



**CHRISTOPHER B. BURKE ENGINEERING, LTD.**

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February 25, 2020  
**REVISED April 24, 2020**

Village of Orland Park  
Public Works Department  
15655 Ravinia Avenue  
Orland Park, IL 60462

Attention: Mr. Rich Rittenbacher – Interim Public Works Director

Subject: Proposal for Professional Engineering Services for  
Fernway Subdivision Road and Drainage Improvements

Dear Mr. Rittenbacher:

Christopher B. Burke Engineering, Ltd. (CBBEL) is pleased to submit this proposal to provide professional engineering services for the 2020 Fernway Road and Drainage Improvements outlined by the Village of Orland Park (Village). This proposal includes our Understanding of the Assignment, Scope of Services and Fee.

**UNDERSTANDING OF ASSIGNMENT**

The Fernway Subdivision stormwater management system is an open drainage system that outlets to Tinley and Midlothian Creeks which traverse the neighborhood. CBBEL previously completed stormwater ditch designs for the areas bound by 171<sup>st</sup> St. to the south, 165<sup>th</sup> PI to the North, 88<sup>th</sup> Ave to the west, and Village limits to the east. The Village would like to extend the previous work out into the neighborhood by reestablishing the culvert and ditch flow lines that are critical to the effective functionality of an open drainage system. This proposal is for the regional drainage ditch design outlined as “2020 section”, bound by 165<sup>th</sup> PI to the south, 164<sup>th</sup> St to the north, 88<sup>th</sup> Ave to the west, and Village limits to the east. 164<sup>th</sup> PI will be included in this year’s scope per direction from Village staff. In addition to this regional drainage design, this proposal includes the roadway reconstruction design for the Village’s 2020 program which includes Robinhood Dr Sections 10 and 11, Sussex Dr, and Sherwood Dr Sections 1-3. We understand that the Village will use general funds, therefore IDOT approval will not be required.

To complete an accurate, bid worthy design for the regional drainage design and the roadway design, CBBEL has previously completed an aerial topographic survey with ground culvert verification for the road program. This survey was completed as part of the 2019 project.

It is important to note that this project will be designed to accommodate general overland flow and nuisance flooding (temporary standing water in poorly graded ditches) it is not intended to solve the flooding issues in large rain events. Because this neighborhood lies within the floodplain/drainage area of both Midlothian and Tinley Creeks, solving the flooding from large storm events would require a significantly larger amount of infrastructure, land and design engineering.

### **SCOPE OF SERVICES**

Based on our experience with similar projects, our anticipated scope of services is detailed below:

**Task 1 – Topographic Supplementation:** CBBEL will utilize the aerial drone survey previously performed for the proposed project area. The survey will be used to determine the drainage improvements that would be necessary to accommodate overland flow and reduce nuisance flooding. CBBEL will supplement the survey to address any inconsistencies found in the drone survey. The survey will include:

- Horizontal Control: Utilizing state plane coordinates, CBBEL will set recoverable primary control utilizing state of the art GPS equipment based on NGS Control Monumentation.
- Vertical Control: CBBEL will establish benchmarks and assign elevations to the horizontal control points. This will be based on GPS observed Cook County Control Monumentation (NAVD'88 vertical control datum).
- Existing Right-of-Way: CBBEL will establish the approximate existing right-of-way of the roadways within the project limits based on monumentation found in the field, plats of highways, subdivision plats and any other available information.
- Utility Survey and Coordination: All existing storm sewers will be surveyed to determine rim and invert elevations and pipe sizes. Above ground facilities of any additional underground utilities including water main, gas, electric, cable, etc. will also be located.
- Base Mapping: CBBEL will compile all of the above information onto one base map at 1'=20' scale that is representative of existing conditions.

**Task 2 – Utility Coordination:** CBBEL will identify utilities that may have facilities within the project limits and send a Preliminary Utility Request to known utility companies to obtain pertinent information. Based on the information received from the utility companies, CBBEL will include locations of facilities on the plans, identify potential conflicts with the proposed project and design the proposed improvements to minimize utility conflicts.

**Task 3 – Preliminary Engineering:** Using Tasks 1-3 deliverables, CBBEL will prepare Preliminary Engineering plans. The plans will be prepared in accordance with Village and IDOT design criteria. The plans are anticipated to include the following sheets:

| Sheet Hours                                            | Average Hours/ Sheet | Area #4     |            |
|--------------------------------------------------------|----------------------|-------------|------------|
|                                                        |                      | # of Sheets | Hours      |
| Title Sheet                                            | 4                    | 1           | 4          |
| General Notes/ Summary of Quantities/ Typical Sections | 15                   | 3           | 45         |
| Alignment Ties & Benchmarks                            | 8                    | 1           | 8          |
| Roadway and Ditch Plan & Profile Grading Sheets 1"=20' | 24                   | 7           | 168        |
| Erosion Control Plan                                   | 20                   | 1           | 20         |
| Quantity Schedules                                     | 20                   | 2           | 40         |
| Cross-Sections                                         | 6                    | 14          | 84         |
| Construction Details                                   | 6                    | 1           | 6          |
| Specifications                                         | (20)                 | -           | 20         |
| Opinion of Probable Costs/Quantity Calculations        | (20)                 | -           | 20         |
| QA/QC                                                  | -                    | -           | 6          |
| <b>TOTALS</b>                                          |                      | <b>27</b>   | <b>421</b> |

Preliminary Plans, Specifications and opinion of probable cost will be submitted to the Village for review. This task includes one review meeting with Village Staff.

**Task 4 – Permitting:** Although the Village has jurisdiction over the majority of the areas where work is proposed, several other agencies and/or municipalities are located in one or more of the sub-watersheds. As needed to permit and/or construct the proposed improvements, CBBEL will coordinate with Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), Cook County, Illinois Department of Natural Resources – Office of Water Resources (INDR-OWR), Illinois Department of Transportation (IDOT), Tinley Park, and Orland Hills. CBBEL will also prepare a Stormwater Pollution Prevention Plan (SWPPP) consistent with the requirements of the Village's NPDES Phase II permit and submit it to the Illinois Environmental Protection Agency (IEPA).

**Task 5 – Final Engineering:** Upon meeting with the Village Staff to review their comments on the preliminary submittal, CBBEL will revise and finalize the contract documents and cost estimate. During this task, the exact letting date will be determined and an estimated construction schedule will be provided.

**Task 6 – Local Agency Coordination/QA-QC/Administration:** Although the Village owns the majority of the roadways where most of the work is proposed, there may be a need for coordination with adjacent municipalities or Cook County. CBBEL will meet and/or coordinate with all local governmental agencies as needed throughout the course of the design to obtain concurrence and /or approval for the proposed activities. All QA/QC aspects and project administration is included under this item.

**Task 7 – Bid Assistance:** CBBEL will assist the Village in advertising for bids, distribute plans and specifications to all bidders, and be present at the bid opening. CBBEL will review and tabulate all of the bids and make a recommendation of award.

### **FEE ESTIMATE**

The estimated costs for the tasks provided above are as follows:

| <b>Task</b>  | <b>Description</b>                             | <b>Area #4</b>   |
|--------------|------------------------------------------------|------------------|
| 1            | Topographic Survey                             | \$ 4,400         |
| 2            | Utility Coordination                           | \$ 4,800         |
| 3            | Preliminary Engineering                        | \$ 38,000        |
| 4            | Permitting                                     | \$ 3,400         |
| 5            | Final Engineering                              | \$ 21,000        |
| 6            | Local Agency Coordination/QA-QC/Administration | \$ 4,000         |
| 7            | Bid Assistance                                 | \$ 1,500         |
| Sub Total    |                                                | \$ 77,100        |
| Direct Costs |                                                | \$ 800           |
| <b>Total</b> |                                                | <b>\$ 77,900</b> |

We will bill you at the hourly rates specified in the Professional Engineering Services Master Agreement including previously agreed upon Schedule of Charges and General Terms and Conditions. These General Terms and Conditions are expressly incorporated into and are an integral part of this contract for professional services. It should be emphasized that any requested meetings or additional services are not included in the preceding fee estimate and will be billed at the previously accepted Schedule of Charges. It is assumed that no federal funding or MFT funding will be utilized.

Please sign and return one copy of this agreement as an indication of acceptance and notice to proceed. Please feel free to contact us anytime.

Sincerely,

  
Michael E. Kerr, PE  
President

THIS PROPOSAL ACCEPTED FOR THE VILLAGE OF ORLAND PARK:

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_