

CITY OF DURHAM – Carver Street Extension  
Contract Amendment #2

Scope of Services

**PURPOSE:**

The Purpose of this agreement is to extend the duration of the contract for the Consultant, (Horvath Associates, Inc.), to provide construction administration, engineering and design and design services for the City of Durham's Carver Street Extension from Danube Lane to Old Oxford Highway.

**SCOPE OF SERVICES:**

1. **Construction Bid Process** – The consultant shall assist the City Staff with the construction contract bidding process. As a minimum, the consultant shall provide the following services:
  - a. **Validate Bid Items and Quantity Takeoff** - The consultant shall review and insure that the quantity takeoff reflects the work required to complete the project, at the same time, identify any missing or previously unanticipated pay items. The consultant shall be responsible for updating the project manual and bid documents accordingly. The goal is to complete this construction project without change orders.
  - b. **Develop a Preliminary Construction Schedule** - Prior to advertising the bid for construction, the consultant shall develop a preliminary construction schedule to include a work breakdown structure and task list using the City's Primavera P6 Project Management System for inclusion in the bid documents. The quantities of each pay item relative to construction tasks in the P6 schedule shall be assigned to that task in P6, so as to create a preliminary proposed cost loaded schedule for evaluation by the contractors who will provide bids. All quantities for all pay items in the bid documents shall be accounted for in the preliminary proposed P6 construction schedule. This will enable the use of Earned Value Management in the Primavera software as means of measuring construction project performance.
  - c. **Assist with Bidding** – The consultant shall assist the City staff with all aspects of the bidding including but not limited to:
    - i. Bid document preparation
    - ii. Advertisement
    - iii. Responding to RFI and issuing Addendum
    - iv. Bid opening
    - v. Analysis of bidders responses
2. **Contract Administration and Inspection** - The consultant shall utilize the City's Oracle/Primavera centric contract management and scheduling software to administer all aspects of the construction contract between the City and the as

of yet undetermined contractor, including but not limited to, the following work elements:

- a. **Requests for Information(RFI)** - All RFI's will be submitted, reviewed and responded to by the consultant through the workflow in Oracle/Primavera Contract Manager (PCM).
- b. **Shop Drawing Submittals** - The consultant shall preload PCM with a list of all of the shop drawings required for the project so that the contractor and consultant have a checklist for all of the required submittals. The consultant shall subsequently manage the shop drawings submittals (from the contractor) and reviews through the CM work flow processes. The consultant shall insure that the shop drawing submittals are reviewed a timely manner in accordance with the construction documents and all relevant specifications.
- c. **Progress Meetings** - The consultant shall hold weekly progress meeting with the contractor and City staff. The meeting agendas and content will be managed in PCM.
- d. **Construction Observation and Inspection** - The consultant shall have a construction inspector onsite daily. The amount of time the inspector will need to be onsite will be dependent on the work being performed and weather conditions. On rainy days, as a minimum, the inspector will need to observe the performance of the erosion control devices. During warm dry weather the inspector may need to be onsite all day long; his(her) responsibility will be to observe and document all construction for subsequent certification that it meets NCDOT and City Standards, as well as approval of daily reports for payment quantities entered by the contractor (discussed below).
- e. **PCM and PDRX Daily Reports** - The construction inspector will be responsible for summarizing the activities observed during the day in a PCM daily report and will report his time spent each day in a PDRX daily report for the CA/CI work.
- f. **Photographic Journal** - The construction inspector will be responsible to taking good quality and composition photographs daily that are representative on the work being performed. The photographs will be uploaded daily to a cloud based file service such as DropBox maintained by the consultant.
- g. **Inspections Equipment** - The construction inspector shall have all of the equipment necessary for his job with him or on his vehicle at all times. All equipment will be well-maintained, recently calibrated where appropriate, and in good working order. The equipment shall include but not be limited to :
  - i. A four-wheel drive vehicle suitable for off-road transport.
  - ii. Reliable portable computer with wireless connection capability to the internet. The computer shall have the most current version of the Microsoft operating system and office software and will be configured by the consultant so as to be compatible with City project management software.
  - iii. Six foot level
  - iv. Construction grade string line (>50ft) and line level

- v. Various tape measures which report in inches and hundredths of a foot, including tapes that carried in a pocket capable of measuring distances 35' or less, and tapes that are carried on a reel that measure distances from 35-200'.
  - vi. Earth compaction resistance probe
  - vii. High resolution digital camera
  - viii. Concrete slump test equipment
  - ix. Auto level with tripod and 25' rod
  - x. Surveyor pin flags
  - xi. Wood stakes of varying length and 3lb sledge hammer
  - xii. OSHA approved safety equipment for himself/herself including but not limited to:
    - 1. Hard Hat
    - 2. Vests/Jackets/Rain gear
    - 3. Shoes
    - 4. Glasses
- h. **Approval of Contractor Daily Reports** - The consultant shall be responsible verification and approval of payment quantities in the Primavera Daily Report Extender (PDRX) daily reports submitted by the contractor. The consultant shall monitor the installed quantities daily and alert City staff immediately of any quantities in excess of the estimates.
- i. **Payment Requisitions** - The consultant shall be responsible for the month-end process of approving final quantities for payment, making adjustments to the previously approved daily reports as needed, and creating the monthly payment requisitions in CM.
- j. **Punch lists** - The consultant shall create punch lists as necessary in CM for remedial work which needs to be performed the contractor. The consultant shall monitor and report the contractor's progress in completing punch list items.
- k. **Job Site and Work Zone Safety** - The construction inspector(s) onsite shall fully comply with the certification requirements of the "North Carolina Department of Transportation's Implementation of the FHWA Final Rule on Safety & Mobility 23 CFR 630 Subparts J & K". The inspectors will have the authority as an agent of the City to issue a stop work order whenever unsafe conditions are observed.
- l. **Conformance with NCDOT Encroachment Agreements** - The consultant is responsible to insure that the work being performed is in accordance with the NCDOT encroachment agreements at all times.
- m. **Review and Approval of As-Built Submittals** - The contractor, as specified in the project manual and construction documents, is required to comply with Section 4 of the City's reference Guide for Development with respect to as-built drawing and data requirements. The consultant shall be responsible for approving the as-built submittals by the contractor and insuring that they are in compliance with the City's requirements.
- n. **Prepare the require documentation for the flood hazard zone as-builts for the LOMAR certification.**

3. **Project Management and Weekly Status Reports** - The consultant shall prepare a weekly status report in Word that summarizes the work performed, issues encountered and resolutions, budget status of pay item estimates and quantities, accidents, etc. The consultant shall report construction progress on a monthly basis using the Earned Value Methodology using the City Primavera software.
4. **Construction Drawing Interpretation and Design Services**
  - a. **Construction Drawing Interpretation** - The consultant shall have a professional engineer, experienced in the design and construction of streetscape elements, on staff to assist with the interpretation of the intent of the construction drawings if and when it becomes evident that there is an ambiguity, a conflict, or an error or omission; there may be other circumstances that necessitate analysis and interpretation.
  - b. **Design Services** - The consultant shall have a professional engineer and support staff, experienced in the design of similar projects, on call to prepare changes to the construction drawings when interpretation, described above, is insufficient to resolve an ambiguity, a conflict, or an error or omission. The staff available shall consist of but not be limited to, registered professional engineer, registered landscape architect, registered professional land surveyor and technicians.
5. **Construction Materials Testing and Certifications**

The consultant shall provide all of the testing and the certification required to meet NCDOT/COD standards on the entire project. The testing and certifications services provided will at a minimum address the specific requirements of the NCDOT encroachment agreements.

**PERIOD OF SERVICE:**

This Amendment # 2 shall be from 24 months from the date of notice to proceed. *Upon mutual agreement with the Consultant and the City the contract can be extended six additional months.*

**COMPENSATION:**

The proposed fee is an hourly rate with a not-to-exceed cost. The hourly fees include all labor costs, overhead and overhead costs and incidental expenses including sub-consultants. Direct expenses for automobile costs and reproduction will be invoiced as separate line items. Fees will be invoiced monthly based upon the hours worked with a not-to-exceed cost. Payment will be due in accordance with the Original Agreement dated March 21, 2011.

All labor charges and direct expenses shall be entered into PDRX daily reports each day with no later than a 1 day lag. Monthly payment requisitions will be created in PCM and will be used for invoicing and payment

The actual cost of direct labor, overhead and fee for the staff assigned to this work within each task shall not exceed the not-to-exceed amount in Exhibit A of this Agreement without the written permission of the Client. The costs for this assignment shall not exceed \$712,000.00. Amendments to this agreement may agree to in writing by both parties.

**Exhibit A**

Pre-bid and Bidding Process	\$ 21,000.00
Contract Administration	\$500,000.00
Project Management Scheduling	\$ 25,000.00
Roadway/SCM Interpretation/Design	\$ 25,000.00
Traffic Signal Interpretation/Design	\$ 35,000.00
Construction Material Testing & Certifications	\$ 80,000.00
Reimbursable	
Mileage and Vehicle Expense	\$ 25,000.00
Reproduction	<u>\$ 1,000.00</u>
	Total Reimbursable <u>\$ 26,000.00</u>
Total	\$712,000.00

**Horvath Associates, PA. Inc.**