review by **City**. Discipline-specific QA/QC is accounted for under the respective sections for each deliverable throughout this scope of services. Time accounted in the estimate for this section is for auditing the process and customizing the QA/QC plan to this project.

SECTION 200 DATA ACQUISITION

200.1 Project Research / Data Collection

The **Consultant** will obtain and review available relative and relevant information impacting the project. This information will include copies of readily available most current *Design Standards and Policies Manual (DSPM)*, quarter section maps, record drawings within the project area, previously prepared reports and studies, and other relevant documents (electronic or hard copies). The **Consultant** will prepare a list of data needed from the **City**. The **City** will assign a contact at the **City** to compile the data. The data will be provided to the **Consultant** at no charge.

The **City** will also provide the **Consultant** with title reports for all properties affecting the project at no charge to the **Consultant**. The **Consultant** will provide a list of the title reports necessary to develop a right-of- way base map.

SECTION 300 SURVEY, MAPPING, AND ALIGNMENT

No current survey information is available for the project area. The **Consultant** will provide a combination of photogrammetry and field surveying necessary for the completion of this project as described in this Scope of Work.

300.1 Survey Control

The **Consultant** will develop horizontal and vertical control for the project by tying into the **City** Horizontal Control Network using GPS methods and benchmarks on the **City** vertical datum (NAVD88). The **Consultant** will place aerial targets for orthorectification of photogrammetry.

300.2 Photogrammetry and Planimetric Mapping

The **Consultant** will contract with **Cooper Aerial Surveys Co.** to produce 1 inch = 40 feet, 1 feet topographic information, planimetric detail and digital orthophotos which will extend from 1,000 feet south of Dynamite Road to 1,500 feet north of Las Piedras, a section line distance of approximately 9,100 feet. The width of photography and planimetric data collection will be 200 feet centered on the Pima Road section line, except in an area from approximately 250 feet north and 1700 feet south of Dixileta Drive which will be 400 feet centered on the Pima Road section line. This will be the basis for the survey base map.

300.3 Supplemental Topographic Surveying

The **Consultant** will supplement the photogrammetry and planimetric mapping primarily focusing on the following critical elements:

- Pavement, sidewalk and other flatwork to sufficiently provide information for tie-ins and transitions
- Stormwater culvert inverts and headwall/wingwall configurations
- Utility structure locations, inverts (where possible), operating nuts and exploratory potholes
- Driveways and intersections
- Random quality control points to verify the integrity of the photogrammetric surface model

Supplemental topographic surveys will be performed by conventional methods within the photogrammetry and planimetric mapping limits for the tie-in of improvements in the following locations:

- **City** facility approximately 900 feet south of Dynamite Blvd on east side of Pima Road
- Dynamite Boulevard
- South entrance to Dream City Church
- New entrance to Pima Dynamite Trailhead parking lot
- North entrance to Dream City Church
- Via Dona Road
- Las Piedras (topo only to guard building)

A supplemental topographic survey will be performed by conventional methods within the photogrammetry and planimetric mapping limits and an additional 800 feet west for the tie-in of improvements in the following location:

- Dixileta Drive

The supplemental topographic surveys shall locate above ground features including edge of pavement, curb and gutter, sidewalk, driveway, signs, mailboxes, fences, walls, above ground visible utility facilities and visible blue stake utility markings. Elevations shall be obtained at edges of pavements and sidewalks, gutter, top of curb, street centerline, water valve nuts, manhole inverts and rims (storm drain and sanitary), utility vaults and pads, inlet inverts and gutter, and sufficient elevations beyond the edge of pavement to represent the existing ground surface.

300.4 Pima Road Surface Utility Survey

The Consultant will perform a surface utility survey within the photogrammetry and planimetric mapping limits along Pima Road. The survey shall locate above ground visible utility facilities and visible blue stake utility markings. Elevations shall be obtained at water valve nuts, manhole inverts and rims (storm drain and sanitary), headwalls and culvert inverts, utility vaults and pads.

300.5 Survey Base Map

A base map of the project area will be prepared in MicroStation using **City** layer and CADD standards. The street centerlines, rights-of-way, property lines and easements shown on the base map will be based solely on field located monumentation and record information obtained from the Maricopa County Recorder; title reports will be obtained by the **City** and provided to the **Consultant**. Text annotations will be stored on layers separate from the graphic elements. The base map will include photogrammetry and planimetric mapping, supplemental topographic surveying, and utility information obtained from the **City** and utility owners "as-built" maps in the project area. The base map will also include the basis of horizontal and vertical control, north arrow, date of survey, and any pertinent notes and details.

300.6 Rawhide Wash Supplemental Topographic Surveying

The **Consultant** will perform supplemental topographic surveys at wash crossings outside the photogrammetry and planimetric mapping limits where additional data is required for design.

SECTION 400 PROJECT COORDINATION

Public & Stakeholder Engagement Task Oversight

The **Consultant** will lead the public and stakeholder engagement efforts which include the tasks and meetings described in Sections 400.1 through 400.5 below. The **Consultant** will manage the effort by jointly developing the stakeholder list with **City** staff, then maintaining a stakeholder mailing and contact list, respond and manage inquiries and comments in or outside of public and stakeholder meetings, prepare meeting materials, attend pre-engagement meeting that may include the **City** Public Information Officer, participation in public meetings, document comments received and the preparation of a Stakeholder Involvement record for the Design Review Board (DRB) Submittal. All stakeholder and public engagement meetings will be conducted in a virtual meeting format, with the exception of the agency briefings, which will be conducted in person. Meetings or attendance in addition to the scope listed above are provided in the attached fee estimate. Additional meetings beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort.

400.1 Stakeholder Meetings

The **Consultant** proposes one (1) virtual stakeholder engagement meeting to sufficiently inform and achieve stakeholder consensus for this project. This stakeholder meeting will introduce the project to the stakeholders (project objectives, major tasks and project schedule) and solicit stakeholder comments, concerns and objectives. The meeting is intended to provide an overview of the project early in the planning stage.

The **Consultant** will prepare for, attend and summarize the results for one(1) meeting for stakeholder outreach for the adjacent property owners and the HOA with potential interest in the project. Anticipated property owners or organizations that could be met with include:

- Sincuidados Homeowner's Association
- Adjacent property owners (one focus group meeting with 7-10 property owners located on the west side of Pima Rd. between Dynamite Blvd. and Dixleta Dr.)

The **Consultant** will prepare pertinent graphics and a PowerPoint presentation for use at the meeting. The **Consultant** will be responsible for preparing meeting agendas, sign-in sheet, attending and facilitating the meeting, and submitting a brief meeting summary report to the **Project Manager**. Task includes meeting attendance by up to four members of the **Consultant** team.

400.2 Agency Briefings

The **City** staff will perform in person, public agency briefings with the **City** Preserve Commission and the McDowell Sonoran Conservancy. One briefing to the **City** DRB is also recommended.

This agency briefings will introduce the project to the agencies (project objectives, major tasks and project schedule) and solicit agency comments, concerns and objectives. The meeting is intended to provide an overview of the project early in the planning stage.

The **Consultant** scope and fee does not include graphics, attendance, or documentation efforts to support the **City** with Agency briefings. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of providing services for this task.

400.3 Virtual Public Open House Meeting

The **Consultant** will prepare for, attend and summarize the results for two (2) virtual public meetings. The **Consultant** will collaborate with the **City** to develop a distribution list for advertisement/invitation to **City** staff and the stakeholders. The objective of these meetings is to present an overview of the project early in the planning stage and also at the draft 60% plan stage prior to submittal to the **City**.

Virtual Meeting Room Platform
For these meetings, the **Consultant** will create a project-specific, customized "virtual meeting room" platform to be used by the public as a hub for the dissemination of all presentation materials for this virtual public open house meeting. The virtual meeting room platform will be made available on the project website for multiple weeks to allow interested parties to view the presentation and review related documents at their convenience at any time during the project in a convenient and efficient manner and without added project cost. This task includes and assumes **City** PIO group review, comment and two (2) virtual work group meetings (1st meeting prior to preparation, 2nd meeting to review draft virtual room) and **Consultant** incorporation of minor modifications to the virtual meeting room in response to **City** PIO group comments.

Pre-recorded PowerPoint Presentation
The **Consultant** will collaborate with the **City** PIO to prepare a pre-recorded PowerPoint presentation. The PowerPoint presentation is intended to provide a broad overview of the various roadway, bike/pedestrian/equestrian, landscape, and/or flood control design characteristics.

Other Meeting Materials
The **Consultant** will prepare digital sign-in sheet and up to six (6) map graphics for public display in the virtual meeting room space. Task also includes the **Consultant** obtaining a project-specific internet domain. This domain is intended to be accessed through the **City** project website.

400.4 Project Website

The **Consultant** will coordinate with the **City** and prepare up to fifteen (15) FAQ questions/responses, provide up to six (6) project related graphics for the project website. The project website which will be established and maintained by the **City**. The graphics provided are assumed to be the same materials as produced for the stakeholder and/or public meetings. The estimated effort associated with coordination and development of the website is provided in the attached fee estimate. Coordination beyond the estimated effort in the attached fee estimate will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort.

400.5 Stakeholder Participation Summary Report and Public Engagement Coordination

The **Consultant** will prepare a Stakeholder Participation Summary Report that will provide details of stakeholder coordination, participation, and results of the stakeholder coordination effort. This document will provide the necessary information to demonstrate public reaction for the Design Review Board (DRB) approval.

SECTION 500 UTILITIES

The **Consultant** will review readily available existing utility data within the project area, including record drawings, electronic maps, utility survey information, utility easements and prior rights information.

500.1 Utility Data Acquisition

The **Consultant** will request utility maps from each utility company identified to have facilities within the project limits. The **Consultant** will identify utility providers via a blue stake request in order to confirm and document that blue stake was notified, and that applicable utility data was received.

500.2 Prior Rights Determination

The **City**, with assistance from the **Consultant**, will solicit the submittal of prior rights documentation by utility companies. The request for prior rights requests will take place as soon as the **Consultant** receives utility mapping and prior to the 30% submittal. Prior rights documentation will be reviewed and discussed with the **City** within ten (10) business days of receipt and a course of action will be developed for relocation of conflicting facilities. The **Consultant** will coordinate with the utility provider for relocation plans by the utility and schedules related to getting them moved or adjusted. The **Consultant** will avoid discussing opinions of prior rights validity with the utility company until the review of prior rights status has been completed and confirmed by the **City**.

500.3 Utility Designation and Potholing

Utility designation and potholing will be led by the prime **Consultant** with the majority of the physical labor being performed by **T2 Utilities Engineering Inc. (T2UE)** as detailed in Attachment A. The estimated fee for this item covers the project management and engineering review aspect of the prime **Consultant**.

500.4 Create Utility Base File

The Utility Base File mapping will be led by the prime **Consultant**. The **Consultant** will use available information including utility maps, record drawings, survey data and pothole data to develop a reasonable depiction of utility facility locations and depth.

500.5 Utility Coordination

As outlined in the following sections, the **Consultant** will coordinate with the utility providers and the **City**.

500.5.1 Utility Coordination Meetings

The **Consultant** will arrange and conduct virtual coordination meetings to facilitate identification and resolution of conflicts based on project needs as requested by the **City**. The meetings noted in the attached fee estimate include regular quarterly utility coordination meetings (four (4) total) in addition to individual utility meetings (six (6) total) that will be required. The estimated effort associated with meeting preparation, attendance, and note compilation time is provided in the attached fee estimate.

500.5.2 Utility Conflicts

The **Consultant** will indicate potential areas of conflict between utility facilities and project improvements. The **Consultant** will work with the utility owners to mitigate conflicts and develop alternatives. The **Consultant** will adjust project plans if feasible to avoid utility conflicts without impacting the needs of the project or public safety. During the duration of the contract the **Consultant** will develop and maintain a conflict identification spreadsheet and roll plot. As new conflicts arise the spreadsheet will be updated and distributed to the project team prior to regular utility coordination meetings.

The **City** will notify the **Consultant** of maximum shut down durations and allowable times/seasons for **City** owned facilities if relocations are needed.

500.5.3 Utility Plans Review

The **Consultant** will transmit plans to the utility companies for review and comment as noted in the submittalssection of this scope of services. The **Consultant** will tabulate comments received and provide responses. The **Consultant** will provide the **City** copies of correspondence to and from the utility companies. Utility comments and resolutions will be included on the comment resolution forms and will be distributed to team members, and utility companies. Any plans or right-of-way needs which may affect existing utilities, or their relocation, will be brought to the attention of the utility owner. This will include any slope adjustments, curb locations, drainage modifications, cut/fill adjustments and other features such as sound walls or structural elements.

500.5.4 Determine Utility Relocation Right-of-Way Needs

The **Consultant** will inform the **City** if new right-of-way is required which exceeds what is needed for the roadway improvements. The **City** will authorize utility companies in writing to begin the design and construction of their facility relocations only if such design and relocation is subject to prior rights and/or compensable by the **City**. The authorizations will be dated and signed with copies sent to the appropriate individuals. The utility owner will be requested to provide relocation plans and scheduling for review.

500.5.5 Utility Relocations on Private Property

It is not expected that these will be required unless sound walls are warranted and desired and are excluded from the scope of work.

500.5.6 Utility Relocation Costs

The **Consultant** will determine, by examination of prior rights documentation provided by the utility company, the utility's rights to occupy the area of conflict and who is responsible for the cost of the relocation. The **City** is responsible for the cost of utility relocations for utility providers with prior rights. Additions and betterments are the responsibility of the utility provider. Utilities without prior rights are responsible for cost incurred to relocate facilities. The **Consultant** will provide an opinion of probable cost, or review and comment on cost estimates provided by the utility provider for

inclusion in the Utility Agreement. The **City** will notify the utility company to relocate at its own expense or will obtain the necessary cost estimates and prepare the utility agreements to allow for payment of utility relocation work when it is at the **City's** expense. The assumed effort for this task is shown within the attached fee estimate. As the full effort for this task is unknown, any efforts determined to be necessary above and beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort.

500.5.7 Utility Relocation Design

The utility owners will be responsible for the design of their relocation needs whether prior rights are proven or not proven. The **Consultant** will coordinate design and relocation plans between utility companies to mitigate conflicts between utility companies desiring to relocate within the same corridor.

The **Consultant** will review utility relocation plans for compatibility with the proposed design plans. Once utility relocation plans have been reviewed, the **City** will issue the relocation permit to the utility owners. The assumed effort for this task is shown within the attached fee estimate. As the full effort for this task is unknown, any efforts determined to be necessary above and beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort.

500.5.8 Update Utility Base File

Utility relocations will be shown within the final construction plans and noted as such within the utility special provisions. The **Consultant** will compile and update a proposed utility base file to show the relocation concepts. The estimated fee includes depicting the proposed condition on the construction drawings.

500.5.9 Utility Relocation Construction

It is assumed that the dry utility companies will be responsible for performing the work associated with the relocation of their utility facilities unless other agreements are made with **City**. If another agreement is made, inclusion of relocation within the project plans will be considered additional services to include relocation construction specifications and plans as appendices to the roadway construction documents. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort and request additional services.

500.5.10 Utility Relocation Special Provisions

The **Consultant** will coordinate the development of special provisions for the project in the respective scope sections for utility restrictions during construction of the project. The effort to develop Utility Special Provisions is included in Section 900 Specifications and will include the following:

- A listing of utility providers in the area, as well as a contact person and their associated contact information
- A statement describing the status of the utility, including any relocations that have happened or will happen
- A description of the work to be performed by the utility providers prior to and during construction
- A committed completion date for each utility requiring relocations
- A description of any utility work to be performed by the **City**'s Contractor
- A description of licenses, permits, insurance, and right of entry requirements
- Special conditions, locations or clarifications related to utility facilities or work that might affect the **City's** Contractor's bid or schedule.

The assumed effort for this task is shown within the attached fee estimate. As the full effort for this task is unknown, any efforts determined to be necessary above and beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort.

500.5.11 Utility Agreements

It is assumed that the **City** will review and develop any utility agreements required for this project. Services for review and coordination of agreements are not included within this scope of services.

500.5.12 Approval to Construct

Water and sewer facility relocation services will require an Approval to Construct (ATC) from the Maricopa County Environmental Services Department (MCESD). It is assumed that only minor adjustments will be required for water and reclaimed water facilities. Sanitary sewer relocations are not anticipated and will not be required but the manholes and valve covers will require adjustment to new grade and modification at in-pavement locations. The **Consultant** does not include costs for MCESD coordination or fees for an ATC.

500.5.13 Miscellaneous Exhibits and Correspondence

The **Consultant** will prepare miscellaneous exhibits as part of the concept and design development of utility relocations. These exhibits may include depictions of relocation alignments, locations for easements, locations for stubs and service requests, etc. The assumed effort for this task is shown within the attached fee estimate. As the full effort for this task is unknown, any efforts determined to be necessary above and beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort.

500.5.14 Utility Clearance Letter

The **Consultant** will prepare a Utility Clearance Letter and submit it to the **City** prior to final sealed plans, together with copies of correspondence from utility companies verifying the information. A list of utilities, including those not in conflict, is to be provided in the special provisions. If adjustments are needed, the Clearance Letter will list each utility company separately, showing:

- The name of the company, address, contact name and phone number
- The nature of required adjustment
- The status of Agreements and applicable permits.
- The status of the utility adjustment
  - Completed
  - To be done by Contractor during construction
  - To be done by utility company during construction with estimated completion date or number of working days required following milestone achievement
  - In progress with estimated completion date

SECTION 600 ENVIRONMENTAL

The **Consultant** will lead the effort for environmentally clearing the project. The majority of the field work and Reports will be performed by the subconsultants **EcoPlan** and **Newton Environmental Consulting, LLC** as shown in Attachments D and C.

600.1 Noise Analysis

Noise analysis will be provided by **Newton Environmental Consulting, LLC** as outlined in the scope and fee in Attachment C. The noise analysis will be completed as early in the design schedule as possible once the horizontal and vertical roadway alignments and typical sections are approved by the **City**. Angie Newton will provide staff for attendance at the public meetings. Sound walls as a result of the noise analysis are not anticipated to be required for this project.

600.2 Biological Evaluation

The **Consultant** will prepare a Biological Evaluation (BE) for the project area. The primary work will be performed by **EcoPlan, Inc.** whose proposal is shown in Attachment D. This task includes time associated with managing the work.

The **Consultant** will submit the draft BE to the **City** for review and will respond to one (1) round of comments. The **Consultant** will finalize the BE based on the **City's** comments. The **Consultant** will submit the draft BE to US Army Corps of Engineers (USACE) for review and will respond to one (1) round of comments. The **Consultant** will finalize the BE based on the USACE comments.

600.3 Preliminary Jurisdictional Delineation (PJD)

The **Consultant** will prepare a Preliminary Jurisdictional Delineation (PJD) for Rawhide Wash. The primary work will be performed by **EcoPlan, Inc.** whose proposal is shown in Attachment D. This task includes time associated with managing the work.

The **Consultant** will submit this PJD package to the **City** for review and will respond to one (1) round of comments. The **Consultant** will submit this PJD package to the USACE for review and will respond to one (1) round of comments.

SECTION 700 ALTERNATIVE ANALYSIS

700.1 Alignment Alternatives

The **Consultant** effort for alignment and cross section alternatives, and landscape architecture concepts coordination is included in Section 800 Technical Memoranda (TM) and Reports.

SECTION 800 TECHNICAL MEMORANDA AND REPORTS

800.1 Alignment Alternatives

The **Consultant** will review alignment alternatives which may result in an easterly shift from the Pima Road section line that would reduce need for right-of-way acquisitions where the western right-of-way width is 55 feet. The current Pima Road two-lane roadway is located just west of the section line and is generally located on what will be the future southbound Pima Road pavement and the future north bound lanes will be just east of the section line. This will facilitate a phased construction of the new northbound pavement in the clear while two-way traffic remains on the existing pavement. The two-way traffic can then be shifted to the completed northbound lanes while the southbound lanes are constructed. The **Consultant** will evaluate constructability, R/W and other impacts for alternative alignments prior to the 30% submittal and the selected alternative will be included in the 30% submittal.

800.2 Cross Section Alternatives

The **Consultant** will evaluate the use of different curb and gutter types within the roadway cross section throughout the project limits to convey pavement runoff. The curb and gutter applications that currently exist periodically along the roadway and those identified in recent nearby Pima Road projects will also be reviewed and considered. This evaluation will finalize the locations for use and consider the effect of using each type regarding low impact design and erosion. The analysis will be completed prior to the 30% submittal and the selected alternative will be included in the 30% submittal.

800.3 Landscape Architecture Concepts

The **Consultant** will coordinate with **DIG Studio Inc.** to develop plant palates, hardscape features, landscape and public art improvements and structural aesthetics for the project. The time included in this task is for coordination and management of **DIG Studio**'s effort. **DIG Studio**'s proposal for services is included in Attachment E.

800.4 Traffic Report

The purpose of the traffic analysis is to evaluate intersection configuration, turn lane requirements and storage lengths and safety analysis.

800.4.1 Data Collection:

1. Obtain and review readily available traffic studies conducted within or adjacent to the project limits. These studies and the data will be utilized to obtain the data determined to be reasonably necessary to complete this analysis. The **City** will provide copies of the traffic studies.
2. Conduct a field review to determine existing traffic conditions (i.e., lane configurations and traffic control) for each of the intersections.
3. Collect AM, Mid-Day and PM Peak turning movement counts (2-hours each) and 48-hour bi-directional counts at the following locations:
    - 3.1 Pima Road and Dynamite Boulevard
    - 3.2 Pima Road and Dixileta Drive
    - 3.3 Pima Road and Las Piedras

Turning movement counts will be collected by **All Traffic Data Services**. Their quotation to perform data collection services is provided in Attachment F.

800.4.2 Traffic Analysis

A Traffic Analysis will be conducted for Pima Road under existing conditions, interim/opening year (10-year horizon), and 20-year horizon (2040) using a 45-mph posted speed limit as existing. Traffic analysis will be done utilizing SYNCHRO Version 10.0 Software. Traffic volumes developed will be submitted to **City** staff for review and approval prior to completing the traffic analysis.

Future year traffic volumes will be obtained from Maricopa Association of Governments (MAG) Travel Demand Model (TDM). Appropriate adjustments to the MAG volumes will be made based on discussions with the **City**. The **City** will provide input on the future developments that will affect the traffic analysis. This information will be used to extrapolate impacts to the design year ADT.

The intersection analysis will consist of defining intersection control, lane configurations, left-turn and right-turn storage lane lengths, and signal phasing requirements. Intersections that will be evaluated as part of the project are as follows:

- Pima Road and Dynamite Boulevard
- Pima Road and Dixileta Drive
- Pima Road and Las Piedras

Intersection control and lane configurations determined by the analysis will be provided to the **City** for review and approval prior to the 30% submittal. This will allow review and approval of the intersection layouts before the footprint for the signing and pavement marking and signal pole foundation locations are set.

A crash analysis will be conducted to identify whether any crash mitigation measures are needed within the project limits. Crash analysis will be conducted using the latest 5-year crash data either obtained from ADOT or the **City**.

Per the **City** Roundabouts First Policy, if any intersection meets the signal warrants based on the analysis, and the **City** concurs, a contract modification will be developed and submitted to the **City** for approval. The contract modification will be provided by the **Consultant** team including **Roundabouts and Traffic Engineering (RTE)** who will analyze the operations of potential roundabouts. It is anticipated that the project will not meet signal warrants at Dixileta Road or Las Piedras so any scope related to roundabout analysis is not included in this scope of work.

800.4.3 Traffic Memorandum

A traffic memorandum will be prepared which will summarize the data collected, analysis process, results of the analysis and recommendations. Appendices will be provided. Two submittals (draft and final) technical memorandums will be prepared.

800.4.4 Signal Modifications

Modifications to the existing signal timing and coordination plans are excluded from this project scope. Modifications can be made at a later time under separate contract

modification authorization at a more appropriate time closer to when construction activities are nearing completion.

800.5 Drainage Analysis

The drainage design includes development of Rawhide Wash crossing drainage alternatives followed by two (2) drainage design evaluation components for on-site and off-site design.

800.5.1 Rawhide Wash Crossing Drainage Alternatives

The **Consultant** shall prepare a Drainage Alternative Memo which analyzes various options to convey the Rawhide Wash across Pima Road Crossing. There is an existing bridge crossing immediately west of Pima Road on a private property that will restrict flows conveyed downstream.

Prior to the 30% submittal, the **Consultant** will submit a Drainage Alternative Memo for the proposed drainage solution to convey the flow from Rawhide Wash. Up to two (2) alternatives will be evaluated. The anticipated alternatives include:

- A culvert or bridge structure at Pima Road crossing in conjunction with a channel east of Pima Road. The channel will divert some of the flows south along Pima Road to mimic existing conditions. An additional culvert crossing a little south of the proposed bridge crossing would be needed to route flows conveyed by the channel across Pima Road.
- A culvert or bridge structure at Pima Road crossing to convey the Rawhide wash flows in its entirety to limit the number of new drainage crossings across Pima Road. A channel west of Pima Road can be designed to convey any excess flow not conveyed by the existing bridge structure that is located on the private property. The channel will ultimately convey the flows south into the existing natural drainage corridor south of the private property.

The alternatives analysis will consider constructability, right-of-way, maintenance, utilities, aesthetics, and sediment issues. The **City** will decide on the drainage alternative and crossing structure type prior to the **Consultant** beginning the final design. Other Stakeholders such as Flood Control District of Maricopa County and Arizona State Lands may be consulted before determining the Recommended Alternative. Comments received on the Memo will be compiled and addressed in the Final Drainage Alternative. The Scope of Work assumes that the FCDMC will provide review but not suggest unwarranted flood control alternatives and studies other than a no adverse impact solution for the Rawhide Wash roadway crossing of Pima Road.

800.5.2 Off-site Drainage Design

The **Consultant** shall review existing hydrology prepared for Rawhide Wash Flood Hazard Mitigation - Final Design Hydrology, Hydraulics and Sediment Transport and Scour Report completed in March 2021. This hydrology was updated from the Pinnacle Peak West ADMS and performed in FLO-2D with updated 2016 topography. This hydrology will be used as a base model for developing the pre-project conditions to determine the peak discharges reaching the east side of Pima Road. The **Consultant** will modify and add details to the FLO-2D model as necessary. The **Consultant** shall develop existing conditions model and show the recommended improvements for 10-YR, 50-YR and 100-YR storm events in FLO-2D. Other storm events such as 25-YR may be required based on the roadway classification. The post-project conditions will be compared to the pre-project conditions to demonstrate no increase to peak discharge at the Pima Road Crossing.

10-YR, 50-YR and 100-YR models will then be revised to reflect the proposed drainage conditions such as culverts and channel sections in the Rawhide Wash crossing. The FLO-2D model will be used for this exercise. The **Consultant** shall coordinate with the **City** to obtain a no-rise certificate. In addition to the Rawhide Wash crossing there are about seven (7) existing culvert crossings that are identified along the roadway corridor. The existing CMP crossings will be replaced with RCP crossings or HDPE pipes. HY-8 or CulvertMaster will be used to analyze these crossings with riprap stilling basin anticipated to dissipate the energy.

Sediment yield and sediment transport analysis is not included within this scope of work and will be coordinated with the **City** if determined to be necessary.

If the modeling results show an increase in water surface elevation a CLOMR/LOMR will be required for the crossing. If the 100-YR water surface elevation shows increase, a separate hydraulic model using HEC-RAS will be developed. The **Consultant** may be able to use the previously developed HEC-RAS model from the Upper Rawhide Wash Floodplain Delineation Study performed by Kimley Horn in 2002. The **Consultant** will update the existing HEC-RAS model and modify and add cross-sections with updated topographic information for this exercise. Additionally, the HEC-RAS model will be updated to reflect the proposed conditions. The hydraulic model will extend from east of the Pima Road to 300 feet downstream of Pima Road to include the downstream bridge crossing. The HECRAS model is only for informational purposes and is not intended for FEMA submittal. CLOMR/LOMR is not included as part of this scope and fee.

800.5.3 On-site Drainage Design

On-site drainage design will be designed to convey the 10-year storm event per the **City** requirements. Pavement runoff will be treated for the first flush. First flush treatment will be in the public right-of-way. Dry lane calculations will be performed to assess the need for roadway scuppers. Pavement drainage design will be performed to locate and size scuppers and side road conveyance channels.

800.5.4 Drainage Report

The **Consultant** will prepare a drainage report in compliance with the Drainage Policies and Standards Manual (DSPM) to document the drainage design for the project. The drainage report will follow the outline in the **City's** DSPM. Exhibits that will be prepared for the drainage report include:

- Vicinity Map
- Existing Conditions Map
- Proposed Onsite Drainage Map
- Hydraulic Workmap

The **Consultant** will prepare a Preliminary and Final Drainage Report. The Preliminary Drainage Report will be submitted with the 60% deliverable. The Final Drainage Report will be submitted with the 90% deliverable. The Final Drainage Report will be submitted as a bound report and in electronic format. The **Consultant** will compile comments received into a summary of comments form and address comments prior to the final submittal.

800.5.5 Drainage Exclusion Assumptions

The following is a list of assumptions for the drainage tasks for this project:

- A CLOMR/LOMR is not assumed or included within this scope of services. If a CLOMR/LOMR is needed, the approach is discussed in 800.5.2 as a reference
- A sediment yield and transport analysis is not assumed or included with this scope of services
- No additional hydrologic or 1D hydraulic modeling that is not mentioned in Section 800.5.2 will be performed
- No bridge analysis is included in the design except for drainage alternative analysis.
- Private owner coordination or easement negotiations is not included

800.6 Alternatives Analysis & Structure Selection Memorandum (Rawhide Wash)

The **Consultant** will prepare a structural alternative analysis for a new Pima Road structure at the existing Rawhide Wash crossing just south of Dixileta Drive. A Structure Selection Memorandum will provide a detailed comparison between the alternatives and recommend a structure type at the 30% stage submittal. Up to two (2) alternatives will be considered in the analysis. Alternative analysis will consider site conditions, constructability, maintenance, construction duration, and aesthetics. The **City** will confirm the considered alternatives and approve a box culvert or bridge type structure early in the structure alternative process prior to the **Consultant** beginning the final design. Comments received for the Initial Structure Selection Memorandum will be compiled and addressed in the Final Structure Selection Memorandum. The following sections will be included in the Structure Selection Memorandum:

- Background and Need for Improvements
- Structure Location and Description
- Structural alternatives to be considered
- Existing/Proposed Roadway Geometry and Condition
- Existing/Proposed Structure Geometry
- Structure Hydraulics
- Existing and Proposed Utilities
- Right of Way, construction and/or maintenance easement(s)
- Structural Design Specifications and Loadings
- Structure Foundation Type and Geotechnical Recommendations
- Environmental Constraints
- Aesthetics Considerations
- Construction Phasing
- Traffic Constraints and Traffic Control
- Temporary Structures
- Cost Estimate of Structure Alternatives Considered
- Recommended Alternative

The following appendices will be included in the memorandum:
Appendix A: Structure Layout and Typical Sections for the Recommended Alternative
Appendix B: Detailed Cost Estimates for the Considered Alternatives

800.7 Geotechnical Memorandum

Geotechnical services will be provided by **Ethos Engineering**. Their detailed proposal for Geotechnical Engineering services is included in Attachment G. Costs associated with managing this effort by the prime **Consultant** are included in this scope item.

800.8 Noise Analysis Memorandum

A noise analysis memorandum will be provided by **Newton Environmental** as outlined in their scope and fee proposal in Attachment C. Costs associated with managing this effort by the prime **Consultant** are included in this scope item.

SECTION 900 PLANS, SPECIFICATIONS AND ESTIMATES

The plans will be developed following the guidelines established in the **City's** DSPM - Chapter 9. Drawing Sheet size will be 22-inches by 34-inches. The estimated number of **Consultant** plan sheets for each discipline is provided below. If the scope of services changes and additional plan sheets are determined to be necessary, the **Project Manager** will be notified and additional services will be requested accordingly. The effort to compile, package, and submit the various stages of plans, specifications, estimates, and other information is included in Section 1200 Submittals. The following **Table 1** is a list of the anticipated **Consultant** developed sheets identified for the project and is based on including the anticipated multi-cell concrete box culvert structure crossing at Rawhide Wash. These estimated sheets may change as plan development progresses.

Table 1: Michael Baker Estimated Sheets Summary

Dwg Description	Location	No. of Sheets
ROADWAY		
Cover	General	1
Notes	General	1
Typical Sections	General	1
Pavement Structural Sections	General	1
Pavement Transitions	General	1
Ped Ramps/Returns Details	General	1
Miscellaneous Details	General	4
Geometric Control	Pima Rd	1
Plan & Profile	Pima Rd	17
Plan & Profile	Dynamite Blvd	2
Plan & Profile	Dixileta Dr	1
Plan & Profile	Las Piedras	1
Plan/Table (Staking)	Pima Rd/Dynamite Rd	1
Plan/Table (Staking)	Pima Rd/Dixileta Dr	1
Plan/Table (Staking)	Pima Rd/Las Piedras	1
Plan/Table (Staking)	Driveways	2
Roadway Subtotal		**37**
CROSS SECTIONS		
Cross Sections (100 ft Interval)	General	**13**
Roadway & Cross Sections Subtotal		**50**
TRAFFIC		
Traffic Cover	General	1
Signing & Marking Notes	General	1
Signing & Marking Layout	Pima Road	5
Sign Summary Sheets	General	3
Construction Sequencing Notes	General	1
Construction Sequencing Details	Pima Road	5

Traffic Signal Notes	General	1
Traffic Signal Layout	Pima Rd/Dixileta Dr	1
Pole Schedule	Pima Rd/Dixileta Dr	1
Conductor Schedule	Pima Rd/Dixileta Dr	1
Traffic Signal Layout	Pima Rd/Las Piedras	1
Pole Schedule	Pima Rd/Las Piedras	1
Conductor Schedule	Pima Rd/Las Piedras	1
Signal Interconnect Layout	Pima Rd	5
Interconnect Details	General	1
Splice Details	General	1
Traffic Subtotal		**30**
DRAINAGE		
Drainage Details	General	2
Culvert Crossing Plan & Profile	Miscellaneous Locations	4
Culvert Crossing Plan & Profile	Rawhide Wash	2
Channel Plan & Profile	Pima Rd So. of Rawhide Wash	2
SWPP Plans	General	3
Drainage Subtotal		**13**
STRUCTURES (For Multi-Cell Box Culvert		
General Plan & Elevation	Rawhide Wash Crossing	1
Typical Section & Quantities	Rawhide Wash Crossing	1
Structural Excavation & Backfill Limits	Rawhide Wash Crossing	1
Phasing & Construction Sequence	Rawhide Wash Crossing	1
Barrier Details	Rawhide Wash Crossing	1
Aesthetic Treatment Details	Rawhide Wash Crossing	1
Cutoff Walls & Scour Protection Details	Rawhide Wash Crossing	1
Wingwall Plan, Elevation & Sections	Rawhide Wash Crossing	1
Miscellaneous Structural Details	Rawhide Wash Crossing	1
Structures Subtotal (Base)		**9**
UTILITIES		
Water Relocation Plans and Details	Miscellaneous Locations	8
Utilities Subtotal		**8**
TOTAL		**110**

900.1 Roadway Plans

The **Consultant** will prepare roadway plan and profile sheets in accordance with the **City** DSPM guidelines. Plans will be submitted with the 30% submittal for review of line and grade. Initial typical sections will also be provided at 30%.

At 60%, draft roadway details will be included where standard details cannot be implemented. Driveway detail designs will be submitted for each driveway affected by the project improvements.

The design will include two travel lanes and a bike lane in each direction separated by a 16-foot wide raised landscaped median with full width reconstruction of the Pima Rd intersections at Dynamite Blvd, Dixileta Drive, and Las Piedras. Just beyond these intersections, all roadways will be transitioned to match the existing pavement widths with appropriate edge tapers in accordance with the **City** DSPM guidelines. Intersections will be designed to meet future roadway width requirements, as defined by the **City**.

A paved sidewalk will be designed and constructed along the west side of the corridor. A paved shared use path and earthen trail will also be designed and constructed on the east side of the corridor. The new sidewalk, shared use path, and earthen trail will be designed to the limits of the full width pavement at the intersections, and either transitioned to existing infrastructure or ended per concurrence with the **City**.

The horizontal and vertical alignments will match existing at the project limits.

Pavement design will be as documented in the geotechnical recommendations provided by **Ethos Engineering**.

Design speed will be 55 mph with a posted speed of 45 mph.

The alignment is generally a straight tangent configuration; therefore, superelevation is not anticipated.

A pedestrian underpass is not included within this scope of services.

Transit facilities are not anticipated or included within this scope of services.

30% Roadway documents and plans will include sheets and backup reports and calculations that define typical sections, roadway geometry and right of way requirements, major drainage features, traffic features, utilities, construction limits, intersection layouts, and approximate right of way requirements.

60% Roadway documents and plans will include the following:

- Engineering calculations
- General sheets (face, general notes, quantity summary, and geometric control sheets)
- Roadway sheets (typical sections, plan and profile, and driveway detail sheets)
- Traffic related sheets (described below)
- Structure sheets (See below)
- Intersection detail sheets
- Landscape sheets
- Earthwork report and sheets
- Roadway cross sections
- Project opinion of probable cost and bid schedule
- Special provisions

Significant changes to the design and scope after the 60% Stage will have an effect on R/W, utility, and/or environmental clearance schedules and this will require the **Project Manager's** approval. Prior to the 60% submittal the design team will resolve major design challenges between all appropriate technical disciplines that include over-the-shoulder design reviews; report updates; and technical discussion meetings that will aid in executing the goals of the 60% Stage.

95% Roadway document and plans will include the following:

- Utility coordination and conflict documentation
- Engineering calculations
- General sheets (face, general notes, quantity summary, and geometric control sheets)
- Roadway sheets (typical sections, plan and profile, and driveway detail sheets)
- Traffic related sheets (described below)
- Structure sheets (described below)
- Intersection detail sheets
- Landscape sheets
- Earthwork report and sheets
- Roadway cross sections
- Project opinion of probable cost and bid schedule
- Special provisions

100% Roadway document and plans will include the following:

- Utility coordination and conflict documentation
- Engineering calculations
- General sheets (face, general notes, quantity summary, and geometric control sheets)
- Roadway sheets (typical sections, plan and profile, and driveway detail sheets)
- Traffic related sheets (described below)
- Structure sheets (described below)
- Intersection detail sheets
- Landscape sheets
- Earthwork report and sheets
- Roadway cross sections
- Project opinion of probable cost and bid schedule
- Special provisions

900.2 Roadway Cross Sections

The **Consultant** will prepare roadway cross sections at 100 ft intervals in accordance with the **City** DSPM guidelines. Roadway cross sections will include earthwork summaries and will be submitted with the 60% and 95% submittals for review.

900.3 Signing and Pavement Markings

The **Consultant** will prepare pavement marking and signing plans in accordance with the **City** DSPM guidelines. Pavement marking plans will be submitted with the 30% submittal and will show relevant street dimensions and lane geometry. Existing pavement marking will be shown for 100 feet beyond pavement matching locations and including any transitions to existing striping, together with pertinent dimensions being shown. Assumed limits and standards for pavement markings are as follows:

- Pima Road, from approximately 500-feet south of Dynamite Boulevard to approximately 500-feet north of Las Piedras.
- 200-feet in advance of approaches on Dynamite Boulevard at Pima Road.
- Up to 200-feet on minor / collector street approaches along Pima Road within the project limit

The **Consultant** will provide complete street application recommendations for the project.

900.4 Sequence of Construction

The **Consultant** will prepare general sequence of construction plans as part of the 60% submittal. These major construction sequences are anticipated with sub phases for minor landscape and pavement matching.

The **Consultant** will prepare an estimated construction schedule and recommended duration for project construction. The project construction duration is the number of calendar days from the notice to proceed date to completion of construction.

The recommended construction duration will be identified in the special provisions and will be based on the estimated construction schedule prepared by the **Consultant**. Recommendations for liquidated damages for violating the construction schedule will be presented to the **City** for review, approval and inclusion into the specifications.

The estimated construction phase schedule will include consideration of lead time requirements for delivery of materials and will include float time to accommodate weather delays.

The estimated construction schedule will be submitted for review as part of the project engineering calculations.

Construction sequencing for the project will be detailed as part of project specifications. Full traffic control plans are not anticipated or included within this scope of services.

900.5 Traffic Signals

The **Consultant** will prepare design and construction documents to design recommended new traffic signals and/or the modification of existing traffic signals within the project limits in conformance with the requirements of the MUTCD and current **City** DSPM standards. Existing equipment will be salvaged to the **City**.

The **Consultant** will prepare traffic signal design and plans at the following locations:

- Pima Road and Dynamite Boulevard (potential modification),
- Pima Road and Dixileta Drive (potential new signal design if authorized by the **City** PM if a roundabout intersection is determined not to be advanced), and
- Pima Road and Las Piedras (potential new signal design if authorized by the **City** PM if a roundabout intersection is determined not to be advanced)

Traffic signal layouts and interconnect plans will be provided with the 30% submittal and will show intersection geometry. Traffic signal plans will include the following:

- Signal layouts including poles, mast arms, conduit, push buttons, pull boxes and controller cabinets
- Pole type, foundation, mast arm and signal head data summaries

- Conduit, conductor and pull box schedules
- Luminaire requirements
- Equipment schedules
- Phase diagrams
- Electrical point of service revisions for reconstructed traffic signals
- Video detection layout and details
- Signal interconnect layout and details
- General and construction notes
- Proposed ADA surfaces
- Proposed revisions to the **City's** basic timing sheets
- Potential future signal phasing

Traffic signal modification plans will be prepared according to the **City** DSPM.

900.6 Traffic Signal Interconnect Plans

The **Consultant** will evaluate whether the existing interconnect can be protected in place based on proposed improvements. We understand it is the **City's** preference to preserve what is in place.

The **Consultant** will prepare traffic signal interconnect plans that include modifications to existing conduit, fiber, and communication pull boxes/vaults. Splice details will be included. Information regarding existing splices will be provided by the **City**.

900.7 Lighting

Lighting is not proposed along Pima Road except at the intersections Dynamite Boulevard, Dixileta Drive and Las Piedras. Lighting Analysis is not included within the scope of services of this project. The new streetlight poles will match the existing streetlights in the project vicinity. Existing streetlights within the project limits will remain as is. Changing existing lighting fixtures to LED fixtures is not included within this scope of services.

The **Consultant** will coordinate lighting points of service for existing streetlights.

900.8 Drainage

The drainage design prepared during the analysis outlined in Section 800 will be shown in the drainage plans. This will include construction documents for the drainage crossings and culvert/bridge at the Rawhide Wash

Project plan set assumes the inclusion of the following 13 sheets that will be developed for the drainage improvements:

- 2 -Drainage Detail Sheets
- 6 -Drainage Culvert Plan and Profile Sheets
- 2 -Drainage Channel Plan and Profile Sheets
- 3- SWPP Plan Sheets

900.9 Landscape Architectural Design

The **Consultant** effort for this task is for coordination with **DIG Studio** who will prepare designs and construction documents for landscape, and irrigation within the project limits that are consistent with the **City** DSPM guidelines. The design will address the landscape and irrigation within the roadway medians and the areas between the back of curb and the R/W. From the substantial construction completion date, new roadside vegetation will be irrigated for 3-years and weaned off and the new drainage channels will be a mixture of both hydroseed (non-irrigated), and plantings (temporarily irrigated). Irrigation systems will be designed so the medians will continue to have irrigation after the 3 years from the substantial construction completion date. Construction documents by the **Consultant** will also include stormwater pollution plans (SWPP) required for construction.

DIG Studio will determine the necessary plans and renderings associated with the landscape task for the Development Review Board (DRB) submittal per the DRB checklist.

DIG Studio will provide the basic conceptual layout for the 30% plan review with full landscape architectural construction documents, specifications, and opinion of probable cost estimates at the 60%, 95%, and 100% submittals.

Native Plant Inventory/Salvage Plans will be provided by **DIG Studio** based on their attached scope and fee in Attachment E. Existing trees will be salvaged and replanted within the same general location, if possible, to provide the adjacent property owner similar vegetation in comparison to the existing condition.

Coordinating with a **City** designated artist is not included within this scope of services. An artist is not currently scoped to be involved in the project.

900.10 Structures - Multi-Cell Box Culvert @ Rawhide Wash Crossing

The **Consultant** will prepare construction plans for the 30%, 60%, 95% and final sealed PS&E submittals for the following structure:

- Proposed structure at Rawhide Wash crossing: The structural construction plans scope includes the development of the final structure type assumed to be a multi-cell cast-in-place reinforced concrete box culvert. The scope includes construction plans for one single location. If more than one crossing location is needed to convey the flows, additional construction plans may be required. The **Consultant** will notify the **Project Manager** in advance and request additional services accordingly.

This structural construction plans scope does not include the development of plans for a multi-span cast-in-place reinforced concrete slab bridge. If during the Alternative Analysis, the **Consultant** and **City** determine that a concrete slab bridge scenario, instead of a box culvert scenario, should be taken forward to final design, additional services for this task will be necessary. The **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort for a box culvert scenario.

Retaining walls and sound walls are not anticipated to be required for this project and are excluded from this scope of work. If additional services for the design and plan development for these structural elements are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance and request additional services accordingly.

900.11 Utilities

The scope of these services assumes that up to four (4) locations total for water and reclaimed water will require minor adjustment (relocations) and will be designed by the **Consultant**. This will include coordination with the **City** for allowable shut-downs, materials, tie-ins, need for temporary bypassing, valving, trenching, backfill, etc. The **City** will direct the **Consultant** on locations of any future utility stubs determined to be reasonably necessary for installation as part of this project's construction.

The **Consultant** will be responsible for identifying and providing design and relocation plans for **City** utilities within the proposed Right-of-Way.

The **Consultant** will include utility relocation plans no later than the 60% submittal. The Utility Relocation Plan Sheets will identify utilities prominently, as well as each potential conflict point. The Utility Plan Sheets will contain the following information:

- Existing utilities
- Proposed utility relocations (for information only)
- Identification of the utility type and ownership
- Proposed improvements
- Potential conflict points and test hole locations
- The utility identified by the test hole
- Northing, Easting, Station, and Offset of each test hole location
- Elevation of utilities located in the test hole
- Identification of the party responsible for the relocation
- A legend key for any symbols used to depict utilities as needed.

Utility plans will conform to the following requirements:

- The pipe wall thickness will be shown in the profile and section views for all utilities greater than 18-inches.
- The **Consultant** will show the top of valve box elevations and top of operating nut elevations for water valves on the plan view with a leader pointing to water valves.
- The **Consultant** will show the rim and invert elevations for existing storm and sanitary sewer manholes on the plan view with a leader pointing to the manhole.
- Existing utility crossings will be shown at the location and elevation as obtained from record drawings, interpolated from actual survey data, or as determined from test hole explorations. The **Consultant** will indicate on the plans the data source by the notation "As-Built" or "test hole". Elevations will be converted and shown using the roadway project datum.
- The **Consultant** will show existing and new underground facility locations on plan, profile, and cross section drawings.

Utility Plan Sheets will be updated throughout the design process. As such, not all the above information will always be included on all sheets throughout the design process.

900.12 Specifications

The **Consultant** will prepare Special Provisions for items, details, and procedures not adequately covered by MAG, the **City's** Supplement to MAG or the **City's** boiler plate specification. Final Special

Provisions will be sealed by the Engineer in responsible charge. Special Provisions will be submitted at the 60%, 95%, 100% sealed stages for project reviews.

900.13 Quantities and Opinion of Probable Cost Estimates and Bid Schedule

Quantities

The **Consultant** will be responsible for compiling a list of quantities at all submittals outlined in Section 1200. The quantities will be compiled in a list and will be labeled using standard **City** item numbers. This list of quantities will be updated for each submittal.

Opinions of Probable Cost

The **Consultant** will prepare probable cost estimates (cost estimates) using the **City's** bid item numbers. The **Consultant** will notify the **Project Manager**, in writing, if the opinion of probable cost appears to exceed the **City's** budget.

Bid Schedule

The **Consultant** will provide a bid schedule at each submittal. The bid schedule will be in the same format as the opinion of probable cost estimate and include the list of quantities included in the estimate but will have no estimate costs listed for any quantity item.

900.14 Quality Control

The **Consultant** will perform and document quality control reviews for accuracy and completeness for all major report, memorandum, plan, specification, quantity, estimate, and calculation submittals. The quality control documents will be retained in the **Consultant** project files.

SECTION 1000 RIGHT-OF-WAY

1000.1 Right of Entry for Field Work

It will be the responsibility of the **Consultant** to identify the needs for the **City** to coordinate the acquisition of temporary entry documents for each parcel for the following activities: geotechnical investigations, environmental reviews, landscape salvage and design services or design survey services. The **Consultant** will notify the **City** of the need for any temporary entry documents no later than thirty (30) days after the NTP. The **City** will obtain the appropriate right-of-entry. The **Consultant** will not enter any such property prior to approval of the temporary entry documents by the **City**.

1000.2 Right-of-Way Title Reports

The **City** will be responsible for obtaining and providing title reports to the **Consultant** at no charge.

1000.3 Right-of-Way Mapping

The **Consultant** will provide a list of the title reports necessary to develop a right-of-way base map. Title reports will be obtained by the **City** and provided to the **Consultant.** The **Consultant** will develop a right-of-way map with section lines, centerlines, right-of-way lines, deed lines and easements as found in the title reports provided by the **City** and/or obtained from the Maricopa County Assessor and Recorder as needed. The right-of-way map will be delivered in CAD format.

1000.4 Right-of-Way and Easement Requirements

The **Consultant** will be responsible for identifying new Right-of-Way and easement requirements.

1000.4.1 Determine Right-of- Way and Easements

The **Consultant** will determine the requirements for new Right-of-Way and easements, including, but not limited to, new roadway Right-of-Way, slope easements, drainage easements, temporary construction easements, and access control Right-of-Way.

1000.4.2 Submit Right-of- Way and Easement Requirements

The **Consultant** will submit to the **City**, in writing, the final Right-of-Way requirements on or before the 60% submittal. No revisions or additions to the Right-of-Way requirements will be allowed after the 60% submittal without the approval of the **Project Manager**.

1000.4.3 Coordination with City Real Estate

The **Consultant** will coordinate with the **City** to determine the appropriate right-of-way and easement requirements for the project. The **Consultant** will be responsible for determining the area and right-of-way needed.

1000.5 Provide Preliminary Right-of-Way Costs

Beginning with the 30% Submittal, the **Consultant** will provide a preliminary opinion of probable right- of-way costs associated with the Right-of-Way and easement acquisition required for the project. The **Consultant** will prepare an estimate for the Right-of-Way required for the project. The estimate will include the following information:

- Property ownership (assessor parcel number, property owner, and address)
- Total parcel area

- Total area of parcel acquisition (easement and permanent Right-of-Way)
- Opinion of probable cost (**City** will provide unit cost)

1000.6 Right-of-Way Strip Maps

Right-of-Way strip maps are not anticipated or included within this scope of services.

1000.7 Legal Descriptions

Legal description documents are not anticipated or included within this scope of services.

1000.8 Appraisals

The **City** will be responsible for appraising the Right-of-Way and easement areas. The **Consultant** will provide supporting documents and exhibits as requested by the **City**.

1000.9 Acquisitions

The **City** will be responsible for negotiating and acquiring the Right-of-Way and easement areas. The **Consultant** will provide supporting documents and exhibits as requested by the **City**. The **City** will be responsible for all actions involved with condemnations or relocations of property owners.

1000.10 Right-of-Way Clearance

A right-of-way clearance document is not anticipated or included within this scope of services.

SECTION 1100 VALUE ENGINEERING

1100.1 Value Engineering

Value engineering services is not required for this project and is not included within this scope of services.

SECTION 1200 SUBMITTALS

The following **Table 2** is the assumed submittals required for the project that will be provided by the **Consultant**. 30%, 60%, 95% and 100% Sealed submittals are assumed. The 95% Not for Construction Sealed Plans are to be reviewed through the **City's** one-stop-shop review process. A separate DRB submittal and Encroachment Permit Submittal will also be provided as noted below.

Table 2 - Project Submittals Table

Legend **H# - Number of Copies Requested*** **E -Indicates Electronic Submittal is Requested** ***Note - Hard copies are optional and will be provided if requested by the City** **Submittal Document**	**City of Scottsdale**	**Utility Company Representative (5 Assumed)**	**Total Number of Hard Copies**
1200.1 30% Grade and Alignment			
Plans	E, H3	E, H5	8
MicroStation and InRoads CADD Files	E		
Opinion of Probable Cost Estimate	E, H3		3
Draft Traffic Memorandum	E, H3		3
Draft Drainage Memorandum	E, H3		3
Draft Bridge Memorandum	E, H3		3
Stakeholder Communication Memorandum #1	E, H3		3
1200.2 60% Progress Plans			
Plans and Cross Sections	E, H3	E, H5	8
Outline Specifications	E, H3		3
Opinion of Probable Cost Estimate	E, H3		3
MicroStation and InRoads CADD Files	E	E	
Draft Drainage Report	E, H3		3
Draft Bridge and Structure Report	E, H3		3
Draft Environmental Report	E, H3		3
Draft Geotechnical Report	E, H3		3
Draft Noise Memorandum	E, H3		3
Draft Aesthetic Enhancements and Landscape Palate	E, H3		3
Stakeholder Communication Memorandum #2	E, H3		3

Legend H# - Number of Copies Requested* E -Indicates Electronic Submittal is Requested *Note - Hard copies are optional and will be provided if requested by the City Submittal Document	City of Scottsdale	Utility Company Representative (5 Assumed)	Total Number of Hard Copies
1200.3 Design Review Board (DRB) Submittal			
Plans and Cross Sections	E, H3		3
MicroStation and InRoads CADD Files	E		
1200.4 95% Completed Plans			
Plans and Cross Sections	E, H3	E, H5	8
Specifications	E, H3		3
Opinion of Probable Cost Estimate	E, H3		3
MicroStation and InRoads CADD Files	E		
Final Drainage Report	E, H3		3
Final Environmental Review	E, H3		3
Final Geotechnical Report	E, H3		3
Final Noise Memorandum	E, H3		3
Draft Utility Clearance Letter	E, H3		3
Draft Communication Program Documentation	E, H3		3
1200.5 Encroachment Permit Submittal			
Plans and Cross Sections	E, H3		3
MicroStation and InRoads CADD Files	E		
1200.6 100% Sealed PS&E			
Plans and Cross Sections	E, H3	E,H5	8
Specifications	E, H3		3
Opinion of Probable Cost Estimate	E, H3		3
MicroStation and InRoads CADD Files	E	E	
Final Utility Clearance	E, H3		3
Final Communication Program Documentation	E, H3		3

SECTION 1300 Bidding Phase

The assumed effort for all tasks under this section is shown within the attached fee estimate. As the full effort for this task is unknown, any efforts determined to be necessary above and beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort. It is assumed that the bidding phase will conclude within 90 days of the **Consultant** submitting the 100% Sealed plans submittal.

1300.1 Technical Assistance to Prepare Advertisement

The **Consultant** will provide technical assistance and respond to design questions during the project advertisement period.

1300.2 Pre-Bid Conference

The **Consultant** with 3 staff will attend one (1) pre-bid conference for contractors interested in bidding on the project and will be prepared to answer the contractor's questions.

1300.3 Preparation of Addenda

The **Consultant** will prepare addenda that may be required to clarify the plans or Special Provisions. This will include providing personnel and equipment to update the project documents, which may be required due to changes in site conditions between the completion of the plans and the bidding of the project. The **Consultant** will also prepare additional documents for alternate bids for the work or a portion thereof.

The assumed effort for this task is shown within the attached fee estimate. As the full effort for this task is unknown, any efforts determined to be necessary above and beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort.

1300.4 Bid Opening

After bid opening, the **Consultant** will assist the **City** in analyzing bids when requested to do so. The **Consultant** will also assist in evaluating bid protests as requested by the **Project Manager**.

The assumed effort for this task is shown within the attached fee estimate. As the full effort for this taskis unknown, any efforts determined to be necessary above and beyond the estimated effort will be considered additional services. If additional services for this task are determined to be necessary, the **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort.

SECTION 1400 Post Design

1400.1 Post Design Services

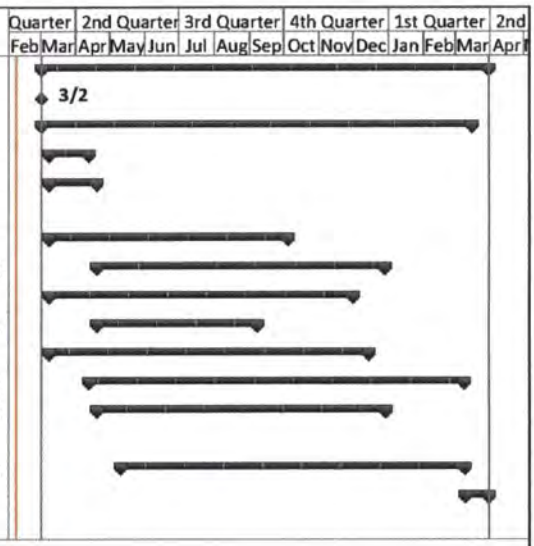
Post Design Services are not included with this scope of services. If post design services are determined necessary and requested by the **City**, the **Consultant** will provide a scope and fee for these services.

SECTION 1500 Exclusions

Items listed below are not included in Michael Baker International's Scope of Work unless approved by the **City** under a separate contract or change order.

1. Private utility relocation design
2. MCESD coordination, applications or submittals
3. Application fees for **City** reviews and permits shall be paid by the **City**
4. Permitting or related fees are not included in the scope of work
5. Flood Control District coordination, review fees or permit fees are not included in the scope of work
6. US Army Corps of Engineers 404-permits, CLOMR/LOMR, FEMA
7. A CLOMR/LOMR is not assumed or included within this scope of services. If a CLOMR/LOMR is needed, the approach is discussed in 800.5.1 as a reference
8. A sediment yield and transport analysis is not assumed or included with this scope of services
9. No additional hydrologic or 1D hydraulic modeling that is not mentioned in section 800.5.2 will be performed
10. Offsite drainage design, detailed hydrologic or hydraulic design except as included in this scope of work
11. Maintenance access into the middle of the box culverts via a manhole or access grate are not necessary and not included within this scope of services
12. Title reports / commitment documents
13. Arizona State Land Department coordination
14. No Private owner coordination or easement negotiations
15. A right-of-way clearance document is not anticipated or included within this scope of services
16. Coordinating with a **City** designated artist is not included within this scope of services. An artist is not currently scoped to be involved in the project
17. A pedestrian or equestrian underpass is not included within this scope of services
18. Transit facilities are not anticipated or included within this scope of services
19. It is anticipated that the project will not meet signal warrants at Dixileta Road or Las Piedras so any scope related to roundabout analysis is not included in this scope of work.
20. Modifications to the existing signal timing and coordination plans are excluded from this project scope. Modifications can be made later under separate authorization at a more appropriate time closer to the time when construction activities are nearing completion
21. Changing existing lighting fixtures to LED fixtures is not included within this scope of services
22. Full traffic control plans are not anticipated or included within this scope of services
23. Air analysis is not anticipated or included within this scope of services
24. Retaining walls and sound walls are not anticipated or included within this scope of services
25. This structural construction plans scope does not include the development of plans for a multi-span cast-in-place reinforced concrete slab bridge. If during the Alternative Analysis, the **Consultant** and **City** determine that a concrete slab bridge scenario, instead of a box culvert scenario, should be taken forward to final design, additional services for this task will be necessary. The **Consultant** will notify the **Project Manager** in advance of continuing services above and beyond the estimated effort for a box culvert scenario.
26. Value engineering is not required for this project and is not included within this scope of services
27. Construction management, administration, inspection, or participation in construction meetings
28. Post Design services are not included with this scope of services. If the **Consultant's** services are requested for post design support, additional services will be requested

ID	Task Mode	Task Name	Duration	Start
1		**Pima Road**	**282 days**	**Wed 3/2/22**
2		Notice To Proceed	0 days	Wed 3/2/22
3		**Section 100 - Project Management**	**271 days**	**Wed 3/2/22**
95		**Section 200 - Data Acquisition**	**25 days**	**Wed 3/9/22**
101		**Section 300 - Survey, Mapping, and Alignment**	**30 days**	**Wed 3/9/22**
144		**Section 400 - Project Coordination**	**150 days**	**Wed 3/9/22**
183		**Section 500 - Utilities**	**181 days**	**Wed 4/20/22**
311		**Section 600 - Environmental**	**191 days**	**Wed 3/9/22**
324		**Section 700 - Alternative Analysis**	**101 days**	**Wed 4/20/22**
367		**Section 800 - Technical Memoranda**	**201 days**	**Wed 3/9/22**
447		**Section 900 - PS&E**	**236 days**	**Wed 4/13/22**
532		**Section 1000 - Right-Of-Way**	**182 days**	**Wed 4/20/22**
618		**Section 1100 - Value Engineering - EXCLUDED**		
626		**Section 1200 - Submittals**	**217 days**	**Wed 5/11/22**
662		**Section 1300 - Bidding Phase**	**15 days**	**Fri 3/10/23**
691		**Section 1400 - Post Design**		



Key Milestones

Wed 3/2/22	**Notice to Proceed**
Wed 5/11/22	**Stakeholder Meeting (Sincuidados HOA)**
Wed 5/18/22	**1st Virtual Pubiic Meeting**
Wed 9/14/22	**2nd Virtual Public Meeting**
Mon 5/9/22	**30% PS&E**
Wed 9/7/23	**60% PS&E**
Wed 1/4/23	**90% PS&E**
Wed 3/8/23	**100% PS&E**

Project: Pima Road - Master Sche
Date: Tue 2/8/22

Task	External Milestone	Manual Summary Rollup
Split	Inactive Task	Manual Summary
Milestone	Inactive Milestone	Start-only
Summary	Inactive Summary	Finish-only
Project Summary	Manual Task	Deadline
External Tasks	Duration-only	Progress

DERIVATION OF COST PROPOSAL SUMMARY

(Figures Rounded To The Nearest $1)

ESTIMATED DIRECT LABOR

CLASSIFICATION	PERSON HOURS		BILLING RATE/HOUR		TOTAL
Senior Project Manager	522	$	254.00	$	132,588
Project Engineer	754	$	222.00	$	167,388
Senior Engineer	1,162	$	180.00	$	209,160
Engineer	1,484	$	148.00	$	219,632
Designer	2,314	$	110.00	$	254,540
Administrative	104	$	95.00	$	9,880
	6,340	Hours			
Estimated Labor Cost	Subtotal			**$**	**993,188**

ESTIMATED DIRECT LABOR - ALLOWANCE

Estimated Labor Cost - Allowance (for Misc Items)	Subtotal	**$ 75,000**

ESTIMATED DIRECT EXPENSES
(Listed By Item At Estimated Actual Cost - NO MARKUP)

Travel	$	605	
Plotting & Printing	$	2,424	
Miscellaneous Expenses	$	-	
	Total Estimated Expenses		**$ 3,029**

ESTIMATED OUTSIDE SERVICES AND CONSULTANTS

Firm		Cost
All Traffic Data Services	$	3,500
DIG Studio	$	92,597
Ethos Engineering	$	22,005
Cooper Aerial	$	6,300
T2 Utilities Engineering	$	49,130
Newton Environmental	$	17,952
EcoPlan	$	12,280
	Total Estimated Outside Services	**$ 203,764**

TOTAL ESTIMATED FEE	**$ 1,274,981**
CONTRACT TIME	365

Consultant Firm Signature

2/23/2022
Date

Pima Road - Dynamite Blvd to Las Piedras
Project No. 22SQ005

Michael Baker International, Inc.
Contract XXXXX

ESTIMATE OF STAFF HOURS

TASK	Scale	No Shts	Senior Project Manager	Project Engineer	Senior Engineer	Engineer	Designer	Administrative	Total	Cost	Hours/ Sheet
			$ 254.00	$ 222.00	$ 180.00	$ 148.00	$ 110.00	$ 95.00		1.00000	
SECTION 100 - PROJECT MANAGEMENT											
100.1 Project Work Plan and Schedule			20						20	$ 5,080	
100.2 Communication Plan and Contacts list			10					8	18	$ 3,300	
100.3 Kick-off Meeting (1 mtg @ 4 hrs/mtg with prep-attend-document time)			4	4	4	4		2	18	$ 3,406	
100.4 Design Progress Meetings (3-Qtrly, 2-Technical, 3-Comment Res Mtgs @ 5 hrs/mtg for prep-attend-document time			40	40	40	40		8	168	$ 32,920	
100.5 Design Criteria			2	4		10			16	$ 2,876	
100.6 Design Exceptions - EXCLUDED										$ -	
100.7 Field Visit with Project Team (2 site visits @ 8 hrs/visit with prep-attend-document time)			16	16	16	16			64	$ 12,864	
100.8 Project Administration			140		32			16	188	$ 42,840	
100.9 Safety Plan				8		6			14	$ 2,664	
100.10 Quality Assurance/Quality Control Plan			10	12					22	$ 5,204	
Subtotal 100 Project Management			242	84	92	76		34	528	$ 111,154	
SECTION 200 - DATA ACQUISITION											
200.1 Project Research / Data Collection			2	8	20	32	32		94	$ 14,140	
Subtotal 200 Data Acquisition			2	8	20	32	32		94	$ 14,140	
SECTION 300 - SURVEY, MAPPING, AND ALIGNMENT											
300.1 Survey Control				16		8	16		40	$ 6,496	
300.2 Photogrammetry and Planimetric Mapping				4		8			12	$ 2,072	
300.3 Supplemental Topographic Surveying				4		8	56		68	$ 8,232	
300.4 Pima Road Surface Utility Survey				4		8	48		60	$ 7,352	
300.5 Survey Base Map				12		24			36	$ 6,216	
300.6 Rawhide Wash Supplemental Topographic Surveying				4		12	16		32	$ 4,424	
Subtotal 300 Survey, Mapping, and Alignment				44		68	136		248	$ 34,792	

ESTIMATE OF STAFF HOURS

TASK	Scale	No Shts	Senior Project Manager	Project Engineer	Senior Engineer	Engineer	Designer	Administrative	Total	Cost	Hours/ Sheet
SECTION 400 - PROJECT COORDINATION											
400.1 Stakeholder Meetings (1 mtg @ 6 hrs/mtg for prep/attend/document time)			6	6	6	6	12	4	40	$ 6,524	
400.2 Agency Briefings (Excluded)										$ -	
400.3 Virtual Public Open House Meeting (2 mtgs @ 8 hrs/mtg for prep/attend/document time)			16	16	16	16	32	8	104	$ 17,144	
400.4 Project Website			2			32	8	4	46	$ 6,504	
400.5 Stakeholder Participation Summary Report and Public Engagement Coordination			8		16	24		2	50	$ 8,654	
Subtotal 400 Project Coordination			32	22	38	78	52	18	240	$ 38,826	
SECTION 500 - UTILITIES											
500.1 Utility Data Acquisition - EXCLUDED - Included in Project Data Collection Section 200										$ -	
500.2 Prior Rights Determination						2	2		4	$ 516	
500.3 Utility Designation and Potholing			2			12	16		30	$ 4,044	
500.4 Create Utilty Base File					4		20		24	$ 2,920	
500.5 Utility Coordination										$ -	
500.5.1 Utility Coordination Meetings (4-Qrtly & 6 Individual Mtgs @ 4 hrs/mtg for prep-attend-document time)			20		40	40	20		120	$ 20,400	
500.5.2 Utility Conflicts					20	4	16		40	$ 5,952	
500.5.3 Utility Plans Review			2	4	12	4	16		38	$ 5,908	
500.5.4 Determine Utility Relocation Right-of-Way Needs					2	4	8		14	$ 1,832	
500.5.5 Utility Relocations on Private Property - EXCLUDED										$ -	
500.5.6 Utility Relocation Costs			2		8	12	16		38	$ 5,484	
500.5.7 Utility Relocation Design			2		50		80		132	$ 18,308	
500.5.8 Update Utility Base File					24		28		52	$ 7,400	
500.5.9 Utility Relocation Construction - EXCLUDED										$ -	
500.5.10 Utility Relocation Special Provisions - EXCLUDED (Included in Project Special Provisions Section 900)										$ -	
500.5.11 Utility Agreements			4	16					20	$ 4,568	
500.5.12 Approval to Construct - EXCLUDED										$ -	
500.5.13 Miscellaneous Exhibits and Correspondence			2	4			16		22	$ 3,156	
500.5.14 Utility Clearance Letter			2		8				10	$ 1,948	
Subtotal 500 Utilities			36	24	168	78	238		544	$ 82,436	

Pima Road - Dynamite Blvd to Las Piedras
Project No. 22SQ005

Michael Baker International, Inc.
Contract XXXXX

ESTIMATE OF STAFF HOURS

TASK	Scale	No Shts	Senior Project Manager	Project Engineer	Senior Engineer	Engineer	Designer	Administrative	Total	Cost	Hours/ Sheet
SECTION 600 - ENVIRONMENTAL											
600.1 Noise Analysis			6	6					12	$ 2,856	
600.2 Biological Evaluation			6	10					16	$ 3,744	
600.3 Preliminary Jurisdictional Delineation			6	10					16	$ 3,744	
Subtotal 600 Environmental			18	26					44	$ 10,344	
SECTION 700 - ALTERNATIVE ANALYSIS											
700.1 Alignment Alternatives - EXCLUDED (Included in Section 800 TM and Reports)										$ -	
Subtotal 700 Alternative Analysis										$ -	
SECTION 800 - TECHNICAL MEMORANDA (TM) AND REPORTS											
800.1 Alignment Alternatives			4		8	16	30		58	$ 8,124	
800.2 Cross Section Alternatives				4		6	8		18	$ 2,656	
800.3 Landscape Architecture Concepts			4	8		12			24	$ 4,568	
800.4 Traffic Report										$ -	
800.4.1 Data Collection - EXCLUDED (Included in Project Data Collection Section 200)										$ -	
800.1.2 Traffic Analysis			4	2	16	32			54	$ 9,076	
800.1.3 Traffic Memorandum			2		20	72			94	$ 14,764	
800.1.4 Signal Modifications - EXCLUDED										$ -	
800.5 Drainage Analysis										$ -	
800.5.1 Rawhide Wash Crossing Drainage Alternatives			8	20	40	40	100		208	$ 30,592	
800.5.2 Off-site Drainage Design			8	40	50	80	120		298	$ 44,952	
800.5.3 On-site Drainage Design			8	16	40	46	100		210	$ 30,592	
800.5.4 Drainage Report			8	28	56	70	86		248	$ 38,148	
800.5.5 Drainage Exclusion Assumptions										$ -	
800.6 Alternative Analysis & Structure Selection Memorandum (Rawhide Wash)			4	80	120	60	100		364	$ 60,256	
800.7 Geotechnical Memorandum			6	12			16		34	$ 5,948	
800.8 Noise Analysis Memorandum			6	8			8		22	$ 4,180	
Subtotal 800 Technical Memoranda (TM) and Reports			62	218	350	434	568		1632	$ 253,856	

Pima Road - Dynamite Blvd to Las Piedras
Project No. 22SQ005

Michael Baker International, Inc.
Contract XXXXX

ESTIMATE OF STAFF HOURS

TASK	Scale	No Shts	Senior Project Manager	Project Engineer	Senior Engineer	Engineer	Designer	Administrative	Total	Cost	Hours/ Sheet
SECTION 900 - PLANS, SPECIFICATIONS AND ESTIMATES											
900.1 Roadway Plans		37	8	60	100	220	340		728	$ 103,312	20
900.2 Roadway Cross Sections		13	4	16		32	48		100	$ 14,584	8
900.3 Signing and Pavement Markings		10	6		42	80	106		234	$ 32,584	23
900.4 Sequence of Construction		6	6	2	8	8	32		56	$ 8,112	9
900.5 Traffic Signals		7	6		26	42	80		154	$ 21,220	22
900.6 Traffic Signal Interconnect Plans		7	6		26	42	80		154	$ 21,220	22
900.7 Lighting - EXCLUDED (Included as part of the Traffic Signal Scope)										$ -	
900.8 Drainage		13		12	4	10	124		150	$ 18,504	12
900.9 Landscape Architectural Design			4	8		12			24	$ 4,568	
900.10 Structures - Multi-Cell Box Culvert @ Rawhide Wash Crossing)		9		90	100	100	160		450	$ 70,380	50
900.11 Utilities		8			60		120		180	$ 24,000	23
900.12 Specifications			20	60	48	32		24	184	$ 34,056	
900.13 Quantities and Opinion of Probable Cost Estimates			8	12		40	60		120	$ 17,216	
900.14 Quality Control			20	40	48	24	16		148	$ 27,912	
Subtotal 900 Plans, Specifications, and Estimates		110	88	300	462	642	1166	24	2682	$ 397,668	24
SECTION 1000 - RIGHT-OF-WAY											
1000.1 Right of Entry for Field Work						4			4	$ 592	
1000.2 Right-of-Way Title Reports - EXCLUDED										$ -	
1000.3 Right-of-Way Mapping						8	12		20	$ 2,504	
1000.4 Right-of-Way and Easement Requirements										$ -	
1000.4.1 Determine Right-of-Way and Easements			2	4		16	24		46	$ 6,404	
1000.4.2 Submit Right-of-Way and Easement Requirements			2		4		6		12	$ 1,888	
1000.4.3 Coordination with City Real Estate			2	4	8				14	$ 2,836	
1000.5 Provide Preliminary Right-of-Way Costs					8		12		20	$ 2,760	
1000.6 Right-of-Way Strip Maps - EXCLUDED										$ -	
1000.7 Legal Descriptions - EXCLUDED										$ -	
1000.8 Appraisals					2		6		8	$ 1,020	
1000.9 Acquisitions					2		6		8	$ 1,020	
1000.10 Right-of-Way Clearance - EXCLUDED										$ -	
Subtotal 1000 Right-of-Way			6	8	24	28	66		132	$ 19,024	

Pima Road - Dynamite Blvd to Las Piedras
Project No. 22SQ005

Michael Baker International, Inc.
Contract XXXXX

ESTIMATE OF STAFF HOURS

TASK	Scale	No Shts	Senior Project Manager	Project Engineer	Senior Engineer	Engineer	Designer	Administrative	Total	Cost	Hours/ Sheet
SECTION 1100 - VALUE ENGINEERING											
1100.1 Value Engineering - EXCLUDED										$ -	
Subtotal 1100 Value Engineering										$ -	
SECTION 1200 - SUBMITTALS											
1200.1 30% Grade and Alignment			2				6	4	12	$ 1,548	
1200.2 60% Progress Plans			2				6	4	12	$ 1,548	
1200.3 Design Review Board (DRB) Submittal			2				6	4	12	$ 1,548	
1200.4 95% Completed Plans			2				6	4	12	$ 1,548	
1200.5 Encroachment Permit Submittal			2				6	4	12	$ 1,548	
1200.6 100% Sealed PS&E			2				6	4	12	$ 1,548	
Subtotal 1200 Submittals			12				36	24	72	$ 9,288	
SECTION 1300 - BIDDING PHASE											
1300.1 Technical Assistance to Prepare Advertisement			4			8	8	4	24	$ 3,460	
1300.2 Pre-Bid Conference (1 mtg @ 8 hrs/mtg for prep/attend/follow-up time)			8	8	8				24	$ 5,248	
1300.3 Preparation of Addenda			8	12		32	12		64	$ 10,752	
1300.4 Bid Opening			4			8			12	$ 2,200	
Subtotal 1300 Bidding Phase			24	20	8	48	20	4	124	$ 21,660	
SECTION 1400 - POST DESIGN											
1400.1 Post Design Services - EXCLUDED										$ -	
Subtotal 1400 Post Design										$ -	
Totals		110	522	754	1162	1484	2314	104	6340	$ 993,188	

Pima Road - Dynamite Blvd to Las Piedras
Project No. 22SQ005

Michael Baker International, Inc.
Contract XXXXX

ESTIMATE OF STAFF HOURS & LABOR BY SECTION/TASK

CONTRACT SECTION/TASK	Senior Project Manager $254	Project Engineer $222	Senior Engineer $180	Engineer $148	Designer $110	Administrative $95	TOTAL MAN HOURS	TOTAL LABOR
SECTION 100 - PROJECT MANAGEMENT	242	84	92	76	-	34	528	$ 111,164
SECTION 200 - DATA ACQUISITION	2	8	20	32	32	-	94	$ 14,140
SECTION 300 - SURVEY, MAPPING, AND ALIGNMENT	-	44	-	68	136	-	248	$ 34,792
SECTION 400 - PROJECT COORDINATION	32	22	38	78	52	18	240	$ 38,826
SECTION 500 - UTILITIES	36	24	168	78	238	-	544	$ 82,436
SECTION 600 - ENVIRONMENTAL	18	26	-	-	-	-	44	$ 10,344
SECTION 700 - ALTERNATIVE ANALYSIS	-	-	-	-	-	-	-	$ -
SECTION 800 - TECHNICAL MEMORANDA (TM) AND REPORTS	62	218	350	434	568	-	1,632	$ 253,856
SECTION 900 - PLANS, SPECIFICATIONS AND ESTIMATES	88	300	462	642	1,166	24	2,682	$ 397,668
SECTION 1000 - RIGHT-OF-WAY	6	8	24	28	66	-	132	$ 19,024
SECTION 1100 - VALUE ENGINEERING	-	-	-	-	-	-	-	$ -
SECTION 1200 - SUBMITTALS	12	-	-	-	36	24	72	$ 9,288
SECTION 1300 - BIDDING PHASE	24	20	8	48	20	4	124	$ 21,860
SECTION 1400 - POST DESIGN	-	-	-	-	-	-	-	$ -
TOTAL	522	754	1,162	1,484	2,314	104	6,340	$ 993,188

Pima Road - Dynamite Blvd to Las Piedras
Project No. 22SQ005

Michael Baker International, Inc.
Contract XXXXX

ESTIMATE OF DIRECT EXPENSES

Travel

A. Local Mileage at $ 0.54		1,120	miles
5 Baker Design Staff x 2 Site Trips = 10 Trips @ 80 miles Roundtrip			
2 Baker Survey Staff x 2 Site Trips = 4 Trips @ 80 miles Roundtrip			
4 Baker Public Mtg Staff x 2 PI Mtgs = 8 Trips @ 20 miles Roundtrip			
Subtotal Travel		$ 605	

Plotting & Printing

B. Exhibits at	$	1.20	40	exhibits
			$ 48	
C. Plots at	$	1.20	-	plots
			$ -	
D. Plan Submittals				
Half Size Bond Copies at	$	0.11	7,200	Copies
Full Size Bond Copies at	$	1.20	1,200	Copies
Subtotal Plotting			$ 2,232	
E. 8.5x11 copies at	$	0.06	2,400	Sheets
			$ 144	

Miscellaneous Expenses

F. Courier (12 @ $7.95)	$ -
Subtotal Miscellaneous Expenses	$ -

ESTIMATED OUTSIDE SERVICES & CONSULTANTS

All Traffic Data Services	$ 3,500
DIG Studio	$ 92,597
Ethos Engineering	$ 22,005
Cooper Aerial	$ 6,300
T2 Utilities Engineering	$ 49,130
Newton Environmental	$ 17,952
EcoPlan	$ 12,280
TOTAL ESTIMATED OUTSIDE SERVICES	$ 203,764

TOTAL ESTIMATED DIRECT EXPENSES **$ 3,029**

ATTACHMENT A

T2 UTILITY ENGINEERS

FEE PROPOSAL

Michael Baker
INTERNATIONAL

T2 UES, Inc. dba
T2 Utility Engineers
19621 N. 23rd Drive
Suite 150
Phoenix, AZ 85027
602-977-8000 (phone)
www.t2ue.com

January 14, 2022

Michael Baker International
Attn: Jim Martin PE, RLS, FAA Part 107 RP
Senior Associate
2929 N. Central Avenue, 8th Floor
Phoenix, AZ 85012
Email: james.martin@mbakerintl.com
602-308-1333

RE: Pima Road: Dynamite Blvd. to Las Piedras
Subsurface Utility Engineering (SUE)–Scope of Services
T2 Proposal No. 16104-22-0096

Note: A clean version of the Subconsultant Proposal will be included for the Final Contract

Dear Mr. Martin:

T2 UES, Inc. dba T2 Utility Engineers (herein referred to as T2) is pleased to submit this proposal to provide professional Subsurface Utility services for the above referenced project to Michael Baker International, (the Client). Below is the project team's scope and fee for the project.

PROJECT UNDERSTANDING

~~The T2 team will complete an ASCE 38 Quality Level D, C, B, & A SUE utility mapping investigation in accordance with the CI/ASCE Standard 38: *Standard Guideline for the Collection and Depiction of Existing Subsurface* Utilities within the project area as defined below. This process will include an iterative field investigation, which will ultimately produce detailed drawings that are signed and sealed by a Professional Engineer in accordance with the requirements of the Standard.~~

~~T2's general workflow to our approach is outlined below:~~

1. ~~Perform records research;~~
2. ~~Perform survey of existing Utility Appurtenances~~
3. ~~Perform geophysical investigation;~~
4. ~~Perform survey of utility markings placed by our designators;~~
5. ~~Complete utility investigation with depictions as outlined in the ASCE 38 standard (QL D, C, & B);~~
6. ~~QA/QC of our investigative findings based on existing records, maps and as-built information;~~
7. Complete QLA Test Holes as requested by the design team.
8. ~~Provide depiction of the completed utility investigation findings – signed and sealed by a licensed engineer.~~

LIMITS OF INVESTIGATION

- The utility investigation will take place within an approximate 7,800 lf of the existing right of way of N. Pima Road in Scottsdale beginning at a point approximately 1,000 ft. south of the centerline of E. Dynamite Road proceeding north to a point approximately 200 ft. north of the centerline of N. Las Piedras. Please see Exhibit 1 below for a depiction of the proposed SUE Limits.

Exhibit 1– Limits of SUE Investigation Identified in Red

PROJECT APPROACH

~~The T2 team will complete a SUE investigation in accordance with the CI/ASCE Standard 38: *Standard Guideline for the Collection and Depiction of Existing Subsurface Utilities*. ASCE 38 provides a nationally recognized, standard guideline for the collection and depiction of existing subsurface utility data. The utility quality level provides a professional opinion of the quality and reliability of the utility information. The four quality levels are as follows:~~

- ~~**Quality Level D (QLD):** Record research of existing subsurface utilities within the project limits by contacting each utility owner and obtaining their available facility records. This process will substantiate necessary records that will be obtained and the depiction~~

of untraceable (nonmetallic buried without trace wire) utilities that do not meet Quality Level C or B specifications. QLD designation is based on information obtained from record drawings and includes utility type, ownership, size and material composition.

- **Quality Level C (QLC):** Inclusive of a QLD effort, the project team will provide QLC designating of existing untraceable subsurface utilities by correlating surveyed surface evidence to the QLD utility records to obtain the utility location. QLC designation includes utility type, ownership, size and material composition based on available record information.
- **Quality Level B (QLB):** Involves the use of QLC and QLD methods of utility investigation and the use of subsurface geophysical techniques under the direction of a Professional Engineer licensed in the State of Arizona to determine the existence and horizontal position of underground utilities. This activity is called "designating." The information obtained in this manner is surveyed to project control. Two-dimensional (2D) designation information is obtained.
- **Quality Level A (QLA):** Involves the use of QLB, QLC and QLD methods of investigation, plus the use of minimally intrusive excavation methods at critical points to determine the precise horizontal and vertical position of underground utilities, as well as the type, size, condition, material and other characteristics. The excavation and data documentation activity is called Locating "excavation of test holes". It is the highest level of utility certainty presently available. When surveyed and mapped, precise plan and profile information is available for making final design decisions at the test hole locations.
-

T2's general approach is to perform a QLB investigation using all available geophysical means and methods to identify the location of the subsurface utilities within the project limits. Where QLB data unachievable, utilities will be shown at QLC or QLD depending on available information and surface features. Further detail regarding Quality Levels and the specific project scope are detailed below.

SCOPE OF WORK

A Professional Engineer licensed in the State of Arizona shall oversee, document, stamp and seal a Subsurface Utility Engineering (SUE) investigation of the project area to determine existing utility conditions within the project limits. As part of the SUE investigation for this project T2 will complete the following tasks:

- **QLD Utility Records Research**

  The T2 team shall perform the following activities as part of their research effort on this project:

  - Conduct a full reconnaissance and utility records research to aid in the identification of Utility Owners that may have facilities on, or to be affected by the project.
  - Collect all applicable utility facility records available through Utility Owner(s), such as one-call notification, service maps, as-built drawings, standard drawings, service plats, construction plans from prior projects, local government or Agency permit exhibit drawings, and oral histories gained through interviews with Utility Owner officials and authorities.
  - Compile a list of all utility companies contacted for information. Note information received with contact information for each response and note non-response if applicable.
  - Attempt to identify all known and unknown utilities, except as noted above, within the project area at QLB and depict those utilities at the actual achieved utility Quality Level.
  - All utility company contacts will be provided to the Client

- **Perform QLC, QLB Investigation**

  The T2 team will conduct the following:

  - T2 will survey existing visible surface utility appurtenances and correlate the information provided to the QLD utility records to obtain the utility location. This effort will update the information and depictions to QLC, and all data will be incorporated into the CAD file and final PDF deliverable.
  - Utilize geophysical utility locating techniques to determine the true horizontal position of conductive utilities within the project area. The project team will provide QLB depictions of existing traceable (metallic or nonmetallic buried with trace wire) subsurface utilities utilizing a variety of geophysical locating equipment to detect, verify and designate the location of subsurface utilities from above ground. Once designated (horizontally positioned), verified utilities are marked using appropriate pink paint and flagging which is the standard industry color for temporary markings. This field information is then surveyed and mapped into a digitized CAD file compatible with the project design files.
  - T2 will utilize a full suite of geophysical equipment appropriate to existing site conditions for locating the type of utility being

investigated. Utilities detected that are not identified by the records research will be termed "undocumented" and depicted on the plans as "unknown" utilities.

- T2 will use a complimentary suite of geophysical tools in an attempt to determine the location of undocumented utilities but cannot guarantee finding all undocumented utilities. Electromagnetic depths will not be recorded during this investigation.
- As an additional step, T2 will use inductive scanning techniques in critical areas to attempt to designate the presence of conductive undocumented utilities. QLA Test Holes may be necessary to confirm the existence of undocumented utilities in areas of potential conflicts.
- GPR NOTE: T2 will conduct an investigation of the project site using Ground Penetrating Radar (GPR) equipment in an effort to detect larger non-metallic utilities. However, the degree of success of a GPR investigation is based entirely on the composition of the soils and the depth and scale of subsurface targets. Electrically non-conductive soils, such as quartz sands, typically allow for the study of phenomena to depths greater than 15 feet. Electrically conductive soils, such as clay, moist silt or saline soils typically preclude the investigation of targets deeper than 3-6 feet. A determination of a maximum attainable depth of investigation requires on-site resistive site calibration of the GPR equipment. Subsequently, due to the unknown receptiveness of site specific soils to the passage of radar energy, conclusive results cannot be guaranteed from GPR.
- QLB depiction will be attempted on all mainline utilities included within T2's geophysical investigation. However, sewer, storm drain and possibly non-metallic water will most likely be depicted at QLC or QLD dependent upon existing physical appurtenances associated with these lines; utilities that cannot be designated at QLB but have existing physical appurtenances in the field will be depicted at QLC; utilities which cannot be designated at QLB and for which there are no visible physical appurtenances will be depicted at QLD per record.
- Underground storage tanks (USTs), septic fields, traffic loop systems, sewer laterals, and landscape irrigation are excluded from this investigation.
- **Invert information and, where possible, pipe size/material will be collected at Storm and Sewer Manholes as well as Storm Drain Catch Basins and Drop inlets, where accessible from the surface will be collected by T2**. The alignment of the sewer pipes will be shown on the drawing based on a combination of record information received, results of the invert investigation, surveyed Manholes/Catch Basins and professional judgment. If confined space entry is required to obtain information of offset or excessively deep pipes, extra costs will be incurred and will be discussed with the Client in advance.
- **Top of nut elevations on water valves throughout the project limits will be surveyed by the Client's survey subconsultant.** NIC

➢ **Perform QLA Test Holes (Potholes) per the QLA ASCE 38 Standard**

The T2 team can complete an estimated 30 test holes on this project at identified conflict locations as follows:

- T2 can assist the Client in determining the critical points based on their design to identify the test hole locations along with an accompanying test hole number.
- Will provide traffic control plans and protection in accordance with City of Scottsdale specifications and permit requirements. This item will be subcontracted to a certified traffic control company if required as well as traffic control flaggers.
- T2 will obtain required permits, contact AZ811 state one-call notification system (Blue Stake), and submit one-call tickets prior to excavation.
- T2 will use the compressed air & vacuum excavation method at critical points to measure and record the precise horizontal and vertical position of underground utilities, as well as the type, size, condition, material and other characteristics. Standard test hole size is a 12"x12" hole with a standard depth of up to 6 feet deep.
- Backfill of excavated test holes will be in accordance with City of Scottsdale standards. A combination of slurry, native backfill, coring, and hot patch is assumed to be in compliant with agency policies.
- The test hole information will be documented on our T2 Testhole Data Report and Summary forms. The Client will receive the reports with the surveyed test hole locations outlined. The testhole reports will be signed and sealed by an Arizona Registered Professional Engineer (licensed with the AZ Board of Technical Registration).

Notes:

- If additional holes are required over and above the 30 holes scoped for this project, they will be done so on a separate task for a separate fee.
- Prior to beginning the QLA test hole work, T2 will request a pdf plan set showing test hole locations with accompanying Northing and Easting coordinates

- Each test hole will be assigned a unique ID number and will be marked for survey.
- Excavation in rock or excavation to a depth greater than 12 feet is considered beyond the scope of this proposal and can be estimated for the Client on a case by case basis.
- If test holes are located in sidewalk or concrete, there will be a per hole charge of $125 per hole to excavate, jackhammer, and remove the existing concrete on the site, saw cut, and conduct 12" x 12" concrete restoration using bagged pre-mixed concrete. If full panel replacement is required for holes excavated in sidewalk or concrete, additional cost will be incurred, to be covered under a separate scope and fee.
- Test holes excavated in which no utility if found (Dry Test Holes) excavated over QL D or C utilities will be billed at a rate equal of the test hole rate. Extra wide test holes (larger than 15 inches in width) will be billed at 150% of the test hole rate. Any hole excavated over 6' in depth will be charged
  $75 per additional foot.
- Test Holes in which two utilities are found at a separation of more than 15" on center will be billed as two separate test holes. Test Holes which are requested at locations of the crossing of two utilities, will be billed as two separate test holes when the overall hole width exceeds 15".
- For these miscellaneous charges based on field conditions, T2 proposes a QLA contingency of $3,200 for the project. This will be a contingency allowance that will not be billed unless field conditions are encountered as noted above.

DELIVERABLES

- ~~T2 will provide a signed pdf plan set and corresponding MicroStation V8i drawing showing the location of existing utilities within the project area. The drawing will depict utilities within the investigation area at the achieved ASCE 38 Quality Level and the pdf plan set will be signed and stamped by a licensed Professional Engineer.~~ NIC
- If Test Hole Allowance is required, Pertinent QLA utility test hole data will be presented in scanned electronic format on our standard "Test Hole Data Summary" and individual "Test Hole Data Report" forms sealed by an Arizona Registered Professional Engineer (licensed with the AZ Board of Technical Registration). Information includes the depth, horizontal coordinates, vertical elevation, size, and material composition of the utility line exposed at each test hole.

ASSUMPTIONS

➢ Client will provide the following:

- Existing topographic survey, including all utility structures, inverts, top of nuts, sizes and material of pipe for the project.
- Survey control
- Existing right-of-way information if available
- Any previously collected utility records, points of contact, as-built plans, and electronic files to be made available for T2's use during the utility investigation.
- Right of entry to any private property or co-ordination to obtain access to private property (not anticipated)

PROJECT ESTIMATE

For the services outlined, T2 proposes compensation as outlined in the fee schedule below. T2 will not exceed the estimated fee without prior authorization from Client. This is an estimated fee only based on full review of the corridor and an estimated LF of utilities to be investigated. If lower number of utilities are depicted only the amount found in the investigation will be invoiced. **Monthly invoices will be prepared for work completed up to the estimated budget amount.** We appreciate this opportunity to provide professional SUE and Surveying services for this project. Should you have any questions or require additional information, please do not hesitate to call.

Robert Ramsey, P.E.
Vice President
Phone: 602.977.8037
Email: robert.ramsey@T2.com

Pima Road: Dynamite Blvd. to Las Pierdras
Subsurface Utility Engineering
T2 Proposal No. 22AZ0096

PROJECT ESTIMATE			
~~SUE Quality Level "D, C & B" Designating/Mapping~~ NIC			
~~*Quality Level "D, C, & B" Designating Subsurface Utilities~~	~~146,500 LF @~~	~~$1.34 per LF~~	~~$196,310.00~~
		~~Subtotal~~	~~$196,310.00~~
SUE Quality Level "A" Test Hole Excavation			
*Quality Level "A" Test Hole Estimate (up to 6 feet in depth)	30 holes @	$680.00 per hole	$20,400.00
*Contingency	Extra Depth/Width and/or Concrete Work		$3,200.00
		Subtotal	**$23,600.00**
Professional Services			
*Professional Engineer/Project Manager	6 hours @	$155.00 per hour	$930.00
*SUE Supervisor	12 hours @	$115.00 per hour	$1,380.00
*CAD Technician	6 hours @	$105.00 per hour	$630.00
*Administrative	2 hours @	$75.00 per hour	$150.00
		Subtotal	**$3,090.00**
Misc., Permits & Maintenance of Traffic			
*Permits: (City of Scottsdale)	If Required (Billed Cost + 10%)		$2,000.00
*Maintenance of Traffic Set-ups, Traffic Plan Preparation & Traffic Plan Permit Submittals	Estimated (Billed Cost + 10%)		$8,100.00
*Traffic Control Flagmen for Two Lane Sections of Road	Estimated (Billed Cost + 10%)		$2,000.00
*Slurry Backfill	Estimated (Billed Cost + 10%)		$2,640.00
*Concrete Coring	Estimated (Billed Cost + 10%)		$1,500.00
*Hot Patch (Required by COS)	Estimated (Billed Cost + 10%)		$5,000.00
*Off Duty Police Officer	Estimated (Billed Cost + 10%)		$1,200.00
		~~Subtotal~~	~~$22,440.00~~
		~~ESTIMATED TOTAL~~	~~$242,350.00~~

*** Proposal estimate only, the cost may vary due to unknown field conditions & municipality requirements** $49,130
Note 1: Test hole unit rate above includes, a 2-man vac crew, test hole survey and corresponding trucks and equipment.
Note 2: If full panel replacement is required for holes excavated in sidewalk or concrete, additional cost will be incurred, to be covered with a change order under separate scope and fee.

Note 3: LF line item will be invoiced if total footage is over 12,000, if under that amount will be invoiced hourly at $290 an hour for field crews.

ATTACHMENT B

COOPER AERIAL SURVEY COMPANY

Michael Baker
INTERNATIONAL

COOPER AERIAL SURVEYS CO.

PROJECT MANAGER
Emily Martin
602.678.5111 ext 215
emily@cooperaerial.com

Cost Proposal for COS Pima Rd

Scott Nelson
Michael Baker International -0000
2929 N. Central Avenue, 8th Floor
Phoenix, Arizona 85012
6023081327
Scott.Nelson@mbakerintl.com

Proposal Date:
01/12/2022
Project Location:
Scottsdale, AZ

Cooper Aerial Surveys Co. is pleased to provide its cost proposal for aerial mapping and related services. This proposal is valid for thirty days from issuance date. The following is a summary of services to be provided. Please sign below and return the approved proposal to your Cooper Aerial Project Manager as acceptance of scope of services, proposed cost, and agreement to payment terms (30 days from completion of the work and provision of deliverables.)

Project Scope

Survey Services	Client will set 8 aerial targets and post-process data
Flight Services	Acquire 4cm color photography for mapping and imagery
Mapping Services	1"=40' scale map with a 1 Ft CI collection of DTM, Contours & Plan
Imagery Services	Orthorectified 4cm GSD file

COOPER AERIAL SURVEYS CO.

PROJECT MANAGER
Emily Martin
602.678.5111 ext 215
emily@cooperaerial.com

Estimated Duration*

18 working days from the receipt of flight and verification of control

Deliverables for COS Pima Rd

Microstation 2D and 3D Files, Microstation DTMASCII format files of the DTM, COS seed 2D file for the correct geo-reference, Orthorectified Imagery

Mapping Limits

Sincerely,

Emily Martin

Emily Martin

CLIENT ACCEPTANCE
Printed Name:
Title:
Signature:
Date:

TOTAL FEE: $6,300.00
(plus taxes where applicable)

ATTACHMENT C

NEWTON ENVIRONMENTAL CONSULTING. LLC

FEE PROPOSAL

Michael Baker
INTERNATIONAL

newton
Environmental Consulting, LLC

January 14, 2022

Jim Martin
Michael Baker
2929 N. Central Avenue, 8th Floor
Phoenix, AZ 85012

Project: Pima Road, Dynamite Road to Las Piedras
Environmental Assessment
City of Scottsdale

Re: Scope-of-Services and Cost-Estimate
Traffic Noise Analysis

Dear Mr. Hayes:

Newton Environmental Consulting, LLC (NEC) is pleased to submit for your consideration our Scope-of-Services and Cost-Estimate to complete a traffic noise analysis for Pima Road from Dynamite Road to Las Piedras in the City of Scottsdale, Maricopa County, Arizona.

NEC will provide the services for the technical traffic noise analysis and report as described in the Scope of Services for an amount of $17,951.69.

We hope that you will find this Scope-of-Services and Cost-Estimate complete. Please call me directly at 602.332.9642, should you have any questions or require additional information.

Sincerely,

Angela Newton

Angela Newton
Principal

Attachments: Cost Derivation Sheets

NEC SCOPE-OF-SERVICES

City of Scottsdale
Pima Road, Dynamite Road to Las Piedras

PROJECT UNDERSTANDING

The City of Scottsdale is planning to widen Pima Road from Dynamite Road to Las Piedras to a four-lane major arterial complete street. Project features will include a raised landscaped median, increased capacity, safety improvements at critical intersections, improved bike lanes, a new 6' to 8' sidewalk on the west side plus a 10-foot shared-use path and 6' to 8' unpaved trail on the east side. The project limits are one-eighth mile north of Las Piedras to the southern edge of the Dynamite Boulevard intersection, for a complete project limit of 1.4 miles. The project is located within Maricopa County in Scottsdale, Arizona.

TRAFFIC NOISE ANALYSIS ASSUMPTIONS

NEC assumes one (1) design configuration for Pima Road. Noise level measurements will be conducted with a 2-person team at no more than two (2) locations. Traffic will be counted during the noise measurements for input into the TNM 2.5 noise model for validation purposes.

Additional tasks, analysis of additional design alternatives and/or analysis due to design modifications, per your authorization, are considered out of scope and are subject to a cost-modification.

LIST OF REQUIRED ITEMS

The items listed in the table on the following page are required to complete the Traffic Noise Analysis. NEC anticipates the first draft noise and will be available for internal project team review within eight (8) weeks after receiving all the requested items.

REQUIRED ITEMS City of Scottsdale Pima Road, Dynamite Road to Las Piedras		
Items	**Description**	**Notes**
1. CAD Files	Roadway design files, land use data/Base Files, Aerial files	Microstation compatible, SID, HMR, TIFF formats or GIS to be provided by Michael Baker.
2. Roadway Geometry Files	Horizontal and vertical roadway alignment files	Microstation compatible or GIS to be provided by Michael Baker.
3. Terrain Data	Survey and topographical data, Digital Terrain Model (DTM)	Microstation compatible or GIS to be provided by Michael Baker.
4. Traffic Volume Data	AM/PM Build peak hour traffic volumes, vehicle mix, ADT for autos and trucks	Provided by Michael Baker

TASKS DESCRIPTIONS

1. ***Project Management***
   - Scoping, scheduling, budgeting, and billing services.
2. ***Coordination***
   - Coordination with Michael Baker and the City of Scottsdale.
3. ***Field Assessment***
   - Conduct site assessment, evaluate land use adjacent to the project limits, and identify noise sensitive receptors.
   - Conduct noise level measurements with concurrent traffic counts using 2-person team at no more than 2 locations.
4. ***Data Assessment***
   - Review as-built plans, traffic data, and electronic design files.
   - Prepare/extract data from plans and design files for noise model use from traffic studies and design plans for use in the Federal Highway Administration (FHWA) approved Traffic Noise Model version 2.5 (TNM 2.5)
5. ***Noise Analysis***
   - Prepare noise model using TNM 2.5
   - Prepare noise mitigation to comply with the 2011 City of Scottsdale *Draft Roadway Noise Abatement Policy*.
6. ***Reports***
   - Prepare and submit a draft noise analysis technical report, for the internal team to review in electronic PDF format.
   - Address comments per internal team review and revise the noise analysis technical report for final submittal in electronic PDF format.

Pima Road, Dynamite Road to Las Piedras

January 14, 2022

City of Scottsdale Project No.: TBD
Federal Aid Project No.: N/A

DERIVATION OF COST PROPOSAL SUMMARY

ESTIMATED DIRECT LABOR

Classification	Estimated Hours	Average Hourly Rate	Labor Cost
Project Manager	6	$160.00	$960.00
Noise Specialist	116	$125.00	$14,500.00
Technician	18	$87.13	$1,568.34
Administrative	14	$65.00	$910.00
Total Hours:	**154**	**Total Estimated Labor Cost:**	**$17,938.34**

OTHER DIRECT COSTS
(Listed by item at estimated actual cost - NO MARKUP)

Travel	$13.35
Total Estimated Other Direct Costs:	**$13.35**

TOTAL ESTIMATED COST: **$17,951.69**

Angela Newton
Principal

1/14/2022
Date

Pima Road, Dynamite Road to Las Piedras
January 14, 2022

City of Scottsdale Project No.: TBD
Federal Aid Project No.: N/A

TASK NO.	TASK DESCRIPTION	Project Manager	Noise Specialist	Technician	Administrative	Task Hour
1	**100- PROJECT MANAGEMENT**					
	Scoping, scheduling, budgeting, and billing services.	4	4	-	8	16
2	**200- COORDINATION**					
	Coordination with Logan Simpson and the City of Scottsdale.	-	4	-	-	4
3	**300- FIELD ASSESSMENT**					
	Site Assessment- prepare mapping, evaluate land use adjacent to the project limits and identify noise sensitive receptors (2-person team)	-	4	-	-	4
	Noise Level Measurements (2-person team, 2 locations).	-	6	6	-	12
4	**400- DATA ASSESSMENT**					
	Review as-built plans, traffic data, and electronic design files. Compile traffic data, zoning data (confirm if permits have been issued on vacant lands), sensitive noise receivers (account for the number of dwelling units that each receiver will represent and categorize) into Excel files for the ADOT noise methodology meeting.	-	10	-	-	10
	Extract data from as-builts and design files for noise model using Bently InRoads Program, build spreadsheets for inputs into TNM.	-	28	-	-	28
5	**500- NOISE ANALYSIS**					
	Build and run TNM 2.5 noise model for the no-build and build scenarios, validate noise model using field noise measurments and traffc counts.		16	4	-	20
	Identify noise impacts and evaluate noise mitigation as needed per 2011 COS Draft Roadway Noise Abatement Policy.		20	4	-	24
6	**600 - NOISE REPORT**					
	Prepare and submit a draft noise analysis technical report (electronic PDF format) for internal team review.	2	20	4	4	30
	Address comments per internal team review; revise the noise analysis technical report for final submittal (electronic PDF format).		4	-	2	6
	Total Hours	**6**	**116**	**18**	**14**	**154**

January 14, 2022

City of Scottsdale Project No.: TBD
Federal Aid Project No.: N/A

OTHER DIRECT COSTS BREAKDOWN

Travel

Mileage (field work)	1	trips/month x	1	months x	30	miles/trip	
	=		30	total miles @	$0.445	per mile =	$13.35
						Subtotal Travel:	**$13.35**

TOTAL OTHER DIRECT COSTS: **$13.35**

ATTACHMENT D

ECOPLAN ASSOCIATES, INC.

FEE PROPOSAL

Michael Baker
INTERNATIONAL

ecoplan

January 14, 2022

Jim Martin PE, RLS, FAA Part 107 RP
Michael Baker International
Phoenix Plaza Tower II
2929 N. Central Avenue, 8th Floor
Phoenix, AZ 85012

RE: Pima Road-Dynamite Road to Las Piedras Roadway Improvements
EcoPlan Proposal No.: 21-01105

Dear Mr. Martin:

EcoPlan Associates, Inc. (EcoPlan) is pleased to submit this proposal for environmental services for the above-referenced project.

We have included a detailed scope of work, assumptions and cost estimate in this proposal for your review and approval. We estimate the cost of our services will be $20,406.00. Invoices will be submitted monthly for work completed to date.

Please contact Jennifer Jennings at 480-733-6666, extension 126 or me at extension 124 if you have any questions. Thank you for your time and consideration.

Sincerely,

Thomas C. Ashbeck
President/Director of Biological Resources

Enclosures: As noted

ecoplan

SCOPE OF WORK
Pima Road-Dynamite Road to Las Piedras Roadway Improvements
EcoPlan Proposal No.: 21-01105

EcoPlan is pleased to submit this scope of work for the City of Scottsdale (COS) project located along Pima Road. The project entails upgrading Pima Road from Dynamite Blvd to Las Piedras to a 4-lane major arterial street. This will include raised medians, bicycle lanes, sidewalks, and increased capacity. A bridge or large culverts may also be included. The limits are 1.4 miles, from 1/8 miles north of Las Piedras to the southern edge of Dynamite Blvd. Resource surveys will be limited to no more than 17 acres.

Task 1: Project Management, Coordination and Meetings
This task includes the general project management (scheduling resources, monitoring budget, invoicing, communication); coordination of personnel and quality control. An EcoPlan representative will attend 10 project meetings via a virtual platform.

Task 2: Biological Evaluation
EcoPlan will prepare a Biological Evaluation (BE) to determine the effects of the project on federally listed and special status species occurring in the project limits of Maricopa County, Arizona. EcoPlan will also conduct a site survey to determine the presence of federally listed species, migratory birds, and suitable habitat for special status species within the project limits. The BE will include a project description, project maps and photos, results of the site surveys, determination of effects for federally listed species, discussion of migratory birds and agency coordination, and recommended environmental commitments. The BE will not include any detailed species evaluations. The U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System will be accessed to identify natural resources of concern including federally protected species, as well as the Arizona Game and Fish Department Online Environmental Review Tool. Online receipts for these two resources will be attached to the BE.

Task 3: Preliminary Jurisdictional Delineation
EcoPlan will complete a field survey to determine and map the extent of the Ordinary High Water Mark (OHWM) per the most recent guidance from the U.S. Army Corps of Engineers (Corps). Based on the field delineation, EcoPlan will prepare a Preliminary Jurisdictional Delineation (PJD). This submittal will include a cover letter summarizing the findings of the field delineation, a description of the project, evaluation of potential Waters of the U.S., an aerial photo based exhibit showing the location and extent of the OHWM, ground photographs, a Jurisdictional Delineation Physical Characteristics and Other Information table, and a Preliminary Jurisdictional Determination Form.

Task 4: Cultural Resources (Allowance)
EcoPlan will provide a cultural resources assessment to comply with the COS Archaeology Ordinance, the Arizona Antiquities Act (A.R.S. §41-841 et seq), and State Historic Preservation Act (A.R.S. §41-861 through §41-864).

EcoPlan will conduct a Class I records search which will consist of consulting archaeological survey and site files of the Arizona State Museum (ASM) at the Archaeological Records Office, as well as the online AZSITE database, the COS Historic Register, the online databases of the National Register of Historic Places (NRHP) and the Arizona Register of Historic Places, and early maps of the vicinity of the project area (e.g., General Land Office survey plats, historic U.S. Geological Survey topographic map, aerial photographs). The records search will focus primarily on the project area to document known

archaeological sites within the include a standard 0.5-mile buffer area surrounding the project area and will determine if any previously recorded cultural resources exist within the project area and if the area has been previously studied. A preliminary review of AZSITE shows that the project area has been previously surveyed: however, most of these surveys are more than 10 years old. The most recent survey, conducted in 2015, includes a portion of the southern half of the project area along the east side of Pima Road. This survey recorded two new sites, one of which may be within the boundary of the project area. An additional site, AZ U:1:97(ASM) (the Dixie Leta Site) intersects the project area along the east side of Pima Road, just north of E. Dixileta Drive. The site is considered eligible for the NRHP. EcoPlan will conduct a Class III cultural resources survey of the project area. The fieldwork will consist of an intensive pedestrian survey by two archaeologists in one work day to identify the presence of any new cultural resources and to re-record previously documented cultural resources within the project area. Coverage will be 100% and transect intervals throughout the survey will not exceed 20 meters apart.

Following the completion of the survey, EcoPlan will prepare a Class III survey report conforming to COS specifications (Archaeology Ordinance; Scottsdale Revised Code, Chapter 46, Article VI) that includes the results of the Class I records search, details the Class III field methods, and presents the results of the study and recommendations. The draft report will be sent electronically to the client for their submittal to the COS. Any comments or revisions from the agency will be addressed by EcoPlan and the revised report will be submitted.

Assumptions

Assumptions used to generate this scope of work and cost estimate are summarized below. Should additional services be required that are not described in this scope of work, EcoPlan will provide a supplemental scope and cost.

- One EcoPlan representative will participate in 10 project meetings via a virtual platform.
- If necessary, rights of entry will be provided by others in time for the site visit.
- Endangered Species Act Section 7 consultation with the USFWS will not be required.
- Species-specific protocol surveys will not be required.
- COS will accept a BE for the biological clearance.
- A separate biological geotechnical clearance will not be required.
- Revisions to the BE will be limited to one round based on comments from the client and COS.
- The PJD will be limited to one round of revisions based on comments from the client and COS.
- COS will submit the PJD to the Corps if necessary.
- The Class I records search will include a standard 0.5-mile buffer area.
- EcoPlan assumes the Class III fieldwork will be completed by 2 archaeologists in one 6-hour work day, including travel to and from the project area.
- No more than 17 acres will be included in the Class III survey.
- No artifacts will be collected.
- Up to 2 previously known sites will be re-recorded.
- The Class III report will be limited to one round of revisions based on comments from the COS.
- The draft report will be submitted electronically to the client only for their consultation with the COS. Any comments or revisions from the COS will be addressed by EcoPlan and the revised report will be submitted to the client for their final consultation with the COS. No more than one round of revisions will be required.

- The quoted ASM fees are valid for 60 days and if a notice-to-proceed for this project is not received within 60 days, a new quote will need to be generated and a cost modification will be submitted for any change in the fees.
- All deliverables will be submitted electronically.

Cost Estimate Worksheet

Prepared for: Michael Baker International

Project Name: Pima Road-Dynamite Road to Las Piedras Roadway Improvements

EcoPlan # 21-01105

Task Description	Principal	Senior Environmental Planner III	Senior Environmental Planner II	Environmental Planner	Senior Biologist	Cultural Principal Investigator	Cultural Project Director	Archaeologist	Senior Quality Control Specialist/Editor	Quality Control Specialist/Editor	Senior GIS Graphics Specialist	Total Hours	Total Costs
Billing Rate	**$152.60**	**$116.91**	**$100.91**	**$71.38**	**$152.60**	**$120.60**	**$91.88**	**$54.15**	**$100.91**	**$46.76**	**$84.91**		
Task Order													
Task 1: Project Management, Coordination and Meetings	8	16	0	0	4	2	0	0	0	0	0	30	$ 3,942.96
Task 2: Biological Evaluation	0	0	0	40	4	0	0	0	0	6	4	54	$ 4,085.80
Task 3: Preliminary Jurisdictional Delineation	0	0	4	40	0	0	0	0	0	6	6	56	$ 4,048.86
Task 4: Cultural Resources	0	0	0	0	0	5	44	6	12	0	12	79	$ 7,200.46
Subtotal:	8	16	4	80	8	7	44	6	12	12	22	219	$ 19,278.08
Total Hours:	**8**	**16**	**4**	**80**	**8**	**7**	**44**	**6**	**12**	**12**	**22**	**219**	
Labor Subtotal:													**$ 19,278.08**

Direct Expenses					
Mileage	340	miles @	$0.445	/mile	$ 151.30
Per Diem	1	day @	$51.00	/day	$ 51.00
Arizona State Museum Fees					
Arizona State Museum Quote No.: Q004042					$ 925.80
Total Direct Expenses:					**$ 1,128.10**
Total Cost:					**$ 20,406.00**

Quote

THE UNIVERSITY OF ARIZONA
ARIZONA STATE MUSEUM

Quote No	**Q004042** Allowance
Job No.	004280
Date	13 January 2022
Valid To	14 March 2022

Arizona State Museum
C/O RII Business Center
Marshall Building - Room 525
845 N Park Avenue
PO Box 210158B
Tucson, AZ 85719

EcoPlan Associates, Inc.
701 W Southern Ave., Suite 203
Mesa
AZ 85210

Pima Road-Dynamite Road to Las Piedras Roadway Improvements

Online Quote Request 01/12/2022 1:15 pm
Submitted By: Andrew Lack / alack@ecoplanaz.com
21-01105
Class III survey
Client Selected:

EcoPlan Associates, Inc.:EcoPlan Associates, Inc.
701 W Southern Ave., Suite 203:701 W Southern Ave., Suite 203
Mesa:Mesa
AZ:AZ
85210:85210
(480) 733-6666:(480) 733-6666
(480) 383-6915:(480) 383-6915
http://ecoplanaz.com/:http://ecoplanaz.com/

Project Sponsor: City of Scottsdale
Project Name: Pima Road-Dynamite Road to Las Piedras Roadway Improvements
Project Number: 21-01105
ASM Accession Number:
Project Description: Class III survey
Land Ownership: Private: YES
Land Ownership: Tribal: NO
Land Ownership: Federal: NO
Land Ownership: State: YES
Estimated Project Start Date: 02/01/2022
Estimated Project End Date: 04/30/2022

Service: PROJECT REGISTRATION: YES
Project Registration Type: Survey: SELECTED
Survey Type: Non-Collection Survey: SELECTED
Linear inches of documents to be curated at ASM for Non-collection Survey: 1
Notification of Intent to conduct non-collection survey required if Project Area is located on State land.: YES
Records Management Agreement Required for Non-collection Survey: NO
Person field days for Non-collection Survey: 2
Acres to be surveyed for Non-collection Survey: 17.0
New sites to be recorded for Non-collection Survey: 0
Digital images to be curated at ASM for Non-collection Survey: 4
Sites to be updated for Non-collection Survey: 2

Rate-Based Services

Description	Time	Rate	Amount

Quote

THE UNIVERSITY OF ARIZONA
ARIZONA STATE MUSEUM

Project Registration, Non-collection survey - Assistant - (ARO)	0.67	38.00	25.33
Project Registration, Non-collection survey - Specialist - (ARO)	0.60	83.00	49.80
Review Draft Report - Specialist - (ARO)	2.00	83.00	166.00
CURATION Prepare Documents - Assistant - (ARO)	0.33	38.00	12.67
CURATION Prepare Documents - Specialist - (ARO)	0.17	83.00	13.83
CURATION Prepare Archive - Assistant - (ARCHIVE)	0.30	38.00	11.40
CURATION Prepare Archive - Professional - (ARCHIVE)	0.33	125.00	41.67
CURATION ASM Site Card Update - Assistant - (ARO)	1.50	38.00	57.00
CURATION ASM Site Card Update - Specialist - (ARO)	4.00	83.00	332.00
CURATION Prepare Photos - Specialist - (PHOTO)	1.20	83.00	99.60
CURATION Process Images - Professional - (PHOTO)	0.40	125.00	50.00

Fee-Based Services

Description	Quantity	Rate	Amount
CURATION in perpetuity of a linear inch of documentation	1.00	66.50	66.50
		Sub Total	925.80
		Tax	0.00
		Total	**925.80**

This quote is provided in good faith based on the assumptions and information submitted via the Arizona State Museum (ASM) Request for Quote Questionnaire. This quote applies only to the specific project for which the Request for Quote was submitted. If at any time the scope of this project escalates beyond that which was outlined within the Request for Quote Questionnaire, a revised quote (Rev.) will be issued, and thereafter become binding. The rates and fees listed in this quote are valid for 60 calendar days after date issued.

ATTACHMENT E

DIG STUDIO, INC.

FEE PROPOSAL

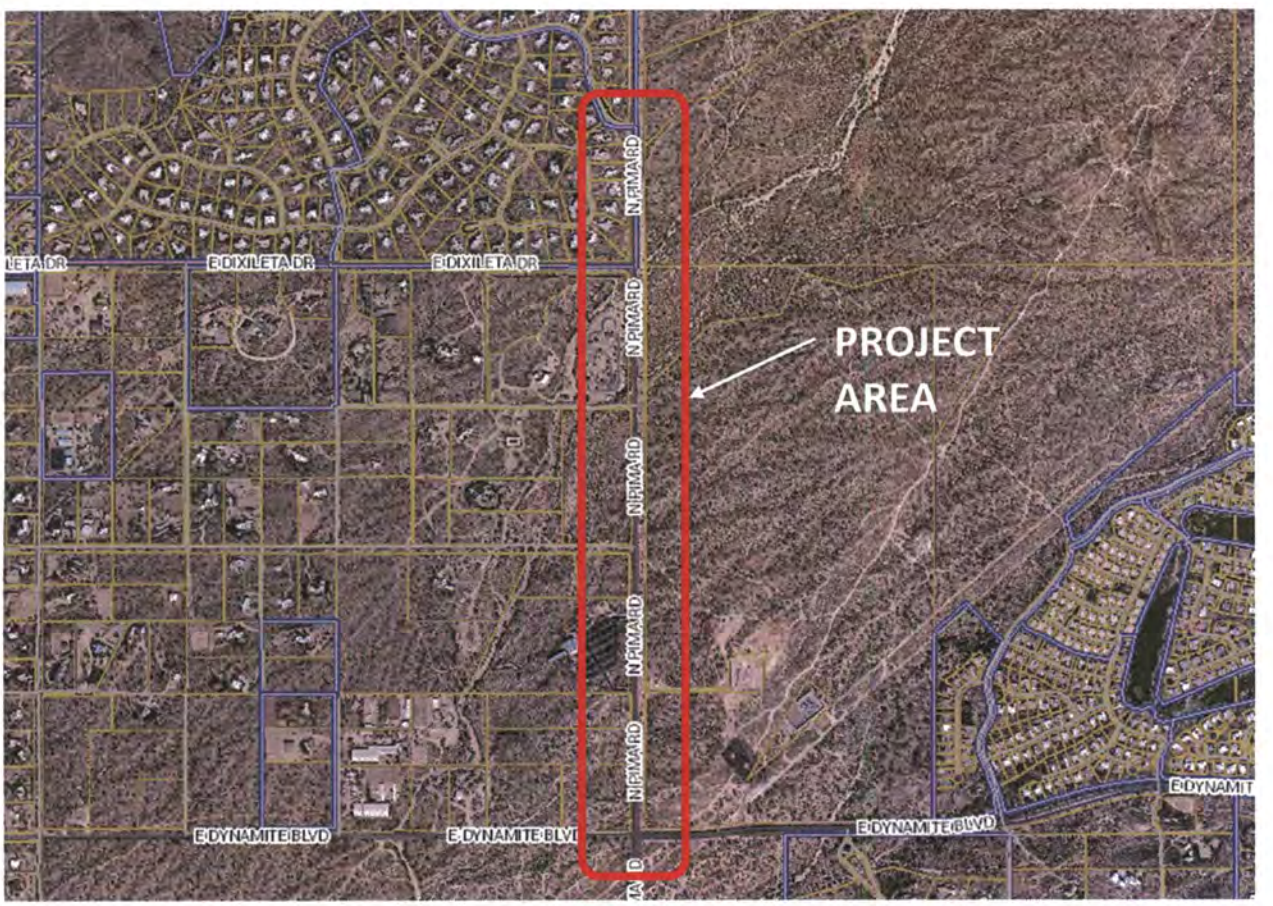
Michael Baker
INTERNATIONAL

Dig Studio Inc.
600 N. 4th Street
Phoenix, AZ 85004
T: 602.595.4101
digstudio.com

To:	**Jim Martin, PE, Michael Baker International**
From:	Jay Hicks, Dig Studio
Date:	January 14, 2021 (Revised February 9, 2022)
Subject:	**Proposal for Landscape Architectural Services for Pima Road – Dynamite Road to Las Piedras**

Dear Jim,

Dig Studio is pleased to present Michael Baker International (Baker) the following Scope of Services to provide landscape design services to complete a Landscape Design for the City of Scottsdale for the Pima Road improvements from Dynamite Road to Las Piedras. Dig Studio, as a sub-consult to Baker, will coordinate and support the design team, including: preparing an Existing Site Assessment, developing Design Concepts, supporting the DRB Submittal, preparing Construction Documents and assisting in the Public Outreach program. Native Resources will provide the Native Plan Inventory as a Sub-Consultant to Dig Studio.



Project Area – Dynamite Road to Las Piedras (Approx. 1.3 miles)

SCOPE OF WORK

SECTION 100 – MEETINGS

Dig Studio will attend meetings related to this project as required by city staff, including but not limited to design meetings, public meetings, stakeholder meetings and City Council meetings. A list of the meetings is as follows:

Project kick off / site visit meeting (1 Total)
Project Team Meetings (6 Total)
Development Review Board meetings with City (1 Total) – See Section 900 for additional information
Public Meetings, virtual meeting format (2 Total)– See Section 400 for additional information
-Public Meeting #1: Initial Concept Presentation
-Public Meeting #2: Final Presentation
Stakeholders Meetings, In-person and/or Virtual (4 Total) – See Section 400 for additional information
- May include Neighborhood HOA's, Sonoran Preserve Representatives

SECTION 200 – DATA ACQUISITION

Dig Studio will assess existing conditions, opportunities, and constraints within the project area. The design team will incorporate data and analysis into graphic and written formats for presentation and discussion with the City Staff and other involved entities. Dig will provide an existing condition report as part of this work assignment.

SECTION 300 – SURVEY, MAPPING AND ALIGNMENT - No Work Dig

SECTION 400 – PROJECT COORDINATION

400.1 Stakeholder Engagement Oversight

Dig Studio will participate and coordinate with Baker to develop a Stakeholder Engagement plan. Dig will be in support role to Baker.

400.2 Stakeholder Meetings

Dig Studio will coordinate with Baker and attend up to four (4) stakeholder meetings. Dig will be in a support role to Baker. Dig will provide meeting notes to Baker for inclusion into Meeting Minutes.

400.3 Public Involvement Meeting

Dig Studio will participate in two (2) virtual meetings and coordinate with Baker to develop a Public Involvement plan. Dig will be in support role to Baker. Dig will provide meeting notes to Baker for inclusion into Meeting Minutes.

400.4 Graphic Support

Dig Studio will assist Baker in preparing graphics required for the stakeholder, virtual public meetings and the project website. The number of graphics or type of graphics are unknown at this time. Please see Dig's fee schedule for the hourly allowance for this task (80 Staff hours total).

400.5 Project Website

See 400.4 above for graphic support.

SECTION 500 – UTILITIES - No Work Dig

SECTION 600 – ENVIRONMENTAL – No Work Dig

SECTION 700 – ALTERNATIVE ANALYSIS

700.4 Landscape Architecture Concepts

Based on preliminary roadway design alternatives (including a possible roundabout), Dig Studio will develop landscape design concepts for the project. Dig Studio will develop (2) high level design alternatives. Design alternatives will include the following:

- Street Section Alternatives (in coordination with Baker)
- Planting concepts
- Multiuse path location and design
- Lighting design (if required)
- Site Furnishings / Trailhead locations
- Public Art Locations
- Urban/wildfire interface design

700.5 Alternative Selection

Dig will participate in the Alternative Selection process to identify a preferred design. The preferred design will be refined as part of 30% and 60% design outlined in Section 900).

SECTION 800 – TECHNICAL MEMORANDA AND REPORTS – No Work Dig

SECTION 900 – PLANS, SPECIFICATIONS AND ESTIMATE

900.8 – Landscape Architectural Design

Dig Studio will advance the preferred landscape design to 30%, 60%, 90% and 100% completion. Work will include landscape design, native plant restoration, hydroseeding, multi-use path (if soft-surface), restoration irrigation (3 year establishment period according to DRB / Natural Area Open Space requirements).

Design Review Board Submittal

Dig Studio will support Baker in the formatting, refinement and submittal of the formal materials required for Scottsdale DRB. It is anticipated that the design will be at 60% completion for DRB submittal. Below is a check list required for DRB Submittal with *Primary* responsibility and a *Support* role responsibility:

Task	Primary / Support
• Project Narrative	Baker / Dig Studio
• Site Plan	Baker / Dig Studio
• Cross Sections	Baker / Dig Studio
• Preliminary Art Plan	Dig Studio / Baker
• Perspectives (2 total)	Dig Studio / Baker
• Conceptual Landscape Plan	Dig Studio
• Exterior Materials Board	Dig Studio
• Native Plant Inventory	Dig Studio

(See Native Resources Proposal as a sub-consultant to Dig Studio).

Design Review Board Meeting

Dig Studio will coordinate and support Baker and the City of Scottsdale to provide presentation materials for the DRB meeting (1 total). Dig Studio will produce graphics identified above, participate in the presentation and record the DRB

feedback.

Coordination with Artist

Dig Studio, if an artist is involved in the project, will coordinate with the project artist for the project. The artist will be under a separate contract with the City. Dig will work with and assist the artist to integrate art within the project. This work may include special planting design, identifying envelopes for art installation and possible aesthetic design of the project features in support of the artist concepts.

Stormwater Pollution Plans (SWPP)

SWPP will be prepared by Baker.

900.11 Specifications

Dig will prepare Special Provisions that are not adequately covered by MAG and the City's Supplement to MAG.

900.12 Opinion of Probably Cost Estimate

Dig will prepare a list of bid items and quantities represented in Dig's drawings. Quantities will be prepared at 60%, 90% drawing completion.

Dig will prepare a 100% completion a Bid Schedule listing bid items and quantities contained within Dig's drawings.

SECTION 1000 – RIGHT OF WAY – No Work Dig

SECTION 1100 – VALUE ENGINEERING – No Work Dig

SECTION 1200 – SUBMITTALS – See master matrix of deliverables for landscape architecture design

SECTION 1300 – BIDDING PHASE

Dig will provide bidding assistance, including responding to request for information, attending a pre-bid conference, preparation of addenda and evaluation of bids.

SECTION 1400 – POST DESIGN – No Work This Phase of Work

Scope Clarifications and Services Not Included in Scope of Work:

Additional Services shall include, but are not limited to the following:

A. ADDITIONAL GRAPHIC EXHIBITS OR DELIVERABLES: Additional Graphic Exhibits or Deliverables beyond what is identified in the scope, or exceeds where a Fee Allowance is identified will be considered additional services.
B. FEES: Payment for governmental permits, application fees, processing fees, and plan check fees.
C. ADDITIONAL MEETINGS: Additional Meetings in excess of those indicated in each stage of the Scope of Work above.
D. THIRD PARTY ILLUSTRATIONS/RENDERINGS: Professional third-party marketing renderings, beyond Deliverables mentioned above as part of the concept design, stakeholder and public outreach.
E. SCALE MODELS: Scale models as requested and approved for by Client. Cost to include Dig Studio cost (either internal or subcontracted) and Dig Studio's labor to prepare model drawings and coordination plus administration fee.
F. ADDITIONAL SUBMITTAL REVIEWS beyond those listed, including additional materials requested by DRB that are not part of the established checklist of materials.
G. AutoCAD: Work to be produced by Dig Studio will be produced in AutoCAD format. Engineer will provide plans in AutoCAD format to Dig Studio.

H. STORM WATER PREVENTION PLAN (SWPP): Storm water prevention plan is to be prepared by the Civil Engineer.
I. NATIVE PLAN INVENTORY: Native Resources will provide Native Plant Inventory per the City of Scottsdale's requirements. An allowance has been included in the fee proposal for Native Resources to include future areas that might be outside of the initial project area, or to retag material due to weather related impact or human removal.
J. IRRIGATION CONTROLLER AND WATER POINT OF CONNECTION: Dig will coordinate with the Civil and Electrical Engineers the locations of the irrigation controller and the water source for the irrigation system. Dig will be responsible for directing the contractor to connect to a 120v source provided by the Electrical Engineer (if not a solar powered controller) and connecting downstream of the backflow preventor for the water source.

FEE PROPOSAL

For the professional services described in the above Scope of Work, excluding Additional Services, Dig Studio proposes the following Professional Services Fee. A task and hourly breakdown are included in **Exhibit A – Fee Proposal**.

Dig Studio	$80,757
Native Resources (Plant Inventory)	$7,840 (See Exhibit B for Proposal)
Plant Inventory Retagging (Allowance)	$2,500
Total Fees	$91,097
Reimbursable Expenses (allowance)	$1,500
Total Fees and Expenses	**$92,597**

Reimbursable Expenses:

Printing, reproduction, mileage and courier delivery will be billed at cost.

2022 Dig Studio Billing Rate Table:

Category	Amount
Sr. Principal	$ 225.00
Principal	$ 152.00
Sr. Landscape Architect	$ 128.00
Landscape Designer III	$ 117.00
Landscape Designer II	$ 106.00
Landscape Designer I	$ 95.00

End of Scope of Work

EXHIBIT A
FEE PROPOSAL DETAIL

	Pima Road - Dynamite to Las Piedras								
	Dig Studio								
	Date: January 14, 2022 (Revised February 9, 2022)								
	TASK	Sr Principal	Principal	Sr. LA	LA III	LA II	LA I	Extended Total	Comments
		$ 225	$ 152	$ 128	$ 117	$ 106	$ 95		
1	SECTION 100 – MEETINGS								
2	Kick-Off Meeting	1		1				2	1 Meeting
3	Team Meetings	3		6				9	6 Meetings+Mtg Minutes
4	Section 100 Hour Total	4	0	7	0	0	0	11	
5	Section 100 Fee	$ 900	$ -	$ 896	$ -	$ -	$ -	$ 1,796	
6									
7	SECTION 200 – DATA ACQUISITION								
8	Existing Conditions Assessment	1		2		8		11	Existing Conditions / Reports
9	Section 200 Hour Total	1	0	2	0	8	0	11	
10	Section 200 Fee	$ 225	$ -	$ 256	$ -	$ 848	$ -	$ 1,329	
11									
12	SECTION 300 - No Work Dig								
13									
14	SECTION 400 - PROJECT COORDINATION								
15	400.1 Stakehoder Engagment Oversight	2		2				4	Participate in (1) Meeting
16	400.2 Stakeholder Meetings	8		8				16	Attend (4) In-Person Meetings
17	400.3 Public Involvement Meeting	2		2				4	Attend (2) Virtual Meetings
18	400.4 Graphic Support			2		80		82	Prepare Exhibits for Mtgs + Web
19	400.5 Project Website							0	Graphic support in 400.4
20	Section 400 Hour Total	12	0	14	0	80	0	106	
21	Section 400 Fee	$ 2,700	$ -	$ 1,792	$ -	$ 8,480	$ -	$ 12,972	
22									
23	SECTION 500 - UTILITIES - No Work Dig							$ -	
24									
25	SECTION 600 - Environmental - No Work							$ -	
26									
27	SECTION 700 - ALTERNATIVE ANALYSIS								
28	700.4 Landscape Architecture Concepts	8		24		40		72	Planting/Path/Art Coordination
29	700.5 Alternative Selection	4		8		24		36	Presentation / (1) Revision
30	Section 700 Hour Total	12	0	32	0	64	0	108	
31	Section 700 Fee	$ 2,700	$ -	$ 4,096	$ -	$ 6,784	$ -	$ 13,580	
32									
33	SECTION 800 - TECHNICAL MEMO - No Work							$ -	
34									
35	SECTION 900 - PLANS, SPECS & ESTIMATE								
36	900.8 Landscape Architectural Design								
37	30% Design Documents	2		8		60		70	1" = 40 Scale (6 Base Sheets)
38	60% Design / DRB Submittal / Spec / Est	8		40		120		168	1" = 20 Scale (12 Base Sheets)
39	90% Design Documents / Spec / Est	2		8		80		60	1" = 20 Scale (12 Base Sheets+Dtls)
40	100% Design Documents / Spec / Est	2		8		40		50	1" = 20 Scale (12 Base Sheets+Dtls)
41	900.11 Specifications	1		16				17	(3) at 60%, 90%, 100%
42	900.12 Opinion of Probable cost	1		8		16		25	(3) at 60%, 90% , 100%
43	Section 900 Hour Total	16	0	88	0	316	0	420	
44	Section 900 Fee	$ 3,600	$ -	$ 11,264	$ -	$ 33,496	$ -	$ 48,360	
45									
46	SECTION 1000 – RIGHT OF WAY – No Work Dig								
47									
48	SECTION 1100 – VALUE ENGINEERING								
49	1100 Value Engineering	0		0		0		0	Not in scope
50	Section 1100 Hour Total	0	0	0	0	0	0	0	
51	Section 1100 Fee	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
52									
53	SECTION 1200 – SUBMITTALS							$ -	Included in Section 900
54									
55	SECTION 1300 – BIDDING PHASE								
56	RFP, Addenda, Prebid Conferendce			4		2		6	As-Need Clarificatons
57	Section 1300 Hour Total	0	0	4	0	2	0	6	
58	Section 1300 Fee	$ -	$ -	$ 1,024	$ -	$ 1,696	$ -	$ 2,720	
59									
60	SECTION 1400 – POST DESIGN - Not in Scope							$ -	
61									
62	Total Hours	45	0	147	0	470	0	662	
63	Total Fees	$ 10,125	$ -	$ 19,328	$ -	$ 51,304	$ -	$ 80,757	
64									
64	Native Resources - Sub Contract to Dig Studio							$7,840	See Attached Proposal (01/12/22)
65	Native Resources - Sub Contract to Dig Studio - Allowance for Retagging Plant Material							$2,500	Allowance for Retagging
66							Total Fee	$ 91,097	
67							Reimbursable Expenses	$ 1,500	
68				Dig Studio Total Fee, Sub-Consultants, Expenses				$ 92,597	

EXHIBIT B
NATIVE RESOURCES
NATIVE PLANT INVENTORY

Native Resources
INTERNATIONAL

1540 W Happy Valley Road, Phoenix, AZ 85085
Phone: (623) 869-6757 Fax: (623) 869-6769 Email: info@nativeresources.com
Visit us on the web: www.nativeresources.com

PROPOSAL

Date	Number
01/12/22	NRIQ12578

This is NOT an invoice

To: Dig Studio
600 N. 4th St, Suite D

Phoenix, AZ 85004

Attn: Jay Hicks
Phone: 602.595.4101
Fax:

Project Name: PIMA ROAD - DYNAMITE / LAS PIEDRAS - NPI
Job Location:

PO/Contract No.: ____________________

NRI Job No.: ____________________

Qty	Description	Unit	Unit Price	Ext. Price
1	Native Plant Inventory	ls	$7,840.00	$7,840.00
	-Inventory plans include GPS tech, GPS unit, data processing, data printing, AutoCAD.			

SubTotal	$7,840.00
Sales Tax	$0.00
Shipping	$0.00
Total	**$7,840.00**

ATTACHMENT F

ALL TRAFFIC DATA SERVICES

FEE PROPOSAL

Michael Baker
INTERNATIONAL

ALL TRAFFIC DATA SERVICES

All Traffic Data Services, LLC
9660 West 44th Avenue
Wheat Ridge, CO 80033

303-216-2439 (tel)
303-278-2681 (fax)

Proposal

Submitted To: Michael Baker
Job Location: Scottsdale
Job Description: Data Collection

Date: 1/12/2022

We hereby propose to furnish all materials and perform all the labor necessary for the completion of the following:

Item#	Description	Quantity	Unit Price	Units	Total
100	Data Collection	1.00	3,500.00	LS	$3,500.00

Weekday AM, Mid-Day and PM (2-hours each) turning movement counts and 48-hour bi-directional counts in 15-minute intervals on all legs of intersections at the following intersections:

Pima Road and Dynamite Boulevard,
Pima Road and Dixileta Drive, and
Pima Road and Las Peidras

All material is guaranteed to be as specified, and the above work to be performed in accordance with the drawings and specifications submitted for above work and completed in a substantial workmanlike manner for the sum of:

$3,500.00

Any alteration or deviation from above specifications involving extra costs, will be executed only upon written orders, and will become an extra charge over and above the estimate. Prices are good for 60 days.

Respectfully submitted: **ATD Services LLc**

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified.

Signature:_____ Date:_____

ATTACHMENT G

ETHOS ENGINEERING, LLC

FEE PROPOSAL

Michael Baker
INTERNATIONAL

January 14, 2022

Jim Martin, PE, RLS
Senior Associate
Michael Baker International
Phoenix Plaza Tower II
2929 North Central Avenue
Phoenix, Arizona 85012

SUBJECT: Proposal for Geotechnical Design Services
City of Scottsdale
Pima Road Widening, Dynamite Boulevard to Las Piedras
Scottsdale, Arizona

Dear Jim:

As requested, Ethos Engineering, LLC (Ethos) is pleased to present this proposal for professional geotechnical engineering services for the referenced project. Included is our understanding of the project, our proposed scope of work, work-hour estimate and estimated fees.

1.0 PROJECT INFORMATION

Michael Baker International (MBI) has been selected by the City of Scottsdale (City) to re-design Pima Road from just south of Dynamite Road to just north of Las Piedras for a distance of approximately 1.3 miles in north Scottsdale, Arizona. Improvements will include the construction of new northbound (NB) lanes accommodating two lanes of traffic with paved shoulder. A paved shared-use path and an un-paved trail will be built east of the roadway. The majority of existing pavement will carry southbound (SB) traffic including two travel lanes and a paved outside shoulder. A paved sidewalk will be constructed off from the SB shoulder. NB and SB traffic will be separated by a raised landscaped median.

The project will provide drainage improvements at the Rawhide Wash Crossing. A new bridge is anticipated for this crossing. The location and span configuration for this bridge has not yet been established. For the purpose of this proposal, a three-span structure with drilled shafts terminating in rock is assumed. An additional two multi-barrel box culverts are also currently assumed in the vicinity of Rawhide Wash.

Ethos has been retained by MBI to provide geotechnical engineering support services. Our requested scope includes the preparation of a geotechnical exploration report which addresses the site soil conditions relative to the support of roadway and pathway pavements, for a new bridge crossing of Rawhide Wash and two additional multi-barrel box culverts.

2.0 SCOPE OF SERVICES

2.1 Review of Existing Data & Site Visit

Ethos will review any available information including As-built Plans, existing geotechnical reports and any published data including geologic maps, groundwater and subsidence

information from the Arizona Department of Water Resources (ADWR) and fissure mapping provided by the Arizona Geological Survey.

Ethos will visit the site and note any conditions which might require special treatment or consideration relative to existing geotechnical conditions. Any items of note will be discussed in the Geotechnical Investigation Report or otherwise communicated to MBI.

2.2 Geotechnical Investigation

The following presents a summary of our planned subsurface investigation activities:

- Ethos will prepare of a Field Investigation Plan showing the intended boring locations. This plan will be submitted to MBI. We plan to locate the borings along the east side of Pima Road, adjacent to pavement and within existing Scottsdale right of way.
- Ethos will obtain a no-fee City encroachment permit to drill the test borings. Once the permit is received, we will lay out the test borings and contact AZ811 to identify any nearby buried utilities. Traffic control will be provided by Roadsafe Traffic Systems (Roadsafe). Rolling shoulder closures are anticipated. Roadsafe will prepare a traffic control plan that will be included with the encroachment permit application.
- Ethos will subcontract ACS Services (ACS) to complete 6 roadway test borings, four to 5 feet and two to 10 feet. The roadway test borings will be advanced with hollow stem auger. An additional four structure borings will be advanced to a depth of 70 feet or practical refusal for the Rawhide Wash crossing. For costing we anticipate these borings will be advanced by down hole percussion (ODEX) to a depth of 60 feet and completed with HQ coring methods to full depth. We will obtain drive samples at intervals which do not exceed 5 feet in all borings. All field work will be directed and supervised by Ethos.
- Ethos will subcontract ACS to perform grain-size analysis (16 tests), Atterberg limits (16 tests), 6 ring density, 2 direct shear, 2 R-value, 4 Proctor and 4 remolded swell, 3 pH, resistivity, soluble sulfates and chloride tests on selected samples.
- Ethos will prepare a geotechnical investigation report which provides the results of the test drilling, laboratory analysis and recommendations for bridge foundation design, site grading and pavement design. Our report will also include general site geology, discussions regarding problematic soil conditions, pavement subgrade support, recommended pavement sections and site grading. Our discussions will be summarized in a draft and final geotechnical investigation report prepared under the supervision of a Professional Civil Engineer registered in the State of Arizona.

3.0 PROJECT SCHEDULE

We will begin our work upon notice-to-proceed (NTP) and will endeavor to complete our work within 6 weeks of receipt of any needed environmental clearance and the City right of way use permit.

4.0 PROJECT FEES

Our services will be performed under the direction of an Arizona-registered Professional Civil Engineer. Based on the proposed scope of work and our understanding of the project, we propose to complete the geotechnical scope of work presented above for a lump-sum cost of **$42,139.00.**

If there is a need for any change in the scope of services described in the proposal, please call us immediately. Changes may require revision of the proposed fee, which will be communicated to you upon assessment of the requested changes effect on the fee.

Our fees will be invoiced on a monthly basis not to exceed the indicated amount. In the event that field conditions require a modification to the scope of work developed for this proposal and may affect either our planned project schedule or budget, we will contact you at the earliest opportunity to discuss these conditions.

5.0 LIMITATIONS

The geotechnical services will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of the geotechnical profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations will be based on information collected by Ethos and provided by others. It is possible that conditions could vary between or beyond the data evaluated. Ethos makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

6.0 AUTHORIZATION

We will proceed upon successful negotiation and execution of the subconsultant agreement provided by MBI.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you have any questions or require additional information pertaining to this proposal, we would be pleased to discuss them with you.

Sincerely,

ETHOS ENGINEERING LLC

Keith Dahlen, PE
Principal/Senior Geotechnical Engineer

Reviewed by:

Francisco J. Garza, PE
Principal/Senior Geotechnical Engineer

\\files\accounting\2021xxx - michael baker - city of scottsdale pima road\scope and fee proposals\rev0\proposal - mbaker_pima road - dynamite blvd to las pedras 1-14-2022.docx

Pima Road - Dynamite to Las Piedras
Ethos Engineering, LLC - Man-Hour Estimate

Project Work Task	Project Manager	Engineer - Sr.	Engineer	Designer	Admin	Total Hours
Project Setup & Permitting	4	6	0	4	2	16
Layout & Bluestake	0	4	0	4	0	8
Field Investigation	0	2	0	60	0	62
Laboratory Testing	1	2	0	2	0	5
Analysis	2	4	12	0	0	18
Draft and Final Report Prep	6	16	20	2	0	44
Meetings	6	0	0	0	0	6
TOTAL	19	34	32	72	2	159

DERIVATION OF COST SUMMARY

ESTIMATED DIRECT LABOR

Classification	Hours	Rate	Estimated Labor Costs
Project Manager	19	$190.00	$3,610.00
Engineer - Sr.	34	$155.00	$5,270.00
Engineer	32	$125.00	$4,000.00
Designer	72	$95.00	$6,840.00
Administrative	2	$65.00	$130.00
Total Hours:	159		

Total Estimated Direct Labor: $19,850.00

ESTIMATED DIRECT EXPENSES

Vehicle Mileage (Personal)	486 mi. @	$0.585 /mi.	$284.31

Total Estimated Direct Expenses: $284.31

ESTIMATED OUTSIDE SERVICES

Test Drilling (ACS Services)	$13,583.00
Lab Testing (ACS Services)	$5,474.36
Traffic Control (Roadsafe) - Rolling Shoulder Closure	$1,305.00
Traffic Control (Roadsafe) - Shoulder Closure	$1,642.33

Total Estimated Outside Services: $22,004.69

By:

TOTAL LUMP SUM COST: $42,139.00

Keith Dahlen, Contract Manager

1/14/2022
Date

Pima Road - Dynamite to Las Piedras
Ethos Engineering, LLC - Mileage Estimate

Project Task	No. of Two -Way Trips	Miles per Trip	Total Miles
Layout & Bluestake	2	66	132
Field Investigation	5	66	330
Laboratory Testing	1	24	24
TOTAL			486

ACS SERVICES LLC
DBE SBE WBE

Proposal #: 2260037
Date: 1/13/2022

Thank you for the opportunity to provide a quote for one of your potential jobs.

Ethos
Keith Dahlen
9180 S Kyrene Rd #104
Tempe, AZ 85284

Project Name: Roadway Widening
Location: Pima Road, from Dynamite Blvd to Las Piedras, North Scottsdale

Subject: Advance six 4.25" auger boreholes (4-5' and 2-10') for a total of 40' with SPT sampling at 5' intervals. Advance four 5" ODEX boreholes (4-60') for a total of 240' with four HQ cores (4-10') for a total of 40'.

Item	Quantity	Unit	Average Cost	Price
Drilling				
Mob/Demob	1	LS	$ 400.00	$ 400.00
4.25" Auger Drilling (including SPT Sampling)	7	HR	$ 179.00	$ 1,253.00
5" ODEX Percussion Casing Advance	240	FT	$ 40.00	$ 9,600.00
HQ Rock Core	40	FT	$ 48.00	$ 1,920.00
HQ Core Box	4	EA	$ 15.00	$ 60.00
			Drilling Total	**$ 13,233.00**
Lab				
Sieve Analysis	16	EA	$ 81.00	$ 1,296.00
Atterberg Limits (Plasticity Index)	16	EA	$ 74.75	$ 1,196.00
Moisture/Density of Rings	6	EA	$ 36.06	$ 216.36
Remolded Swell	4	EA	$ 87.00	$ 348.00
Standard Proctor	4	EA	$ 120.75	$ 483.00
R-Value	2	EA	$ 350.00	$ 700.00
pH, resistivity, sulfates, chlorides	3	EA	$ 245.00	$ 735.00
Direct Shear Test	2	EA	$ 250.00	$ 500.00
			Lab Total	**$ 5,474.36**
Addition Costs				
Utilities Locate	1	LS	$ 350.00	$ 350.00
***Stand by** (Please see note below)		HR	$ 179.00	
			Proposal Total	**$ 19,057.36**

***Any stoppage of work due to site access or matters out of ACS Services control once work has started will be billed at the hourly stand by rate of $179.00 per hour. Site visits will be conducted by ACS Services at no additional charge to verify access if requested to ensure no unforeseen cost.**
All proposals are good for 45 days from the day shown on this document. All changes in work outside of the original agreed upon scope that causes ACS Services to run over on hours not agreed upon will be billed at the hourly stand by rate of $179.00.
Your success is our priority so please do not hesitate to reach out to me anytime if you have questions.
Sincerely,
ACS Services LLC.

Charles Johnson "Eddie"

Charles Johnson "Eddie"
Drilling Manager
2235 W. Broadway Rd.
Mesa, AZ 85202
office: 480-968-0190
cell: 270-254-1500

Acceptance of all outlined pricing, terms and conditions, including General Conditions on page 2.

Company Name:_____

Authorized Representative (Name & Title):_____

Signature:_____

GENERAL CONDITIONS

ACS Services LLC is providing drilling services under the direction and authority of the CLIENT. CLIENT is solely responsible for all direction, activities and consequences once the drilling string penetrates the surface.

1. Site Preparation. CLIENT, shall be solely responsible for performing all site preparation activities to allow for the accessibility of any drill rig, including truck mounted drill rigs, excavation equipment or equipment necessary for geotechnical evaluation. This includes any Blue Stake type activities, private locations marking and overhead surveys. CLIENT is responsible for choosing and marking sites where it wants to perform drilling activities.

2. On-Site Water Supply. CLIENT, if required, shall be solely responsible for ensuring an available supply of on-site water necessary to complete its drilling, excavation or geotechnical operations.

3. Staging Areas. CLIENT, if required, shall be solely responsible for securing all necessary staging areas for its equipment and supplies used to perform all drilling, geotechnical or excavation activities.

4. Erosion and Sedimentation. CLIENT shall be solely responsible for installing and maintaining erosion and sedimentation controls related to drilling, geotechnical or excavation work in compliance with all Laws, including without limitation Environmental Laws.

5. Contamination or Segregation of Cuttings, Drilling Fluids, Water or Excavated Soils.
5.1 Generally Auger cutting and any uncontaminated water are to be used for abandonment and any excess dispersed on surface. CLIENT must contain any contaminated drill cuttings, drilling fluids and all water that comes into contact with or is extracted or purged from the subsurface formation. CLIENT, if required, shall be solely responsible for providing drums or other containers for the drill cuttings and for providing drums, tanks or large vessels for containment of drilling fluids or water that comes into contact with or is extracted or purged from the subsurface formation.

5.2 Except as otherwise provided in the Work Authorization, CLIENT, at its sole cost and expense, shall perform the necessary due diligence and sampling of the excavated materials to determine whether the excavated materials, or any portion thereof, must be disposed of off-site in accordance with applicable Environmental Laws. Any excavated material requiring off-site disposal shall be the responsibility of the CLIENT. Unless otherwise provided in the Work Authorization, Subcontractor under the direction and authority of the CLIENT, shall backfill the excavation with material and return the excavated area to the same or substantially similar condition as existed prior to the excavation.

6. Permits. CLIENT, if required, shall be responsible for securing all necessary state, county and local drilling permits.

7. Subsurface Conditions. Unless otherwise provided in the Work Authorization, CLIENT shall be solely responsible for all costs associated with subsurface conditions, including without limitation rock excavation, sands and dewatering. CLIENT shall be solely responsible for any utilities or subsurface anomalies and the consequences of any damage caused during drilling, this is in effect whether the subsurface conditions were identified or not.

8. Indemnification. It is understood and agreed the CLIENT will indemnify ACS, and its employees and representatives from and against claims that are the result of negligent acts or omissions on the part of the CLIENT, its employees or representatives. ACS shall indemnify the CLIENT from and against claims which are solely the result of negligent acts or omissions on the part of ACS, its employees and representatives. ACS can only be held liable for negligent acts or omissions based on site or Services information supplied by CLIENT. For any Subsurface activity (drilling, backhoe, etc.), ACS will take reasonable precautions to reduce damage to the site when performing Services; however, CLIENT accepts that invasive services such as drilling or sampling may damage or alter the site. Site restoration is not provided unless specifically included in the Services.

9. Liability. The CLIENT agrees to limit the liability (whether in tort, contract, or otherwise) of ACS and its owners, directors, officers, employees, subconsultants, and their spouses to a collective total of $10,000 or the Consultant's fee (i.e., total fee for professional services), whichever is greater. Increased liability limits may be negotiated upon the CLIENT'S written request and agreement to pay an additional fee to be set by ACS.

10. Insurance. CLIENT confirms that it carries suitable insurance for the type of activity that it is undertaking and that no special exclusions exist within its insurance that would preclude coverage for Work intended under the Subcontract. As a condition of any work performed by ACS Services LLC, ACS Services LLC is to be included as an additionally insured on the relevant insurance policies

RoadSafe TRAFFIC SYSTEMS

3015 E Illini
Phoenix, AZ 85040
602-243-1218
Fax 602-243-3470

QUOTATION

Quote Date	Quote ID
1/12/2022	01122022DD1
Payment Terms	Net 30 Days

Valid Through: 2/11/2022

ETHOS ENGINEERING LLC
Accounts Payable
9180 S KYRENE ROAD SUITE 104
TEMPE, AZ 85284
Phone: 480-203-9252

Email: pgarza@ethosengineers.com

Job Location:
PIMA RD & DYNAMITE- LAS
Scottsdale
Quote Created By: David Deanda
Estimated Days: 2

Item Description	Price	UOM	Qty/Day	Days	Total Qty.	Total
1 Man 1 Truck- TRAVEL *	$55.00	Per Hour	1	2	2	$110.00
1 Man 1 Truck- LABOR *	$55.00	Per Hour	8	2	16	$880.00
1 Man 1 Truck- RETURN TO SHOP *	$55.00	Per Hour	1	2	2	$110.00
Flags *	$2.30	Per Each	4	1	4	$9.20
Sandbags *	$1.01	Per Each	10	1	10	$10.10
Medium Sign *	$0.84	Per Day	2	2	4	$3.36
Small Sign *	$0.64	Per Day	3	2	6	$3.84
Spring Stand *	$2.10	Per Day	2	2	4	$8.40
Sign Stand 4 ft *	$0.60	Per Day	3	2	6	$3.60
TCP	$50.00	Per Hour	1	1	1	$50.00
Type I Barricade *	$0.50	Per Day	8	2	16	$8.00
Vertical Panel Side VP *	$0.50	Per Day	15	2	30	$15.00

Note: The * indicates taxable items.

QUOTE IS FOR A ROLLING SHOULDER CLOSURE ON PIMA RD. CREW WILL SETUP 150FT. WORK AREA. STANDBY TO MOVE AND SETUP ANOTHER 150FT.

EQUIPMENT	$42.20
ONE TIME CHARGES	$69.30
LABOR	$1,100.00
SUBTOTAL	$1,211.50
SALES TAX (8.05%)	$93.50
QUOTE TOTAL	$1,305.00
TOTAL PER DAY	$617.08

Scope: The above quantities are estimated quantities based on information provided by the customer. Actual quantities used in the field will be billed on the customer invoice.

Included: Delivery, Setup, Takedown and Pickup

Excluded: State, City or County Permits or Fees.

Add'l Terms: Invoices are payable with Terms of Net 30 Days.

Any additional equipment added to the job site will be billed separately.

Roadsafe Traffic Systems Contractor License # 24899 L-05, 253153AE

Initials _____

David DeAnda

David Deanda

RoadSafe Traffic Systems, Inc.

1/12/2022

Date

Accepted By:

Signature

Date

Print Name

Title

Company

RoadSafe TRAFFIC SYSTEMS

3015 E Illini
Phoenix, AZ 85040
602-243-1218
Fax 602-243-3470

QUOTATION

Quote Date	Quote ID
1/12/2022	01122022DD2
Payment Terms	Net 30 Days

Valid Through: 2/11/2022

ETHOS ENGINEERING LLC
Accounts Payable
9180 S KYRENE ROAD SUITE 104
TEMPE, AZ 85284
Phone: 480-203-9252

Email: pgarza@ethosengineers.com

Job Location:
PIMA RD & DYNAMITE- LAS
Scottsdale
Quote Created By: David Deanda
Estimated Days: 4

Item Description	Price	UOM	Qty/Day	Days	Total Qty.	Total
1 Man 1 Truck- DELIVERY *	$55.00	Per Hour	3	4	12	$660.00
1 Man 1 Truck- PICKUP *	$55.00	Per Hour	3	4	12	$660.00
Flags *	$2.30	Per Each	4	1	4	$9.20
Sandbags *	$1.01	Per Each	10	1	10	$10.10
Medium Sign *	$0.84	Per Day	2	4	8	$6.72
Small Sign *	$0.64	Per Day	3	4	12	$7.68
Spring Stand *	$2.10	Per Day	2	4	8	$16.80
Sign Stand 4 ft *	$0.60	Per Day	3	4	12	$7.20
TCP	$50.00	Per Hour	1	1	1	$50.00
Type I Barricade *	$0.50	Per Day	8	4	32	$16.00
Vertical Panel Side VP *	$0.50	Per Day	40	4	160	$80.00

Note: The * indicates taxable items.

QUOTE IS FOR A SHOULDER CLOSURE ON PIMA RD. WORK AREA IS 1000FT.

EQUIPMENT	$134.40
ONE TIME CHARGES	$69.30
LABOR	$1,320.00
SUBTOTAL	$1,523.70
SALES TAX (8.05%)	$118.63
QUOTE TOTAL	$1,642.33
TOTAL PER DAY	$392.87

Scope: The above quantities are estimated quantities based on information provided by the customer. Actual quantities used in the field will be billed on the customer invoice.

Included: Delivery, Setup, Takedown and Pickup

Excluded: State, City or County Permits or Fees.

Add'l Terms: Invoices are payable with Terms of Net 30 Days.

Any additional equipment added to the job site will be billed separately.

Roadsafe Traffic Systems Contractor License # 24899 L-05, 253153AE

Initials _____

Quote For: ETHOS ENGINEERING LLC - Quote ID: 01122022DD2 (cont.)

David DeAnda | 1/12/2022

Date

RoadSafe Traffic Systems, Inc.

Accepted By:

Signature | Date

Print Name

Title

Company

EXHIBIT B
FEE SCHEDULE

Labor Class	Hourly Rate
Senior Project Manager	$254
Project Engineer	$222
Senior Engineer	$180
Engineer	$148
Designer	$110
Administrative	$95