



**BOARD OF SUPERVISORS AGENDA ITEM REPORT
CONTRACTS / AWARDS / GRANTS**

Award Contract Grant

Requested Board Meeting Date: 11/21/23

* = Mandatory, information must be provided

or Procurement Director Award

***Contractor/Vendor Name/Grantor (DBA):**

Kimley-Horn and Associates, Inc.

***Project Title/Description:**

Canoa Ranch Sewer Extension Segment 2 Design (3CRAEX)

***Purpose:**

Amendment: Contract No. CT-CPO-23-225, Amendment No. One (1). This amendment incorporates additional design services and increases the contract amount by \$168,911.00 due to necessary sewer realignment for a cumulative not-to-exceed amount of \$495,161.00.

Administering Department: Project Design and Construction

***Procurement Method:**

Pursuant to the Direct selection authority of A.R.S. § 34-103, the Board of Supervisors awarded a contract for this Project in a not-to-exceed amount of \$326,250.00 for a contract term of 12/06/22 to 07/14/24.

Attachment: Amendment No. One (1).

***Program Goals/Predicted Outcomes:**

The Canoa Ranch Sewer Extension will provide sewer service to the southern extents of the Green Valley area, along I-10 to connect with the existing Avra Valley WRF. This new gravity line will allow flow from this entire service area to be sent to the Green Valley WRF, which will increase our ability to produce reclaimed water and eventually retire the Avra Valley WRF. Additionally, this will include the ability for the Historic Raul Grijalva Canoa Ranch Complex to connect to the sewer treatment system, which will facilitate future expansion at the site.

***Public Benefit:**

The Canoa Ranch Sewer Extension will allow for continued and improved sewer service to areas of southern Pima County, increased sustainable water practices and reduced costs to Pima County in the form of the aging Arivaca Treatment Plant being removed from service.

***Metrics Available to Measure Performance:**

Performance will be measured using the consultant evaluation process as outlined in BOS Policy D29.1(E). Completing the Canoa Ranch Sewer Extension according to the approved schedule and budget, while successfully receiving an Arizona Department of Environmental Quality Discharge Authorization permit.

***Retroactive:**

No.

To: COB 11-7-23(1)
Vers: 5
pgs: 42

Contract / Award Information

Document Type: _____ Department Code: _____ Contract Number (i.e., 15-123): _____
Commencement Date: _____ Termination Date: _____ Prior Contract Number (Synergen/CMS): _____
 Expense Amount: \$* _____ Revenue Amount: \$ _____

***Funding Source(s) required:**

Funding from General Fund? Yes No If Yes \$ _____ % _____

Contract is fully or partially funded with Federal Funds? Yes No

If Yes, is the Contract to a vendor or subrecipient?

Were insurance or indemnity clauses modified? Yes No

If Yes, attach Risk's approval.

Vendor is using a Social Security Number? Yes No

If Yes, attach the required form per Administrative Procedure 22-10.

Amendment / Revised Award Information

Document Type: CT Department Code: CPO Contract Number (i.e., 15-123): 23-225
Amendment No.: 1 AMS Version No.: 5
Commencement Date: 11/21/23 New Termination Date: _____

Expense or Revenue Increase Decrease Amount This Amendment: \$ 168,911.00
Is there revenue included? Yes No If Yes \$ _____

***Funding Source(s) required:** Regional Wastewater Reclamation Department Obligations

Funding from General Fund? Yes No If Yes \$ _____ % _____

Grant/Amendment Information (for grants acceptance and awards) Award Amendment

Document Type: _____ Department Code: _____ Grant Number (i.e., 15-123): _____
Commencement Date: _____ Termination Date: _____ Amendment Number: _____
 Match Amount: \$ _____ Revenue Amount: \$ _____

***All Funding Source(s) required:**

***Match funding from General Fund?** Yes No If Yes \$ _____ % _____

***Match funding from other sources?** Yes No If Yes \$ _____ % _____

***Funding Source:** _____

***If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?**

Contact: Procurement Officer: Denise Waldo Digitally signed by Denise Waldo Date: 2023.11.01 09:19:57 -07'00' Division Manager: Scott Loomis Digitally signed by Scott Loomis Date: 2023.10.25 09:05:20 -07'00'

Department: Procurement Director: Terri Spencer Digitally signed by Terri Spencer Date: 2023.11.01 12:01:21 -07'00' Telephone: 520.724.8458

Department Director Signature/Date: Sheila Holben Digitally signed by Sheila Holben Date: 2023.11.01 12:01:21 -07'00'

Deputy County Administrator Signature/Date:  11/2/2023

County Administrator Signature/Date:  11/2/2023
(Required for Board Agenda/Addendum Items)

PIMA COUNTY CAPITAL PROGRAM OFFICE

PROJECT: Canoa Ranch Sewer Extension Segment 2 Design (3CRAEX)

CONSULTANT: Kimley-Horn and Associates, Inc.
3800 N Central Ave Suite 460
Phoenix, AZ 85012

CONTRACT NO.: CT-CPO-23-225

AMENDMENT NO.: One (1)

FUNDING: Regional Wastewater Reclamation Department Obligations

CONTRACT TERM: 12/06/22 to 07/14/24	ORIGINAL CONTRACT AMOUNT:	\$	326,250.00
TERMINATION PRIOR AMENDMENT: N/A	PRIOR AMENDMENT(S):	\$	-
TERMINATION THIS AMENDMENT: 07/14/24	AMOUNT THIS AMENDMENT:	\$	168,911.00
	REVISED CONTRACT AMOUNT:	\$	495,161.00

CONTRACT AMENDMENT

The Parties agree to amend the above-referenced contract as follows:

1. Parties, Background and Purpose.

- 1.1. Background. On December 6, 2022, County and Consultant entered into the above referenced agreement to provide the Final Design of the Canoa Ranch Sewer Extension for the Canoa Ranch Sewer Extension Segment 2 Design Project.
- 1.2. Purpose. Additional design services are needed due to the realignment of the Project from the east to the west of I-19 and increases the amount of the contract by \$168,911.00 for the additional services.

2. Scope of Services.

Add "Section 3.1. County and Consultant agree to add Exhibit A-1 Scope of Services (11 pages)."

3. Compensation and Payment.

Replace Section 4.1. with, "County will pay Consultant Not-to-Exceed \$495,161.00."

Add Section 4.2.1. "County and Consultant agree to add Exhibit B-1 Consultant Fee Proposal (29 pages)."

Attach: Exhibit A-1 Scope of Services
Exhibit B-1 Consultant Fee Proposal

(Remainder of Page Intentionally Left Blank)

All other provisions of the Contract not specifically changed by this Amendment remain in effect and are binding upon the Parties.

APPROVED:

Chair, Board of Supervisors

Date

CONTRACTOR:

Timothy Rhine

Signature

Tim Rhine, Authorized Signer

Name and Title (Please Print)

11-06-2023

Date

ATTEST:

Clerk of the Board

Date

This contract template has been approved as to form by the Pima County Attorney's Office.



October 19, 2023

Craig Roberts and Jaime Rivera
Pima County Regional Wastewater Reclamation District
201 N. Stone Ave., 3rd Floor
Tucson, AZ 85701

RE: *Professional Services Amendment for the Canoa Ranch Sewer Extension*

Kimley-Horn and Associates (“Kimley-Horn” or “Consultant”) is pleased to submit this proposal to Pima County Regional Wastewater Reclamation Department (“RWRD” or “Client”) to amend the existing agreement dated December 06, 2022 (“Agreement”) concerning Canoa Ranch Sewer Extension Segment 2 Design. The Consultant has entered into the Agreement with the Client for the furnishing of professional services and the parties now desire to amend the Agreement. Through this amendment, Kimley-Horn proposes to provide professional services for *Final Design of Canoa Ranch Sewer Extension West*, including *Environmental Services* for the full sewer length.

BACKGROUND

Kimley-Horn is currently under contract (CT-CPO-23-225) for the *Final Design of Canoa Ranch Sewer Extension Segment 2* that runs east of I-19, along with *Environmental Services* for both Segments 1 & 2. After conflicts in Canoa Ranch property were identified along this eastern alignment, an alternative analysis was performed in coordination with the Client and Construction Manager at Risk (“CMAR”). Based on this analysis, the Client selected the alignment option that runs along the western shoulder of the I-19 Frontage Road from Escondido Wash to south of the Canoa Ranch Interchange. Kimley-Horn, at the request of the Client, provided a conceptual alignment exhibit that identified potential utility conflicts based on available utility maps and as-built data along the alignment.

This proposal details the anticipated modifications required to the current authorized scope of work and associated fee.

MODIFIED SCOPE OF SERVICES

The following is organized to reflect proposed changes to the current tasks within the Contract CT-CPO-23-225, and includes new subtasks required to execute the new scope. To be consistent with the original Agreement, Tasks B and C are not used in this document. Current tasks that require no change in scope will be specified.

TASK A. Project Management and Coordination

Kimley-Horn will provide project management throughout the project duration, which includes meetings and coordination with Pima County & the project Construction Manager At Risk (CMAR), schedule and budget management, internal management of resources to complete the project, and Quality Assurance/Quality Control (QA/QC). The scope of work and cost proposal assumes a 6-month duration for bi-weekly meetings with the Client and CMAR, two (2) design review meetings, and up to eight (8) additional project meetings.

TASK D. Design of Canoa Ranch Outfall Sewer (Full Alignment)

This task is modified from the original contract Task D to include subtasks that reflect the *Final Design of Canoa Ranch Sewer Extension West* and services from subconsultants required to complete the modified scope.

Task D.1 Final Design of Canoa Ranch Sewer Extension West (Full Alignment)

As stated in the Project Background, the effort related to this project is to complete the final design of the entire sewer alignment from Escondido Wash to south of the Canoa Ranch Interchange. In order to properly design this alignment, data collection and field services is required. The purpose of Task D is to complete topographic survey, geotechnical investigation, and subsurface utility exploration to provide final design of an alignment and profile for the entire sewer alignment. Once field data and investigation is complete, Kimley-Horn will identify sewer alignment recommendations along the proposed corridor and evaluate utility conflicts. Kimley-Horn will coordinate with the necessary utility companies to identify potential solutions. Kimley-Horn will complete preliminary slope grading concepts to discuss with ADOT and provide final design drawings based on approved method. Kimley-Horn will collaborate closely with Pima County RWRD staff and the CMAR to determine construction feasibility and construction costs along the proposed alignment.

Task D.1.1 – Construction Documents

Kimley-Horn will prepare thirty percent (30%), sixty percent (60%), and ninety percent (90%) progress drawings, and Final Design drawings for the full sewer alignment from Escondido Wash to south of the Canoa Ranch Interchange. Slope grading, slope stabilization plans, and erosion control plans for existing slopes impacted by the proposed sewer alignment will be included.

Contract drawing documents will be in accordance with Pima County RWRD procedures and standards and in compliance with the Arizona Department of Environmental Quality (ADEQ) requirements. Transmittal of an electronic set of drawings to the appropriate utility companies and agencies for their review and approval, if required, will be included in this task. The design will adhere to the recommendations presented in the 30% Design and Technical Memorandum along with recommended review comments. The Basis of Design Report will be updated with each staged submittal until marked as the Final Basis of Design Report with the Final Design Drawings. This Task includes:

- 30% Design Drawings (Rollplot plan and profile)
- 60% Design Drawings (40-scale plan and profile)
- 90% Design Drawings (40-scale plan and profile)
- Final Design Drawings (40-scale plan and profile)
- Final Design Drawings and Basis of Design Report for final review and approval by Pima County RWRD and ADEQ.

Deliverables: One (1) electronic copy for review and comment by Pima County RWRD staff. One (1) copy will be provided to ADEQ, ADOT, and other related utilities or agencies as appropriate. Kimley-Horn assumes one (1) Pima County RWRD review cycle for each submittal stage.

An electronic PDF version of the signed and sealed plans and specifications shall also be transmitted to the Pima County RWRD for use as a record review set/archiving. Kimley-Horn will request the appropriate agency review fee(s) from Pima County prior to submittal(s).

Slope Grading

Based on the conceptual alignment exhibit provided to the Client under the current contract, it was identified that existing steep slopes along the new alignment will most likely be impacted. Kimley-Horn and the Client met with ADOT regarding this impact and slope grading exhibits were requested to determine which slope stabilization methods would be approved by ADOT. Kimley-Horn will evaluate what slope stabilization options are available based on ADOT Standards and use the geotechnical investigation recommendations to complete slope grading exhibits to submit to ADOT for follow-on discussion and approval.

Waterline Relocation Construction Documents

Kimley-Horn will prepare waterline relocation plans for the anticipated conflict with Green Valley Water District's existing waterline within the roadway shoulder. Kimley-Horn will submit 30%, 60%, and 90% progress drawings, and Final Design plan and profile sheets per Green Valley Water District's requirements and will include typical trench and separation details as needed. We assume three (3) review meetings will be required.

Waterline Relocation Construction Documents

Kimley-Horn will prepare waterline relocation plans for the anticipated conflict with Green Valley Water District's existing waterline within the roadway shoulder. Kimley-Horn will submit 30%, 60%, and 90% progress drawings, and Final Design plan and profile sheets per Green Valley Water District's requirements and will include typical trench and separation details as needed. We assume three (3) review meetings will be required.

Permitting

Kimley-Horn will assist Pima County RWRD with ADEQ coordination. Kimley-Horn will provide the Basis of Design Report and Construction plans for permitting approval and the Approval to Construct of the sewer.

Task D.1.2 – Topographic Site Survey

Darling Geomatics, as a subconsultant to Kimley-Horn, will research existing survey information available shall complete a topographic site survey along the sewer alignment. The Basis of Elevation and Basis of Bearing proposed for use in the plans shall conform to the datum currently used by Pima County RWRD, NAD83 State Plane Central Horizontal Datum, and NAVD88 Vertical Datum. Kimley-Horn will be responsible for incorporating the survey information into the plan/profile drawings for the full sewer alignment, providing all raw survey data to Pima County RWRD. Site survey data shall include delineation of all new and existing easements and rights-of-way, street names, owner names indicating public and private property ownership of areas adjacent to the project limits, spot elevations, surface drainage shown by flow arrows and topography at 1-foot contours. The survey services will include up to 15 legal descriptions for new easements. In addition, Darling Geomatics will collect actual elevations of existing manhole inverts as available. Darling Geomatics will be responsible for generating field surveys for the sewer alignment, in accordance with the requirement of Pima County DOT Surveying Standards. The proposed corridor to be surveyed is approximately 150-feet offset to the west from the western edge-of-pavement of southbound I-19 Frontage Road to the shoulder east of southbound I-19 Highway.

Task D.1.3 - Existing Utilities Research

Kimley-Horn will be responsible for researching or contacting adjacent utilities to determine the locations of the existing utilities and to utilize the best information available to provide an accurate indication of these utilities' locations in the sewer improvement plans. Existing utilities shall be designated, located, and mapped according to ASCE Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data (CI/ASCE 38-02) commonly referred to as a Subsurface Utility Engineering survey.

Potential utility conflicts shall be confirmed by potholing and field surveying as outlined in Subsurface Utility Engineering Level B. For the purposes of estimating, up to 10-potholes have been included in the proposed fee. Kimley-Horn will be responsible for arranging potholing at all utility locations whose exact locations are in question. Kimley-Horn will engage the services of a subcontractor, T2, to perform the required potholing. T2 will be responsible for contacting Blue Stake and securing permission from the utility owner to expose the utility. At such time as the utility is exposed, T2 will record the horizontal and vertical location of the utility with the assistance of a professional land surveyor utilizing GPS and conventional ground survey.

Task D.1.4 – Geotechnical Investigation. Ninyo & Moore Geotechnical and Environmental Sciences Consultants, as a subconsultant to Kimley-Horn, will complete the soils investigation to support the project design. As part of this effort, existing soil investigation will be conducted to assist in determining subsurface conditions related to future manhole and gravity sewer installation. Soils data will also be used in evaluating slope grading and stability options. In addition, potential wash crossings have been identified along the new sewer alignment. Soils information collected will be used to determine scour depth for sewer segments crossing each wash. The soils investigation and related data will be included as part of the Basis of Design Report and trench recommendations and applicable information will be used as part of the sewer design.

Task D.1.5 – Agency Coordination. Due to the proximity of this project to Interstate-19 and Arizona Department of Transportation (ADOT) right-of-way, Kimley-Horn will coordinate with Pima County RWRD, ADOT, and other related agencies to establish and coordinate construction schedules, phased installation planning, and mobilization and laydown requirements. Kimley-Horn will identify and coordinate the applicable Construction Documents with the requirements and schedules of all involved regulatory agencies, Pima County Department of Environmental Quality (PDEQ), and other agencies/utilities that may be affected by construction. Kimley-Horn will provide Agencies/Utilities a reasonable opportunity to review and comment on the 30% design information and respond to their comments or recommendations.

ADOT Coordination. Based on discussion with Pima County RWRD and ADOT staff, ADOT right-of-way coordination has already begun. Kimley-Horn will assist Pima County RWRD with ADOT coordination for an encroachment permit for the installation of new gravity sewer within ADOT right-of-way. Environmental documents in support of the encroachment permit will be included and is specified in Task E.1.

TASK E. Environmental Services

Task E.1 – Environmental Compliance Certification

Kimley-Horn will prepare one (1) Environmental Compliance Certification memo in support of the ADOT Encroachment permit application. The Environmental Compliance Certification memorandum will summarize findings related to biological resources, cultural resources, Clean Water Act, and hazardous materials. The following sections will summarize specific tasks.

Task E.2 – Biological Resources

Pima Pineapple Cactus (PPC) have been documented within three miles of the project limits. Kimley-Horn will conduct protocol surveys within the project limits for PPC and fence any located PPC for avoidance, as specified in the current scope. The new design will have a larger footprint to survey for Pima Pineapple Cactus due to the slope impacts along the shoulder of I-19.

Task E.3 – Cultural Resources

No Change.

Task E.4 – Section 404/401 Clean Water Act (CWA)

No change.

Task E.5 – PISA / Hazardous Materials

No change.

Task E.6 – Environmental Coordination

No change.

TASK F. Permitting Support and Post-Design Services

Kimley-Horn assumes that all post-design services, including permitting assistance, Approval of Construction, contractor coordination, and Pima Pineapple Cactus coordination and assistance are excluded from this scope and will be provided as necessary as a subconsultant to the CMAR. The current Contract fee allocated for Task F is requested to be re-allocated to complete the augmented scope of Task D.

TASK G. As-Needed Services

All As-Needed Services previously identified in the current Contract shall be removed or excluded as part of this amendment. The current Contract fee allocated for Task F is requested to be re-allocated to complete the augmented scope of Task D. The removal or exclusion for each Task G subtask is detailed below.

Task G.1 – Prepare and Process Section 404 Nationwide Permit (NWP) 58 Pre-Construction Notification (PCN)

This task is excluded. Kimley-Horn assumes that this project will be under a Non-Notification Section 404 Nationwide Permit.

Task G.2- Biological Evaluation

This task is excluded.

Task G.3 – Canoa Ranch Conservation Lands Restrictions

This task is no longer needed because the sewer is no longer proposed through Pima County Canoa Ranch property.

Task G.4 – Access Plans

This task is no longer needed and shall be excluded due to the new sewer location along the west shoulder of I-19 Frontage Road. It is our understanding that RWRD may utilize their existing maintenance agreement with ADOT and therefore, would no longer require maintenance access plans.

Task G.5 – Revised Alignment

This task is no longer needed because the sewer is no longer proposed through Pima County Canoa Ranch property.

BUDGET SUMMARY

	<i>Additional Fee Needed for Augmented Scope</i>
TASK A. Project Management and Coordination	\$21,404
TASK D. Design of Canoa Ranch Outfall Sewer (Full Alignment)	\$105,855
TASK E. Environmental Services	\$7,657
TASK F. Permitting Support and Post-Design Services <i>(Current Contract Fee to be Reallocated to Task D)</i>	-\$22,097
<hr/>	
Kimley-Horn Labor Fee	\$112,819
Subconsultants	
Darling Geomatics (Survey)	\$25,990
Ninyo & Moore (HAZMAT Testing)	\$0
Ninyo & Moore (Geotechnical)	\$29,290
T2 Engineering (Subsurface Utility Exploration)	\$44,335
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Outside Services Fee	\$100,245
Estimated Expenses	
Reproductions	\$0
Environmental Risk Information Services (PISA Database Search)	\$0
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SUB-TOTAL:	\$213,064
TASK G. As-Needed Services <i>(Current Contract Fee to be Reallocated to Task D)</i>	-\$44,153
<hr/>	
TOTAL:	\$168,911

EXCLUSIONS

Any other services, including but not limited to the following, are not included in this Agreement but can be added through a contract modification.

- Hydraulic computer modeling
- Planning and future development projections
- Future sewer flow calculations and projections
- Traffic control plans
- Sewer bypass plans
- Sewer connections under/west of I-19
- Hydrogeologic Studies
- Soil Contamination Sampling
- Permit Fees
- Stormwater Pollution Prevention Plan (SWPPP) – Contractor to Complete
- Maintenance Access Plans
- Section 404 Nationwide Permit (NWP) 58 Pre-Construction Notification (PCN)
- Biological Evaluation

CLOSURE

We appreciate the opportunity to provide these services to you and to begin to move forward with this very important project. Please contact Kevin Payne at (520) 352-8624 or kevin.payne@kimley-horn.com if you have any questions and thank you for the opportunity to continue to work with Pima County RWRD.

Very truly yours,

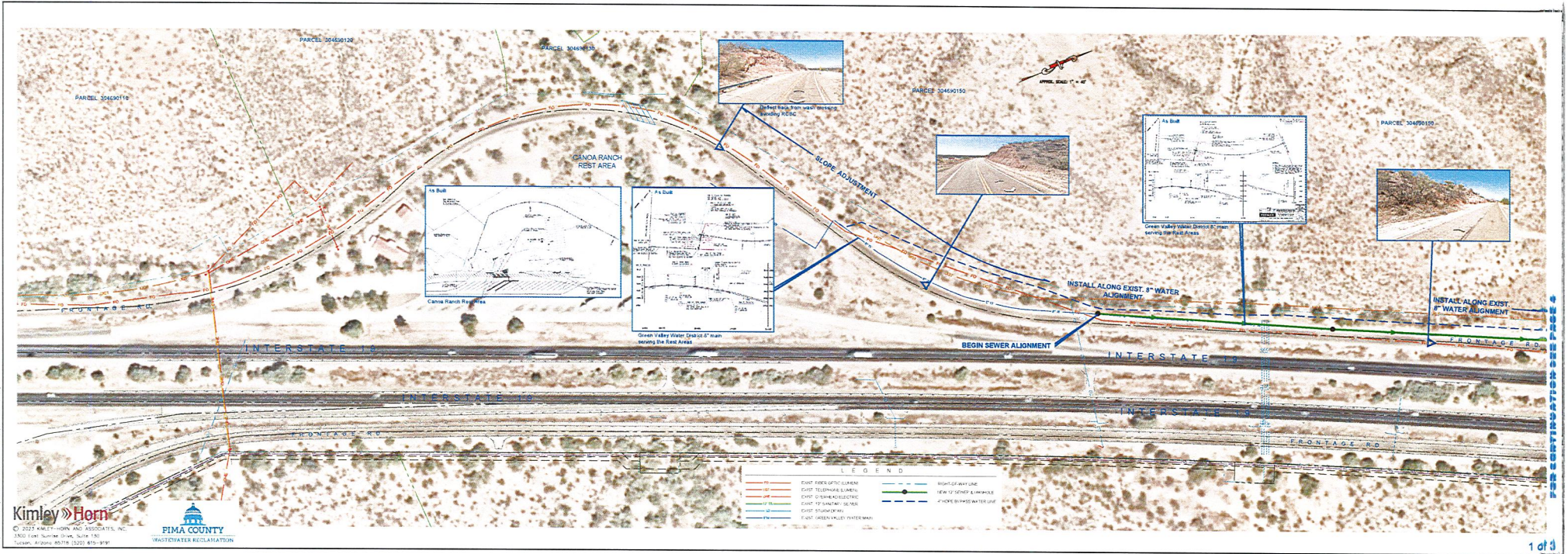
KIMLEY-HORN AND ASSOCIATES



Kevin W. Payne, P.E., CFM
Project Manager

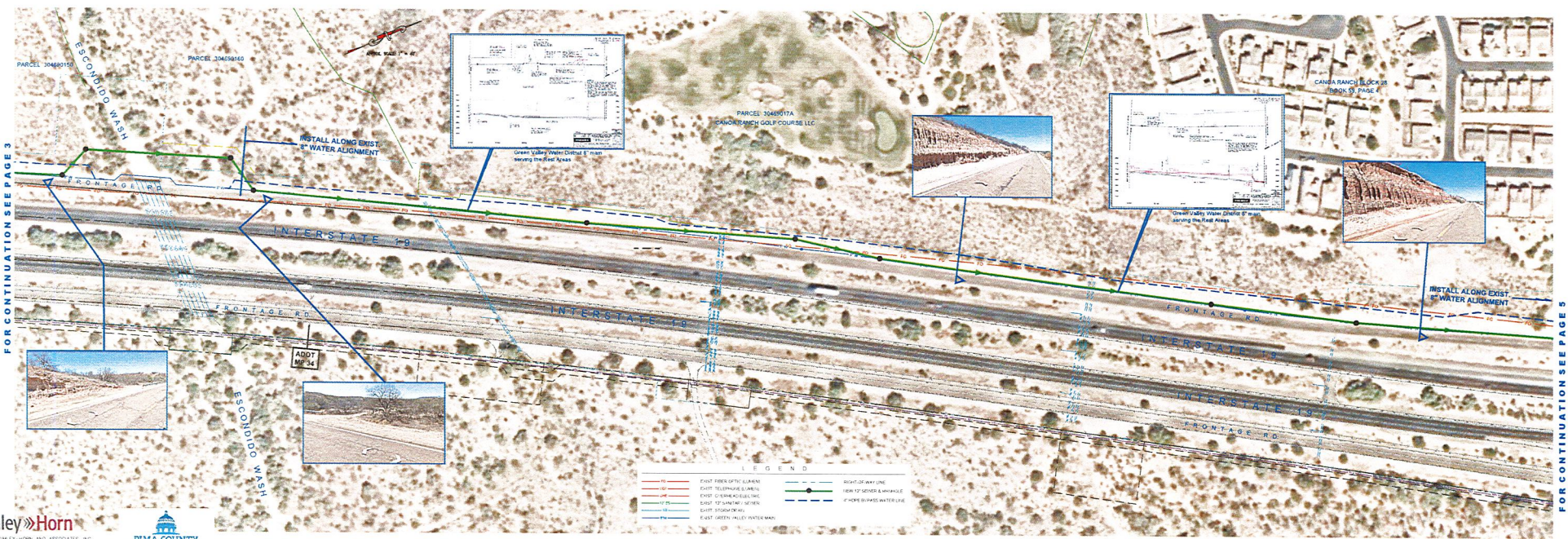


Ray Montoya, P.E.
Project Manager



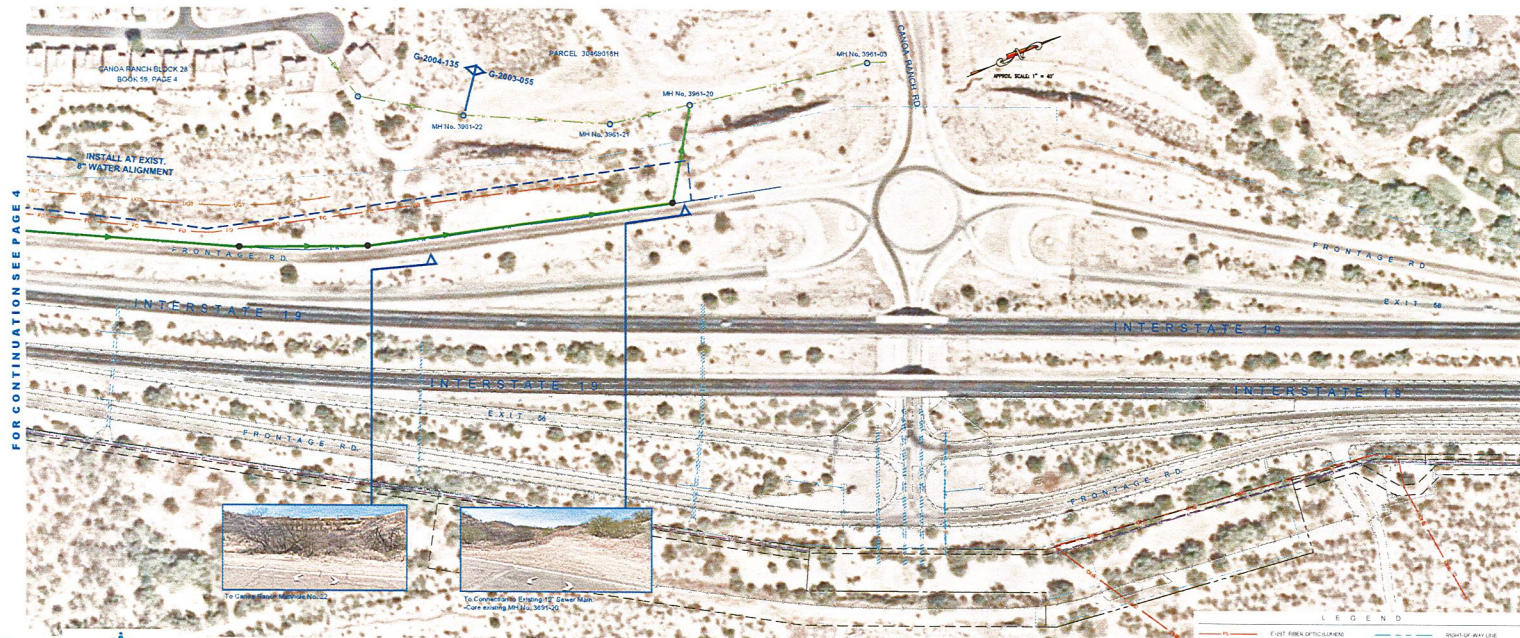
LEGEND

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	RIGHT OF WAY LINE
	VIEW TO STREET ALIGNMENT
	PHONE BENCH MARK LINE



FOR CONTINUATION SEE PAGE 3

FOR CONTINUATION SEE PAGE 5



FOR CONTINUATION SEE PAGE 4

LEGEND

10"	8" FIBER OPTIC CABLE	10"	8" FIBER OPTIC CABLE
16"	8" TELEPHONE CABLE	10"	8" TELEPHONE CABLE
24"	8" FIBER OPTIC CABLE	10"	8" TELEPHONE CABLE
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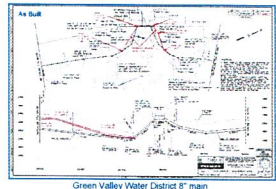
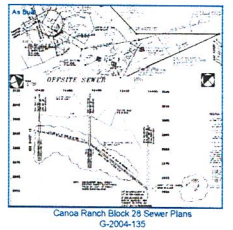
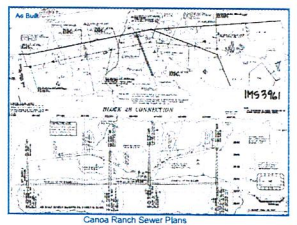


Exhibit B-1 – Consultant Fee Proposal (29 Pages)
 3CRAEX - Canso Sewer Extension Segment 2 - Amendment 1
 Contract CT-CPO-23-225
 Budgetary Fee Summary

	Current Contract Budget	Remaining Contract Budget	Augmented Scope Fee	Additional Fee Required to Complete Augmented Scope <i>(Augmented Scope Fee - Remaining Budget)</i>
Kimley-Horn Labor				
A. Project Management and Coordination	30,129	3,801	25,205	21,404
D. Final Design	140,489	104,077	209,932	105,855
E. Environmental + Plant Survey	67,936	62,382	70,039	7,657
F. Permitting Support and Post Design <i>(Current Contract Fee to be Reallocated to Task D)</i>	22,097	22,097	0	-22,097
Kimley-Horn Labor Fee	260,651	192,357	305,176	112,819
Subconsultants				
Darling Geomatics (Survey)	12,950	12,950	38,940	25,990
Ninyo and Moore (HAZMAT)	7,696	7,696	7,696	0
Ninyo and Moore (Geotechnical)	N/A	N/A	29,920	29,920
T2 (Subsurface Utility Exploration)	N/A	N/A	44,335	44,335
Outside Services Fee Total	20,646	20,646	120,891	100,245
Expenses	800	800	800	0
Subtotal	282,097	213,803	426,867	213,064
G. As-Needed Services <i>(Current Contract Fee to be Reallocated to Task D)</i>	44,153	44,153	0	-44,153
Total	326,250	257,956	426,867	168,911

<i>Current Contract Total</i>	326,250
<i>Additional Fee Required Total</i>	168,911
<i>Final Contract Total</i>	495,161

Exhibit 1 - Cost Proposal Summary
Pima County RWRD - Canoa Ranch Sewer Extension
October 19, 2023

(Costs Rounded to the Nearest \$1.00)

ESTIMATED DIRECT LABOR (TASKS 1-4)																			
	Estimated	Hourly Rate*	Labor																
Classification	Man-Hours		Costs																
Project Principal	28	\$271.09	\$ 7,591																
Project Manager	197	\$214.05	\$ 42,168																
Senior Professional	146	\$204.67	\$ 29,882																
Professional	556	\$163.22	\$ 90,751																
Junior Professional	1092	\$122.25	\$ 133,497																
Admin Support I	0	\$153.10	\$ -																
Admin Support II	16	\$80.45	\$ 1,287																
Total Man-Hours	2,035	Total Labor Costs	\$ 305,176																
ESTIMATED DIRECT EXPENSES																			
Reproductions			\$ 500																
PISA Database Search			\$ 300																
Total Direct Expenses			\$ 800																
ESTIMATED OUTSIDE SERVICES AND CONSULTANTS (TASKS 1-4)																			
HAZMAT Testing (Ninyo & Moore)			\$ 7,696																
Survey (Darling Geomatics)			\$ 38,940																
Geotechnical (Ninyo & Moore)			\$ 29,920																
SUE (T2)			\$ 44,335																
Total Estimated Outside Services			\$ 120,891																
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 65%;">Direct Labor</td> <td style="width: 30%;"></td> <td style="width: 5%;"></td> <td style="width: 10%; text-align: right;">\$ 305,176</td> </tr> <tr> <td>Total Direct Expenses</td> <td></td> <td></td> <td style="text-align: right;">\$ 800</td> </tr> <tr> <td>Total Estimated Outside Services</td> <td></td> <td></td> <td style="text-align: right;">\$ 120,891</td> </tr> <tr> <td>TOTAL BASE COST (NOT TO EXCEED)</td> <td></td> <td></td> <td style="text-align: right;">\$ 426,867</td> </tr> </table>				Direct Labor			\$ 305,176	Total Direct Expenses			\$ 800	Total Estimated Outside Services			\$ 120,891	TOTAL BASE COST (NOT TO EXCEED)			\$ 426,867
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TOTAL PROPOSAL (NTE)			\$ 426,867																

Exhibit 2 - Derivation of Person-Hours
Pima County RWRD - Canoa Ranch Sewer Extension
October 19, 2023
CLASSIFICATION

Task	Description	Project Principal	Project Manager	Senior Professional	Professional	Junior Professional	Admin Support I	Admin Support II	Total
Task A - Project Management and Coordination									
	PM & Coordination	8	36	16	48	24	0	16	148
	Task A Totals	8	36	16	48	24	0	16	148
Task D - Final Design of Canoa Ranch Outfall Sewer									
D.1	Construction Documents - Sewer (30%, 60%, 90%, 100%)	10	36	8	240	360	0	0	654
	Construction Documents - Slope Grading (30%, 60%, 90%, 100%)	0	32	8	80	120	0	0	240
	Construction Documents - Waterline Relocation Plan & Profile	10	24	0	80	240	0	0	354
	Basis of Design Report	0	16	6	80	40	0	0	142
	Permitting and Agency Coordination	0	8	8	8	8	0	0	32
	Task D Totals	20	116	30	488	768	0	0	1422
Task E - Environmental									
E.1	Environmental Compliance Certification Memos (two)	0	8	12	0	40	0	0	60
E.2	Biological Resources Analysis	0	2	8	0	32	0	0	42
	Pima Pineapple Cactus Survey	0	8	24	0	80	0	0	112
E.3	Cultural Resources Summary	0	1	4	0	8	0	0	13
E.4	Clean Water Act (Abbrev. PJD and Non-Notify NWP 58 documentation)	0	4	20	20	80	0	0	124
E.5	PISA / Hazardous Materials	0	2	12	0	40	0	0	54
E.6	Environmental Coordination	0	20	20	0	20	0	0	60
	Task E Totals	0	45	100	20	300	0	0	465
Task F - Permitting Support and Post Design									
	Permitting Support and Post Design	0	0	0	0	0	0	0	0
	Construction Meetings	0	0	0	0	0	0	0	0
	ADOT Meetings for Slope Grading	0	0	0	0	0	0	0	0
	Construction Support for Pima Pineapple Cactus	0	0	0	0	0	0	0	0
	Task F Totals	0	0	0	0	0	0	0	0
	BASE SERVICES TOTALS	28	197	146	556	1092	0	16	2035
Task G - As-Needed Services									
G.1	Prepare and Process Section 404 Nationwide Permit (NWP) 58 Pre-Construction Notification (PCN)	0	0	0	0	0	0	0	0
G.2	Biological Evaluation	0	0	0	0	0	0	0	0
G.3	Canoa Ranch Conservation Lands Restrictions	0	0	0	0	0	0	0	0
G.4	Access Plans	0	0	0	0	0	0	0	0
G.5	Revised Alignment	0	0	0	0	0	0	0	0
	Task G Totals	0	0	0	0	0	0	0	0
	TOTALS	28	197	146	556	1092	0	16	2035

October 2, 2023
Proposal No. 12TUC02-01921 Rev 2

Ms. Vicki Chu, Civil Engineer
Kimley-Horn & Associates, Inc.
3300 East Sunrise Drive, Suite 130
Tucson, Arizona 85718

Subject: Proposal to Provide Geotechnical Engineering Services
Canoa Ranch Sewer Extension Realignment
Pima County, Arizona

Dear Ms. Chu:

Ninyo & Moore provided a geotechnical evaluation for the original planned alignment of the extension of the sewer in our original report (606829002) and is pleased to submit this scope and fee for the realignment. This proposal is based on the information that we received from your office. It outlines our scope of services, project assumptions, anticipated schedule, and estimated fee for this project.

PROJECT DESCRIPTION

We understand that Pima County has approved the realignment for the design and construction of a new sewer line along the frontage road along the west side of Interstate 19 within Arizona Department of Transportation (ADOT) right-of-way (ROW). The sewer alignment will begin just north of the Canoa Ranch Rest Area and will continue to the north along the South Bound Frontage Road to the Canoa Ranch Interchange a distance of approximately 1 ¼ miles in length. The sewer is anticipated to be constructed using open trench excavation techniques. The average pipe invert depth will be about 30 feet along the project alignment.

Ninyo & Moore was requested to evaluate the subsurface soils conditions and provide geotechnical conclusions and recommendations in support of the project design and construction.

SCOPE OF SERVICES

The scope of services we will perform for the project are summarized below:

- Apply for a ROW Permit from ADOT.
- Conduct a field trip to the project areas to mark out field test locations in coordination with Kimley-Horn staff.

- Contact Arizona 811 to evaluate utility locations prior to the fieldwork.
- Perform a geotechnical exploration using truck mounted hollow stem auger drilling equipment, which will include drilling of seven exploratory borings to a depth of 35 feet below ground surface (BGS). The borings will be drilled to the target depth or refusal on very dense cobbly/cemented deposits. A Ninyo & Moore employee will conduct the drilling fieldwork and prepare the boring log.
- Collect bulk soils samples in the boring for laboratory testing and analysis. Ninyo & Moore personnel will log the boring in general accordance with the Unified Soil Classification System (USCS) and American Society for Testing and Materials (ASTM) D 2488 by observing cuttings and samples. Soil samples will be placed in large plastic bags and will be transported to a Ninyo & Moore laboratory for testing.
- Conduct laboratory testing on subgrade soil samples that will generally include in-situ moisture and dry density, gradation, Atterberg limits, consolidation, and corrosivity (including sulfate and chloride contents, pH, and laboratory electrical resistivity).
- Prepare a geotechnical letter report to include classifications of the exploratory samples, boring log and results of the laboratory testing. The report will also include a cover letter sealed by a Professional Engineer licensed in the State of Arizona, as well as the following information:
 - Description of work scope, laboratory, and field procedures;
 - Encountered subsurface soil and groundwater conditions;
 - Earthwork recommendations including excavation characteristics of on-site soils and earthwork factors;
 - Potential for re-use of on-site soils;
 - Discussion or trenchless excavation feasibility and recommended design parameters;
 - Seismic design parameters in accordance with IBC 2018
 - Recommendations relative to site drainage; and
 - Discussion of soil corrosivity to steel and concrete.

ASSUMPTIONS

We have made the following assumptions in the preparation of this proposal:

- The fieldwork will be performed during daytime hours.
- The site is accessible for a two-wheel drive drill rig and access will be granted.
- Groundwater will not be encountered.
- Some ground disturbance should be expected as a result of our fieldwork.
- Traffic control measures including partial lane closures for the frontage road will be needed for this project.

- Ninyo & Moore will not need to obtain any environmental clearance as a part of this project.
- Ninyo & Moore will not provide private utility locating services for the boring locations and are expected to be handled by others if necessary.
- Asphalt pavement will not be cored.
- The borings within 20 feet from the pavements will be backfilled with cement slurry.

SCHEDULE

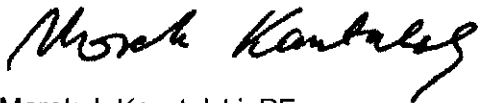
We are prepared to initiate this project immediately and could begin the fieldwork within about one week after receiving notice-to-proceed. Fieldwork will take approximately one-week and will be coordinated with the Kimley-Horn. The geotechnical evaluation report will be submitted four weeks after completion of fieldwork.

ESTIMATED FEE

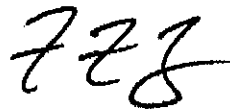
We propose to perform the work scope described above for not too exceed fee of \$29,920 (Twenty-Nine Thousand Nine Hundred Twenty Dollars). This estimated fee is based on the scope of services presented above and our understanding of the project. Any additional services not included in the aforementioned scope will be charged on a time and materials basis in accordance with our current schedule of fees.

Ninyo & Moore appreciates the opportunity to provide services on this project and we look forward to working with you.

Respectfully submitted,
NINYO & MOORE



Marek J. Kasztalski, PE
Principal Engineer



Fred Narcaroti
Principal/Tucson Office Manager

MJK/FFN/jom

Attachment: Fee Estimate
Work Authorization and Agreement

**Proposal to Provide Geotechnical Evaluation
Green Valley Sewer Extension Realignment
Green Valley, Arizona**

Project Logistics/Coordination/Meetings

Principal Engineer/Geologist/Environmental Scientist	2 hours @ \$ 180.00 /hour	\$ 360.00
Project Engineer/Geologist/Environmental Scientist	2 hours @ \$ 120.00 /hour	\$ 240.00
Staff Engineer/Geologist/Environmental Scientist	4 hours @ \$ 110.00 /hour	\$ 440.00
Technician	8 hours @ \$ 70.00 /hour	\$ 560.00
	Subtotal	\$ 1,600.00

Markout, Bluestak, Permitting and Utility Clearance

Principal Engineer/Geologist/Environmental Scientist	1 hours @ \$ 180.00 /hour	\$ 180.00
Project Engineer/Geologist/Environmental Scientist	1 hour @ \$ 120.00 /hour	\$ 120.00
Staff Engineer/Geologist/Environmental Scientist	6 hours @ \$ 110.00 /hour	\$ 660.00
Field Vehicle and Equipment Usage	6 hours @ \$ 10.00 /hour	\$ 60.00
	Subtotal	\$ 1,020.00

Field Exploration

Principal Engineer/Geologist/Environmental Scientist	2 hours @ \$ 180.00 /hour	\$ 360.00
Project Engineer/Geologist/Environmental Scientist	3 hours @ \$ 120.00 /hour	\$ 360.00
Senior Technician	20 hours @ \$ 75.00 /hour	\$ 1,500.00
Field Vehicle and Equipment Usage	20 hours @ \$ 10.00 /hour	\$ 200.00
Vegetation/Drill Rig Access Clearing	2 days @ \$ 2,000.00 /day	\$ 4,000.00
Traffic Control	2 days @ \$ 1,850.00 /day	\$ 3,700.00
Drilling Rig (Mob/Demob/Grout Backfilling)	2 days @ \$ 4,355.00 /day	\$ 8,710.00
	Subtotal	\$ 16,830.00

Laboratory Analyses

Atterberg Limits - Wet Preparation, D 4318, T 89, T 90	8 test @ \$ 90.00 /test	\$ 720.00
Chloride and Sulfate Content, ARIZ 733, 736	4 test @ \$ 100.00 /test	\$ 400.00
Moisture and Density, D 2937	8 test @ \$ 35.00 /test	\$ 280.00
pH and Resistivity, ARIZ 236b	4 test @ \$ 100.00 /test	\$ 400.00
Sieve Analysis, C 136	8 test @ \$ 100.00 /test	\$ 800.00
	Subtotal	\$ 2,600.00

Data Compilation and Analysis including GPR

Principal Engineer/Geologist/Environmental Scientist	4 hours @ \$ 180.00 /hour	\$ 720.00
Senior Project Engineer/Geologist/Environmental Scientist	4 hours @ \$ 140.00 /hour	\$ 560.00
Project Engineer/Geologist/Environmental Scientist	12 hours @ \$ 120.00 /hour	\$ 1,440.00
Staff Engineer/Geologist/Environmental Scientist	18 hours @ \$ 110.00 /hour	\$ 1,980.00
Data Processor/Admin	4 hours @ \$ 75.00 /hour	\$ 300.00
	Subtotal	\$ 5,000.00

Report Preparation

Principal Engineer/Geologist/Environmental Scientist	1 hour @ \$ 180.00 /hour	\$ 180.00
Project Engineer/Geologist/Environmental Scientist	2 hours @ \$ 120.00 /hour	\$ 240.00
Technical Illustrator/CAD Operator	4 hours @ \$ 75.00 /hour	\$ 300.00
Data Processor/Admin	2 hours @ \$ 75.00 /hour	\$ 150.00
	Subtotal	\$ 870.00

TOTAL ESTIMATED FEE \$ 29,920.00



WORK AUTHORIZATION AND AGREEMENT

Please Sign and Return One Copy to:

NINYO & MOORE
1991 East Ajo Way, Suite 145
Tucson, Arizona 85713

PROPOSAL NO. **12TUC02-01921**

1. PROJECT ADDRESS: **Canoa Ranch Sewer Extension, Pima County, Arizona**
2. PROJECT DESCRIPTION: **Geotechnical Engineering Services**
3. SCOPE OF STUDY: **Please refer to proposal dated October 2, 2023.**
4. FEE: **\$29,920 (Twenty-Nine Thousand Nine Hundred Twenty Dollars – Not to Exceed)**
5. PORTION OF FEE IN ADVANCE OF WORK: **None**
6. CLIENT: **Kimley-Horn & Associates, Inc.** PHONE: **520-615-9191**
3300 East Sunrise Drive, Suite 130
Tucson, Arizona 85718
- CONTACT: **Ms. Vicki Chu** PHONE: **520-615-9191**
7. STATEMENT TO BE SENT TO: **Client**

CONDITIONS OF AGREEMENT BETWEEN CLIENT AND NINYO & MOORE

This AGREEMENT is made by and between: NINYO & MOORE GEOTECHNICAL AND ENVIRONMENTAL SCIENCES CONSULTANTS, hereinafter referred to as CONSULTANT, and **Kimley-Horn & Associates, Inc.**, hereinafter referred to as CLIENT. This AGREEMENT between the parties consists of these TERMS, the attached Proposal identified as No. **12TUC02-01921** dated **October 2, 2023**, and any exhibits or attachments noted in the Proposal. Together, these elements will constitute the entire AGREEMENT superseding any and all prior negotiations, correspondence, or agreements either written or oral. Any changes to this AGREEMENT must be mutually agreed to in writing.

STANDARD OF CARE

CLIENT recognizes that subsurface conditions may vary from those observed at locations where borings, surveys, or explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by CONSULTANT will be based solely on information available to CONSULTANT. CONSULTANT is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.

Services performed by CONSULTANT under this AGREEMENT are expected by CLIENT to be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the geotechnical engineering profession practicing contemporaneously under similar conditions in the locality of the project. Under no circumstance is any warranty, expressed or implied, made in connection with the providing of geotechnical consulting services.

SITE ACCESS AND SITE CONDITIONS

CLIENT will grant or obtain free access to the site for all equipment and personnel necessary for CONSULTANT to perform the work set forth in this agreement. CLIENT will notify any and all possessors of the project site that CLIENT has granted CONSULTANT free access to the site. Client will protect all property, inside and out, including all plants and landscaping. CONSULTANT will take reasonable precautions to reduce the potential for damage to the site, but it is understood by CLIENT that, in the normal course of work, some damage may occur and the correction of such damage or alteration is not part of this AGREEMENT unless so specified in the Proposal.

CLIENT is responsible for accurately delineating the locations of all subterranean structures and utilities. CONSULTANT will take reasonable precautions to avoid known subterranean structures, and CLIENT waives any claim against CONSULTANT, and agrees to defend, indemnify and hold CONSULTANT harmless from any claim or liability for injury or loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, CLIENT agrees to compensate CONSULTANT for any time spent or expenses incurred by

CONSULTANT in defense of any such claim, with compensation to be based upon CONSULTANT's prevailing fee schedule and expense reimbursement policy.

SAMPLE DISPOSAL

CONSULTANT will dispose of remaining soil, rock, and water samples approximately thirty (30) days after submission of the report covering those samples. Further storage or transfer of samples can be made at CLIENT's expense upon CLIENT's prior written request.

MONITORING

If CONSULTANT is retained by CLIENT to provide a site representative for the purpose of monitoring specific portions of construction work or other field activities as set forth in the Proposal, then this phrase applies. For the specified assignment, CONSULTANT will report observations and professional opinions to CLIENT or CLIENT's agent. No action of CONSULTANT or CONSULTANT's site representative can be construed as altering any AGREEMENT between the CLIENT and others. CONSULTANT will report to CLIENT or CLIENT's agent any observed geotechnically related work which, in CONSULTANT's professional opinion, does not conform with plans and specifications. The CONSULTANT has no right to reject or stop work of any agent or subcontractor of CLIENT; such rights are reserved solely for CLIENT. Furthermore, CONSULTANT's presence on the site does not in any way guarantee the completion or quality of the performance of the work of any party retained by CLIENT to provide field or construction-related services.

If CONSULTANT is not retained by Client for the purpose of monitoring construction work or field activities, CONSULTANT will expressly not be held liable or responsible for such activities or for the geotechnical performance of the completed project. Monitoring of construction work or field activities and the geotechnical performance of the completed project is and will remain the sole and express responsibility of the CLIENT or other party designated by the CLIENT. CLIENT hereby agrees to indemnify and hold harmless CONSULTANT from and against any loss or judgment, suffered by the CONSULTANT as a result of a claim or lawsuit resulting from CLIENT's failure to monitor construction work or field activities for which CONSULTANT has not been retained.

CONSULTANT will not be responsible for and will not have control or charge of specific means, methods, techniques, sequences or procedures of construction or other field activities selected by any agent or agreement of CLIENT. It is mutually understood and agreed by CLIENT and CONSULTANT that CONSULTANT has no control or enforcement ability over any persons or parties who are not employees of CONSULTANT. CONSULTANT does not purport to be, nor is CONSULTANT responsible for, any safety precautions nor programs incident thereto for such non-employees of CONSULTANT.

OWNERSHIP AND MAINTENANCE OF DOCUMENTS

Unless otherwise specified in this Agreement or in an Addendum, and provided that CONSULTANT has been fully paid for the Services, CLIENT shall have the right to use the documents, maps, photographs, drawings and specifications resulting from CONSULTANT's efforts on the project, for purposes reasonably contemplated by the parties. CONSULTANT shall have the right, but shall not be obligated, to retain copies of all such materials and shall have the right to use the same for any purpose, unless such use would be expected to cause harm to CLIENT. CLIENT shall specify in advance, in writing, and be charged for all arrangements for special or extended-period maintenance of such materials by CONSULTANT. CONSULTANT retains the right of ownership with respect to any patentable concepts or copyrightable materials arising from its Services.

Reuse of any material described by CLIENT, including publication to third parties, on extension of this project or on any other project without CONSULTANT's written authorization, shall be at CLIENT's risk, and CLIENT agrees to indemnify, defend, and hold harmless CONSULTANT from all claims, damages, and expenses, including attorney's fees, arising out of such unauthorized reuse.

BILLING AND PAYMENT

CLIENT will pay CONSULTANT in accordance with the procedures indicated in the Proposal and its attachments. Invoices will be submitted to CLIENT by CONSULTANT, and will be due and payable upon presentation. If CLIENT objects to all or any portion of any invoice, CLIENT will so notify CONSULTANT in writing within fourteen (14) calendar days of the invoice date, identify the cause of disagreement, and pay when due that portion of the invoice not in dispute. The parties will immediately make every effort to settle the disputed portion of the invoice. In the absence of written notification described above, the balance as stated on the invoice will be paid.

Invoices are delinquent if payment has not been received within thirty (30) days from date of invoice. CLIENT will pay an additional charge of three quarters of a percent (.75) per month (or the maximum percentage allowed by law, whichever is lower) on any delinquent amount, excepting any portion of the invoiced amount in dispute and resolved in favor of CLIENT. Payment thereafter will first be applied to accrued interest and then to the principal unpaid amount. All time spent and expenses incurred (including any attorney's fees) in connection with collection of any delinquent amount will be paid by CLIENT to CONSULTANT per CONSULTANT's current fee schedules. In the event CLIENT fails to pay CONSULTANT within sixty (60) days after invoices are rendered, CLIENT agrees that CONSULTANT will have the right to consider the failure to pay the CONSULTANT's invoice as a breach of this AGREEMENT and CONSULTANT may cease work on the project. At CONSULTANT's option, CONSULTANT may waive said major breach upon payment by CLIENT of all arrearages and outstanding invoices.

TERMINATION

This AGREEMENT may be terminated by either party seven (7) days after written notice in the event of any breach of any provision of this AGREEMENT or in the event of substantial failure of performance by either party, or if CLIENT suspends the work for more than three (3) months. In the event of termination, CONSULTANT will be paid for services performed prior to the date of termination plus reasonable termination expenses, including, but not limited to, the cost of completing analyses, records, and reports necessary to document job status at the time of termination.

RISK ALLOCATION

Many risks potentially affect CONSULTANT by virtue of entering into this AGREEMENT to perform professional consulting services on behalf of CLIENT. The principal risk is the potential for human error by CONSULTANT. For CLIENT to obtain the benefit of a fee which includes a nominal allowance for dealing with CONSULTANT's liability, CLIENT agrees to limit CONSULTANT's liability to CLIENT and to all other parties for claims arising out of CONSULTANT's performance of the services described in this AGREEMENT. The aggregate liability of CONSULTANT will not exceed \$50,000 for negligent professional acts, errors, or omissions, including attorney's fees and costs which may be awarded to the prevailing party, and CLIENT agrees to indemnify and hold harmless CONSULTANT from and against all liabilities in excess of the monetary limit established above.

Limitations on liability and indemnities in this AGREEMENT are business understandings between the parties voluntarily and knowingly entered into, and shall apply to all theories of recovery including, but not limited to, breach of contract, warranty, tort (including negligence), strict or statutory liability, or any other cause of action, except for willful misconduct or gross negligence. The parties also agree that CLIENT will not seek damages in excess of the limitations indirectly through suits with other parties who may join CONSULTANT as a third-party nor by an award of attorney's fees and costs to the prevailing party in excess of the aggregate liability agreed upon herein by the parties. Parties means CLIENT and CONSULTANT and their officers, employees, agents, affiliates, and subcontractors.

Both CLIENT and CONSULTANT agree that they will not be liable to each other, under any circumstances, for special, indirect, consequential, or punitive damages arising out of or related to this AGREEMENT.

INDEMNIFICATION

If any claim is brought against CONSULTANT, its employees, agents and subcontractors and/or CLIENT by a third party, relating in any way to the Services, the contribution and indemnification rights and obligations of CONSULTANT and Client, subject to the paragraph titled "Risk Allocation" above, such claim shall be determined as follows:

1. If any negligence, breach of contract, or willful misconduct of CONSULTANT caused any damage, injury, or loss claimed by the third party, then CONSULTANT and CLIENT shall each indemnify the other against any loss or judgement on a comparative negligence basis (CLIENT responsibility to include that of its agents, employees, and other contractors); and
2. Unless CONSULTANT was liable for negligence, breach of contract, or willful misconduct which in whole or in part, caused the damage, injury, or loss asserted in the third party claim, CLIENT shall indemnify CONSULTANT against the claim, liability, loss, legal fees, consulting fees, and other costs of defense reasonably incurred.

DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS

CLIENT represents that CLIENT has made a reasonable effort to evaluate if hazardous materials are on or near the project site, and that CLIENT has informed CONSULTANT of CLIENT's findings relative to the possible presence of such materials.



Geotechnical & Environmental Sciences Consultants

Hazardous materials may exist at a site where there is no reason to believe they could or should be present. CONSULTANT and CLIENT agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. CONSULTANT and CLIENT also agree that the discovery of unanticipated hazardous materials may make it necessary for CONSULTANT to take immediate measures to protect health and safety. CLIENT agrees to compensate CONSULTANT for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials.

CONSULTANT agrees to notify CLIENT when unanticipated hazardous materials or suspected hazardous materials are encountered. CLIENT agrees to make any disclosures required by law to the appropriate governing agencies. CLIENT also agrees to hold CONSULTANT harmless for any and all consequences of disclosures made by CONSULTANT which are required by governing law. In the event the project site is not owned by CLIENT, CLIENT recognizes that it is CLIENT's responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials.

Notwithstanding any other provision of the AGREEMENT, CLIENT waives any claim against CONSULTANT and, to the maximum extent permitted by law, agrees to defend, indemnify, and save CONSULTANT harmless from any claim, liability, and/or defense costs for injury or loss arising from CONSULTANT's discovery of unanticipated hazardous materials or suspected hazardous materials, including, but not limited to, any costs created by delay of the project and any cost associated with possible reduction of the property's value.

CLIENT will be responsible for ultimate disposal of any samples secured by CONSULTANT which are found to be contaminated.

DISPUTE RESOLUTION

If a dispute at law arises from matters related to the services provided under this AGREEMENT and that dispute requires litigation, then:

1. The claim will be brought and tried in judicial jurisdiction of the court of the county where CONSULTANT's principal place of business is located and CLIENT waives the right to remove the action to any other county or judicial jurisdiction, and;
2. The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' and expert witness fees, and other claim-related expenses.

GOVERNING LAW AND SURVIVAL

If any of the provisions contained in this AGREEMENT are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired. Risk allocation and indemnities will survive termination or failure of this AGREEMENT for any cause.

The parties have read, or had the opportunity to read, the foregoing, including all attachments, addendums, and exhibits hereto, have had an opportunity to discuss the same, understand completely the terms, and willingly enter into this AGREEMENT which will become effective on the date signed below by CLIENT.

Printed Name of Client or Authorized Agent

Signature of Client or Authorized Agent

Date

Fred Narcaroti, Principal/Tucson Office Manager

Date

PM: MJK



May 26, 2023
Proposal No. 13TUC03-00265

Ms. Vicki Chu
Kimley-Horn & Associates, Inc.
3300 East Sunrise Drive, Suite 130
Tucson, Arizona 85718

Subject: Proposal for Environmental Services
Canoa Ranch Sewer Extension Realignment
Lead Based Paint & Limited Asbestos Survey
Pima County, Arizona

Dear Ms. Chu:

In accordance with your request, Ninyo & Moore is pleased to submit this proposal to provide environmental services for the Canoa Ranch Sewer Extension project in Pima County, Arizona. This proposal outlines our scope of environmental services, project assumptions, anticipated schedule and estimated fee for the work associated with this project.

SCOPE OF SERVICES

Project Coordination

Ninyo & Moore will perform the following project coordination tasks:

- Coordinate with an Arizona-certified analytical laboratory; and
- Prepare a Site-specific Health and Safety Plan.

Field Activities

Ninyo & Moore's proposed scope of services for the Lead Based Paint Survey will include the activities listed below:

- The Lead Based Paint (LBP) Survey will consist of a visual assessment of the ADOT frontage road striping (both white and yellow painted/thermal applied striping). Each homogeneous suspect LBP will be observed for material type, location and condition.
- Following identification of homogenous suspect LBP, Ninyo & Moore will collect bulk samples of suspect LBPs from readily accessible areas representative of the features within the Project Area. The samples will be collected in general accordance with Occupational Safety and Health Administration (OSHA). The samples will be collected in re-sealable plastic bags and labeled with unique sample identification numbers.

- Samples of suspect LBPs will be delivered to a laboratory accredited in the National Voluntary Laboratory Accreditation Program.

Ninyo & Moore's proposed scope of services for the Limited Asbestos Survey will include the activities listed below:

- The Limited Asbestos Survey will consist of a visual assessment of up to 12 drainage crossings to identify homogeneous areas of suspect asbestos-containing materials (ACMs), including the concrete used to form each culvert. Each homogeneous suspect ACM will be observed for material type, location, condition, and friability.
- Following identification of homogenous suspect ACM, Ninyo & Moore will collect bulk samples of suspect ACMs from readily accessible areas representative of the features within the Project Area. The samples will be collected in general accordance with Occupational Safety and Health Administration (OSHA), National Emission Standard for Hazardous Air Pollutants (NESHAP), and AHERA guidelines. The samples will be collected in re-sealable plastic bags and labeled with unique sample identification numbers.
- Samples of suspect ACMs will be delivered to a laboratory accredited in the National Voluntary Laboratory Accreditation Program for bulk asbestos fiber analysis.
- Bulk samples will be analyzed for the presence and quantification of asbestos fibers using Polarized Light Microscopy (PLM), in general accordance with USEPA Method 600/M4-82-020.

REPORTING

Ninyo & Moore will prepare up to two letter reports (northern half and southern half) within two weeks of our receipt of the analytical data. The reports will contain a description of field activities and analytical results, figures illustrating sampling locations, and appendices with laboratory analytical reports.

UNDERSTANDINGS

The following conditions will apply to the performance of the scope of services described herein:

- The client will provide access to the Site.
- Our LBP Survey includes a maximum of 20 samples collected for lead analysis which will be collected from the white striping at quarter mile intervals along the four-mile sewer extension alignment, and any white or yellow striping that maybe within the alignment at the intersection of Elephant Head Road and East Frontage Road. If survey of additional areas or collection of additional samples is requested, or otherwise warranted, then a request for additional time and materials will submitted before proceeding with the additional work.

- Our Limited ACM survey includes a maximum of 18 bulk samples collected for asbestos analysis by PLM. Six of these bulk samples will be collected of white roadway paint along the alignment and yellow paint at the intersection, and the remaining 12 will be collected from concrete or other suspect ACMs identified at the 12 drainage crossings/culverts within the project area. If additional areas or collection of additional samples is requested, or otherwise warranted, then a request for additional time and materials will be submitted before proceeding with the additional work.
- Ninyo & Moore will not dismantle roadway components due to accessibility and safety issues; therefore, unidentified asbestos may be present at the Project Area. Should renovation/demolition activities begin and suspect ACM be discovered in inaccessible features or other areas on the Project Area, the material should be evaluated for asbestos prior to disturbance.
- Our proposal excludes the cost of ADOT or Pima County Right-of-Way permitting, or traffic control services. If required, then the actual cost of this permitting and subcontracted services will be invoiced.

SCHEDULE

Ninyo & Moore estimates the proposed services can be completed within 30 working days (approximately 6 weeks) of receipt of written notice to proceed and permission for access to the Project Area.

ESTIMATED FEE

Ninyo & Moore proposes to perform the scope of services described above, subject to the listed assumptions, on a time and materials basis not to exceed fee of \$7,696 (Seven Thousand Six Hundred Ninety-Six Dollars). We propose to provide our services under our existing contract with the District. If the scope of services and fee contained in this proposal are acceptable, please provide a task order as formal authorization for us to proceed.

Ninyo & Moore appreciates the opportunity to provide the District with this proposal.

Respectfully submitted,

NINYO & MOORE



Fred F. Narcaroti
Principal/Tucson Office Manager



Mark J. Guatney, P.E.
Principal Engineer/Environmental
Operations Manager

FFN/MJG/jom

Attachments: Table 1 – Breakdown of Estimated Fee
Work Authorization and Agreement

Table 1 - Breakdown of Estimated Fee

Background Review, Mobilization and Demobilization

Principal Engineer/Geologist/Environmental Scientist	1 hour @ \$ 180.00 /hour	\$ 180.00
Senior Engineer/Geologist/Environmental Scientist	hour @ \$ 150.00 /hour	\$ -
Senior Project Engineer/Geologist/Environmental Scientist	2 hours @ \$ 140.00 /hour	\$ 280.00
Project Engineer/Geologist/Environmental Scientist	hour @ \$ 120.00 /hour	\$ -
Senior Staff Engineer/Geologist/Environmental Scientist	hour @ \$ 115.00 /hour	\$ -
Staff Engineer/Geologist/Environmental Scientist	2 hours @ \$ 110.00 /hour	\$ 220.00
Data Processor	2 hours @ \$ 55.00 /hour	\$ 110.00
	Subtotal	\$ 790.00

Field Services

Principal Engineer/Geologist/Environmental Scientist	2 hours @ \$ 180.00 /hour	\$ 360.00
Senior Engineer/Geologist/Environmental Scientist	hour @ \$ 150.00 /hour	\$ -
Senior Project Engineer/Geologist/Environmental Scientist	hour @ \$ 140.00 /hour	\$ -
Project Engineer/Geologist/Environmental Scientist	12 hours @ \$ 120.00 /hour	\$ 1,440.00
Senior Staff Engineer/Geologist/Environmental Scientist	hour @ \$ 115.00 /hour	\$ -
Staff Engineer/Geologist/Environmental Scientist	8 hours @ \$ 110.00 /hour	\$ 880.00
Senior Technician	hour @ \$ 75.00 /hour	\$ -
Field Vehicle and Equipment Usage	12 hours @ \$ 10.00 /hour	\$ 120.00
Sampling Supplies	Lump Sum	\$ 50.00
	Subtotal	\$ 2,850.00

Laboratory Analyses

Asbestos Bulk Sample Analysis by PLM/ds	18 ea @ \$ 12.00 /test	\$ 216.00
Paint Chip Analysis by Flame AAS	20 ea @ \$ 11.00 /test	\$ 220.00
	Subtotal	\$ 436.00

Report Preparation

Principal Engineer/Geologist/Environmental Scientist	4 hours @ \$ 180.00 /hour	\$ 720.00
Senior Engineer/Geologist/Environmental Scientist	hour @ \$ 150.00 /hour	\$ -
Senior Project Engineer/Geologist/Environmental Scientist	6 hours @ \$ 140.00 /hour	\$ 840.00
Project Engineer/Geologist/Environmental Scientist	hour @ \$ 120.00 /hour	\$ -
Senior Staff Engineer/Geologist/Environmental Scientist	hour @ \$ 115.00 /hour	\$ -
Staff Engineer/Geologist/Environmental Scientist	14 hours @ \$ 110.00 /hour	\$ 1,540.00
Technical Illustrator/CAD Operator	4 hours @ \$ 75.00 /hour	\$ 300.00
Data Processor	4 hours @ \$ 55.00 /hour	\$ 220.00
	Subtotal	\$ 3,620.00

TOTAL ESTIMATED FEE **\$ 7,696.00**



WORK AUTHORIZATION AND AGREEMENT

Please Sign and Return One Copy to:

NINYO & MOORE
1991 East Ajo Way, Suite 145
Tucson, Arizona 85713

PROPOSAL NO. **13TUC03-00265**

1. PROJECT ADDRESS: **Canoa Ranch Sewer Extension Realignment, Pima County, Arizona**
2. PROJECT DESCRIPTION: **Environmental Services**
3. SCOPE OF STUDY: **Please refer to proposal dated May 26, 2023.**
4. FEE: **\$7,696 (Seven Thousand Six Hundred Ninety-Six Dollars – Time and Materials)**
5. PORTION OF FEE IN ADVANCE OF WORK: **None**
6. CLIENT: **Kimley-Horn & Associates, Inc.**
3300 East Sunrise Drive, Suite 130
Tucson, Arizona 85718 PHONE: **520-615-9191**
- CONTACT: **Ms. Vicki Chu** PHONE: **520-615-9191**
7. STATEMENT TO BE SENT TO: **Client**

CONDITIONS OF AGREEMENT BETWEEN CLIENT AND NINYO & MOORE

This AGREEMENT is made by and between: NINYO & MOORE GEOTECHNICAL AND ENVIRONMENTAL SCIENCES CONSULTANTS, hereinafter referred to as CONSULTANT, and **Kimley-Horn & Associates, Inc.**, hereinafter referred to as CLIENT. This AGREEMENT between the parties consists of these TERMS, the attached Proposal identified as No. **13TUC03-00265** dated **May 26, 2023**, and any exhibits or attachments noted in the Proposal. Together, these elements will constitute the entire AGREEMENT superseding any and all prior negotiations, correspondence, or agreements either written or oral. Any changes to this AGREEMENT must be mutually agreed to in writing.

STANDARD OF CARE

CLIENT recognizes that subsurface conditions may vary from those observed at locations where borings, surveys, or explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by CONSULTANT will be based solely on information available to CONSULTANT. CONSULTANT is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.

Services performed by CONSULTANT under this AGREEMENT are expected by CLIENT to be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the environmental sciences profession practicing contemporaneously under similar conditions in the locality of the project. It is important to recognize that even the most comprehensive scope of services may fail to detect environmental liabilities on a particular site. Therefore, CONSULTANT cannot act as an insurer and cannot "certify" that a site is free of environmental contamination. Under no circumstance is any warranty, express or implied, made in connection with the providing of environmental sciences consulting services.

SITE ACCESS AND SITE CONDITIONS

CLIENT will grant or obtain free access to the site for all equipment and personnel necessary for CONSULTANT to perform the work set forth in this agreement. CLIENT will notify any and all possessors of the project site that CLIENT has granted CONSULTANT free access to the site. Client will protect all property, inside and out, including all plants and landscaping. CONSULTANT will take reasonable precautions to reduce the potential for damage to the site, but it is understood by CLIENT that, in the normal course of work, some damage may occur and the correction of such damage or alteration is not part of this AGREEMENT unless so specified in the Proposal.

CLIENT is responsible for accurately delineating the locations of all subterranean structures and utilities. CONSULTANT will take reasonable precautions to avoid known subterranean structures, and CLIENT waives any claim against CONSULTANT, and agrees to defend, indemnify and hold CONSULTANT harmless from any claim or liability for injury or



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loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, CLIENT agrees to compensate CONSULTANT for any time spent or expenses incurred by CONSULTANT in defense of any such claim, with compensation to be based upon CONSULTANT's prevailing fee schedule and expense reimbursement policy.

CONTAMINATED MATERIALS

In performing environmental, hydrologic, or hydrogeologic services, CONSULTANT may excavate or otherwise come in contact with hazardous materials. CLIENT represents that CLIENT has informed CONSULTANT of the presence of any known hazardous materials.

CLIENT recognizes that a project site containing hazardous materials may not perform as anticipated by CLIENT, even though CONSULTANT's services are performed with currently acceptable levels of care and skill. Further, CLIENT acknowledges that, while necessary for site exploration, commonly used exploration methods such as drilling borings and excavating trenches involve an inherent risk. For example, exploration on a project site containing contaminated materials may result in inducing cross-contamination and/or other negative effects.

Unanticipated hazardous materials may be encountered in an area where there is no reason to believe they could or should be present. CONSULTANT and CLIENT agree that the discovery of unanticipated hazardous materials may make it necessary for CONSULTANT to take immediate measures to protect health and safety. CLIENT agrees to compensate CONSULTANT for any equipment decontamination or other costs arising out of the discovery of hazardous materials.

CONSULTANT agrees to notify CLIENT when hazardous materials or suspected hazardous materials are encountered. CLIENT agrees to make any disclosures required by law to the appropriate governing agencies. CLIENT also agrees to hold CONSULTANT harmless for any and all consequences of disclosures made by CONSULTANT which are required by governing law. In the event that the project site is not owned by CLIENT, CLIENT recognizes that it is CLIENT's responsibility to inform the property owner of the discovery of hazardous materials or suspected hazardous materials.

Notwithstanding any other provision of the AGREEMENT, CLIENT waives any claim against CONSULTANT and, to the maximum extent permitted by law, agrees to defend, indemnify, and save CONSULTANT harmless from any claim, liability, and/or defense cost for injury or loss arising from CONSULTANT's discovery of hazardous materials or suspected hazardous materials, including, but not limited to, any costs created by delay of development projects and any cost associated with possible reduction of the property's value.

CLIENT will be solely responsible for the ultimate disposal of any materials secured by CONSULTANT which are found to be contaminated. Such materials include, but are not limited to, drilling mud, soil, groundwater, and other materials removed from excavations. Contaminated materials will be placed in suitable storage containers, labeled, and left on site.

SAMPLE DISPOSAL

CONSULTANT will dispose of soil, rock, and water samples collected for analyses approximately thirty (30) days after the laboratory analysis report date. Further storage or transfer of samples can be made at CLIENT's expense upon CLIENT's prior written request.

OWNERSHIP AND MAINTENANCE OF DOCUMENTS

Unless otherwise specified in this Agreement or in an Addendum, and provided that CONSULTANT has been fully paid for the Services, CLIENT shall have the right to use the documents, maps, photographs, drawings and specifications resulting from CONSULTANT's efforts on the project, for purposes reasonably contemplated by the parties. CONSULTANT shall have the right, but shall not be obligated, to retain copies of all such materials and shall have the right to use the same for any purpose, unless such use would be expected to cause harm to CLIENT. CLIENT shall specify in advance, in writing, and be charged for all arrangements for special or extended-period maintenance of such materials by CONSULTANT. CONSULTANT retains the right of ownership with respect to any patentable concepts or copyrightable materials arising from its Services.

Reuse of any material described by CLIENT, including publication to third parties, on extension of this project or on any other project without CONSULTANT's written authorization, shall be at CLIENT's risk, and CLIENT agrees to indemnify, defend, and hold harmless CONSULTANT from all claims, damages, and expenses, including attorney's fees, arising out of such unauthorized reuse.

BILLING AND PAYMENT

CLIENT will pay CONSULTANT in accordance with the procedures indicated in the Proposal and its attachments. Invoices will be submitted to CLIENT by CONSULTANT, and will be due and payable upon presentation. If CLIENT objects to all or any portion of any invoice, CLIENT will so notify CONSULTANT in writing within fourteen (14) calendar days of the invoice date, identify the cause of disagreement, and pay when due that portion of the invoice not in dispute. The parties will immediately make every effort to settle the disputed portion of the invoice. In the absence of written notification described above, the balance as stated on the invoice will be paid.

Invoices are delinquent if payment has not been received within thirty (30) days from date of invoice. CLIENT will pay an additional charge of three quarters of a percent (.75) per month (or the maximum percentage allowed by law, whichever is lower) on any delinquent amount, excepting any portion of the invoiced amount in dispute and resolved in favor of CLIENT. Payment thereafter will first be applied to accrued interest and then to the principal unpaid amount. All time spent and expenses incurred (including any attorney's fees) in connection with collection of any delinquent amount will be paid by CLIENT to CONSULTANT per CONSULTANT's current fee schedules. In the event CLIENT fails to pay CONSULTANT within sixty (60) days after invoices are rendered, CLIENT agrees that CONSULTANT will have the right to consider the failure to pay the CONSULTANT's invoice as a breach of this AGREEMENT and CONSULTANT may cease work on the project. At CONSULTANT's option, CONSULTANT may waive said major breach upon payment by CLIENT of all arrearages and outstanding invoices.

TERMINATION

This AGREEMENT may be terminated by either party seven (7) days after written notice in the event of any breach of any provision of this AGREEMENT or in the event of substantial failure of performance by either party, or if CLIENT suspends the work for more than three (3) months. In the event of termination, CONSULTANT will be paid for services performed prior to the date of termination plus reasonable termination expenses, including, but not limited to, the cost of completing analyses, records, and reports necessary to document job status at the time of termination.

RISK ALLOCATION

Many risks potentially affect CONSULTANT by virtue of entering into this AGREEMENT to perform professional consulting services on behalf of CLIENT. The principal risk is the potential for human error by CONSULTANT. For CLIENT to obtain the benefit of a fee which includes a nominal allowance for dealing with CONSULTANT's liability, CLIENT agrees to limit CONSULTANT's liability to CLIENT and to all other parties for claims arising out of CONSULTANT's performance of the services described in this AGREEMENT. The aggregate liability of CONSULTANT will not exceed \$50,000 for negligent professional acts, errors, or omissions, including attorney's fees and costs which may be awarded to the prevailing party, and CLIENT agrees to indemnify and hold harmless CONSULTANT from and against all liabilities in excess of the monetary limit established above.

Limitations on liability and indemnities in this AGREEMENT are business understandings between the parties voluntarily and knowingly entered into, and shall apply to all theories of recovery including, but not limited to, breach of contract, warranty, tort (including negligence), strict or statutory liability, or any other cause of action, except for willful misconduct or gross negligence. The parties also agree that CLIENT will not seek damages in excess of the limitations indirectly through suits with other parties who may join CONSULTANT as a third-party defendant. Parties means CLIENT and CONSULTANT and their officers, employees, agents, affiliates, and subcontractors.

Both CLIENT and CONSULTANT agree that they will not be liable to each other, under any circumstances, for special, indirect, consequential, or punitive damages arising out of or related to this AGREEMENT.

INDEMNIFICATION

If any claim is brought against CONSULTANT, its employees, agents and subcontractors and/or CLIENT by a third party, relating in any way to the Services, the contribution and indemnification rights and obligations of CONSULTANT and Client, subject to the paragraph titled "Risk Allocation" above, such claim shall be determined as follows:

1. If any negligence, breach of contract, or willful misconduct of CONSULTANT caused any damage, injury, or loss claimed by the third party, then CONSULTANT and CLIENT shall each indemnify the other against any loss or judgement on a comparative negligence basis (CLIENT responsibility to include that of its agents, employees, and other contractors); and



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- 2. Unless CONSULTANT was liable for negligence, breach of contract, or willful misconduct which in whole or in part, caused the damage, injury, or loss asserted in the third party claim, CLIENT shall indemnify CONSULTANT against the claim, liability, loss, legal fees, consulting fees, and other costs of defense reasonably incurred.

DISPUTE RESOLUTION

If a dispute at law arises from matters related to the services provided under this AGREEMENT and that dispute requires litigation, then:

- 1. The claim will be brought and tried in judicial jurisdiction of the court of the county where CONSULTANT's principal place of business is located and CLIENT waives the right to remove the action to any other county or judicial jurisdiction, and;
- 2. The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' and expert witness fees, and other claim-related expenses

GOVERNING LAW AND SURVIVAL

If any of the provisions contained in this AGREEMENT are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired. Risk allocation and indemnities will survive termination or failure of this AGREEMENT for any cause.

The parties have read, or had the opportunity to read, the foregoing, including all attachments, addendums, and exhibits hereto, have had an opportunity to discuss the same, understand completely the terms, and willingly enter into this AGREEMENT which will become effective on the date signed below by CLIENT.

Printed Name of Client or Authorized Agent

Signature of Client or Authorized Agent

Date

Fred Narcaroti, Principal/Tucson Office Manager

Date

PM: MJG

October 4, 2023

Kimley Horn
Attn: Vicki Chu, PE
3300 East Sunrise Drive, Suite 130,
Tucson, AZ 85718
Email: Vicki.Chu@kimley-horn.com
Phone: 720-773-4143

RE: Canoa Sewer Interconnection: Elephant Head Rd. to Canoa Ranch Rd.
Subsurface Utility Engineering (SUE)–Scope of Services T2UE Proposal No. 16104-23-0117

Dear Ms. Chu:

Thank you for the opportunity to propose on this project. Our experience providing subsurface utility engineering for State DOTs, municipalities, various public works departments, and design consultants will enable us to successfully complete this utility investigation and meet the program and project goals. The combination of our resources and experience will provide you with the confidence that T2ue is the right choice to complete the project on time and on budget. For more information, please visit www.T2UE.com

This proposal has been prepared for the Canoa Sewer Interconnection: Elephant Head Rd. to Canoa Ranch Rd Project. We have provided you with a Time and Material Fee to complete the specific items described within the Scope of Services. We respectfully request any comments or questions you may have.

Thank you again for this opportunity. We are committed to giving you the quality and service that you expect from T2.

LIMITS OF INVESTIGATION

The limits of investigation will include the approximately 1.3 mile project length roughly identified on the Exhibit A below in solid green received September 28, 2023.

Exhibit A – Rough Limits Identified as Solid Green Line

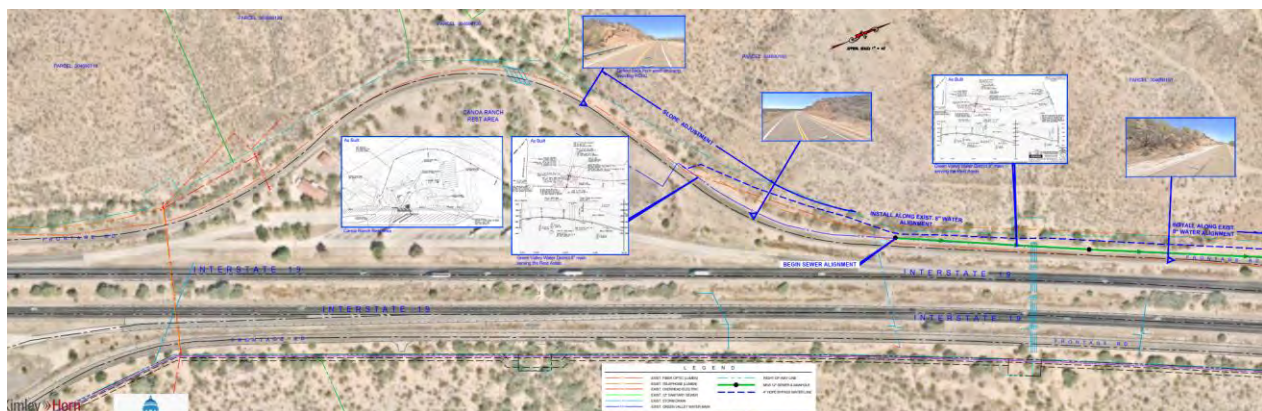


Exhibit A – Rough Limits Identified as Solid Green Line (Continued)



SCOPE OF WORK

T2ue will provide utility designating services of existing traceable (either metallic or non-metallic buried with trace wire) subsurface gas, telephone, fiber optic, and water lines as identified on the attached Exhibit B. T2ue will utilize a variety of geophysical locating equipment to detect, verify and designate the approximate horizontal location of the four requested utility lines within the defined limits. Designated lines shall be marked in the field using pink paint, which is the standard APWA color convention for survey items. Once designated the utilities will be surveyed and incorporated into CAD format for delivery to Client. Use of this service does not negate an excavator's responsibility to notify the Arizona 811 One Call Center 48 hours prior to any excavation. Limits for the utility designating shall consist of a 100 ft wide path centered on the proposed Interstate 19 (I-19) crossing at Elephant Head Rd and then once the project crosses the west frontage road of I-19 the limits will include the shoulder area from the west edge of west frontage road of I-19 to the west ADOT right of way.

After Client has reviewed the utility mapping, T2ue will, on a separate mobilization, provide up to ten (10) vacuum excavation testholes (potholes) on the designated utilities at locations deemed in potential conflict with the project design. The utility data obtained through our standard testhole procedure includes the depth, horizontal and vertical location tied to project datum via survey, size, and material composition of the utility exposed. Our standard testhole procedure includes backfilling pothole with compacted native material and pavement restoration with "permanent" asphalt cold patch. It is understood that the requested test holes will be along the shoulders of the frontage road and will not be in pavement.

SUE Scope of Work Canoa Sewer Interconnection: Elephant Head Rd. to Canoa Ranch Rd.

Prior to providing service, T2ue will request the following:

- Client shall provide any gathered utility record information to T2ue.
- Client will provide CAD files containing the project topographic base mapping, and existing right-of-way and monument lines, along with horizontal and vertical survey control signed and sealed by an Arizona Professional Land Surveyor.

DELIVERABLES

- T2ue will provide utility mapping in electronic AutoCAD Civil 3D format utilizing T2ue CAD standards and conventions. No plan set (pdf nor electronic) will be produced for the requested utility designation and the utility designation deliverable will not be signed and stamped by a Professional Engineer.
- Pertinent utility testhole data will be presented in electronic format on our standard "Testhole Data Summary" form sealed by an Arizona Registered Land Surveyor or Arizona Registered Professional Engineer that includes the depth, horizontal coordinates, vertical elevation, size, and material composition of the utility line exposed at each pothole. Testhole data will be submitted in both sealed hard copy format and electronic Excel format.

PROJECT ESTIMATE

For the services outlined, T2ue proposes compensation as outlined in the fee schedule below. T2ue will not exceed the estimated fee without prior authorization from Client. **Monthly invoices will be prepared upon monthly completion for the actual work conducted up to the estimated budget amount.** We appreciate this opportunity to provide professional SUE services for this project. Should you have any questions or require additional information, please do not hesitate to call.

Sincerely,



Dan Padilla
Senior Project Manager
Phone: 520-770-0021
Email: dan.padilla@t2ue.com



**Canoa Sewer Interconnection
Subsurface Utility Engineering
T2 Proposal No. 23AZ0117R2 - 09/29/2023**

PROJECT ESTIMATE			
SUE Quality Level "D, C & B" Designating/Mapping			
Quality Level B Utility Designating Crew, Truck & Equipment	64 Hours @	\$240.00 per Hour	\$15,360.00
Survey Crew, Truck & Equipment	40 Hours @	\$190.00 per Hour	\$7,600.00
		Subtotal	\$22,960.00
SUE Quality Level "A" Test Hole Excavation			
*Quality Level "A" Test Hole Estimate (up to 6 feet in depth)	10 holes @	\$630.00 per hole	\$6,300.00
*Contingency	Extra Depth/Width		\$900.00
Survey Crew, Truck & Equipment	8 Hours @	\$190.00 per Hour	\$1,520.00
		Subtotal	\$8,720.00
Professional Services			
Project Manager	2 Hours @	\$165.00 per Hour	\$330.00
Professional Engineer	6 Hours @	\$155.00 per Hour	\$930.00
Professional Land Surveyor	4 Hours @	\$175.00 per Hour	\$700.00
SUE Manager	10 Hours @	\$125.00 per Hour	\$1,250.00
CAD Technician	25 Hours @	\$105.00 per Hour	\$2,625.00
Administrative	3 Hours @	\$75.00 per Hour	\$225.00
		Subtotal	\$6,060.00
Professional Services for QLA Test Hole Excavation			
*Project Manager	2 hours @	\$155.00 per hour	\$310.00
*SUE Supervisor	3 hours @	\$115.00 per hour	\$345.00
*CAD Technician	4 hours @	\$105.00 per hour	\$420.00
*Administrative	2 hours @	\$75.00 per hour	\$150.00
		Subtotal	\$1,225.00
Reimbursable Items			
Lodging - 2 person Designating and Survey Crews	10 Days @	\$130.00 per Day	\$1,300.00
Per Diem- 2 person Designating and Survey Crews	14 Days @	\$55.00 per Day	\$770.00
*Permits		(Billed at Cost)	\$500.00
*Maintenance of Traffic Set-ups, Traffic Plan Preparation & Traffic Plan Permit Submittals		Estimated (Billed at Cost)	\$2,800.00
		Subtotal	\$5,370.00
ESTIMATED TOTAL			\$44,335.00

Proposal estimate only, actual costs may vary due to unknown field conditions & jurisdictional requirements



October 6, 2023

Vicki Chu, P.E.

Kimley-Horn | 3300 East Sunrise Drive, Suite #130 Tucson, AZ 85718

Office Direct T: 520-352-8637 | Email: vicki.chu@kimley-horn.com

RE: Canoa Sewer West Side Redesign
Survey Proposal

Vicki,

I've reviewed the data that you sent me on this project. I am pleased to forward this scope of work for land surveying services. Darling Geomatics is an award winning certified WBE, WOSB and SBE land surveying company.

SCOPE OF WORK:

- 1.) Office computations and drafting to prepare deliverable items in CAD.
- 2.) Field survey to set aerial targets along flight path. (Approx. 15)
- 3.) Flight with aircraft from Aerotech to collect base topo.
- 4.) Locating the right of way on the westside of I-19.
- 5.) Prepare 15 Legal Descriptions for easements.
- 6.) Registered Land Surveyor supervision throughout the duration of the project.

The estimated fee for work outlined in the above Scope of Work shall be: \$38,940.00

Survey/drafting estimated at: \$29,160.00

RLS	\$150	31	\$4,650.00
Survey project Manager	\$125	70	\$8,750.00
1 person survey crew	\$125	29	\$3,625.00
2 person survey crew	\$145	55	\$7,975.00
CADD	\$90	45	\$4,050.00
Admin	\$55	2	\$110.00
Darling Total:			\$29,160.00

Aerotech flight: \$9,780.00

DELIVERABLE:

1. AutoCAD base file with topography and eastside I-19 right of way locations.
2. All data will meet the National Mapping Standards accuracy required to provide a 1 foot topographic map

EXCLUSIONS:

- 1) Any work due to changes in the documents used to generate this proposal.
- 2) Providing blue stake markings.
- 3) Meeting attendance.
- 4) Record of Survey is specifically excluded for this project per the request received on May 20, 2021.

ADDITIONAL WORK:

Any work not defined in the Scope of Work as written above shall be considered additional work. Additional work shall be agreed upon in writing prior to its start or the additional field work can be completed upon request if it is agreed that a Darling Change Order Form will be signed by the Client's representative on site the day that the additional field survey services are provided. Additional work may include office support and supervision.

MISCELANEOUS:

Payment of invoices by the Client using a pay service, i.e. Textura, or a credit card, that both charge the payee a fee, shall not be an acceptable method of payment of Darling invoices without Darling charging the Client the fees that are associated with use of those services.

All work shall be performed under the direct supervision of an Arizona Registered Land Surveyor and shall conform to the current Standards for the practice of land surveying in the State of Arizona.

Should work be authorized and begin and then be terminated for any reason, all work completed prior to notice of termination shall be due and payable at the hourly rates in effect when the work was completed.

There are no understandings or agreements, written or verbal, other than those written herein.

In lieu of a separate subcontract agreement accepted by both parties, the Terms & Conditions outlined below shall apply.

Thank you for the opportunity to provide this proposal. Please call if you have any questions. If acceptable, you can sign where indicated below or forward a separate agreement for our review.

Respectfully submitted,



Tim Janes
Field Operations Manager



Award Winning Certified DBE, WBE, WOSB, SBE, 3D Scanning and Environmental Consulting Firm
Award Winning Certified WBE, WOSB and SBE Land Surveying Company
U of A Tech Park
9040 South Rita Road, Ste #2350, Tucson, AZ 85747
520.298.2725 (O)
360.720.0212 (M)
www.darlingltd.com



ACCEPTANCE AND AUTHORIZATION TO PROCEED:

Accepted by: _____

On behalf of: _____

Date: _____

It is agreed the attached terms and conditions are incorporated into and made a part of the Agreement.

Terms and Conditions

Performance of Services: The Consultant shall perform the services outlined on page one (1) of this Agreement in consideration of the stated fee and payment terms.

Access to Site: Unless otherwise stated, the Consultant will have access to the site for activities necessary for the performance of the services. The Consultant will take reasonable precautions to minimize damage due to these activities, but has not included in the fee the cost of restoration of any resulting damage and will not be responsible for such costs.

Retainer/Billing/Payment: The Client agrees to pay the Consultant for all services performed and all costs incurred. Prior to the provision of services, the Client shall deposit a retainer of \$N/A with the Consultant. Invoices for the Consultants' services shall be submitted, at the Consultant's option, either upon completion of such services or on a monthly basis. Invoices shall be due and payable upon receipt. If any invoice is not paid within 30 days, the Consultant may, without waiving any claim or right against the Client, and without liability whatsoever to the Client, suspend or terminate the performance of such services. The retainer shall be credited on the final invoice. Accounts unpaid 45 days after the invoice date may be subject to a monthly service charge of 1.5% (or the maximum legal rate) on the unpaid balance. In the event any portion of an account remains unpaid 60 days after the billing the consultant may institute collection action and the Client shall pay all costs of collection, including reasonable attorneys' fees.

Indemnification: The Client shall, to the fullest extent permitted by law, indemnify and hold harmless the Consultant, his or her officers, directors, employees, agents, and sub consultants from and against all damage, liability and cost, including reasonable attorneys' fees and defense costs, arising out of or in any way connected with the performance of the services under this Agreement, excepting only those damages, liabilities or costs attributable to the sole negligence or willful misconduct of the Consultant.

Waiver: In addition, the Client agrees, to the maximum extent permitted by law, to waive any claims against the Consultant arising out of the performance of these services, except for the sole negligence or willful misconduct of the Consultant.

Information for the Sole Use and Benefit of the Client: All opinions and conclusions of the Consultant, whether written or oral, and any plans, specifications or other documents and services provided by the Consultant are for the sole use and benefit of the Client and are not to be provided to any other person or entity without the prior written consent of the Consultant. Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of any third party against either the Consultant or the Client.

Limitation of Liability: In recognition of the relative risks, rewards and benefits of the project to both the Client and the



Consultant, the risks have been allocated such that the Client agrees that, to the fullest extent permitted by law, the Consultant's total liability to the Client for any and all injuries, damages, claims, losses, expenses or claim expenses arising out of this Agreement from any cause or causes, shall not exceed the amount of the contract. Such causes include, but are not limited to, the Consultant's negligence, errors, omissions, strict liability, breach of contract or breach of warranty. Initialed _____.

Ownership of Instruments of Service: The Client acknowledges the Consultant's construction documents, including electronic files, as instruments of professional service. Nevertheless, the final construction documents prepared under this Agreement shall become the property of the Client upon completion of the services and payment in full of all monies due to the Consultant. The Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Consultant, its officers, directors, employees and subconsultants (collectively, Consultant) against any damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising from or allegedly arising from or in any way connected with the unauthorized reuse or modification of the construction documents by the Client or any person or entity that acquires or obtains the construction documents from or through the Client without the written authorization of the Consultant.

Dispute Resolution: Any claims or disputes between the Client and the Consultant arising out of the services to be provided by the Consultant or out of this Agreement shall be submitted to nonbinding mediation. The Client and the Consultant agree to include a similar mediation agreement with all contractors, subconsultants, subcontractors, suppliers and fabricators, providing for mediation as the primary method for dispute resolution among all parties.

Termination of Services: This Agreement may be terminated at any time by either party should the other party fail to perform its obligations hereunder. In the event of termination for any reason whatsoever, the Client shall pay the Consultant for all services rendered to the date of termination, and all reimbursable expenses incurred prior to termination and reasonable termination expenses incurred as the result of termination.

Upon default of terms and conditions, applicant agrees to pay any collection cost incurred by Darling Geomatics in the collection of the amount balance, including reasonable attorney fees.





333 North Wilmot Road
Suite 340
Tucson, Arizona 85711
(520) 561-6537

October 10, 2023

Richard Darling, RLS
Darling Geomatics
9040 South Rita Road, Suite 2350
Tucson, Arizona 85747

Proposal: Elephant Head Road Addition

AeroTech Mapping, Inc., (ATM) is pleased to present the following cost proposal for aerial photography and photogrammetric services for the above mentioned project.

Photogrammetric Scope of Work

Our services will begin with the production of 1"=40', 1 foot topographical information, planimetric detail and digital orthophoto covering the additional corridor (72 acres) located in Pima County, Arizona. The aerial mapping limits are indicated in green on the attached layout. All mapping deliverables will tie to AZ0621-129.

Accuracies of plus or minus 0.295' can be expected as it relates to the topographical information generated from the Digital Terrain Modeling (DTM) information. Accuracies of plus or minus 0.196' can be expected as it relates to the DTM information itself.

Project accuracy to conform to generally accepted photogrammetric standards established by the American Society of Photogrammetry and Remote Sensing (ASPRS).

Deliverables

Deliverables will consist of a flash drive containing the DTM information used for the generation of topographical information, the contour information, planimetric detail, the .tfw image limit file, orthophoto TIFF image and .dwg image limits file which will allow for bringing the image into its proper coordinate position.

Final delivery of the digital information will be supplied in AutoCAD, or as directed by **Darling Geomatics**. The layering scheme will be standard ATM layering.

Estimated Project Schedule

ATM anticipates completing this project 15 consecutive working days after date of photography, or receipt of control, whichever is later. Please note certain delays may exist, i.e., weather and/or air flight restrictions, that are beyond our control.

ARIZONA

CALIFORNIA

NEVADA

NEW MEXICO

TEXAS

www.atmlv.com



Summary & Terms

Service	Description	Schedule
Aerial Photography	4.5cm Digital Imagery	<i>Project will tie to ATM Project No. AZ0621-129</i> 15 Working Days
Overlap	60%	
Aerial Ground Control	Existing	
Contour Interval	1 Foot (DTM & Breaklines)	
Mapping Scale	1" = 40'	
Stereo Model Count	12	
Planimetric	Full Detail	
Plot	N/A	
Format	AutoCAD	
Layers	ATM	
Digital Orthophoto	Color, TIFF, 0.15' Pixel Resolution	
Total Fee		

Payment Schedule Net 30 Days

This proposal will remain effective for 60 days after the date of this letter. If you have any questions, please do not hesitate to contact us at any time. ATM appreciates the opportunity of submitting this proposal and we look forward to working with Darling Geomatics.

Your signature in the space provided below indicates your acceptance of the scope of work and terms of the proposal and serves as our Notice to Proceed.

Sincerely,

Tim Burrows, CP
Project Manager

Accepted By: **Darling Geomatics**

Richard Darling, RLS

KHA SU23-056
Client Project Number

10/17/2023
Date