

Lamb-Star Engineering, LP
5700 W. Plano Pkwy Suite 1000, Plano, TX 75093
Tel 214.440.3600



August 30, 2019

Sean Wilson

Otak Inc.

371 Centennial Parkway, Suite 210
Louisville, CO 80027

RE: 2ND AVE BRIDGE IN LYONS (200892.01)

Dear Mr. Wilson,

Lamb-Star Engineering (LSE) is pleased to submit a cost proposal for Subsurface Utility Engineering (SUE) required for the above referenced project.

INTRODUCTION

LSE will perform the SUE Investigation required for this project in general accordance with the recommended practices and procedures described in ASCE Publication CI/ASCE 38-02 (Standard guideline for the Collection and Depiction of Existing Subsurface Utility Data). As described in the mentioned ASCE publication, four levels have been established to describe the quality of utility location and attribute information used on plans. The four quality levels are as follows:

- Quality Level D (QL-D) – Information derived from existing records.
- Quality Level C (QL-C) – QL D information supplemented with information obtained by surveying visible above-ground utility features (i.e. valves, hydrants, meters, manhole covers, etc.)
- Quality Level B (QL-B) – Two-dimensional (x, y) information obtained through the application and interpretation of non-destructive surface geophysical methods. Also known as “designating” this quality level provides the horizontal position of subsurface utilities within approximately one foot.
- Quality Level A (QL-A) – Also known as “locating”, this quality level provides precise three-dimensional (x, y, z) information at critical locations by exposing specific utilities. Non-destructive vacuum excavation equipment is used to expose the utilities at specific points which are then tied down by survey.

LSE personnel will scan the defined work area using electronic prospecting equipment to search for utilities. SUE investigation results are not always 100% accurate, Therefore, LSE will provide a SUE report outlining the means and methods used and discuss levels of confidence. The SUE report can then be used by designers to make informed decisions based on the defined quality of the SUE investigation.

SCOPE OF WORK

Based on information provided by Otak, LSE has developed a preliminary scope for the SUE work required for this project during the proposal phase. The scope of work may be modified, with *Otak's* concurrence, during the performance of the SUE fieldwork if warranted by actual field findings.

For this project, LSE will provide QL-D, QL-C (including inverts on all manholes), and QL-B and applicable survey for the grey shaded and red boxed project area shown in Exhibit A-1 and A-2. The option of adding



19 QL-A test holes is shown in the Fee on Exhibit B-2. The locations of these test holes, if needed, will be determined by *Otak*.

LSE will provide all surveying that is required for the collection of SUE field data. *Otak* will provide LSE with survey control and a base map/topographic file in CAD format for use in preparing the deliverables.

DESIGNATING PROCEDURES

Prior to beginning field designating activities, LSE's field manager will review the project scope of work and available utility records. Once these initial reviews are complete, the field manager and technicians will begin designating the approximate horizontal position of known subsurface utilities within the specified project limits. A suite of geophysical equipment (electromagnetic induction, magnetic) will be used to designate metallic/conductive utilities (e.g. steel pipe, electrical cable, telephone cable). Non-metallic/non-conductive utilities will be designated using other proven methods, such as rodding, and probing. Where access is available, a sonde will be inserted into the utility line (e.g. PVC gravity sewer pipe) to provide a medium for signal transmission, which can then be designated using geophysical equipment. In instances where access is not available, (e.g. pressurized PVC water line), LSE personnel will attempt to designate the utility by probing.

Accurate collection and recording of designated utilities is a critical component of the SUE process. LSE utilizes a proven method of collecting and recording survey information once the utilities have been designated in the field. LSE's field manager will produce detailed sketches depicting each utility as well as relevant surface features such as roadways, buildings, manholes, fire hydrants, utility pedestals, valves, meters, etc. Each utility will be labeled with a unique ID code. For example, if two buried electric cables exist on the project, one will be labeled E1 and the other E2. Paint and pin flags will be used to designate the utilities in the field. A labeled pin flag or paint mark will be used to mark each location where a survey shot is required. Shot points will typically be placed at 100-foot intervals on all utilities. The locations will be numbered sequentially for each individual utility line.

LOCATING PROCEDURES

LSE will utilize its utility designating marks and specific information provided by *Otak* to lay out the test hole locations. LSE will attempt to place the test holes outside of paved areas wherever possible. However, some test holes may need to be placed in paved areas that may require traffic control measures to be implemented. LSE will establish routine/ordinary traffic control (cones and free-standing signage, etc.) whenever required as part of our standard pricing. If non-routine traffic control measures are required (barricades, flag person, changeable message board, etc.), these services will be invoiced at cost.

LSE will utilize non-destructive vacuum excavation equipment to excavate the test hole at the required locations. Once the utilities are located, LSE will record the type, size, material, depth to top and general running direction. The test hole will be assigned a unique ID number and will be marked with rebar/cap, nail/disk, or chiseled X, as appropriate. Test-hole excavations will be backfilled with appropriate material and the original surface will be restored. The backfill will be compacted in lifts by mechanical means to minimize settlement.



DELIVERABLE AND SCHEDULE

LSE will produce an electronic SUE CAD file depicting the type and horizontal location of the designated utilities and test holes. *Otak* will provide LSE with base map/topographic files in electronic format for use in preparing the SUE file. LSE will utilize its standard SUE line styles and symbology.

LSE will also prepare a summary sheet of test hole information showing the utility size, depth, material, direction and type of surface marker used to identify the test hole location.

LSE can commence work within three weeks of receiving the notice to proceed (NTP) and complete the work within one week from the start date. Once the location of the QL "A" test holes have been laid out, the QL "A" field work must be preceded by a One Call ticket and a mandatory 48-hour clearance period. The QL "A" test holes are estimated to be completed within seven (7) work days with the survey taking one (1) day to complete. The deliverables as previously described can be submitted within 5 days after the survey has been completed.

ESTIMATED FEE

See Attached Exhibit B Fee Schedule

The total *estimated cost* to complete the work described without QL-A test holes is **\$22,906.00**

The total *estimated cost* to complete the work described with QL-A test holes is **\$41,160.00**

We look forward to working with you on this project. If you have any questions or require additional information, please contact me at 214-440-3633

William L. O'Dell
Lamb-Star Engineering

Date



EXHIBIT A-1

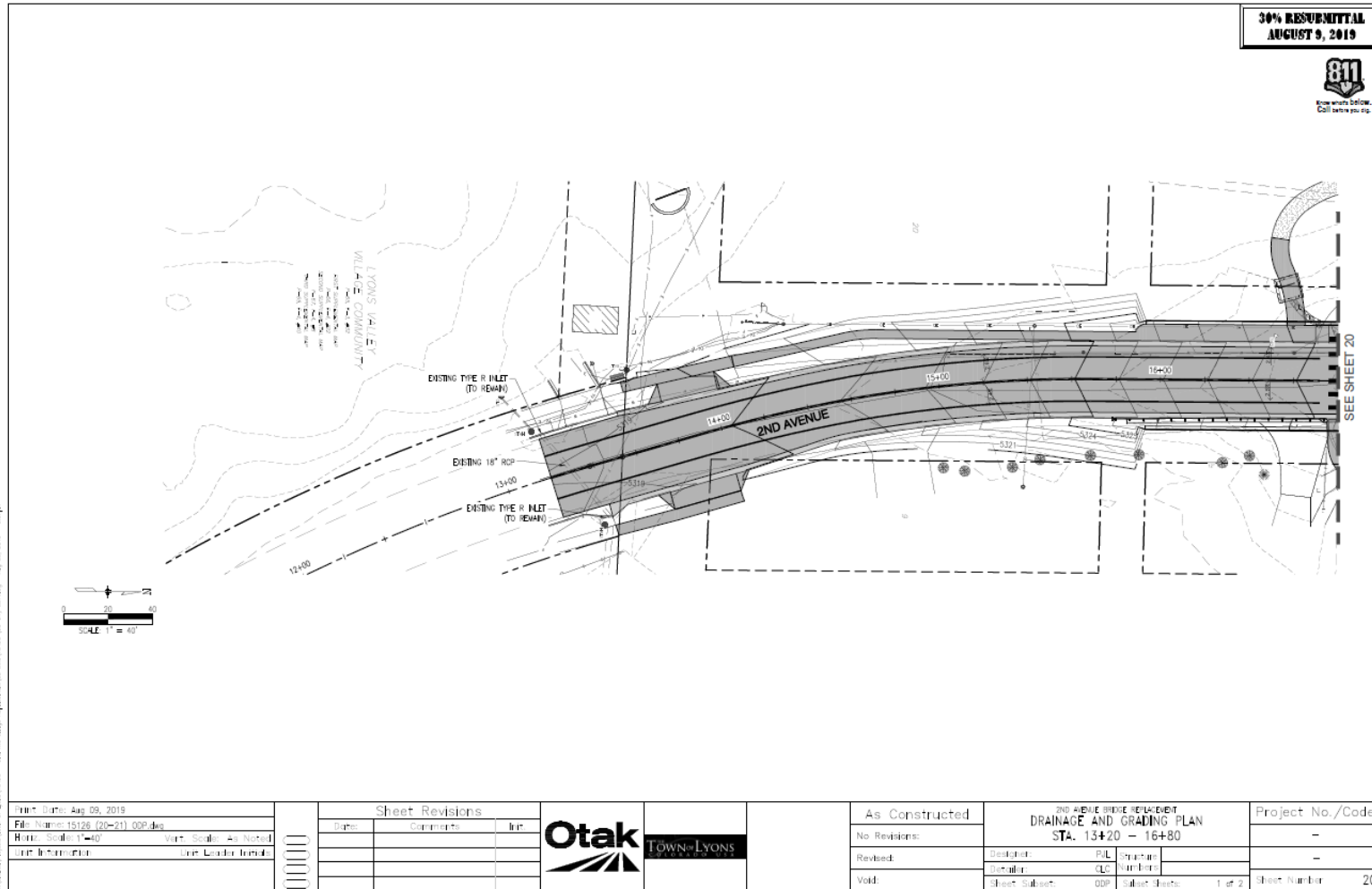
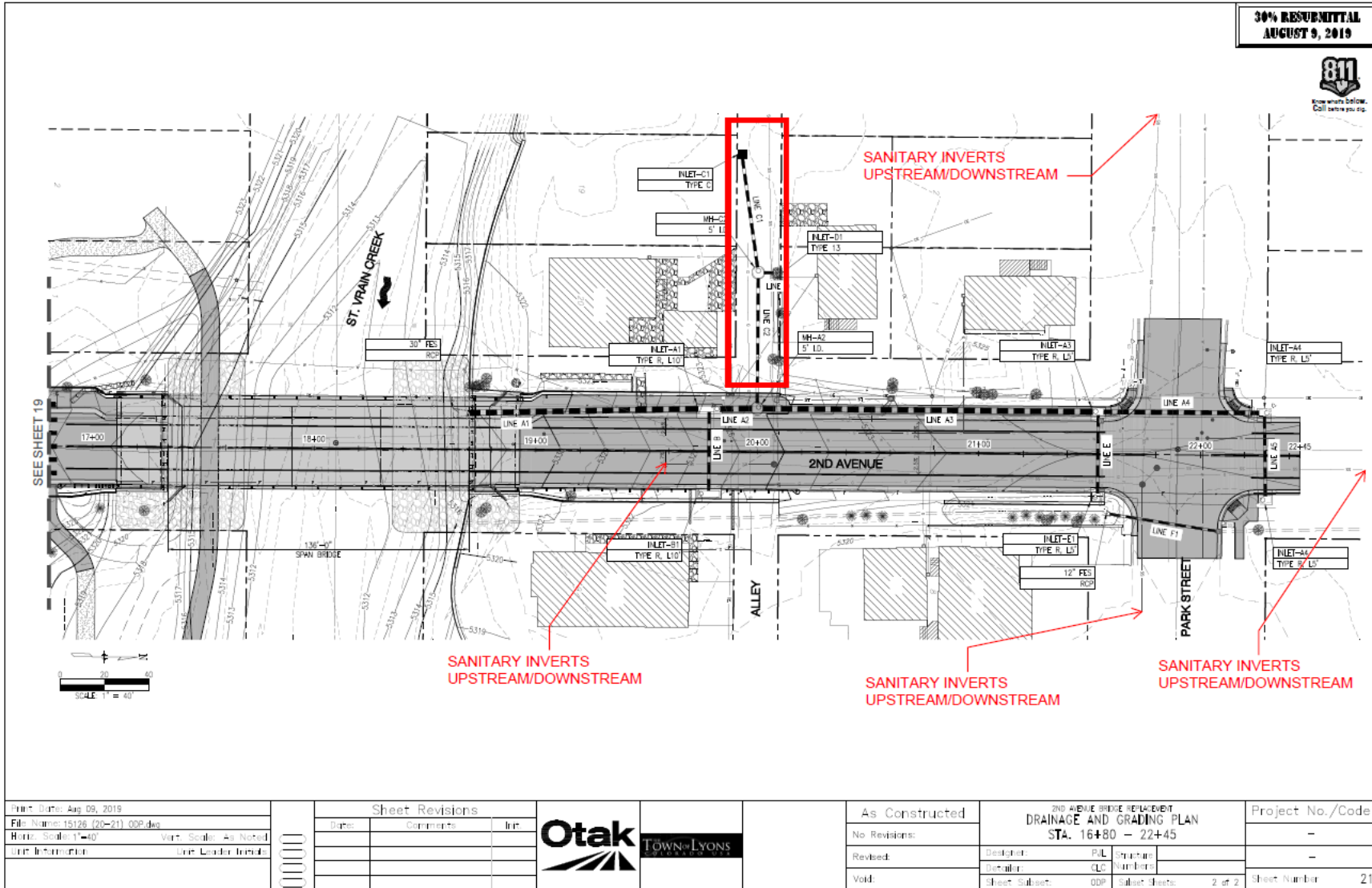




EXHIBIT A-2



**30% RESUBMITTAL
 AUGUST 9, 2019**



Print Date: Aug 09, 2019
File Name: 15126 (20-21) ODP.dwg
Home Scale: 1"=40'
Unit: Feet

Sheet Revisions		
Date	Comments	By



As Constructed	2ND AVENUE BRIDGE REPLACEMENT DRAINAGE AND GRADING PLAN STA. 16+80 - 22+45	
No Revisions:		
Revised:		
Void:		

Designer: PUL	Structure Numbers:
Detailer: CLC	
Sheet Subject: ODP	Sub-sheet: 2 of 2

Project No./Code	
Sheet Number	21



EXHIBIT B-1

Subprovider Name: Lamb-Star Engineering, L.P.								
TASK DESCRIPTION	PROJECT MANAGER	QUALITY MANAGER	PROJECT ENGINEER	EIT	UTILITIES COORDINATOR	ADMIN/ CLERICAL	TOTAL HRS. & COSTS	COST PER TASK
RATE PER HOUR	\$260.00	\$210.00	\$160.00	\$115.00	\$150.00	\$95.00		
SUE								
Utility Base Map	2		4	6	4		16	\$ 2,450.00
Utility Sheets	2		4	12			18	\$ 2,540.00
SUE Report	2		6	4	2	1	15	\$ 2,335.00
QA/QC	2		4	4	2	1	13	\$ 2,015.00
HOURS SUB-TOTALS	8	0	18	26	8	2	62	
CONTRACT RATE PER HOUR	\$260.00	\$210.00	\$160.00	\$115.00	\$150.00	\$95.00		
TOTAL LABOR COSTS	\$2,080.00	\$0.00	\$2,880.00	\$2,990.00	\$1,200.00	\$190.00	\$9,340.00	
SUBTOTAL								\$ 9,340.00
TOTAL HOURS	8	0	18	26	8	2	62	
CONTRACT RATE PER HOUR	\$260.00	\$210.00	\$160.00	\$115.00	\$150.00	\$95.00		
SUBTOTAL LABOR EXPENSES	\$2,080.00	\$0.00	\$2,880.00	\$2,990.00	\$1,200.00	\$190.00	\$9,340.00	
	Quantity	Unit	Cost	Total				
SUE (Quality Level C and D)	5500	LF	\$0.70	\$ 3,850.00				
SUE (Quality Level B)	6000	LF	\$1.60	\$ 9,600.00				
SUE (Quality Level A - Utility Locate, Test Holes)								
0.00 feet to 4 feet		each	\$1,100.00	\$ -				
4 feet to 8 feet		each	\$1,350.00	\$ -				
8 feet to 12 feet		each	\$1,650.00	\$ -				
SUBTOTAL UNIT EXPENSES				\$13,450.00				
OTHER DIRECT EXPENSES	UNIT	QUANTITY	MAXIMUM COST				TOTAL	
LODGING/HOTEL (TAXES/FEEES INCLUDED)	DAY/PERSON		\$ 159.00				\$0.00	
MEALS	DAY/PERSON		\$ 66.00				\$0.00	
MILEAGE	MILE	200	\$ 0.580				\$116.00	
SUBTOTAL DIRECT EXPENSES							\$116.00	
TOTAL							\$ 22,906.00	



EXHIBIT B-2

Subprovider Name: Lamb-Star Engineering, L.P.								
TASK DESCRIPTION	PROJECT MANAGER	QUALITY MANAGER	PROJECT ENGINEER	EIT	UTILITIES COORDINATOR	ADMIN/CLERICAL	TOTAL HRS. & COSTS	COST PER TASK
RATE PER HOUR	\$260.00	\$210.00	\$160.00	\$115.00	\$150.00	\$95.00		
SUE								
Utility Base Map	2		4	6	4		16	\$ 2,450.00
Utility Sheets	2		4	12			18	\$ 2,540.00
SUE Report	2		6	4	2	1	15	\$ 2,335.00
QA/QC	2		4	4	2	1	13	\$ 2,015.00
HOURS SUB-TOTALS	8	0	18	26	8	2	62	
CONTRACT RATE PER HOUR	\$260.00	\$210.00	\$160.00	\$115.00	\$150.00	\$95.00		
TOTAL LABOR COSTS	\$2,080.00	\$0.00	\$2,880.00	\$2,990.00	\$1,200.00	\$190.00	\$9,340.00	
SUBTOTAL								\$ 9,340.00
TOTAL HOURS	8	0	18	26	8	2	62	
CONTRACT RATE PER HOUR	\$260.00	\$210.00	\$160.00	\$115.00	\$150.00	\$95.00		
SUBTOTAL LABOR EXPENSES	\$2,080.00	\$0.00	\$2,880.00	\$2,990.00	\$1,200.00	\$190.00	\$9,340.00	
	Quantity	Unit	Cost	Total				
SUE (Quality Level C and D)	5500	LF	\$0.70	\$ 3,850.00				
SUE (Quality Level B)	6000	LF	\$1.60	\$ 9,600.00				
SUE (Quality Level A - Utility Locate, Test Holes)								
0.00 feet to 4 feet	10	each	\$1,100.00	\$11,000.00				
4 feet to 8 feet	5	each	\$1,350.00	\$ 6,750.00				
8 feet to 12 feet	4	each	\$1,650.00	\$ 6,600.00				
SUBTOTAL UNIT EXPENSES				\$31,200.00				
OTHER DIRECT EXPENSES	UNIT	QUANTITY	MAXIMUM COST				TOTAL	
LODGING/HOTEL (TAXES/FEES INCLUDED)	DAY/PERSON		\$ 159.00				\$0.00	
MEALS	DAY/PERSON		\$ 66.00				\$0.00	
MILEAGE	MILE	500	\$ 0.580				\$290.00	
Mobilization/Demobilization of Vac Truck	mile	60	\$ 5.50				\$330.00	
SUBTOTAL DIRECT EXPENSES							\$620.00	
TOTAL							\$ 41,160.00	