UTAH DEPARTMENT OF TRANSPORTATION

CONSULTANT SERVICES Solicitation

(Request for Qualifications) (Electronic Submittal Required)



UDOT GENERAL ENGINEERING SERVICES POOL (POOL)

POOL PERIOD JULY 1, 2022 – JUNE 30, 2025

Revised March 4, 2024

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PART ONE

POOL SOLICITATION INTRODUCTION AND SUMMARY

1. Introduction

The Utah Department of Transportation (UDOT) utilizes multiple procurement methods to select consultants for engineering and design related services contracts. All engineering and design related services solicitation and selection methods, through Consultant Services, follow the Brooks Act (USC 40 Chapter 11) and Utah Administrative Rule R907-66 and are qualifications-based selections.

Qualifications-Based Selection (QBS) is a competitive selection process where the owner (UDOT) evaluates firms' qualifications to perform the work based on criteria directly related to the work being requested. The Brooks Act requires the selection of these services based on demonstrated competence and qualifications for the type of professional services required.

Based on the nature of the project and related factors such as anticipated costs, complexity and level of environmental effort, the UDOT Project Manager, in coordination with UDOT Consultant Services, determines the procurement method. The most utilized procurement method is contracting with a consultant from the General Engineering Services Pool.

2. General Engineering Services Pool

The General Engineering Services Pool (Pool) is a pool of prequalified consultants in specific work disciplines. UDOT and Local Governments may consider consultants in the Pool for design and engineering related service contracts. Pool contracts are limited to a specified contract cap from start to completion. The result of this Solicitation determines the pool of qualified consultants in each of the outlined work disciplines.

3. Pool Contract Project Locations Various locations statewide

4. Sources of Funding

Federal, Local, State, or Other

5. Solicitation Administrator

Gaye Hettrick, Consultant Services Manager UDOT Consultant Services P.O. Box 148490 Salt Lake City, UT 84114-8490 801-633-6213 <u>ghettrick@utah.gov</u> (email contact for process or format questions)

6. General Engineering Services Pool – Qualification Process

- a) Consultants must submit a separate Proposal for each work discipline for which they would like to be considered qualified within the UDOT Bonfire procurement platform.
- b) UDOT technical experts will review and evaluate the Proposals based on the criteria within this Solicitation through the Selecting-By-Consent (SBC) Process. SBC is a scoring process that aids the Selection Team in developing a final score and ranking through a collaborative process. The Selection Team scores each weighted criterion by "consent". Consent is defined as the willingness of all Selection Team members to accept a decision reached by a collaborative process.
- c) Each Proposal will receive a final score by UDOT Selection Teams.
- d) UDOT has established a minimum threshold score of 60% of the total points available. If a Proposal receives this threshold score or higher, the consultant will be considered and listed as qualified. If the Proposal receives below the minimum threshold score, the consultant will not be listed as qualified.
- e) Consultant Services will provide a consultant's final scores by email directly to the individual identified as the Pool Submission Contact for Consultant Proposal Submission(s) within the UDOT Bonfire procurement platform.
- f) By June 30th, Consultant Services will post the final pool of qualified consultants list on the <u>Consultant Qualified Pools</u> website.
- g) After the effective date of July 1st, consultants may request access to the Pool Qualified Proposals for review.
- After the effective date, UDOT and Local Governments may consider consultants in the Pool for design and engineering-related service contracts. There are two levels of selection methods from the Pool; Small-Purchase and Request for Pool Letter of Qualifications (RPLOQ).
- i) At the midpoint of the pool period, Consultants will be required to meet the Requalification Certification Requirements to maintain their qualification status.

7. Pool Period

The Pool period is July 1, 2022 through June 30, 2025

8. Requalification Certification Requirement

Consultants will be required to self-certify their firm is still qualified at the midpoint of the Pool period to maintain qualification for the Pool status based on the Utah Procurement

Code (<u>Utah Code 63G-6a-507</u>), see Part Nine Requalification Certification Requirement page for details.

PART TWO

POOL SOLICITATION OVERVIEW

The Utah Department of Transportation is soliciting services identified in Part Eight (Work Disciplines Descriptions, Certifications, and Other Information) of this document. Consultant Services will follow requirements outlined in the <u>Consultant Services Manual of Instruction</u> (MOI) and in this Solicitation.

Solicitation is defined as the document used by UDOT to obtain a Consultant's Proposal.

Proposal is defined as a Consultant's response to UDOT's Solicitation.

1. Consultant Services Electronic Notification Subscription Service UDOT recommends Consultants subscribe to the <u>Consultant Services Electronic</u> <u>Notification Subscription Service</u>. Consultants will only be notified of any updates or changes to this Solicitation through this service and through the UDOT Bonfire procurement platform.

2. Solicitation

This Solicitation follows the request for qualifications processes and procedures outlined herein. Consultant selection for this pool is a Qualifications-Based Selection (QBS) process, where the primary factor in selection is the qualifications-based criteria outlined in Part Seven Scoring Criteria and Evaluation Section, rather than the cost of engineering related services. Cost is a secondary factor after a Consultant is selected from the Pool for a contract and the contract negotiation process begins.

3. Review of the Solicitation Document

Consultants are responsible for reviewing and understanding the content and requirements of the Solicitation. Read and review each section carefully to ensure Proposals meet the outlined requirements. If the Consultant identifies any mistake, error, or ambiguity in the Solicitation during the procurement process, it is the duty of the Consultant to notify the Solicitation Administrator via email.

4. Conflict of Interest

UDOT expects Consultants to act with integrity and professional ethics. When there is a potential conflict of interest, Consultants are required to either not accept the project or disclose the potential conflict to the Consultant Services Manager by submitting a <u>UDOT</u> <u>Conflict of Interest or Unfair Competitive Advantage Submission Form</u> prior to accepting. The Consultant Services Manager will coordinate with the UDOT Conflict of Interest Committee for a determination by UDOT. For additional information, refer to the UDOT <u>Consultant Services Manual of Instruction</u> (MOI).

5. Applicable Federal, State, and Local Regulations

The Consultant will conform to all applicable state and federal regulations.

6. Conditions of Proposal

All costs related to the preparation of a Proposal and any related activities are the sole responsibility of the Consultant. UDOT assumes no liability for any costs incurred by Consultants during the pool development, selection, and contract negotiation processes.

7. Financial Screening

Consultants are required to be financially screened at the appropriate level for the Pool contract limits at the time of contract. For additional information on financial screening requirements, refer to the <u>Consultant Services Manual of Instruction</u> (MOI). The time it takes a Consultant to complete the Financial Screening process varies and therefore UDOT encourages Consultants to submit their <u>Financial Screening Application</u> and associated documentation in a timely manner after notification of qualification for the Pool. Do not include these financial screening documents with your pool proposal submission, please submit them separately.

Contact the Consultant Services Financial Screening Analyst at <u>csscreening@utah.gov</u> for questions related to Financial Screening.

8. Contract Terms and Conditions

It is the Consultant's responsibility to review and understand the applicable UDOT Terms and Conditions identified on the <u>Consultant Services Contract Resources webpage</u>. These terms and conditions will apply to any contract resulting from this Solicitation.

9. Debarment Certification (Contracting)

Federal Regulations require certification by prospective participants (including consultants, subconsultants, and principals) as to current history regarding debarment, eligibility, indictments, convictions, or civil judgments. The selected Consultant will be required to certify in accordance with contract Standard Terms and Conditions on every contract.

10. Right to Cancel or Reject

UDOT reserves the right to cancel the Solicitation at any time when it is in UDOT's best interest. UDOT also reserves the right to accept or reject any or all Proposals submitted in response to the Solicitation.

11. Required Personnel Qualification

The Consultant will be responsible to ensure all personnel proposed for contracts are qualified through training, experience, license, and appropriate certification for the tasks assigned and will have a working knowledge of UDOT standard practices. The qualification requirements for Consultant personnel may be adjusted during the Pool period.

12. Proposing Current or Former UDOT Employees

UDOT's requirement for proposing current or former UDOT employees is as follows:

- If a Consultant proposes a former UDOT employee who officially left UDOT employment prior to the submission date of the Proposal, the Proposal will not be disqualified.
- If a Consultant proposes an individual who has not yet left UDOT employment, even if the employee plans to retire or quit soon, the Proposal will be disqualified.

13. Key Personnel

Key Personnel are those individuals identified in the Proposal as being set forth to effectively manage all aspects of the work in a quality, timely, and efficient manner. Consultant agrees to make proposed personnel or personnel with equivalent qualifications available to complete work on contracts at whatever level a project requires.

- The Consultant may only identify as Key Personnel individuals currently employed by the Consultant within the Proposal.
- The Consultant certifies it legally employs individuals identified in the Proposal on the date of Proposal submission.
- A Proposal that violates any part of this paragraph is not responsive to the Solicitation and may subject the Consultant to suspension or debarment.

14. Individuals Concurrently Employed by Two Firms

Two firms cannot utilize the qualifications of the same employee or individual as Key Personnel for the same work discipline or both firms' Proposals will be considered non-responsive and will be disqualified. Exception 1: If one firm voluntarily withdraws their firm's Proposal, the other firm's Proposal will be considered responsive and will not be disqualified for this reason. Exception 2: If an individual changes employment from one firm to a different firm mid-pool period, and their qualifications are submitted for the new firm for a subsequent interim Proposal submission deadline for the same work discipline, neither firm will be disqualified for this reason.

15. No Sub-consultants

Consultants may not use the qualifications of sub-consultants as part of their Proposal submittal to qualify in a work discipline. If a consultant submits with a sub-consultant, the Proposal will be considered non-responsive and will be disqualified.

16. Key Personnel Change During a Contract

If there is a change in Key Personnel during a contract and UDOT or the Local Government does not approve the change, UDOT reserves the right to cancel the contract and/or reflect the change on the Consultant Project Evaluation.

17. Key Personnel Change for Project Management Work Discipline

If a Pool-qualified Consultant Project Manager leaves a firm during a contract and:

- The firm has another approved Consultant Project Manager, the firm may propose the change in personnel to the UDOT Program Manager for approval.
 - o If the Program Manager approves, an Alternate Staff Transaction must be completed for the contract(s).
- The firm does not have another approved Consultant Project Manager, the contract will be canceled and may be initiated with another firm from the qualified pool list by the UDOT Program Manager.

If a Consultant Project Manager changes employment during the pool period, the new firm must be Pool-qualified with other Consultant Project Manager(s) in order for the firm to be considered eligible for selection under this work discipline.

18. Audits (Pool Qualification)

If the proposing Consultant has failed to pay UDOT monies due to UDOT for over payment on past projects, UDOT has the right to retract the Consultant's qualification for the pool. Disqualification will be based on audit findings, determinations, and recommendations made by the UDOT Fiscal Audit Division.

19. Work Site Safety

UDOT may request the Consultant submitting a Proposal to provide information about the Consultant's work site safety program, including any requirement that the person imposes on sub consultants for a work site safety program and any other pertinent information.

20. Disposition of Proposals

Proposals and their content become the property of UDOT and are treated as non-public records until the Pool has been published. The Proposals of successful Consultants will be open to public inspection for the three years of the pool period.

21. Consultant Debriefing

Consultant Services may offer Consultant Pool Debriefs by email within 30 days following July 1st. Debriefing information will include 1) Work Discipline Criteria Scores and 2) Unacceptable ("0") and/or "Fail" Score Selection Team Reviewer Comments (see Part Seven Work Discipline Scoring Criteria and Evaluation for details). Review of successful proposals will be available for the three years of the pool period. This may be changed to meet the needs of UDOT.

22. Notice to Proceed (NTP)

NTP will be issued by the Consultant Services division after contract execution. Authorization to begin work from any other source is invalid and will result in non-payment for services provided prior to authorized notification to begin work.

23. Protests

All protests with respect to this Solicitation must be in writing and will follow the requirements in Utah Code Sections <u>§63G-6a-1602</u>. Deliver a copy of any protest to:

Executive Director Utah Department of Transportation 4501 South 2700 West, 1st Floor P O Box 141245 Salt Lake City, UT 84114-1245

Any protest not set forth in writing within the time limits specified in §63G-6a-1602 is null and void and will not be considered.

24. Insurance Requirements

Consultants are required to provide UDOT with Certificates of Insurance meeting the current requirements. For current insurance requirements, refer to the <u>UDOT Consultant</u> <u>Services Manual of Instruction</u> (MOI).

25. Required Completion and Acceptance Criteria

Progress payments will be made for work in progress. Final invoice payment will be made after: all the work has been completed; the final estimate, project records, and documentation have been received and accepted by UDOT as accurate and complete; and a Consultant Evaluation has been performed.

26. Government Records Access and Management Act (GRAMA)

UDOT will maintain a nonpublic process for the duration of this Solicitation. Pursuant to Subsection <u>§63G-2-305(6)</u> of the GRAMA, all records related to this Solicitation, including, but not limited to Proposals, evaluation, and selection procedures, and any records created during the evaluation and selection process will remain nonpublic records. The GRAMA, Utah Code., <u>§63G-2-101 et seq.</u>, provides in part that certain records are protected if properly classified.

27. Consultant Job Vacancies

The contract resulting from this Solicitation will require, for the duration of the contract, CONSULTANT to submit its name, contact information, and information about its job vacancies that become available on the resulting contract's project to the Utah Department of Workforce Services to facilitate job inquiries by the public pursuant to Utah Code Sections 63G-6a-107.7(4) and 35A-2-203(5)(b). This requirement will not apply when filling a vacancy with a current employee and will not preclude CONSULTANT from advertising job openings in other forums throughout the state.

28. For Construction Engineering Management Contracts

Proof of certifications is not required at this stage and the Consultant will be required to self-certify as per the Contract Terms and Conditions.

29. Use of Unmanned Aerial Systems (UAS)

Follow all <u>UDOT UAS Policy and Procedure</u>, and all FAA Part 107 procedures and policies. UAS may be used when it provides cost efficiency, improved data quality, or improved personnel safety over an existing method or process. Examples of permitted uses include, but are not limited to, aerial photography, photogrammetry, bridge inspections, geotechnical field investigations, Light Detection and Ranging (LiDAR) applications, public outreach, mapping construction sites and conditions, asset management, asset inspections, traffic monitoring, incident management, disaster response, and training exercise.

PART THREE

POOL ACCEPTANCE AND COMPLETION CRITERIA

1. Solicitation

This Solicitation follows the Pool Solicitation processes and procedures outlined herein.

2. Work Disciplines

A Pool of qualified Consultants has been and/or will be selected as qualified to cover each area of service (Work Discipline) UDOT deems necessary for upcoming projects, outlined in Part Eight Work Discipline Descriptions, Certifications and Other Requirements.

3. Preparation of Proposals

Prepare Proposals in accordance with Part Five Proposal Requirements and Guidelines Summary.

4. Electronic Proposal Submission Required - UDOT Bonfire Procurement Platform

The Utah Department of Transportation (UDOT) has implemented a new eProcurement platform called Bonfire. Consultants must register in Bonfire and Proposals must be submitted electronically to the <u>UDOT Bonfire portal</u>.

Consultants may refer to the <u>UDOT Consultant Services Instructions for Pool</u> <u>Submissions Within Bonfire</u> for assistance in the Bonfire registration and proposal submission process. Please follow the instructions within the document and refer to the links provided for Frequently Asked Questions (FAQ's).

Consultants may visit the <u>UDOT Bonfire Portal</u> and follow the link to the Bonfire Vendor Registration page to register at any time. The Vendor Registration is free and proposal submission(s) will be linked to the email address entered during registration in Bonfire. Additionally, you will be required to enter your company's Federal Identification Number at the time of registration.

Project Management Work Discipline - Individual Bonfire Registration

A separate Bonfire vendor registration will be required, using a unique email, for each individual being proposed for the Project Management Work Discipline. As such, proposals must be submitted under each appropriate vendor account.

2022-2025 General Engineering (GE) Services Bonfire Pool Proposal Submission Link(s)

<u>GE Services Pool Submission(s)</u> – For all Work Disciplines (WDs) except Project Management

<u>GE Services Project Management Submission(s)</u> – For all Individual Consultant Project Manager(s)

5. Proposal Deadline

Submit one (1) electronic PDF file of the Proposal for each work discipline the Consultant would like to be considered as qualified for in response to this Solicitation. Proposals must be submitted using the UDOT Bonfire procurement platform and as specified in the Solicitation **prior to 11:00 a.m. MDT** on the submission date identified in the table below.

New Consultant Proposals will be evaluated annually by UDOT technical experts to determine whether the Consultant is qualified for the work disciplines they propose on. The deadline and evaluation schedule for the initial Pool period and any Interim Pool Proposal submissions is as follows:

Pool Proposal Submission	Submission Period and Deadline*	Evaluation Period	Pool Acceptance Effective Date
Initial Pool Submission	February 22, 2022 - April 4, 2022 prior to 11:00 a.m. MDT	April 4, 2022 – June 30, 2022	July 1, 2022
1 st Interim Pool Submission	July 1, 2022 - April 4, 2023 prior to 11:00 a.m. MDT	April 4, 2023 – June 30, 2023	July 1, 2023
2 nd Interim Pool Submission	July 1, 2023 - April 4, 2024 prior to 11:00 a.m. MDT	April 4, 2024 – June 30, 2024	July 1, 2024

* Proposals will not be accepted after the deadline for the applicable submission period.

Interim pool proposal submissions will be open in Bonfire as stated in the table above during the submission periods. The Bonfire link for interim proposal submissions will be made available during the applicable submission period.

The Solicitation for the new pool period of July 1, 2025 through June 30, 2028 will be advertised approximately in February 2025 with a new deadline in April 2025.

6. Consultant Fee Discussion

Consultant fees are not a factor in the selection of a Consultant to provide services. All price or cost related items which include, but are not limited to past, present or future

costs or fees associated with Consultant contracts such as; consultant contract amount, direct salaries, wage rates, indirect cost rates, overhead rates and other direct costs are prohibited from being used in Proposals. Consultant fee or cost discussions are not allowed. Do not include any reference to Consultant fees (past, present, or future) in the Proposal(s).

7. Debarment Certification (Pool Qualification)

Federal Regulations require certification by prospective participants (including consultants, subconsultants, and principals) as to current history regarding debarment, eligibility, indictments, convictions, or civil judgments. Consultants are required to disclose any current (last 2 years) debarment, license issues, and/or investigations information in Proposal(s).

- If a consultant is currently debarred, any Proposal submitted for the Pool is considered non-responsive and is disqualified.
- If a consultant is debarred after submitting a Proposal for the Pool and before the effective date of qualification, the Proposal is considered non-responsive and is disqualified.
- If a consultant is debarred after being listed as qualified for the Pool, the qualification is canceled effective the date of debarment.
- After the debarment period is complete, the Consultant may submit a new Proposal(s) for consideration per the requirements in the Solicitation.

8. Qualifications-Based Selection (QBS)

This is a Qualifications Based Selection (QBS) process based on United States Code (USC) Title 40, Chapter 11, Sections 1101 – 1104 (Selection of Architects and Engineers, otherwise known as The Brooks Act). Consultant fees are not a factor in the ranking of Consultants to provide the requested services

9. Financial Screening

For contract selection eligibility, the Consultant is required to complete the UDOT financial screening process at the appropriate level. If a Consultant firm has never been financially screened by UDOT the firm is not listed in the UDOT Contract Management System (CMS). For additional information on financial screening requirements, refer to the <u>Consultant Services Manual of Instruction</u> (MOI).

The time it takes a Consultant to complete the Financial Screening process varies, therefore UDOT encourages Consultants to submit their <u>Financial Screening Application</u> and associated documentation in a timely manner after notification of qualification for the Pool. Do not attach these financial screening documents with your pool submission.

For questions related to Financial Screening, please refer to the <u>Consultant Services</u> <u>Financial Screening website</u> or contact the Financial Screening Analyst at <u>csscreening@utah.gov</u>.

10. UDOT Guidance for Consultant Firms Regarding Coronavirus Pandemic Recovery

In addition to establishing an accepted Indirect Cost Rate with UDOT (which is referred to in this section as an "Unimpacted Rate"), the following will apply to a Consultant (and its subconsultants) when a Consultant submits a proposal in response to this Solicitation. If (i) the Consultant (or a subconsultant) has received a loan under the federal Paycheck Protection Program or similarly, has received a credit, loan or other relief in 2020, or thereafter, from a federal program enacted to provide relief during the Coronavirus pandemic, such as the CARES Act, the FFCRA, or other similar federal legislation (collectively a "PPP Loan"); and (ii) any portion of the PPP Loan was forgiven, or applicable law similarly requires the recipient to provide a refund, repayment, credit, or reimbursement to UDOT; then (iii) the Consultant must comply with 48 C.F.R. 31.201-5, Utah Code § 72-2-113(3), and other applicable law and guidance. Those legal obligations require calculation of a PPP Loan credit which must be included in the Indirect Cost Rate (referred to in this section as an "Impacted Rate"). See: UDOT Guidance on Coronavirus Legislation. This section uses the term "firm" when referring to requirements that apply to both the Consultant and subconsultants.

Whether a firm is the Consultant or a subconsultant, a firm's accepted Impacted Rate will apply in the manner described in this section during the firm's Recovery Period to any contract or subcontract whose payment type is cost-plus-fixed-fee. The firm's "Recovery Period" is the shorter of the following time periods: (i) the time period necessary to recover the required credit amount of the firm's forgiven PPP Loan (or other repayment obligation); or (ii) 365 days after the date when UDOT approved the firm's Impacted Rate.

A firm's accepted Unimpacted Rate will be included in all contracts (and related subcontracts) for which the Consultant is selected (which includes any contract awarded in connection with this Solicitation). However, during a firm's Recovery Period, a firm that has an accepted Impacted Rate must apply a Recovery Credit on each of its invoices for any cost-plus-fixed-fee contracts. A "Recovery Credit" is an amount that is equal to the difference between the firm's overhead and fixed fee calculated at the Unimpacted Rate, and the firm's overhead and fixed fee calculated at the Impacted Rate. The firm must show its Recovery Credits using the <u>UDOT OH & FF Credit Adjustment Template</u> document.

When a firm reaches the end of its Recovery Period, the Consultant must submit a notification to the UDOT Project Manager stating the date when the firm claims recovery was complete (the "Recovery Date"). If the Recovery Date claimed by the firm is less than 365 days after the date when UDOT approved the firm's Impacted Rate then the notification must also include documentation that demonstrates full recovery (subject to UDOT's verification). When the Consultant submits an invoice to UDOT, the invoice will not include Recovery Credits for any firms that have reached their Recovery Date.

2022-2025 General Engineering Services Pool Solicitation July 1, 2022 – June 30, 2025 Page 15 of 104 If upon review UDOT is unable to verify that a firm's required PPP Loan recovery was met, UDOT will require the Consultant to pay the amount of any recovery that should have been credited to UDOT under the requirements of this section.

The PPP Loan recovery requirements are a federal obligation that is required at every Contract level. The Consultant must pass down applicable requirements to its subconsultants.

11. Training Requirements

Consultants will be required to provide UDOT any necessary training verification as deemed necessary. It is the responsibility of each Consultant to know what training will be required and when it is offered.

12. Project Evaluation Requirements

Consultant Services requires UDOT Project Managers and/or Local Government Representatives perform at least TWO Project Consultant Evaluations for each contract. They are further encouraged to include them in the project schedule.

Consultant Project Evaluations are available to UDOT Work Discipline Selection Teams during the Pool evaluation process and to UDOT Project Managers and/or Local Government Representatives during the selection from the Pool process for consideration of past performance per 23 CFR Part 172.

13. Audits (Contracting)

Prior to a final contract award on a project, an audit may be conducted by UDOT of the selected Consultant Firm. This audit will be for the purpose of ensuring the selected Consultant Firm is financially capable of performing the contract, the cost information and prices quoted are reasonable, and the selected Consultant Firm has adequate accounting practices to ensure accurate tracking of contract costs. UDOT reserves the right to inspect Consultant Firm records associated with specific projects, including financial records, as deemed necessary during the term of any contract.

Prior to final acceptance of contract work, UDOT may conduct a closing audit of the consultant firm. This closeout audit will be performed upon completion of the contract to verify the accuracy of all billings and compliance with the contract provisions.

14. Technology Requirements

It is the responsibility of the Consultant or Subconsultant to know what technology requirements are required when doing business with the State. The Consultant will be responsible for the accuracy of the translated data and therefore, may be required to reimburse UDOT for any errors having a direct cost to UDOT.

PART FOUR

POOL CONTRACTING

1. Pool – Small-Purchase

UDOT Project Managers and Local Government Project Managers may consider qualified consultants in the Pool for design and engineering related service contracts up to the small purchase cap of \$250,000. If UDOT Project Managers and/or Local Government Project Managers anticipate the contract amount will exceed the small purchase cap, an alternate selection method must be used.

2. Pool - RPLOQ

For contracts exceeding the small purchase cap but less than \$750,000, UDOT Project Managers and the Local Government Representatives may follow the RPLOQ process. If UDOT Project Managers and/or Local Government Representatives anticipate the contract amount (including any modifications) will exceed the \$750,000 contract cap, a project-specific solicitation selection method must be used.

The RPLOQ process workflow is outlined in the *RPLOQ Consultant Selection Process* and may be downloaded from the <u>Consultant Qualified Pools</u> website.

Recommended Consultant Selection Method	Contract Cap (Maximum Not to Exceed)
Pool – Small-Purchase	\$250,000
Pool – RPLOQ	\$750,000
Project-specific Solicitation (not part of this pool)	(no contract cap)

3. Contract Caps (All work disciplines)

It is the responsibility of all parties (UDOT, Consultants, and Local Governments) to make sure each project seeking Consultant selection from the Pool meets the Contract Caps of **\$250,000 for Pool Small-Purchase** contracts or **\$750,000 for Pool RPLOQ** contracts (including all modifications).

4. Consultant Small-Purchase Consultant Cumulative Pool Caps

UDOT sets a limit on the amount of work a consultant can obtain through the Pool Small-Purchase selection method over the pool period.

The Consultant Small-Purchase Cumulative Pool Caps for this pool period are \$7,500,000 for State Projects and \$4,500,000 for Local Government Projects. The

Consultant cumulative caps will be evaluated periodically during the pool period and may be revised based on the needs of UDOT and Local Governments at UDOT's sole discretion.

5. Project Management Work Discipline and Consultant Cumulative Pool Caps Individuals will be qualified separately for the Project Management Work Discipline;

however, the contract amount of all contracts selected from the Pool-qualified list of individuals in this work discipline will accrue against their firm's Consultant Pool Period Cumulative Cap for the General Engineering Services Pool.

6. Pool Consultant Small-Purchase Consultant Cumulative Cap Contingency Formula

A full twenty-five percent reserve of all open non-on-call Small-Purchase contracts in the 2022-2025 Pool will be reserved for potential modifications to those contracts in order to not exceed the Consultant Small-Purchase Cumulative Pool Cap.

7. Qualified Consultant Selections

The UDOT Project Manager and/or Local Government Representative may consider any consultant listed as qualified by this Pool in the appropriate work discipline. There is no guarantee of work.

8. Work Disciplines

UDOT Project Managers and/or Local Government Representatives will determine the predominant element of work in the Scope of Work they are seeking a consultant to perform and will consider the qualified Consultants from the appropriate Work Discipline.

9. Work Disciplines and Training

UDOT Project Managers or Local Government Representatives may consider qualified firms from work disciplines to develop and deliver engineering-related training related to that work discipline.

10. Required Percentage of Work for Prime Consultant

Pool Contract Language states that a Prime Consultant will self-perform **50%** of the total contract value. The UDOT Project Manager and Consultant will be required to request a waiver for this requirement from the Consultant Services Manager and Preconstruction Engineer for <u>ANY</u> variation from this percentage. If a waiver is granted, the contract language and the Prime Percentage will be revised.

11. Prime Consultant Small-Purchase Pool Dollar Availability

All contract and modification costs (including subconsultant costs) of Pool Small-Purchase contracts will count towards the Prime Consultant's Cumulative Pool Dollars. The selecting UDOT Project Manager and/or Local Government Representative will make sure that each Consultant selected for a Pool Small-Purchase Contract has consultant cumulative dollar availability prior to contacting the Consultant. This information is currently obtained through the Contract Management System (CMS).

12. Contract and/or Modification Requirements

UDOT requires standard contract and contract modification documentation. Any variation from this will require full justification in the Consultant's Executive Summary. Contract modification requests are required to comply with the contract-cap, on-call contract requirements when applicable, and consultant cumulative-cap limits.

The Consultant submits the following contract items to the UDOT Project Manager and/or Local Government Representative for review and approval:

- Executive Summary
- Detailed Work Plan
- Staffing Plan
- Cost Proposal
- Hours Derivation
- Task Schedule/Deliverable Dates/Project Completion Date
- Certificate of Insurance (annually submitted and maintained on file with Consultant Services)
- Subconsultants will be required to meet all contract document requirements, if the value of the subcontract is equal to or greater than \$25,000.

PART FIVE

PROPOSAL REQUIREMENTS AND INSTRUCTIONS SUMMARY

1. Instructions for Preparing Proposals

These instructions were developed to standardize the preparation of a Proposal by Consultants for design and engineering services for the Pool. The purposes of the instructions are to ensure consistency in format and content in the Proposals prepared by Consultants and submitted to UDOT. It is highly recommended that Proposals are written and presented to UDOT in a clear and concise format which will not distract from the content of the material presented.

2. Separate Proposal Submittal Required for Each Work Discipline

Consultants must submit a separate Proposal for <u>each</u> work discipline for which they would like to be considered qualified for in the General Engineering Services Pool. Multiple Proposal electronic files may be submitted at one time through Bonfire.

3. Separate Proposal Submittal Required for Each Individual Project Manager Being Proposed for the Project Management Work Discipline

Consultants must submit a separate Proposal for <u>each</u> individual for which they would like to be considered qualified for the Project Management work discipline. Multiple Proposal electronic files may be submitted at one time through Bonfire.

4. UDOT Pool Proposal Acknowledgement Form

The <u>2022-2025 General Engineering Services Pool - UDOT Pool Proposal</u> <u>Acknowledgement</u> is required for each proposal within Bonfire.

A proposal will be considered non-responsive and will be disqualified if the Acknowledgement Form is not signed and included as the proposal cover page; if an authorized signature is not included on the Acknowledgement Form; or if there is additional information included on the Acknowledgement Form.

The Proposal Acknowledgement is one page. It may be on the Prime Consultant's letterhead and will consist of the following with no additional information.

UDOT Pool Proposal Acknowledgement

Pool Period and Pool Name for Proposal Submission	2022-2025 General Engineering Services Pool
Work Discipline No. and Name	
Consultant Firm Name	

I understand the acceptance and completion criteria, submittal, financial screening requirements, contract selection types, and contract caps. My firm will comply with all state and federal contracting requirements applicable to the project. I understand UDOT policies, procedures, and processes may change during the duration of the project and will comply with any changes required by UDOT. I have fully and accurately disclosed any debarment, license issues, and/or investigations being performed by any governmental entity.

As the authorized signatory for my organization, I certify the content of the proposal(s) to be true, accurate, and all matters required by the Solicitation are fully disclosed. I understand any misrepresentations or failure to disclose matters in the proposal(s) is grounds for immediate disqualification and possible suspension or debarment by the Department.

Signature	
Printed Name	
Title	
Date	

5. Addenda:

If at any time, UDOT changes, revises, deletes, clarifies, increases, or otherwise modifies this Solicitation, we will issue a written Addendum to the Solicitation which will be uploaded to the Bonfire portal and the <u>UDOT Consultant Qualified Pools</u> website.

6. Q&A:

Upon release of this Solicitation, Consultant communications may be done using the Bonfire platform or directly with Consultant Services staff.

7. Proposal Organization

Each Proposal must contain the following sections.

- A. For All Work Disciplines (Except for Project Management):
 - 1) Firm Qualifications
 - 2) Key Personnel
 - 3) Project Experience
- B. For Project Management Work Discipline:
 - 1) Firm Qualifications (Individual);
 - 2) Federal-aid Project Experience (Individual);
 - 3) Project Management Experience (Individual);
 - 4) Qualifications and Experience of Support Team (Firm); and,
 - 5) Capability of the Consultant (Firm)

Sections are not required to start at the top of a page.

8. Margins

One Inch Margins for all pages (Page Footer information may be inside or outside of this boundary).

9. Color

Color is allowed.

10. Font and Spacing Requirements

The Proposal is recommended to be written with a 10 point [or greater] standard Arial or Times New Roman font, including the Acknowledgement Form. Exceptions will be made for letterhead font, section headings, paragraph headings, graphics, headers and footers. Excepted text may be any other font and size as long as the text is reasonable and can be easily read by reviewers without the need of magnification to see what is being presented.

11. Design

Charts, graphs, pictures, tables are acceptable but will be counted as part of page requirements and must meet the above requirements.

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12. Proposal Maximum Number of Pages

The maximum number of pages for each Proposal is **four (4)**. Pages exceeding the maximum limit will be removed from the Proposal prior to distribution to the Selection Team. The *UDOT Pool Proposal Acknowledgement Form* must be included as the first page of the proposal but does not count towards the maximum number of pages.

13. Page Size

A page is defined as a single-sided 8.5" x 11" sized page that contains text, pictures, tables, graphs, charts, plan sheets, licenses, or other graphics.

14. Hyperlinks to Additional Information

Do not include a link to additional information. If Proposals contain links, UDOT Consultant Services will remove them from the Proposal and redact the text.

15. Page Footers

Page Footers are required on every page of the Proposal in the bottom right corner and <u>must</u> include the following information.

For All Work Disciplines (Except Project Management):

- a) Consultant Firm Name
- b) Work Discipline No. and Title
- c) Page number

For Project Management Work Discipline:

- a) Consultant Firm Name Individual Project Manager
- b) Work Discipline No. and Title
- c) Page number

16. Proposal Page Numbers

Every page must be numbered consecutively; 1,2,3 as a footer in the lower right-hand corner.

17. Electronic Proposal File Naming Convention

Consultants are required to use the electronic file naming convention outlined as follows.

For all work disciplines except Project Management, the electronic file name of your Proposal file will be named first with the work discipline number then firm name. For example, if ABC Corporation is submitting a Proposal for the 2 Asset Management work discipline then the electronic file name of the PDF will be "2 ABC Corporation.pdf". Consultants will submit a separate electronic file for each work discipline using this naming convention.

For the Project Management Work Discipline No. 27, the electronic file name of your Proposal file will be named first with the work discipline number "27", second with the

2022-2025 General Engineering Services Pool Solicitation July 1, 2022 – June 30, 2025 Page 23 of 104 firm name, and third with the proposed individual project manager's name. For example, if ABC Corporation is submitting a Proposal for John Smith then the electronic file name of the PDF will be "27 ABC Smith, John.pdf". Consultants will submit a separate electronic file for each individual proposed project manager using this naming convention.

Bonfire has a 30-character limit on file names. If individuals provide a file name with 30 characters or less, this will not be impacted. Provide a file name of 30 characters or less.

18. Claim of Business Confidentiality

The GRAMA, Utah Code Ann., §63G-2-101 et seq., provides in part that certain records are protected if properly classified. Consultants are responsible for determining which information, if any, they wish to be protected under a Claim of Business Confidentiality and are responsible for taking appropriate action to do so. An entire Proposal may not be protected under a Claim of Business Confidentiality.

To protect information under a Claim of Business Confidentiality, the Consultant must, at the time the information is provided to UDOT, include a Form BC - Claim of Business Confidentiality. It is the responsibility of the Consultant to complete Form BC in accordance with Subsection §63G-2-309 and submit to UDOT as a separate file. If there is a Claim of Business Confidentiality, consultants must provide two (2) versions of the proposal; a redacted version of the proposal, clearly marked "REDACTED VERSION" on all pages, and an unredacted version of the proposal. If nothing in the Proposal is being protected under a Claim of Business Confidentiality, a Form BC is not required.

19. Claim of Business Confidentiality File Naming Convention

Consultants are required to use the electronic file naming convention outlined as follows.

For all work disciplines except Project Management, the electronic file name of your Form BC file will be named first with the work discipline number, "BC", then firm name. For example, if XYZ Corporation is submitting a Form BC for the 2 Asset Management work discipline then the electronic file name of the PDF will be "2 BC XYZ Corporation.pdf". Consultants will submit a separate electronic file for each work discipline using this naming convention.

For the Project Management Work Discipline No. 27, the electronic file name of your Form BC file will be named first with the work discipline number "27", second with "BC", third with the firm name, and fourth with the proposed individual project manager's name. For example, if XYZ Corporation is submitting a Form BC for John Smith then the electronic file name of the PDF will be "27 BC XYZ Smith, John.pdf". Consultants will submit a separate electronic file for each Form BC using this naming convention. Bonfire has a 30-character limit on file names. If individuals provide a file name with 30 characters or less, this will not be impacted. Provide a file name of 30 characters or less.

20. UDOT Right

UDOT reserves the right to disqualify a Proposal when the intent of the Solicitation process is violated. UDOT may utilize the provision of Utah Procurement Code 63G-6a-114 to determine an error is immaterial.

21. Proposal Instructions and Guidelines

The following table outlines the Proposal instructions and guidelines. Any penalty or disqualification actions are clearly identified in the table. Violations that do not result in a penalty or a disqualification action may still affect the Consultant's overall Proposal score as part of the evaluation process.

Proposal Instructions and Guidelines		
Instruction	Description of Requirement	Violation Penalty or Disqualification
PDF Submission	Submit Proposals in PDF format as instructed; see Part Three, Pool Acceptance and Completion Criteria.	Guideline
<u>Margins</u>	Provide one-inch (1") margins throughout the Proposal; Consultant Name/Logo and Page Headers/Footers may be within the margins; see Part Five, Proposal Requirements and Instructions Summary.	Guideline
Font and Line Spacing	Use a 10-point [or greater] Arial or Times New Roman font as instructed; see Part Five, Proposal Requirements and Instructions Summary.	Guideline
Proposal File Naming Convention	Name electronic Proposal file(s) as instructed; see Part Five, Proposal Requirements and Instructions Summary.	Guideline
Form BC File Naming Convention	Name electronic Proposal file(s) as instructed; see Part Five, Proposal Requirements and Instructions Summary.	Guideline
<u>RCF File</u> <u>Naming</u> <u>Convention</u>	Name electronic Proposal file(s) as instructed; see Part Five, Proposal Requirements and Instructions Summary.	Guideline

Proposal Instructions and Guidelines		
Instruction	Description of Requirement	Violation Penalty or Disqualification
Page Numbers & Page Footers	Include page numbers and page footers as outlined; see Part Five, Proposal Requirements and Instructions Summary.	Guideline
<u>UDOT</u> <u>Employees</u>	Do not propose current UDOT employees; see Part Two, Pool Solicitation Overview.	Disqualification
Key Personnel	Consultants may only identify individuals currently employed by the Consultant; see Part Two, Pool Solicitation Overview.	Disqualification
Project Management Key Personnel Change	Qualified Consultant Project Manager leaves a firm during the Pool period for a firm that does not have another Project Manager listed as qualified; see Part Two, Pool Solicitation Overview.	Disqualification and removal from prequalified Pool list.
Individuals Concurrently Employed by Two Firms	Two firms cannot utilize the qualifications of the same employee or individual as Key Personnel; see Part Two, Pool Solicitation Overview.	Disqualification
<u>No</u> Subconsultants	Consultants must not use the qualifications of a subconsultant in their Proposal: see Part Two, Pool Solicitation Overview.	Disqualification
Bonfire Submission	Proposal(s) must be submitted through the UDOT Bonfire procurement platform; see Part Three, Pool Acceptance and Completion Criteria.	Disqualification
Fee Discussion	Submit a Proposal without any reference to Consultant fees on this project or any past, present or future project. See Consultant Fee Discussion in Part Three, Pool Acceptance and Completion Criteria.	Disqualification
<u>Financial</u> <u>Screening</u>	Complete the UDOT financial screening process at the appropriate level; see Part Three, Pool Acceptance and Completion Criteria.	Disqualification
Proposal Acknowledge- ment Form	Provide a completed and signed Acknowledgement Form as identified; see Part Five, Proposal Requirements and Instructions Summary.	Disqualification

Proposal Instructions and Guidelines		
Instruction	Description of Requirement	Violation Penalty or Disqualification
Separate Proposal Required for Each Individual for Project Management Work Discipline	A separate Proposal submittal is required for <u>each</u> individual for which you are seeking inclusion to the General Engineering Services Pool for the "Project Management" work discipline; see Part Five, Proposal Requirements and Instructions Summary.	Disqualification
<u>Proposal</u> <u>Deadline</u>	Upload Proposals and submit to UDOT Bonfire procurement platform prior to the 11:00 a.m. MDT deadline on the date identified in Part Three, Pool Acceptance and Completion Criteria.	Bonfire will not allow submission after deadline
<u>Maximum of</u> one (1) proposal per Work Discipline	Submit one (1) proposal per Work Discipline for all Work Disciplines except Project Management unless a Claim of Business Confidentiality (Form BC) is submitted (see Part Five - Proposal Requirements and Instructions Summary, Claim of Business Confidentiality).	Additional proposal(s) will not be evaluated
Proposal Submission	Consultant Firms and/or Individuals being proposed for the Project Management Work Discipline must complete the <u>new Vendor registration</u> and submit proposals within the UDOT Bonfire procurement platform; see Part Three, Pool Acceptance and Completion Criteria. Do NOT submit Proposals directly or indirectly to any known or presumed Selection Team members or other UDOT personnel.	Additional proposal(s) will not be evaluated
Form BC (Claim of Business Confidentiality)	If Form BC is submitted, a maximum of one (1) alternate proposal is required to be uploaded prior to the 11:00 AM deadline on the date identified in Part Three, Pool Acceptance and Completion Criteria. The alternate proposal must be exactly the same as the original proposal with the applicable confidential information redacted.	Additional proposal(s) will not be evaluated
Proposal Page Limits	Provide only the allowable number of pages; see Part Five, Proposal Requirements and Instructions Summary.	Additional pages will be removed

Proposal Instructions and Guidelines		
Instruction	Description of Requirement	Violation Penalty or Disqualification
Page Size	Provide only the allowable page size; see Part Five, Proposal Requirements and Instructions Summary.	Pages violating size requirement will be removed
<u>Hyperlinks to</u> <u>Additional</u> Information	Do not include hyperlinks to additional information; see Part Five, Proposal Requirements and Instructions Summary.	Hyperlinks will be removed and text redacted
Requalification Certification Form (RCF)	Failure to submit responsive RCF at mid-point of the pool period; see Part Nine, Requalification Certification Requirement.	Removal from the prequalified list until RCF is received and approved.
<u>RCF Page</u> Limit	Provide only up to the allowable number of pages; see Part Nine, Requalification Certification Requirement.	Additional pages will be removed

PART SIX

WORK DISCIPLINES

For more detail on Work Disciplines, see Part Eight Descriptions, Certifications, and Other requirements.

No.	Work Discipline
1	Aeronautics Services
2	Asset Management
3	Bridge Inspection
4	Bridge Management, Planning, and Programming
5	Constructability Review Services
6	Construction Engineering Management (CEM)
7	Construction Services – Independent Cost Estimating
8	Construction Training
9	Drainage Design
10	Environmental Document Preparation
11	Environmental Services – Air Quality
12	Environmental Services – Archaeology and Paleontology
13	Environmental Services – Architectural Historian
14	Environmental Services – Biological and Wildlife
15	Environmental Services – Noise
16	Environmental Services – Wetlands and Other Waters
17	Geographic Information Systems (GIS)
18	Geotechnical Services
19	Hazardous Materials, Waste Assessment and Remediation
20	Intelligent Transportation Systems – Construction Inspection

No.	Work Discipline
21	Intelligent Transportation Systems – Installation, Testing, and Integration of Field Equipment
22	Intelligent Transportation Systems – Project Development, Design and Oversight
23	Landscape Architecture
24	Materials Testing
25	Planning
26	Preconstruction Engineering
27	Project Management – (Individual Qualification)
28	Public Involvement
29	Research
30	Right of Way Design
31	Specialized Services – (Firms self-title the specialized services)
32	Structures Design
33	Subsurface Utility Engineering (SUE)
34	Surveying Services – Aerial Photogrammetry
35	Surveying Services – Surveying and Mapping
36	Traffic Signal and Roadway Lighting Design
37	Transit and Railway Services
38	Utility Coordination
39	Value Engineering

PART SEVEN

WORK DISCIPLINE SCORING CRITERIA AND EVALUATION

1. Evaluation Criteria

For each of the criteria listed below, consultant firms must address the requirements of the specific work disciplines in Part Eight Work Discipline Descriptions, Certifications and Other Requirements; e.g., applicable certifications, licenses.

Any experience listed while an employee was employed at a different firm, must be disclosed. Consultants may not use the qualifications of sub-consultants as part of their Proposal submittal to qualify in a work discipline.

Consultant Project Evaluations are available to UDOT Work Discipline Selection Teams during the Pool evaluation process for consideration of past performance per 23 CFR Part 172.

Criteria for All Work Disciplines (Except Project Management):

a) Criteria Heading 1 – Firm Qualifications

Describe the firm's local and national qualifications and capabilities. Emphasis should be placed on specific and unique strengths which demonstrate leadership, management, work quality, commitment, collaboration, and communication capabilities.

b) Criteria Heading 2 – Key Personnel

Describe the qualifications and experience of the proposed Key Personnel. Emphasize experience related to: education; Work Discipline expertise; leadership; management; past projects; and the ability to collaborate and communicate.

c) Criteria Heading 3 – Project Experience

Describe experience for projects completed or ongoing during the last ten years. Only include projects for which your firm, or the identified Key Personnel's firm, was the prime consultant or a subconsultant with a substantial role. For each project identified include: services performed, specific individuals' roles, and a reference contact name and phone number.

Criteria for the Project Management Work Discipline:

The evaluation criteria are categorized either as the "Individual" or as "Individual's Firm". "Individual" is defined as the proposed Consultant Project Manager. "Firm" is defined as the firm with whom the "Individual" is employed.

Note: Criteria 1-3 are applicable to the Individual Consultant Project Manager. Criteria 4-5 are applicable to the Individual's Firm.

a) Criteria Heading 1 – Qualifications (Individual)

Describe the education, facilitation, collaboration, presentation, communication, and other pertinent skills necessary to lead a team.

- b) Criteria Heading 2 Federal-aid Project Experience (Individual) Describe direct experience working on federal-aid projects.
- c) Criteria Heading 3 Project Management Experience (Individual) Describe the qualifications and direct experience managing teams and projects; including contracts, schedules, and risk mitigation.
- d) Criteria Heading 4 Qualifications and Experience of Support Team (Firm)

Describe the experience and availability as it relates to Project Manager and project team support.

e) Criteria Heading 5 – Capability of the Consultant (Firm)

Describe the specific and unique capabilities as a firm, including demonstration of leadership and management commitment.

2. Qualitative Assessment Guidelines for Reviewers

Rating – Qualitative Assessment Guidelines for Reviewers		
Throughout the scoring process the Pool Selection Teams will use the following Qualitative Assessment Guidelines when scoring criteria. These guidelines are used to help ensure consistency in scoring.		
9 - 10	The Proposal demonstrates qualifications that significantly exceed expectations and/or the required minimum qualifications.	
7 - 8	The Proposal demonstrates qualifications that exceed expectations and/or the required minimum qualifications.	
6	The Proposal demonstrates adequate qualifications that meet expectations and/or the required minimum qualifications.	
3 - 5	The Proposal demonstrates qualifications that are below expectations and/or the required minimum qualifications.	
1 - 2	The Proposal demonstrates an insufficient understanding of the subject and qualifications that fail to meet expectations and/or required minimum qualifications.	
0	The Proposal is unacceptable and fails to meet criteria expectations and the stated requirements. Not qualified.	
NOTE: If a Selection Team rates a criteria with a score of two (2) or under or the total proposal score is 20 or under, a detailed comment will be provided on the Consultant's Individual Scoring Form.		

3. Evaluation

The General Engineering Services Pool Discipline Selection Review Teams will evaluate and score Proposals in accordance with the criteria and rating scales below. (NOTE: It is not required to have headings on separate pages in the Proposal.)

Evaluation Weights for All Work Disciplines Except Project Management

Heading	Criteria	Points Possible
1	Firm Qualifications	(20)
2	Key Personnel	(40)
3	Project Experience	(40)
	Total Points	(100)

Evaluation Weights for the Project Management Work Discipline

Criteria 1-3 are based on the "Individual" proposed Consultant Project Manager and will be scored on a scale of 1-5. Criteria 4-5 are based on the "Individual's Firm" and will be Pass/Fail.

Heading	Criteria		Points Possible
1	Qualifications	Individual	(40)
2	Federal-aid Project Experience	Individual	(30)
3	Project Management Experience	Individual	(30)
4	Qualifications and Experience of Support Team	Individual's Firm	Pass/Fail*
5	Capability of Consultant	Individual's Firm	Pass/Fail*
Total Points			(100)

*Pass/Fail

- If the Individual's Firm receives a "Fail" for Criteria 4 or 5 by the Pool Work Discipline Selection Team, the Individual will not be selected for the qualified pool list.
- If the Selection Team rates an Individual's Firm with a "Fail", the Team will be required to submit detailed comments on the Evaluation Form.
- Debriefing comments will be provided to the Pool Submission Contacts listed within the Bonfire platform.

4. Threshold Score

UDOT has established a threshold score of 60% of the total points available. If a Consultant's Proposal receives 60 points or higher out of 100 points, the Consultant will be considered qualified and will be listed as qualified for the work discipline. If a Consultant's Proposal receives less than 60 points, the consultant will not be listed as qualified for the work discipline.

For the Project Management Work Discipline, if a Consultant's Proposal receives 60 points or higher out of 100 points and the Individual's Firm receives a "Pass" on Criteria 3 and 4, the Individual will be considered qualified and will be listed as qualified for the work discipline. If a Consultant's Proposal receives less than 60 points or the Individual's Firm receives a "Fail" on Criteria 3 or 4, the Individual will not be listed as qualified for the work discipline.

PART EIGHT

SCOPE OF WORK (WORK DISCIPLINE DESCRIPTIONS, CERTIFICATIONS, AND OTHER REQUIREMENTS)

Work Discipline:	Aeronautics Services	Work Discipline No.:	1	
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Definition:

Work within this category is related to performing a variety of aviation operations, planning and investment activities to assist UDOT in determining Utah's current and future needs to shape the future transportation system today. This work consists of:

- Airport System Plan Updates;
- Airport Economic Impact Study Updates;
- Integrated Airport Planning;
- Aviation related studies; and,
- Other Aviation Technical Services.

The product of planned work will be used in UDOT's Division of Aeronautics' ongoing work in creating a safe, efficient and sustainable aviation system. The consultant may be asked to evaluate existing and future conditions of the state aviation system using forecasting, operational analysis, and geographic information systems. Evaluation techniques, methodologies, and software should be consistent with UDOT's systems, state-of-the-practice, or approved by UDOT.

General Scope of Work:

The Consultant may be required to conduct research managed by UDOT Staff with subject area expertise, document research findings, and recommendations, and develop technical reports to be used within UDOT and by partner agencies.

The Consultant may participate in studies/planning efforts as a collaborative effort with other planning agencies to ensure airport interests are represented in partner plans; which may include community plans, UDOT corridor studies, transportation plans, economic development plans, and Independent Fee Estimates that support aviation.

The Consultant may be asked to research or provide state-of-the-practice training to UDOT's staff on a variety of aviation planning related issues.

Airport System Plan Updates

This work will entail updating information within the current airport system plan to ensure we continue to fulfill the goals of the plan. These updates are necessary for the plan to remain relevant and may consist of data gathering, interpretation, public outreach, and technical writing.

The selected consultant should have knowledge and experience with airport system planning, airport planning, land use analysis, business site selection, corridor planning, activity center planning, intermodal transportation planning, airport noise analysis, airport sustainability, UAS integration, and FAA 5010 inspections.

Utah Airport Economic Impact Study Updates

This work will entail updating information within the current airports' economic impact study to ensure we continue to fulfill the goals of the study. These updates are necessary for the study elements to remain relevant, and to produce an annual report for performance monitoring. The consultant should have a thorough understanding of economics, as well as knowledge of airport economic impact, project benefit-cost analysis, market analysis, economic development, and airport development.

Integrated Airport Planning

Integrated airport planning is a new initiative at the Division of Aeronautics that strives to help airports and communities become better integrated to maximize economic potential. Integrated airport planning intends to provide technical assistance on a variety of issues where airport planning, community planning, and transportation planning overlap. A strong background in collaboration and facilitation is necessary. This work will consist of data gathering, interpretation, public outreach, and technical writing. Knowledge of airport, community, transportation planning is essential, in addition to economic development.

Airport Pavement Management

The consultant may be asked to assist in Pavement Condition Index (PCI) inspections, pavement reports, project cost estimation, project prioritization, and other tasks related to airport pavement management.

Airport GIS Services

The consultant may be asked to assist in a variety of GIS services associated with airport and airport system planning.

UAS/Urban Air Mobility Integration

UAS may be used when it provides cost efficiency, improved data quality, or improved personnel safety over an existing method or process. Examples of permitted uses include, but are not limited to, aerial photography, photogrammetry, bridge inspections, geotechnical field investigations, Light Detection and Ranging (LiDAR) applications, public outreach, mapping construction sites and conditions, asset management, asset inspections, traffic monitoring, incident management, disaster response, training exercise, and Urban Air Mobility Integration.

Services provided for UDOT may include any or all the following: 5010 Master Record data collection; pavement condition analysis; aerial photogrammetry; 3D model development and urban skyscape mapping; public information media (photos & videos); installing localized RADAR tracking; Unmanned Air Traffic Management services; conduct studies relating to UAS

2022-2025 General Engineering Services Pool Solicitation July 1, 2022 – June 30, 2025 Page 37 of 104 and Urban Air Mobility integration; and provide Information Technology Services as it pertains to Urban Air Mobility Integration.

The Consultant must be familiar with FAA, State, and UDOT policies regarding UAS operations, experience, aircraft fleet, and safety record.

Required Minimum Qualifications (Experience, Services Provided, Required Personnel, Certification Requirements):

- The Consultant must be familiar with current FAA guidance.
- Proposal must provide enough detail to demonstrate competency in performing aviation related planning tasks for which you would like to provide services.
- Experience with State and Local Airport System Planning.
- Experience in Airport Capital Improvement Program Planning
- Experience with Airport Economic Impact methods, and Economic Development strategies.
- Experience with Airport Land Use Compatibility issues and Non-Aeronautical use issues.
- Experience with Airport Pavement preventative maintenance, repair, rehabilitation, reconstruction, as well as pavement management best practices.
- Experience with Airport Business Development practices to include: minimum standards development, strategic planning, tenant recruitment, tenant development, air carrier recruitment, Part 139, Part 135, and Part 380 operations.
- Experience using GIS to solve a variety of airport planning problems, such as: pavement planning, airport inspections, land development, Part 77 mapping, economic and demographic analysis, and staff training
- Proposal must provide enough detail to demonstrate competency utilizing UAS in the subcategories below for which you would like to provide services.
- Experience with State and Federal UAS Programs Preference will be given to firms and project teams whose personnel have a demonstrated working relationship with State Aviation programs, the FAA, USDOT, and NASA. A thorough understanding of regulations and procedures associated with national integration of UAS into the national airspace system (NAS) is highly desirable.

UAS Flight Operations

- Current FAA Remote Pilot Certificate
- Understanding and compliance with all requirements as listed in Title 14 of the Code of Federal Regulations (14 CFR) Part 107 and UDOT UAS Policy and Procedures.
- Recent flight experience where the pilot in command acted as the sole manipulator of the flight controls and made at least three 3 take off and landings within the preceding 90 days in a UAS of the same category, class, and type prior to flight at an airport.
- Demonstrate proficiency and competency utilizing UAS for operations.
- Provide safety record for UAS operations. The candidate may be eliminated from the pool based on safety record at Department discretion.

Unmanned Traffic Management

• Experience in UAS traffic management, UAS program development, and UAS integration with FAA and/or NASA, and UAS flight services.

UAS Training

• Experience with training on UAS regulations, safety, flight operations, processing software, Unmanned Traffic Management (UTM), Urban Air Mobility (UAM) solutions, or other related UAS technologies.

Airport Data Processing

- Experience processing UAS specific data is preferred but not required. Demonstrate experience utilizing software, quality control, and assurance processes.
- Provide workflow for processing data.

Other UAS services not defined

• Experience in the area of interest utilizing UAS technologies

Work Discipline:Asset ManagementWork Discipline No.:
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This category of work is all encompassing for asset management and report generation services. Services include the personnel, resources, equipment, and materials necessary to prepare, or assist in preparing, or refining UDOTs Transportation Asset Management Plan (TAMP) or individual asset management plans that are encompassed in the overall TAMP. All work will be in coordination with UDOT TAMP and the applicable FHWA Asset Management Process.

General Scope of Work

Work within this category is related to assisting in UDOT's overall asset management efforts. This may include asset management work with a wide variety of transportation assets including, but not limited to: pavements, bridges/box culverts, traffic signals, ITS, pavement markings, culverts, walls, barrier, and overhead/multi-post signs. Types of work may include the following asset management activities: location, condition and performance assessments, performance forecasting, data collection and assessment analysis, life-cycle cost/asset deterioration modeling, risk management, reporting, graphic design, and general support services to meet Federal Highway Administration (FHWA) requirements. The scope of work may also include developing an asset management plan and strategy for each of the individual asset classes. Consultants selected from this Pool Discipline are responsible to provide quality products and deliverables.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements)

- Proposed Staff must possess proper licenses and/or certifications for the work areas they are proposed for.
- Familiarity with the UDOT Asset Management Process.
- Demonstration of knowledge and experience with FHWA Asset Management guidelines and TAMP requirements.
- Demonstration that proposed Personnel have the knowledge and experience in the specific work areas for which they are proposed.
- The ability to deliver project documents in formats acceptable to UDOT.

Services within this work discipline are related to gathering data, and/or supporting the gathering of data, on the condition of in-service structures carrying or crossing a roadway for use by UDOT's Bridge Management Division. This may include small to large projects, or individual tasks.

General Scope of Work

Work for this discipline will be provided by performing inspections/testing on the in-service structures, or supporting ongoing programs and projects that are gathering this data. The inspections and testing may include visual observations, non-destructive testing, or destructive testing and professional analysis of their results. Support activities may include training, quality control, quality assurance checks, and/or technical support.

Required Minimum Qualification, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Demonstrate adequate knowledge and experience with the UDOT Bridge Management Manual in relation to bridge inspection.

Demonstrate that personnel have knowledge, experience and/or certifications for the work items they propose.

Definition:

Services within this work discipline are related to assisting in UDOT's overall bridge management efforts. This may include small to large projects, or individual tasks.

General Scope of Work:

Specific services may include load rating, STIP Planning, corridor studies, hydraulic studies, deterioration modeling, cost modeling, database enhancements, training, feasibility studies, minor plan package development, and technical support.

Required Minimum Qualification, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Demonstrate adequate knowledge and experience with the UDOT Bridge Management Manual.

Demonstrate that personnel have knowledge, experience and/or certifications for the work items they propose.

Services within this work discipline are related to assisting the Department with qualified individuals or firms who can provide Constructability Review Services for design plans going into construction. Integration of experienced construction personnel into the earliest stages of project planning as full-fledged members of the project team will greatly improve the chances of achieving a better-quality project, completed in a safe manner, on schedule, for the least costs.

General Scope of Work:

Constructability review optimizes the following major project elements from start to finish of the project: overall project plan, planning and design, construction-driven schedule, construction and major construction methods. Factors to be considered in a constructability review may include the following: managing the project, contracting strategy (CMGC, Design Build, Design Bid Build, etc.), risk management, schedule analysis, claims review, work package breakdown (project phasing), labor plan, access to site, site layout, sequence of design and construction, rigging plan, availability and procurement of equipment and materials, prefabrication, preassembly, modularization, quality management, materials management, site facilities, safety, operability, and maintainability.

The individual or firm providing constructability reviews may be required to perform them at different stages of the project to ensure that the design meets effective and cost-efficient construction practices.

Required Minimum Qualification, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

The consultant performing constructability reviews will be required to have a lead person with a minimum of 10 years of direct construction experience. The consultant must provide their detailed approach to how they would perform constructability review. List project-specific examples where you have implemented this approach, including transportation or highway specific experience.

Work within this category is related to assisting in UDOT's construction management efforts. This may include small to large projects, or individual tasks. This may also include contracting with a firm for selected individuals from the Key Personnel in the proposal to augment UDOT staff.

General Scope of Work:

Tasks of Construction Engineering Management (CEM) may include:

- Provide constructability reviews during the preconstruction process.
- Perform tasks consistent with the Construction Engineering Management (CEM) Network, see <u>Project Management Tools & Project Delivery Tools website</u>
- Conduct all necessary meetings from the preconstruction meeting to the post construction conference.
- Continuous onsite monitoring of the contractor's work including safety, adherence to the traffic control plan, schedule, and compliance with appropriate plans and specifications related to the project.
- Resolve project issues that arise.
- Use Department Business Systems including Masterworks and ProjectWise,
- Follow Construction MOI processes,
- Coordinate with UDOT, local government representatives, public involvement, and utility companies on project issues.
- Project Partnering in accordance with the UDOT Partnering Field Guide.
- Daily documentation of the contractor's work.
- Acceptance testing of onsite materials incorporated into the project.
- Organization of required documentation including but not limited to certifications and materials tests.
- Measurement and payment of pay quantities and processing partial pay estimates.
- Project closeout and final review and processing.

Required Minimum Qualification, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

- It is the Consultant's responsibility to get the training and certifications required to qualify to do CEM work for the Department. Training schedules are on the UDOT Website.
- All qualified Consultants desiring to provide CEM services to the Department and/or Local Government will be required to provide the following prior to being selected for a project:
 - a. Resident Engineers must be a registered Professional Engineer (P.E.) in the State of Utah.

- b. Construction Engineering Management Training (CEMT) Certification is required for Resident Engineers, Field Engineers, and Office Managers and will be verified prior to project selection. UDOT's required inspection training program and Traffic Control Certification are required for inspectors. At least one person per project must have the Environmental Control Supervisor certification. Projects that have pedestrian access ramps require at least one person with ADA Pedestrian Access Ramp certification.
- c. WAQTC Certified Personnel in AMRL Certified Labs are required for testing materials. WAQTC Certified Personnel are required for field testing of materials.
- d. Completion of UDOT Partnering training.
- More information for CEM may be found at <u>https://www.udot.utah.gov/connect/business/construction-engineering-management/</u> and for Traffic Control Certification at <u>https://www.udot.utah.gov/connect/business/contractortraining/traffic-control-certification/</u>

Services within this work discipline are related to assisting the Department with qualified individuals or firms who can provide Independent Cost Estimating Services and Training for design plans going into construction and/or construction support during the project duration.

General Scope of Work:

Independent Cost Estimating of the following major project elements including materials, costs or production-based estimates, construction-driven schedule. Factors to be considered in independent cost estimating may include the following: contracting strategy (CMGC, Design Build, Design Bid Build, etc.), risk management, schedule analysis, work package breakdown (project phasing), labor plan, access to site, site layout, sequence of design and construction, availability and procurement of equipment and materials, prefabrication, preassembly, modularization, site facilities, and safety.

The firm will develop Independent Cost Estimates (ICEs) at regular intervals to assess the cost impact of the design on the cost of the project. The cost estimates may be used to optimize the project design from a cost viewpoint. The firm will develop ICEs throughout the project as needed for change orders and additional work.

Required Minimum Qualification, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

The consultant performing independent cost estimating will be required to have a lead person with a minimum of 10 years of direct construction estimating experience. The consultant must provide their detailed approach to how they would perform independent cost estimating. List project specific examples where you have implemented this approach, including transportation or highway specific experience.

Services within this work discipline are related to assisting the Department with qualified individuals or firms who can provide and prepare Construction Training.

General Scope of Work:

The firm providing construction training may be asked to develop the training in whole, or in part, based on a well-defined scope of work outlined in detail in advance of the training. Training may consist of a session at a conference, or an individual workshop dedicated to a particular subject. The work product for the training may range from preparing all the tools (i.e. PowerPoint, handouts, training manual, etc.) necessary for UDOT to provide the training, and/or preparing and providing the training in its entirety including copies of all presentation and training materials. List specific examples where you have implemented this type of training, including transportation or highway specific experience.

Required Minimum Qualification, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

The consultant performing construction training will be required to have a lead person with a minimum of 10 years of direct construction and training experience. The consultant must provide their detailed approach to how they would perform construction training. List project-specific examples where you have implemented this approach, including transportation or highway specific experience

Work within this category is related to the production of drainage plans and documents that conform to UDOT's design processes, procedures, standards, requirements and guidelines as defined in the UDOT Drainage Manual of Instruction and Stormwater Quality Design Manual.

General Scope of Work:

Provide engineering services to design, study, or analyze drainage features that may be required on a highway project or engineering study. This may include but not limited to tasks involving channels, storm drains, culverts, stormwater storage facilities, stormwater treatment BMPs, and bridges. The definition of design includes the preparation and development of calculations, reports, plans, specifications, special provisions, measurement and payment, and all required project documentation.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Proposal must provide sufficient detail to demonstrate familiarity with UDOT's design and delivery processes for the drainage discipline and UDOT's hydrologic and hydraulic analysis and design procedures. Provide statements of qualifications of proposed personnel to perform the requested services including (but not limited to) a brief history of related work, related and noteworthy successes on other projects, related software experience, and any credentials or special recognitions, as applicable. Services include all equipment, software, supplies and personnel necessary to complete the required tasks.

General Scope of Work:

Consultants preparing Environmental Documents must be able to write clear and succinct purpose and need statements and project descriptions. Consultants must have the capability to perform or oversee sub-consultants performing environmental analyses and conducting evaluation activities for a variety of resources, including cultural and paleontological resources, threatened and endangered species, wildlife, wetlands and waters of the U.S., wetland mitigation and stream alteration permitting issues, noise, air quality, public involvement, and right-of-way. Detailed analyses and studies for all these resources will not be needed for every document; however, Consultants selected for the pool should be capable of performing, or sub-consulting, these if needed. If sub-consultants are required, the firm would be expected to contract with an approved consultant from the UDOT General Engineering Services & Local Government Pool for the particular Technical Analysis Support Work Discipline. Preference will be given in the Environmental Document Preparation evaluation to firms that have the ability to perform all or most of these resource analyses.

Consultants must be able to use UDOT's Electronic Program Management (ePM) software to complete Environmental Documents. Preference will be given to consultants with previous satisfactory experience performing Environmental Documents with UDOT.

Required Minimum Qualification, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultants preparing Environmental Documents for UDOT must have expert knowledge on the following regulatory documents: the National Environmental Policy Act of 1969 (40 CFR 1500) (NEPA) as it applies to the Federal Highway Administration in 23 CFR Parts 771 and 774, Federal Transit Administration, Federal Railroad Administration, and UDOT's State Environmental Policy.

Consultants must be proficient with the UDOT Environmental Manual of Instruction, the Memorandum of Understanding for State Assumption of Responsibility for Categorical Exclusions (23 USC 326 CE MOU), the Memorandum of Understanding Between the Federal Highway Administration and the Memorandum of Understanding Between the Federal Highway Administration and the Utah Department of Transportation Concerning State of Utah's Participation in the Surface Transportation Project Delivery Program Pursuant to 23 U.S.C. 327 (NEPA Assignment MOU), UDOT's Project Delivery and Environmental Process Networks, and other applicable federal, state, and local laws, regulations, executive orders, policies, and guidance pertaining to environmental resource analyses and environmental document preparation.

Services within this work discipline are related to support from technical air quality experts to supplement existing staff and other consultant teams. This can vary from conducting technical analyses, to providing review and oversight on projects. Knowledge of applicable Federal, State, and local laws, regulations, Executive Orders, and guidance is required. Consultants should be able to prepare chapters, memoranda or analyses to support preparation of NEPA documents or State Environmental Studies.

General Scope of Work:

Consultants performing air quality analyses on transportation projects must be an expert in conformity as defined in Title 40 part 93 of the Code of Federal Regulations, the Clean Air Act of 1970, as amended, project level conformity, and how regional conformity is obtained in the Long Range Plan (LRP) and Transportation Improvement Plan (TIP) processes. Consultants must also have experience evaluating a project's potential to be of local air quality concern and in performing air quality analyses for transportation projects. Analyses may be required for ozone, particulate matter, PM_{2.5}, PM₁₀, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, Mobile Source Air Toxics (MSATs), greenhouse gases and other constituents as appropriate for the project. For hot-spot conformity analyses of carbon monoxide, PM_{2.5} and PM₁₀, consultants will use the 2017 CO Categorial Hot-Spot Finding, or emission factors generated by the latest version of the Motor Vehicle Emission Simulator (MOVES) model or the AERMOD dispersion model, as appropriate. Consultants will describe current conditions, analyze potential impacts, develop mitigation strategies if needed and provide a written report.

Required Minimum Qualification, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultants in this work discipline must be adept in the evaluation and documentation of projects in support of project-level air quality conformity determinations. Demonstrated proficiency with AERMOD and MOVES is highly recommended.

Services within this work discipline are related to support from technical experts to supplement existing staff and other consultant teams in various fields of expertise. This can vary from performing field surveys, to conducting technical analyses, to providing review and oversight on projects. Knowledge of National Environmental Policy Act (NEPA), the UDOT Environmental Process Manual of Instruction and other applicable Federal, State, and local laws, regulations, Executive Orders, and guidance are frequently required. Consultants should be able to prepare chapters or analyses to support preparation of chapters for NEPA documents or State Environmental Studies.

General Scope of Work:

UDOT is seeking to retain qualified archaeologists and paleontologists to assist the Department in complying with state and federal laws. Consultants will be required to perform background research and field studies to identify, document, and evaluate archaeological and paleontological resources; and prepare professional technical reports documenting the results of these studies.

Consultants preparing archaeological documents must be able to perform the following tasks:

- Literature reviews (including full Class I search and archival research)
- Identification and documentation of archaeological sites and isolates
- Traditional cultural properties inventory and documentation
- Recommendations of National Register of Historic Places eligibility
- Development and implementation of data recovery and monitoring plans
- Consultants preparing paleontological resource documents must be able to perform the following tasks:
- Written literature search request to the State Paleontologist
- Inventory, documentation and significance evaluation of paleontological resources
- Development and implementation of mitigation and monitoring plans

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

<u>Archaeological</u> consultants must meet or exceed the Secretary of Interior's professional qualifications standards for archaeology. Consultants must be able to acquire (and are responsible for doing so) all necessary state and federal permits to work on all lands within the state of Utah. These include survey and excavation permits from the Public Lands Policy Coordination Office (PLPCO). Firms that do not have PLPCO-permitted archaeologists employed as full-time staff when submitting a SOQ will not be considered for the pool contract.

Consultants preparing archaeological documents must have demonstrated understanding of the eligibility and integrity criteria of the National Register of Historic Places and have demonstrated experience in completing documents acceptable to the Utah State Historic Preservation Office (SHPO) and the reviewing agency.

Consultants must be proficient with Section 106 of the National Historic Preservation Act, the Utah Antiquities Act (UCA 9-8-102 et seq.), the Utah Geological Survey statute (UCA 79-3-101 et seq.), current UDOT Archaeology Guidelines, UDOT interagency programmatic agreements, UDOT Environmental Process Manual of Instruction, National Register Bulletins, and other applicable federal, state, and local laws, regulations, policies, and guidance. Consultants must be proficient with current documentation standards and practices, including use of GIS technology, digital photography, and the UDSH database.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

<u>Paleontological</u> consultants must meet the qualifications listed in the UDOT Environmental Process Manual of Instruction and must be able to obtain an excavation permit from the Utah Geological Survey and/or other applicable land managing agencies.

Definition:

Services within this work discipline are related to support from technical experts to supplement existing staff and other consultant teams in various fields of expertise. This can vary from performing field surveys, to conducting technical analyses, to providing review and oversight on projects. Knowledge of Section 106 of the National Historic Preservation Act (NHPA), the UDOT Environmental Process Manual of Instruction and other applicable Federal, State, and local laws, regulations, Executive Orders, and guidance are frequently required. Consultants should be able to prepare chapters or analyses to support preparation of chapters for NEPA documents or State Environmental Studies.

General Scope of Work:

The Department is seeking to retain gualified architectural historians for the identification, documentation and evaluation of architectural properties potentially eligible for the National Register of Historic Places to comply with federal and state regulations. Architectural properties include buildings and bridges, and may include cultural or designed landscapes, such as industrial sites and farmsteads. Consultants in the architectural history pool may have experience in the preparation of historic architectural resource surveys, historic structure reports, and the preparation of contexts; however, the skills used must correspond to the requirements of the project.

Consultants in the UDOT pool for architectural history will be called primarily to prepare historic resource surveys that identify and document the types of properties listed in the preceding paragraph. Consultants preparing architectural history documents must be able to perform the following tasks:

- Identify the characteristics of historic properties, primarily buildings, noting their styles, plans, materials and be able to provide an approximate date of construction.
- Identify alterations that may have occurred that affect the National Register eligibility of an architectural property.
- Recommend National Register eligibility

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required **Personnel, Certification Requirements):**

Architectural historian consultants must meet or exceed the Secretary of Interior's professional qualifications standards for architectural history.

Consultants must have a demonstrated understanding of the eligibility and integrity criteria of the National Register of Historic Places and have demonstrated experience in completing documents acceptable to the Utah State Historic Preservation Office and reviewing agencies.

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Consultants must be proficient with section 106 of the National Historic Preservation Act, the Utah Antiquities Act (UCA 9-8-102 et seq.), section 4(f) of the Department of Transportation (DOT) Act of 1966, current UDOT Architectural History guidelines, UDOT interagency programmatic agreements, UDOT Environmental Process Manual of Instruction, the Utah Historic Bridge Survey, National Register bulletins, and other applicable federal, state, and local laws, regulations, policies and guidance. Consultants must be proficient with current documentation standards and practices, including use of GIS technology, digital photography and the UDSH database.

Definition:

Services within this work discipline are related to support from technical experts to supplement existing staff and other consultant teams in various fields of expertise. This can vary from performing field surveys, to conducting technical analyses, to providing review and oversight on projects. Knowledge of National Environmental Policy Act (NEPA), the UDOT Environmental Process Manual of Instruction and other applicable Federal, State, and local laws, regulations, Executive Orders, and guidance are frequently required. Consultants should be able to prepare chapters or analyses to support preparation of chapters for NEPA documents or State Environmental Studies.

General Scope of Work:

This work discipline provides services in support of compliance with Section 7 of the Endangered Species Act (ESA) of 1973, the Migratory Bird Treaty Act of 1918 and the Bald and Golden Eagle Protection Act of 1940. Consultants may be called upon to perform biological studies, species surveys, habitat assessments, evaluations of potential impacts to species and to compose Biological Assessments and/or Biological Evaluations. Consultants performing these services must have an expert understanding of the above referenced Acts and be able to demonstrate professional knowledge and competence in ecology, wildlife, fishery and /or plant biology subject areas. Qualified consultants will also have a knowledge of sensitive species, habitats and ecosystems of Utah, and will adhere to current and future guidelines, protocols and standards for performing biological analyses, as requested by the Department. Consultants must be able to write concise and accurate technical reports which demonstrate use of sound scientific practices and which are written to current professional standards. Consultants must also be proficient with the use of GPS and GIS technologies and the dissemination of spatial data as a deliverable component of a technical report. Photographs and GIS data included in the report are required to be submitted in their original file format.

Consultants preparing BAs and/or BEs for consultation with the USFWS should have experience preparing these documents and with the section 7 consultation process. All formal and informal section 7 consultation with the USFWS will be coordinated with the UDOT Natural Resource Program Manager.

Required Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultants should hold a Bachelor's in biology, ecology, wildlife management or related field and have a minimum of five years demonstrated experience performing surveys, inventories, monitoring and data analyses using standard and accepted methods, for a specific resource or subject matter area, as corresponds to the requirements of the project.

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Definition:

Services within this work discipline are related to support from noise technical experts to supplement existing staff and other consultant teams. This can vary from performing field surveys, to conducting technical analyses and modeling, to providing review and oversight on projects. Knowledge of applicable Federal, State, and local laws, regulations, Executive Orders, and guidance are frequently required. Consultants should be able to prepare chapters or analyses to support preparation of chapters for NEPA documents or State Environmental Studies.

General Scope of Work:

Noise Consultants performing or reviewing traffic noise analyses for transportation projects must be familiar with and understand the current UDOT Noise Abatement Policy and FHWA noise abatement procedures in 23 CFR 772 and be proficient with the latest accepted version of the FHWA Traffic Noise Model (TNM). Consultants must have experience in performing noise analyses for transportation projects and in developing a clear report describing the results of the analysis. For transit projects, consultants should be familiar with FTA's Transit Noise and Vibration Impact Assessment Guidance Manual.

Required Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Specifically, consultants must demonstrate their ability to conduct field noise measurements using an industry standard sound level meter, input all required data into TNM, run the model, and interpret the results. For a given project, consultants in this work discipline will describe existing traffic noise levels, document projected worst case traffic noise levels for the build alternatives, analyze potential noise impacts, develop possible mitigation measures, prepare a cost analysis of mitigation measures in accordance with the most current UDOT Noise Abatement Policy and 23 CFR 772, and provide a written report that is easily understandable by non-technical audiences.

Work within this category is required to ensure that transportation projects comply with any current laws and regulations related to water resources.

General Scope of Work:

This work discipline provides services to support compliance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Consultants must demonstrate an expert understanding of the principles of Waters of the United States (WOTUS) delineation, wetland science, stream assessment parameters, and regulatory guidance established by the U.S. Army Corps of Engineers (USACE). Consultants must demonstrate competency in obtaining permits and approved WOTUS delineations from Utah regulatory offices.

Consultants performing aquatic resource evaluations under this pool work discipline must be proficient in the delineation of WOTUS, including wetlands, in accordance with the processes outlined in the 1987 USACE Wetland Delineation Manual, the appropriate regional supplement and other regulatory guidance related to hydrophytic vegetation, hydric soils and wetland hydrology. Consultants must also be conversant with the identification and documentation of the Ordinary High Water Mark (OHWM) of non-wetland waters in accordance with the processes outlined in the appropriate regional guide. Delineation reports must be clearly written, accurate, and meet the requirements of the most current USACE, Sacramento District, Minimum Standards for Acceptance of Aquatic Resource Delineation Reports and any future guidelines, protocols or standards, as requested by the Department. Photographs and GIS data included in the Delineation Report are required to be submitted in their original file format.

Consultants in this work discipline may be called upon to prepare, submit and obtain Department of Army permit applications, which may include USACE Regional and Programmatic General Permits (GPs), Nationwide Permits (NWPs), Letter of Permission (LOP) or a Standard Permit (SP). Consultants responsible to submit and obtain any type of USACE permit must be knowledgeable of current regulatory processes including application requirements, permit timeframe, general and regional conditions, alternative analyses, and explanation of avoidance, minimization and compensation of aquatic resources. Where applicable, consultants could be required to develop mitigation plans following the procedures established by the Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (2008).

Consultants in this pool may also be called upon for the following tasks:

• Perform wetland functional assessments using UDOT's Wetland Functional Assessment Method.

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- Prepare detailed mitigation plans (grading and re-vegetation), quantities and specifications for the establishment, re-establishment, enhancement, rehabilitation or preservation of compensatory mitigation sites.
- Inspect construction of wetland mitigation sites to ensure contractors are complying with plans and specifications.

Required Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultants should hold a Bachelor's in the biological or physical sciences or a related field and have five years demonstrated experience surveying wetlands and other waters, performing aquatic resource analyses, preparing permit applications, developing restoration plans, and/or monitoring wetlands, as corresponds to the requirements of the project.

Work within this category is related to performing or assisting with Geographic Information Systems (GIS) tasks using the ESRI platform including but not limited to Production of digital and paper maps; maintaining and editing GIS data; deploying and managing map services; creating automated workflows; performing spatial analysis; creating spatial dashboards; configuring mobile applications using ESRI's Collector, Survey 123, Workforce, Field Maps, and Navigator applications; assisting with data governance; creating and managing data ETL processes; making recommendations based on current geospatial technology trends and best practices.

General Scope of Work:

Consultants performing or assisting with work in this category may be asked to provide the following:

GIS Technical Skills

- Produce and edit maps (both web maps and hardcopy maps).
- Create, update, and maintain spatial data in various formats as required by specific project and workflow needs.
- Query and analyze spatial data.
- Understand GIS principles, best practices, and tools at both the desktop and server level (e.g., map design, projection and coordinate systems, data analysis, data storage and management).
- Knowledge of Esri desktop software and AGOL web environment.
- Use Esri ArcGIS technology including Enterprise Geodatabases, API solutions, and other GIS-oriented or expansive solutions like ArcPy, Javascript, Python, etc.
- Knowledge of GPS technology, principles, hardware, and ability to identify the best solutions for specific applications.
- Understand linear referencing systems.
- Experience with automating workflows using FME (Feature Manipulation Engine).

System Management

- Utilize complementary and related hardware and software for workflow automation and data management.
- Ability to work with the unique requirements of big data storage, ETL, automated workflows, extracting useful information from raw data.
- Ability to adhere to specific data governance standards, and ability to suggest or implement additional guidance and structure where necessary.
- Database maintenance and administration.

Communication

- Communicate information and ideas clearly, concisely, both in written and verbal format.
- Interpret, organize, execute, research, and coordinate GIS assignments and activities.
- Deal with complex issues that are not clearly defined and require considerable technical expertise, research, and decision-making.
- Solve problems by understanding Department needs, identifying key facts, proposing alternatives, and advancing quality solutions.
- Provide technical expertise, guidance, and training to UDOT staff.

Definition:

Work within this category is related to different aspects of geotechnical engineering and engineering geology, including:

- Geotechnical Investigations (exploratory borings, CPT probes, test pits, geoseismic, etc.)
- Geotechnical Laboratory Testing
- Geotechnical Design (bridge foundations, retaining walls, slope stability, settlement, rock cut design, landslide and rockslide mitigation, etc.)
- Pile driving monitoring and testing
- Exploratory borehole logging

General Scope of Work:

The services may be for the complete geotechnical design of a project or for one or more specific geotechnical tasks. Work must be performed in accordance with UDOT's Project Delivery Network, Geotechnical Activities. Drilling and CPT tasks may require the use of all-terrain equipment due to difficult access locations of required exploration work. The driller must be capable of collecting soil samples and rock cores common to the geotechnical practice in accordance with AASHTO and ASTM standards. The CPT provider must conduct CPT probes according to the same standards. Provide all equipment and personnel necessary. Project support during construction may also be required. This may include activities such as foundation inspections, settlement monitoring, WEAP analysis and pile driving analysis (PDA). The PDA consultant must provide full Pile Driving services including driving analysis of pile types and sizes common in UDOT construction. Interpretation of analysis will include signal matching (CAPWAP) capability. The services must also include all equipment and personnel necessary. All inclusive design services must be in accordance with all current AASHTO requirements, the UDOT Geotechnical Manual of Instruction, and corresponding specifications.

Definition:

Work within this category is related to assisting the Department in providing environmental professionals / Hazardous Waste Contractors (collectively, Consultants) who will analyze potential project impacts, develop possible remedial alternatives, develop conclusions, and provide a written report for possible inclusion in an environmental document. Level of site investigation will generally be phased, following ASTM Phase I and II guidelines.

General Scope of Work:

Consultant will conduct historical research in a project corridor that will include, but not be limited to, DEQ records search. Discoveries are reportable, by law, to DEQ following a full report to project manager/environmental manager. Consultant will obtain from local and state authorities the necessary permits for removals and disposals. Consultant may work with UDOT Right of Way agents and advise whether whole or partial property purchase is feasible. Consultant must provide an estimate of costs and disposal fees. Consultant should work closely with an environmental consulting firm if it does not have in-house capability.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultants qualifying for expertise in this field must be environmental professionals, 40 hour OSHA trained (current), trained in environmental site investigation techniques, certified by Utah Department of Environmental Quality (DEQ) to investigate and sample hazmat sites, have performed environmental site investigations where hazardous materials were found and/or discovered, be familiar with current US laws and EPA regulations including (but not limited to) RCRA, CERCLA, SARA, OPA, CWA, CAA, and NEPA requirements for Hazmat discovery, and state-adopted/delegated authority for same. Consultant must also become familiar with local jurisdiction requirements for reporting, removal and disposal on UDOT projects statewide.

For information on certifications that may be required by the UDEQ with respect to hazardous materials, consult <u>Utah Code Title 19</u>, <u>Chapter 6</u> and <u>Utah Administrative Rules R311 et seq</u>. UDEQ also has a <u>Permit Wizard</u> designed to assist individuals and companies involved in activities regulated by UDEQ to identify the permits, licenses, registrations, and certifications required for those activities.

Definition:

This category of work is defined as inspection of the construction of Intelligent Transportation Systems (ITS) to ensure adherence to UDOT's standards and specifications for ITS.

Consultant(s) qualified in this work discipline will inspect the various stages of construction and acceptance of a variety of ITS field devices, systems, and infrastructure including:

- Closed-circuit Television (CCTV) cameras
- Variable message signs (VMS)
- Variable speed limit systems (VSL)
- Traffic monitoring stations (TMS)
- Highway advisory radios
- Roadside connected vehicle technology, including CV2X and DSRC radios, and related equipment
- Road weather information/environmental sensing systems
- Communications infrastructure and hardware, including fiber optic communications conduit, cable, switches, and related equipment; cellular modems; and IP radios
- Traffic signal systems
- Ramp metering systems
- Tolling systems
- Wrong way driving detection systems
- Electronic signs
- Solar and battery systems

Construction inspection and acceptance of ITS devices will include:

- Referencing and completing the UDOT ITS construction inspection checklists for each device inspected
- Coordinating inspection activities with appropriate UDOT representatives
- Providing weekly inspection updates to the ITS project manager and resident engineer as required
- Ensuring ITS devices are constructed and installed per UDOT standards and specifications
- Attending and participating in all construction related project meetings, including pre-construction meetings, weekly toolbox meetings (when applicable), and other meetings as directed
- Attending and participating in all device acceptance meetings and procedures

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultant(s) qualified in this work discipline possess knowledge, skills and abilities such as:

- A thorough working knowledge of ITS devices and infrastructure; UDOT plans, processes and procedures; Traffic Management Division processes for testing, approving, integrating, and accepting new devices.
- Knowledge of fiber optic networking and testing, telecommunications devices, and associated hardware.
- Knowledge of installing, testing, and troubleshooting IP/Ethernet communications, fiber, copper wire, and wireless communications.
- Understanding and experience interfacing field devices through communications protocols.
- Understanding and experience with NEMA and NEC codes.
- Familiarity with and ability to work under various construction contracting methods, including Design-Bid-Build, Design-Build, CMGC, Procurement, etc.
- Understanding process to submit electronic invoicing

Individuals performing inspections are to certify inspection knowledge and abilities by knowledge of items listed above, as well as by completing the UDOT Traffic Signal, ITS, and Fiber Optic Communications web-based training course available at UDOT's Online Learning Portal (<u>https://utah-udotu_public.sabacloud.com</u>) prior to performing ITS inspection activities.

Work Discipline:	Intelligent Transportation Systems (ITS) – Installation, Testing, and Integration of Field Equipment	Work Discipline No.:	21	
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This category of work is defined as installation, testing, and integration of ITS devices, systems, and infrastructure with UDOT central systems.

Consultant(s) qualified in this work discipline will install, program and test a variety of field devices including:

- Closed-circuit Television (CCTV) cameras
- Variable message signs (VMS)
- Variable speed limit systems (VSL)
- Traffic monitoring stations (TMS)
- Highway advisory radios
- Roadside connected vehicle technology, including CV2X and DSRC radios, and related equipment
- Road weather information/environmental sensing systems
- Communications infrastructure and hardware, including fiber optic communications conduit, cable, switches, and related equipment; cellular modems;, and IP radios
- Traffic signal systems
- Ramp metering systems
- Tolling systems
- Wrong way driving detection systems
- Electronic signs
- Solar and battery systems

Under this procurement, 'installation' must not be construed to include 'construction' activities (excavation, concrete placement, boring, etc.)

The Consultant will also configure and perform end-to-end integration of field equipment, communications, and central control (i.e. firmware, protocols, terminal server and Ethernet switches) to include:

- Troubleshoot integration issues between field devices and central software
- Provide assistance in integrating and debugging equipment
- Establish continuous reliable communications providing network and communication solutions to identified problems
- Coordinate integration of traffic signals and ITS devices into centralized software, including internal databases and public facing websites
- Install firmware upgrades and new configurations on signal controllers
- Perform asset management requirements as directed

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- Provide as-built splice details and outside plant data for updating UDOT's fiber configuration database
- Complete acceptance testing for operations and maintenance
- Consultant will need to have the ability to load, transport, and store state furnished materials, when applicable

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultant(s) qualified in this work discipline possess knowledge, skills and abilities such as:

- A thorough working knowledge of ITS devices; UDOT plans, processes and procedures; Traffic Management Division processes for testing, approving, integrating, and accepting new devices; the role of Utah Dept. of Technology Services personnel and equipment in the ITS system; current Asset Management procedures for ITS devices; UDOT ordering and warehousing procedures, including the ability to pick-up State Furnished Material.
- Knowledge of the UDOT fiber optic network, telecommunications devices and associated software
- Experience installing, testing, and troubleshooting IP/Ethernet communications, fiber, copper wire, and wireless communications
- Understanding and experience interfacing field devices through communications
 protocols
- Ability and experience updating firmware, software and systems in the field
- Understanding and experience with configuration management
- The ability to perform site surveys, license frequencies, and establish continuous communications between field devices
- Current certification in Outside Plant and Inside Plant practices and techniques
- Understanding and experience with NEMA code
- Current licensing with the State of Utah as Contractors, Master Electricians, Electricians, and Electronics Technicians (IMSA Level I, II, III).
- Understanding process to submit electronic invoicing

Work Discipline:	Intelligent Transportation Systems (ITS) – Project Development, Design, and Oversight	Work Discipline No.:	22	
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This category of work is defined as developing, designing, and/or overseeing projects with Intelligent Transportation Systems (ITS).

Consultant(s) qualified in this work discipline will:

- Assist with needs analysis, system planning and programming, including the full range of ITS elements and devices, coordinated traffic signal systems, ramp meter systems, and the fiber optic network.
- Develop or update system architectures.
- Prepare project alternatives analyses and concept reports.
- Analyze and prepare scope documents.
- Prepare design plans for construction in accordance with the ITS Design Manual and other UDOT design standards.
- Review and redline plans and construction specifications for compliance and consistency with ITS standards, specifications, and architecture.
- Assist with project advertising.
- Provide design oversight including QA/QC and interpretation of plans.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultant(s) qualified in this work discipline possess knowledge, skills and abilities such as:

- Being conversant with the design requirements for a UDOT plan set, including specific requirements and styles for each of the four Regions.
- Experience using UDOT's current project delivery software and systems
- Understanding UDOT's requirements for CADD and UDOT specifications
- Understanding UDOT's project advertising process
- The ability to interpret designs and identify corrections to State furnished plans
- A thorough knowledge of current UDOT ITS (ATMS) specifications, Highway Capacity Manual, AASHTO Design Guide, MUTCD, Roadside Design, and Utah Electrical Code.
- Familiarity with UDOT's traffic signal software, signal performance metrics system, and fiber optic network.
- Familiarity with UDOT's State Furnished Materials Form submittal process
- Understanding process to submit electronic invoicing

Definition:

Work within this category is related to services that ensure transportation projects respond to the context in which they are constructed by providing design solutions that are in harmony with the surrounding environment and the community setting.

General Scope of Work:

Consultants providing work under this category must have a working knowledge of roadway design principles, and be capable of providing the following work:

- Understand natural systems as they relate to roadway projects and develop design solutions to minimize roadway impacts by providing erosion control, grading, and re-vegetation plans.
- Recognize the context of transportation projects in urban, rural, or natural environments and develop design solutions that enhance visual quality by integrating design elements into structural components, roadside plantings, and streetscapes. Establish design themes that unify highway elements and incorporate community interests.
- Perform site analyses and visual assessments and provide CADD drawings for landscape, re-vegetation, site design, irrigation, grading, and erosion control plans, and accompanying specifications for various transportation projects.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Consultants providing work under this category must be a Landscape Architect licensed in the State of Utah and be familiar with the UDOT policies related to project aesthetics (UDOT 08A-02, Placement of Monument Features and City Logo Panels on State Highways; and UDOT 08A-03, Project Aesthetics and Landscaping Plan Development and Review), UDOT Aesthetic Guidelines; and landscape and erosion control standard drawings and specifications.

Work Discipline:	Materials Testing	Work Discipline No.:	24	
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Work within this category is related to inspection and testing of construction materials to ensure that work is in conformance with a project's plans and specifications, including the UDOT Materials Manual of Instruction, UDOT Minimum Sampling and Testing Requirements, UDOT Quality Management Plans, and FHWA eligibility requirements. This work will be as a supplement to the work performed by UDOT personnel on UDOT projects, or as a principle testing entity for Local Government projects.

Sampling and testing will be performed in the disciplines of Aggregates, Asphalt Binder, Asphalt Mix, Portland Cement Concrete (PCC), and Soils. Submitting firms must identify which disciplines they wish to work in.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

The Proposal must provide sufficient detail to demonstrate familiarity with UDOT's materials sampling and testing procedures, capability, capacity and location(s) of the materials testing laboratory and satellite labs, and qualifications of the personnel to perform field and laboratory sampling and testing services in the appropriate disciplines.

A firm's personnel listed in the proposal must be certified through the UDOT Transportation Technician Qualification Program (TTQP). Technicians must be certified in each discipline in which they will be conducting materials sampling and testing. UDOT provides certification in the following areas: Embankments and Base; In-place Density; Asphalt Mix Concrete Field Testing; Concrete Strength Testing; Aggregates; Sampling, Reduction and Density; Laboratory; and Superpave Mix Design.

Testing Laboratories must be able to provide a permanent lab or mobile facility located within a two-hour driving radius of the construction project(s). Testing Laboratories must be qualified through the UDOT Laboratory Qualification Program (LQP) and be listed on the UDOT Materials Division web page as a qualified laboratory.

The testing laboratory must hold AASHTO R18 accreditation through AASHTO re:source or CMEC in the specific areas (i.e., Asphalt Mix, PCC, Aggregates, and Soils) that are required by the contract. The testing laboratory must also be able to provide testing and analysis of properties related to contract-specific materials which are beyond the scope of AASHTO AMRL accreditation.

UDOT Qualified labs are also required to maintain a current Quality Systems Manual (QSM) with information regarding personnel qualifications and equipment calibrations. It also includes 2022-2025 General Engineering Services Pool Solicitation July 1, 2022 – June 30, 2025 Page 69 of 104 quality practices and procedures for ensuring proper sampling, testing and reporting procedures are followed.

All pool-qualified Consultants desiring to provide materials testing services to UDOT and/or Local Governments may be required to provide current AASHTO re:source or CMEC accreditation documentation prior to being selected for a project.

Failure to comply with project contract requirements may result in removal from the materials testing pool.

Work Discipline:	Planning	Work Discipline No.:	25
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This category of work is defined as performing an array of planning activities to assist UDOT in meeting its mission to enhance the quality of life through transportation.

General Scope of Work:

This section outlines a general description of activities and responsibilities for qualified General Engineering Consultants (GEC). Qualified GEC will be used to support and supplement UDOT planning staff in a variety of roles. The following list of subject areas is not exhaustive but are areas planners may request assistance in. Submittals should address at least one of the following.

Community Planning: We strive for planning that is holistic and comprehensive in nature, always assessing the intersections of transportation and land use in both urban and rural community settings. Consultant should have experience developing:

- Small Area Plans
- Corridor Studies
- Project Concepts and Feasibility Studies
- Long-Range Transportation Planning
- Transportation and Land-use Planning
- Travel Demand Management Strategies
- Alternatives Analyses
- Environmental Constraints Assessments
- Asset Management Assessments
- Planning for Disruptive Trends

Data Analysis: A data-driven approach should drive all aspects of the planning work. Consultant should have a deep and comprehensive understanding of:

- Existing Data Resources (including active transportation resources)
- Data Collection
- Big Data Integration
- Geographic Information Systems
- Database Development and Maintenance

Community Outreach and Involvement: Reaching out to the communities we serve and seeking meaningful feedback is critically important at all stages in the planning process. Consultant should have experience with the following:

- Stakeholder and technical advisory council engagement
- Diversity, Equity and Inclusion outreach, specifically;
 - BIPOC Communities
 - Historically Underserved Communities

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- Aging Communities
- Rural Communities
- Workshops / public meetings

Active Transportation Planning & Design: Our transportation planning should focus on vulnerable roadway users of all ages and abilities. Consultants should demonstrate creative solutions that accommodate all roadway users, particularly through the following:

- Roadway Concept Designs
- Vulnerable Users Safety Assessments
- Micromobility Planning
- Mobility as a Service Planning

Modeling: *Transportation modeling plays an important role in long-term planning across the state. Consultant should have experience working with:*

- Microsimulation
- Travel Demand Modeling
- Forecasting, Simulation and Visualization
- Air Quality Measuring and Modeling

Grant Writing: Many of our projects are feasible only with grants, both local and federal. Consultants should be proficient in organizing and executing successful grant writing.

Freight Planning: Goods movement continues to increase and evolve across the state and nation. UDOT strives to be informed on the latest best practices in freight planning. Consultant should have freight expertise.

Rural Transit Planning: Transit options should be accessible for a broad cross-section of Utah communities, including rural areas. Consultants should demonstrate capabilities in planning for transit in rural areas. Knowledge of FTA rules, regulations, and policies.

Graphic Design: Innovative, thoughtful, and creative graphic design can speak a thousand words in one image. Consultant should be able to show examples of visually compelling graphics that strike the right balance between striking and informative.

Required minimum qualifications, if applicable (experience, services provided, required personnel, certification requirements):

- Familiarity with current UDOT planning, design, and funding process and standards.
- Proposals should provide enough detail to demonstrate key personnel competency in performing planning tasks for which the firm would like to provide services.
- Evaluation techniques, methodologies, standards and software should be consistent with UDOT's system, state of the practice, or approved by UDOT.
- Knowledge of AASHTO design guide, NACTO and NEPA (preferred but not required)

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Definition:

This category of work includes roadway design and all stages of preconstruction services. Services include but are not limited to:

- Personnel resources, equipment and materials necessary to prepare contract plans, specifications, estimates, and risk analysis, or any part(s) in accordance with UDOT's design process for each defined project contract
- Prepare electronic bid documents in accordance with UDOT advertisement process and deliver in Bentley format following UDOT Plan Sheet Development Standards Manual and Digital Delivery Guidelines.
- Utilize UDOT business development tools such as MasterWorks, ePM, Projectwise, and UDOT's Project Management Office (PMO).

Consultants selected from this Pool Discipline are responsible to provide a quality product. The Preconstruction Engineering (PE) Proposal will include a QC/QA program proposal that ensures the quality of the plans, specifications and estimates and is compliant with UDOT's QC/QA Procedures.

Although this work discipline covers many areas of preconstruction, UDOT recommends Consultants submit a Proposal for each of the work disciplines and technical areas for which they would like to be considered qualified for in response to this Solicitation. If there is a specific work discipline more appropriate for the project-specific work, the general Preconstruction Engineering Work Discipline may not be used. For example, if the project is to design a bridge, the Consultant must be qualified for the Structures Design Work Discipline and will not be selected from the Preconstruction Engineering Work Discipline.

General Scope of Work:

Selected Consultants will be responsible for the design and development of complete Advertising Packages or portions thereof, in accordance with UDOT design process.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

- Proposed personnel must possess proper licenses and/or certifications for the work.
- Demonstrate knowledge and experience with the UDOT project delivery processes.
- Demonstrate knowledge and experience with design standards and criteria used by UDOT.
- Demonstrate that proposed personnel have the knowledge and experience in the specific work areas for which they are proposed.

- Selected firms must have the ability to deliver project documents (plans, specifications, etc.) in formats acceptable to UDOT. Specifically, design files must be delivered in Bentley format and PDF. Other documents are generally delivered in PDF format.
- Selected firms must be capable of delivering documents with Digital Signatures.

Work Discipline:Project Management (Individual Qualification)Work Discipline No.:	27	
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Individual Qualification:

Consultants must submit a separate Proposal for <u>each</u> individual for which they would like to be considered qualified for the Project Management work discipline. The contract amount of all small-purchase contracts selected from the qualified list of consultants in this work discipline will accrue against that individual's firm's Consultant Small-Purchase Cumulative Pool Cap.

Scope of Work:

In an effort to assist UDOT and Local Governments to expedite their projects, UDOT requests proposals from qualified firms for a Consultant Project Manager.

Throughout this Solicitation, the Consultant Project Manager is defined as the project's key leader who is familiar with the project needs, scope, schedule, and budget. As that project leader, one of their functions is to serve as a single point of contact for internal and external stakeholder issues. The Consultant Project Manager leads throughout the project life-cycle (from scoping through financial close-out), managing smooth transitions between different phases of the project. The Consultant Project Manager manages the entire project and not just portions or parts of a project.

The Consultant Project Manager will act as the UDOT Project Manager in coordination with the UDOT Program Manager or UDOT Portfolio Manager to provide project management services for both UDOT and Local Government projects.

<u>General</u>

Project assignments will be made by the UDOT Region Program Manager or UDOT Portfolio Manager. The Region Program or UDOT Portfolio Manager provides the Consultant Project Manager with UDOT concept reports, Local Government project applications and any supplemental project-specific documents available for each project assigned.

The Consultant Project Manager performs an initial review of all assigned projects to help identify any fatal flaws with respect to scope, schedule and budget and confirm neither he/she nor his/her firm has conflicts of interest with the projects.

The Consultant Project Manager leads project design teams by following the UDOT Project Delivery Network (PDN) for both Local Government and UDOT projects and the UDOT Project Manager Guide. Project management training and project delivery tools such as the PDN may be found at <u>Project Management & Project Delivery Tools</u> and <u>Project Management Training</u>.

Local Government Projects

For projects sponsored by a Local Government, the Consultant Project Manager follows the <u>UDOT Local Public Agency Guide</u> and ensures the Local Government is following the guide. The Consultant Project Manager is responsible to contact the local government contact listed in the project application within two days of the project assignment to begin work.

The Consultant Project Manager coordinates with UDOT's Local Government and Right-of-Way managers, the Region Program Manager, along with other region technical experts (i.e. the Preconstruction Engineer, Environmental Coordinator, and Utility Coordinator) as necessary to capture their review comments of the sponsors' application concept. If fatal flaws are identified, notify the Local Government contact, MPO and Region Program Manager.

Federal-aid Agreements

Assist the Local Government to develop, prepare, and coordinate their Federal-aid Agreements. This includes scheduling and coordinating and attending meetings. Facilitate the processing of the agreement through both the Local Agency and UDOT.

Consultant Contracts

In coordination with the UDOT Program Manager, assist the Local Government to develop, negotiate and submit their preliminary engineering and construction engineering contract information to Consultant Services. This includes scheduling, coordinating and attending meetings, preparing independent cost estimates, R-709's, and request and approval memos. It also includes facilitating the processing of agreements through both the Local Agency and UDOT. This will also include assisting the Local Government to close the contracts and perform consultant evaluations.

Assist in the Design and Advertising Process

Assist the Local Governments and their respective consultants to prepare environmental documents, project design criteria, plans, specifications, and estimates for project advertisement. Ensure that the design team performs their quality review and the region estimate review prior to submitting for advertisement. Schedule, facilitate, and coordinate project-related meetings.

Project Scheduling

Assist the Local Government in creating and updating their project schedule. UDOT uses Microsoft (MS) Project Professional 2013 and the UDOT Scheduling Project Management Office (PMO) for scheduling. The Project Manager should have a good understanding of schedules and critical path. Ensure consultants are keeping contract related schedules in MS Project and PMO. Help the local agency and consultants to identify schedule dilemmas and implement schedule solutions. Meet with project consultants and Local Agency on a regular basis to review their project schedules.

Project Scoping & Funding

Assist the Local Government to identify and resolve scoping and funding issues. Assist the Local Agency to obtain signatures and process consultant pay requests. Meet with consultants and the Local Agency on a regular basis to review project scope and funding. Assist the consultants and Local Agency to identify and implement project-related scoping and funding solutions. Fill out the Project Definition Document (PDD) and recommend for approval. Once approved, manage the project to meet the scope laid out in the PDD.

ePM Business System Set-up and Updates

In coordination with the Region Program Manager, review and/or complete ePM screen 505 (Cost Estimate) and screen 510 (Target Completion Dates).

Risk Management

Assist the Local Government to identify and resolve scoping and funding issues using risk management practices. Use the proper method of identifying risks and opportunities and assist the local entity in understanding the risks and moving toward a solution to resolve, mitigate, or otherwise assign who manages the risk.

Construction Project Management

During the Construction phase the Consultant Project Manager works with the Local Agency and continues to fill an active role on the project. Some of these duties include attending Pre & Post Construction meetings and periodic project meetings with the contractor, being available to the Resident Engineer to address Change Order issues, managing Construction Engineering Management (CEM), reviewing invoices for approval by the Region Program Manager, project visits, follow thru with Utility and ROW Commitments, and continuing to manage the project risks, schedule, and budget.

Other Activities

Assist with project-related activities as directed by the UDOT Region Program Manager.

Project Management Billings

Prepare monthly standard UDOT invoices and Time Allocation to Projects Reports.

UDOT Projects

Consultant Contracts

In coordination with Program Manager, work with consulting firms to develop, negotiate and submit preliminary engineering and construction engineering contract information to Consultant Services. This includes scheduling, coordinating and attending meetings, preparing an independent cost estimate, R-709's, and request/approval memos. This will also include closing the contracts and performing consultant evaluations.

Design and Advertising Process

Lead project teams to prepare environmental documents, project design criteria reports, plans, specifications, and estimates for project advertisement. Ensure that the design team performs their quality review and the region estimate review prior to submitting for advertisement. Schedule, facilitate and coordinate project-related meetings.

Project Scheduling

Coordinate with consultants and project teams to keep contract-related schedules. UDOT uses Microsoft (MS) Project Professional 2013 and the UDOT Scheduling Project Management Office (PMO) for scheduling. Ensure consultants are keeping contract related schedules in MS Project and PMO. Coordinate with project team members on a regular basis to review and approve project schedules. Meet with consultants on a regular basis to review their project schedules, identifying any schedule dilemmas and implementing schedule solutions.

Project Scoping & Funding

Lead project teams to identify and resolve scoping and funding issues. Review and approve consultant pay requests. Meet with project teams on a regular basis to review project scope and funding. Assist project teams to identify and implement project-related scoping and funding solutions. Fill out the Project Definition Document (PDD) and recommend for approval. Once approved, manage the project to meet the scope laid out in the PDD.

ePM Business System Set-up and Updates

In coordination with the Region Program Manager, review and/or complete ePM screen 505 (Cost Estimate) and screen 510 (Target Completion Dates).

Risk Management

Identify and resolve scoping, funding, and schedule issues using risk management practices. Ensure these risks are tracked appropriately. Guide the project team in using the proper method of identifying risks and opportunities and assist the team in understanding the risks and moving toward a solution to resolve, mitigate, or otherwise assign who manages the risk.

Construction Project Management

During the Construction phase the Consultant Project Manager continues to fill an active role on the project. Some of these duties include attending Pre & Post Construction meetings and periodic project meetings with the contractor, being available to the Resident Engineer to address Change Order issues, managing Construction Engineering Management (CEM), reviewing invoices for approval by the Region Program Manager, project visits, follow thru with Utility and ROW Commitments, and continuing to manage the project risks, schedule, and budget.

Other Activities

Assist with project-related activities as directed by the UDOT Region Program Manager.

Project Management Billings

Prepare monthly standard UDOT invoices and Time Allocation to Projects Reports.

UDOT Research Projects

A consultant acting on behalf of UDOT as a Research Project Manager leads research project teams by following the <u>UDOT Research Project Management Checklist</u>. The

2022-2025 General Engineering Services Pool Solicitation July 1, 2022 – June 30, 2025 Page 78 of 104 Consultant Research Project Manager is assigned project management responsibilities for various research projects by the UDOT Research & Innovation Division Director. As such, they are the central point of contact for all project activities including setup and management of the researcher's contract and the review of deliverables. They manage the project's scope, schedule, and budget using CMS and the Research Project Management System (RPMs) database. Some research contracts with state universities will be managed outside of CMS. The Consultant Research Project Manager works closely with UDOT for a research project, schedules project team meetings, keeps the project team informed on progress, and stores key project documents.

Conflict of Interest:

UDOT utilizes consultants to act as the UDOT Project Manager to supplement in-house project management staff. The individual acting as a UDOT Project Manager will be referred to in this section as the Consultant UDOT Project Manager (CUPM).

A UDOT Program Manager will determine project(s) for which UDOT wishes to outsource the project management services. During negotiations with the Consultant for specific contracts, the Consultant will need to complete and submit a <u>Consultants Acting</u> on <u>Behalf of UDOT Conflict of Interest Form</u>.

Once a Consultant contracts as the CUPM, the CUPM's firm will no longer be eligible for other work on those specific projects the CUPM will be managing; i.e., environmental services, design, construction management engineering, etc.

Selection of Other Consultants for CUPM Projects:

When a project managed by a CUPM requires hiring additional consultant services, the CUPM may only have limited involvement in the hiring process. The CUPM may not participate in the consultant selection regardless of whether done through an RFQ or the General Engineering Services and Local Government Pool. The selection process must be performed by the UDOT Program Manager or designee (a UDOT employee). Once a selection has been made, the CUPM may negotiate on behalf of the UDOT Program Manager including negotiating scope, schedule, budget, and other contract terms. The UDOT Program Manager must agree with all negotiations performed by the CUPM before the contract can be finalized and prepared by Consultant Services.

Contract Management System (CMS) Access:

The CUPM may have access to the CMS module of ePM in order to perform their duties under the following conditions.

The CUPM will maintain the confidentiality of all information the CUPM may gain access to whether intentional or otherwise and will not disseminate information except as required in performance of their duties as a CUPM. The consultant's access within CMS will be audited. If a consultant is found to have deliberately or repeatedly accessed data unrelated to the appropriate performance of their assignments or disseminates information inappropriately, all of the CUPM's firm's contracts for project management services will be immediately canceled. The consultant will no longer be listed as prequalified for the General Engineering Services Pool Project Management work discipline with other consequences pursued as needed.

Work Discipline:	Public Involvement	Work Discipline No.:	28	
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This category of work is defined as firms or individuals capable of providing public involvement and public relations services pertaining to UDOT projects, programs and initiatives. Services may be required at various locations across the state.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Individuals and firms should have demonstrated knowledge and experience in the following:

- The surface transportation industry and civil engineering techniques.
- Public involvement and public relations policies, processes, issues and strategies during the planning, environmental (including NEPA public outreach requirements), design and construction phases of transportation projects.
- Project and contract management skills for public involvement and public relations services.
- Local government and other partnering agencies' processes, activities and personnel roles relative to the delivery of transportation projects.
- Effective writing, visual, verbal and social communication.
- Promotion of UDOT projects and goals.
- Mediation and partnering skills that obtain group consensus.
- Creation, management and use of basic public involvement tools including but not limited to: project hotline numbers, one-on-one meetings (virtual and in-person), key stakeholder engagement, public outreach campaigns, public open houses (virtual and in-person), research methods and analysis, social media platforms, presentations, websites, web services, email, publications, graphics, geographic referencing, photography (surface and aerial), and creation of collateral materials.
- Effective Department communication, utilizing feedback from UDOT project team members, project managers and Region Communications Managers in the selection and implementation of appropriate communications tools and tactics.
- Proper use of ProjectWise software for attribution, documentation and archival maintenance of public involvement and public relations activities and documents used on projects.
- UDOT style guides and online communication and mobile channels
- Communications research, planning and strategy development.
- Using software programs (such as Adobe InDesign and Illustrator) to develop publications, graphics and collateral materials used on UDOT projects.
- Using photographic and audio/visual equipment and software, such as Adobe Photoshop, Premiere and After Effects.

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Work within this category is related to assisting the Department in research and related innovation, implementation, or technology transfer activities to further the goals of UDOT. Consultants will provide individuals or firms that can assist in carrying out specific engineering or other professional services research tasks, performing analysis on the data gathered, and creating the needed deliverables (reports, training, manuals, specifications, etc.) related to these research projects.

NOTE: Individuals interested in providing project management services on Research projects to supplement staff efforts should NO LONGER apply for the Research discipline, but rather for the Project Management (Individual Qualifications) discipline (27).

General Scope of Work:

The Research and Innovation Division conducts transportation-related studies in the following technical and business-related areas:

Structures Materials and Pavements Geotechnical Hydraulics Connected and Autonomous Vehicles Roadway Design Environmental Wildlife-Vehicle Collision Prevention Maintenance Construction Planning and Investments Road Usage Charging Aeronautics Planning Data Analytics Asset Management Performance Management Traffic Management Traffic Safety Roadway Condition Data Collection Public Transportation Active Transportation Statistical Analysis Economic Analysis Administration Customer Satisfaction

Because of the broad range of potential research subject areas, applicants for the Research pool discipline should indicate a primary area of research expertise and may add up to three secondary areas of research expertise for consideration in hiring from the pool. Alternatively, in the case of universities and larger firms with internal specialties, applicants may specify multiple primary areas of research expertise if the individual or team corresponding to that area is identified in the application.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Firms applying for the Research discipline may outline direct experience with design, construction, or other engineering and professional services. However, demonstrated experience with research processes, including literature reviews, data collection and analysis, testing, statistical analysis, documentation, preparation and presentation of research reports, and implementation planning, within the specified areas of research expertise, is preferred.

Work Discipline:	Right of Way Design	Work Discipline No.:	30	
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Provide right of way design services on UDOT projects on an as-needed basis under the direction of UDOT's representative to develop, check, review and certify all right of way documents needed in the Acquisition and/or Disposal phases which include right of way plans, legal descriptions, Record of Survey(s), QC/QA, associated field work and all other UDOT Right of Way deliverables for parcels identified as required on proposed construction outside of the existing right of way or property currently owned by the Department in accordance with the applicable <u>UDOT Manual of Instruction for Right-of-Way Design</u>, <u>UDOT Survey and Geomatics Standards</u>, <u>Right of Way ProjectWise Guide</u> UDOT and FHWA procedures for Right of Way Design, Acquisition and Disposal processes. This also includes the ability to QC/QA of other consultants.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

All design work ,review and QC/QA performed for this work discipline must be under the direction and supervision of a PLS, licensed in the State of Utah.

Note: This category does <u>not</u> include Right of Way Acquisition Services such as: Appraisal, Appraisal Review, Acquisition, Lead Agent, or Relocation. There is a separate Pool for these services, <u>2021-2024 Right of Way Acquisition Services Pool Solicitation</u>. Please contact the Director of Right of Way Division for more information.

Work within this category is defined as a firm's unique specific service that does not fit within any other work discipline. This work discipline is applicable to firms who do not qualify for the Preconstruction Engineering (PE) Work Discipline and/or Construction Engineering Management (CEM) Work Discipline but are able to provide a valuable particular expertise. Firms who qualify (receive a score at or above the threshold score) for the PE and/or CEM work disciplines will not be considered for this work discipline.

For this work discipline, the consultant is required to:

- Provide a title for their specific service; include the title on the first page of the proposal";
- Include a ½ page description within the allowed pages of what the service is and what value the service would provide to UDOT and/or Local Governments; and,
- Services must be engineering or transportation-related services.

Consultants are required to provide this information. If this information is not provided the Proposal will be considered non-responsive and will be disqualified.

The Proposal will be given a pass/fail on whether the service would provide value to UDOT and/or Local Governments. If given a "pass" on the service, the firm's Proposal will then be scored based on this Solicitation's standard evaluation criteria in <u>Part Seven</u> Work Discipline Scoring Criteria and Evaluation.

Consultants may only submit one Proposal for this work discipline.

Due to the unique nature of this work discipline, UDOT reserves the right to cancel this work discipline at its sole discretion or UDOT could choose to move Proposal(s) to another work discipline where they may appropriately fit.

Work Discipline:	Structures Design	Work Discipline No.:	32	
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Work within this category is related to the production of competently engineered structures (bridges and miscellaneous structures) that conform to UDOT's design processes, procedures, standards, requirements and guidelines including those of the UDOT Structures Design and Detailing Manual (SDDM), the Bridge Management Manual (BMM), AASHTO and FHWA. The consultant will provide engineering services to design, study, analyze or review structures of various types that may be required on a project or study.

General Scope of Work:

Work may include the following design services:

- Bridge
- Bridge widening
- Box culverts
- Other culvert types
- Retaining walls
- Overhead sign structures
- Structures required for ITS functions
- Preservation
- Rehabilitation
- Load rating
- Accelerated Bridge Construction (ABC)

The definition of design includes the preparation and development of structural calculations, plans, special provisions, estimate, measurement and payment, structural deviation requests, required project documentation, and construction support as defined in the SDDM.

It is recommended firms demonstrate an understanding of the SDDM, BMM, UDOT Structures Division Quality Control/Quality Assurance Procedures, and UDOT Project Delivery Network for the structures discipline.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Structures Key Personnel must meet the following minimum requirements:

- A minimum of three Registered Engineers (PE or SE) with 5 years experience post professional licensure.
- At least two of those Registered Engineers must have a minimum of 5 years' experience post professional licensure in the design of bridges and other structures outlined in this solicitation.

To be considered qualified, firms must meet the requirements of the UDOT Structures Division Quality Control/Quality Assurance Procedures (i.e. three independent, licensed and qualified individuals).

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Definition:

Work within this category is related to providing resources and expertise in the Subsurface Utility Engineering services for various projects.

General Scope of Work:

Consultants performing or assisting with work in this category may be asked to provide the following:

- <u>Designating Services</u> Designating means to indicate, by qualified personnel, the horizontal location of underground utilities through the application and professional interpretation of appropriate non-destructive surface geophysical techniques and to reference the location to established survey control, in accordance with ASCE Standard Guideline 38 (current edition). Must be able to certify horizontal accuracy to within +/-1-foot tolerance. Designating also includes determining the approximate vertical location of underground utilities when geophysical equipment readings appear valid. Approximate vertical location data should be labeled as such.
- 2) Locate (Test Hole) Services Locate means to obtain precise horizontal and vertical position, material type, condition, size and other data about the utility facility and its surrounding environment through exposure, inspection and survey. Excavation methods used to expose the utility must be minimally intrusive and non-destructive, ensure the integrity of the utility and highway facilities, and be performed by qualified personnel in accordance with ASCE Standard Guideline 38 (current edition). Must be able to certify both vertical and horizontal accuracies to within +/- 0.1-foot tolerance.
- 3) Data Management and Submittals All SUE submittals must be signed and sealed by a professional engineer licensed in the State of Utah. All work must be processed and output submitted in the current UDOT CAD standards and current versions of MICROSTATION and BENTLEY CAD programs, unless otherwise approved by UDOT's Project Manager. All SUE utility location data must be submitted based on UDOT's direction. A final SUE report must be submitted at the completion of each work order in a Microsoft Excel file.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

All SUE work must be performed by qualified professionals. All years of experience listed below mean continuous work at the specific task or function rather than years of experience performing a wide variety of tasks of which some include the specific task or function:

- <u>Registered Professional Engineer</u> The Consultant must have at least one (1) Professional Engineer licensed in the State of Utah with demonstrated training and project experience in:
 - Utility infrastructure mapping scope development
 - Utility records research and interpretation
 - Utility configurations and installation practices
 - Utility detection geophysical theory, application, precision, and limitations
 - Quality assurance and quality control review of utility infrastructure mapping and report deliverables
 - Survey, data collection, and CAD
 - Knowledge and application of ASCE Standard Guideline 38 (current edition)
 - Utility reports
 - Must have at least three (3) years of experience in delivering Utility infrastructure mapping in accordance with ASCE Standard Guideline 38 (current edition) under the direct supervision of a qualified professional meeting the above criteria
- <u>Utility Designator</u> The Consultant must have at least one (1) Utility Designator with three (3) years of direct experience working under the responsible charge of a registered professional engineer, with demonstrated training and project experience in:
 - Providing utility infrastructure designating services of all common utility systems using the applicable geophysical equipment as listed in the Equipment-Geophysical Section below
 - Utility construction practices including installation and layouts
 - Utility records interpretation
 - Utility detection geophysical applications, precisions, and limitations
- Locator The Consultant must have at least one (1) Locator with one (1) year experience in utility exposure and visual identification of all observable common utility systems attributes using means and methods to safely and minimally expose underground utilities (e.g. vacuum systems).
- Survey Party Chief The Consultant must have at least one (1) Survey Party Chief with two (2) years' experience in surveying utility designating marks and identifying the function of visible utility appurtenances.
- 5) <u>CAD Technician</u> The Consultant must have at least one (1) CAD Technician with one (1) year of experience in reducing survey work and one (1) year of experience in depicting utilities in UDOT's current versions of MICROSTATION and BENTLEY CAD programs, and in the current UDOT drafting standards.
- 6) <u>Consultant Firm</u> In addition to the required experience of individual personnel, the Consultant must demonstrate not less than four (4) years' experience performing SUE.

The four (4) years means continuous SUE work rather than years of experience performing a wide variety of work of which some include SUE.

<u>Equipment</u> – The Consultant must have access to a range of utility detection (geophysical) equipment. The equipment is not necessary to be owned. However, it is necessary to have equipment readily available and have in-house personnel specifically experienced in its use. All personnel using equipment must be under the direct responsible charge of a registered professional engineer who will seal the ASCE Utility Quality Levels. Not every project will require every piece of equipment:

1) Geophysical and related equipment:

- Pipe and cable locator(s) (PCL) covering the frequency range of 1kHZ-480kHZ, with specific frequencies broadly centered around 1kHZ, 8kHZ, 33kHZ, 83kHZ, 250kHZ, and 480kHZ
- Inductive clamp for PCL
- Di-electric extender pole for clamp
- Submersible antennas for underwater mapping
- 200-foot minimum length detectable push rod or CCTV for empty non-metallic ducts
- PCL with passive 60Hz and "Radio-Mode" coverage
- Non-metallic water pipe acoustic locator
- Magnetic gradiometer
- Manhole cover lifter
- Confined space entry equipment and OSHA certifications
- 200-foot minimum wire for remote grounding
- 2) Survey Equipment:
 - Equipment capable of achieving 0.2 foot accuracy for x, y (Quality levels B,C, and D)
 - Equipment capable of achieving 0.1 foot accuracy for x, y, and 0.05 foot for z referenced to local benchmarks (Quality Level A)
- 3) Excavation and Related Equipment:
 - Air-vacuum excavator capable of 16-foot minimum excavation (air mandatory; water jet optional, only for use in out of pavement areas with UDOT Project Manager's approval)
 - Asphalt/concrete removal tools
 - Pneumatic/air tampers for backfill

4) Computer and Software:

• Engineering design and mapping software compatible with UDOT's data management and delivery requirements

<u>General</u> – The Consultant must be able to perform Quality Level D, C, B, and A SUE work in conformance with ASCE Standard Guideline 38 (current edition). The ability to designate and 2022-2025 General Engineering Services Pool Solicitation July 1, 2022 – June 30, 2025 Page 90 of 104

locate must be able to be performed within the company. When outlining your experience as required in the RFQ with respect to SUE work, be specific on what role your company performed with respect to SUE – e.g. company did locating and Level A SUE, or company designated and performed Level B SUE, or company performed Level D SUE.

Provide surveying services on UDOT projects on an as-needed basis under the direction of UDOT's representative.

General Scope of Work:

Provide aerial mapping services on engineering projects on an as needed basis under the direction of UDOT's representative. Aerial mapping may include any or all of the following: digitized color or black & white aerial photographs, color or black & white orthographic. Aerial photogrammetry must meet the latest edition of requirements of the <u>UDOT Survey and</u> <u>Geomatics Standards</u> and should be suitable for subsequent photogrammetric mapping. This area of work also includes obtaining information about physical objects and the environment through processes of recording, measuring and interpreting photographic images and electromagnetic energy in order to create and produce digital and planimetric data. It includes the creation of digital orthophotography. It may include survey work necessary to establish reference points for photo control.

Within your firm's proposal state whether your firm can provide aerial photogrammetry using an airplane, unmanned aerial systems (UAS), helicopter, etc.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

Any control established for UDOT projects must be performed under the direction and supervision of a PLS, licensed in the State of Utah.

Provide surveying services on UDOT projects on an as-needed basis under the direction of UDOT's representative.

The services provided for UDOT within this work discipline may include any or all of the following: re-tracing and/or staking alignment(s), horizontal and vertical control, level surveys, cross-sectioning, topographical surveys, right-of-way searching and field locating, property description searching, locating and surveying section corner searches, survey title work, clearing easements, record of surveys, preparation of survey related exhibits installing monuments etc. Surveying services must meet the requirements of the <u>UDOT Survey and</u> <u>Geomatics Standards</u>.

Within your firm's proposal, state what survey technology your firm can provide and years of experience (eg Mobile LiDAR, Terrestrial LiDAR, Aerial LiDAR, GPS, Total Station).

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

All work performed for this work discipline must be under the direction and supervision of a PLS, licensed in the State of Utah.

Work within this category is related to providing services for design of traffic signal and roadway lighting projects including design of new traffic signals or modification to existing traffic signals, and design of roadway lighting systems for intersections, interchanges, expressways, and freeways.

General Scope of Work:

The consultant will provide engineering services to design warranted traffic signal and roadway lighting for new, modified, and upgraded locations. Design activities include:

- Site investigation
- Underground and overhead utility location
- Utility design and coordination with Region Utility Engineer
- Context sensitive solutions
- Lighting analysis using AGI32 or equivalent lighting software
- Lighting design plans, circuit schematics, control details, and schedules
- Signal design plans, circuit schematics, roadway plans, striping plans, interconnect plans, and schedules
- Traffic analysis as needed using simulation and capacity analysis software
- Cost/benefit approach to design solutions

The consultant must perform activities per the UDOT design process and be capable of providing necessary design documents including the environmental study (CAT-EX), right of way plans, utility location plans, drainage plans, design exceptions, cooperative agreements, cost analysis, and complete electronic advertisement package. Base design on current State and Federal design standards including:

- Utah MUTCD
- UDOT Standard Drawings and Specifications
- UDOT Signalized Intersection Design Manual
- UDOT Roadway Lighting Design Guidelines
- AASHTO Design Guide
- AASHTO Roadside Design Guide
- AASHTO Roadway Lighting Design Guide
- Highway Capacity Manual
- ITE Manual of Traffic Signal Design.

The consultant will submit completed project plans within established time frames and be available to respond to questions during the design and construction phases of the project. Complete all project design plans per UDOT CADD Standards. Prepare electronic bid documents in accordance with the UDOT advertisement process. Utilize UDOT business development tools such as PDBS, ePM, and Projectwise. Provide accurate "Record Document" drawings of constructed projects.

2022-2025 General Engineering Services Pool Solicitation July 1, 2022 – June 30, 2025 Page 94 of 104 NOTE: Operational traffic modeling is classified under the Planning Work Discipline.

This category of work is related to transit and railway engineering, review and design services. These services may include, but are not limited to, the following modes: Bus, Enhanced Bus, Express Bus, Bus Rapid Transit (BRT), Streetcar, Light Rail Transit (LRT), Commuter Rail Transit (CRT), Railway or Railroad where state funds are used and/or public transit project traverses any portion of state highway system.

General Scope of Work:

Transit and railway services may include other related engineering disciplines such as civil, trackwork, systems, stray current/corrosion control, systems integration, grade crossings, train signaling, safety/security, survey, right of way, roadway, traffic, structural, geotechnical, landscaping, drainage, utilities, electrical, architectural, stations or other related design elements. It is desirable for the Consultant to understand multiple transit modes and/or components of these related transit and railway engineering disciplines.

Consultants may be required to prepare electronic bid documents in accordance with UDOT advertisement process, utilize UDOT business development tools such as MasterWorks, PDBS, ePM, Projectwise, and UDOT's Project Management Office (PMO).

Although this work discipline encompasses all transit and railway services, UDOT recommends qualified Consultants submit proposals for other pool work disciplines and technical areas in which they qualify. If there is a specific work discipline more appropriate for the project-specific work, the general Transit and Railway Services Work Discipline may not be used. For example, if the project is for transit bridge design, the Consultant must be qualified for the bridge design work discipline and not be selected from the Transit and Railway Services Work Discipline.

Required Minimum Qualifications, if applicable (experience, services provided, required personnel, certification requirements):

Project Manager and all key personnel are required to have significant, relevant work experience in transit and/or railway services. Project Manager and all key personnel must have a minimum of 3 years of experience in transit and/or railway services and provide similar experience on at least 2 transit and/or railway projects.

This category of work is defined as professional services related to the proper coordination, cooperation and communication (CCC) of utility conflicts and mitigation strategies as a result of UDOT's highway projects. Proactive utility coordination early in the scoping and design of a project will reduce the effort needed later in the design and construction of a project. History has shown that doing early coordination and continuing coordination through the life of a project is the most effective tool to:

- Identify and resolve issues as early as possible
- Eliminate arbitrary and unnecessary utility relocations
- Minimize costly unexpected issues
- Facilitate timely utility relocations

In the longer term, beyond just immediate project needs, this also has a significant positive effect on UDOT's relationships with utility companies. Consultants must provide services based on the CCC principles.

General Scope of Work:

Proper utility coordination is critical to the success of UDOT's project. The Consultant must have experience in effective utility coordination and have the resources to provide appropriate utility coordination on various UDOT projects in accordance with the UDOT Utility Coordination Manual of Instruction (MOI). Typical activities include but are not limited to gathering information on utility owners and facilities; identifying potential conflicts between utility facilities and the UDOT project; tracking and managing potential conflicts from identification through resolution; working proactively with involved parties to assess and resolve conflicts; recommending any Subsurface Utility Engineering (SUE) work needed; reviewing utility relocation plans, schedules and cost estimates; conducting and documenting meetings; communicating and informing the UDOT Regional Utility Leader of all project utility information; developing strategies for minimizing utility relocations and costs; and compiling, summarizing, and submitting relevant utility information for inclusion into UDOT's contract documents and agreements. Work is to be completed and communicated in such a manner that the UDOT Regional Utility Leader is able to accurately certify the project in a timely manner and utility impacts are avoided that will delay UDOT's project schedule.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

<u>Utility Coordinator</u> – The Consultant must have at least one (1) utility coordinator with at least four (4) years of demonstrated experience performing utility coordination on transportation

projects. Years of experience are to be measured in a role where a substantial amount of time was spent performing utility coordination.

Individuals must have demonstrated knowledge of UDOT's Utility Coordination MOI; the UDOT project development process; relevant federal, state and FHWA laws, rules, and regulations; and other related standards, policies, and procedures.

The Utility Coordinator must have demonstrated relevant training in utility coordination. Such training may include:

- UDOT's Utility Conflict Management Interchange Training (required before working on projects)
- UDOT's Utility Manual of Instruction Training (2017 course, online)
- UDOT's Subsurface Utility Engineering (SUE) course
- UDOT's Railroad Manual of Instruction Training
- National Highway Institute (NHI) Utility Coordination for Highway Projects

If the Consultant believes to have completed other equivalent training that may be applicable, they can submit them to UDOT for consideration.

This work discipline is defined as a systematic process of review and analysis of a project, during the concept and design phases, by a multidisciplinary team of persons not involved in the project, that is conducted to provide recommendations for:

- Providing the needed functions safely, reliably, efficiently, and at the lowest overall cost;
- Improving the value and quality of the project; and
- Reducing the time to complete the project.

Value Engineering studies may be required at one or more of the following project phases: Initial Concepts, Comparison of Alternatives, 30-40% Design or during Construction. The Consultant will provide a team leader and Subject Matter Experts as needed to fill a mixed team of UDOT and consultant personnel. Selected Consultants may organize, staff, and facilitate project specific multi-disciplined teams using competent personnel experienced in design, right-of-way, maintenance and operation of highways, bridges, public transportation, traffic operation and other related fields. The Consultant will present the team staffing in its entirety for review and approval by UDOT. All submittals will include a detailed description of work experience and credentials for each proposed team member. Selected Consultants will establish project specific Quality Control Plan and Procedures. Objectives and Tasks may include: Preparation and Analysis, VE Study, Reports and Presentations.

Required Minimum Qualifications, if Applicable (Experience, Services Provided, Required Personnel, Certification Requirements):

The Consultant will ensure that all personnel proposed under this RFQ are qualified through training, experience, and appropriate certification for the tasks assigned and will have a working knowledge of UDOT standard practices.

Value Engineering Consultant Team Leader must either: **(a)** be a registered Professional Engineer having 5 years of experience in the planning, design, and construction of highways and bridges with sufficient VE training, education, and experience to be recognized by SAVE International as meeting the requirements for certification, <u>OR</u> **(b)** have a CVS certification with 10 years of experience in the planning, design, and construction of highways and bridges.

Subject Matter Experts that are proposed on a specific project will also need to meet the <u>minimum</u> specific personnel experience requirements in their respective areas on expertise: **1**) Construction - 10 years in the supervision of major highway and bridge construction projects as project engineer or contractor's superintendent, **2**) Design - Registration as a Professional Engineer and 10 years of experience in the design of **(a)** highway projects (for studies primarily involving highway improvements) or **(b)** structures (for studies primarily involving bridges or

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retaining walls), **3)** Maintenance - 5 years responsible charge of a major maintenance program of city, county or state transportation system, **4)** Right-of-way - 5 years of experience in R/W administration, land management, abstract and title work, sale, acquisition or appraisal of real-estate, of which 3 years must be Government related, **5)** Other - Other appropriately experienced and licensed team members as applicable, such as drainage engineers, traffic engineers, geotechnical engineers, and other specialists required to provide a project specific team.

PART NINE

REQUALIFICATION CERTIFICATION REQUIREMENT

The Utah Procurement Code (Utah Code 63G-6a-507). Effective May 9, 2017, the Utah Legislature revised the Procurement Code to state prequalified lists of consultants may not be in place for a term longer than 18 months (Subsection (5)(b)(ii)).

To be compliant with Utah Code, ALL Consultants qualified in the Pool as of **November 1, 2023** will be required to self-certify their firm is still qualified to provide services.

Consultants are required to submit a *Requalification Certification Form* (RCF) for **each** work discipline for which they are listed as qualified by UDOT to maintain their qualified status in the Pool.

1. RCF Submission Deadline

Consultants may submit RCF(s) between November 1, 2023 and Wednesday, November 15, 2023 prior to 11:00 a.m. MST.

Any consultant listed as qualified in the Pool who does not submit an RCF within the window provided and by the deadline for a specific work discipline will no longer be considered qualified in the Pool for that work discipline effective January 1, 2024; until an RCF is submitted and approved.

If a firm misses the RCF deadline in error, they may submit an RCF for consideration subject to Consultant Services Division approval.

- RCF Submittal Required for Each Work Discipline (Except Project Management) To maintain your firm's qualified status in the Pool, a separate RCF submittal is required for <u>each</u> Work Discipline for which your firm is listed as qualified by UDOT.
- 3. RCF Submittal Required for Each Individual Consultant Project Manager

To maintain your firm's Consultant Project Manager's qualified status in the Pool, a separate RCF submittal is required for <u>each</u> Individual Consultant Project Manager for which your firm is listed as qualified by UDOT.

4. RCF Electronic File Naming Convention

Firms will submit separate PDF files for each work discipline and Consultant Project Manager using file naming conventions.

For all Work Disciplines, except Project Management, use the file naming convention below:

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- a) Work discipline number
- b) Firm name

For example, if ABC Corporation is submitting an RCF for the "2 Asset Management" work discipline then the electronic file name of the PDF will be "2 ABC Corporation.pdf".

For the Project Management Work Discipline, use the file naming convention below:

- a) Work discipline number
- b) Firm name
- c) Individual Consultant Project Manager's name

For example, if ABC Corporation is submitting an RCF for John Doe, then the electronic file name of the PDF will be "27 ABC Corporation-Doe,John.pdf".

Bonfire has a 30-character limit on file names. If individuals provide a file name with 30 characters or less, this will not be impacted. Provide a file name of 30 characters or less.

5. Electronic Requalification Certification Submission Required

- a) Submit a separate electronic PDF file of each RCF using the UDOT Bonfire procurement platform. Further instructions will be provided prior to the submission period.
- b) Bonfire will not accept files over 1000 MG per file.
- c) As part of your submission in Bonfire, you will receive a unique confirmation code and email receipt.

6. Requalification Certification Form (RCF)

An RCF is required for each work discipline and each Consultant Project Manager listed in the Project Management discipline.

The RCF forms may also be downloaded from the <u>Consultant Qualified Pools</u> website:

- a) All Work Disciplines, (except Project Management) <u>Requalification Certification Form</u> (<u>RCF</u>) – <u>GE Pool</u>
- b) Project Management Discipline <u>Requalification Certification Form (RCF) GE Pool –</u> <u>Project Management</u>

7. RCF Maximum Number of Pages

The RCF must not exceed the one-page maximum.

8. Changes to the Work Discipline Contact Information

For any changes, please submit a separate email to the Solicitation Administrator's email in <u>Part One</u>, Pool Solicitation Introduction and Summary.

UDOT REQUALIFICATION CERTIFICATION FORM 2022-2025 General Engineering Services Pool

See Solicitation, Part Nine Requalification Certification Requirement for instructions on this form.

Work Discipline No. and Name	
Consultant Firm Name	

Requalification Certification

As the authorized signatory for my organization, I certify my firm is qualified under the requirements of this pool and has maintained employment of individuals who are skilled in providing the services for this work discipline.

- My firm has specific and unique strengths demonstrating leadership, management, work quality, commitment, collaboration, and communication capabilities.
- *My firm's personnel have specific past experience related to education, expertise, leadership, management, past projects, and ability to collaborate and communicate.*

nature	Signature
Name	Printed Name
Title	Title
Date	Date

UDOT REQUALIFICATION CERTIFICATION FORM 2022-2025 General Engineering Services Pool Project Management (Individual) Work Discipline

See Solicitation, Part Nine Requalification Certification Requirement for instructions on this form.

Consulta	nt Firı	m Name	e

Individual Project Manager Name

Requalification Certification

As the authorized signatory for my organization, I certify the individual listed is qualified under the requirements of this pool and has maintained the skills necessary to provide Consultant Project Management services.

Signature
Printed Name
Title
Date