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February 10, 2022

Scott Raypholtz, PS ODOT District 12 5500 Transportation Boulevard Garfield Heights, Ohio 44125

> Re: D12/D3 GES FY2021-2022 Survey Agreement 35403 Task Order 12-9 GEA/LAK-44-18.45/0.00 – PID 114163

Dear Mr. Raypholtz:

We are pleased to submit this fee proposal for surveying services for the GEA/LAK-44-18.45/0.00 project. This proposal is based upon your January 27, 2021, email Cost Proposal Request and follow-up phone conversations between you, Bill Thomas, and Jason Lingenfelter from our office.

This work will be completed within 45 days of project authorization.

Please contact me if you have any questions or need additional information.

Sincerely, ENGINEERING ASSOCIATES, INC.

A. Frederick Seling Jr., P.E.

Principal / Project Manager

Sheldon D. Schlabach, P.E.

Principal / Deputy Project Manager

Attachments

cc: Kevin Rhode, PE

File

| C-R-S | GEA/LAK-44-18.45/00.00 | | | | | |
|---|---|------------|------|-----|---------------|---|
| Consultant: | Engineering Associates, Inc. | | | | | |
| Agreement No. | 35403 | | | | | |
| Modification No. | 0 | | | | | |
| PID No. | 114163 | | | | _ | |
| Proposal Date | 2/8/2022 | Ę | | | İzec | |
| • | | ulta | | | þor | |
| Task Description | | Consultant | ОООТ | LPA | If-Authorized | Narrative |
| | | | | | | |
| | n the Labor Rates_Cost Proposal Tab | Х | Х | Х | Х | Add Narratives as needed here |
| AUTHORIZED | TASKS: | | | | | |
| 1 - Planning Pl | hase | | | | | |
| 1.2 - Project Initiation | on Package | | | | | |
| 1.2.F - Concept, So | cope and Budget Estimates | Х | | | | Research scope, discuss with District 12, prepare fee proposal |
| O Busliminam | - Canina anima Dhana | | | | | |
| | / Engineering Phase | | | | | |
| 2.3 - AER Design | rand Assist Manaina | | | | | |
| | y and Aerial Mapping Control, Benchmarks, and Reference Points | | | | | |
| , | e "A" Concrete Monument (See RM 1.1) | x | | | | 5 Geodetic control monuments requested, planning on using existing subdivision and road intersection monument boxes for the Type A monuments outside of the project at the north end of the project, a USGS monument near the intersection of Clark Rd and S.R. 44 for our center monument and for the OPUS solution for P.A.F. and set 2 monuments at the south end of the project. Low effort = 36 hr. x 2 monuments to set = 72 hours + 32 hrs for recovery of existing monument boxes, static data sessions, adjustments and spreadsheet. 72 + 32 = 104 hours. Based on 200 mile round trip, 1 round trip to locate areas to be OUPS located for control monuments and scope monument boxes for geodetic control = 200 miles plus 15 mile for commuting the project = 215, 1 round trip to set 2 type A concrete monuments. 215 miles + 215 miles = 430 miles total |
| 2.3.A.A.2 - Type "B" Monument Specified TOTAL - 2.7 - Stage 1 Design | | x | | | | Scope of services requests that the Type B control along the corridor be inter-visable. Based on a discussion with Scott Raypholtz, 10 Type B control monuments will be set with corresponding bench marks, a pair every 1/2 mile along the corridor with an additional 3 set, one at the north end, south end and in the middle to allow inter-visability at those locations. Medium effort = 20 hr. x 13 Monuments (13 Type B, using medium effort due to extra effort of geodetic static sessions) = 260 hours. Based on a 200 mile round trip, 2 trips involving week stays (4 nights each) plus 75 miles per week commuting on the project = 550 miles. |
| | TOTAL - 2.7 - Stage 1 Desig | J11 | | | | |
| 2.8 - Project Manage | ement for Preliminary Engineering Phase | | | | | |
| 2.8.B - General Ove | ersight | Х | | | | Two months low effort = 2 x 10 (low) = 20 |
| 2.8.C - Project Set | Up | Х | | | | Project setup = 8 hours |



OHIO DEPARTMENT OF TRANSPORTATION

Mike DeWine, Governor

Jack Marchbanks, Ph.D., Director

District 12
5500 Transportation Blvd., Garfield Heights, OH 44125
216-581-2100
transportation.ohio.gov

Cost Proposal Request January 27, 2022

Engineering Associates, Inc. 1935 Eagle Pass Wooster, OH. 44691

Re: GEA/LAK SR 044 18.45/00.00 Rehab (PID 114163)

PID: 113150 D12/D3 GES FY2021-2022 Survey

Task Order: 35403 (12-9)

Attn.: Fred Selig

Project Description

Major pavement rehabilitation of SR 044 from the Chardon north corporation line in Chardon Township to the 4-lane section south of Capital Parkway in Concord Township. Anticipate project to be included on the May 2022 programmatic. District seeks to schedule Lidar mapping for this flight season.

Requesting that Engineering Associates provide Primary Project Control for Lidar Basemapping (by others).

Proposed Scope of Service

All work per current Survey & Mapping Specifications (January 21, 2022). Specific reference to Section 502.2m Deliverables and Section 300: NAD83 (2011) & Geoid 18, NAVD88.

TASK 2.3.A.A.1 Primary Project Control, Benchmarks, and Reference Points Reference Section 502 Control Surveys

- Geodetic Control Network
 - Although programmed as a Path 2 project, District requests Geodetic Control Monuments be established. Assume a project length of 5 miles, anticipate 5 control monuments, a differential level loop between these monuments is not required.
- Primary Project Control
 - Type A or B (or other) monuments acceptable, to be situated along project corridor but outside anticipated construction limits as possible, inter-visable and elevations established via differential level.
- Survey Report (502.2m) please include ground coordinates as well.

Project Delivery

Provide an estimated date for control delivery to coordinate with LIDAR mapping.

Existing Supporting Documentation

- 114163 Mapping Limits_2022-01-10.kmz
- Miscellaneous Monument Records

Respectfully,

Scott Raypholtz, P.S.
District 12 Survey Operations Manager