CITY OF HIGH POINT AGENDA ITEM



TITLE: Task Order for Design Services with De	wberry Engineers, Inc.
FROM: Greg Venable, Transportation Director	MEETING DATE: April 1, 2024
PUBLIC HEARING: n/a	ADVERTISED DATE/BY: n/a
ATTACHMENTS: Budget Ordinance Amendment Dewberry Fee Proposal Project Scope	

PURPOSE: To approve a Task Order for a Master Agreement for Professional Services with Dewberry Engineers, Inc. for professional engineering and design services related to proposed improvements to S. Main Street, S. Wrenn Street, and Russell Avenue in partnership with High Point Market Authority (HPMA). The city has a Master Services Agreement with Dewberry for these services.

BACKGROUND: The city is partnering with the HPMA to construct improvements in the southern showroom district in accordance with the Nonprofit Organization Agreement with the High Point Market Authority approved on February 5, 2024. Improvements include but are not limited to the following.

- Project Management
- Natural Environment
- Community Studies
- Public Involvement
- Hydraulics
- Location and Surveys
- Environmental Policy

- Roadway
- Erosion Control
- Signal Communication
- Signal Design
- Signage
- Utility Coordination
- Utility Design

Dewberry will provide the described professional design services for a lump sum fee of \$599,030.

BUDGET IMPACT: A budget ordinance amendment appropriating the grant funding is included with this item. The Market Authority received a \$9,000,000 grant from the State of North Carolina for these improvements and will reimburse the City via these funds.

RECOMMENDATION/ACTION REQUESTED: Staff recommends approval of this Task Order with Dewberry Engineers, Inc. in the amount of \$599,030, approve a budget ordinance amendment for the allocation of funds for this project, and allow the appropriate city staff to execute all associated documents

"AN ORDINANCE AMENDING THE 2023-2024 BUDGET ORDINANCE OF THE CITY OF HIGH POINT, NORTH CAROLINA TO APPROPRIATE FUNDS FOR IMPROVEMENTS TO SOUTH MAIN, SOUTH WRENN, AND RUSSELL AVENUE

Be it ordained by the City Council of the City of High Point, North Carolina, as follows:

Section 1. The proposed amendment appropriates \$9,000,000 in state grant funds for improvements to South Main, South Wrenn, and Russell Avenue.

Section 2. The 2023-2024 Budget Ordinance of the City of High Point should be amended as follows:

(A) That the following Special Revenue Fund revenues be amended as follows:

Market Authority Reimbursements \$9,000,000

(B) That the following Special Revenue Fund expenditures be amended as follows:

South Main and Other Street Improvements \$9,000,000

Section 3. That all ordinances, or parts of ordinances in conflict with this ordinance are hereby repealed to the extent of such conflict.

Section 4. That this ordinance shall be effective from and after its passage."

Adopted by High Point City Council, this the 1st day of April 2024

Cyril Jefferson, Mayor

ATTEST

Sandra Keeney, City Clerk



Dewberry Engineers Inc. | 919.881.9939 2610 Wycliff Road, Suite 410 919.881.9923 fax

Raleigh, NC 27607 www.dewberry.com

Fee Proposal

February 27, 2024

INTRODUCTION:

Dewberry Engineers Inc. (Dewberry) is pleased to submit our fee for professional engineering services for the above S Main Market Area Improvement project. These professional services will be performed as part of Dewberry's 2023 ON-CALL TRANSPORTATION ENGINEERING AND PLANNING SERVICES MASTER CONTRACT.

COMPENSATION

Dewberry will provide the scope of services outlined in the S Main Market Improvement project scope for the following compensation noted below. All fees are lump sum unless otherwise noted and have been generated using Dewberry's standard billing rates.

BASIC SERVICES

Task 1 – Project Management	\$40,698 (LS)
Task 2– Natural Environment	\$7,245 (LS)
Task 3 – Community Studies	\$11,010 (LS)
Task 4 – Public Involvement	\$71,850 (LS)
Task 5 – Environmental. Policy	\$10,920 (LS)
Task 7 - Hydraulics	\$44,840 (LS)
Task 8 – Location and Surveys	\$89,712 (LS)
Task 9 - SUE	\$20,220 (LS)
Task 10 – Final Pavement Markings	\$6,320 (LS)
Task 11 – Roadway	\$92,270 (LS)
Task 12 – Erosion Control	\$15,420 (LS)
Task 13 – Signing	\$11,525 (LS)
Task 14 – Signal Communication	\$12,195 (LS)
Task 15 – Signals	\$16,700 (LS)
Task 16 – WZTC	\$36,355 (LS)
Task 17 – Utility Coordination	\$32,690 (LS)
Task 18 – Utility Design	\$79,060 (LS)

Total......\$599,030

Service are quoted as lump sum (LS) based on the information provided. Should project scope changes occur Dewberry reserves the right to ask for additional funds under a supplemental agreement.

TERMS AND CONDITIONS

Standard Terms and Conditions will be in accordance with Dewberry's 2023 ON-CALL TRANSPORTATION ENGINEERING AND PLANNING SERVICES MASTER CONTRACT.

Please contact Dewberry if you have any questions about the scope of services. We appreciate this opportunity to work with you on this project.

Sincerely,

Dewberry Engineers Inc.

hip

Bryan Lambeth, PE Project Manager

Robert S. Notte, PE Vice President

Attachments: Attachment A - Standard Billing Rate

The scope of services, terms, and conditions of this Letter Agreement are accepted:

Print/Type Individual, Firm, or Corporate Name

Signature of Authorized Representative

Date

Print/Type Name of Authorized Representative and Title



Standard Hourly Billing Rate Schedule

Dewberry	Hourly Rates	
Professional		
Principal	\$350.00	
Architect I,II,III	\$110.00, \$125.00, \$145.00	
Architect IV,V,VI	\$165.00, \$185.00, \$205.00	
Architect VII,VIII,IX	\$230.00, \$250.00, \$280.00	
Interior Designer I,II,III,IV	\$100.00, \$120.00, \$130.00, \$165.00	
Engineer I,II,III	\$115.00, \$135.00, \$155.00	
Engineer IV,V,VI	\$170.00, \$195.00, \$225.00	
Engineer VII,VIII,IX	\$250.00, \$275.00, \$305.00	
Geographer/GIS I,II,III	\$95.00, \$105.00, \$125.00	
Geographer/GIS IV,V,VI	\$145.00, \$165.00, \$185.00	
Geographer/GIS VII,VIII,IX	\$215.00, \$250.00, \$290.00	
Professional I,II,III	\$105.00, \$125.00, \$150.00	
Professional IV,V,VI	\$170.00, \$190.00, \$210.00	
Professional VII,VIII,IX	\$235.00, \$260.00, \$290.00	
Technical		
Designer I,II,III	\$110.00, \$135.00, \$160.00	
Designer IV,V,VI	\$180.00, \$200.00, \$220.00	
CADD Technician I,II,III,IV,V	\$80.00, \$100.00, \$120.00, \$140.00, \$175.00	
Surveyor I,II,III	\$68.00, \$83.00, \$98.00	
Surveyor IV,V,VI	\$115.00, \$125.00, \$145.00	
Surveyor VII,VIII,IX	\$160.00, \$190.00, \$235.00	
Technical I,II,III	\$85.00, \$105.00, \$130.00	
Technical IV,V,VI	\$140.00, \$155.00, \$180.00	
Emergency Management		
Emergency Management I, II, III	\$85.00, \$110.00, \$140.00	
Emergency Management IV, V, VI	\$170.00, \$220.00, \$280.00	
Construction		
Construction Professional I,II,III	\$125.00, \$155.00, \$185.00	
Construction Professional IV,V,VI,VII	\$215.00, \$240.00, \$285.00, \$320.00	
Inspector I,II,III	\$85.00, \$110.00, \$140.00	
Inspector IV,V,VI,VII	\$160.00, \$180.00, \$205.00, \$240.00	
Survey Field Crews		
Fully Equipped 1, 2, 3 Person Crews	\$145.00, \$175.00, \$230.00	
With Laser Scanner 1, 2 Person	\$195.00, \$225.00	
Administration		
Admin Professional I,II,III,IV	\$70.00, \$95.00, \$115.00, \$145.00	
Non-Labor Direct Costs	Cost + 15%	

** Company Confidential and Proprietary



Revised 5.1.2023 | Subject to Revision | Standard Hourly Billing Rate Schedule | Attachment A | 1

Project Understanding

The City of High Point and the High Point Market Authority have secured state funding to provide professional engineering services for public involvement, permitting, design, and final construction plans for improvements along South Main Street from north of Russell Avenue to north of Grimes Avenue, S. Wrenn Street from north of E. Russell Avenue to just north of E. Grimes Avenue, E. Russell Avenue from S. Elm Street to S. Main Street, and E. Russell Avenue from S. Main Street to S. Hamilton Street. The project consists of the installation of a duct bank for all existing overhead utilities, replacing all outdated wet utilities, pedestrian safety improvements, and intersection and traffic signal improvements. The intersection improvements will include the installation of mast arms at the intersections of S. Main Street and W. Russell Avenue and S. Wrenn Street and E. Russell Avenue. Pedestrian safety improvements will extend from Grimes Avenue on the southern end of the project to just north of E Russell Ave and will extend to the intersections of Russell Ave and S Elm St to the west as well and Russell Ave and S Hamilton St to the east.

Additional roadway improvements will include but are not limited to the mill and overlay of the existing roadways, additional pedestrian level lighting (to be handled by city staff), stamped decorative asphalt crosswalks, and street trees (where space is available). Project plan views will be done at a horizontal scale of 1"=20' and in AutoCAD Civil3D format unless approved otherwise.

Plans and designs will conform to City of High Point and NCDOT standard practices for highway construction which are based on the AASHTO "A Policy on Geometric Design of Highways and Streets" latest edition. In addition, the NCDOT "Roadway Design Manual" latest edition will be used as a guide, including modifications as directed by the city during the life of this Agreement. The services provided and project deliverables are as defined in the scope of work.

The project is not expected to impact wetlands or surface water features. Construction land disturbance is expected to be more than 1 acre, so a North Carolina Department of Environmental Quality (NCDEQ) Erosion and Sediment Control Certificate of Approval will be required.

While property impacts are unknown at this time, it is expected that at least temporary construction easements into adjoining private properties will be required.

It should be noted that it is expected that NCDOT will be updating their design standards and specifications manual sometime in 2024. Changes required to the design of the project when those new standards are released will be considered an additional service and provided through a supplemental agreement.

The following tasks are included in this scope of services and defined in more detail in the sections that follow.

Task 1: PM-Project Management Task 2: EN-Natural Env Task 3: EN-Community Studies Task 4: EN-Public Involvement Task 5: EP-Env Policy Task 6: GT-Geotechnical Task 7: HY-Hydraulics Task 8: LS-Location Surveys Task 9: LS-SUE Task 10: PD-Final Pavement Marking & Markers Task 11: RD-Roadway Task 12: RE-Erosion Control Task 13: SD-Signing Task 14: SG-Signal Communications Task 15: SS-Signals Task 16: TM-Work Zone Traffic Control (WZTC) Task 17: UT-Utilities Coordination Task 18: UT-Utilities Design Task 19: Right of Way

Scope of Services

TASK 1: PM-PROJECT MANAGEMENT

1.1 – Project Management

The Consultant shall provide the following project management tasks:

- Bi-Weekly Meetings with City The Consultant will attend bi-weekly virtual meetings with the City
 to discuss the project. Meeting minutes and agendas will be prepared for each meeting, it is
 anticipated meetings will be one hour in length. It is expected these meetings will be attended for
 up to 15 months.
- Various Meetings The Consultant will attend the following meetings (assumes 2 hours per meeting) and provide meeting minutes:
 - Kick-Off Meeting The Consultant will attend an in-person kick-off meeting with the City to discuss the project and will include a field walk (by up to 6 Dewberry staff), if desired by the City.
 - Recommended Plan Set Review Meeting (25% Design) The Consultant (up to 4 Dewberry staff) will attend a virtual meeting to discuss the 25% Design submission comments.
 - Field Inspection Plan Set Review Meeting (65% Design) The Consultant (up to 6 Dewberry staff) will attend a virtual meeting to discuss the 65% Design submission comments.
 - Right of Way Acquisition Plan Set Review Meeting (75% Design) The Consultant (up to 4 Dewberry staff) will attend a virtual meeting to discuss the 75% Design submission comments.
 - Final Contract Package Review Meeting (100% Design) The Consultant (up to 6 Dewberry staff) will attend a virtual meeting to discuss the 100% Design submission comments.

1.2 – Project Schedule

The Consultant shall develop a project schedule in Microsoft Project (MS Project) and maintain it monthly throughout the life of the project.

1.3 – Monthly Status Reports and Invoice

The Consultant will provide the City with monthly status reports and project invoicing.

TASK 2: EN-NATURAL ENVIRONMENTAL

2.1 - Assess Natural Environmental Impacts

The Consultant will complete a Natural Resource Technical Memorandum (NRTM) for the project study area. The following will be performed to complete the NRTM:

- Project site background information and mapping review
- Field investigation
 - Confirm no potential jurisdictional waters of the U.S. (wetlands, streams, surface waters)
 - o Surveys/habitat assessments for relevant protected species
- *Excluded*: Complete Draft and Final Preliminary Jurisdictional Determination (PJD) Package and Agency Site Visit

- It is expected based on nature of the project area, a PJD package will not be required. If a PJD is found to be needed, this service will require approval of a supplemental agreement.
- Complete Draft and Final NRTM documents

Specific tasks associated with the NRTM are described below:

- Pre-Field work
 - Preparation for field work will include data collection, creation of field maps, and preparation of field equipment.
- Jurisdictional Delineation Field Work
 - Field work will include review of the project study area for streams, wetlands, and/or surface waters. Wetland and stream identification methodology developed by the USACE and stream identification methodology developed by the NCDEQ Division of Water Resources (NCDWR) will be employed. If potential jurisdictional features are present, they will be flagged in the field and feature points will be recorded using a sub-meter Trimble R1 GPS (Note: these points will be sub-meter but will not be survey-grade). Wetland boundary points will be flagged using branded pink and black flagging and stream points flagged with blue flagging. These feature points will be incorporated into both GIS shapefiles and CAD files and feature boundaries/channels will be developed.
- Protected Species Surveys
 - Protected species assessments will be performed per the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC; https://ipac.ecosphere.fws.gov/) website. As of the date of preparation of this scope, the USFWS lists the following potential species for the project:
 - Bald eagle Bald and Golden Eagle Protection Act
 - Tricolored Bat Proposed Endangered
 - Schweinitz's Sunflower Endangered
 - Small Whorled Pogonia Threatened
 - If habitat is present, species surveys will be completed for these species during optimal survey windows.
- Excluded: Creation of WEX and WET files
 - Due to the nature of the project site, delineation of stream, wetland, and surface water data is not expected and is not included in this scope.
- NRTM
 - A draft NRTM will be prepared for the project, including information related to project background, methodology and contributors, jurisdictional features within the study area, and protected species. Mapping will also be included. Internal quality assurance using three signature sign-off by the preparer, technical reviewer and quality assurance reviewer will be documented for the draft NRTM.

The Consultant will incorporate one set of comments on the draft NRTM to create the final NRTM. Internal quality assurance using a three-signature sign-off by the preparer, technical reviewer, and quality assurance reviewer will be documented for the final NRTM. Both a Microsoft Word and Adobe PDF version of the final document will be provided.

2.2 - Permits

Due to the nature of the project site, it is expected that environmental permits will not be required. If an unforeseen condition requires an environmental permit, that service will be part of a supplemental agreement.

TASK 3: EN-COMMUNITY STUDIES

3.1 - Assess Human Environmental Impacts

The Consultant team will complete the following tasks in assessing the human environmental impacts of the project:

- Background Data Collection
 - The Consultant will collect background data associated with the study area sections of the project.
- Direct and Indirect Screening Tool
 - The Consultant will prepare a Direct and Indirect Screening Tool (DIST) using the most recent guidance from NCDOT Public Involvement, Community Studies & Visualization (PICSViz) located at: https://connect.ncdot.gov/resources/Environmental/EAU/PICSViz/Pages/default.aspx
 A draft DIST will be submitted to Division 7 for the initial review. One set of review

comments will be addressed and the DIST will be resubmitted for a final review and

Cultural Resource Project Review

approval by Division 7.

- The Consultant will complete the North Carolina State Historic Preservation Office (NC-HPO) Project Review Checklist for the project. This checklist will include a description of the project, project study area maps, review of known cultural resources, and site photographs of the structures within the project study area that appear to be 50 or more years old.
- Exclusions Conducting cultural resource surveys, including historic architecture, cultural resource, or archaeological resource surveys are not provided in the scope as we do not anticipate this need. Additionally, we assume no Section 106 or Section 4(f) coordination is required beyond completion of the Project Review Checklist.
- Tribal Coordination
 - The Consultant will prepare the Start of Study Tribal Coordination letter for the Catawba Indian Nation and Occaneechi Band of the Saponi Nation per NCDOT Tribal Coordination Protocol and submit to Division 7 for review, approval, and signature.

TASK 4: EN-PUBLIC INVOLVEMENT

4.1 - Mailing List and Notification

The Consultant will prepare a direct mailing list in Excel with an accompanying GIS map in PDF format for non-resident owners. The consultant will identify (as available) United States Postal Service (USPS) Every Door Direct Mail (EDDM) routes for mailers to resident owners and tenants.

The Consultant will prepare a postcard (direct mail and EDDM versions) to announce the upcoming public meeting and provide a project overview. A PDF copy of both postcards will be submitted to the City for review. The Consultant will develop a door-hanger version of the postcard and submit an electronic version

to the City for review. Spanish translation is anticipated to be appropriate for this project, based on Census data, thus the postcards will be bilingual. A visual graphic will be prepared to be included on the EDDM version of the postcard.

Following review and approval by the City, the Consultant will be responsible for printing and mailing both postcards (up to 500 direct and up to 3000 EDDM postcards are included in this scope) and printing and distributing the door hangers (up to 200 door hangers are included in this scope).

The Consultant will provide the City with up to two graphics to be used for social media notifications regarding the public meeting. The City will be responsible for any public notices to be placed in local media and website.

4.2 - Public Meetings

An up to three-hour open-house public meeting will be held and attended by four staff from the Consultant team. In addition to the four Consultant staff, the Consultant will provide one Spanish language interpreter for the meeting based on the presence of Spanish speaking populations indicated in Census data. The Consultant will prepare a sign-in and comment sheet for the public meeting.

The Consultant will prepare a handout (one 8.5 x 11" color page double sided) to include a graphic and details (purpose, need, background) of the project and for the meeting and will submit an electronic copy of the handout to the City for review. Following review, the Consultant will make one round of revisions and print the handout for the public meeting (up to 200 copies are included in this scope).

The Consultant will prepare three foam display boards (36" x 48" each) with additional background information, such as adjacent projects, traffic data, existing resources, or visualizations as described in Task 4.3. The Consultant will provide electronic copies of the boards to the City for review. Following review and approval of the boards by the City, the Consultant will conduct one round of revisions, print, and mount the boards for the public meeting.

Preparation of the public meeting maps is included under Task 11.

The Consultant will prepare a public meeting summary with comment responses. A draft public meeting summary in electronic version will be provided to the City during an in-person meeting, which will be held at the City's office and attended by up to three staff from the Consultant to review and respond to public comments. The Consultant will make one round of revisions to the comment summary and provide a final electronic copy of the summary to the City. A summary of the public meeting will be included in the National Environmental Policy Act (NEPA) screening.

4.3 - Visualizations

The Consultant will prepare a graphical typical section for use in public outreach and two sets of before and after photo renderings of two points along the project corridor.

4.4 - Website

The Consultant will provide materials to the City to post on their website. A separate project website or online feedback tools are not included in this scope

4.5 - Local Officials Informational Meeting (LOIM)

A LOIM will be held prior to the public meeting and attended by up to three staff from the Consultant. The Consultant will prepare a brief PowerPoint presentation for this meeting. The Consultant will provide an electronic copy of the presentation to the City for review and will address one round of comments. The

Consultant will coordinate with the City to prepare the invitation list. The Consultant will distribute the invite via email to those on the invite list approved by the City.

Maps and handout materials that are prepared for the public meeting will be used during the LOIM, and the Consultant will prepare a sign-in sheet and a meeting summary. The Consultant will provide the City with an electronic draft of the meeting summary and make one round of revisions. The Consultant will distribute an electronic copy of the meeting summary to the local officials on the invite list and attendee list.

4.6 - Stakeholder Meeting

It is anticipated the Consultant will conduct up to four stakeholder meetings (up to 3 Consultant attendees at each) in addition to the previously described LOIM and Public Meeting. These meetings are assumed to be in-person and may be with the City Council, businesses, neighborhoods, or other interested groups. Previously prepared mapping will be used, and handouts will be updated as needed for each meeting. The Consultant will summarize discussions at the meeting.

TASK 5: EP-ENV POLICY

5.1 – Environmental Documentation

The project is expected to qualify for a Type 1(A) Categorical Exclusion (CE). The Consultant will prepare a federal Type I(A) Ground-Disturbing CE, according to Documentation Requirements and Approval Procedures for Federal-Aid Projects Classified as Categorical Exclusions (2019). Coordination will be required with Federal Highway Administration (FHWA), NCDOT Division 7, US Department of Housing and Urban Development (HUD), and the City of High Point. If unforeseen circumstances require completion or a different CE format and/or substantial coordination with Federal Highway Administration (FHWA), that service will be part of a supplemental agreement.

The Consultant shall prepare the draft CE, exhibits, and supporting documentation necessary. A draft CE package will be submitted and one round of comments will be addressed. After comments have been addressed, a final CE package will be submitted. The City will be responsible for uploading the submissions into the NC Enterprise Business Services (EBS) portal and sending the Consultant comments that NCDOT uploads into the portal.

TASK 6: GT-GEOTECHNICAL

The roadway pavement will be milled and overlaid with no expected widening. The milling depth will be supplied by the city since no geotechnical or pavement investigation will be performed.

There are no proposed retaining walls or other structures that would require a geotechnical report. As such, no geotechnical services are currently scoped. If the need arises later in the project for geotechnical work, it will be provided as a supplemental agreement.

TASK 7: HY-HYDRAULICS

Given the improvements proposed by the project, it is expected that the drainage system within the project limits will be replaced. It is not anticipated that any major culvert crossings exists. Given the scope of the project, it is not expected that an NCDOT style Stormwater Management Plan will be required and is not included in the scope. The drainage for the project will be designed according to the NCDOT's "Guidelines for Drainage Studies and Hydraulic Design" latest edition.

7.1 – Complete Drainage for Field Inspection (65% Design)

The drainage design for the project will begin after the approval of the 25% design submission. Tasks to include:

- Attend Hydraulics Pre-Design Meeting with NCDOT and City as needed.
- Conduct field reconnaissance of existing and proposed drainage features and patterns for the pipe and ditch systems.
- Utilize the approved 25% design plans to begin drainage design. Consultant will develop hydraulic designs for roadside ditches, storm drainage systems, inlet locations, outfall analyses, and final cross pipe designs. The portion of the project that contains curb and gutter will be evaluated for spread conditions along the roadway edges (if available).
- Evaluate and design necessary revisions to existing hydraulic structures (storm drain, drop inlets, cross pipes, headwalls) that may be impacted by the proposed improvements.
- Draft the proposed drainage features (storm drain systems, inlets, ditches, cross pipes, etc.) and associated labeling in a drainage AutoCAD Civil 3D file utilizing approved Drainage software.
- Indicate drainage features (storm drain, ditches, cross pipes, inlets, etc.) on the Plan Sheets.
- Provide special drainage detail sheets, as necessary
- Complete the drainage summary sheets and prepare quantities to be incorporated into the project cost estimate
- Complete Pre versus Post Outfall analysis
- Coordinate with Utility Designers and Perform Limited Utility Conflict Resolution Design
- Prepare redline plans
- Existing condition survey of drainage structures that will remain in-place
- Attend virtual 65% design review meeting

7.2 – Complete Hydraulic Design (75% Design)

- Prepare response to comments, address comments received from the 65% design submission for the 75% design submission, revise quantities to be incorporated into the project cost estimate, and prepare special provisions to be incorporated into the Project Manual.
- Attend virtual 75% design review meeting

7.3 - Complete Open Hydraulic Tasks (100% Design)

- Prepare response to comments, address comments received from the 75% design submission for the 100% design submission, and revise quantities to be incorporated into the project cost estimate.
- Address comments received from the 100% design submission for a PS&E submission.

TASK 8: LS-LOCATION SURVEYS

The Consultant shall provide the following survey services and will be done to NCDOT standards in AutoCAD:

The survey limits will extend to the face of the adjacent buildings along S main St, S Wrenn St, and E Russell Ave. The survey will extend an additional 100' along the approaches of the following intersections S Elm St and Russell Ave, S Hamilton St and Russel Ave, W Grimes Ave and S Main St, S Wren St and Grimes Ace. The survey on these approaches will extend to the ROW line.

• Courthouse Research - Property deeds and map of records will be collected and reviewed. The City of High Point will contact those owners prior to Survey. A full title search will not be required for this project.

- Contacting Property Owners The City of High Point will be responsible for contacting property owners.
- Project Control NC Grid (Horizontal/Vertical) Ties Project baseline control to be established and referenced to the NC State Plane Coordinate system NAD 83-2011/North American Vertical Datum 1988 adjustment respectively. Implementation of NATRF2022 has been delayed until 2024. In the unlikely scenario that the implementation of this new state coordinate system does not allow grandfathering on ongoing projects, then additional services needed to update survey and design plans would be covered under a supplemental agreement.
- Vertical Control Tie Vertical datum for this project will be based on the North Carolina Grid System
 utilizing the NAVD 88 vertical datum. Implementation of NAPGD2022 has been delayed until 2024.
 In the unlikely scenario that the implementation of this new state coordinate system does not allow
 grandfathering on ongoing projects, then additional services needed to update survey and design
 plans would be covered under a supplemental agreement.
- Baseline Traverse The survey baseline control will be composed of #5 rebar and stamped cap, set at each baseline control point. The Northing and Easting Coordinates and elevation will be acquired and serve as the basis of the base mapping.
- Baseline Levels The Consultant will elevate baseline control points using differential and/or trigonometric leveling methods.
- Establish Project Benchmarks Establish/elevate benchmarks at locations throughout the project limits. The Temporary Benchmarks (TBM's) shall consist of railroad spikes or Benchtie markers. Benchmarks shall have third order closure accuracy of 0.05x the square root in miles and will be based on the NAVD 88 vertical datum. These TBM's will be clearly marked in the field and plotted on the mapping.
- Pavement DTM's Pavement DTM's, with break lines, will be obtained by the Consultant and taken at a minimum spacing of 50' along -L- line and all -Y lines. Surveyed pavement elevations, curb & gutter elevations, pavement crown and other pertinent elevations will be obtained for digital terrain modeling. The Consultant will incorporate the field ground located pavement breaklines into the overall DTM file, then produce a TIN for the project.
- Field Property Ties and Recon The Consultant will investigate and tie property corners (front corners if sufficient numbers are found), for the parcels which are expected to be impacted by the proposed project.
- Property Analysis and Computations Property corners found and tied for the parcels which are expected to be impacted by the proposed project, will be used to produce property mapping for the parcels, showing property lines drawn from existing deeds and/or plats of record if available.
- Classification of Planimetric Features The Consultant will classify planimetric features such as buildings, culverts, trees, pavement, walks, signs, and poles which are located within the project limits. The classifications will be reflected in the digital base mapping for the project.
- Field Location of Topo and Planimetric Features The Consultant will field survey planimetric features such as buildings, walks, signs, and poles that are within the survey limits. The survey will include additional "shots" where driveways are expected to be longer to achieve similar grades as existing.
- Location of Gravity U/G Utilities (Storm & Sanitary Only) The Consultant will field survey existing storm sewer and gravity sanitary sewer structures to one structure outside of the project limits. Information shown on the mapping will include top and invert elevations, pipe size, and pipe material.
- Production of Base Mapping The Consultant will provide a compiled Final Survey (FS) file with base line text, DTM and associated TIN files. A Survey Control Data sheet will be provided. Electronic files will be in accordance with NCDOT standards.

- GPS Points The Consultant will establish horizontal and vertical control utilizing GPS methods and procedures tied to existing NGS or NCGS control monumentation if available near the project.
- Traffic Control & Safety Work zone devices will be placed at each end of the work area, if along an existing roadway, each day consisting of a BEGIN SURVEY sign, and an END SURVEY sign at the end of the work zone. The Consultant will coordinate with the City of High Point and NCDOT, if necessary, if temporary lane closures are required.
- Property Acquisition Support While it is expected that at least temporary construction easements will be required, the full extent of the property acquisition is not known at this time. Once the design progresses to the point where the property acquisition is known, those services will be scoped as part of a supplemental agreement.
- Production of Base Map Consultant will produce Final Survey (2D) and DTM (3D) files. Mapping to be drawn at a scale of 1" =20'. Deliverables to be AutoCAD DWG format.

TASK 9: LS-SUE

The Consultant will provide subsurface utility engineering "Level B" services which entail the designating of existing buried utilities in the area of the project limits. Utilities will be marked in the field according to the American Public Works Association (APWA) standard color-coding system. Telephone, Power, Cable Television, Gas, Water and Fiber Optic Communications will be located. This task does not include the designation and survey of untraceable underground irrigation lines or sprinkler heads that may exist within the project limits. Field sketches of utilities are prepared during designation to ensure that lines marked are surveyed. Undocumented, unknown and/or abandoned utilities will be shown as "unknown utility" on the Topographic and Utility survey. Survey crews will locate utilities designated by SUE crews and include the utility data in the survey basemap. Utilities that cannot be designated due to non-conductive material or no tracer wire will be shown per level "C".

If it is determined during the design of the project that there are areas that require "Level A" services, those services will be provided as a supplemental agreement.

TASK 10: PD-FINAL PAVEMENT MARKING & MARKERS

The Consultant shall design pavement markings in accordance with the NCDOT "Signing and Delineation Unit (SDU) Procedures Manual." Given the project scope, the first plan submittal will be at 65% Design. The plan sheets will be done at a scale of 1"=40'. The pavement marking design will consist of the following sheets:

- Title Sheet Which will include
 - Roadway Standard Drawings
 - o Pavement Marking Schedule
 - o Notes
 - o Index
- Detail Sheets (If needed)
- Pavement Marking Plan Sheets

In addition, quantities will be prepared to be incorporated into the project cost estimate at the 65% design stage.

The Consultant shall prepare a response to comments for every design submission, address comments for the next design submission, and update quantities to be incorporated into the project cost estimate. Additional submissions are expected at 75% Design, 100% Design, and PS&E. The Consultant shall also

provide any required special provisions for the project at the 75% design stage that will be incorporated into the Project Manual.

TASK 11: RD-ROADWAY

The project design plans will be submitted at the following milestones:

- Revised Conceptual Design Plans
- Recommendation Plan Set (25%)
- Field Inspection Plan Set (65%)
- Right of Way Acquisition Plan Set (75%)
- Unsealed Final Contract Package (100%)
- Sealed Final Contract Package (PS&E)

The Consultant will produce the roadway design plans with a horizontal scale of 1"=20' and a vertical scale of 1"=10' with cross sections at a scale of 1"=5'. Existing roadways, structures, utilities, and other items affected by the project, as provided by surveys, will be shown in addition to the proposed construction in plan views. Plans will be done in AutoCAD Civil 3D format and will follow the requirements in the NCDOT "Roadway Design Manual", latest edition.

11.1 – Revised Conceptual Design Plans

The Consultant will provide new conceptual design plans based on the latest approved typical section. As of the time of this scoping, the final typical section has not been finalized. The City will provide the final decision on the typical section before the revised conceptual design can be started. If the City wishes the Consultant to provide multiple concepts, that will be provided as part of a supplemental agreement.

The revised conceptual design is expected to be completed before field survey will be completed. The Consultant shall utilize existing aerial photography to complete the revised conceptual design. The plans shall be done in a roll-plan format and will be done at a scale of 1"=50'.

In Addition, the sidewalk and decorative buffer strip patterns have not been defined. The Consultant will provide one 22"x34" board showing various options for the City to choose.

11.2 – Recommendation Plan Set (25%)

After approval of the revised conceptual design and completion of the field survey, the Consultant will complete the roadway design for the 25% Design submission. The 25% Design plan set shall include the following:

- Title Sheet
- Typical Sections including the pavement schedule labeled Preliminary or Final Pavement Schedule
- Preliminary Earthwork Summary
- Plan Sheets with Horizontal Design and to include the following:
 - o Preliminary retaining wall locations, if proposed
 - Proposed right of way/easement lines
 - o Sight Distance Calculations at bridges, intersections, and other obstructions, if necessary
- Profile Sheets with Vertical Design
- Utilities Construction Plans
- Utilities by Others Plans
- Cross Sections

Additional items to be completed for the 25% design submission are as follows:

- Roadway Design QC Checklist
- Design Exception Checklist and/or Design Exception Request, if required
- Maintenance of Traffic Narrative
- Cost Estimate

The Consultant will make a 25% design submission of the required documents to the City to be inputted into the EBS system. The Consultant will attend a virtual 25% design review meeting after the submission.

In addition, the Consultant after the 25% design submission will develop a public hearing meeting map to NCDOT standards that will be utilized for the public meetings. A draft submission will be made to the City along with the Public Meeting Map QC Checklist. The public hearing map will be revised based on 1 set of review comments from the City.

11.3 – Field Inspection Plan Set (65%)

After approval of the 25% design submission, the 65% design stage will begin. The design will be progressed and comments received from the 25% design review will be incorporated, as well as applicable comments from the public meetings. Proposed drainage design will be incorporated into the roadway plans.

The 65% Design plan set shall include the following:

- Plan sheets from the 25% design
- Index of Sheets, General Notes, and Standard Drawings
- Conventional Symbols
- Roadway Details, including Intersection Detail Sheets, as necessary
- Special Details, as necessary
- Drainage Details, as necessary
- Roadway Summaries
- Drainage Summaries
- Parcel Index Sheet
- Pavement Marking Plans
- Erosion Control Plans
- Landscape Plans
- Signing Plans

Additional items to be completed for the 65% design submission are as follows:

- Response to 25% Design Comments
- Drainage Calculations and Redline Plans
- Roadway Design QC Checklist
- Updated Cost Estimate

The Consultant will make a 65% design submission of the required documents to the City to be inputted into the EBS system. The Consultant will attend a virtual 65% design review meeting after the submission.

11.4 - Right of Way Acquisition Plan Set (75%)

After approval of the 65% design submission, the 75% design stage will begin. The design will be progressed and comments received from the 65% design review will be incorporated.

The 75% Design plan set shall include the following:

- Plan sheets from the 65% design
- Traffic Management Plans
- Signal and Communication Plans

Additional items to be completed for the 75% design submission are as follows:

- Response to 65% Design Comments
- Revised Drainage Calculations and Redline Plans, if required
- Signal Clearance Diagram and Clearance Calculations
- Roadway Design QC Checklist
- Project Manual Including Technical Special Provisions (Per NCDOT Local Programs Management Handbook Requirements)
- Updated Cost Estimate

The Consultant will make a 75% design submission of the required documents to the City to be inputted into the EBS system. The Consultant will attend a virtual 75% design review meeting after the submission.

In addition, the Consultant after the 75% design submission, will revise the public hearing meeting map prepared at 25% design based on the latest design to be utilized during the 75% design public meeting. A draft submission will be made to the City along with the Public Meeting Map QC Checklist. The public hearing map will be revised based on 1 set of review comments from the City.

11.5 - Unsealed Final Contract Package (100%)

After approval of the 75% design submission, the 100% design stage will begin. In addition, property acquisition can begin after the 75% design approval. The design will be progressed, and comments received from the 75% design review will be incorporated. Minor comments received based on property acquisition will also be incorporated. If substantial design revisions occur due to property acquisition negotiations, it will be considered an additional service as part of a supplemental agreement.

The 100% design package shall include the following:

- Response to 75% Design Comments
- Plan Set
- Revised Drainage Calculations and Redline Plans, if required
- Signal Clearance Diagram and Clearance Calculations, if required
- Updated Project Manual Including Technical Special Provisions (Per NCDOT Local Programs Management Handbook Requirements)
- Updated Cost Estimate

The Consultant will make a 100% design submission of the required documents to the City to be inputted into the EBS system. The Consultant will attend a virtual 100% design review meeting after the submission.

11.6 - Sealed Final Contract Package (PS&E)

After approval of the 100% design submission, the PS&E design stage will begin. Final comments received will be incorporated into the contract documents. Necessary documents will be sealed and submitted to the City to be inputted into the EBS for approval for Letting.

The PS&E design package shall include the following:

- Final Sealed Plan Set
- Final Sealed Project Manual
- Final Cost Estimate

11.7 – Letting

The Consultant shall assist the City during the Letting process. Tasks include the following:

- Attend pre-bid meeting and assist City staff to educate qualified contractors on the nature of the work to be undertaken and answer questions (2 staff)
- Assist City on answering contractor questions to be issued in addendums
- Complete bid tabulation and certify

TASK 12: RE-EROSION CONTROL

The Consultant will design and specify erosion control measures, which minimize erosion and limit off-site sedimentation during construction of the project. The design will be in accordance with the requirements of NCDEQ and the requirements of the City. Erosion control design will begin at the 65% design phase. The plan sheets will be done at a scale of 1"=20'. The erosion control design will consist of the following sheets:

- Title Sheet
- Detail Sheets
- Notes Sheet
- Erosion Control Plan Sheets

As the project is on-road in a built-up environment, erosion control measures are expected to be primarily drainage inlet protection. The Consultant shall provide quantities to be incorporated into the project estimate.

The Consultant shall prepare a response to comments for the 65% design comments and address comments from that review for a 75% design submission. It should be noted that NCDOT does not typically provide comments on erosion control design for a Locally Administered Project and it is expected that comments will be from the City and NCDEQ. In addition, special provisions will be prepared to be incorporated into the Project Manual.

The Consultant will submit erosion control plans to the Winston-Salem Regional Office of NCDEQ for review and approval of the erosion control plans after approval of the 75% design submission. The Consultant will also coordinate with the City to complete the Financial Responsibility Form. The Consultant will be responsible for the permit fee. The package that will be submitted to NCDEQ will include the following:

- NCDEQ Plan Review Checklist
- Table of Land Owners
- Verification of Land Owner Notification
- Erosion Control Plans
- Stormwater Report and Erosion Control Calculations, if required
- Erosion Control Specifications
- Financial Responsibility Form
- Permit Fee

The Consultant shall prepare a response to comments for the 75% design comments from the City and NCDEQ and address comments from that review for a 100% design submission. Updated quantities will also be provided.

Comments received from the 100% design submission shall be addressed in the PS&E submittal.

TASK 13: SD-SIGNING

The Consultant shall design signing in accordance to the NCDOT "Signing and Delineation Unit (SDU) Procedures Manual." Given the project scope, the first plan submittal will be at 65% Design. The plan sheets will be done at a scale of 1"=40'. The signing design will consist of the following sheets:

- Title Sheet Which will include.
 - Roadway Standard Drawings

- o Notes
- o Summary of Quantities
- o Index
- Detail Sheets
 - Type D Signs
 - Wayfinding Signs (to be provided by City)
- Sign Plan Sheets
 - o Identify existing signs and note their disposition (remove, reset, dispose, etc.).
 - Identify proposed warning, regulatory, route marker and guide signing. It is assumed that there will be only Type D, E, and F signing for the project. No type A or B guide signing (overhead or ground mounted) is anticipated.

The City has requested wayfinding signage along the corridor. The development of wayfinding design standards to determine the style of the wayfinding are not included in this scope, and instead will be part of the Southwest Greenway scope. Upon completion of the standards, it is assumed that they will be used to design up to 6 wayfinding signs designed along the corridor. The sign legends will be specified in the detail sheets. In addition, quantities will be prepared to be incorporated into the project cost estimate at the 65% design stage.

The Consultant shall prepare a response to comments for the design submissions, address comments for the next design submission, and update quantities to be incorporated into the project cost estimate. Additional submissions are expected at 75% Design, 100% Design, and PS&E. The Consultant shall also provide required special provisions for the project at the 75% design stage that will be incorporated into the Project Manual.

TASK 14: SG-SIGNAL COMMUNICATIONS

It is assumed that the traffic signals at S. Main and W. Russell Avenue and S. Wrenn Street and E. Russell Avenue have communication connections. It is expected that based on the current proposed design that these connections will need to be modified. The Consultant will prepare the final communication cable routing and splice plans for the corridor, including a title sheet to NCDOT TMSO Unit standards. Plans will only be required where work is proposed. There will be no temporary cable routing and splicing and signal communications within the project limits do not have to be maintained during construction. The first design submittal will be at the 75% design stage. In addition, quantities will be prepared to be incorporated into the project cost estimate at the 75% design stage.

The Consultant shall prepare a response to one set of comments for the design submissions, address comments for the next design submission, and update quantities to be incorporated into the project cost estimate. Additional submissions are expected at 100% Design and PS&E. The Consultant shall also provide required special provisions for the project at the 75% design stage that will be incorporated into the Project Manual.

TASK 15: SS-SIGNALS

At the time of this scoping, the proposed traffic signal design work is anticipated to be as follows:

- Full Intersection Signal Update (cabinet to remain): Remove existing span wire traffic signals, install
 provide new mast arm traffic signals, replace vehicle loop detection (if existing), and install new
 pedestrian signals/replace pedestrian signals to meet current placement requirements at the
 intersections of:
 - South Main and West/East Russell Avenue

o South Wrenn Street and East Russell Avenue

At the 25% overall design stage, the Consultant shall provide pole location diagrams to be submitted for approval. The Consultant shall update these diagrams based on one set of comments received and/or revisions to the design between 25% design and 75% design. The Consultant shall submit these diagrams at the 75% design stage, if changes are required.

Traffic Signal and Electrical plans including a Title Sheet and applicable Detail Sheets shall be prepared at the 75% design stage. It is assumed that traffic signal electrical plans for the existing traffic signals are available in either AutoCAD or MicroStation format and will be provided by the City and/or NCDOT. If any signalized intersection does not have the necessary AutoCAD or MicroStation files available, creation of these files will be considered an additional service as part of a supplemental agreement. In addition, the Consultant shall prepare traffic signal clearance diagrams and calculations. Traffic signal quantities will be prepared to be incorporated into the project cost estimate.

The City will provide mast arm signal pole standard drawings and specifications for the Consultant's use in preparing the metal pole with mast arm detail sheets and loading diagrams associated project special provision.

The Consultant shall prepare a response to one set of comments for the design submissions, address comments for the next design submission, and update quantities to be incorporated into the project cost estimate. Additional submissions are expected at 100% Design and PS&E. The Consultant shall also provide required special provisions for the project at the 75% design stage that will be incorporated into the Project Manual.

Traffic signal designs shall meet the requirements of the NCDOT Transportation Systems Management and Operations (TSMO) Unit Design Manual.

This scope does not include the following:

• Designing any temporary signals during construction

If any of these services are deemed necessary later in the design process, that work will be considered an additional service as part of a supplemental agreement.

TASK 16: TM-WORK ZONE TRAFFIC CONTROL (WZTC)

Transportation Management Plans will be developed in accordance with the NCDOT "Transportation Management Plan Design Manual," latest edition. To construct the proposed utility improvements as well as the raised intersection, temporary detours will be necessary. It assumed that construction will be divided into two major phases, with each phase constructed consecutive semi-annual High Point Markets. Phase I will construct S. Main Street, including its intersection with W. Russell Avenue. Phase II will construct W. Russel Avenue and S. Wrenn Street. It is assumed that 4 detour alignments will be required. In addition, pedestrian detours are expected along each block and each side of the project corridor. Construction will need to be staged within closed sections of roadways in order to maintain local vehicular and pedestrian access to fronting properties and driveways. Accommodation for existing bus stops along the corridor as well as the train station boarding areas will be designed. Single lane closures are also expected to facilitate construction of the proposed improvements.

16.1 - Initiate Transportation Management Plan

Due to the complexity of the project, Temporary Traffic Control (TTC) Concept Plans will be prepared. The Consultant will develop preliminary construction phasing concept sheets including an overall description of sequential steps to be followed in construction phasing. This design is intended for general concept discussion only and will not constitute final or detailed construction traffic control plans. This work will be completed during the 75% design stage.

16.2 - Complete Transportation Management Plan

The Consultant will prepare the Transportation Management Plan for submittal at the 75% design stage and will include the following with all plan sheets developed at a scale of 1"=20':

- Title Sheet
- Roadway Standard Drawings and Legend
- Transportation Operation Notes
 - o General Notes
 - Local Notes
 - Transportation Management Strategies
- Written Phasing
- TTC Phase Plan Sheet
- TTC Detour Plan Sheet
- TTC Special Sign Designs for Detours

In addition, quantities will be prepared to be incorporated into the project cost estimate and special provisions will be completed at the 75% design stage.

The Consultant shall prepare a response to one set of comments for the design submissions, address comments for the next design submission, and update quantities to be incorporated into the project cost estimate. Additional submissions are expected at 100% Design and PS&E.

TASK 17: UT-UTILITIES COORDINATION

17.1 - Initiate Utility Coordination

The initial outreach and coordination with third party utilities will be handled by the City of High Point during the design of the underground duct bank. Dewberry's coordination will be limited to coordination of the wet utility layout and the incorporation of the duct bank into the overall plan set. The Consultant shall incorporate information from the utility company that was missing in the survey.

17.2 – Advance/Complete Utility Coordination

The Consultant shall continue utility coordination with the City of High Point as the design progresses. Final Utility relocation plans and provisions will be provided by the City of High Point.

Utility Coordination Assumptions:

- Assumes four virtual meetings at one hour per meeting with City staff and up to 3 Dewberry staff
- Assumes relocation and redesign of up to 6 storm water structures and up to 600 LF or drainage pipe
- Assumes relocation and redesign of up to 2 signal mast arms and 400 LF of conduit
- Assumes relocation and redesign of up to 1,000 LF of sanitary sewer.
- Assumes relocation and redesign of up to 1,000 LF of water mains.

TASK 18: UT-UTILITIES DESIGN

Based on information provided by the City, utility design for improvements to the facilities owned by the City are as follows:

- Sanitary Sewer Approximately 3,800 linear feet
- Stormwater Utilities Approximately 3,000 liner feet
- Water Approximately 3,200 linear feet

The sanitary sewer and water lines will be replaced at the same size as existing. No analysis to determine the sizing of these utilities is included in the scope. The City will provide the details, if required, for these utility improvements. Design for lighting is not included in the scope. If lighting design is requested, those services will be provided as an additional service as part of a supplemental agreement.

A third-party review of the distribution system model will be performed by a consultant of the City's choosing to ensure the proposed water main sizes meet the requirements of the overall system. This distribution system model analysis is excluded from Dewberry's scope of work

Design of the electrical utilities and the underground duct bank, will be performed by the City of High Point.

The Consultant shall provide the following at 25% design:

- Utility Plans:
 - o Title Sheet
 - Legend Symbology
 - o Notes
 - o Details
 - Plan/Profile Sheets
 - o Quantities to be incorporated into the project cost estimate

The Consultant shall prepare a response to one set of comments for the design submissions, address comments for the next design submission, and update quantities to be incorporated into the project cost estimate. Additional submissions are expected at 65% Design, 75% Design, 100% Design, and PS&E. The Consultant shall also provide the required special provisions for the project at the 75% design stage that will be incorporated into the Project Manual.

Any permits required by the State for water and sewer utilities shall be obtained by the Consultant. The Consultant will be responsible for permit fees.

TASK 19: RIGHT OF WAY

As of this time, Right of Way impacts are unknown. It is anticipated that at least temporary construction easements will be required. Once the project reaches the 65% design stage and Right of Way impacts are known, Right of Way services will be provided as part of a supplemental agreement.