

UTAH DEPARTMENT OF TRANSPORTATION



REQUEST FOR QUALIFICATIONS
(Electronic Submittal Required)

**UDOT
GENERAL ENGINEERING SERVICES
AND
LOCAL GOVERNMENT POOL
(POOL)**

The Pool is for small and simple transportation and construction-related service contracts under \$600,000 (cradle to grave).

**POOL PERIOD
JULY 1, 2016 - JUNE 30, 2019**

Revised March 30, 2016

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POOL RFQ REQUIREMENTS SUMMARY

Introduction

The Utah Department of Transportation (UDOT) utilizes a variety of avenues to select consultants for design and engineering services related contracts. Consultant solicitation and selection methods through UDOT Consultant Services are qualifications-based (Reference 40 USC 11 Selection of Architects and Engineers (Brooks Act)). Once the decision is made to utilize a Consultant, the UDOT Project Manager, in coordination with UDOT Consultant Services, determines the procurement method. This decision is based on the nature of the project and related factors such as anticipated costs, level of environmental effort, and complexity. The most commonly used and simplest selection method is selecting a consultant from the General Engineering Services and Local Government Pool.

General Engineering Services and Local Government Pool

The General Engineering Services and Local Government Pool (Pool) is a pool of prequalified consultants in various work disciplines. This selection process may be used by UDOT and Local Governments to select consultants for small and simple transportation and construction-related service contracts under a contract cap from start to completion. This RFQ will establish the pool of qualified consultants in the various work disciplines.

General Engineering Services and Local Government Pool – Development Process

- 1) Consultants are invited to submit a separate Statement(s) of Qualifications (SOQs) for any of the work disciplines for which a consultant has qualifications.
- 2) UDOT professionals will review and evaluate the SOQs based on the criteria within this RFQ.
- 3) Each SOQ will be given a score.
- 4) UDOT has established a threshold score of 60% of the total points available. If an SOQ receives this threshold score or higher, the consultant will be considered qualified and will be listed as qualified for the work discipline. If the SOQ receives below the threshold score, the consultant will not be listed as qualified for the work discipline.
- 5) Consultant Services will provide a consultant's scores by email directly to the consultant individual identified as the primary contact.
- 6) By June 30th, Consultant Services will post the final pool of qualified consultants list on the web, www.udot.utah.gov/go/cspools.
- 7) After the effective date of July 1st, consultants may schedule a time to come in and review the successful proposals.
- 8) After the effective date, UDOT and Local Government representatives may select from the qualified list of consultants for contracts. There are two levels of selection methods from the Pool; Direct-select and Request for Pool Letter of Qualifications (RPLOQ).
- 9) At the mid-point of the pool period, Consultants will be required to meet the Requalification Certification Requirements in order to maintain their qualification status.

Pool – Direct-Select

UDOT Project Managers and Local Government Project Managers may direct-select from the qualified list of consultants in the Pool for contracts up to the small purchase cap of \$150,000 for general engineering work disciplines and \$100,000 for the public involvement work discipline. In anticipation of potential modifications, \$120,000 (or \$75,000 for public involvement) is the maximum contract amount at the request stage of the contracting process for direct-select contracts based on the Independent Cost Estimate (ICE). If UDOT Project Managers and/or

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Local Government Project Managers anticipate the contract amount will exceed the contract cap, a Request for Pool Letter of Qualifications (RPLOQ) selection method must be used.

Pool – RPLOQ

For contracts exceeding the limit of a Pool Direct-Select and less than \$600,000 (or \$250,000 for Public Involvement), UDOT Project Managers and the Local Government Project Managers will follow the RPLOQ process. In anticipation of potential modifications, \$450,000 (or \$190,000 for Public Involvement) is the maximum contract amount at the request stage of the contracting process for RPLOQ Contracts based on the ICE. If UDOT Project Managers and/or Local Government Project Managers anticipate the contract amount will exceed the contract cap, a project-specific request for qualifications selection method must be used.

The RPLOQ process work flow is outlined in the *RPLOQ Consultant Selection Process* and may be downloaded from the Consultant Services Forms website, www.udot.utah.gov/go/csforms. The Public Involvement RPLOQ process work flow is outlined in the *Public Involvement RPLOQ Consultant Selection Process*.

Contract Caps and Consultant Cumulative Caps

General Engineering (All work disciplines combined except Public Involvement)

Recommended Consultant Selection Method	Independent Cost Estimate (ICE) Amount
Pool – Direct Select	\$0 - \$120,000 (\$150,000 contract cap)
Pool – RPLOQ	\$120,000 - \$450,000 (\$600,000 contract cap)
Project-specific Request for Qualification or Request for Letter of Interest (not part of this pool)	Above \$450,000 (no contract cap)

It is the responsibility of all parties (UDOT, Consultants, and Local Governments) to make sure that each project seeking Consultant selection from the Pool meets the Contract Caps of **\$150,000 for Pool Direct-Select** contracts or **\$600,000 for Pool RPLOQ** contracts (cradle to grave) and the Consultant Pool Period Cumulative Cap of **\$5,000,000 for State Projects** and **\$4,000,000 for Local Government Projects**. No exceptions.

Public Involvement Work Discipline

Recommended Consultant Selection Method	Independent Cost Estimate (ICE) Amount
Pool – PI Direct Select	\$0 - \$75,000 (\$100,000 contract cap)
Pool – PI RPLOQ	\$75,000 - \$190,000 (\$250,000 contract cap)
Project-specific Request for Proposal (not part of this pool)	Above \$190,000 (no contract cap)

It is the responsibility of all parties (UDOT, Consultants, and Local Governments) to make sure that each project seeking Consultant selection from the Public Involvement Work Discipline Pool meets the Contract Caps of **\$100,000 for Pool Direct-Select** contracts or **\$250,000 for Pool RPLOQ** contracts (cradle to grave) and the Consultant Pool Period Cumulative Cap of **\$1,500,000 for State Projects** and **\$1,500,000 for Local Government Projects**. No exceptions.

Pool Period

The Pool period is July 1, 2016 through June 30, 2019.

Pool Consultant Cumulative Cap Contingency Formula

A full twenty-five percent reserve of all open non-on-call contracts in the 2016-2019 Pool will be reserved for potential modifications to those contracts in order to not exceed the Consultant Cumulative Cap. A contract will be considered closed in regards to the contingency formula if:

- The final Project Consultant Evaluation Form has been completed and submitted to Consultant Services and the Comptroller's Office;
- The final invoice has been submitted to and approved by the UDOT Project Manager and submitted to the Comptroller's Office for payment; and,
- The Comptroller's Office sends closure notification to Consultant Services or an audit request to the Fiscal Audit Division with a notification copy to Consultant Services.

SOQ Submission

Consultants interested in being listed as qualified in the Pool may submit work discipline specific Statements of Qualifications (SOQ's) in response to this RFQ. An SOQ may be submitted at any time from the initial posting of this RFQ on February 16, 2016 through the first two years of the Pool period.

New Consultant SOQ's will then be evaluated annually by UDOT technical experts to determine whether the Consultant is qualified in specific work disciplines based on work discipline specific SOQ's.

Any SOQ's received by **11:00 a.m. on April 5th** will be evaluated during the months of April, May and June. If considered qualified, the consultant will be eligible to be selected on July 1st, subject to the financial screening process.

Schedule of SOQ Deadlines

April 5, 2016 by 11:00 a.m.

April 5, 2017 by 11:00 a.m.

April 5, 2018 by 11:00 a.m.

Any SOQ's received late by the UDOT for an April 5, 2016 11:00 a.m. deadline will not be evaluated by UDOT until after the following year's deadline of April 5, 2017.

Any SOQ's received late by UDOT for an April 5, 2017 11:00 a.m. deadline will not be evaluated by UDOT until after the following year's deadline of April 5, 2018.

No SOQ's will be accepted for the Pool after April 5, 2018, at 11:00 a.m. Any SOQ's received after April 5, 2018 11:00 a.m. will be considered non-responsive and will be disqualified. The RFQ for the new pool period of July 1, 2019 through June 30, 2022 will be advertised in approximately February 2019 with a new deadline in April 2019.

Requalification Certification Requirement

Firms will be required to self-certify their firm is still qualified in each work discipline at the mid-point of the Pool period based on Utah Code 63G-6a-403, see page 19 for details.

Pool Project Locations

Various locations statewide

Sources of Funding

Federal, Local, State, or Other

RFQ Administrator

Gaye Hettrick, Consultant Services Manager

UDOT Consultant Services

PO Box 148490

Salt Lake City, UT 84114-8490

801-965-4639

ghettrick@utah.gov (email contact for questions)

GESOQ@utah.gov (email contact for submittal of SOQ's)

Electronic SOQ Submission Required

- 1) Submit an electronic PDF file of each SOQ by email to Gaye Hettrick, Consultant Services Manager, GESOQ@utah.gov.
- 2) If for some reason you are unable to email your submittal, an electronic copy; i.e., CD, jump drive, etc. with SOQ files delivered to Consultant Services will be accepted.
- 3) The state email system will not receive any emails with attachments of 25M or greater.
- 4) When the GESOQ@utah.gov email receives emails, an automatic return email will be generated to provide confirmation your email was received if you have the word "pool" in the subject line somewhere and there is an attachment.

Protests

All protests with respect to this RFQ must be in writing, and will follow the requirements in Utah Code Sections §63G-6a-1602 et seq. 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.

Financial Screening

UDOT requires Consultants be Financially Screened prior to performing work for UDOT. If a Consultant is selected and has not been financially screened and approved within two weeks after selection, the Consultant will be disqualified unless the delay is due to problems or delays by UDOT. The time it takes a Consultant to complete the Financial Screening process varies and therefore UDOT encourages Consultants to submit their *Financial Screening Application* at the same time as their Statement of Qualifications or before. Consultants may obtain the *Financial Screening Application* from the website www.udot.utah.gov/go/csforms. For questions, contact Consultant Services at 801-965-4138. A Consultant's Financial Screening status is effective for the period of one year from the time the Consultant is approved.

UDOT has a system in place that allows UDOT Project Managers to electronically select consultants from the Pool, the Contract Management System (CMS). This system tracks all contract requests. If you have never been financially screened by Consultant Services your firm is not listed in CMS. Therefore, your admittance into the Pool is contingent on providing a copy of your firm's W-9 and the contact information for your financial representative (Name, Company, Address, Phone, and email) as a minimum so we can input your firm's data. Or, you may submit a full financial screening application. If your firm has never been financially screened, do not attach an application or the W-9 with your pool submission, please submit separately.

Consultant Services Electronic Notification Subscription Service

Please join the Consultant Services Electronic Notification Subscription Service. **Consultants will only be notified of any updates or changes to this RFQ through this service.** The website for subscribing is www.udot.utah.gov/go/subscriptionlist.

SOQ REQUIREMENTS SUMMARY

Preparation of SOQ's

Prepare Statements of Qualifications (SOQs) in accordance with Utah Department of Transportation SOQ Requirements Summary.

SOQ Sections

Each SOQ should contain the following sections:

- 1) Pool Cover Page Form;
- 2) Firm Qualifications;
- 3) Key Personnel; and,
- 4) Project Experience.

Sections are not required to start at the top of a page. (NOTE: The Cover Page should not be submitted as a separate electronic file from the rest of the SOQ, it should be the first page in the electronic file.)

Pool Cover Page Form

A Cover Page is required for each SOQ. It may be on the Consultant's letterhead and will consist of the following with no additional information.

POOL COVER PAGE FORM 2016-2019 General Engineering Services and Local Government Pool	
Date:	
Work Discipline	
Work Discipline No.:	
Work Discipline Title:	
Subcategory or Subcategories (if applicable):	
Project Manager Individual Name (for Work Discipline No. 15 Project Management (if applicable)):	
Firm	
Firm Name:	
W-9 Federal ID No.:	
Firm Address:	
Primary Contact (During Pool Selection Administration Process)	
Primary Contact Name:	
Email:	
Office Phone No.:	
Cell Phone No.:	
Primary Contact (For Future Contracts)	
Primary Contact Name:	
Email:	
Office Phone No.:	
Cell Phone No.:	
Acknowledgements	
<p><i>I understand the acceptance and completion criteria, submittal, financial screening requirements, contract selection types and contract caps. My firm shall 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 shall 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. Employees listed on the staffing plan are current bona fide employees of the firm.</i></p> <p><i>As authorized to sign for my organization, I certify the content of this Statement of Qualification to be true, accurate and all matters fully disclosed as requested in the Request for Qualifications. I understand any misrepresentations or failure to disclose matters in the Statement of Qualifications is immediate grounds for disqualification.</i></p>	
Signature Block	
Signature:	
Name:	
Title:	

The information is required to be in this exact format with no additional information other than the Consultant's letterhead. **SOQs will be considered non-responsive and will be disqualified if the Cover Page is not attached to the SOQ; if the Acknowledgement is not included on the Cover Page; if last pool period's version of the Acknowledgement is used; and/or if there is additional information included on the Cover Page. No evaluation points are assigned to this section and the Cover Page will not count as one of the allowed pages.** The *Pool Cover Page Form – 2016-2019 GE Pool* may be downloaded from the web www.udot.utah.gov/go/cspooladvertisements or www.udot.utah.gov/go/csforms.

Separate SOQ Submittal Required for Each Work Discipline

A separate SOQ submittal is required for **each** Work Discipline for which you are interested in submitting. However, multiple SOQ electronic files may be attached to one email.

Electronic File Naming Convention

Consultants are required to use the electronic file naming convention outlined as follows. The electronic file name of your SOQ file will be named first with the work discipline number then firm name. For example, if ABC Corporation is submitting an SOQ for the 14-Preconstruction Engineering work discipline then the electronic file name of the PDF will be "14 ABC Corporation.pdf". Firms will submit a separate electronic file for each work discipline using this naming convention.

Project Management Work Discipline #15 – Separate RFQ

UDOT has created a separate Request for Qualifications (RFQ) for the Project Management work discipline. The work discipline is intended for individuals who will act on behalf of UDOT as the UDOT Project Manager. Firms may submit Statements of Qualifications for individuals following the guidelines in the separate RFQ. Individuals will be qualified separately; however, the contract amount of all contracts selected from the qualified list of consultants in this work discipline will accrue against that individual's firm's Consultant Pool Period Cumulative Cap.

Work Discipline Subcategories

There are four Work Disciplines (3 - Construction Services, 5 – Environmental Technical Analysis Support, 22 - Surveying Services, 25 – Value Engineering and Risk Analysis) that have specialty subcategories. Firms are required to identify which subcategory or subcategories the firm is interested in being considered for in the Cover Page Form.

SOQ Maximum Number of Pages

The maximum number of pages for each SOQ is **four (4)** and the maximum length of the Cover Page Form is **one (1)** page for a total of **five (5)** pages.

For Work Disciplines that have Subcategories, the maximum number of pages is **increased by one page for each additional subcategory** a firm is submitting for.

- If submitting for **one** subcategory in a work discipline, the page limit for the SOQ is four (4), plus one (1) page for the Cover Page Form for a total of five (5) pages.
- If submitting for **two** subcategories in a work discipline, the page limit for the SOQ is five (5), plus one (1) page for the Cover Page Form for a total of six (6) pages.
- If submitting for **three** subcategories in a work discipline, the page limit for the SOQ is six (6), plus one (1) page for the Cover Page Form for a total of seven (7) pages, etc.

Any SOQ exceeding the page-maximum will be considered non-responsive and will be disqualified.

SOQ Page Numbers

Every page shall be numbered consecutively, 1,2,3,.... Please make this part of each page as a footer in the lower right hand corner. Do NOT count the Cover Page as page 1.

Page Footers

Page Footers are required on every page bottom right corner except the Cover Page and must include the following information:

- 1) Consultant/Contractor Firm Name;
- 2) Work Discipline No. and Title;
- 3) Subcategories (if applicable); and
- 4) Page number.

Margins

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

Color

Color is allowed.

Font and Spacing Requirements

The SOQ is required to be written with a 10 point [or greater] standard Arial or Times New Roman font, including the Cover Page 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. The minimum line spacing is 12 point.

Page Size

8½ x 11

Design

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

Penalty Points

UDOT reserves the right (through Consultant Services and/or the Selection Teams) to assess one Penalty Point for each instruction violation in the SOQ Requirements Summary. Our goal is not to penalize any submittal, but to help standardize/streamline the Pool Review Process for the Pool Selection Teams.

POOL ACCEPTANCE AND COMPLETION CRITERIA

Work Disciplines

A Pool of qualified Consultants or Contractors (firms or individuals) has been and/or will be selected to cover each area of service (Work Disciplines) UDOT deems necessary for upcoming projects. Project Managers should select qualified Consultants from the appropriate Work Discipline. Project Managers are encouraged to use the 50% Scope of Work/Work Plan Rule which will help them determine from what Work Discipline to select a Consultant.

Work Disciplines and Training

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

Qualified Consultant Selections

UDOT Project Managers and Local Government Project Managers are encouraged to use a variety of Consultants for their Pool Projects. However, it is up to each Consultant or Contractor to market their skills and services directly to the Region Project Managers. **There is no guarantee of work.**

Prime Consultant Requirements

Pool Contract Language states that a Prime Consultant will perform **60%** of the total contract value. The UDOT Project Manager and Consultant will be required to notify the Consultant Services Contract Administrator of ANY variation from this procedure so that the contract language may be altered.

Prime Consultant Pool Dollar Availability

All contract and modification costs (including subconsultant costs) will count towards the Prime Consultant's Cumulative Pool Dollars.

The selecting Project Manager (UDOT and/or Local Government) will make sure that each Consultant selected for a Pool Contract has consultant cumulative dollar availability prior to contacting the Consultant. This is done through the Contract Management System (CMS).

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 and consultant cumulative-cap limits.

The Consultant/Subconsultant(s) submits the following items through the Contract Management System (CMS) to the UDOT Project Manager for review and approval:

- 1) Executive Summary
- 2) Detailed Work Plan
- 3) Staffing Plan
- 4) Cost Proposal
- 5) Hours Derivation
- 6) Task Schedule/Deliverable Dates/Project Completion Date
- 7) Certificate of Insurance (annually submitted and maintained on file with Consultant Services)

- 8) Subconsultants shall be required to meet all contract document requirements, if the value of the subcontract is greater than or equal to \$25,000.

The **UDOT Project Manager** is required to submit the following documents to Consultant Services through a CMS Pool Contract and/or Modification request before the contract/mod can be generated:

- 1) Scope of Work – Executive Summary
- 2) Independent Cost Estimate (ICE)
- 3) R-709 Form (Required for All State and Federal Projects)
- 4) Update the ePM 505 Screen
- 5) CMS electronic Contract/Modification Approval
- 6) Executed Local Government Federal-Aid Agreement (if applicable)

Insurance Requirements

UDOT requires all Consultants and Subconsultant(s) selected for Pool Projects to meet certain insurance requirements. These requirements may change throughout the Pool period according to the need and direction of UDOT. It is the responsibility of the Consultant to meet the insurance requirements of UDOT. Insurance Waivers may be requested through the Consultant Services Manager in writing who will then submit the request to Risk Management for approval. The current insurance requirements may be found within the *Consultant Services Manual of Instructions* and may be downloaded from www.udot.utah.gov/go/csmanuals.

Applicable Federal, State, and Local Regulations

It is the responsibility of Consultants and Subconsultants to know and understand state and federal contracting and project regulations, rules, policies and procedures. Consultants and Subconsultants shall conform to all state and federal requirements.

Authorization to Begin Work

Consultant Services staff are the only authorized agents to give a Notice to Proceed (NTP). This will come via email and will then be followed up with an official letter. Consultants may request an early Notice to Proceed with the UDOT Project Manager via email if a specific incident arises where UDOT needs to allow work to begin prior to a formal NTP. The UDOT Project Manager is then required to submit this request in writing justifying and supporting the request to the Consultant Services Manager. If an early Notice to Proceed is given, it will come from Consultant Services in writing with specific limitations and expectations for the Consultant and the UDOT Project Manager.

NOTE: Violation of authorization to begin work (Notice to Proceed) may result in non-payment of work performed, termination of an impending contract, or loss of federal funds, if applicable. Consultant billings shall not date prior to contract and/or modification execution date.

Consultant Personnel/Certification Requirements

The Consultant guarantees UDOT that every individual working for them is qualified through training, experience, and appropriate certification for the tasks they will be assigned for a contract or contract modification. If UDOT has determined that non-professional technical people who may work on projects for UDOT must meet certain certification requirements it must be reflected in each SOQ that the Consultant has met this requirement.

Former UDOT Employees

If a firm lists someone who has not yet left UDOT employment, even if the employee plans to retire or quit soon, the SOQ will be disqualified. If a firm lists a former UDOT employee on an SOQ who officially left UDOT employment prior to the date of submittal of the SOQ, the firm will not be disqualified for this reason.

Non-affiliated Consultant Employees

Consultants cannot list non-affiliated individuals in their SOQ employed by another Consultant. The Consultant's SOQ will be disqualified and will not be evaluated by UDOT. **If the use of non-affiliated consultant employees is noted after qualification, the Consultant's SOQ will be disqualified once it is brought to Consultant Services attention.**

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' SOQs will be considered non-responsive and will be disqualified. Exception 1: If one firm voluntarily withdraws their firm's SOQ, the other firm's SOQ 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 SOQ submission deadline for the same work discipline, neither firm will be disqualified for this reason.

No Sub-consultants

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

Training Requirements

Consultants and Subconsultants 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.

Project Evaluation Requirements

Consultant Services requires UDOT Project Managers, Local Government Project Managers, and Consultants perform at least TWO Project Consultant Evaluations for each contract. Consultants are encouraged to initiate these evaluations if the UDOT or Local Government Project Manager has not. They are further encouraged to include them in the project schedule.

Qualification Based Selection

The selection for this Pool is a Qualifications Based Selection (QBS) process based on the Brooks Act. Consultant cost is NOT a factor in the evaluation of consultants to provide the services described in the Work Discipline Descriptions.

All price/cost related items which include, but are not limited to, direct salaries, wage rates, indirect cost rates, fees, and other direct costs are prohibited from being used in SOQs. **Any SOQ received with any discussion of consultant cost (other than cost control measures) will be considered non-responsive and will be disqualified. If a Project Experience Chart is included, do not include consultant contract amounts in place of construction estimates. If you include consultant contract amounts, the SOQ will be considered non-responsive and will be disqualified.**

Debarment Certification

Federal Regulations require certification by prospective participants (including consultants, contractors, subcontractors, 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. **Consultants are required to disclose any current (last 2 years) debarment, license issues, and/or investigations information.**

Pool Debriefing Opportunities

Consultant Services will offer Consultant Pool Debriefs by email within 90 days of receiving an email request. Debriefing information will include 1) Discipline Scores and 2) Not Qualified ("0") Score Selection Team Reviewer Comments (see page 18 for details). This may be changed to meet the needs of UDOT.

Disclosure and Disposition

Statements of Qualifications of successful Consultants shall be open to public inspection for a period of three years after the Pool qualification is made. Once submitted, Statements of Qualifications and their content become the property of UDOT and are treated as protected documents (this includes scores and comments) and will be handled according to UDOT Policies.

Preaward Audit

In the event that a proposing consultant has failed to pay UDOT monies due to UDOT for over payment on past projects, UDOT has the right to reject and/or disqualify the firm's Statement of Qualifications. Disqualification will be based on the audit findings, determinations, and recommendations made by UDOT's authorized agent.

Technology Requirements

It is the responsibility of the Consultant/Contractor 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. Technical and Standards support will be provided to the consultant through the Department of Technology Services.

Quality Control / Quality Assurance

Reviews and Quality Assurance: All contracts require a quality control / quality assurance plan and checklist. For design projects specifically, the CONSULTANT shall deliver a project specific QC/QA plan that meets or exceeds UDOT's standard QC/QA plan located on UDOT's web page at www.udot.utah.gov/go/qcqa. If the CONSULTANT elects to use their own QC/QA plan, that plan shall, as a minimum, contain the requirements of UDOT's plan and be approved by UDOT's Project Manager. In addition to the QC/QA checklists and certifications, back up documentation of the QC/QA plan shall be maintained. The backup documentation shall include, but not be limited to the following items:

- 1) Check prints and calculations
- 2) Comment resolution forms
- 3) Written records of the findings of the Quality Control check
- 4) Peer review letters, memoranda, etc.
- 5) Any other correspondence regarding the Quality Control activities involving the task.

WORK DISCIPLINES

Work Disciplines		Subcategories	
1	Bridge Management and Asset Management		
2	Construction Engineering Management (CEM)		
3	Construction Services	A	Constructability Review Services
		B	Training
4	Environmental Document Preparation		
5	Environmental Technical Analysis Support	A	Air Quality
		B	Archaeology and Paleontology
		C	Architectural Historian
		D	Biological and Wildlife
		E	Noise
		F	Wetlands and Other Waters
6	Geotechnical		
7	Hazardous Materials, Waste Assessment and Remediation		
8	Hydraulic Design		
9	Intelligent Transportation Systems – Installation, Testing, and Integration of Field Equipment		
10	Intelligent Transportation Systems – Project Development, Design and Oversight		
11	Landscape Architecture		
12	Materials Testing		
13	Planning		
14	Preconstruction Engineering		
15	Project Management (Individual Qualification under Separate RFQ)		
16	Public Involvement (Separate pool caps and limits apply.)		
17	Research		
18	Right of Way Engineering		
19	Specialized Services (Firms self-title the specialized services)		
20	Structures Design		
21	Subsurface Utility Engineering		
22	Surveying Services	A	Aerial Photogrammetry
		B	Surveying and Mapping
23	Traffic Data		
24	Traffic Signal and Roadway Lighting Design		
25	Value Engineering & Risk Analysis	A	Value Engineering
		B	Risk Analysis

WORK DISCIPLINE EVALUATION / SCORING CRITERIA

The General Engineering Services and Local Government Pool Discipline Selection Review Teams will evaluate and score all Statements of Qualifications in accordance with the criteria and rating scale below. (NOTE: It is not required to have headings on separate pages in the SOQ.)

Rating*: 0 = Not Qualified 1 2 3 4 5 = Excellent

Heading	Criteria	Points Possible	Rating	Multiplier	Score
1	Firm Qualifications	(5)		X <u> 1 </u> =	
2	Key Personnel	(10)		X <u> 2 </u> =	
3	Project Experience	(10)		X <u> 2 </u> =	
Total Points		25			

Threshold Score

UDOT has established a threshold score of 60% of the total points available. If a Consultant's SOQ receives 15 points or higher out of 25 points, the Consultant will be considered qualified and will be listed as qualified for the work discipline. If a Consultant's SOQ receives less than 15 points, the consultant will not be listed as qualified for the work discipline.

Criteria Heading 1 – Firm Qualifications

Provide specific Consultant firm qualifications directly related to the "Work Discipline" you are submitting qualifications for, including both local and national (if applicable) qualifications. Particular emphasis should be placed on your firm's specific and unique strengths that show leadership, management, work quality, commitment, collaboration, and communication capabilities. Consultants may not use the qualifications of sub-consultants as part of their SOQ submittal to qualify in a work discipline.

Criteria Heading 2 – Key Personnel

Provide specific experience of Key Personnel that your firm will utilize in the particular "Work Discipline" for which you are submitting qualifications. Specific past experience related to education, expertise, leadership, management, past projects, and ability to collaborate and communicate should be emphasized. Work experience gained while an employee was working for a different firm must be disclosed.

Criteria Heading 3 – Project Experience

Provide specific project experience for completed or ongoing transportation projects in the particular "Work Discipline" for which your firm is submitting qualifications. Project experience must be for work performed within the past ten years and must include references. Your firm may only identify projects for which it was the prime consultant, or a subconsultant with a substantial role. For each project identified, state individuals' roles and the services performed. Referenced key personnel no longer employed by your firm must be disclosed.

*** Rating – Qualitative Assessment Guidelines for Reviewers**

Selection Team members will review and score each SOQ according to the criteria. Team members will evaluate and score based on the scoring listed below. Selection Teams may use up to two decimal place accuracy; i.e., 2.75, 3.50, 4.25, etc.

5	The Proposer's qualifications are exceptional. The Proposer demonstrates a complete understanding of the subject and qualifications that significantly exceed the stated requirements and objectives of the work. The Proposal communicates an outstanding level of quality.
4	The Proposer's qualifications are more than adequate. The Proposer demonstrates a strong understanding of the subject and qualifications that meet the stated requirements and objectives of the work. The Proposal communicates a high level of quality.
3	The Proposer's qualifications are adequate. The Proposer demonstrates a general understanding of the work and qualifications containing some weaknesses/deficiencies regarding the stated requirements and objectives of this work. The proposal communicates an adequate level of quality.
2	The Proposer's qualifications raise questions about the Proposer's ability to successfully complete the work. The Proposer demonstrates a vague understanding of the work and qualifications containing significant weaknesses/deficiencies regarding the stated requirements and objectives of this work. The Proposal communicates a below-adequate level of quality.
1	The Proposer's qualifications do not indicate the likelihood that the work will be completed successfully. The Proposer demonstrates insufficient understanding of the subject and qualifications that fail to meet the stated requirements and objectives of this work. The Proposal communicates a low level of quality.
0	Not Qualified. NOTE: If a Selection Team Reviewer rates a Consultant with a zero, the Reviewer will be required to submit detailed comments on the Consultant's Individual Scoring Form. Comments will be given to the Consultant in their debriefing email.

REQUALIFICATION CERTIFICATION REQUIREMENT

Utah Code 63G-6a-403 (Effective 05/01/13). Prequalification of potential vendors Subsection (3)(b)(v) states, “*the period of time during which the list of prequalified potential vendors will remain in effect, which may not be longer than 18 months after the list of prequalified potential vendors is made available to the public under Subsection (8)(b) . . .*” Vendor is defined in Subsection (1)(a)(iii) as “*a contractor, including an architect or an engineer.*”

In order to be consistent with Utah Code, all Consultants qualified in the Pool as of **Wednesday, November 1, 2017** 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 in order to maintain their qualified status in the Pool.

RCF Submission Deadline

Between November 1, 2017 and Wednesday, November 15, 2017 by 11:00 a.m.

Consultants may submit RCFs any time starting on Wednesday, November 1, 2017 until Wednesday, November 15, 2017 by 11:00 a.m.

Any firm 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, 2018.

If a firm misses the RCF deadline, they may submit a new SOQ for the next SOQ submission deadline of April 5, 2018 by 11:00 a.m. for consideration.

Separate RCF Submittal Required for Each Work Discipline

A separate RCF submittal is required for **each** Work Discipline for which your firm is listed as qualified by UDOT in order to maintain your firm’s qualified status in the Pool. However, multiple RCF electronic files may be attached to one email.

Electronic File Naming Convention

Consultants are required to use the electronic file naming convention outlined as follows. The electronic file name of your RCF file will be named first with the work discipline number, then firm name. For example, if ABC Corporation is submitting an RCF for the 14-Preconstruction Engineering work discipline then the electronic file name of the PDF will be “14 ABC Corporation.pdf”. Firms will submit a separate electronic file for each work discipline using this naming convention.

Electronic Requalification Certification Submission Required

- 1) Submit an electronic PDF file of each RCF by email to Gaye Hettrick, Consultant Services Manager, GESOQ@utah.gov.
- 2) If for some reason you are unable to email your submittal, an electronic copy; i.e., CD, jump drive, etc. with RCF files delivered to Consultant Services will be accepted.
- 3) The state email system will not receive any emails with attachments of 25M or greater.

- 4) When the GESOQ@utah.gov email receives emails, an automatic return email will be generated to provide confirmation your email was received if you have the word “pool” in the subject line somewhere and there is an attachment.

Requalification Certification Form (RCF)

A RCF is required for each work discipline. It may be on the Consultant’s letterhead. The *Requalification Certification Form (RCF) – GE Pool* may be downloaded from the website www.udot.utah.gov/go/csforms.

Material Changes Section

Consultants are required to identify changes that have occurred since they qualified for the 2016-2016 General Engineering Services and Local Government Pool. Since consultants in the pools may requalify at the 18-month interval without the need to go through a new competitive procurement process, it is essential that UDOT become aware of any changes that have occurred during that interim that may affect a consultant’s ability to perform as UDOT requires. Not every change will disqualify a firm from being included in a prequalified consultant pool. Consultant Services Division personnel will thoroughly evaluate the material changes identified on the RCF Form and disqualify a firm if such action is necessary to protect the interests of UDOT and the state.

Following are definitions for each item in the Material Changes Section of the RCF Form. If an item is not applicable, insert “NA”.

- 1) *Adverse Action Initiated:* In the period since your firm qualified in the identified 2016-2019 General Engineering Services and Local Government Pool work discipline, have any of your firm’s clients or has any law enforcement agency initiated any action adverse to the interests of your firm such as, but not limited to:
 - a) Filed a complaint or petition with court seeking a remedy for an alleged wrong;
 - b) Initiated an administrative proceeding with a public entity seeking to have your firm debarred;
 - c) Identified your firm as the target of a civil or criminal investigation based on allegations of bribery of a public employee or antitrust law violation; or
 - d) Filed a claim against one of your firms bonds or funds pledged as security?
- 2) *Financial Condition:* In the period since your firm qualified in the identified 2016-2019 General Engineering Services and Local Government Pool work discipline, has the financial condition of your firm deteriorated so that it is at risk of defaulting on a contract or has defaulted on a contract, or has filed for bankruptcy protection?
- 3) *Key Personnel:* In the period since your firm qualified in the identified 2016-2019 General Engineering Services and Local Government Pool work discipline, have any of the employees your firm identified to UDOT to establish its qualifications terminated their employment with your firm?
- 4) *Ownership:* In the period since your firm qualified in the identified 2016-2019 General Engineering Services and Local Government Pool work discipline, has your firm merged with another firm or been purchased by a new owner?

- 5) *Work Under Contract.* In the period since your firm qualified in the identified 2016-2019 General Engineering Services and Local Government Pool work discipline, has the amount of work your firm has contracted with UDOT or others to perform increased by more than 300%?

- 6) *Other.* In the period since your firm qualified in the identified 2016-2019 General Engineering Services and Local Government Pool work discipline, has your firm experienced any changes not listed here that could adversely affect its ability to perform the work anticipated by this RFQ?

REQUALIFICATION CERTIFICATION FORM
2016-2019 General Engineering Services and Local Government Pool

(See 2016-2019 General Engineering Services and Local Government Pool RFQ on www.udot.utah.gov/go/cspooladvertisements for instructions for this form, pages 19-22)

Date:

Work Discipline

Work Discipline No.:

Work Discipline Title:

Subcategory or Subcategories
(if applicable):

Firm

Firm Name:

W-9 Federal ID No.:

Firm Address:

Primary Contact

Primary Contact Name:

Email:

Office Phone No.:

Cell Phone No.:

Material Changes

Adverse Action Initiated:

Financial Condition:

Key Personnel:

Ownership:

Work Under Contract:

Other:

Requalification Certification

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 showing 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.
- I have identified all material changes that have occurred since the last time my firm certified to its qualifications and operating conditions.
- I am authorized to speak for and execute legal documents for my firm.

Signature Block

Signature:

Name:

Title:

WORK DISCIPLINE DESCRIPTIONS / CERTIFICATIONS / OTHER REQUIREMENTS

Bridge Management and Asset Management – #1

Work within this category is related to assisting in UDOT's overall bridge management efforts. This may include small to large projects, or individual tasks. Specific services may include but are not limited to bridge inspection, load rating, STIP Planning, Corridor studies, Hydraulic studies, deterioration modeling, cost modeling, database enhancements, training, minor plan package development, and technical support.

Construction Engineering Management – #2

All qualified Consultants desiring to provide Construction Engineering Management services to the Department and/or Local Government will be required to provide the following prior to being selected for a project: 1) CEMT, IQP, ADA Ped Ramp and Traffic Control Certification Verification, 2) Professional License (PE).

Some tasks of Construction Engineering Management are: 1) Continuous onsite monitoring of the contractor's work, resolve any issues that arise, 2) Conduct all necessary meetings from the advertisement to the post construction conference, 3) Coordinate with UDOT and/or local government representatives on project issues, and 4) Monitor the contractor's work for safety, adherence to the traffic control plan, schedule, and compliance with appropriate plans and specifications related to the project.

WAQTC Certified Personnel in AMRL Certified Labs may test all construction material.

Consultants are responsible for:

- 1) Entering quantities into the Department's Project Accounting System,
- 2) Provide necessary project documentation
- 3) Follow Construction MOI processes
- 4) Perform Project closeout

The consultant must have appropriate training in these areas prior to being selected for a project.

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.

Construction Engineering Management Training (CEMT) Certification is required for Resident Engineers, Field Engineers, and Office Managers and will be verified prior to project selection. Inspector Qualification Program (IQP) Certification and Traffic Control Certification are required for inspectors.

More information may be found at: www.udot.utah.gov/go/cemt and www.udot.utah.gov/go/iqp. More information for Traffic Control Certification may be found at www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:2967.

Construction Services – #3 **(Subcategories)**

The Construction Services work discipline includes subcategories. Consultants are required to list the subcategories the firm is submitting for in the Cover Page Form. If your firm is submitting for more than one subcategory, the maximum number of pages allowed in your SOQ varies, see page 10 for additional details.

UDOT is seeking qualified individuals or firms who can provide Constructability Review Services and Construction Training 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.

3A – Constructability Review Services

Constructability optimizes the following major project elements from start to finish of the project: overall project plan, planning and design, construction-driven schedule, costs or estimates, 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, independent cost estimating, 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. The firm may also be asked to develop Independent Cost Estimates (ICE) 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 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.

3B – Construction Training

The individual or 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.

Environmental Document Preparation – #4

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-

1508) (NEPA) as it applies to the Federal Highway Administration in 23 CFR Parts 771 and 774, 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), 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.

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, but not limited to 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 of 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.

Environmental Technical Analysis Support – #5 **(Subcategories)**

The Environmental Technical Analysis Support work discipline includes subcategories. Consultants are required to list the subcategories the firm is submitting for in the Cover Page Form. If your firm is submitting for more than one subcategory, the maximum number of pages allowed in your SOQ varies, see page 10 for additional details.

There are occasions when UDOT requires 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.

5A – Air Quality

Consultants performing air quality analyses on transportation projects must be an expert in conformity as defined in [Title 40 of the Code of Federal Regulations](#), the Clean Air Act of 1970, as amended, the UDOT planning process as it relates to regional conformity and project level conformity, and how conformity is obtained and modeled in the Long Range Plan (LRP) and Transportation Improvement Plan (TIP) processes. Consultants must also have expert level experience in performing air quality analyses for transportation projects. Air Quality analyses will

address all criteria pollutants applicable to the geographic area of a proposed project. Analyses may be required for ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, Mobile Source Air Toxics (MSATs), greenhouse gases and other constituents as required by the project. For quantitative analyses of carbon monoxide, consultants will use emission factors generated by the latest Motor Vehicle Emission Simulator (MOVES) model and the latest version of the CAL3QHC/CAL3QHCR dispersion model. For quantitative analyses of volatile organic compounds (VOCs), MSATs, nitrogen oxides (NOx), and particulate matter (PM), consultants will use the most current version of the EPA MOVES model, as directed by federal requirements. Consultants will describe current conditions, analyze potential impacts, develop mitigation strategies if needed and provide a written report.

5B – Archaeology and Paleontology

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:

- Records 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

Archaeological 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, but are not limited to 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 and digital photography.

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

Paleontological 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.

5C – Architectural Historian

The Department is seeking to retain qualified 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

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.

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 Preservation Pro database.

5D – Biological and Wildlife

This subcategory 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 Wildlife Biologist and the Natural Resources Program Manager.

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.

5E – Noise

Consultants performing 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. 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 subcategory 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.

5F – Wetlands and Other Waters

This subcategory 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 wetland science, stream assessment parameters, and regulatory guidance established by the U.S. Army Corps of Engineers (USACE). Consultants should also demonstrate a track-record of successfully obtaining permits and approved delineations from Utah regulatory offices.

Consultants performing aquatic resource evaluations under this pool subcategory must be proficient in the delineation of wetlands in accordance with the processes outlined in the 1987 Corps of Engineers Wetland Delineation Manual and the appropriate regional supplement, and with the use of indicator statuses as given in the most recent National Wetland Plant List. 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 subcategory may be called upon to prepare permit applications, which may include a USACE Nationwide Permit (NWP) or an USACE Individual Permit (IP). Consultants preparing NWPs should be knowledgeable of the NWPs applicable to transportation projects and should possess an expert understanding of the NWP application process, including general and regional conditions and the completion and submittal of Pre-Construction Notifications (PCNs). Consultants preparing IPs should demonstrate their experience preparing IPs, and any associated alternative analyses and mitigation plans developed 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.
- Prepare detailed construction plans (grading and re-vegetation) and specifications for the creation, restoration, or enhancement of wetland mitigation sites.
- Inspect construction of wetlands mitigation sites to ensure contractors are complying with plans and specifications.

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.

Geotechnical – #6

This category of work involves different aspects of geotechnical engineering and engineering geology including:

- Geotechnical Investigations (borings, CPT, 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 Analysis (PDA)
- Exploratory borehole logging

The services may be for the complete geotechnical design of a project or for one or more specific geotechnical tasks. Work shall 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 shall be capable of collecting soil samples and rock cores common to the geotechnical practice in accordance with AASHTO and ASTM standards. The CPT provider shall 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 PDA. The Pile Driving Analysis consultant shall 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 shall also include all equipment and personnel necessary. All inclusive design services shall be in accordance with all current AASHTO requirements and the UDOT Geotechnical Manual of Instruction.

Hazardous Materials / Waste Assessment and Remediation – #7

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 EPA regulations including (but not limited to) RCRA, CERCLA and SARA, OPA, CWA, CAA, 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. Level of site investigation will generally be phased, following ASTM Phase I and II guidelines. Consultant will conduct historical research in corridor that will include, but not be limited to DEQ records search. Discoveries are reportable, by law, to DEQ following full report to project manager/environmental manager. Consultant may work with UDOT Right of Way agents and advise whether whole or partial property purchase is feasible. Consultants will analyze potential project impacts, develop possible remedial alternative, develop conclusions and provide a written report for possible inclusion in an environmental document. Hazardous Waste Contractors will obtain from local and state authorities the necessary permits for removals and disposals. All employees of contractor working in remediation phase of project must be current with 40-hour OSHA training. Contractor must provide estimate of costs and disposal fees. Contractor will be required to report discoveries to DEQ following full report to project manager/environmental manager. Contractor should work closely with an environmental consulting firm if it does not have in-house capability.

Hydraulic Design – #8

Statement of Qualifications shall provide sufficient detail to demonstrate familiarity with UDOT's Hydrologic and Hydraulic analysis and design procedures. Provide statements of qualifications of personnel to perform the requested services in the areas listed below.

Work within this category is related to assisting in UDOT's overall infrastructure management efforts and may include small to large projects, or individual tasks. Specific services may include but are not limited to hydrologic studies, hydraulic studies, bridge scour studies, storm water quality studies, culvert design, roadway drainage design, bridge scour countermeasure design, cost estimating, training, plan package development, review, and technical support. Services include all equipment and personnel necessary to complete the required tasks.

**Intelligent Transportation Systems (ITS) –
Installation, Testing, and Integration of Field Equipment – #9**

Intelligent Transportation Systems are defined as the application of advanced computing and communication technologies in transportation.

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

- 1) A thorough working knowledge of ITS devices; UDOT plans, processes and procedures; TOC 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.
- 2) Knowledge of the UDOT fiber optic network, telecommunications devices and associated software
- 3) Experience installing, testing, and troubleshooting IP/Ethernet communications, fiber, copper wire, and wireless communications
- 4) Understanding and experience interfacing field devices through communications protocols
- 5) Ability and experience updating firmware, software and systems in the field
- 6) Understanding and experience with configuration management
- 7) The ability to perform site surveys, license frequencies, and establish continuous communications between field devices
- 8) Current certification in Outside Plant and Inside Plant practices and techniques
- 9) Understanding and experience with NEMA code
- 10) Current licensing with the State of Utah as Contractors, Master Electricians, Electricians, and Electronics Technicians (IMSA Level I, II, III).

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

- 1) Video cameras
- 2) Variable message signs
- 3) Traffic monitoring stations
- 4) Highway advisory radios
- 5) DSRC radios
- 6) Road weather information/environmental sensing systems
- 7) Communications hardware, including switches, modems, and IP radios
- 8) Traffic signal controllers and related devices
- 9) Vehicle detectors
- 10) Pre-emption systems

Under this procurement, 'installation' shall not be construed to include 'construction' activities (excavation, concrete placement, hoisting, 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:

- 1) Troubleshoot integration issues between field devices and central software
- 2) Provide assistance in integrating and debugging equipment
- 3) Establish continuous reliable communications - providing network and communication solutions to identified problems
- 4) Design graphics of signalized intersections for centralized software

- 5) Update central software user interfaces, configuration and databases
- 6) Install firmware upgrades and new configurations on signal controllers
- 7) Provide as-built splice details and outside plant data for updating UDOT's fiber configuration database
- 8) Complete acceptance testing for operations and maintenance.

**Intelligent Transportation Systems (ITS) –
Project Development, Design, and Oversight – #10**

Intelligent Transportation Systems are defined as the application of advanced computing and communication technologies in transportation.

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

- 1) Being conversant with the design requirements for a UDOT plan set, including specific requirements and styles for each of the four Regions.
- 2) Experience using Micro-station/Inroads Selectseries 4, Projectwise and Electronic Program Management (ePM)
- 3) Understanding UDOT's requirements for CADD and UDOT specifications
- 4) Understanding UDOT's project advertising process
- 5) The ability to interpret designs and identify corrections to State furnished plans
- 6) A thorough knowledge of current UDOT ITS (ATMS) specifications, Highway Capacity Manual, AASHTO Design Guide, MUTCD, Roadside Design, and Utah Electrical Code.
- 7) Familiarity with UDOT's Intelight MaxView traffic signal software, signal performance metrics system, and fiber optic network.
- 8) Current certification or proven experience in inspection and QA/QC of ITS projects
- 9) Current licensing with the State of Utah as Professional Engineers, Contractors, Master Electricians, Electricians, and Electronics Technicians (IMSA Level I,II,III).

Consultant(s) qualified in this work discipline will:

- 1) 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.
- 2) Develop or update system architectures.
- 3) Prepare project alternatives analyses and concept reports.
- 4) Analyze and prepare scope documents.
- 5) Prepare design plans for construction.
- 6) Review and redline plans and construction specifications for compliance and consistency with ITS standards, specifications, and architecture.
- 7) Assist with project advertising.
- 8) Provide construction oversight including inspection, QA/QC, and interpretation of plans.
- 9) Provide persons who have obtained IQP certification for any inspection tasks.

Landscape Architecture – #11

This category of work provides services to 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. Consultants providing work under this category must be licensed Landscape Architects, have a working knowledge of roadway engineering principles, and be capable of providing the following work:

- 1) 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.

- 2) Recognize the context of transportation projects in manmade or urban 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.
- 3) 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.

Consultants must be familiar with the UDOT aesthetics policy and landscape and erosion control standard drawings and specifications. Consultants providing in-house irrigation design must demonstrate their ability to provide this work as it relates to large transportation projects.

Materials Testing – #12

Scope:

This category of work is defined as the 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 and FHWA eligibility requirements. This work will be as a supplement to the work performed by UDOT personnel on UDOT projects, or as principle testing facility for Local Government projects.

Testing will be performed in the disciplines of Hot Mix Asphalt, Asphalt Binder, Portland Cement Concrete and Soils. Submitting firms must identify which disciplines they wish to work in.

Qualifications:

Statement of Qualifications shall 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 Statement of Qualification must be UDOT TTQP 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, HMA Asphalt, Concrete Field Testing, Concrete Strength Testing, Aggregates, Sampling Reduction and Density, General 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 Central Materials Division's Laboratory Qualification Program (LQP) and be listed on the UDOT Materials Division web page as a qualified laboratory.

The testing laboratory must hold AASHTO accreditation in the specific areas (i.e., HMA, 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, equipment calibrations and QC/QA 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 Government may be required to provide current AMRL Accreditation Documentation prior to being selected for a project.

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

Planning – #13

This category of work may consist of performing a varied array of transportation planning activities to assist UDOT in determining Utah's future mobility needs and shaping the future transportation system today. Plan recommendations from studies will be used in UDOT's long-range plan system mobility needs, prioritized, and fiscally phased. The consultant may be asked to evaluate existing and future conditions of the state transportation 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. Included in this planning category are data collection, Travel Demand Modeling, Simulation/visualizing, design traffic, GIS, Corridor Planning Process, corridor planning and operations, alternatives analysis, planning level environmental constraints identification, cost determinations, Access Management Agreements, Asset Management evaluations, Community Impact identification, Public Involvement, TravelWise (Travel Demand Management), Active Transportation Planning (Road respect, Region Plans-BFIT etc.), Pedestrian Planning & Safety (with Traffic and Safety), Freight Planning, Air Quality measuring-modeling, database manipulation, local government coordination and training services.

The Consultant will be required to perform studies managed by UDOT Staff with expertise for planning areas described above, develop reports and document study findings and recommendations.

The Consultant may participate in corridor studies, corridor operations analysis, NEPA related documents, the UDOT's long-range plan, intersection operations analysis, level of service analysis, and UDOT's efforts to link Planning to NEPA. These studies may involve individual modes or a combination of modes; Hot Lane, HOV, Toll, Transit, Travel Demand Management, Transportation System Management.

The Consultant may be asked to research or provide state-of-the-practice training to UDOT's staff on Travel Demand Modeling, Simulation/visualizing, design traffic, GIS, alternatives analysis, planning level environmental constraints identification, cost determinations, Access Management Agreements, Asset Management evaluations, Community Impact identification, Public Involvement, database manipulation, development of design traffic, traffic modeling, simulation, capacity analysis, GIS, and environmental processes.

Preconstruction Engineering – #14

This category of work is all encompassing for design phase services. Services include the personnel resources, equipment and materials necessary to prepare contract plans,

specifications, and estimates 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. Utilize UDOT business development tools such as PDBS, ePM, Projectwise, and UDOT's Project Management Office (PMO).

Consultants selected from this Pool Discipline are responsible to provide a quality product. The PE Statement of Qualification (SOQ) 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 is all encompassing, UDOT recommends qualified Consultants submit SOQ's for all other design 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 Preconstruction Engineering Work Discipline may not be used. For example, if the project is for bridge design, the Consultant must be qualified for the bridge design work discipline and not be selected from the Preconstruction Engineering Work Discipline.

Project Management – #15 (INDIVIDUALS ONLY)

UDOT has a separate Request for Qualifications (RFQ) for the Project Management work discipline. Firms may submit Statements of Qualifications for individuals following the guidelines in the separate RFQ. Individuals will be qualified separately; however, the contract amount of all contracts selected from the qualified list of consultants in this work discipline will accrue against that individual's firm's Consultant Pool Period Cumulative Cap.

Public Involvement – #16 (Separate pool caps and limits apply)

UDOT is seeking 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.

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, 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, key stakeholder engagement, public outreach campaigns, public open houses, research methods and analysis, social media

platforms, websites, web services, email, publications, graphics, geographic referencing, photography 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 including UDOT Projects and UDOT Traffic services.
- 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 and Premiere.

Research – #17

The primary focus of the Research Division is to provide problem solving and technical enhancements in areas of concern identified in the “Utah Department of Transportation Strategic Direction”. UDOT has a strong tradition of using research to further the goals of UDOT and is therefore seeking individuals or firms that can assist them.

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

Structures	Materials
Geotechnical	Hydraulics
Intelligent Transportation	Roadway Design
Pavements	Environmental
Maintenance	Safety
Construction	Administration
Planning	Customer Satisfaction
Data Collection	Traffic
Roadway Condition Data Collection	

UDOT is interested in contracting with firms or individuals who can carry out specific research tasks, perform analysis on the data gathered, and create the needed deliverables (reports, training, manuals, etc.) related to these research projects.

Right of Way Engineering – #18

Provide engineering services to survey, develop, check, review and certify documents, prepare Right of Way plans and descriptions for parcels associated with proposed construction in accordance with the applicable *UDOT Survey and Geomatics Standards Manual*, UDOT and FHWA procedures.

Note: This category does not include Right of Way Acquisition Services such as: Appraisal, Appraisal Review, Acquisition, Lead Agent, or Relocation. There is a separate Pool for these

Right of Way Services. Please contact **James Olschewski**, Deputy Director of Right of Way at **(801) 965-4821** for more information.

Specialized Services - #19

Consultants may propose their firm's unique specific service in this work discipline that does not fit within the other defined work disciplines. The intent of this work discipline is for firms who do not have the staff to qualify for the Preconstruction Engineering (PE) Work Discipline (full roadway design) and/or Construction Engineering Management (CEM) Work Discipline (full inspection services) but would be 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:

- **Title their specific service in 3-5 words;**
- **Include the title on the Cover Page Form in the Box for "Subcategory or Subcategories (if applicable)";**
- **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 SOQ will be considered non-responsive and will be disqualified.

The SOQ 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 SOQ will then be scored based on this RFQ's standard criteria on Page 17.

Consultants may only submit one SOQ related to PE services and one SOQ related to CEM services for a total of up to two SOQs for this work discipline and indicate in your submittal whether your SOQ is related to PE or CEM services.

This is a new work discipline to attempt to provide a category for firms who do not have the staff to qualify for the PE and/or CEM work disciplines but would be able to provide a valuable particular expertise. If unforeseen issues arise during the evaluation process, UDOT reserves the right to cancel this work discipline at its sole discretion or UDOT could choose to move SOQs to another work discipline where they may appropriately fit.

Structures Design – #20

This category of work is defined as the production of competently engineered structures (bridges and miscellaneous structures) that conform to UDOT's design processes, procedures, standards, requirements and guidelines as defined in the UDOT Structures Design and Detailing Manual (SDDM), the Bridge Management Manual (BMM), and those of AASHTO and the FHWA. Provide engineering services to design, study, analyze or review structures of various types that may be required on a highway project or engineering study. This may include but not be limited to the complete bridge design, a bridge widening or any miscellaneous structure. Miscellaneous structures include but are not limited to box culverts, other culvert types, retaining walls, overhead sign structures, and structures required for ITS functions. The definition of design includes the preparation and development of structural calculations, plans, specifications, special provisions, measurement and payment, and acceptance and

documentation as well as all required project documentation. Preference will be given to those who understand the requirements as defined in the SDDM and BMM, those that have experience with Accelerated Bridge Construction, those that understand and can meet or exceed the UDOT Structures Division Quality Control/Quality Assurance Procedures, and those that understand the requirements within the UDOT Project Delivery Network for the structures discipline.

Subsurface Utility Engineering (SUE) – #21

Services - The Consultant shall be qualified and have the resources to provide Subsurface Utility Engineering services for various projects:

- 1) Designating Services – 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 shall 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 shall be signed and sealed by a professional engineer licensed in the State of Utah. All work shall be processed and output submitted in the current UDOT drafting standards and current versions of MICROSTATION and BENTLEY CADD programs, unless otherwise approved by UDOT's Project Manager. All SUE utility location data shall be submitted in UDOT's current 3D as-built database format (CSV file). A final SUE report shall be submitted at the completion of each work order in a Microsoft Excel file.

Experience, Certifications and Personnel – All SUE work shall 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:

- 1) Registered Professional Engineer – The Consultant shall 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 CADD
 - Knowledge and application of ASCE Standard Guideline 38 (current edition)
 - Utility reports
 - 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
- 2) Utility Designator – The Consultant shall 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
 - 3) Locator – The Consultant shall 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).
 - 4) Survey Party Chief – The Consultant shall 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) CAD Technician – The Consultant shall 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 CADD programs, and in the current UDOT drafting standards.
 - 6) Consultant Firm – In addition to the required experience of individual personnel, the Consultant shall 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.

Equipment – The Consultant shall 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

General – 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 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.

Surveying Services – #22 **(Subcategories)**

The Surveying Services work discipline includes subcategories. Consultants are required to list the subcategories the firm is submitting for in the Cover Page Form. If your firm is submitting for more than one subcategory, the maximum number of pages allowed in your SOQ varies, see page 10 for additional details.

Provide surveying services on UDOT projects on an as-needed basis under the direction of UDOT's representative. Surveying Services will fall under two subcategories; A – Aerial Photogrammetry and B – Survey and Mapping.

22A – Aerial Photogrammetry

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 shall meet the latest edition of requirements of the *UDOT Survey and Geomatics Standards Manual* 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 creation of digital orthophotography. It may include survey work necessary to establish reference points for photo control. (Note: Any control established for UDOT projects shall be performed under the direction and supervision of a PLS, licensed in the State of Utah.)

22B – Survey and Mapping

The services provided for UDOT within this subcategory may include any or all of the following: alignment, horizontal and vertical control, level surveys, cross-sectioning, topographical surveys, property description searching, locating and surveying section corner searches, survey title work, clearing easements, record of surveys, preparation of survey related exhibits, etc. Surveying services shall meet the requirements of the *UDOT Survey and Geomatics Standards Manual*. All work performed for this subcategory shall be under the direction and supervision of a PLS, licensed in the State of Utah.

Traffic Data – #23

This category of work provides services for gathering traffic data including field data collection, data processing, and preparation of data reports. Traffic engineering analysis is not part of this category. Collect traffic data using reliable and accepted traffic engineering methods.

Provide traffic data collection services for the following types of traffic studies:

- New traffic signal
- Left turn phasing
- Turning movement
- Manual count
- 24-hour volume
- Spot Speed
- Pedestrian crossing
- Ball bank
- Gap
- Pass/no pass
- Travel time
- Weave
- Stop

Provide electronic copy of all field data collected and document the date, time, operator name, weather, and traffic conditions. Some studies require combinations of traffic data: for example a new signal study requires manual peak hour turning volumes, 24-hour volumes, pedestrian crossing, and speed data. Specifics will be provided at time of contract.

NOTE: Operational traffic modeling is classified under the Planning Work Discipline.

Traffic Signal and Roadway Lighting Design – #24

This category of work provides 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.

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

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:

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

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 UDOT advertisement process. Utilize UDOT business development tools such as PDBS, ePM, and Projectwise. Provide accurate “Record Document” drawings of constructed projects.

NOTE: Operational traffic modeling is classified under the Planning Work Discipline.

Value Engineering and Risk Analysis– #25 **(Subcategories)**

The Value Engineering and Risk Analysis work discipline includes subcategories. Consultants are required to list the subcategories the firm is submitting for in the Cover Page Form. If your firm is submitting for more than one subcategory, the maximum number of pages allowed in your SOQ varies, see page 10 for additional details.

25A – Value Engineering

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.

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, OR **(b)** have a CVS certification with 10 years of experience in the planning, design, and construction of highways and bridges.

Subject Matter Experts will also need to meet the minimum 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 retaining walls), **3)** Maintenance - 10 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.

25B – Risk Analysis

Risk Analysis may be required at one or more of the following project phases: Initial Concepts, Environmental, Comparison of Alternatives, 30-40% Design or during Construction. The Consultant will provide a Risk Analysis Team Leader and supporting staff. The Consultant will present the Team Leaders for review and approval by UDOT. Selected Consultants will establish project specific Quality Control Plan and Procedures. Objectives and Tasks may include: Preparation and Analysis, Risk Analysis Workshop(s), Reports and Presentations.

Risk Analysis Team Leaders must have at least 10 years of experience in the planning, design, and construction of infrastructure projects with sufficient experience in Risk Analysis to lead a successful Risk Analysis study. The Consultant will provide adequate supporting staff (engineering and/or clerical) for the successful completion of the Risk Analysis. UDOT will provide Subject Matter Experts for the Risk Analyses.

The Consultant may be asked to perform one of two types of Risk Analysis study and must demonstrate proficiency using the appropriate software tools. The two types of Risk Analysis study are Cost Risk Analysis (CRA) and Cost Estimate Validation Process (CEVP®). CRA uses a spreadsheet based tool which UDOT will provide. CEVP® is a process developed by the Washington State Department of Transportation which uses a Monte Carlo simulation to develop risk distributions. The Consultant will be responsible for providing suitable software for CEVP® studies.