

CITY OF HIGH POINT

AGENDA ITEM



Title: E. Washington Street Realignment- Water and Sewer Relocation Design
STV Inc.

From: Terry Houk – Public Services Director
Derrick Boone – Public Services Asst. Director

Meeting Date: June 15, 2020

Public Hearing: N/A

Advertising Date: N/A
Advertised By: On-Call

Attachments: Attachment A- Map
Attachment B- Proposal

PURPOSE:

To contract with STV Engineering for the engineering and design work for the relocation of the water and sewer utility lines in conjunction with E. Washington Street realignment project.

BACKGROUND:

On November 4, 2019, City Council awarded a contract with STV Engineering for professional engineering and design services associated with the proposed relocation of a portion of Washington Street adjacent to the railroad. The project focused on the relocation of a portion of Washington Street away from the crest of the railroad cut slope. Over many years, the slope has experienced substantial erosion that has encroached to the southern edge of the road and is threatening to undermine the subgrade.

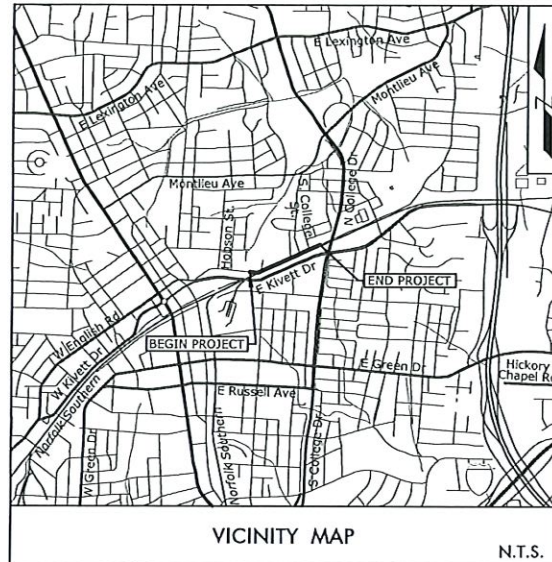
The water and sewer utility lines located within the E. Washington Street Realignment project area are over a 100-years old. The existing water lines are cast iron and were constructed in 1902 and the sewer line is vitrified clay and was constructed in 1910. The scope of the project will be to contract with STV Engineering to perform engineering and design work for the relocation and replacement of the water and sewer lines as part of the overall E. Washington Street re-alignment project (from Gaylord Court to east of N. Downing Street). The estimated construction cost is \$1,230,000 for the water and sewer portion of the project.

BUDGET IMPACT:

Funds for this project are available in the 2019-2020 Budget.

RECOMMENDATION / ACTION REQUESTED:

STV Engineering is an approved on-call professional transportation planning and engineering services consultant for the City of High Point. The Public Services Department recommends approval and asks for the Council to award the professional engineering services to STV Engineering in the amount of \$97,362.85



PRELIMINARY PLANS

CITY OF HIGH POINT ENGINEERING SERVICES DEPARTMENT

E. WASHINGTON STREET RE-ALIGNMENT FOR RAILROAD SLOPE ROADWAY IMPROVEMENTS

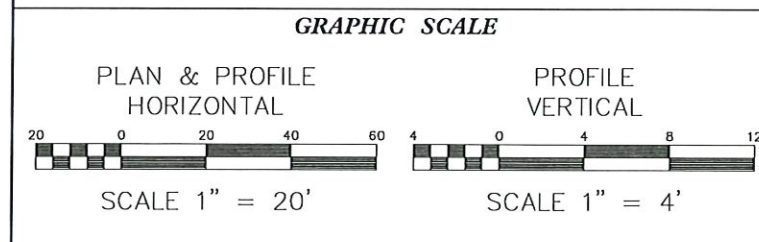
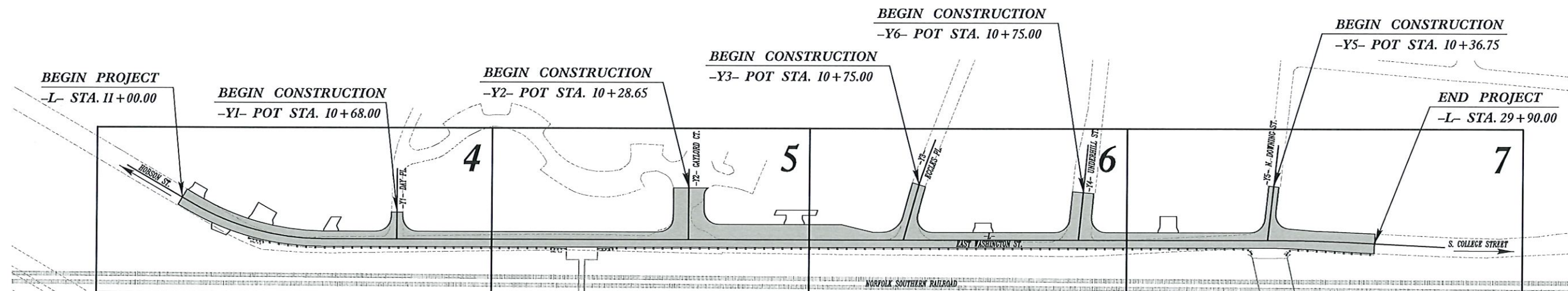
LOCATION: EAST WASHINGTON STREET FROM EAST OF HOBSON STREET
TO EAST DOWNING STREET

TYPE OF WORK: GRADING, DRAINAGE, PAVING

TOTAL LENGTH OF PROJECT = 0.358 MI

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
2A-1 THRU 2A-2	TYPICAL SECTIONS
3B-1	ROADWAY SUMMARIES
4 THRU 8	PLAN & PROFILE SHEETS
X-1 THRU X-25	CROSS-SECTIONS
X-26 THRU X-27	DRIVEWAY PROFILES



DESIGN DATA

ADT = 4,100 VPD (2017)
ADT = 5,400 VPD (2040)
V = 30MPH

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

RIGHT OF WAY DATE:
OCTOBER 23, 2020

LETTING DATE:
MAY 5, 2021

SHANE I. SHARPE, PE
PROJECT ENGINEER

MAAMOON K. ABDELAZIZ
PROJECT DESIGNER



TITLE SHEET FOR
E. WASHINGTON STREET
RE-ALIGNMENT FOR RAILROAD SLOPE
ROADWAY IMPROVEMENTS
HIGH POINT - GUILFORD COUNTY - N.C.

SHEET NO.
1

CITY OF HIGH POINT
ENGINEERING SERVICES
DEPARTMENT
211 S. HAMILTON STREET
HIGH POINT, NC 27261
TELEPHONE (336) 883-3194
FAX (336) 883-4118

PRELIMINARY
PLANS
INCOMPLETE
PLANS
DO NOT BE FOR CONSTRUCTION

JOB NO:	4020442
DATE	4/8/2020
DESIGNED	MKA
DRAWN	MKA
CHECKED	SIS
SCALE	NTS

REV.	DATE	DESCRIPTION	BY

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



ESTIMATE OF PROFESSIONAL SERVICES SUMMARY PAGE

STV Proposal or Job Number: 4020442

Client Job Number: TBD

Project Description/Location: Washington Street Realignment Water/Sewer Supplemental

Client: City of High Point

Client Project Manager: Justin Carroll

Item	wksht	Hours	Budgeted Effort	Other Dir. Costs	Subconsult.	Grand Total
Project Management	A	107	\$ 14,765.85	\$ 608.00	\$ -	\$ 15,373.85
Water/Sewer Design	B	320	44,118.00	583.50	8,670.00	53,371.50
Water/Sewer NCDEQ Permitting	C	23	3,120.75	680.00	-	3,800.75
Water/Sewer NCRR Permitting	D	46	6,241.50	2,080.00	-	8,321.50
Water/Sewer Bid Phase Services	E	6	1,111.50	122.00	-	1,233.50
Traffic Control Design Revisions	F	127	15,261.75	-	-	15,261.75
GRAND TOTALS >		629	\$ 84,619.35	\$ 4,073.50	\$ 8,670.00	\$ 97,362.85


Project Manager, STV Engineers, Inc.



City of High Point
E. Washington Street Relocation
Water and Sewer Relocation Design
May 29, 2020

Project Understanding

STV Engineers, Inc. (STV) entered into agreement with the City of High Point (City) to relocate an approximate 2,000 ft. portion of E. Washington Street (City maintained facility) from its current location to the north to create better separation from the North Carolina Railroad (NCRR)/Norfolk Southern (NS) Railroad tracks and top of bank. E. Washington Street is located at the top of the slope of the railroad and is currently being undermined due to erosion of the slope bank. The goal is to realign the road to the north away from the tracks so that adequate separation occurs between the edge of pavement and the ultimate railroad top of slope. The road is currently within the railroad right of way (ROW) and is anticipated to remain in the ROW after the relocation per understanding between the City and NCRR.

Water and Sewer utilities are owned by the City in the project area. The field survey, performed by the City, has revealed that there are sanitary gravity sewers, a 12-inch water main with connections to the northern side streets, a 30-inch diameter water transmission main, and utility appurtenances including manholes/air releases/hydrants/services/water meters/etc. within the project area. The City indicated the 12-inch diameter water line was installed in the 1902 and is most likely unlined cast iron pipe. The 30-inch diameter water transmission main was installed in the 1970's and has generally 7-1/2 feet of cover. The City requested that the roadway alignment be adjusted to avoid impacting the 30-inch diameter water transmission main from drainage or guard rail posts.

The current plan for the roadway grading is to install the new roadway relatively close to the existing grades. The City has indicated they would like to replace the 12-inch diameter water line along the project's entire length in E. Washington Street and relocate portions of the 8-inch diameter gravity sewers only where conflicts with proposed guardrails and drainage will occur. Initial analysis indicates that approximately 1,800LF of 12-inch diameter water lines and approximately 800LF of 8-inch diameter sanitary gravity sewers are to be relocated. Horizontal water and sewer alignment will be included on the roadway sheets (1-inch = 20feet scale drawings). Water/Sewer profiles and schematic/zoomed-in details of tie-ins will be provided on separate water/sewer drawings. The City's applicable standard water and sewer details will be included on detail sheets and supplemented with STV's standard details when necessary. Cost estimates will be prepared using the City's pay items in its Standard Specifications and Details. The water/sewer portion of the project will be bid as part of the overall roadway package.

A. PROJECT MANAGEMENT

Regular meetings and other communication between STV and the City staff will ensure that the project goals are being met throughout the project. The meetings will service as work sessions, allowing STV to receive valuable input from the City staff as it relates to the project.

(1) Conduct kickoff meeting

- (a) Upon receipt of Notice to Proceed (NTP), STV will conduct one (1) kickoff meeting with the City staff to review project objectives, assign roles and review the schedule. STV will prepare



and submit meeting minutes to the City Project Manager (PM) for review, comment and record.

(2) Hold intermediate progress meetings

- (a) It is anticipated that three (3) utility specific intermediate progress meetings will be held by the PM and STV during the course of the utility design to keep the PM up to date on design status. Items discussed during the meeting include progress reports, invoices, and anticipated design goals/challenges. The meeting may also be used to present, discuss, and/or review work-in-progress. STV shall prepare and submit meeting minutes of these meetings to the PM for review comment and record.

(3) Coordination with sub-consultant

- (a) STV will coordinate with the sub-consultant working on the project and provide necessary supervision for assurance that the work of the sub-consultant is adequate for use during design efforts.

(4) Other project management

- (a) STV will conduct miscellaneous project administration which will include monthly billings, contract maintenance and project correspondence and records. STV will prepare progress reports detailing work completed with an updated project schedule. The progress report will accompany monthly billings and will be utilized during progress meetings.

B. WATER/SEWER RELOCATION DESIGN

This scope of service includes design and permitting of the water and sewer relocations (water main and gravity sewer). The tasks are described below:

(1) Evaluation of existing water and sewer utilities.

- (a) Evaluate survey and potential relocation alignment/options.
- (b) One (1) field visit to examine the site and identify water/sewer facilities and confirm location survey captured all facilities. Up to two (2) meetings with City at City offices to receive and discuss comments on the 60% and 90% water/sewer submittals. Discussion of 30% alignment will be conducted via telephone or emailed comments. One (1) meeting with City to review drainage and utility impacts.

(2) Internal project meetings and coordination with roadway and drainage during design.

- (a) Meetings with different disciplines to evaluate potential impacts and solutions.
- (b) Design analysis of water and sewer relocation.

(3) Develop design drawings (plan and profile), cost estimates and special provisions for bidding and construction.

- (a) City of High Point standard details will be referenced for the design. Special provisions will be provided.

- (b) STV's subconsultant NV5 will perform six (6) soft digs of buried utilities. This work will take up to two (2) days and include traffic control measures.
- (c) 1"=20' horizontal scale and 1"=4' vertical scale will be used on water and sewer plan and profile. Water and Sewer plan design will be included on roadway plan sheets. Separate water sewer profile sheets will be developed.
- (d) Plans will be submitted for review and comments by City as listed below:
 - 1. 30% Submittal for review and comment on the plan view of the proposed water and sewer lines. Preliminary construction cost estimate will also be submitted for review. Review and discussion will be conducted by phone.
 - 2. 60% Submittal for review and comment on the plan and profile views of the designs, and to acquire approval for the profile views. A preliminary construction cost estimate updated based on the 60% design will also be submitted for review along with Special Provisions. One (1) review meeting at City offices will take place to discuss the City's comments.
 - 3. 90% Submittal for review and comment on the plan and profile views of the designs. A preliminary construction cost estimate updated based on the 90% design will also be submitted for review along with Special Provisions. One (1) review meeting at City offices will take place to discuss comments on the design.
 - 4. 100% final signed and sealed plans and final construction cost estimate.

C. WATER/SEWER PERMITTING

This scope of service includes preparation and submission of permit applications for:

- (1) NCDEQ PWS Authorization to Construct (ATC) permit application
- (2) NCDEQ Sewer Extension permit application
- (3) NCRR/NS encroachment application
- (4) Permit fees will be paid by the Consultant and reimbursed by the City

D. WATER/SEWER BID PHASE SERVICES

This scope of service includes the following:

- (1) Attend pre-bid meeting and answer questions a necessary during the pre-bid meeting

E. TRAFFIC CONTROL DESIGN REVISIONS

This scope of service includes revisions to the Maintenance and Protection of Traffic (MOT) Plan. STV will provide additional maintenance and protection of traffic plans for utility line construction. Consists of details for lane closures and off-site detours for five (5) locations along the water line alignment.

F. DELIVERABLES

- (1) 30% plans and cost estimate.

- (2) 60% plans, special provisions and cost estimate.
- (3) 90% plans, special provisions and cost estimate.
- (4) Final plans, special provisions and cost estimate. (Final plans in cad format)
- (5) Permit applications as listed above.

G. ASSUMPTIONS/EXCLUSIONS

- (1) Based on the preliminary evaluation, it is assumed up to approx. 1,800 LF of water lines, and 800 LF of gravity sewers will need to be relocated for the roadway and drainage design.
- (2) STV will review and analyze relevant information that the Owner can provide for its existing utilities.
- (3) Permit application fees will be paid by STV and reimbursed by Owner. Owner will obtain necessary signatures on permit and encroachment application forms.
- (4) STV will use City of High Point Standard Specifications and Details of the latest version. Special provisions will address project-specific requirements not covered by City standard specifications.
- (5) Preparing any Water or Wastewater Management Plans relating to permit applications is not included in this scope and fee.
- (6) Design review meetings will be conducted via phone for 30% and at City offices for 60% and 90% submittals.
- (7) No environmental permitting is anticipated nor included in this scope of work.
- (8) Trenchless design of roadway crossings is not included in this scope of work. Water/Sewer utilities will be designed within NCRR right-of-way but not across railroad tracks.
- (9) Reimbursed NCRR application review fee does not include cost of encroachment nor cost to Norfolk-Southern. City will execute agreement separately and pay all encroachment fees directly. Does not include any additional costs of railroad engineers or flagmen. Does not include any meetings.
- (10) Additional soft digs beyond six (6) indicated will be provided at additional cost.
- (11) Does not include presentation preparation and exhibits for public meeting.
- (12) Additional site visits or meetings outside this scope of work will be invoiced separately at the approved unit rates for labor and expenses herein.
- (13) STV will coordinate with the project utility coordinator to eliminate potential conflicts with relocated dry utilities. STV will coordinate with the drainage designer to make every attempt to move drainage structures where possible to minimize the impact to buried water and sewer utilities planned to remain in place.



- (14) Third party testing services including pre-blast surveys, geotechnical, structural testing or evaluation, field condition evaluations are not included.
- (15) Any revision to the already acquired permits of the project due to field condition, contractor request or other reasons will be additional services, if requested by the City are not included.
- (16) No construction phase services will be included in this scope.

H. ITEMS PROVIDED BY THE CITY

- (1) As-builts or record drawings of water/sewer utilities in project area.
- (2) Survey of soft-dig locations and provide information to STV.
- (3) Bid package/bid advertisement/addendum and other formal responses to prospective bidders/bid receipt/bid evaluation/RPR/Construction administration of the project including as-built record drawings and certification to the state as to meeting the permit requirements upon completion.