

**TASK ORDER  
AGR23-52a  
On Call Engineering Services**

**Los Alamos County**  
2023 On-Call Engineering  
**Bohannon Huston, Incorporated.**  
DATE CONTRACT May 3, 2023  
DATE Revision 0

Task Order Form AGR23-52a

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**AGR23-52d TASK ORDER #1 Rev 2** NM4 Crossing and Multi-use Trail  
Improvement Project (CN:5101730)  
**DATE PREPARED: February 28, 2025**

**CHARGE: CP5036**

**CONTRACT MANAGER:** Karen Henderson, 505-663-1856. All changes in scope, budget, or schedule (extensions) need to be approved in advance by Karen Henderson.

**COUNTY REQUESTOR/CONTACT:** Keith Wilson, 505-663-1757. All changes in scope, budget, or schedule (extensions) need to be approved in advance by Keith Wilson.

**ATTACHMENTS:** Bohannon Huston Inc. Proposal for additional Professional Engineering Services dated 02/27/2025, Bohannon Huston Inc. Proposal for additional Professional Engineering Services dated 11/22/2024, and Bohannon Huston Inc. Design Scope of Work Proposal for Professional Engineering Services dated 08/14/2024

**COMMENCE WORK DATE:** Receipt of Executed Task Order

**REQUESTED DELIVERY DATE:**

- Estimated May 31, 2025

**REVISED SCOPE OF WORK REQUESTED:**

Original Scope

Los Alamos County received Congestion Mitigation and Air Quality Improvement (CMAQ) funding from the NMDOT for the design and construction of an at-grade crossing of NM State Road 4, a new multi-use trail along the northside of NM State Road 4 and reconstruction of the existing multi-use trails within the Pinon Park. The project will include approximately 2,500ft of new multi-use trail alignment and approximately 3,500ft of reconstructed multi-use trail alignments.

See Attached Proposal for Professional Engineering Services and Fee Proposal.

Revision 1 Scope

The revised scope of work adds the Hydraulic Analysis for the Drainage Memorandum. The Hydraulic Analysis was previously thought to have been completed by another project, but this has turned out to not be the case.

See attached Amendment No. 1 Proposal for Professional Engineering Services and Fee Proposal.

### Revision 2 Scope

This revised scope of work adds Design Services for the Pinon School Trail Segment; additional Cultural Resource investigation following findings during site survey; additional design services due to the realignment of the trail along the southside of NM4 to meet ADA.

### **DELIVERABLE:**

- Design Kick off meeting
- Biweekly design progress meetings
- Scoping report, including traffic analysis and conceptual alignment plan
- Survey and Mapping
- Environmental Investigation and Documentation
- Geotechnical Report
- Certified Utility Mapping
- 30% Design Package with Drainage Memorandum (including Hydraulic Analysis) and Preliminary Engineer's Estimate
- 90% Design Package with Technical Specification and Engineer's Estimate
- Certification and FEMA No-Rise Letters
- Final PS&E Package with Final Technical Specification and Engineer's Estimate in bid format
- Public Input Meetings and Communication with Interested Parties

	Original;	Revision 1	Revision 2	New Total
<b>Direct Labor Costs</b>	\$ 232,546.00	\$ 16,942.00	<b>\$129,457.00</b>	\$ 378,945.00
<b>Reimbursable Costs<sup>1</sup></b>	\$ 950.00	\$ -	<b>\$ -</b>	\$ 950.00
<b>Estimated Total Cost (not to exceed amount)</b>	<b>\$ 233,496.00</b>	<b>\$ 16,942.00</b>	<b>\$129,457.00</b>	<b>\$ 379,895.00</b>
<b>GRT (7.0625%)</b>	\$ 16,490.66	\$ 1,196.53	<b>\$ 9,142.90</b>	\$ 26,830.08
<b>Final Estimate</b>	<b>\$ 249,986.66</b>	<b>\$ 18,138.53</b>	<b>\$138,599.90</b>	<b>\$ 406,725.08</b>

<sup>1</sup> - Reimbursable at Actual Cost or according to Rates provided in "Compensation Rate Schedule".

Current Contract Value (not including Reimbursable Expenses or GRT)	\$ 5,000,000.00	Plus GRT
Estimated Value of all task orders to date, including this task order (not including Reimbursable Expenses or GRT)	\$ 2,846,077.23	Plus GRT
Remaining Contract Value:	\$ 2,153,922.77	Plus GRT

## **SIGNATURE PAGE (Revision 2)**

### **Original Task Order**

\_\_\_\_\_  
**Keith Wilson** **Date**  
Project Manager

\_\_\_\_\_  
**Kurt Thorson, PE** **Date**  
Bohannon Huston, Inc.

\_\_\_\_\_  
**Karen Henderson, PE** **Date**  
Contract Manager

\_\_\_\_\_  
**Eric Ulibarri, PE** **Date**  
County Engineer

\_\_\_\_\_  
**Eric Martinez, PE** **Date**  
Public Works Director (if over \$3,000.00)

\_\_\_\_\_  
**Anne Laurent** **Date**  
County Manager (if TO value is \$10,000 or more)

\_\_\_\_\_  
**Los Alamos County Council**  
(if TO value is \$300,000 or more)

# Bohannon Huston

## ENGINEERING SERVICES AGREEMENT AMENDMENT

Project: NM4 Crossing and Multi-Use Trail Improvements  
Los Alamos County

Project No.: 20250219

Engineer: Bohannon-Huston, Inc.  
7500 Jefferson St NE  
Albuquerque, NM 87109

Task Order No.:  
Contract No.:  
Amendment No.: 2  
Date: February 27, 2025

Reason and Justification for Amendment: (use additional sheets, if necessary)

**1. Los Alamos County has requested the addition of the existing trail on the west side of Pinon Park Elementary integrated into the current project in order to establish a continuous, accessible pathway from NM4 to Grand Canyon Drive.**

**2. To meet NMDOT and NM SHPO standards a cultural resources investigation will need be completed to document historical buildings and archaeological site.**

**3. Realignment of the existing trail to the south side of NM4 will require additional design and geotechnical borings that were not included in the original scope.**

Requested or initiated by: ☒ User Agency ☐ Owner ☐ Engineer ☐ Other

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The Engineer is authorized to provide the following described services (scope of services and compensation).

- 1 BHI will provide additional design services to rehabilitate the existing trail from Pinon Park trail down to Grand Canyon Drive along the western edge of the Pinon Elementary School Property, approximately 850 LF. BHI will provide additional field survey, including topographic, planimetric and aerial mapping, subsurface utility locating (quality level 'B'), geotechnical investigation and environmental field work for the additional area. According to existing survey plat data, the existing trail resides on school and private property, therefore BHI will also provide survey services to obtain property boundaries and produce legal easement exhibits and descriptions, two (2), signed by NMPLS and/or process & integrate County developed easement exhibits and descriptions into provided survey documentation. Design will tie to the existing infrastructure, and incorporate the newly designed Pinon Elementary School improvements. Los Alamos Public School or representative will provide design files or as-builts for any improvements that supersede BHI field survey. BHI will incorporate the new design into the overall Construction Documents for the project, including trail layout/alignment, pavement design, trail plan & profiles, grading and drainage plans, SWMP/Erosion control plans, construction details, specifications and cost estimates, as well as provide overall project management, public meeting presentation, utility coordination and permitting, in accordance with the current contract. This portion of trail will be developed and broken out into a separate bid alternative in the construction documents.
- 2 The original scope of services for cultural resources for this project assumed a negative finding and filling out a NIAF to complete the cultural component of the environmental compliance tasks. However, during the site survey, our archaeologists found a concentration of artifacts of sufficient number and proximity that it meets the criteria for an archaeological site. Also, during the site survey four buildings were identified within sufficient proximity to the project area that are old enough to potentially qualify for the National Register of Historic Places (NRHP). Although it is likely that the project will not adversely affect these buildings and the archaeological site, in order to make that determination, they have to be fully documented and analyzed in a positive finding report along with the required associated forms for each one. To complete this work, our archaeologists will go back out to the project area and document them, then prepare a positive finding Cultural Resource Report and the requisite associated forms. Survey and documentation of the additional trail alignment defined in item 1 above is also included if approved.
- 3 BHI will provide additional design services to realign the existing trail on the south side of NM4, approximately 670 LF. The new alignment will follow the existing barrier wall on the south side of NM4 and require slope stability or landscape wall as needed for grading tie backs and handrailing integrated onto the existing barrier wall. BHI subconsultant will provide geotechnical investigation for the additional area including borings and exploratory drilling and sampling operations for subsurface conditions, slope stability and wall recommendation. Design will tie to the existing infrastructure. BHI will incorporate the new design into the overall Construction Documents for the project, including trail layout/alignment, pavement design, trail plan & profiles, grading and drainage plans, SWMP/Erosion control plans, construction details, specifications and cost estimates, as well as provide overall project management, utility coordination and permitting, in accordance with the current contract.



August 14, 2024

Courtyard I  
7500 Jefferson St. NE  
Albuquerque, NM  
87109-4335

[www.bhinc.com](http://www.bhinc.com)

voice: 505.823.1000  
facsimile: 505.798.7988  
toll free: 800.877.5332

Keith Wilson, PTP  
Project Manager  
Los Alamos County Public Works  
1000 Central Ave #160  
Los Alamos, NM 87544

Re: **NM4 Crossing and Trail Project**

Dear Mr. Wilson:

Bohannon Huston, Inc. (BHI) is pleased to submit this proposal for professional engineering services for Los Alamos County NM4 Crossing and Trail Project under agreement AGR23-52a.

The scope of services, including design schedule, is detailed in the attached Scope of Work, Exhibit A. The manhour and fee estimate for each Task are listed in Exhibit B, also enclosed. The fees are based on the agreed-upon rates in our current Services Agreement, effective May 3, 2023.

If this proposal is acceptable, please provide us with a written work authorization in accordance with our Incorporated County of Los Alamos Services Agreement.

We look forward to working with you on this project. If you have any questions, please don't hesitate to contact me at (505) 823-1000.

Sincerely,



Jared M Lee  
Senior Vice President

Enclosures

cc: Eric Ulibarri, LAC  
Kurt Thorson, BHI  
Denise Aten, BHI

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

August 14, 2024

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Keith Wilson, PTP  
Project Manager  
Los Alamos County Public Works  
1000 Central Ave #160  
Los Alamos, NM 87544

Re: **NM4 Crossing and Trail Project**

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Sincerely,



Jared M Lee  
Senior Vice President

Enclosures

cc: Eric Ulibarri, LAC  
Kurt Thorson, BHI  
Denise Aten, BHI

Engineering ▲

Spatial Data ▲

Advanced Technologies ▲

# LOS ALAMOS COUNTY NM4 CROSSING AND MULTI-USE TRAIL IMPROVEMENTS

## EXHIBIT A—DESIGN SERVICES SCOPE OF WORK

### TASK 0—PROJECT MANAGEMENT AND COMMUNICATION

**Objective:** This task consists of communications, coordination, meetings, and project administration and management during the project. Engineer will conduct a project kick-off meeting with the County and other stakeholders (including NMDOT D5) to obtain additional project information, County, and stakeholder input, and to develop critical success factors for design and implementation of the Project. The project kickoff meeting will also serve as a design workshop with the Engineer team, County engineering, and operations staff. Using the available information as the preliminary basis of design, we will go over the major design elements, and the County's design preferences for the project.

BHI will also meet with the County in bi-weekly conference calls to keep the County informed of the project's progress and obtain additional input from the County as necessary. Bi-weekly conference calls will focus on action items and items critical to the project schedule. The Engineer will also provide County with monthly progress reports summarizing project technical status. These reports will include progress made, problems resolved, anticipated problem areas, recommended solutions, and upcoming activities.

Other project management activities that will be performed under this task are management of subcontracts, project accounting, scheduling and budget tracking, and maintenance of project files.

#### **Assumptions:**

- The duration of project management includes design phase of 9 months.
- The project kickoff meeting will be held at the County's offices with County staff and Engineer's project manager. Other team members, including project subconsultants may attend virtually.
- Design phase bi-weekly progress meetings will be conducted via virtual meeting.
- Monthly progress reports will be provided with monthly invoices.
- Additional meetings (including review meetings) have been included in other tasks or will be additional services.
- Consultant will use BHI Project Tracker site for project data and deliverable management.

#### **Deliverables:**

- Kick-off meeting agenda, presentation, and meeting minutes
- Project Management plan, including initial schedule and project contacts
- Monthly progress reports – delivered via e-mail
- Monthly progress meeting agenda and minutes
- Monthly invoices for Engineer's services

## TASK 1— LOCATION STUDY

### SUBTASK 1A— ALIGNMENT STUDY

**Objective:** Work under this Task includes initial traffic analysis and conceptual alignment study for the project. Engineer will perform a pedestrian crossing warrant for the new at-grade mid-block crossing of NM-4 between La Vista Drive and Sherwood Blvd to establish location and crossing type recommendations, as well as lane reduction and reconfiguration to reduce the westbound direction of NM4 from the existing 2 lanes to 1.

Engineer will also develop a conceptual alignment of proposed trail network along NM4 and within the Pinon Park, to include approximately 2,500ft of new multi-use trail alignment and approximately 3,500ft of reconstructed multi-use trail alignment per attached project exhibit.

The above will be summarized in an NMDOT Compliant Scoping Report.

#### Assumptions:

- Existing Traffic data will be required and provided by the County.

#### Deliverables:

- Scoping report, including traffic analysis and conceptual alignment plan.

### SUBTASK 1B— SITE INVENTORY AND DATA ACQUISITION

**Objective:** Work under this Task includes survey and mapping to develop a base map for project design and analysis, as well as environmental field work and documentation as required by NMDOT for clearance.

**Survey and Mapping** BHI will provide aerial mapping of the project site, approximately 31 acres, as shown in the attached exhibit. Approximately eight (8) control points with aerial target panels will be established within the project area. This control is to be used to adjust the aerial mapping and is intended to be used by any subconsultant during design, as well as be used by the contractor's surveyor during construction. A NMDOT-format control map will be prepared, to be inserted in the plan set. This control map will include the attributes of each point set, the points' coordinates, and a list of the project coordinate system's parameters and datums referenced. After the aerial mapping flight, a BHI survey technician will return to the site to remove the aerial target paneling from the control points. A complete planimetric survey with topographic survey will be produced, as well as ortho imagery.

BHI Surveyors will provide a Right-of-Way (ROW) Determination and Certification. It is assumed that the Los Alamos County Surveyor will provide all plats and deeds needed which describe the boundary of each parcel along the project corridor. These documents will be used to prepare a field package including a reference drawing and search coordinate point file. A BHI survey technician will use these files to locate right-of-way and property corner monuments. The collected boundary evidence will then be analyzed by a NM-licensed surveyor to determine the location of the right-of-way within the project limits. A right-of-way certification letter will be drafted by the surveyor, stating that the design is located within the existing right-of-way. The letter will follow NMDOT, T/LPA guidance and template.

**Environmental Investigation and Documentation** BHIs subconsultant will provide Environmental Services for the project. An Environmental Level-of-Effort Letter will need to be prepared and submitted to the NMDOT Environmental Bureau to confirm field surveys and reports required for the project. The current scope assumes biology, cultural, and HAZMAT will be required, but will exclude any tasks ultimately not required by the NMDOT Environmental Bureau

#### Assumptions:

- Existing ROW documents exist, and adjacent individual deeds are not required to define the existing ROW. ROW monuments/property corners along the corridor of interest are existent. No title work will be required or provided.

- Work will be conducted within existing County ROW or property and access will be provided. This scope of work does not include any right-of-entry requests or coordination of right-of-way corner monumentation. These services can be provided separately if determined to be necessary.
- No additional ROW or property acquisition is expected as part of the project. Exhibits or acquisition services are not included in this scope of work. It is assumed the property ownership of the Pinon Park by Los Alamos County will suffice for R/W certification and evidence of publicly dedicated R/W will not be required.
- A Biological Evaluation may be required by the NMDOT Environmental Bureau, although no protected species are anticipated in the project area or in the immediate vicinity of the project area.
- A Class III Cultural Resource survey with associated NIAF forms will be required by the NMDOT Environmental Bureau.
- An Initial Site Assessment (ISA) Determination Letter will be required as part of the Environmental Level-of-Effort submission.
- No hazardous materials are located within the project area and a full ISA will not be required.
- No noise analysis or air quality reports will be required for the project.
- No Wild and Scenic Rivers are present in the project area.
- The project will not include any activities or components that would require the preparation of an Environmental Assessment.
- No historic buildings will require recording.
- No more than 5 maps for the Cultural Resource documentation will be required.
- No new Archaeological Sites and up to five (5) Isolated Occurrences may be discovered during the Class III survey.
- No historic sites or districts are within the viewshed of the project area.
- Two maps will be required for the Biological Evaluation.
- No wetlands are located within the project area.
- NEPA documentation will consist of completion of an NMDOT Categorical Exclusion Checklist with two (2) maps.

#### Deliverables:

- NMDOT-format Control Map certified by a New Mexico Professional Land Surveyor describing the survey control set onsite, including field methodology, coordinate system parameters, and datums referenced.
- NMDOT Right-of-way certification letter
- Plats, deeds of record, site as-builts or other documents as may be obtained during the course of the survey
- ACAD Civil 3D topographic survey drawing, with an .xml surface in BHI engineering standards
- Full Cultural Resource Report to NMDOT Stds
- Biological Evaluation to NMDOT Stds
- ISA Determination Letter
- Categorical Exclusion Checklist

#### SUBTASK 1C— PUBLIC INVOLVEMENT

**Objective:** The BHI team, in conjunction with the County will prepare and present initial project scope and objectives to the public. BHI will prepare visual aids in support of the meeting. BHI staff will also attend to help facilitate and present information as needed. BHI will summarize public input for consideration of project design development and environmental compliance.

#### Assumptions:

- County will be responsible for meeting location, advertisement and notification and cost associated with these items. BHI will create presentation, including any visual aids to support the meeting. County will be responsible for visual aid production or cost associated with production of physical materials. BHI will provide at least one (1) in-person staff to facilitate meeting, with others attending virtually as appropriate.

#### Deliverables:

- Public Meeting visual graphics and PowerPoint presentation. Public Meeting summary.

## TASK 2— PRELIMINARY DESIGN PHASE

### SUBTASK 2A— SUPPLEMENTAL SITE DATA ACQUISITION

**Objective:** BHIs subconsultant will provide additional site inventory and data for the project.

***Subsurface Utility Engineering (SUE)*** Our SUE subconsultant, Cobb, Fendley & Associates, Inc. (CobbFendley), will provide SUE services for the project.

CobbFendley will identify utility owners affected by the project and perform record research with each to obtain the most up to date as built information available. Upon receipt of all requested information, CobbFendley's SUE Technicians will perform field investigations to identify above ground visible features and collect inverts on all storm and sanitary manholes. Information obtained from the utility owners includes roadway owner utility permits as available, one-call information, utility as-builts, construction drawings, verbal recollections, conduit maps etc.

CobbFendley will utilize the initial contact with utility owners to informally notify them of the project and begin building a utility coordination contact list.

Included with the SUE Level C/D scope of work is the opening of all accessible Storm and Sanitary manholes & drop inlets to obtain inverts, pipe sizes and materials, when possible. Using the collected record information and identified utility surface features, CobbFendley's SUE Technicians will perform field investigations to mark the horizontal location of toneable subsurface utilities. Once marked, CobbFendley will survey all utilities and combine this data with collected record info. Ground Penetrating Radar (GPR) will be utilized to attempt to accurately identify these non-traceable utilities. To limit impacts to traffic, GPR will not be utilized in the main travel lanes, but instead focus on specific areas of the right of way where record information and field investigations indicate the presence of a non-toneable utility.

CobbFendley will correlate utility owner records with designating data and resolve discrepancies using professional judgment. CobbFendley will create an existing utility drawing (or update the existing utility plan, as applicable) using the designated utilities, utility owner names, quality levels, line sizes and subsurface utility locate (test hole) locations if applicable. It is understood by both CobbFendley and the Client that the line sizes of designated utility facilities detailed on the deliverable are from the best available records and that an actual line size is normally determined from a test hole through vacuum excavation. A note will be placed on the designate deliverable that states "lines sizes are from best available records". This information will be provided in AutoCAD format. All surveying associated with SUE services will be completed by CobbFendley.

***Geotechnical Investigation and Recommendations*** Our geotechnical subconsultant, GeoMat Inc, will provide geotechnical service to characterize and evaluate subsurface conditions at the proposed project site and to provide geotechnical recommendations for subgrade preparation and pavement section options.

GeoMat will perform seven (7) exploratory borings at approximate 1,000-foot intervals along the proposed alignment, as well as, one boring at the potential culvert/bridge crossing. The trail borings will be advanced to a depth of approximately 10 feet below existing grade and the culvert/bridge boring will be drilled to an approximate depth of 15 feet below existing grade using a truck-mounted drill with solid and/or hollow-stem auger. The borings may be terminated at shallower depths should practical auger refusal be encountered on



rock, strongly cemented materials, or other obstructions. GeoMat will obtain representative bulk samples of the soils for laboratory testing.

GeoMat will perform laboratory tests on soil samples to evaluate engineering properties that may influence project performance. Gradation and Atterberg limits tests will be performed on each sample obtained to verify visual classifications made in the field. A correlated R-value will be assigned to the samples based on the results of the gradation and plasticity index tests.

GeoMat will prepare an engineering report presenting the results of exploratory drilling, laboratory testing, and engineering analyses to include the following:

- Logs of the test borings, a site plan showing their locations, and a description of procedures and equipment used during subsurface exploration.
- A description of the geotechnical profile and depth to groundwater, if encountered, beneath the alignment.
- Results of laboratory tests and a description of test methods.
- Recommendations for subgrade preparation, fill construction, and special site treatments.
- Asphalt pavement structure sections and recommendations including any potential reuse of existing asphalt as base course.
- Earthwork recommendations for the culvert/bridge crossing location as applicable.

#### Assumptions:

- Project alignment is readily accessible by a two-wheel-drive, truck-mounted drill rig and support vehicles and right of entries will be provided as needed.
- The County will supply all available GIS data.
- No Utility Impacts, other than potential manhole and valve cover adjustments, are anticipated. SUE Level D/C/B Services are included in the current scope of work. If Level A (potholes) are determined to be required, they can be provided as an additional service.

#### Deliverables:

- Draft and Final Geotechnical Report
- ASCE 38-22 certified utility mapping sealed by a Registered Professional attesting to the utility depictions based on the ASCE 38-22 standard and electronic 2D CAD format.

#### SUBTASK 2B: PRELIMINARY DESIGN (30 PERCENT DESIGN PACKAGE)

**Objective:** BHI will prepare preliminary plans for new multi-use trail design, minor roadway elements, pedestrian crossing and signal, as well as grading and drainage components. BHI will prepare preliminary (30%) design level drawings and framework for front end and technical specifications in accordance with NMDOT T/LPA project requirements. The 30% design submittal will include:

- Construction Drawings including,
  - Title Sheet, Project Data, Plans Index
  - General Notes
  - Project Control and Survey Sheet
  - Typical Sections
  - NMDOT compliant summary of quantities, bid items schedules and surfacing schedule
  - Removal Plan
  - Trail Plan and Profile
  - Signage and Striping Plan

- Pedestrian Signal Plans
- Grading and Drainage Plans
- Drainage Crossing Structure Plan and Details
- Intersection and Curb Ramp Detail Sheets
- Grading, Erosion and Sediment Control Plans and Details
- Maintenance of Traffic Plans for work along NM4 and applicable trail closure signs as necessary with in the Park boundary. Suggested Sequence of Construction.
- Miscellaneous Construction Details
- Standard Drawing List
- Engineer's Estimate of Construction Cost

BHI will prepare a Drainage Memorandum to summarize the drainage analysis and approach for the project.

BHI will coordinate and facilitate review meeting with County and NMDOT. (Including preparation of meeting agenda and minutes)

#### Assumptions:

- Design will be based on information provided in Design Scope of Work developed by the County and as modified during the alignment study– see supporting documents attached for additional details.
- A HAWK signal is assumed to be recommended for trail crossing at NM-4 and design is included in this scope.
- Trail lighting is excluded from the project design, with the exception of the lighting of the mid-block crossing is required.
- Landscape Architecture or irrigation plans are not included. Mitigation of existing trees impacted by construction and restoration of existing will be included in design.
- No property ownership or mapping will be required, the County Surveyor will aid with all property research as needed.
- Drainage analysis will rely on current hydrologic and Hydraulic analysis developed by BHI as part of the adjacent school project. This scope includes hydraulic sizing of proposed trail crossing only.
- Coordination meetings will likely be needed with the following County Departments, Public Utilities and Community Services Department. The County Project Manager will coordinate with all interested parties throughout the design development.

#### Deliverables:

- Preliminary (30%) Construction Drawings for FIR review
- Preliminary Engineer's Estimate of Construction Cost in Excel (.xcl) and Adobe PDF format.
- Drainage Memorandum
- Review meeting minutes and comment matrix

#### SUBTASK 2C – PUBLIC INVOLVEMENT

**Objective:** The BHI team, in conjunction with the County will prepare and present project design. BHI will prepare visual aids in support of the meeting. BHI staff will also attend to help facilitate and present information as needed. BHI will summarize public input for consideration of continued project design and environmental compliance.

#### Assumptions:

- County will be responsible for meeting location, advertisement and notification and cost associated with these items. BHI will create presentation, including any visual aids to support the meeting. County will be



responsible for visual aid production or cost associated with production of physical materials. BHI will provide at least one (1) in-person staff to facilitate meeting, with others attending virtually as appropriate.

**Deliverables:**

- Public Meeting visual graphics and PowerPoint presentation. Meeting summary.

### TASK 3 – FINAL DESIGN PHASE

#### TASK 3A: PRE-FINAL DESIGN (90 PERCENT DESIGN PACKAGE)

**Objective:** Based on the 30% design, internal quality review, and the County’s review comments, the Engineer will further develop the design to Pre-Final (90%) level. The major activities included in this subtask include preparation of 90% design level drawings and specifications. The 90% design level plans and specifications will be developed as a “Pre-Final” set for final quality and agency review. The 90% design submittal will include:

- Construction Drawings (90% Plans)
- Technical Specifications
- NMDOT or County standard project provisions and project special provisions
- Engineer’s Estimate of Construction Cost

BHI will coordinate and facilitate review meeting with County and NMDOT. (Including preparation of meeting agenda and minutes)

**Utility Coordination/Certification:** BHI subconsultant CobbFendley will provide Utility Coordination services in order to complete a Utility Certification for the project. Work will be performed in accordance with applicable County / NMDOT requirements.

**Utility Conflict Analysis:** Upon completion of all necessary research and designating services, and receipt of the 30% design plans from BHI, CobbFendley will determine to what extent the proposed improvements will impact the existing utilities and prepare a report outlining conflicts and, if necessary, recommend an upgrade to the current SUE Quality Level (i.e., recommendation of SUE Quality Level A Test Holes).

**Utility Process Coordination for NMDOT Utility Certification:** Upon completion & receipt of 30% design plans from BHI, CobbFendley will facilitate a 30% Utility Alert meeting via certified mail with return receipts. The purpose of this meeting will be to alert utilities to the project, inform them of the Utility Coordination/Permitting process, identify project milestones and the corresponding deadlines for receipt of utility information, request Impact/No Impact statements and easement interest information from each utility owner and ensure the utilities identified in 30% planset are complete and accurate. CobbFendley will check completeness of ROW maps and provide BHI with easement details following receipt of utility owner easement information.

CobbFendley will facilitate a Utility Coordination meeting and send approved “Authorization to Engineer” letters and plans to Utility Owners concurrent with the Utility Coordination meeting. CobbFendley will conduct field review meetings with Utility Owners as applicable for identified Impacts.

CobbFendley will then obtain Utility Relocation Package checklist items, as currently required by County or NMDOT, from Utility Owners that indicate they are impacting or conflicting with the project and submit to BHI. A certification tracking spreadsheet for distribution regarding documentation completion will be maintained and provided. CobbFendley will confirm utility feedback from information obtained in meetings complies with County/NMDOT requirements and is translated into the final Certification and NTC statements.

CobbFendley will prepare a draft Utility Certification letter & Notice to Contractor for the project for inclusion in final clearance request.

**Assumptions:**

- Standard Drawings and Specifications will be referenced where applicable, including County and NMDOT Standard Drawings and Specifications.

- BHI will assist the County in development of the contract documents by providing non standard technical specifications or special provisions. It is assumed the County will utilize their standard bidding boiler plate and will assemble standard documents such as bid advertisement form, contractor requirements for bid bonds and warranty etc.
- Structural Analysis or Design is not included. Retaining walls will be less than 3 feet in height and not require structural design. Pre-Engineered Standard Drawings for drainage crossings will be used.
- All improvements will be within County property and easements or ROW. Acquisition is not necessary.
- Consultant does not have the authority to negotiate or make final determinations of reimbursable or non-reimbursable facilities, costs, joint use agreements or utility adjustment agreements. This will be County responsibility.

**Deliverables:**

- Final (90%) Construction Drawings for FOR review
- Technical Specifications in Word (.doc) and Adobe PDF format
- Engineer's Estimate of Construction Cost in Excel (.xcl) and Adobe PDF format.

**SUBTASK 3B – PERMITTING**

**Objective:** The Engineer will provide permitting coordination and final clearance requests from NMDOT services during the pre-final design phase.

**Assumptions:**

- BHI will submit NMDOT ITS, Railroad, Utility and Right-of-Way certification letters in accordance with the current NMDOT Tribal/Local Government (T/LPA) Handbook procedures and standard request form templates
- NMDOT Workzone Checklist and PSE Checklist will be prepared for PSE with NMDOT
- NMDOT D5 is supportive of the project and will need to be coordinated with throughout the design development to ensure the County can obtain the NMDOT ROW certification. NM4 is within NMDOT ROW. Pinon Park is County Property under the purview of the Community Services Department. The trail segment along the west side of Pinon School is on Los Alamos Public Schools property and they are supportive of the project.
- Drainage design will achieve a no-rise condition and CLOMR/LOMR is not required. FEMA No-Rise letter will be prepared and coordinated with the County Floodplain manager for approval.
- Any required permitting fees will be paid by the County

**Deliverables:**

- Certification Letters
- FEMA No-Rise Letter

**TASK 3C: FINAL PS&E (100 PERCENT DESIGN PACKAGE)**

Based on the 90% design, internal quality review, and the County's review comments, the Engineer will further develop the design to 100% level. The major activities included in this subtask include preparation of bid ready drawings, tabulation of quantities and final specifications. Minor modifications will be incorporated into the "Final" set used for bidding.

**Assumptions:**

- Major modification or design revisions at this stage will require additional service requests.
- Bid Alternatives or multiple phased plans are not include in this scope.

**Deliverables:**

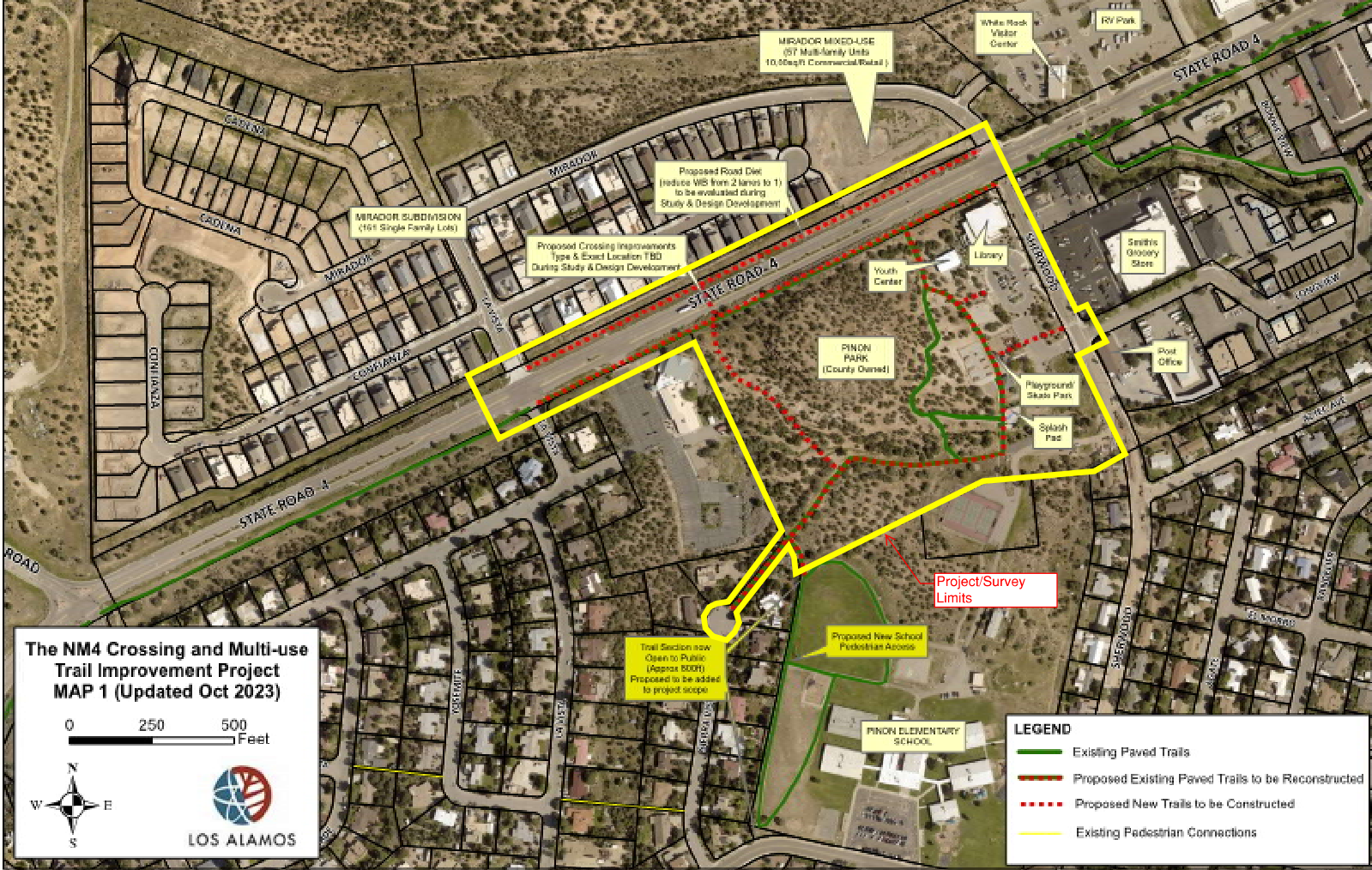
- Stamped final (100%) Construction Documents in AutoCAD 2016 or newer, Word (.doc), and Adobe PDF format.
- Final Technical Specifications in Word (.doc) and Adobe PDF format
- Engineer's Estimate of Construction Cost and Bid Form in Excel (.xcl) and Adobe PDF format.

**TASK 4 – BIDDING PHASE SERVICES/ ENGINEERING SERVICES DURING CONSTRUCTION (EXCLUDED)**

Bidding and engineering services during construction are excluded from the current proposal and to be determined once construction contract has been awarded. Project bidding is expected to be conducted utilizing the County's Procurement Department.

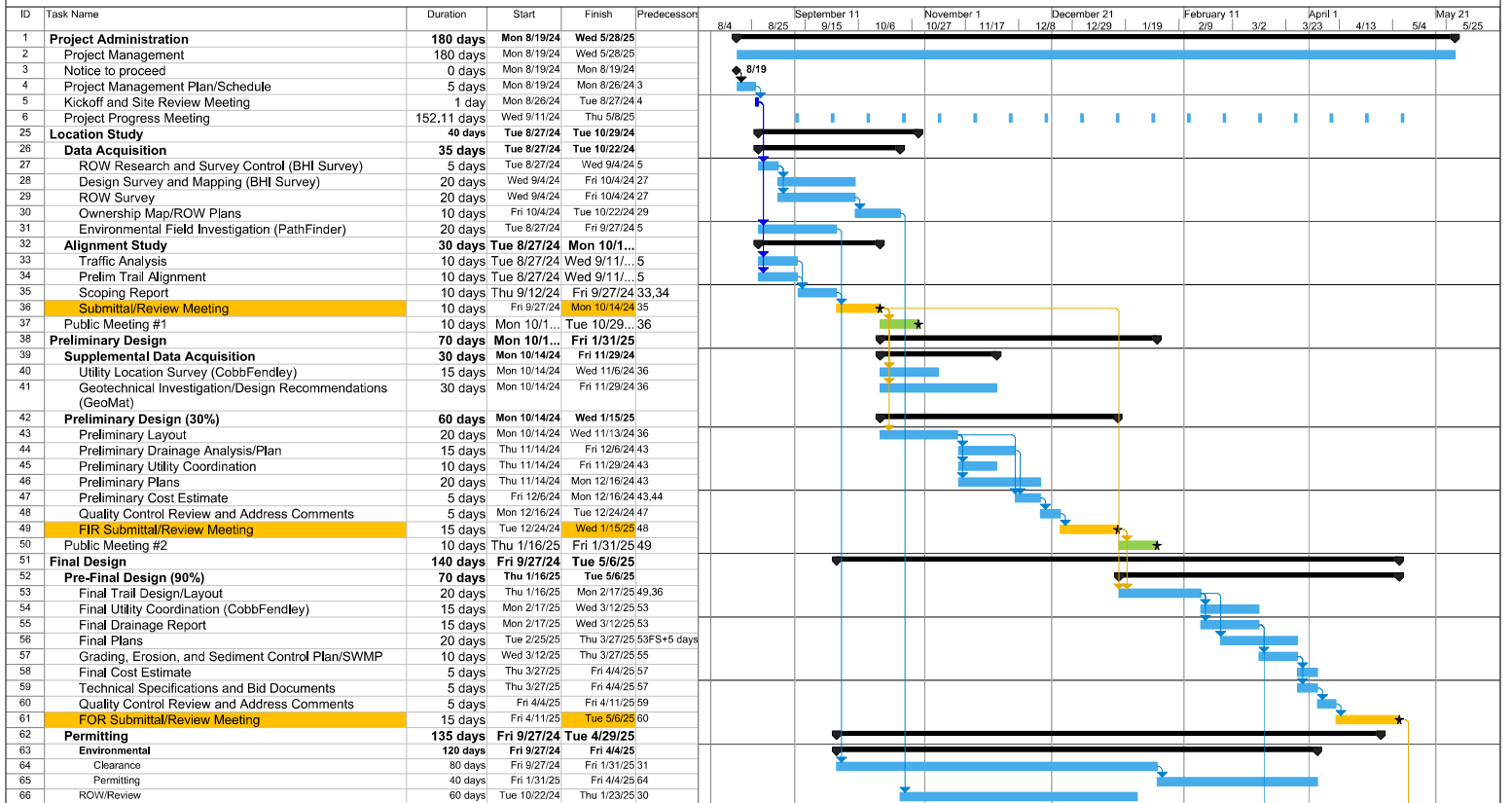
**SCHEDULE**

Project will be completed following the attached schedule with design services to be completed no later than May 31, 2025, and will be contingent on County and NMDOT review periods.



Los Alamos County - NM4 Crossing and Multi-Use Trail Improvements

Bohannon Huston



Project: LAC NM4 Trail_Schedule.mpp Date: Fri 8/9/24	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Progress		
	Split		External Tasks		Inactive Summary		Manual Summary		Deadline		
	Milestone		External Milestone		Manual Task		Start-only				
	Summary		Inactive Task		Duration-only		Finish-only				

Los Alamos County - NM4 Crossing and Multi-Use Trail Improvements

Bohannon Huston

ID	Task Name	Duration	Start	Finish	Predecessors	8/4	8/25	September 11	9/15	10/6	November 1	10/27	11/17	December 21	12/8	12/29	1/19	February 11	2/9	3/2	April 1	3/23	4/13	5/4	May 21	5/25
67	Floodplain Permit (No-Rise)	30 days	Wed 3/12/25	Tue 4/29/25	55																					
68	PS&E/Final Plans/Clearance Letters	15 days	Tue 5/6/25	Thu 5/29/25	61																					
69	Authorization to Bid	20 days	Thu 5/29/25	Tue 7/1/25	68																					
70	Public Meeting #3	10 days	Tue 5/6/25	Wed 5/21/...	61																					

Project: LAC NM4 Trail\_Schedule.mpp  
Date: Fri 8/9/24

Task

Split

Milestone

Summary

Project Summary

External Tasks

External Milestone

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

Progress

Deadline

Page 2

**EXHIBIT B - DESIGN SCOPE FEE**

**Name of Project:** LOS ALAMOS COUNTY NM4 Crossing and Multi-Use Trail Improvements

**Client:** LOS ALAMOS COUNTY

**Principal-in-Charge/ PM, Des. Eng:** Jared Lee

**Date of proposal:** REV 8/14/2024

**Prepared by:** Jared Lee

**Approved by:** \_\_\_\_\_

Task / Activity	# of Sheets	Engineer 7, PIC	Technical Manager 6, PM	Engineer 6, PE	Engineer 5	Eng Tech 6	Engineer 4	Engineer 3	Engineer 2	Engineer 1	Planner 7	Planner 2	Admin Asst 5	Subconsultant	Other Groups (Survey, Structures, Construction)	Reimbursable Expenses	Task Sub-Totals	
																	Per-Hrs	Cost
Hourly Rate:		\$ 259	\$ 232	\$ 232	\$ 189	\$ 124	\$ 167	\$ 145	\$ 124	\$ 108	\$ 248	\$ 113	\$ 102					
<b>TASK 0: Project Management &amp; Communication</b>	<b>35</b>				<b>1</b>	<b>74</b>			<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>11</b>	\$ -	\$ -	\$ 650.00	<b>127</b>	<b>\$ 24,309.00</b>
Client Kick-Off Meeting / Site Visit	4					14										\$ 650.00	18	\$ 4,024.00
Internal Kick-Off	2				1	2			2		1	1	2				13	\$ 2,070.00
Bi-Weekly Teleconference Coordination (18 total)	18					18											36	\$ 7,668.00
Project Management Plan/Schedule	2					4											6	\$ 1,186.00
Project Management and Documentation (9 months)	9					36							9				54	\$ 9,261.00
<b>TASK 1: Location Study</b>	<b>18</b>			<b>4</b>	<b>26</b>	<b>26</b>			<b>40</b>		<b>12</b>	<b>20</b>		\$ 22,365.00	\$ 28,000.00	\$ 150.00	<b>144</b>	<b>\$ 75,039.00</b>
<b>TASK 1A: Alignment Study</b>	<b>4</b>			<b>4</b>	<b>26</b>	<b>18</b>			<b>40</b>					\$ -	\$ -	\$ -	<b>90</b>	<b>\$ 14,510.00</b>
Traffic Counts (Provided by County)																		\$ -
Pedestrian Crossing Warrant					6												6	\$ 1,134.00
NM4 capacity/lane configuration analysis					12												12	\$ 2,268.00
Preliminary Trail Alignment (6,000 LF)	2					8			24								34	\$ 4,830.00
Scoping Report	2			4	8	8			16								38	\$ 6,278.00
<b>TASK 1B: Site Inventory and Data Acquisition</b>	<b>4</b>					<b>10</b>					<b>4</b>			\$ 19,605.00	\$ 28,000.00	\$ -	<b>18</b>	<b>\$ 51,303.00</b>
Design Survey and Mapping (BHI Survey)	2					6								\$ -	\$ 28,000.00		8	\$ 29,520.00
Environmental Investigations and Documentation (Pathfinder)	2					4					4			\$ 19,605.00			10	\$ 21,783.00
<b>TASK 1C: Public Involvement</b>	<b>8</b>										<b>8</b>	<b>20</b>		\$ 2,760.00	\$ -	\$ 150.00	<b>36</b>	<b>\$ 9,226.00</b>
Public Meeting 1 Preparation	4										4	12		\$ 2,760.00			20	\$ 6,144.00
Public Meeting 1 Attendance/Presentation	4										4	8				\$ 150.00	16	\$ 3,082.00

**EXHIBIT B - DESIGN SCOPE FEE**

Name of Project:		LOS ALAMOS COUNTY NM4 Crossing and Multi-Use Trail Improvements												Date of proposal:		REV 8/14/2024		
Client:		LOS ALAMOS COUNTY												Prepared by:		Jared Lee		
Principal-in-Charge/ PM, Des. Eng:		Jared Lee												Approved by:		Inits.		
Task / Activity	# of Sheets	Engineer 7, PIC	Technical Manager 6, PM	Engineer 6, PE	Engineer 5	Eng Tech 6	Engineer 4	Engineer 3	Engineer 2	Engineer 1	Planner 7	Planner 2	Admin Asst 5	Subconsultant	Other Groups (Survey, Structures, Construction)	Reimbursable Expenses	Task Sub-Totals	
																	Per-Hrs	Cost
Hourly Rate:		\$ 259	\$ 232	\$ 232	\$ 189	\$ 124	\$ 167	\$ 145	\$ 124	\$ 108	\$ 248	\$ 113	\$ 102					
TASK 2: Preliminary Design Phase		23			10		80			188	12	20	2	\$ 30,107.60	\$ -	\$ 150.00	335	\$ 77,208.60
TASK 2A. Site Inventory and Data Acquisition		2					6							\$ 20,420.00	\$ -	\$ -	8	\$ 21,940.00
Site Inventory and Data Acquisition																		\$ -
Subsurface Utility Engineering (SUE)		1					4							\$ 12,470.00			5	\$ 13,397.00
Geotechnical Investigations/Recommendations (GeoMat)		1					2							\$ 7,950.00			3	\$ 8,543.00
TASK 2B. Preliminary Design (30%)		13			10		74			188			2	\$ 6,927.60	\$ -	\$ -	287	\$ 45,050.60
Trail Design																		\$ -
Preliminary Layout/Horizontal Alignment		2					4			16							22	\$ 2,914.00
Vertical Alignment/Profile/Slope Requirements		2					6			24							32	\$ 4,112.00
Preliminary Drainage Analysis		2			4		12			20							36	\$ 5,438.00
Preliminary Utility Coordination		1					2							\$ 6,927.60			3	\$ 7,520.60
Preliminary Plans																		
Cover Sheet	1						1			2							3	\$ 383.00
Site Vicinity Map, Site Location, Sheet Index	1						1			2							3	\$ 383.00
General Notes and Legend	1						1			2							3	\$ 383.00
General Site Plan/Control	1						1			2							3	\$ 383.00
Typical Sections	2						2			6							6	\$ 982.00
Removal Plan	2						3			12							15	\$ 1,797.00
Preliminary Trail PNP	8						8			24							32	\$ 3,928.00
Preliminary Signage and Striping Plan	2						4			12							16	\$ 1,964.00
Preliminary HAWK Signal Plan	1						4			8							12	\$ 1,532.00
Construction Details	2						2			6							8	\$ 982.00
Preliminary Drainage Plans	2						4			12							16	\$ 1,964.00
Preliminary Drainage Crossing Plans	2						5			14							19	\$ 2,347.00
Preliminary Cost Estimate							6			16							22	\$ 2,730.00
Quality Control Review and Address Comments		4			6		4			8							22	\$ 3,702.00
FIR Submittal/Review Meeting (virtual)		2					4			2			2				10	\$ 1,606.00
TASK 2C. Public Involvement		8									12	20		\$ 2,760.00	\$ -	\$ 150.00	40	\$ 10,218.00
Public Meeting 2 Preparation		4									8	12		\$ 2,760.00			24	\$ 7,136.00
Public Meeting 2 Attendance/Presentation		4									4	8				\$ 150.00	16	\$ 3,082.00



**EXHIBIT B - DESIGN SCOPE FEE**

**Name of Project:** LOS ALAMOS COUNTY NM4 Crossing and Multi-Use Trail Improvements

**Client:** LOS ALAMOS COUNTY

**Principal-in-Charge/ PM, Des. Eng:** Jared Lee

**Date of proposal:** REV 8/14/2024

**Prepared by:** Jared Lee

**Approved by:**

**inits.**

Task / Activity	# of Sheets	Engineer 7, PIC	Technical Manager 6, PM	Engineer 6, PE	Engineer 5	Eng Tech 6	Engineer 4	Engineer 3	Engineer 2	Engineer 1	Planner 7	Planner 2	Admin Asst 5	Subconsultant	Other Groups (Survey, Structures, Construction)	Reimbursable Expenses	Task Sub-Totals	
																	Per-Hrs	Cost
Hourly Rate:		\$ 259	\$ 232	\$ 232	\$ 189	\$ 124	\$ 167	\$ 145	\$ 124	\$ 108	\$ 248	\$ 113	\$ 102					
<b>TASK 3: Final Design Phase</b>		31			12		104			216			14	\$ 4,618.40	\$ -	\$ -	377	\$ 57,039.40
<b>TASK 3A. Pre-Final Design (90%)</b>		13			12		74			164			8	\$ 4,618.40	\$ -	\$ -	271	\$ 41,139.40
<b>Trail Design</b>																		
Final Layout/Horizontal Alignment Adjustments		1					4			10							15	\$ 2,007.00
Vertical Alignment/Profile/Slope Requirements		2					6			14							22	\$ 3,032.00
Final Drainage Analysis/Memo		2			6		12			24			4				48	\$ 6,656.00
Final Utility Coordination							2							\$ 4,618.40			2	\$ 4,952.40
<b>Pre-Final Plans</b>																		
Cover Sheet		1					1			1							2	\$ 275.00
Site Vicinity Map, Site Location, Sheet Index		1					1			1							2	\$ 275.00
General Notes and Legend		1					1			1							2	\$ 275.00
General Site Plan/Control		1					1			2							3	\$ 383.00
Typical Sections		2					2			5							7	\$ 874.00
Removal Plan		2					2			8							10	\$ 1,198.00
Trail PNP		8					6			18							24	\$ 2,946.00
Signage and Striping Plan		2					2			8							10	\$ 1,198.00
HAWK Signal Plan		1					4			6							10	\$ 1,316.00
Construction Details		2					2			6							8	\$ 982.00
Final Drainage Plans		2					4			12							16	\$ 1,964.00
Trail Crossing Plan/Detail		2					4			12							16	\$ 1,964.00
SWMP/Erosion Control Plans		6					4			12							16	\$ 1,964.00
Final Cost Estimate							4			12							16	\$ 1,964.00
Quality Control Review and Address Comments			4		6		4			8							22	\$ 3,702.00
FOR Submittal/Review Meeting			4				8			4							20	\$ 3,212.00
<b>Task 3B. Permitting</b>		8					18			14			6	\$ -	\$ -	\$ -	46	\$ 7,202.00
NM/DOT T/LPA Clearance			6				12			10			4				32	\$ 5,046.00
No Rise Letter			2				6			4			2				14	\$ 2,156.00
<b>Task 3C. Final PS&amp;E (100%)</b>		10					12			38				\$ -	\$ -	\$ -	80	\$ 8,698.00
Incorporate comments into Final Drawings			2				4			12							18	\$ 2,482.00
Produce 100% Stamped Drawings			4				2			6							12	\$ 2,018.00
Final Spec Package			2				2			8							12	\$ 1,716.00
Final Estimate and Bid Tab			2				4			12							18	\$ 2,482.00
<b>TOTAL PROJECT COST (DESIGN - excl. NMGR):</b>		105		4	49		284		42	406	25	41	27	\$ 57,091.00	\$ 28,000.00	\$ 950.00	983	\$ 233,496.00
																NMGR (7.0625%)		\$ 16,490.66
																	<b>TOTAL</b>	<b>\$ 249,986.66</b>
<b>TASK 4: ENGINEERING SERVICES DURING CONSTRUCTION (not Part of this Scope)</b>														\$ -	\$ -	\$ -		\$ -

\*\*estimated task hours and costs are informational only and may vary from actual hours and cost