

April 20, 2020

Mr. Noriel Noriega, P.E., CPESC  
Village of Westmont  
39 E. Burlington Avenue  
Westmont, Illinois 60559

Re: Professional Engineering Services Proposal  
**CBD Alley Reconstruction Project Section G**

Dear Mr. Noriega:

Thomas Engineering Group, LLC (TEG) respectfully submits the following Proposal to the Village of Westmont for the CBD Alley Reconstruction Project Section G. TEG is excited about the opportunity to continue to work with Village staff on this project. TEG staff has already assisted the Village with previous alley sections making TEG an excellent fit for this continued assignment. We will continue to investigate and evaluate best design and management practices to ensure that the Village's infrastructure investments are sustainable and cost effective.

### **PROJECT UNDERSTANDING**

The Village of Westmont's Public Works Department is seeking professional engineering services for design services to review and survey current conditions, make recommendations, and provide a detailed design plan and profile, associated details and specifications, and a cost estimate for improvements to the north-south and east-west alley sections located between Quincy Street, Cass Avenue, Richmond Street, and Lincoln Street. The Village desires to utilize the same pavement structure utilized for the previously designed alley sections.

It is our understanding that the alley is located in rights-of-way that are 16 ft. wide, with the north-south alley being approximately 400 ft. in length and the east-west alley being approximately 350 ft.



TEG also understands a portion of the east-west alley has been vacated for a future 4 story residential development, shown in the location map above. TEG understands that close coordination with the developer will be needed throughout the design process to ensure a successful project. The design drawing(s) will be incorporated into a plan set for a project scheduled for construction in spring of 2021.



The scope of engineering services includes the preparation of construction plans and specifications. Specific elements of the Project are listed below to convey a clear understanding of the target Project and required services.

1. A full topographic survey of Alley G, bound by Quincy Street, Cass Avenue, Richmond Street, and Lincoln Street will be completed. Hours for topographic survey of the alley are included in the detailed estimate of Design Fees provided herein.
2. Subconsultant costs for drilling and backfilling two (2) pavement cores/soil borings, infiltration testing, and environmental testing along the alley are included in the detailed estimate of Design Fees provided herein. These will assist in the design and feasibility study of providing a green alley design.
3. Where there are existing utility structures located within pavement (sanitary), existing structures will need to be adjusted to revised grades, removed, or abandoned along with associated infrastructure piping. Hours are included in the detailed estimate of Design Fees provided herein for manhole inspections and engineering of any necessary storm sewer.
4. TEG anticipates that the primary challenges of the project will include carefully planning coordination of construction activities with business, garage access, routine deliveries to businesses, and routine trash collection.
5. Another important challenge of this alley reconstruction program includes preserving the adjacent structures and preventing damage to private property.
6. Consideration has also been given to coordination with the adjacent businesses, the future 4 story residential development, Downers Grove Sanitary District, and other utility owners that may be impacted by the proposed improvements.

### **PROJECT APPROACH**

TEG will initially engage Village staff to determine the specific concerns of the Project. TEG will compile this information and subsequently use our expertise to make recommendations that will best serve the Village. The TEG Team will perform the topographic field survey and begin developing alley improvement plans, specifications, and estimates in accordance with applicable standards and criteria based on the funding type. The following scope applies to an improvement funded entirely with local funds and is an overview of the typical scope of services that are anticipated for professional design engineering services for the CBD Alley Reconstruction Project Section G.

1. Data Collection/Project Initiation
2. Data Analyses
3. Development of Concept Plans and Estimates (30%)
4. Preliminary Plans, Specifications, and Estimates (PS&E) Submittal (60%) and Village Review
5. Pre-Final PS&E Submittal (90%) and Village Review
6. Project Advertisement/Bid Assistance



## **PHASE I – PRELIMINARY ENGINEERING/PHASE I FOLLOW-UP**

The goal of the preliminary engineering is to gain an understanding of the Village's preferred alternative and to evaluate the most cost-effective and context-appropriate improvements that meet the Village's desires and budgetary needs. Our process will use the following steps of Data Collection, Project Initiation, and Data Analysis.

**STEP ONE – Data Collection/Project Initiation.** Before beginning the project design process, TEG will attend a preliminary meeting with the Village to discuss the purpose and need of the Project, decisions made during the Phase I process, the Project context, and to refine the scope as necessary to develop a shared understanding of the Project.

Data will be obtained from various Village Departments for development of the base drawings for the Project. The TEG Team will evaluate the conditions of relevant features and collect the necessary data required for determining the scope of construction for the existing conditions. TEG will use available surveys, aerials, as-builts, etc. and conduct any additional surveys necessary to prepare the required level of base mapping. The topographic survey will be performed throughout the alley ROW during this STEP. Other types of data that may have to be gathered include:

- a. As-builts/Record Drawings (if available)
- b. ROW plats
- c. Previous Studies
- d. Property Specific Data
- e. Utility Information
- f. Water and sewer main atlases

Upon TEG's completion of base mapping, we will assist the Village with early utility coordination beginning at this stage by sending a notice and base mapping plans to all utilities located within the limits of the affected ROW.

**STEP TWO – Data Analyses.** The TEG Team will evaluate construction details with Village staff using the data collected in STEP ONE to identify several cost-effective strategies for the preferred alternative. Stormwater conveyance issues will also be identified in this STEP and shared with Village staff to identify the preferred scope of improvement and identification of pavement materials.

## **PHASE II – DEVELOPMENT OF CONSTRUCTION DOCUMENTS**

Construction documents will be developed following decisions made in the preliminary STEPS listed above. Review comments obtained from utility notices will be included in the plans for affected facilities. Estimates of cost and time will be prepared and maintained to track construction costs and schedules.

**STEP THREE – Development of Concept Plans and Estimates (30%).** TEG will advance the Project's design to a 30% completion level and base drawings will be prepared in the CAD format of the Village's preference. Sheet scales will be determined during their creation. The Project will be designed in English units. Following finalization of preliminary plans, a plan-in-hand review will be performed to verify their accuracy.



A standard set of construction plans and contract documents will be prepared for this Project and are anticipated to include the following items.

- a. **Cover Sheet:** Includes location map, index of drawings, index of IDOT statewide standards, contact information, seal and signature blocks.
- b. **General Notes and Summary of Quantities:** Includes all general notes applicable to this Project, list of all calculated quantities of construction materials with specialty item designations, IDOT pay code numbers, IDOT pay item descriptions, units, and total quantities.
- c. **Alignment, Ties, and Benchmarks:** Includes proposed alley alignment and necessary survey information to construct the improvements.
- d. **Typical Sections:** Includes existing and proposed typical sections with IDOT pay items and any other necessary details.
- e. **Plan & Profile Sheets:** Includes all details necessary for construction such as removals, restoration, geometry, and drainage.
- f. **Cross Sections:** Existing and proposed, plotted at 25 foot intervals, including all details necessary for construction of proposed improvements within the existing ROW.
- g. **IDOT and Westmont Details:** Includes details applicable to the Project.
- h. **Special Provisions:** Includes the necessary IDOT and Village standard language for construction.

**STEP FOUR – Preliminary Plans, Specifications, and Estimates (PS&E) Submittal (60%) and Village Review.** With comments received from the field checks described in STEP THREE, TEG will advance the Project's design to a 60% completion level.

**STEP FIVE – Pre-Final PS&E Submittal (90%) and Village Review.** Once all preliminary review comments have been received, TEG will prepare plans, specifications, and estimates for the Pre-Final Submittal. During the 30% and 60% submittals, the various permits will be submitted in accordance with resource agency requirements and design schedule.

**STEP SIX – Project Advertisement/Bid Assistance.** Once all final review comments have been cleared and approved, TEG will engage the Village prior to advertisement. This proposed task will include the preparation of contract documents including plans and bid packages. TEG will duplicate and transmit all bid documents as necessary. The TEG Team will attend required meetings including the pre-bid conference and bid opening as required by the Village.

#### **DESIGN SCHEDULE**

TEG has an excellent record of designing Projects within budget and scope as well as ensuring that Projects are delivered/completed on time. The proposed design schedule is as follows:

- |   |               |
|---|---------------|
| • Data Collection / Project Initiation                | June 2020     |
| • Data Analysis                                       | July 2020     |
| • Development of Concept Plans and Estimate (30%)     | August 2020   |
| • Preliminary PS&E Submittal (60%) and Village Review | October 2020  |
| • Pre-Final PS&E Submittal (90%) and Village Review   | December 2020 |
| • Project Advertisement                               | January 2020  |
| • Anticipated Construction Start                      | April 2021    |



**DESIGN FEES**

We have utilized a direct labor multiple (DLM) contract type and a factor of 3.0 to calculate our cost estimate of consultant services (CECS) based on the actual Hourly Rate of Pay for the individuals assigned to the Project.

Our geotechnical subconsultant will provide geotechnical soil testing for ecological "green" alley section design. The geotechnical scope of services includes determining the surface infiltration rates of the existing subgrade materials to determine the permeable paver typical cross section, in addition to investigating the soil environmental conditions.

The total hours and costs associated with the project are summarized below:

<u>Scope Item</u>	<u>Job Hours</u>	<u>Total Cost</u>
Base Scope (EXCLUDING Geotechnical Analysis)	381 Hours	\$66,208.00
Geotechnical Soil Analysis	N/A	\$6,500.00
<b>TOTAL</b>		<b>\$72,708.00</b>

Additional details of our estimates can be found in the Schedule of Estimate of Hours and Schedule of Services and Fees in Exhibits "A" and "B". Please reference the following pages for greater detail of our estimate. While we believe that this estimate accurately reflects our best effort at understanding the scope of work as described in our proposal, we understand that the Village of Westmont may interpret the scope differently and may seek to add, subtract, or modify the scope or level of effort contained herein. TEG is excited to serve the Village of Westmont again and can negotiate the scope and effort to meet the expectations of the Village.

Please note that the hours and fee included above for this project are the total for the full Alley G Phase II engineering design scope. If funding for the project is provided from one or more sources, the total amount necessary is the above regardless of the funding source and can be provided from multiple sources if needed.

If you have any questions or require additional information, please e-mail at [nicko@thomas-engineering.com](mailto:nicko@thomas-engineering.com) or call me at (815) 531-7868.

Sincerely,

**thomas engineering group, llc**



Nicholas J. Orf, P.E., CFM, CPESC  
Project Manager

Attachments



**EXHIBIT "A"**  
**Estimate of Hours**  
**Base Scope**



Project: Village of Westmont - Alley Design Section G  
 Prepared By: Thomas Engineering Group, LLC  
 Date: 04/20/20

**SHEET WORK**

Plan Sheet Task	Plan Sheet Description (- Clarification)	Scale (If Applicable)	Number of Sheets	Hours Per Sheet	Total Hours
1	Cover Sheet, Index of Sheets		1	1	1
2	General Notes, Summary of Quantities		2	3	6
3	Alignment, Ties, and Benchmarks		2	2	4
4	Typical Sections - Includes existing and proposed typical sections - Sections extend from existing ROW to ROW		1	4	4
5	Plan-Profile Sheets - Includes removal items - Includes proposed geometry - Includes Drainage and Utilities - Includes Erosion Control Plan/Landscaping - Includes Restoration details - Includes construction details		8	8	64
6	Cross Section Sheets (2 per sheet) - Includes existing and proposed elements	25' Intervals	16	4	64
7	IDOT District 1 Details		4	0.5	2
Plan Sheet Subtotal			34		145

**NON-SHEET WORK**

Non-Sheet Task	Non-Sheet Description	Submittals, Duration, Etc.	Total Hours
1	Data Collection/Eval of Ex. Conditions/Survey	1	80
2	Special Provisions/Opinion of Probable Cost	1	32
3	Drainage, Green Infrastructure, Utilities	1	40
4	Utility/Business/Developer Coordination and Meetings	1	60
5	Bid Opening, Bid Assistance, Pre-Con Meeting	1	8
6	QA/QC (3% of Total)	Entire Project	12
7	Administration and Management (6% of Total)	Entire Project	24
Non-Sheet Subtotal			256

Total 401

The TEG Team will attend required meetings including the pre-bid conference and bid opening as required by the Village. TEG will also attend the pre-construction meeting and provide complete bid assistance following with Request for Information (RFI) assistance during the construction of the Project.

**EXHIBIT "B"**  
**Schedule of Services and Fees**  
**Base Scope**



TO: Mr. Noriel Noriega, P.E. CPESC  
 Village of Westmont  
 Public Work Department

Thomas Engineering Group, LLC		Alley G Design Services							TOTAL	
		SHEET WORK								
		TASK 1	TASK 2	TASK 3	TASK 4	TASK 5	TASK 6	TASK 7		
Title	RATE	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	JOB HOURS	DIRECT LABOR
PROJECT MANAGER	\$ 70.00					4			4	\$ 280.00
PROJECT ENGINEER	\$ 60.00		4	2	2	24	24	1	57	\$ 3,420.00
CHIEF SURVEYOR	\$ 55.00								0	\$ -
SURVEY/CADD TECHNICIAN	\$ 44.00	1	2	2	2	36	40	1	84	\$ 3,696.00
QC/QA	\$ 70.00								0	\$ -
TASK SUBTOTAL		1	6	4	4	64	64	2	145	
<b>SUBTOTAL (SHEET WORK) \$</b>										<b>7,396.00</b>

Thomas Engineering Group, LLC		Alley G Design Services							TOTAL	
		NON-SHEET WORK								
		TASK 1	TASK 2	TASK 3	TASK 4	TASK 5	TASK 6	TASK 7		
Title	RATE	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	JOB HOURS	DIRECT LABOR
PROJECT MANAGER	\$ 70.00		4	4	8	4		4	24	\$ 1,680.00
PROJECT ENGINEER	\$ 60.00	4	24	24	40	4		20	116	\$ 6,960.00
CHIEF SURVEYOR	\$ 55.00	44							44	\$ 2,420.00
SURVEY/CADD TECHNICIAN	\$ 44.00	32	4	12	12				60	\$ 2,640.00
QC/QA	\$ 70.00						12		12	\$ 840.00
TASK SUBTOTAL		80	32	40	60	8	12	24	256	
<b>SUBTOTAL (NON-SHEET WORK) \$</b>										<b>14,540.00</b>
<b>TOTAL DIRECT LABOR \$</b>										<b>21,936.00</b>

<b>MULTIPLIER</b>		
<b>3</b>	<b>\$</b>	<b>65,808.00</b>
<b>DIRECT COSTS (COPIES/MAIL/MEETINGS/ETC.)</b>	<b>\$</b>	<b>400.00</b>
<b>DIRECT COSTS (SUBCONSULTANT - PAVEMENT CORES)</b>	<b>\$</b>	<b>6,500.00</b>
<b>TOTAL</b>	<b>\$</b>	<b>72,708.00</b>

**BASE SCOPE PROPOSAL \$ 72,708.00**