

LAKE COUNTY/BUTTERFIELD ADAPTIVE STUDY SUPPLEMENT #1 SCOPE OF SERVICES

The following items have been amended from the original scope of services:

2.3 Develop Request for Qualifications (RFQ) and Evaluation Criteria – DELETED [-25 hours]

2.4 Evaluation of RFQ Responses – DELETED [-25 hours]

3.1. Site data collection/survey

LCDOT will provide as-built roadway, utility, and traffic signal CADD/survey files for use in developing construction plans. AECOM will work with the County to schedule a field site visit of the corridor to inspect existing traffic signal equipment. [-69 hours]

3.2. Environmental assessment

Preliminary Environmental Site Assessment (PESA) [51 hours]

AECOM will complete a Preliminary Environmental Site Assessment (PESA) of the Project in accordance with Section 20-12.08 of the BLRS and “A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Infrastructure Projects” (Circular 585, 2014). The following tasks are included in the PESA scope of work:

- Development of a Safe Work Plan (SWP) prior to conducting the PESA;
- A Site Field Reconnaissance to verify the physical and geomorphological character of the area, to confirm present and adjoining land use, to collect addresses for address-based database searches, as well as for subsequent research into past land uses, and to conduct local on-site research;
- Review of Physical Setting Resources (topographic features, geologic and hydrogeological sources) and Natural Features and Hazards Resources (USGS, wetlands, etc.);
- Review of Standard Environmental Record Resources (CERCLA, TRI, RCRA, LUST, etc.)
- Review of Standard Historical Sources, including aerial photographs, historic topographic maps and plat maps, Sanborn Fire Insurance maps, and historical city directories, etc.; and
- Preparation of the PESA Report.

Project Site Investigation (PSI) [120 hours]

AECOM will complete a Preliminary Site Investigation (PSI) for the above project after the final PESA has been completed. The PSI shall follow the IDOT requirements for state ROW and non-state local roads property’s based on applicable subsections of Section 20-12.08 (BLRS Manual) and “A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Infrastructure Projects” (Circular 585, 2014).

The scope of work according to Section 20-12.05 to 20-12.08 of the BLR manual includes the following;

PSI Health and Safety Plan (HASP) and Work Plan

The HASP will address the risks to site workers associated with the soil chemistry as defined by the findings of the PSI. The HASP must be prepared and in place prior to any work involving site soils. Requirements listed in the Bureau of Local Roads and Streets Manual (BLRSM).

Prior to conducting subsurface activities, the consultant will notify JULIE, Illinois’ one call system for subsurface drilling and excavating activities and conduct a joint meet at the locations to clear the area of potential overhead and underground utilities. In addition, a private utility locator will be used. Both drilling and subcontract laboratories will be notified and field work scheduled.

The Work Plan will include the list of REC site background (referenced from the PESA), the SOW (field investigation, drilling and laboratory subcontractor), general sampling approach, soil sampling methodology, groundwater sampling methodology, sample handling, decontamination & investigation-derived waste, analytical methodology and procedures, geotechnical and analytical contractors, project organization, and schedule. The Work Plan will also include specific laboratory requirements (e.g., tables comparing method detection limits (MDLs) to TACO ROs, and certifications).

PSI Investigation

The PSI site investigation will be conducted in accordance with applicable subsections of Section 20-12.04 of the BLRS Manual. In addition, the laboratory procedures and methods will meet the minimum specified detection limits in accordance with 35 IAC Part 742, Tiered Approach to Corrective Action Objectives (TACO). Procedures in accordance with ASTM Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process (Designation E1903) shall be used (Illinois Tollway Manual, March 2018) will be followed also. All USEPA requirements, including data quality, usability and validation, will be met by the laboratory for this work.

Investigation Results will be performed to determine the nature and extent of soil contamination within the state ROW and local roads area with any planned excavation with the goal to protect the health and safety of construction workers and the environment. If groundwater is encountered during the investigation, determination of the uppermost unit(s) of groundwater elevation will be determined. If analytical results indicate groundwater is impacted and sufficient data on the extent and source of contamination are available, remedial alternatives will also be provided to implement cleanup. If necessary a supplemental site characterization plan will be proposed to better characterize the nature and extent of contamination.

Prior to conducting subsurface activities, the consultant will notify JULIE, Illinois' one call system for subsurface drilling and excavating activities and conduct a joint meet at the locations to clear the area of potential overhead and underground utilities. In addition, a private utility locator will be used. Both drilling and subcontract laboratories will be notified and field work scheduled.

PSI Report

The Final PSI will also include a Site Contamination Erosion Control Plan to address diversion of any storm water away from the exclusion and decontamination zones. The plan will include dust control during any excavation activities to protect construction workers.

The following specific field-based tasks are included in the scope of work:

- There are a total of 20 proposed soil boring locations (B-1 to B-20).
- Thirteen (13) environmental soil borings at REC/Non-REC locations will be advanced to a depth of ten (10) feet. Boring will be continuously sampled to total depth using a GeoProbe®.
- Seven (7) geotechnical/environmental boring will be advanced, one at each intersection location(s) to twenty-one feet (21). Boring will be continuously sampled to total depth using a Split spoon sampling (SPT) device on 2.5ft intervals.
- Seven (7) 1-inch Temporary monitoring wells may be installed one at each location, if groundwater is encountered.
- Soil samples will be field screened for volatile organics (using PID) and soil lithology characterized, in accordance with the Unified Soil Classification System, for continuous intervals to understand subsurface lithology. A detailed description of the soil types encountered will be provided in descriptive boring log
- Soil samples will be field screened for volatile organics (using PID) and soil lithology characterized, in accordance with the Unified Soil Classification System, for continuous intervals to understand subsurface lithology. A detailed description of the soil types encountered will be provided in descriptive boring log.

Environmental Samples

The proposed boring locations based on *possible* RECs visually identified (these may be adjusted after completion of the PESA) are as follows: B-17 to 20 Allanson Road/Greggs Parkway - BP gas station at SW corner, UST's located along Allanson Rd., B-6 to 9 Park Avenue Mobile on SE and Shell on SW corner. Sample quantity (2-per boring location) 16 total environmental samples, based on PID and visual identification of contaminant.

The proposed boring locations based on *possible* Non-RECs (these may be adjusted after completion of the PESA) are as follows: B-15 & 16 Huntington Drive, B-12 to 14 Golf Road, B-10 & 11 Crane Boulevard, B-3 to 5, Winchester Road/County A34, B-1 & 2, Virginia Avenue/William Drive. Sample quantity (1-per boring location) 12 total samples plus one duplicate, 13 total environmental samples.

Note: The geotechnical boring shall be installed for the foundation design per IDOT 3.4.4.1 Traffic Structure Borings regulations using Split Spoon Sample (SPT) on 2.5 ft. intervals. Field testing shall include pocket penetrometer reading in all samples and Field Rimac testing. The results of the SPT (N value), and the Rimac (Qu) tests should be recorded on the boring logs.

Additionally, if contamination is found, the PSI report will identify areas impacted by special waste or regulated substances, recommend actions to be taken, and estimated costs for excavating, transporting, and disposing of material per:

- TACO Tier 1 Soil Remediation Objectives for Residential Properties and for Industrial/Commercial and Construction Worker Exposure Route-Specific Values (35 Ill. Admin. Code 742), and/or
- Most stringent maximum allowable concentration (MAC) for chemical constituents in uncontaminated soil established pursuant to the proposed Subpart F of 35 Ill. Admin. Code 1100.605.

This work includes traffic control for soil boring efforts and supplemental laboratory cost (waste characterization samples) for CCDD disposal.

AECOM will conduct utility investigations at the intersections of Butterfield Road and Allanson Road/Greggs Parkway, Huntington Drive, Golf Road, Crane Boulevard, Park Avenue, Winchester Road, and Virginia Avenue/William Drive for use in subtask 3.3.

3.3 Plans, specifications, and estimates

AECOM will develop plans, specifications/special provisions, and an engineer's estimate of cost for the advanced traffic signal system and associated elements according to IDOT Bureau of Local Roads and Streets requirements for CMAQ projects, which is expected to include the following additional elements:

- Replacement of mast arms and foundations, signal heads, and wiring at seven (7) intersections within the project area to add flashing yellow arrow signals.

The PSE will consist of the following additional plan sheets (estimated 18 sheets total):

- Temporary traffic signal installation and removal plans
- Temporary cable plan
- Temporary traffic signal interconnect plan and schematic
- Traffic signal modification plans
- Traffic signal cable plans
- Traffic signal detail sheets

PSE submittals will occur at the preliminary (60%), pre-final (90%), and final (100%) stages. [300 hours]

3.4 Construction support

Verification and Validation Plans will be used to assess functional and performance as defined by the systems engineering documents developed under Task 1.

- AECOM will provide organizational support for the Verification Plan, which will be developed by the Contractor and used to verify compliance with the system requirements. This involves reviewing the plan, conducting system demonstration testing, documenting the results, and supporting the resolution of issues identified during the process. [80 hours]
- AECOM will develop a Validation Plan, which will be included in the ASCT construction documents for Contractor reference. The Validation Plan will be used to validate the operational performance of the system against the objectives identified in the Concept of Operations document. AECOM will work with LCDOT to select up to three (3) scenarios from the Concept of Operations, with one (1) associated objective and one (1) performance metric for each scenario, for validation. Conducting and documenting the validation testing is not included in this work. [44 hours]

3.5 Deliverables

- Up to ten (10) hard copies of plans, specifications, and estimates package for each submittal (preliminary, pre-final, and final)
- Documentation of System Verification Plan results
- System Validation Plan specification (draft and final)

**LAKE COUNTY/BUTTERFIELD ADAPTIVE STUDY
SUPPLEMENT #1 ESTIMATE OF COST**

Task No.	Task	Estimated Hours	Estimated Cost
2.3	Develop RFQ and evaluation criteria	(25)	\$61,075.75
2.4	Evaluation of RFQ responses	(25)	
3.1	Site Data Collection/Survey	(69)	
3.2	Environmental assessment	171	
3.3	Plans, specifications, and estimates	300	
3.4	Construction support	124	
	In-house Direct Costs		\$2,045.00
	Outside Direct Costs		\$36,667.00
		Total:	\$99,787.75

**PAYROLL ESCALATION TABLE
FIXED RAISES**

FIRM NAME AECOM Technical Services, Inc.
PRIME/SUPPLEMENT N/A

DATE 02/21/19
PTB NO. N/A

CONTRACT TERM 18 MONTHS
START DATE 3/1/2019
RAISE DATE 1/1/2020

OVERHEAD RATE 136.85%
COMPLEXITY FACTOR 0
% OF RAISE 3.00%

ESCALATION PER YEAR

3/1/2019 - 1/1/2020

1/2/2020 - 9/1/2020

10
18

8
18

= 55.56%
= 1.0133

45.78%

The total escalation for this project would be:

1.33%

Subconsultants

FIRM NAME AECOM Technical Services, Inc.
PRIME/SUPPLEMENT N/A
PSB NO. N/A

DATE 02/21/19

NAME	Direct Labor Total	Contribution to Prime Consultant
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0.00
0.00
0.00
0.00
0.00
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Total 0.00 0.00

AVERAGE HOURLY PROJECT RATES

FIRM AECOM Technical Services, Inc.
PSB N/A
PRIME/SUPPLEMENT N/A

DATE 02/21/19

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			T1 - Systems Engineering			T2 - Procurement Support			T3 - Phase II Design			T4 - PM, Admin, QA/QC			Hours	% Part.	Wgtd Avg
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg			
PROJECT PRINCIPAL	70.00	0			0			0			0			0					
PROJECT MANAGER	70.00	41	8.69%	6.08	0			-20	40.00%	28.00	61	11.69%	8.18	0					
SENIOR ENGINEER	67.32	46	9.75%	6.56	0			-12	24.00%	16.16	58	11.11%	7.48	0					
TECHNICAL SPECIALIST	70.00	0			0			0			0			0					
ENGINEER	44.80	103	21.82%	9.78	0			-18	36.00%	16.13	121	23.18%	10.38	0					
INSPECTOR	42.40	230	48.73%	20.66	0			0			230	44.06%	18.68	0					
ENGINEERING TECHNICIAN	40.16	55	11.65%	4.68	0			0			55	10.54%	4.23	0					
ADMINISTRATIVE ASSISTANT	31.41	-3	-0.64%	-0.20	0			0			-3	-0.57%	-0.18	0					
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TOTALS		472	100%	\$47.56	0	0.00%	\$0.00	-50	100%	\$60.28	522	100%	\$48.78	0	0%	\$0.00	0	0%	\$0.00