

RFP2019-03: ENGINEERING, DESIGN AND CONSTRUCTION INSPECTION SERVICES FOR INTERSECTION IMPROVEMENTS AT  
WARREN/W STATE/E STATE STREET INTERSECTION FOR THE CITY OF TRENTON, DPT OF PW, DIVISION OF ENGINEERING  
PROPOSAL OPENING 1/10/18 AT 11:00AM

|   |  |  |  |   |
|---|--|--|--|---|
| RFP2019-03: ENGINEERING, DESIGN AND CONSTRUCTION INSPECTION SERVICES FOR INTERSECTION IMPROVEMENTS AT WARREN/WEST STATE/EAST STATE STREET INTERSECTION FOR THE CITY OF TRENTON, DEPARTMENT OF PUBLIC WORKS, DIVISION OF ENGINEERING |  |  |  |   |
| NUMBER OF RESPONDENTS:  | 4  |  |  |   |
| NAME OF BIDDER  | KELLER & KIRKPATRICK, INC.                                       | ROBERTS ENGINEERING GROUP, LLC   | KS ENGINEERS, P.C.                                       | MATRIX NEW WORLD ENGINEERING, LONG SURVEYING AND LANDSCAPE ARCHITECTURE, P.C. |
| ADDRESS   | 301 GIBRALTAR DRIVE, SUITE 2A                                    | 1670 WHITEHORSE-HAMILTON SQUARE ROAD   | 494 BROAD STREET, 4TH FLOOR                              | 26 COLUMBIA TURNPIKE  |
| CITY, STATE, ZIP  | MORRIS PLAINS, NJ 07950  | HAMILTON, NJ 08690   | NEWARK, NJ 07102   | FLORHAM PARK, NJ 07932  |
| CONTACT NAME  | MATTHEW L. MARTINI, PLS, PP, PRESIDENT                           | CARMELA ROBERTS, P.E., C.M.E., PRESIDENT   | KAMAL SHAHID, P.E.                                       | JAYNE WARNE, PE   |
| TELEPHONE   | 973-37-8500  | 609-586-1141   | 973-623-2999   | 973-240-1800  |
| FAX   | 973-887-0925   | 609-586-1143   | 973-242-2955   | 973-240-181   |
| E-MAIL  | <a href="mailto:MMARTINI@KELLKIRK.COM">MMARTINI@KELLKIRK.COM</a> | <a href="mailto:CROBERTS@ROBERTSENGINEERINGGROUP.COM">CROBERTS@ROBERTSENGINEERINGGROUP.COM</a> | <a href="mailto:KSHAHID@KSENG.COM">KSHAHID@KSENG.COM</a> | <a href="mailto:JWARNE@MATRIXNEWORLD.COM">JWARNE@MATRIXNEWORLD.COM</a>        |
| STATEMENT OF OWNERSHIP DISCLOSURE   | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| REQUIRED EVIDENCE EEO/AFFIRMATIVE ACTION REGULATIONS QUESTIONNAIRE  | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA AS OF DEC. 28, 2018   | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| NJ BUSINESS REGISTRATION CERTIFICATE  | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| NOTICE OF INTENT TO SUBCONTRACT   | NO   | NO   | NO   | NO  |
| NON-COLLUSION AFFADAVIT   | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| ETHICS COMPLAINT DISCLOSURE   | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| AMERICANS WITH DISABILITIES ACT OF 1990 LANGUAGE  | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| CERTIFICATION AND DISCLOSURE OF POLITICAL CONTRIBUTIONS   | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| DISCLOSURE OF INVESTED ACTIVITIES IN IRAN   | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| DEBARMENT NOTICE REQUIRED   | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| EIC   | CERT.#356 EXP. 01/15/2023  | CERT.#42995 EXP. 03/15/2023  | REQUIRED FROM AWARDED VENDOR PRIOR TO AWARD              | CERT.#14549 EXP. 06/15/2020   |
| CERTIFICATE OF INSURANCE  | REQUIRED FROM AWARDED VENDOR PRIOR TO AWARD                      | REQUIRED FROM AWARDED VENDOR PRIOR TO AWARD  | REQUIRED FROM AWARDED VENDOR PRIOR TO AWARD              | REQUIRED FROM AWARDED VENDOR PRIOR TO AWARD                                   |
| CITY OF TRENTON RESIDENT EMPLOYMENT POLICY  | INCLUDED   | INCLUDED   | INCLUDED   | INCLUDED  |
| 60-DAY EXTENSION COMPLIANCE   | YES  | YES  | YES  | YES   |
| WILLING TO PROVIDE PRIORITY EMERGENCY SERVICES  | N/A  | YES  | YES  | YES   |
| REFERENCES  | N/A  | N/A  | N/A  | INCLUDED  |
| W-9   | N/A  | N/A  | N/A  | N/A   |
| TOTAL AMOUNT FOR ONE (1) YEAR   | \$26,400.00 (SEE ATTACHED BREAKDOWN OF PRICING)                  | \$62,000.00 (SEE ATTACHED BREAKDOWN OF PRICING)  | \$65,965.82 (SEE ATTACHED BREAKDOWN OF PRICING)          | SEE ATTACHED BREAKDOWN OF PRICING   |
| FATAL DEFECT  | NONE   | NONE   | NONE   | NONE  |



## KELLER & KIRKPATRICK, INC.

*CONSULTING ENGINEERS-SURVEYORS-PLANNERS-LANDSCAPE ARCHITECTS  
MORRIS PLAINS, NEW JERSEY*

### WARREN/WEST STATE/EAST STATE STREET INTERSECTION IMPROVEMENTS

The following is our proposed fee for the project. The fee includes all labor costs, as well as direct costs (mileage, reproduction, etc.) required to complete the project.

Attached is an hourly breakdown, by task, for the project.

#### COST PROPOSAL

| TASK DESCRIPTION                         | TASK HOURS | TASK FEE     |
|--|------------|--------------|
| FIELD SURVEYING AND BASE MAPPING         | 38         | \$ 3,550.00  |
| RESEARCH & INITIAL INSPECTION            | 18         | \$ 2,310.00  |
| PREPARE PLANS & SPECIFICATIONS           | 102        | \$ 11,100.00 |
| PAYMENT SUBMISSION/CONTRACT ADMIN.       | 16         | \$ 2,360.00  |
| PERIODIC CONSTRUCTION OBSERVATION        | 72         | \$ 7,080.00  |
| ADDITIONAL SERVICES (Mileage & Printing) |            | NO CHARGE    |
| TOTALS                                   | 246        | \$ 26,400.00 |

# KELLER & KIRKPATRICK, INC. - ESTIMATE SHEET - FIELD SURVEY AND BASE MAPS

|                    |   |
|--------------------|---|
| Project Name:      | Warren/West State/East State Street Intersection Improvements |
| Client:            | City of Trenton   |
| Length of Project: | 100 Feet in each direction                                    |
| Date:              | January 10, 2019  |

| K&K Job Title                           | Principal    | Principal Engineer | Design Engineer | Designer     | Survey Dept. Head | Project Surveyor | Party Chief | Transitman | Survey Tech. | Technical Typist  | TASK TOTAL     |
|---|--------------|--------------------|-----------------|--------------|-------------------|------------------|-------------|------------|--------------|-------------------|----------------|
| K&K Employee Name                       | Matt Martini | Art Elias          | Mike Pirog      | Noah Monetti | Kevin Bogerman    |                  |             |            |              | Ronnie Martinelli |                |
| Grade                                   | PIX          | PVIII              | PIV             | PII          | PVIII             | PV               | ET-IV       | ET-III     | ET-III       |                   |                |
| JOB PHASE                               |              |                    |                 |              |                   |                  |             |            |              |                   |                |
| Project Management                      |              |                    |                 |              | 1                 |                  |             |            |              |                   | 1 \$ 150.00    |
| Control - GPS                           |              |                    |                 |              |                   |                  |             |            |              |                   | 0 \$ -         |
| ROW Research & Tie-In                   |              |                    |                 |              |                   | 2                |             |            |              |                   | 2 \$ 220.00    |
| Ties and Benchmarks                     |              |                    |                 |              |                   |                  |             |            |              |                   | 0 \$ -         |
| Planimetrics                            |              |                    |                 |              |                   |                  | 4           | 4          |              |                   | 8 \$ 660.00    |
| Topographic Survey                      |              |                    |                 |              |                   |                  | 4           | 4          | 18           |                   | 26 \$ 2,370.00 |
| Utility Survey/Aboveground Observations |              |                    |                 |              |                   |                  |             |            |              |                   | 0 \$ -         |
| QA/QC                                   |              |                    |                 |              | 1                 |                  |             |            |              |                   | 1 \$ 150.00    |
|   |              |                    |                 |              |                   |                  |             |            |              |                   |                |
|   |              |                    |                 |              |                   |                  |             |            |              |                   |                |
|   |              |                    |                 |              |                   |                  |             |            |              |                   |                |
| Hours                                   | 0            | 0                  | 0               | 0            | 0                 | 2                | 8           | 8          | 18           | 0                 | 38             |
| Salary Rate                             | \$ 170.00    | \$ 170.00          | \$ 95.00        | \$ 80.00     | \$ 150.00         | \$ 110.00        | \$ 95.00    | \$ 70.00   | \$ 95.00     | \$ 50.00          |                |
| Direct Labor Costs                      | \$ -         | \$ -               | \$ -            | \$ -         | \$ 300.00         | \$ 220.00        | \$ 760.00   | \$ 560.00  | \$ 1,710.00  | \$ -              | \$ 3,550.00    |

**SURVEY TOTAL \$ 3,550.00**

|                           |   |
|---------------------------|---|
| <b>Project Name:</b>      | Warren/West State/East State Street Intersection Improvements |
| <b>Client:</b>            | City of Trenton   |
| <b>Length of Project:</b> | 100 Feet in each direction                                    |
| <b>Date:</b>              | January 10, 2019  |

|                 |              |
|-----------------|--------------|
| TASK TOTAL, K&K | \$ 13,410.00 |
|-----------------|--------------|

|                    |   |
|--------------------|---|
| Project Name:      | Warren/West State/East State Street Intersection Improvements |
| Client:            | City of Trenton   |
| Length of Project: | 100 Feet in each direction                                    |
| Date:              | January 10, 2019  |

|       | 0 | 20 | 8 | 0 | 0 | 60 | 0  |
|-------|---|----|---|---|---|----|----|
| Hours | 0 | 20 | 8 | 0 | 0 | 60 | 0  |
|       | 0 | 20 | 8 | 0 | 0 | 60 | 88 |

|                    |      |             |      |           |      |      |             |      |             |
|--------------------|------|-------------|------|-----------|------|------|-------------|------|-------------|
| Direct Labor Costs | \$ - | \$ 3,400.00 | \$ - | \$ 640.00 | \$ - | \$ - | \$ 5,400.00 | \$ - | \$ 9,440.00 |
|--------------------|------|-------------|------|-----------|------|------|-------------|------|-------------|

|                 |             |
|-----------------|-------------|
| TASK TOTAL, K&K | \$ 9,440.00 |
|-----------------|-------------|

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**ORIGINAL**



**Roberts**  
ENGINEERING GROUP LLC  
*Women Business Enterprise Certified*

1670 Whitehorse-Hamilton Square Rd.  
Hamilton, New Jersey 08690  
609-586-1141 fax 609-586-1143  
www.RobertsEngineeringGroup.com

## Cost Proposal

|  |  |                    |
|--|--|--------------------|
| <p>Engineering Services<br/>for the Engineering, Design and Construction Inspection Services<br/>for the Intersection Improvement at Warren/West State/East State Street Intersection<br/>for the City of Trenton Department of Public Works<br/>January 7, 2019<br/>Our File No.: T1808</p> |  |                    |
| 1  | Field Survey/Base Map Preparation  | \$6,800.00         |
| 2  | 75% Preliminary Construction Plans/Specifications/Bid Document Preparation | \$15,000.00        |
| 3  | Final Construction Plans/Specifications/Bid Document Preparation           | \$6,200.00         |
| 4  | Bid Tabulation and Contract Administration                                 | \$2,500.00         |
| 5  | Construction Inspection and Management                                     | \$30,500.00        |
| 6  | Reimbursables (Mileage, Photocopies, etc.)                                 | \$1,000.00         |
|  |  |                    |
|  | <b>Total:</b>  | <b>\$62,000.00</b> |
|  |  |                    |

Note: This is an Hourly Not to Exceed Amount and individual item totals may vary.

# **CONTRACT PRICING PROPOSAL**

(Cost Plus Fixed Fee Contracts)

This form is for use when submission of cost or pricing data for a Cost Plus Fixed Fee contract is required.

Page No.

1

No. Of Pages

2

Name of Offeror **KS Engineers, P.C.**

Supplies and/or Services to be Furnished

Home Office Address

494 Broad Street, 4th Floor, Newark, NJ 07102

Professional Engineering Services

Divisions and Locations Where Work is to be Performed:

494 Broad Street, 4th Floor, Newark, NJ 07102

Total Amount of Proposal

\$65,966

## **DETAIL DESCRIPTION OF COST ELEMENTS**

| 1. DIRECT LABOR- Specify Employee Title   | Estimated Hours | Payroll Rate/ Hours   | Est Cost (\$)      | Reference |
|---|-----------------|-----------------------|--------------------|-----------|
| Project Manager   | 10              | \$89.13               | \$891              |           |
| Project Engineer  | 72              | \$76.13               | \$5,481            |           |
| Civil Engineer P-III  | 58              | \$45.00               | \$2,610            |           |
| CADD Technician I   | 148             | \$35.00               | \$5,180            |           |
| CADD Technician II  | 24              | \$32.00               | \$768              |           |
| Survey Project Manager  | 6               | \$76.79               | \$461              |           |
| Survey QA/QC Manager  | 4               | \$56.28               | \$225              |           |
| Senior Surveyor   | 10              | \$58.66               | \$587              |           |
| Survey Analyst  | 26              | \$36.87               | \$959              |           |
| Cyclone Modeler (Survey)  | 14              | \$49.34               | \$691              |           |
| Party Chief   | 8               | \$43.56               | \$348              |           |
| Instrument Person   | 8               | \$36.45               | \$292              |           |
| Survey Scan Technician II   | 8               | \$49.18               | \$393              |           |
| Survey Scan Technician I  | 8               | \$39.01               | \$312              |           |
| Construction Inspector NICET III  | 168             | \$50.00               | \$8,400            |           |
| <b>TOTAL DIRECT LABOR</b>   |                 |                       | <b>\$27,598.10</b> |           |
| 2. LABOR OVERHEAD (Specify Cost Center)   | O.H. Rate       | X Direct Labor Base = | Est Cost (\$)      |           |
| Ex: Home Office   | 100.00%         | \$27,598.10           | \$27,598.10        |           |
| <b>TOTAL LABOR OVERHEAD</b>   |                 |                       | <b>\$27,598.10</b> |           |
| 3. Direct Expenses (From Exhibit A)   |                 |                       |                    |           |
| <b>Total Direct Expenses</b>  |                 |                       | <b>\$250.00</b>    |           |
| 4. SUB-CONSULTANTS - (You must provide a separate detailed budget for each if over \$5,000) |                 |                       | Est Cost (\$)      |           |
| Key Tech Laboratories   |                 |                       | \$5,000.00         |           |
|   |                 |                       | \$0.00             |           |
|   |                 |                       | \$0.00             |           |
|   |                 |                       | \$0.00             |           |
|   |                 |                       | \$0.00             |           |
|   |                 |                       | \$0.00             |           |
|   |                 |                       | \$0.00             |           |
| <b>TOTAL SUB-CONSULTANTS</b>  |                 |                       | <b>\$5,000</b>     |           |
| 5. TOTAL OF ITEMS 1 -4: DIRECT LABOR, LABOR OVERHEAD, DIRECT EXPENSES, SUB-CONSULTANTS      |                 |                       | <b>\$60,446</b>    |           |
| FEE OR PROFIT (10% of ITEMS 1 AND 2 :Direct Labor & Overhead)                               |                 |                       |                    |           |
| <b>Items 1 &amp; 2-Direct Labor and Overhead</b>  |                 |                       | <b>\$55,196.20</b> |           |
| <b>6.Fee or Profit</b>  |                 |                       | <b>\$5,519.62</b>  |           |
| <b>7. TOTAL ESTIMATED COST AND FEE OR PROFIT (ADD ITEMS 5 AND 6)</b>                        |                 |                       | <b>\$65,965.82</b> |           |



This Proposal is Submitted for use in connection with and in response to (Describe RFP, etc.)

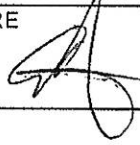
RFP 2019-03 Engineering, Design & Construction Inspection for Improvements at Warren/West State/East St. Intersection

and reflects our best estimates as of this date, in accordance with the instructions to Offerors and the Footnotes which follow.

TYPED NAME AND TITLE

Charles P. Meidhof, Vice President

SIGNATURE



NAME OF FIRM

KS Engineers, P.C.

Date of Submission

1/10/2019

**EXHIBIT A-SUPPORTING SCHEDULE - DIRECT EXPENSES (specify if more space is needed, use reverse)**

| COST EL NO. | Item Description (See footnote 5)           | EST COST (\$) |
|-------------|---|---------------|
|             | Materials and Supplies (Describe)           |               |
|             | Example: Printing                           | \$250.00      |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             | Travel (Describe)                           |               |
|             | Example: Automobile                         | \$0.00        |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             | Special Equipment and/or Testing (Describe) |               |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             | Other Direct Expenses (Describe)            |               |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             |   | \$0.00        |
|             | Total Direct Expenses                       | \$250.00      |

I. Has any Executive Agency of the United States Government Performed any Review of Your Accounts or Records in Connection with any other Government Prime Contract or Subcontract Within the Past Twelve Months?

☐ YES ☒ NO (If Yes, identify below)

NAME AND ADDRESS OF REVIEWING OFFICE AND INDIVIDUAL

TELEPHONE NUMBER/EXTENSION

II. Will you Require the use of any Government Property in the Performance of this Proposed Contract?

☐ YES ☒ NO (If Yes identify on reverse or separate page)

III. Do you now Require Government Contract Financing to Perform this Proposed Contract?

☐ YES ☒ NO ☐ Advance Payments ☐ Progress Payments or ☐ Guaranteed Loans  
(If yes, identify)

IV. Do you now hold any Contract (Or, do you have independently financed (IR&D) projects) For the same or similar work called for by this Proposed Contract?

☐ YES ☒ NO (If yes, identify)

V. Does this Cost Summary Conform with the Cost Principles set forth in Agency Regulations?

☒ YES ☐ NO (If No explain on reverse or separate page)



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Matrix New World Engineering, Land Surveying  
and Landscape Architecture, PC  
442 State Route 35, 2<sup>nd</sup> Floor  
Eatontown, NJ 07724  
732.588.2999 F: 973.240.1818  
www.matrixnewworld.com WBE/DBE/SBE

# MATRIX**NEW**WORLD

Engineering Progress

January 10, 2019

City of Trenton  
Division of Purchasing  
319 East State Street  
1<sup>st</sup> Floor  
Trenton, NJ 08608

Attn: Isabel C. Garcia, QPA – Purchasing Agent

**RE: PROFESSIONAL SERVICES PROPOSAL  
RFP 2019-03 – ENGINEERING, DESIGN, AND CONSTRUCTION INSPECTION SERVICES  
FOR THE INTERSECTION IMPROVEMENT AT WARREN/WEST STATE/EAST STATE  
STREET INTERSECTION  
CITY OF TRENTON, MERCER COUNTY, NEW JERSEY  
MATRIX NO. LD18-229**

Dear Ms. Garcia:

Matrix New World Engineering, Land Surveying and Landscape Architecture, PC (Matrix) is pleased to submit the following proposal. This proposal encompasses professional services as requested for the above-referenced project.

## SCOPE OF SERVICES

The scope of services and associated fee is described in detail below:

### ITEM 1: FIELD SURVEY/BASE MAP PREPARATION

(Phase 01)

#### Items to be provided by client

- ☐ Roadway and/or Highway Right-of-Way Plans (if available to client)
- ☐ Utility company mark-outs (to be provided by the client, refer to Item D)
- ☐ Underground utility plans from municipality and/or utility companies (if available to client)

Matrix will prepare an existing conditions survey for roadway improvements at the intersection of South Warren Street, West State Street and East State Street and along said Streets up to a minimum of 100 feet from the center of intersection of said Streets, (approximate total length of 400 Linear Feet). It is understood that the scope of services is limited to topographic features and existing conditions within the existing road rights-of-way(s) and/or up to the existing building fronts along the road rights-of-way(s).

The survey will include the following tasks:

- A. A base map will be prepared by means of conventional on-the-ground survey methods utilizing electronic 3D scanners and total stations with data collectors. A ground control survey will be prepared by utilizing differential GPS post processed using the National Geodetic Survey OPUS service. The control and the resulting mapping will be referenced to the New Jersey State Plane Coordinate System NAD 83 and the

North American Vertical Datum 1988 (NAVD 88). Mapping will be complied using a digital terrain model (DTM) and map contours to a 1-foot contour interval.

- B. Utilities and physical features will be located and mapped based on visible surface evidence. Matrix will obtain rim and grate elevations of existing storm and sanitary sewers. If accessible, pipe size, type and invert elevations will be obtained. Other visible surface utility hardware such as gas, telephone, electric, poles, etc. will be located and shown on the survey. Underground facilities will be shown based on utility company mark-outs, if provided.
- C. Matrix will map the approximate limit of street rights-of-way based on evidence of property/right-of-way(s) corner markers found in the field, the physical location of the roadways, tax map information along with roadway right-of-way parcel maps, and/or property surveys, if provided. Note: Matrix will not perform research or additional field work to determine the location of the rights-of-way. If the roadway right-of-way(s) parcel maps, deeds, and /or property surveys are provided, Matrix will utilize this information to the extent practical to determine the right-of-way limits. If this information is not provided, the location of the road right-of-way(s) will be shown based upon the latest tax map information.
- D. The location of public utilities (i.e., gas, electric, water) will be based upon visible physical features and utility company mark-outs. **NOTE: It will be the responsibility of the client to make all the arrangements necessary to provide underground utility mark-outs prior to the date of the first scheduled field visit.** If a utility mark-out is not provided only the utility mark-outs that are visible at the time of the field survey will be field located.
- E. This item does not include the boundary survey services.
- F. Upon completion of our field work and analysis, all data will be compiled, and a topographic survey plan will be prepared, at a scale appropriate for the project and not smaller than 1" = 20', utilizing AutoCAD and Civil 3D software that will consist of, but not limited to, the following:
  - 1) Existing visible utilities and surface features such as roads, curbs, gutters, edge of pavements, roadway centerline, layer bricks, sidewalks, ramps, utilities, castings, light poles, traffic items, sewer and drainage structures, etc. along with visible and assessable pipe inverts, pipe size and types, will be shown on the survey
  - 2) Existing visible roadway embedded electromagnetic sensor loops will be shown on the survey
  - 3) Location of core testing(s), (if completed prior to the time of the field survey)
  - 4) One-foot contour intervals along with spot elevations as appropriate
  - 5) Street names, along with tax map lot and block numbers (based upon current tax maps)
  - 6) Right-of-way lines and widths based upon the best information provided and/or tax map information
- G. The base mapping will be field edited as part of our QA activities.
- H. This item does not include topographic compilation necessitated from off-site utility extensions or additional data requests by reviewing agencies.

Deliverables shall include up to six (6) paper prints of the topographic route survey map, signed and sealed by a New Jersey Licensed Land Surveyor, and one (1) AutoCAD format file.

#### **Omissions and Assumptions**

Our proposed scope and fee does not include the following items:

- Utility mark-outs including Ground Penetrating Radar (GPR)
- Topographic compilation necessitated from off-site utility extensions or additional data requests by reviewing agencies
- Construction stakeout
- Boundary and/or right-of-way survey



**Site Access & Traffic Safety**

Providing access to the subject site and adjoining properties will be the responsibility of the client. It will also be the responsibility and expense of the client to supply Matrix with any permits along with traffic safety control if required by any State, County, local authority, or the City of Trenton. This item does not include additional cost for safety personnel and/or police presence. If the above-mentioned property access, highway access, and/or traffic safety is required and not provided to Matrix the client will then be invoiced in accordance with current Matrix fee schedule.

**FIXED FEE:** **\$6,100.00**

**ITEM 2: CORE TESTING**

*(Phase 02)*

**Field Exploration**

The field exploration program will consist of 3 borings with a planned boring depth of 10 feet below ground surface (or auger refusal) at the intersection.

**Boring Layout and Elevations:** We will use handheld GPS equipment to locate borings with an estimated horizontal accuracy of +/-20 feet. Field measurements from existing site features may be utilized. If available, approximate elevations will be obtained by interpolation from a site specific, surveyed topographic map.

**Subsurface Exploration Procedures:** We will advance soil borings with a truck-mounted drill rig using continuous flight augers (solid stem and/or hollow stem, as necessary, depending on soil conditions). Five samples will be obtained in the upper 10 feet of each boring. Soil sampling is typically performed using split-barrel sampling procedures. The split-barrel samplers are driven in accordance with the standard penetration test (SPT). The samples will be placed in appropriate containers, taken to our soil laboratory for testing, and classified by a Geotechnical Engineer. In addition, we will observe and record groundwater levels during drilling and sampling.

Our exploration team will prepare field boring logs as part of standard drilling operations including sampling depths, penetration distances, and other relevant sampling information. Field logs include visual classifications of materials encountered during drilling, and our interpretation of subsurface conditions between samples. Final boring logs, prepared from field logs, represent the Geotechnical Engineer's interpretation, and include modifications based on observations and laboratory tests.

**Property Disturbance:** We will backfill borings with auger cuttings upon completion. The existing concrete pavers would be removed prior to drilling and reinstalled after the drilling and backfilling has been completed. Our services do not include repair of the site beyond backfilling our boreholes and reinstalling the pavers. Excess auger cuttings will be in drums. The testing and disposal of the drums is not included in this proposal. Because backfill material often settles below the surface after a period, we recommend boreholes to be periodically checked and backfilled, if necessary. We can provide this service or grout the boreholes for additional fees at your request.

**Safety**

We are not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program, therefore, our scope of services considers standard OSHA Level D Personal Protection Equipment (PPE) appropriate. Our scope does not include environmental site assessment services, but identification of unusual or unnatural materials encountered while drilling will be noted on our logs and discussed in our report.

New Jersey One Call (NJ One Call) will be notified for the location of utilities in public easements. In accordance with state law, our field exploration program cannot commence prior to completion of the public utility mark-out process, and we will not perform excavations without an understanding of the subsurface utilities

present based upon markings made by the various responsible parties. Due to the high probability of underground utilities within the intersection, we will also engage a private utility locating service to assist in the location of utilities that may be in conflict with our explorations.

Fees associated with the private utility locating services are included in our current scope of services. The detection of underground utilities is dependent upon the composition and construction of the utility line; some utilities are comprised of non-electrically conductive materials and may not be readily detected. The use of a private utility locate service would not relieve the owner of their responsibilities in identifying private underground utilities.

Road opening permits required to perform the explorations in the public right-of-way (ROW) will be obtained as well as arrange for traffic control to be provided to facilitate the performance of our explorations in a safe manner. The traffic control is anticipated to consist of a crash truck, along with cones and signage, in accordance with NJDOT requirements.

**Site Access:** Matrix must be granted access to the site by the property owner. By acceptance of this proposal, without information to the contrary, we consider this as authorization to access the property for conducting field exploration in accordance with the Scope of Services.

### **Laboratory Testing**

The project engineer will review field data and assign laboratory tests to understand the engineering properties of various soil strata. Exact types and number of tests cannot be defined until completion of field work. The anticipated laboratory testing may include the following: Water content, Atterberg limits, grain size analysis, modified proctor, California Bearing Ratio.

Our laboratory testing program often includes examination of soil samples by an engineer. Based on the material's texture and plasticity, we will describe and classify soil samples in accordance with the Unified Soil Classification System (USCS).

### **Engineering and Project Delivery**

Results of our field and laboratory programs will be evaluated by a professional engineer. The engineer will develop a geotechnical site characterization, perform the engineering calculations necessary to evaluate foundation alternatives, and develop appropriate geotechnical engineering design criteria for earth-related phases of the project.

The geotechnical engineering report will provide the following:

- Boring logs with field and laboratory data
- Stratification based on visual soil classification
- Groundwater levels observed during and after the completion of drilling
- Site Location and Exploration Plans
- Subsurface exploration procedures
- Description of subsurface conditions
- Recommended design parameters for pavement

### **Additional Services**

In addition to the services noted above, the following are often associated with geotechnical engineering services. Fees for services noted above do not include the following:

**Review of Plans and Specifications:** Our geotechnical report and associated verbal and written communications will be used by others in the design team to develop plans and specifications for construction. Review of project



plans and specifications is a vital part of our geotechnical engineering services. This consists of review of project plans and specifications related to site preparation, foundation, and pavement construction. Our review will include a written statement conveying our opinions relating to the plans and specifications' consistency with our geotechnical engineering recommendations.

**Disposal of Drill Spoils:** As part of our field operations, any excess drill spoils would be placed in a drum. If requested, we will test the excess soil for eventual disposal, as well as dispose of the drum. As part of these services, we would provide all the necessary documentation related to disposal of the material.

The fee below assumes that all work can be performed during normal business hours, Monday through Friday, 7:00 AM to 5:00 PM with non-union contractors. Stand-by time for delays caused by parties other than Matrix or its subcontractors will be charged at a rate of \$500 per hour.

The following items are not included in the fee below:

- Plans and Specifications Review
- Testing and disposal of drill spoils (1 drum)

**FIXED FEE: \$15,000.00**

**ITEM 3: 75% PRELIMINARY CONSTRUCTION PLANS/SPECIFICATIONS/BID DOCUMENT PREPARATION**

*(Phase 03)*

Based on core testing, initial field visit(s), observation, investigation, and research Matrix will determine the necessary paver removal limits for reinstallation of new or existing bricks and sub-surface material necessary for project completion. We will prepare preliminary construction plans and technical specifications, schedule, and construction estimate for review by the City's representative(s) in preparation for Request for Bid. Preliminary documents will address all items to be removed/replaced and reconstructed including existing and proposed profiles, top of curb and sidewalk elevations (where necessary), and details for construction/installation of improvements. The plan set will be detailed sufficiently to address requirements for public bidding, applicable permits, including Soil Erosion Sediment Control Certification (if necessary).

All engineering, construction, and inspection work associated with the project will comply with the City of Trenton procurement laws. Construction plans, bid form, and invoices will be prepared in accordance with this requirement. The scope also includes the preparation of a Project Manual containing the instruction to Bidders, form of Proposal, Standard General Conditions, any Supplemental Conditions, Prevailing Wage Rate determination, and the supplementary specifications for state aid projects.

The plans, specifications, and related documents will be prepared in consistence and accordance with the Local Public Contracts law – NJSA 40A:11-1 et. Seq., the current editions of NJDOT Standard Specifications for Road and Bridge Construction, Manual of Uniform Traffic Control, and City municipal standards.

**FIXED FEE: \$20,000.00**

**ITEM 4: FINAL CONSTRUCTION PLANS/SPECIFICATIONS/BID DOCUMENT PREPARATION**

*(Phase 04)*

Matrix will revise the 75% Preliminary Plans/Specifications based upon feedback from the City's representative and further develop same to submit two (2) copies to the City of Trenton Engineering office for review and approval. The contents of the bid package submittal will be "complete" with the intention of only revising same as required to obtain approval from the City of Trenton based upon their review of full package. Applications will be prepared for submission to NJDOT for Highway Occupancy Permit and Mercer County Soil Conservation District. Application fees to NJDOT and Mercer County SCD are excluded. Revisions that are required based on

NJDOT or Mercer County SCD review comments are included within this phase. Upon obtaining all approvals, Matrix will submit five (5) copies of complete bid documents.

Separate authorization from the client will be requested prior to commencing services outside the scope of this proposal. All out-of-pocket expenses including but not limited to items such as printing/reproduction, delivery charges, applications fees, etc. beyond the scope as stated above and in items 1-3 above are to be paid for directly by the client.

**FIXED FEE: \$15,000.00**

**ITEM 5: BID TABULATION AND CONTRACT ADMINISTRATION**

*(Phase 05)*

Matrix will administer the project in accordance with the City of Trenton procurement laws. This work includes review of bids received, recommendations to the City of Trenton for Contract Award, and preparation of the Bid Tabulation Sheet of bids received.

**FIXED FEE: \$5,000.00**

**ITEM 6: CONSTRUCTION INSPECTION AND MANAGEMENT**

*(Phase 06)*

Matrix will schedule and attend a pre-construction meeting including coordination with all necessary stakeholder and utility company representatives. In addition, Matrix will provide inspection services. Inspections will be performed by a licensed Professional Engineer.

**FIXED FEE: \$6,000.00**

We thank you for the opportunity to submit this proposal. Please feel free to contact me directly with any questions or comments regarding the scope or fees as indicated at (973) 295-3604 or via email to [ssavage@matrixnewworld.com](mailto:ssavage@matrixnewworld.com).

Sincerely,



Sean M. Savage, PE, LEED AP  
Director of Land Development  
New Jersey License No. 24GE04451000

SMS:NKN:lb



## 2019 FEE SCHEDULE

| TITLE  | HOURLY RATE |
|--|-------------|
| Principal in Charge – Sean M. Savage, PE, LEED AP                | \$195.00    |
| Project Manager – Nitin K. Nagrani, PE                           | \$185.00    |
| Senior Civil Engineer – Robert DeCotiis, PE                      | \$165.00    |
| Professional Land Surveyor – Frank J. Barlowski, PLS             | \$195.00    |
| Design Engineer/Construction Inspection – Christopher Goelz, EIT | \$110.00    |
| Geotechnical Engineer – Erich Christiansen, PE                   | \$195.00    |

## 2019 REIMBURSABLE EXPENSES

| ITEM                       | FEE           |
|----------------------------|---------------|
| Black & White Copy 8½ x 11 | \$ 0.20/sheet |
| Black & White Copy 8½ x 14 | \$ 0.30/sheet |
| Black & White Copy 11 x 17 | \$ 0.40/sheet |
| Black & White Copy 18 x 24 | \$ 1.45/sheet |
| Black & White Copy 24 x 36 | \$ 2.85/sheet |
| Black & White Copy 30 x 42 | \$ 4.25/sheet |
| Color Copy 8½ x 11         | \$ 0.40/sheet |
| Color Copy 11 x 17         | \$ 0.80/sheet |
| Color Copy 24 x 36         | \$27.00/sheet |
| Color Copy 30 x 42         | \$40.00/sheet |
| Mylar 24 x 36              | \$27.00/sheet |
| Mylar 30 x 42              | \$40.00/sheet |
| CD                         | \$50.00/disc  |
| Robotic per diem           | \$249.00      |
| Scanner per diem           | \$400.00      |
| Subconsultants             | 115% of cost  |
| Out-of-pocket expenses     | 115% of cost  |

Additional reimbursables include, but are not limited to, delivery expenses and mileage, charged at Federal prevailing rates.