CITY OF HIGH POINT
AGENDA ITEM

Title: Contract Award for Design Services – High Point on the RISE – Elm Street and Phases 1-3 of the Southwest Heritage Greenway

From: Greg Venable, Transportation Director
Andrew Edmonds, Transportation Planning Administrator

Meeting Date: Tuesday, June 20, 2023

Public Hearing: No

Advertising Date: NA
Advertised By: NA

Attachments: Project Scope of Work and Fee Estimate

PURPOSE:

Award of a contract with Alta Engineering SE, PLLC ("Alta") for professional engineering and design services related to proposed improvements for High Point on the RISE along Elm Street and Phases 1-3 of the Southwest Heritage Greenway within City Limits.

BACKGROUND:

As part of a federally funded RAISE grant, this contract will cover the engineering and design for Phases 1-3 of the Southwest Heritage Greenway. In addition, this contract will cover the engineering and design for improvements to Elm Street from Sunset Avenue to E Commerce Avenue including safe pedestrian and bicycle accommodations, on-street parking, traffic signal upgrades, transit stop enhancements, and streetscape amenities.

A Request for Qualifications was released February 24, 2023. The RFQ sought qualified planning and engineering firms that could complete the project from preliminary design to finalized construction and right-of-way plans. The City sought firms that demonstrate a work history with the rail companies that own and operate rail service along the corridor and a project history of implementing greenway projects along rail corridors.

The City of High Point received three responses to the RFQ of which Alta scored the highest among the selection committee. Alta Engineering SE, PLLC is an approved professional transportation planning and engineering services consultant with the North Carolina Department of Transportation.

This project is divided into two Components; however, engineering and design work associated with each phase can happen simultaneously with the understanding that Elm Street (Component 2) will be let for construction first. The award of this Contract with the City will be for a period of fifteen (15) months and will begin as identified in the contract as the start date.

BUDGET IMPACT:

Alta will provide the described professional design services for a lump sum fee of **$2,862,495.84**. A budget ordinance amendment appropriating the federal and state grant awards is included with this item. Funds for the water and sewer and electric items for this project will be covered by existing capital appropriations and future Capital Improvement Program (CIP) allocations.

RECOMMENDATION / ACTION REQUESTED:

The Transportation Department requests City Council's award a contract with Alta for the proposed project, approve the budget ordinance for the RAISE Grant, and authorize the appropriate City Official to execute the necessary documents.

"AN ORDINANCE AMENDING THE 2022-2023 BUDGET ORDINANCE
OF THE CITY OF HIGH POINT, NORTH CAROLINA
TO APPROPRIATE FUNDS FOR THE RAISE GRANT

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

Section 1. The proposed amendment appropriates $21,501,253 in federal and state grant funds for the proposed improvements for High Point on the RISE along Elm Street and Phases 1-3 of the Southwest Heritage Greenway within City Limits.

Section 2. The 2022-2023 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:

Federal Grants – U.S. Department of Transportation	$19,801,253
Federal Grants – U.S. Department of Housing and Urban Development	1,500,000
State Grants – North Carolina Department of Transportation	200,000
	$21,501,253

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

High Point on the RISE	$21,501,253

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 20th day of June 2023

_____
Jay W. Wagner, Mayor

ATTEST

_____
Sandra Keeney,
City Clerk

Project Understanding

The City of High Point has secured USDOT RAISE grant funding (2021 round) for its High Point on the RISE project, and now seeks to secure professional engineering services for public involvement, permitting, design, and final construction plans for a component of that project, improvements along Elm Street from Sunset Drive to West Commerce Avenue. In addition, improvements will extend from Elm Street along West Broad Avenue and West High Avenue to the High Point Transit System and Amtrak stations. The project consists of reconstructing the existing roadway on Elm Street, converting it into a two-lane roadway with a travel lane in each direction with turn lanes at various intersections, on-street parking at various locations, and improved bicycle and pedestrian facilities with construction of a multi-use path. To construct the proposed typical section, pavement marking revisions will be required between Lindsay Street and Sunset Drive and between West Commerce Avenue and West Green Drive.

Additional roadway improvements will include mill and overlay of the existing roadway, full depth reconstruction to remove the median west of West English Road, modification for the bridge over the railroad between West Broad Avenue and West High Avenue, railroad coordination, drainage reconstruction, utility upgrades, traffic analysis, signal improvements, and a streetscape improvement program along the corridor. Streetscape elements include special sidewalk paving patterns, stamped decorative asphalt crosswalks, a decorative intersection at Church Street, and street trees. Project plans views will be done at a horizontal scale of 1”=20’ and in AutoCAD Civil3D format unless approved otherwise.

The project has federal funding and is considered a North Carolina Department of Transportation (NCDOT) Locally Administered Project (LAP). Plans and designs will conform to City of High Point and NCDOT standard practices for greenway and 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 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: RR-Rail
Task 14: SD-Signing
Task 15: SG-Signal Communications
Task 16: SS-Signals
Task 17: ST-Structures
Task 18: TM-Work Zone Traffic Control (WZTC)
Task 19: TM-Congestion Management
Task 20: UT-Utilities Coordination
Task 21: UT-Utilities Design
Task 22: 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 will be prepared for each meeting. It is expected these meetings will be attended for up to 15 months.
- Various Meetings – The Consultant will attend the following meetings 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, if desired by the City.
    - Recommended Plan Set Review Meeting (25% Design) – The Consultant will attend a virtual meeting to discuss the 25% Design submission comments.
    - Field Inspection Plan Set Review Meeting (65% Design) – The Consultant will attend a virtual meeting to discuss the 65% Design submission comments.
    - Right of Way Acquisition Plan Set Review Meeting (75% Design) – The Consultant will attend a virtual meeting to discuss the 75% Design submission comments.
    - Final Contract Package Review Meeting (100% Design) – The Consultant 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)
    - 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 approval by Division 7.

- Cultural Resource Project Review
  - 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 meetings 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 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, it 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

Based on the current understanding of the project, the roadway width of Elm Street will be reduced with wider sidewalks and/or a sidepath. The remaining roadway pavement will be milled and overlaid with no expected widening. There is a short stretch of concrete median west of West English Road that will require full depth reconstruction, but it is unknown at this time if NCDOT will expect a pavement design.

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 on Elm Street with the project limits will be replaced. It is not anticipated that any major culvert crossings exist along Elm Street. 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:

- 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.
- 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 within 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, a WORK ZONE Next _ Miles sign in the middle of the work zone, 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
    - Pavement Marking Schedule
    - Notes
    - 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:
    - Preliminary retaining wall locations, if proposed
    - Proposed right of way/easement lines
    - 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
- 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: RR-RAIL

Railroad coordination will be required for the bridge work over the existing Norfolk Southern (NS) railroad and North Carolina Railroad (NCRR) even though there is no anticipated impact to their tracks. Coordination with NS will follow their "Public Improvements Project Manual" dated January 1, 2022.

The Consultant will contact the NS Public Improvement Engineer to provide the project location and initial project information. The Consultant will also coordinate with the City and NS to complete a standard Preliminary agreement.

The Consultant will submit design submissions at the 25%, 65%, 75%, and 100% and PS&E stages to NS in PDF format for review. The Consultant shall prepare a response to comments for each design submission and address comments for the next design submission.

The Consultant will prepare required special provisions from NS in the Project Manual at the 75% design stage and revise once based on one set of comments. The Consultant will work with NS and the City to receive the final RR agreement, if necessary.

Any NS comments that require bridge modifications outside of the scope of the project will be considered an additional service and could possibly be provided as part of a supplemental agreement.

TASK 14: 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
    - Notes
    - Summary of Quantities
    - Index
- Detail Sheets
    - Type D Signs
    - Wayfinding Signs
- Sign Plan Sheets
    - 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 15: SG-SIGNAL COMMUNICATIONS

It is assumed that the traffic signals along Elm Street 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 communication cable routing and splice plans for the corridor, including a title sheet to NCDOT ITS and Signals Unit standards. Plans will only be required where work is proposed. 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 16: 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:
    - North Elm Street at Sunset Drive
    - North Elm Street at West Ray Avenue
    - North Elm Street at West Westwood Avenue
    - North Elm Street at Church Avenue
    - North Elm Street at West English Avenue
    - North Elm Street at West Dr. Martin Luther King Jr. Drive
    - North Elm Street at West Broad Avenue

- Partial Intersection signal Update: Replace vehicle loop detection (if existing), and replace pedestrian signals to meet current placement requirements due to the proposed typical section at the intersections of:
    - South Elm Street at West High Avenue
    - South Elm Street at West Commerce Avenue

At the 25% 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 65% design. The Consultant shall submit these diagrams at the 65% design stage, if changes were required.

Traffic Signal and Electrical plans, included 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 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
- Design of a traffic signal or any modifications to the existing flashing beacon at the intersection of North Elm Street at Gatewood Avenue

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 17: ST-STRUCTURES

Structural analysis of the existing Elm Street Bridge over the railroad between West Broad Avenue and West High Avenue will be required to determine if the existing bridge can handle the additional loading of the proposed sidewalk widening. The Consultant shall perform the structural analysis to NCDOT standards.

Assuming the existing bridge can support the proposed widened sidewalks, the Consultant shall design the proposed bridge improvements for the widened sidewalks including replacing the existing bridge pedestrian railing with a decorative railing, provide required design calculations, and prepare structure plans. The first plan submittal will be at 65% Design. 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 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 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 18: TM-WORK ZONE TRAFFIC CONTROL (WZTC)

Traffic 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 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. Accommodations 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.

18.1 - 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 65% design stage.

18.2 - 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
    - 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 19: TM-CONGESTION MANAGEMENT

The proposed project design along Elm Street is a road diet that will reduce a travel lane in each direction and will require revised signal timings at the signalized intersections. The City has not conducted a traffic analysis for the proposed improvements along the corridor. In addition, the City does not have current traffic counts along the corridor.

The Consultant shall obtain daily traffic volumes along North Elm Street through the use of an Automated Traffic Recorded (ATR) for a 72-hour period during midweek (Tuesday-Thursday) at three (3) locations to be determined along the corridor. Peak hour Turning Movement Counts (TMCs) at the study intersections will be obtained between Tuesday and Thursday for the AM peak hour between 7:00AM-9:00AM and for the PM peak hour between 4:00PM-6:00PM. These turning movement counts will be performed in fifteen-minute increments and will include heavy vehicles, bicycles, and pedestrians. at the following intersectionsSpecific intersections to be counted are as follows:

- North Elm Street at Sunset Drive
- North Elm Street at West Ray Avenue
- North Elm Street at West Westwood Avenue
- North Elm Street at Gatewood Avenue
- North Elm Street at Church Avenue
- North Elm Street at West English Avenue
- North Elm Street at West Dr. Martin Luther King Jr. Drive
- North Elm Street at West Broad Avenue
- South Elm Street at West High Avenue
- South Elm Street West Commerce Avenue

There is an existing 4-way stop on span wire at the intersections of North Elm Street and Gatewood Avenue. The intersection will be evaluated against the nine (9) traffic signal warrants included in the Manual on Uniform Traffic Control Devices (MUTCD). This will require the following data be collected:

- 16-hour TMC from 6:00AM to 10:00PM with heavy vehicles, bicycles, and pedestrians.

- Crash data from NCDOT's Traffic Engineering Accident Analysis System (TEAAS).

The findings of the traffic signal warrant evaluation will be documented in a technical memorandum. This scope does not include the development of a crash diagram at this intersection. If it is determined that a crash diagram is needed, this will be provided as part of a supplemental agreement.

Any related signal design, timing and phasing plans will be provided by the Client and/or NCDOT. A traffic capacity analysis will be performed utilizing the Synchro/SimTraffic software package to determine the appropriate signal timings at the signalized intersections. Elm Street is not an NCDOT maintained roadway, however it does intersect two NCDOT maintained roadways, West English Road and West Dr. Martin Luther King Jr. Drive. As of this time, this scope does not include a formal traffic memo meeting the NCDOT Traffic Management Unit (Congestion Management Section) Guidelines. Rather, a figure with recommended turn-lane storage lengths and traffic signal cycle lengths, offsets, and splits will be developed. If it is determined that a formal traffic memo is required, it will be provided as part of a supplemental agreement.

TASK 20: UT-UTILITIES COORDINATION

20.1 - Initiate Utility Coordination
After the 25% design submission, the Consultant shall contact utility owners for coordination and provide the 25% design plans requesting review of the plans for accuracy in the surveyed depiction of their facilities and any omitted/incorrect information depicted. The Consultant shall incorporate information from the utility company that was missing in the survey.

20.2 – Advance/Complete Utility Coordination
The Consultant shall continue utility coordination throughout the design process until design completion and submit to the utility companies the submissions made after the 25% design stage. Relocations required will be shown in Utility by Others Plans completed under Task 21 and be provided by the respective utility owner. The Consultant will complete a Utility by Others Special Provision that shall be incorporated in the Project Manual.

TASK 21: 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 1,500 linear feet with approximate limits as follows:
    - Sunset Drive to West Ray Avenue
    - Crossing North Elm Street at Boulevard Street
    - Crossing North Elm Street at West Westwood Avenue
    - West English Road to West Broad Avenue
    - West High Avenue to West Commerce Avenue
- Water - Approximately 2,500 linear feet with approximate limits as follows:
    - Sunset Drive to West Ray Avenue
    - West Westwood Avenue to Gatewood Avenue
    - Crossing North Elm Street at West English Road
    - West English Road to West Dr. Martin Luther King Jr. Drive
    - West Dr. Martin Luther King Jr. Drive to West Broad Avenue
    - West High Avenue to West Commerce Avenue
- Duct Bank – Approximately 2,500 linear feet with approximate limits as follows:
    - Sunset Drive to West Westwood Avenue

    - West English Road to West Broad Avenue

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.

The Consultant shall provide the following at 25% design:

- Utility Design Plans:
    - Title Sheet
    - Legend Symbology
    - Notes
    - Details
    - Plan/Profile Sheets (Plan Sheets only for the 25% submittal)
    - Quantities to be incorporated into the project cost estimate
- Utility by Others Plans based on information known at 25% design as follows:
    - Title Sheet
    - Plan Sheets

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 22: 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.

Version: 2023.(3.30).SPM

OVERALL SUMMARY

TIP NUMBER:	BL-0071A		
COUNTY:	GUILFORD	**When initial estimate is complete, lock initial estimates**	
TASK ORDER NUMBER: (if applicable)			
FA NUMBER: (if applicable)	710043		
ESTIMATE SUBMITTAL NUMBER: (Version Control-if needed) (Ex. InitialV2 (initial estimate version 2))		**WBS NUMBER(s):** Firm: fill out WBS Number(s) section on "Acct Initiation Request" DOT: the Project Manager fills out the entire "Acct Initiation Request"	50651.1.1 :
OTHER PROJECT IDENTIFIER INFORMATION: (if needed)			
DESCRIPTION: (List the project parameters; where the project starts and stops)	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue		
DISCIPLINE USED: (List each discipline that will be involved in this project)	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design		

DISCIPLINE	INITIAL			FINAL		
ITEM	WD	COST	COST/WORKDAY	WD	COST	COST/WORKDAY
PM-Project Mgmt	31.125	$ 44,526.18	$ 1,430.56			
Direct Costs		$ -				
EN-Natural Env	5.375	$ 5,950.13	$ 1,107.00			
Direct Costs		$ 202.50				
EN-Community Studies	6.250	$ 7,611.52	$ 1,217.84			
Direct Costs		$ 98.25				
EN-Public Involvement	48.710	$ 66,703.05	$ 1,369.39			
Direct Costs		$ 3,002.80				
EP-Env Policy	11.875	$ 14,352.78	$ 1,208.66			
Direct Costs		$ -				
HY-Hydraulics	42.625	$ 51,525.36	$ 1,208.81			
Direct Costs		$ 256.50				
LS-Location Surveys	339.875	$ 219,110.70	$ 644.68			
Direct Costs		$ 2,511.00				
PD-Final Pavement Marking & Markers	35.000	$ 42,548.94	$ 1,215.68			
Direct Costs		$ -				
RD-Roadway	163.000	$ 211,370.29	$ 1,296.75			
Direct Costs		$ 117.90				
RE-Erosion Control	12.250	$ 15,151.63	$ 1,236.87			
Direct Costs		$ 1,054.72				
RR-Rail	10.000	$ 16,944.03	$ 1,694.40			
Direct Costs		$ -				
SD-Signing	2.000	$ 1,969.14	$ 984.57			
Direct Costs		$ -				
SG-Signal Communications	18.688	$ 24,166.51	$ 1,293.19			
Direct Costs		$ -				
SS-Signals	79.313	$ 101,959.54	$ 1,285.54			
Direct Costs		$ -				
ST-Structures	59.125	$ 69,003.28	$ 1,167.07			
Direct Costs		$ 53.60				
TM-Work Zone Traffic Control (WZTC)	57.000	$ 72,437.54	$ 1,270.83			
Direct Costs		$ -				
TM-Congestion Management	23.250	$ 25,470.61	$ 1,095.51			
Direct Costs		$ 5,460.00				
UT-Utilities Coordination	70.250	$ 91,407.00	$ 1,301.17			
Direct Costs		$ -				
UT-Utilities Design	250.000	$ 258,304.40	$ 1,033.22			
Direct Costs		$ 10,215.30				
PM-Project Mgmt--SUB1	54.000	$ 83,205.14	$ 1,540.84			
Direct Costs		$ 50.50				
EN-Public Involvement--SUB1	11.250	$ 14,789.87	$ 1,314.66			
Direct Costs		$ 733.60				
EN-Public Involvement--SUB2	2.000	$ 2,506.32	$ 1,253.16			
Direct Costs		$ -				
EP-Env Policy--SUB1	1.375	$ 2,543.63	$ 1,849.91			
Direct Costs		$ -				
SD-Signing--SUB1	33.500	$ 39,410.91	$ 1,176.45			
Direct Costs		$ 117.90				
Grand Total - All Disciplines	**1367.835**	**$ 1,506,843.07**				
Labor, Overhead & Fee						

MANAGING DOT DISCIPLINE:

ENGINEERING FIRM: Alta Planning + Design

ENGINEERING FIRM CONTRACT NUMBER: **CONTRACT TYPE:** **PAYMENT TYPE:**

SCOPE/WORKDAY ESTIMATE PREPARED BY: **DATE:**

SCOPE/WORKDAY ESTIMATE APPROVED BY: **DATE:**

REASON FOR SUPPLEMENTAL:
(If this is a supplemental to the original Scope of Services, state reason for supplemental.)

PO NUMBER: (If Available) **SUPPLEMENTAL NUMBER:** (If Applicable)

Account Initiation Request

NOTE: If this is the Firm, please go to cell B29 and fill out WBS number(s) only. After completing WBS number entry, the remainder of this worksheet can be ignored.
If this is NCDOT, all information on this worksheet is to be filled out in its entirety by the NCDOT PROJECT MANAGER for the NCDOT estimate.

Primary Consultant:	Alta Planning + Design	NCDOT Unit:	0
Primary Consultant Project Manager Name:	Michael Repsch		
Primary Consultant Project Manager Email:	mikerepsch@altago.com		
Contract #:	0	P.O. #:	0
DOT Project Manager Name:			
DOT Project Manager Tel. #:			
Project Name:	This field does not need to be filled out as there is a TIP number.	OR T.I.P. Number:	BL-0071A
Project Description:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue	Payment Type:	0
Disciplines Used:	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design		

Total Utilization: 0.00%

DOT : Repeat the WBS number for each Discipline, Cost Center, and Function Code that the WBS number is being applied to AND complete all workday estimates to incur a proper Percent Utilization

WBS Number (This column is the only column required by both the Firm and DOT estimates)	% Utilization	$'s Allotted to WBS	Discipline SAP Code	Discipline *Only 1 Unit Per WBS number*	Discipline Cost	% Utilization	Cost Center	Function Code	Note

Supplemental Number: Fiscal # (If available):

Approved by: Date:

TIP NUMBER:	BL-0071A
WBS NUMBER(s):	50651.1.1 :
COUNTY:	GUILFORD
DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue
DISCIPLINE(S) SELECTED:	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT: ALTA PLANNING + DESIGN — STANDARD FEE IS 9% UNLESS APPRO

DISCIPLINE	CLASSIFICATION	EMPLOYEE NAME / INITIALS (First initial, Last initial) Name as submitted to NCDOT	RAW HOURLY RATE**	OVERHEAD* *	FEE	COST OF CAPITAL**
PM-Project Mgmt	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
Project Mgmt		(SF) Spencer Finch	$ 72.12			
		(MR) Michael Repsch	$ 74.32			
		(HB) Hillary Butler	$ 28.37			
EN-Natural Env	THREE OAKS ENGINEERING INC			190.27%	9.00%	0.0600%
	Section Head (E/A Man. -C)	(JM) Jim Mason	$56.00			
	Group Leader (EPS - III)	(AE) Adam Efird	$47.00			
	Env. Snr. Specialist (ESS)	(NH) Nathan Howell (NH)	$35.75			
	Env. Specialist (ES)	(BL) Byron Levan	$26.50			
	Env. Program Consultant (EPC)	(CR) Cary Rowells	$43.25			
EN-Community Studies	THREE OAKS ENGINEERING INC			190.27%	9.00%	0.0600%
	Group Leader (E/A Sup. - A)	(CY) Craig Young	$72.00			
	Project Engineer (E-A)	(LW) Liz Workman-Maurer	$60.00			
	Project Engineer (E-C)	(JS) Joanna Salvucci	$28.50			
	GIS Technician (ET-J)	(CR) Cary Rowells	$43.25			
EN-Public Involvement	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	Group Leader (E/A Sup. - A)	(MR) Mike Rutkowski	$89.71			
	Community Planner (CP-2)	(TT) Timothy Tresohlavy	$57.52			
	Public Inv. Eng. (E-A)	(AL) Amber Lewis	$37.99			
EP-Env Policy	THREE OAKS ENGINEERING INC			190.27%	9.00%	0.0600%
	Group Leader (E/A Sup. - A)	(CY) Craig Young	$72.00			
	Project Engineer (E-A)	(LW) Liz Workman-Maurer	$60.00			
	Project Engineer (E-J)	(JO) Jackie Obediente	$59.00			
	Project Engineer (E-C)	(JS) Joanna Salvucci	$28.50			
	GIS Technician (ET-J)	(CR) Cary Rowells	$43.25			
HY-Hydraulics	SUNGATE DESIGN GROUP PA			200.10%	9.00%	0.1400%
	ESA	(JD) Josh Dalton	$64.00			
	EA	(BE) Brian Elam	$60.00			

TIP NUMBER:	BL-0071A
WBS NUMBER(s):	50651.1.1 :
COUNTY:	GUILFORD
DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue
DISCIPLINE(S) SELECTED:	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT: ALTA PLANNING + DESIGN — STANDARD FEE IS 9% UNLESS APPRO

DISCIPLINE	CLASSIFICATION	EMPLOYEE NAME / INITIALS (First initial, Last initial) Name as submitted to NCDOT	RAW HOURLY RATE**	OVERHEAD* *	FEE	COST OF CAPITAL**
	EJ	(ME) Matt Edwards	$42.00			
	EC	(JH) Jason Harvey	$43.00			
	ETJ	(DS) David Stanovich	$37.00			
	ETC					
LS-Location Surveys	**STANTEC CONSULTING SERVICES INC**			152.26%	9.00%	0.3270%
	Project Engineer Manager		$63.25			
	Project Survey Supervisor	(TC) Tony Carpenter	$51.51			
	Advanced Survey Coordinator	(IB) Ivan Bukovnik	$34.18			
	Survey Crew Leader	(DG) Dan Gunnoe	$41.43			
	Assistant Survey Crew Leader	(KP) Kim Poland	$22.79			
	Survey Crew Member	(MR) Max Roberts	$20.80			
PD-Final Pavement Marking & Markers	**STANTEC CONSULTING SERVICES INC**			165.25%	9.00%	0.1850%
	TEM I	BW - Betsy Watson	$90.39			
	TES III					
	TE II	RH - Rosi Hennein	$43.06			
	TE I					
	TT V					
RD-Roadway	**STANTEC CONSULTING SERVICES INC**			165.25%	9.00%	0.1850%
	PROJECT ENGINEER	(SS) Steve Smallwood	$77.13			
For Roadway	DESIGN ENGINEER	(MF) Matt Ferguson	$52.57			
If needed, List Additional Classifications	ENGINEER ADVANCED	(TH) Thomas Hoppe	$36.86			
RE-Erosion Control	**SUNGATE DESIGN GROUP PA**			200.10%	9.00%	0.1400%
	PROJECT MANAGER	(JD) Josh Dalton	$64.00			
	PROJECT ENGINEER	(BE) Brian Elam	$60.00			
	DESIGN ENGINEER	(ME) Matt Edwards	$42.00			
	SENIOR TECH.	(JH) Jason Harvey	$43.00			
	TECH. / DRAFT.	(DS) David Stanovich	$37.00			
RR-Rail	**STANTEC CONSULTING SERVICES INC**			165.25%	9.00%	0.1850%
	TRANS. ENG. 2 (ENVIRO. SPVR. 2) (TE II) (ES II)	(RW) Ryan White	$73.21		FEE = 0% if using fully-loaded rates.	
SD-Signing	**ALTA PLANNING + DESIGN**			155.42%	9.00%	0.5000%
		(MR) Michael Repsch	$ 74.32			
		(BB) Branden Bergeron	$ 53.69			
		(EB) Elizabeth Braswell	$ 37.50			

TIP NUMBER: BL-0071A
WBS NUMBER(s): 50651.1.1 :
COUNTY: GUILFORD

DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

DISCIPLINE(S) SELECTED: PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT: ALTA PLANNING + DESIGN — STANDARD FEE IS 9% UNLESS APPRO

DISCIPLINE	CLASSIFICATION	EMPLOYEE NAME / INITIALS (First initial, Last initial) Name as submitted to NCDOT	RAW HOURLY RATE**	OVERHEAD* *	FEE	COST OF CAPITAL**
SG-Signal Communications	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	TEM II	(LO) Larry Overn	$70.34			
	TES III	(JG) Jason Galloway	$66.86			
	TE III	(RM) Regina Muncey	$51.45			
	TE III	(DW) Derrick Waller	$49.55			
	TE II	(JH) James Hambright	$44.36			
SS-Signals	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	TEM II	(BW) Betsy Watson	$90.39			
	TES III	(JG) Jason Galloway	$66.86			
	TE III	(RM) Regina Muncey	$51.45			
	TE III	(DW) Derrick Waller	$49.55			
	TE II	(JH) James Hambright	$44.36			
ST-Structures	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	Trans. Eng. Supervisor II	(TD) Tommy Dudeck	$75.73			
	Trans. Engineer III	(BE) Brandon Elliot	$50.96			
	Trans. Engineer I	(VF) Victor Fraga	$50.49			
	Trans. Technician V	(JG) Judi Geile	$43.28			
TM-Work Zone Traffic Control (WZTC)	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	TEM I	(BW) Betsy Watson	$90.39			
	TES III	(JW) Jay Woolard	$71.25			
	TE II	(DR) Donnie Richardson	$44.42			
TM-Congestion Management	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	Traffic Unit Head (TM-1)	(MP) Matt Peach	$75.27			
	Project Engineer Sup. (TES-3)	(JW) Jeff Weller	$58.75			
	Project Engineer Sup. (TES-2)	(PT) Pierre Tong	$46.56			
	Project Engineer (TE-3)	(RC) Ryan Costello	$37.32			
	Project Engineer (TE-2)					
	Project Engineer (TE-1)					
UT-Utilities Coordination	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	Utility Coordination Supervisor	(MB) Melvin Briggs	$62.63			
	Senior Utility Coordinator					
	Utility Coordinator					
	Junior Technician	(GM) Garin Mayemba	$42.16			
	MISCELLANEOUS1					
	MISCELLANEOUS2					
	MISCELLANEOUS3					
UT-Utilities Design	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	Utility Design Supervisor	(LP) LINDA PASS	$73.64			
	Senior Utility Engineer	(KR) KEN ROBINSON	$52.59			

TIP NUMBER:	BL-0071A
WBS NUMBER(s):	50651.1.1 :
COUNTY:	GUILFORD
DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue
DISCIPLINE(S) SELECTED:	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT: ALTA PLANNING + DESIGN — STANDARD FEE IS 9% UNLESS APPRO

DISCIPLINE	CLASSIFICATION	EMPLOYEE NAME / INITIALS (First initial, Last initial) Name as submitted to NCDOT	RAW HOURLY RATE**	OVERHEAD**	FEE	COST OF CAPITAL**
	Utility Engineer	(LW) LAURA WILSON	$ 36.90			
	Junior Technician	(SC) SONIA CHAMBERS	$42.40			
	Junior Technician	(GM) GARIN MAYEMBA	$42.16			
	MISCELLANEOUS2					
	MISCELLANEOUS3					
PM-Project Mgmt--SUB1	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
Project Mgmt--SUB1						
	CS Group Leader (CPSC)	(MR) Mike Rutkowski	$89.71			
	Roadway Design Eng (E-A)	(SS) Steve Smallwood	$77.13			
	Administrative Assistant (AA-I)	(AT) Ann Tolman	$35.68			
EN-Public Involvement--SUB1	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
		(MR) Michael Repsch	$ 74.32			
		(BS) Britt Storck	$ 62.01			
		(CC) Chelsea Cole	$ 28.94			
EN-Public Involvement--SUB2	CONSULTANT NAME	Three Oaks Engineering		190.27%	9.00%	0.0600%
	Project Engineer (E-J)	(JO) Jackie Obediente	$ 59.00			
	Public Inv. Eng. (E-A)	(AS) Ana Santiago	$ 40.00			
EP-Env Policy--SUB1	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	Group Leader (E/A Sup. - A)	(ADG) Andrea Dvorak-Grantz	$ 79.93			
SD-Signing--SUB1	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	TEM I	BW - Betsy Watson	$90.39			
	TES III					
	TE II	RH - Rosi Hennein	$43.06			
	TE I					
	TT V					

TIP NUMBER:	BL-0071A
WBS NUMBER(s):	50651.1.1 :
COUNTY:	GUILFORD
DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue
DISCIPLINE(S) SELECTED:	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT:	**ALTA PLANNING + DESIGN**					STANDARD FEE IS 9% UNLESS APPRO
DISCIPLINE	**CLASSIFICATION**	**EMPLOYEE NAME / INITIALS** (First initial, Last initial) Name as submitted to NCDOT	**RAW HOURLY RATE****	**OVERHEAD***	**FEE**	**COST OF CAPITAL****

Project Mgmt DESIGN BREAKDOWN WORKSHEET - Project Mgmt

PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue			FIRM:	ALTA PLANNING + DESIGN		TASK ORDER NUMBER:		0			DATE PREPARED:			
PREPARED BY:				TIP NUMBER:	BL-0071A		WBS NUMBER:		50651.1.1 :			REVISION DATE:			
			ESTIMATED WORK DAYS												
		Employee	(SF)	(MR)	(HB)										
TASK NO.	TASK DESCRIPTION	Classification										SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2PM1/3PM1/4PM1	Project Management														
1	Project Management and Coordination														
	Coordination with NCDOT PM														
	Coordination with other NCDOT disciplines/units														
	Coordination with external stakeholders and agencies														
	Internal coordination with project team														
	Document all meetings and calls														
	Maintain administrative record and internal project files														
	Maintain Connect/SharePoint files and ATLAS Workbench														
	Prepare for and attend meetings		1.50	2.50								4.00	12.85%		
2	Project Schedule														
	Develop Schedule		0.13	1.00	1.00							2.13	6.83%		
	Maintain Schedule		5.50	5.50	5.50							16.50	53.01%		
3	Monthly PM Status Reports and Invoicing														
4	QC/QA Procedures														
5	Value Management Tasks														
	Other Tasks														
	Sub Coordination/QA/QC		1.50	7.00								8.50	27.31%		
	TOTAL WORKDAYS/CATEGORY:		8.63	16.00	6.50	0.00	0.00	0.00	0.00	0.00	0.00	31.13	100.00%	0.00	
	HOURLY SALARY RATE:		$72.12	$74.32	$28.37	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$576.96	$594.56	$226.96	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$4,976.28	$9,512.96	$1,475.24	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	TOTAL WORKDAYS:		31.13												
	TOTAL PAYROLL BURDEN:		$15,964.48												
	AVERAGE COST PER HOUR:		$64.11												
	GENERAL OVERHEAD:	**155.42%**	$24,811.99												
	SUBTOTAL:		$40,776.47												
	COMPARATIVE FEE:	**9.00%**	$3,669.88												
	FACILITIES COST OF CAPITAL:	**0.5000%**	$79.82												
	TOTAL:		$44,526.18												
	DIRECT EXPENSES:		$0.00												
	OTHER GRAND TOTAL:		**$44,526.18**												

Project Mgmt | ***DIRECT EXPENSES - Project Management***

FIRM:	ALTA PLANNING + DESIGN						
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue						
PREPARED BY:					TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A				WBS NUMBER:	50651.1.1 :	
DATE PREPARED:					REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST		
	Travel:						
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST		
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST		
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST		
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST		
	Travel:						
	Workshop						
	Postage:						
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST		

*** Sum of all plots**

NATURAL ENVIRONMENT BREAKDOWN WORKSHEET

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue | FIRM: THREE OAKS ENGINEERING INC | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071A | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	(JM) Jim Mason Section Head (E/A Man. -C)	(AE) Group Leader (EPS - III)	(NH) Env. Snr. Specialist (ESS)	(BL) Env. Specialist (ES)	(CR) Env. Program Consultant (EPC)					SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
			ESTIMATED WORK DAYS												
2EN1	Assess Natural Environmental Impacts														
1	Pre-Field Work		0.25				0.25					0.50	9.30%		
2	Jurisdictional Delineation Field Work			0.75	0.75							1.50	27.91%		
3	Protected Species Surveys			0.50	0.50							1.00	18.60%		
4	NRTM		0.25	1.00	0.25	0.25	0.38					2.13	39.53%		
5	Project Management		0.25									0.25	4.65%		
6	WET file														
7	Preliminary Jurisdictional Package (PJD)														
8	Approved Jurisdictional Package (AJD)														
9	NRTR														
10	Task Management														
11	Complete QC/QA Procedures														
	Other Tasks (i.e Additional Biological Surveys work)														
3EN3	Apply for Permits														
1	Review Project Documents														
2	Prepare Section 404/401 Permit Application														
3	CAMA Major Permit Application														
4	Other Permit Applications														
5	Task Management														
6	Complete QC/QA Procedures														
	Other Tasks:														
4EN1	Secure Permits														
1	Receive issued permits, review conditions, and update Project Special Commitments														
2	Permit Package														
3	Task Management														
4	Complete QC/QA Procedures														
	Other Tasks:														
	TOTAL WORKDAYS/CATEGORY:		0.75	2.25	1.50	0.25	0.63	0.00	0.00	0.00	0.00	5.38	100.00%	0.00	
	HOURLY SALARY RATE:		$56.00	$47.00	$35.75	$26.50	$43.25	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$448.00	$376.00	$286.00	$212.00	$346.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$336.00	$846.00	$429.00	$53.00	$216.25	$0.00	$0.00	$0.00	$0.00				

TOTAL WORKDAYS:		5.38
TOTAL PAYROLL BURDEN:		$1,880.25
AVERAGE COST PER HOUR:		$43.73
GENERAL OVERHEAD:	**190.27%**	$3,577.55
SUBTOTAL:		$5,457.80
COMPARATIVE FEE:	**9.00%**	$491.20
FACILITIES COST OF CAPITAL:	**0.0600%**	$1.13
TOTAL:		$5,950.13
DIRECT EXPENSES:		$202.50
NES GRAND TOTAL:		**$6,152.63**

PDEA RELATED DATA :

SIZE OF STUDY AREA (SQUARE FEET) _____

JURISDICTIONAL RESOURCES PRESENT _____

POTENTIAL ENDANGERED SPECIES

NATURAL ENVIRONMENT DIRECT EXPENSES

FIRM:	THREE OAKS ENGINEERING INC					
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Carry All	2 Trip(s) @		150 miles @	$0.675	$202.50
				Subtotal		$202.50
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
				TOTAL		**$202.50**

*** Sum of all plots**

COMMUNITY STUDIES BREAKDOWN WORKSHEET

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue | FIRM: THREE OAKS ENGINEERING INC | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071A | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	(CY) Group Leader (E/A Sup. - A)	(LW) Project Engineer (E-A)	(JS) Project Engineer (E-C)	(CR) GIS Technician (ET-J)	ESTIMATED WORK DAYS						SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2EN2	Assess Human Environmental Impacts															
1	Direct and Indirect Screening Tool (DIST)															
1.1	DIST Project Initiation & Set-up			0.13									0.13	2.00%		
1.2	DIST Data Gathering			1.00	1.00								2.00	32.00%		
1.3	DIST Project Documentation			0.25	0.25								0.50	8.00%		
1.4	DIST Deliverables			0.25	0.25	0.50							1.00	16.00%		
	Task Management		0.25										0.25	4.00%		
	Complete QC/QC Procedures		0.13	0.13									0.25	4.00%		
2	Short Form Community Impacts Assessment (CIA)															
2.1	CIA Project Initiation & Set-up															
2.2	CIA Data Gathering															
2.3	Short Form CIA Project Documentation															
2.4	Short Form CIA Deliverables															
	Task Management															
	Complete QC/QC Procedures															
3	Checkbox Community Characteristics Report (CCR) and Community Impacts Assessment (CIA)															
3.1	CCR Project Initiation & Set-up															
3.2	CCR Data Gathering															
3.3	CCR Project Documentation															
3.4	CCR Deliverables															
3.5	CIA Project Initiation & Set-up															
3.6	CIA Project Documentation															
3.7	CIA Deliverables															
	Task Management															
	Complete QC/QC Procedures															
4	Narrative Community Characteristics Report (CCR) and Community Impacts Assessment (CIA)															
4.1	CCR Project Initiation & Set-up															
4.2	CCR Data Gathering															
4.3	CCR Project Documentation															
4.4	CCR Deliverables															
4.5	CIA Project Initiation & Set-up															
4.6	CIA Project Documentation															
4.7	CIA Deliverables															
	Task Management															
	Complete QC/QC Procedures															
5	Short Form Indirect and Cumulative Effects (ICE)															
5.1	Project Initiation & Set-up															
5.2	Conduct Base Screening															
5.3	Conduct Analytical Screening															
5.4	Analyze and Evaluate Data															
5.5	ICE Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
6	Checkbox Indirect and Cumulative Effects (ICE)															
6.1	Project Initiation & Set-up															
6.2	Conduct Base Screening															
6.3	Conduct Analytical Screening															
6.4	Analyze and Evaluate Data															
6.5	ICE Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
7	Narrative Indirect and Cumulative Effects (ICE)															
7.1	Project Initiation & Set-up															
7.2	Conduct Base Screening															
7.3	Conduct Analytical Screening															
7.4	Analyze and Evaluate Data															
7.5	ICE Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
8	Short Form Land Use Scenario Assessment (LUSA)															
8.1	Project Initiation & Set-up															
8.2	Verify and Update Information from ICE Screening Report															
8.3	Create Land Use Development Scenarios															
8.4	Land Use Scenario Assessment															
8.5	Indirect and Cumulative Effects Summary															
8.6	Land Use Scenario Assessment Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
9	Land Use Scenario Assessment (LUSA)															
9.1	Project Initiation & Set-up															
9.2	Verify and Update Information from ICE Screening Report															
9.3	Land Use Development Scenarios															
9.4	Land Use Scenario Assessment															
9.5	Indirect and Cumulative Effects Summary															
9.6	Land Use Scenario Assessment Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
	Other Tasks:		0.25	0.75	0.25	0.50							1.75	28.00%		

	Prepare & SubmitNC-HPO Project Review Checklist				0.25	0.13							0.38	6.00%		
	Prepare & Submit Tribal Coordination Letters															
	TOTAL WORKDAYS/CATEGORY:		0.63	2.50	2.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.25	100.00%	0.00
	HOURLY SALARY RATE:		$72.00	$60.00	$28.50	$43.25	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
	RATES PER DAY:		$576.00	$480.00	$228.00	$346.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
	PAYROLL BURDEN:		$360.00	$1,200.00	$456.00	$389.25	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			

TOTAL WORKDAYS:		6.25
TOTAL PAYROLL BURDEN:		$2,405.25
AVERAGE COST PER HOUR:		$48.11
GENERAL OVERHEAD:	**190.27%**	$4,576.47
SUBTOTAL:		$6,981.72
COMPARATIVE FEE:	**9.00%**	$628.35
FACILITIES COST OF CAPITAL:	**0.0600%**	$1.44
TOTAL:		$7,611.52
DIRECT EXPENSES:		$98.25
COMMUNITY STUDIES GRAND TOTAL:		**$7,709.77**

COMMUNITY STUDIES DIRECT EXPENSES

FIRM:	THREE OAKS ENGINEERING INC					
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	1 Trip(s) @		150 miles @	$0.655	$98.25
				Subtotal		$98.25
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Workshop					
	Postage:					
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
				TOTAL		**$98.25**

*** Sum of all plots**

PUBLIC INVOLVEMENT BREAKDOWN WORKSHEET

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue
FIRM: STANTEC CONSULTING SERVICES INC
TASK ORDER NUMBER: 0
DATE PREPARED:
PREPARED BY:
TIP NUMBER: BL-0071A
WBS NUMBER: 50651.1.1 :
REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	(MR) Group Leader (E/A Sup. - A)	(TT) Community Planner (CP-2)	(AL) Public Inv. Eng. (E-A)								SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
			ESTIMATED WORK DAYS													
2PII	Continue Public Engagement															
1	Public Involvement Plan (PIP)		0.25	0.50									0.75	1.54%		
	Submit ETRACS for PI Team to review draft or develop PIP			0.12									0.12	0.25%		
	Prepare and submit draft and final PIP (if PIP is to be prepared by PEF)			0.50									0.50	1.03%		
2	Project Mailing List															
	Submit ETRACS request and study area Shapefile for project mailing list			0.12									0.12	0.25%		
	Create project mailing list			0.25	0.75								1.00	2.05%		
	Develop Post Card, Door Hanger, Spanish version, Visuals/graphics (2)		0.25	1.00	2.00								3.25	6.67%		
	Printing and Mailing			0.12	1.00								1.12	2.30%		
3	Project Website															
	Submit request for project website or PublicInput.com site															
	Provide updates at project milestones			2.00	0.50								2.50	5.13%		
4	Newsletter/Postcards															
	Prepare and submit draft Newsletter/Postcard (using NCDOT templates)															
	Revise and resubmit Newsletter/Postcard for approval															
	Reproduce and distribute approved Newsletter /Postcard (insert #copies)															
5	Public Meeting(s)/Hearing(s)															
	In-person Open House (X hr meeting)		1.00	1.00	1.00								3.00	6.16%		
	Virtual Meeting (X hr meeting)															
	Formal Presentation		0.50	1.00	0.25								1.75	3.59%		
	Submit meeting request via ETRACS (6 weeks prior to meeting date)			0.12									0.12	0.25%		
	Coordinate with City PI and Division on venue and dates		0.12	0.25									0.37	0.76%		
	Prepare and submit public meeting maps		0.25	0.50	2.50								3.25	6.67%		
	Schedule and attend map review meeting															
	Revise and resubmit public meeting maps															
	Prepare and submit draft public meeting handout		0.12	0.50	1.00								1.62	3.33%		
	Revise and resubmit public meeting handout for approval			0.12									0.12	0.25%		
	Reproduce public meeting handout (200)				0.25								0.25	0.51%		
	Prepare and submit draft public meeting displays															
	Revise and resubmit public meeting displays															
	Provide digital copies of handout, displays, and public meeting maps to City PI for web posting			0.50	0.50								1.00	2.05%		
	Spanish Interpretor (Open House)			1.00									1.00	2.05%		
	Summary		0.25	1.00									1.25	2.57%		
6	Local Officials Information Meeting (LOIM)															
	Coordinate with City PI on schedule and invitees/list		0.50	0.50									1.00	2.05%		
	Prepare and submit draft LOIM Invitation letter		0.25	0.25									0.50	1.03%		
	Revise and resubmit LOIM Invitation letter for approval															
	Prepare and submit draft PowerPoint presentation		0.50	1.00									1.50	3.08%		
	Revise and resubmit PowerPoint presentation		0.12	0.25									0.37	0.76%		
	Prepare and submit draft local officials meeting handout (only when no public meeting is held)															
	Revise and resubmit local officials meeting handout for approval			0.25									0.25	0.51%		
	Prepare and submit draft and final meeting summary		0.25	1.00									1.25	2.57%		
	Attend LOIM Mtg		1.00	1.00	1.00								3.00	6.16%		
7	Public Comments															
	Collect public comments															
	Compile comments in a database and prepare draft responses as needed (export from PublicInput.com site)															
	Submit draft database and responses															
	Revise and resubmit database and responses															
	Prepare for and attend post-public meeting/hearing meeting															
8	Public Engagement Summary															
	Prepare and submit draft public engagement summary, including comment summary and responses using NCDOT template		2.00	2.00	2.00								6.00	12.32%		
	Revise and resubmit public engagement summary		0.50	1.00	1.00								2.50	5.13%		
	Prep for, attend response to public comments meeting, and finalize comment summary		1.00										1.00	2.05%		
9	Project Visualizations															
	Renderings (digital static image)		0.25	0.25	3.75								4.25	8.73%		
	Level I															
	Level II															
	Level III															
	Animations (video with motion)															
	Level I															
	Level II															
	Level III															
	Level IV															
	Level V															
	Level VI															
	Level VII															
	Video Production															
	Level I															
	Level II															
	Virtual 3D Models															
10	Task Management															
11	Complete QA/QC Procedures															
	Other Tasks: (i.e. small group meetings)															
	Prep for, travel, attend, and meeting minutes for 4 stakeholder meetings		4.00										4.00	8.21%		
	TOTAL WORKDAYS/CATEGORY:		13.11	18.10	17.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.71	100.00%	0.00	

HOURLY SALARY RATE:		$89.71	$57.52	$37.99	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
RATES PER DAY:		$717.68	$460.16	$303.92	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
PAYROLL BURDEN:		$9,408.78	$8,328.90	$5,318.60	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TOTAL WORKDAYS:		48.71										
TOTAL PAYROLL BURDEN:		$23,056.28										
AVERAGE COST PER HOUR:		$59.17										
GENERAL OVERHEAD:	**165.25%**	$38,100.04										
SUBTOTAL:		$61,156.32										
COMPARATIVE FEE:	**9.00%**	$5,504.07										
FACILITIES COST OF CAPITAL:	**0.1850%**	$42.65										
TOTAL:		$66,703.05										
DIRECT EXPENSES:		$3,002.80										
PUBLIC INVOLVEMENT GRAND TOTAL:		**$69,705.85**										

PUBLIC INVOLVEMENT DIRECT EXPENSES

FIRM:	STANTEC CONSULTING SERVICES INC					
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	1	Trip(s) @	140 miles @	$0.655	$91.70
				Subtotal		$91.70
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	7	Trip(s) @	140 miles @	$0.655	$641.90
	Car Rental			4 days @	$50.00	$200.00
	Gas for Rental			720 miles @	$0.200	$144.00
		9	Lunch		$11.80	$106.20
	Workshop					
	- Reproduction	100	8 1/2 x 11 B & W Copies @	1 Handouts	$0.09	$9.00
		100	8 1/2 x 11 Color Copies @		$0.83	$83.00
		100	11 x 17 Color Copies @		$1.66	$166.00
		36	SQ. FT. of Plots (B & W or Color)	<65 SQ. FT.*	$6.50	$234.00
	Presentation Materials:	1	Misc. Workshop Supplies @	per workshop	$50.00	$50.00
		3	Foam core boards	each	$40.00	$120.00
	Mailing Labels:	2	Laser Peel & Stick (box)	750 per box	$4.00	$8.00
	Postage:					
	- Public Workshops:	200	Notice or Newsletter @	1 copies @	$0.49	$98.00
				Subtotal		$1,860.10
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
	Postage	500	Direct mail		$0.630	$315.00
	Postage	3000	Every Door Direct Mail		$0.190	$570.00
	Printing	200	Door hangers		$0.830	$166.00
				Subtotal		$1,051.00
				TOTAL		**$3,002.80**

*** Sum of all plots**

ENVIRONMENTAL POLICY BREAKDOWN WORKSHEET

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

FIRM: THREE OAKS ENGINEERING INC

TASK ORDER NUMBER: 0

DATE PREPARED:

PREPARED BY:

TIP NUMBER: BL-0071A

WBS NUMBER: 50651.1.1 :

REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	ESTIMATED WORK DAYS (CY) Group Leader (E/A Sup. - A)	(LW) Project Engineer (E-A)	(JO) Project Engineer (E-J)	(JS) Project Engineer (E-C)	(CR) GIS Technician (ET-J)					SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
1EP1	MERGER SCREENING														
1.1	Merger Pre-Screening														
1.2	Merger Screening														
1.3	Screening/CP1														
1.4	Merger Plan														
2.0	INITIATE ENVIRONMENTAL DOCUMENTATION														
2.1	PSR Coordination														
2.2	Project Initiation Meeting/Coordination														
3.0	TASK MANAGEMENT														
4.0	COMPLETE QC PROCEDURES														
2EP1	PROJECT INITIATION (if not under 1EP1 above)														
	Prepare/Update initiation/scoping materials														
	Attend/Conduct Scoping meeting with internal/external partners														
1.0	MERGER PREPARATION														
1.1/1.2	Setup and Prepare Materials														
1.3	Pre-Meeting														
1.4	Other Meetings														
2.0	MERGER CONCURRENCE														
2.1	Distribute Materials and Provide Coordination														
2.2	Concurrence Meeting														
3.0	ENVIRONMENTAL (NEPA/SEPA) DOCUMENTATION														
3.1	4(f) De Minimis Coordination														
	4(f) Programmatic Evaluation														
3.2	Other Supporting Documentation														
3.3	Draft Environmental Document(ation) - Type IA CE														
	Prepare draft		0.25		2.00	3.00	1.00					6.25	52.63%		
	Submit draft for review and address revisions		0.13		0.50		0.25					0.88	7.37%		
3.4	Final Environmental Document(ation) - Type IA CE														
	Acquire signatures					0.50						0.50	4.21%		
	Upload and distribute (as appropriate)					0.25						0.25	2.11%		
4.0	TASK MANAGEMENT		2.00		1.00	1.00						4.00	33.68%		
5.0	COMPLETE QC PROCEDURES														
3EP1	Right-of-Way Consultation														
1.0	Data Collection														
2.0	Prepare Draft ROW Consultation														
3.0	Submit Final ROW Consultation														
4.0	Task Mngmt														
5.0	Complete QC Procedures														
4EP1	CONSTRUCTION Consultation														
1.0	Data Collection														
2.0	Prepare Draft Construction Consultation														
3.0	Submit Final Construction Consultation														
4.0	Task Mngmt														
5.0	Complete QC Procedures														
	TOTAL WORKDAYS/CATEGORY:		2.38	0.00	3.50	4.75	1.25	0.00	0.00	0.00	0.00	0.00	11.88	100.00%	0.00
	HOURLY SALARY RATE:		$72.00	$60.00	$59.00	$28.50	$43.25	$0.00	$0.00	$0.00	$0.00	$0.00			
	RATES PER DAY:		$576.00	$480.00	$472.00	$228.00	$346.00	$0.00	$0.00	$0.00	$0.00	$0.00			
	PAYROLL BURDEN:		$1,368.00	$0.00	$1,652.00	$1,083.00	$432.50	$0.00	$0.00	$0.00	$0.00	$0.00			

TOTAL WORKDAYS:		11.88
TOTAL PAYROLL BURDEN:		$4,535.50
AVERAGE COST PER HOUR:		$47.74
GENERAL OVERHEAD:	**190.27%**	$8,629.70
SUBTOTAL:		$13,165.20
COMPARATIVE FEE:	**9.00%**	$1,184.87
FACILITIES COST OF CAPITAL:	**0.0600%**	$2.72
TOTAL:		$14,352.78
DIRECT EXPENSES:		$0.00
PLANNING GRAND TOTAL:		**$14,352.78**

ENVIRONMENTAL POLICY DIRECT EXPENSES

FIRM:	THREE OAKS ENGINEERING INC						
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue						
PREPARED BY:					TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A				WBS NUMBER:	50651.1.1 :	
DATE PREPARED:					REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION			UNIT COST	
	Travel:						
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION			UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION			UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION			UNIT COST	
ENVIRONMENTAL DOCUMENT(S):	ITEM	QTY	DESCRIPTION			UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION			UNIT COST	
	Travel:						
	Workshop						
	Postage:						
Miscellaneous Other	ITEM	QTY	DESCRIPTION			UNIT COST	

*** Sum of all plots**

HYDRAULICS DESIGN ESTIMATE

DATE:			
TIP:	BL-0071A	ESTIMATE TYPE:	Project Estimate
COUNTY:	GUILFORD	SUPPLEMENTAL NUMBER	
COMPILED BY:		CONTRACT NUMBER	0
CONSULTANT:	SUNGATE DESIGN GROUP PA		
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue		
PROJECT SCOPE:	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design		

	ESTIMATED WORKHOURS									
EMPLOYEE	(JD)	(BE)	(ME)	(JH)	(DS)					
TASKS / CLASSIFICATION	ESA	EA	EJ	EC	ETJ	ETC		TOTAL	NOTES	
2PEF								**0**		
Develop Preliminary Hydraulic Recommendations								-		
Hydraulic Planning Report								-		
2PEF SUBTOTAL	0	0	0	0	0	0	0			**0 WORKDAYS**
3PEF								-		
Complete Drainage for Field Inspection								-		
Review and provide comments on Design Recommendations Plan Set(s)								-		
Hydraulics Pre-Design Meeting	2	2						0.50		
Field Reconnaissance and Survey								-		
Pipe Drainage, Ditches -L-		24			24			6.00		
Travel		6			6			1.50		
Hydraulic Design Report(s)								-		
Redline Drainage Plans for Field Inspection								-		
Pipes, Storm Drainage , Ditches -L-	16	24	48	16	40			18.00		
Outlet Analysis (4)		8	8		16			4.00		
CADD				24				3.00		
Complete QC Procedures	2							0.25		
Utility Conflict Resolution			16		16			4.00		
65% and 75% Design Review Meetings	4	4						1.00		
3PEF SUBTOTAL	24	68	72	40	102	0	0			**38.25 WORKDAYS**
4PEF								-		
Complete Hydraulic Design								-		
Hydraulic Summary Sheet(s)	4		16					2.50		
Complete Open Hydraulic Tasks								-		
4PEF SUBTOTAL	4	0	16	0	0	0	0			**2.5 WORKDAYS**
2PEF, 3PEF, 4PEF SUBTOTAL	28	68	88	40	102	0	0			**40.75 WORKDAYS**
REVIEW AND REWORK R/W & FINAL PLAN DEVELOPMENT (Phase 3 & 4)	**PERCENT FOR REVIEW AND REWORK**			**5%**						
Review and Rework	1	3	4	2	5	0	0			**WORKDAYS**
TOTAL WORKHOURS:	29	71	92	42	107	0	0		341	**42.625**

TOTAL WORKDAYS:	3.63	8.88	11.50	5.25	13.38	0.00	0.00
HOURLY SALARY RATE:	$64.00	$60.00	$42.00	$43.00	$37.00	$0.00	$0.00
RATES PER DAY:	$512.00	$480.00	$336.00	$344.00	$296.00	$0.00	$0.00
PAYROLL BURDEN:	$1,856.00	$4,260.00	$3,864.00	$1,806.00	$3,959.00	$0.00	$0.00

TOTAL WORKDAYS:		42.625
TOTAL PAYROLL BURDEN:		$15,745.00
AVERAGE COST PER HOUR:		$46.17
COST PER WORKDAY:		$1,208.81
GENERAL OVERHEAD:	**200.10%**	$31,505.75
SUBTOTAL:		$47,250.75
COMPARATIVE FEE:	**9.00%**	$4,252.57
FACILITIES COST OF CAPITAL:	**0.1400%**	$22.04
TOTAL DIRECT AND INDIRECT SALARY COST:		$51,525.36
DIRECT EXPENSES:		$256.50

SUBCONSULTANT FEES (*IF NO SEPARATE ESTIMATE*):		
HYDRAULICS GRAND TOTAL:		**$51,781.86**

TIP: **BL-0071A** **Date:**

TRAVEL EXPENSE:

MILEAGE: # field trips 2 # meeting trips 0 # local trips 0

		Miles to site (one way)		Miles to meeting (one way)		Local Miles (one way)
		95		0		0
Carryall (survey trip)	$ 0.675	(per mile) X	380	Miles =	**$256.50**	
Sedan (meeting trip)	$ 0.655	(per mile) X	0	Miles =	**$0.00**	
Sedan (Local Mileage)	$ 0.655	(per mile) X	0	Miles =	**$0.00**	

PER DIEM EXPENSE:

LODGING + MEALS (BREAKFAST, LUNCH, DINNER)		# of People X	$126.30	(per day) X		# of Days =	**$0.00**
BREAKFAST		# of People X	$9.00	(per day) X		# of Days =	**$0.00**
LUNCH		# of People X	$11.80	(per day) X		# of Days =	**$0.00**
DINNER		# of People X	$20.50	(per day) X		# of Days =	**$0.00**
LODGING		# of People X	$85.00	(per day) X		# of Days =	**$0.00**

MISCELLANEOUS EXPENSES:

Description	Quantity	Unit of Measure		Cost Per Unit		
			X		=	**$0.00**
			X		=	**$0.00**
			X		=	**$0.00**
			X		=	**$0.00**
			X		=	**$0.00**
Total Miscellaneous Expenses						$0.00

SUBTOTAL: **$256.50**

PROJECT ESTIMATE TOTAL:	**$51,781.86**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS PEF COST ESTIMATE

DATE: _____

TIP NO.: BL-0071A FIRM: STANTEC CONSULTING SERVICES INC

LS NO.: _____ MI

WBS: 50651.1.1 : COUNTY: GUILFORD

LENGTH:

L-LINE: _____ MI RAMPS: _____ MI

Y-LINE(S): _____ MI RAILROADS: _____ MI

PROJECT DESCRIPTION:

Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

TASKS & PARAMETERS		ESTIMATED WORKHOURS PEM	PSS	ASC	SCL	ASCL	SCM	TOTAL	NOTES
1. Courthouse Research No. of Properties:	60		1	15				16	
2. Contacting Property Owners No. of Property Owners:								0	
3. NC Grid Tie (Horiz.) to NAD 1983 Approx. Length:								0	
4. Vertical Control Tie to NAVD 1988 Approx. Length:	5500			3	16	16	16	51	
5. Baseline Traverse Approx. Length:	5500			3	24	24	24	75	
6. Intermediate Staking of Baseline Approx. Length:								0	
7. Compute Best-Fit Alignment (Graphically) Approx. Length:	5500		1	10				11	
8. Hub & Stake Design -L- & -Y- Alignments Approx. Length -L-: Approx. Length -Y-:								0	
9. Establish/Elevate Temp. Bench Marks No. of TBM's:	5		1	1	5	5	5	17	
10. Pavement DTMs Approx. Length:	6000		1		48	48	48	145	
11. Hydrographic Surveys & -T- Lines Approx. Length:								0	
12. Suppl. Info for DTM's (Obscured Areas) No. of Acres / Hectares:	4		1		32	32	32	97	
13. Field Property Ties & Recon No. of Properties:	60		1		60	60	60	181	
14. Property Analysis and Computations No. of Properties:	60		6	60				66	
15. Property Line Ties to Design Alignment No. of Properties:								0	
16. Property Strip Maps No. of Maps:								0	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS PEF COST ESTIMATE

DATE: _____

TIP NO.: BL-0071A FIRM: STANTEC CONSULTING SERVICES INC

LS NO.: _____ MI

WBS: 50651.1.1 : COUNTY: GUILFORD

LENGTH:

L-LINE: _____ MI RAMPS: _____ MI

Y-LINE(S): _____ MI RAILROADS: _____ MI

PROJECT DESCRIPTION:

Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

TASKS & PARAMETERS		ESTIMATED WORKHOURS PEM	PSS	ASC	SCL	ASCL	SCM	TOTAL	NOTES
17. Data for Appraisal Report No. of Properties:								0	
18. Classif. of Features on Aerial Maps No. of Maps: Scale:			1	4	8	8	8	29	
19. Field Loc. of Topo & Plan. Features (Dense, Med., or LT.):	Dense		1		16	16	16	49	
20. Loc. of Non-Gravity U/G Utilities (Dense, Med., or LT.):	Dense		10	60	320	320	320	1030	stimated 62,000 total LF of utiliti
21. Loc. of Gravity Utilities & Pipe Inverts (Dense, Med., or LT.):	Dense		2		115	115	115	347	orm Structures, 57 Sanitary Sew
22. Mapping Pre. Prop. from Tax Map Info. No. of Properties:								0	
23. Pole Data Sheets (Dense, Med., LT.):								0	
24. Setting Photo Con. Panels No. of Points:								0	
25. Photogrammetric Control No. of Points:								0	
26. Staking and Flagging R/W & Easements No. of R/W Points: No. of EASEMENT Points:								0	
27. Production of Base Mapping No. of Sheets:			10	80				90	
28. GPS Points No. of Points:	4				4	4	4	12	
29. Misc. Staking No. of Points:								0	
33. Travel Hrs R.T.					93	93	93	279	
34. Project Mgmt. & Supervision			14					14	
35. Traffic Control & Safety					70	70	70	210	
Property 1 Description									

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS PEF COST ESTIMATE

DATE: _____

TIP NO.: BL-0071A FIRM: STANTEC CONSULTING SERVICES INC

LS NO.: _____ MI

WBS: 50651.1.1 : COUNTY: GUILFORD

LENGTH: _____

L-LINE: _____ MI RAMPS: _____ MI

Y-LINE(S): _____ MI RAILROADS: _____ MI

PROJECT DESCRIPTION:

Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

TASKS & PARAMETERS	ESTIMATED WORKHOURS PEM	PSS	ASC	SCL	ASCL	SCM	TOTAL	NOTES
Property 2 Description							0	
Property 1 Description Property 2 Description							0	
Property 1 Description Property 2 Description							0	
Property 1 Description Property 2 Description							0	
Property 1 Description Property 2 Description							0	
TOTAL WORKHOURS:	0	50	236	811	811	811	2719	

Classification	Employee Name	Hours	Rate	Cost
Project Engineer Manager	0	0	$63.25	$0.00
Project Survey Supervisor	(TC) Tony Carper	50	$51.51	$2,575.50
Advanced Survey Coordinator	(IB) Ivan Bukovn	236	$34.18	$8,066.48
Survey Crew Leader	(DG) Dan Gunnoe	811	$41.43	$33,599.73
Assistant Survey Crew Leader	(KP) Kim Poland	811	$22.79	$18,482.69
Survey Crew Member	(MR) Max Robert	811	$20.80	$16,868.80
	0	0	$0.00	$0.00
	0	0	$0.00	$0.00
	0	0	$0.00	$0.00
	0	0	$0.00	$0.00
	0	0	$0.00	$0.00

TOTAL WORKHOURS: **2719**

TOTAL DIRECT SALARY COSTS: $79,593.20

TOTAL WORKDAYS: **339.875**

INDIRECT SALARY COSTS

Total Dir. Salary Costs	$79,593.20	
Overhead (%)	152.26%	$121,187.01
Fee (%)	9.00%	$18,070.22

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS PEF COST ESTIMATE

DATE: _____

TIP NO.: BL-0071A FIRM: STANTEC CONSULTING SERVICES INC

LS NO.: _____ MI

WBS: 50651.1.1 : COUNTY: GUILFORD

LENGTH:

L-LINE: _____ MI RAMPS: _____ MI

Y-LINE(S): _____ MI RAILROADS: _____ MI

PROJECT DESCRIPTION:

Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

TASKS & PARAMETERS				ESTIMATED WORKHOURS PEM	PSS	ASC	SCL	ASCL	SCM	TOTAL	NOTES
Cost of Capt. (%)		0.3270%				$260.27					
			Total Indirect Salary Costs:			$139,517.50					
									TOTAL DIR. and INDIR. SALARY COSTS		
									$219,110.70		
DIRECT COSTS											
Carry-all $/Day	$33.75		Days =		$0.00						
or $/Mi	$0.675	3720	Miles=		$2,511.00						
Sedan $/Day	$32.75		Days =		$0.00						
or $/ Mi	$0.655		Miles=		$0.00						
			Misc. Survey Supplies=								
									TOTAL DIRECT COSTS		
									$2,511.00		

PER DIEM EXPENSES

	$ / Day	Persons		Days	
Lodging	$85.00		x	40	TOTAL PER DIEM
Breakfast	$9.00		x	40	$0.00
Lunch	$11.80		x	40	
Dinner	$20.50		x	40	

MISCELLANEOUS EXPENSES

Description	Quantity	Unit of Measure		Cost Per Unit	
			x		TOTAL MISC. EXPENSES
			x		$0.00
			x		
			x		
			x		

Cost per MI

Workhours per MI

TOTAL DIRECT NON-SALARY COSTS

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS PEF COST ESTIMATE

DATE: _____

TIP NO.: BL-0071A FIRM: STANTEC CONSULTING SERVICES INC

LS NO.: _____ MI

WBS: 50651.1.1 : COUNTY: GUILFORD

LENGTH: _____

L-LINE: _____ MI RAMPS: _____ MI

Y-LINE(S): _____ MI RAILROADS: _____ MI

PROJECT DESCRIPTION:

Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

TASKS & PARAMETERS	ESTIMATED WORKHOURS PEM	PSS	ASC	SCL	ASCL	SCM	TOTAL	NOTES
						$2,511.00		

ESTIMATE BY: Tony Carpenter

PROJECT ESTIMATE TOTAL: **$221,621.70**

MDEST6.XLS PAVEMENT MARKING AND MARKERS ESTIMATE WORKSHEET
REV 11/02/15

DATE: 5/24/2023
TIP #: BL-0071A

CONSULTANT: **STANTEC CONSULTING SERVICES INC**
LSC#:
PREL EST WORKDAYS: **35.00**

EST RDWY SHEETS:	10	# DAYS FIELD TRIPS:	0
TOTAL PLAN SHEETS:	14		
# Y-LINES - INTERCHANGE:	14	LONGITUDINAL MARKING (Y=1,N=0):	0
# Y-LINES - AT GRADE:	0		
		MILEAGE PER TRIP:	0 MILES

		ESTIMATED WORKHOURS							
	EMPLOYEE	BW -		RH -					
TASK	CLASSIFICATION	TEM I	TES III	TE II	TE I	TT V		TOTAL	NOTES
DEVELOP PLAN / MARKING									
Setup & Concept		8.000		8.000				16.000	
Select Marking Types				4.000				4.000	
Prepare Marking Plans				40.000				40.000	
60.00	HR								
FINALIZE QUANTITIES / ESTIMATE									quants are scoped at
Marking quantities				16.000				16.000	several submittals
Marking estimate		2.000		16.000				18.000	
34.00	HR								
MARKING ROADWAY SHEETS									
Drafting/Sheet clean up				40.000				40.000	
Marking Types				8.000				8.000	
Checking		16.000						16.000	
Corrections				24.000				24.000	Iterations expected
88.00	HR								
MISCELLANEOUS									
Curb Ramps		8.000		40.000				48.000	potentially over 100 cr
Special Markings		2.000		8.000				10.000	stamped crosswalks
58.00	HR								
QUANTITIES/CALC SHEETS		2.000		8.000					
10.00	HR							10.000	
SPECIAL PROVISIONS		2.000		4.000					stamped crosswalks
6.00	HR							6.000	
REPRODUCTIONS,PLOTS				8.000					
8.00	HR							8.000	
MEETINGS, ADMIN		16.000							discussion on concept
16.00	HR							16.000	
TOTAL MAN-HRS		56.000	0.000	224.000	0.000	0.000	0.000	280.000	
TOTAL WORKDAYS		7.000	0.000	28.000	0.000	0.000	0.000	35.000	
TOTAL WORKDAYS								**35.000**	

AVERAGE STANDARD RATE PER HOUR

	A	B	C	D	EMPLOYEE	(B*C)/D
CLASSIFICATION	NO.WORKDAYS	% TOT WD	RATE	FACTOR	NAMES	AVG STD RATE
TEM I	7.000	0.200	$90.39	1.000	BW -	$18.08
TE II	28.000	0.800	$43.06	1.000	RH -	$34.45

TOTAL	35.000	1.000				$52.53
	SALARIES	=	(AVG STD RATE)(WORKDAYS)(8 HRS)	=		$14,707.28
	OVERHEAD	=	165.25% (SALARIES)	=		$24,303.49
	FEE	=	9.00% (SALARIES+OVERHEAD)	=		$3,510.97
COST OF CAPITAL	0.1850%	=				$27.21
TOT. DIR. SALARY COST		=	(SALARIES+OVERHEAD+FEE)	=		$42,548.94
					RATE	COST
TRAVEL:	TRAVEL:	0	TRIPS x			
TOTAL DIRECT NON-SALARY COST - - - - - - - - - - - - - - - - - -					=	$0.00

TOTAL ESTIMATE	=	$42,548.94
COST PER WORKDAY	=	1215.68

CONSULTANT'S TOTAL = $42,548.94

CONSULTANT'S TOTAL - TOTAL COST IN_HOUSE ESTIMATE
---------- = 0.00%
TOTAL COST IN_HOUSE ESTIMATE

ESTIMATE PREPARED BY: _____ DATE: 5/24/2023

ROADWAY PROJECT DATA

TIP NUMBER : BL-0071A **ESTIMATE SUBMITTAL NUMBER :** _____

WBS NUMBER : 50651.1.1 :

FA NUMBER : 710043

COUNTY : GUILFORD

DESCRIPTION : Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

DISCIPLINE(S) SELECTED : PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SG-Signal Communications : SS-Signals : ST-Structures : TM-Work Zone Traffic Control (WZTC) : TM-Congestion Management : UT-Utilities Coordination : UT-Utilities Design

CONSULTANT : Alta Planning + Design

(ENGLISH UNITS)

TYPE OF FACILITY (Y/N) :	
BRIDGE PROJECT	
2 & 3-LANE SHOULDER	
3-LANE C&G	
MEDIAN DIVIDED	
DIVIDED WITH RAISED MEDIAN	
SUPERSTREET	

DESIGN LENGTHS:	**UNIT:** FEET
-L-	
DETOURS	
-Y- LINES > 300'	
RAMPS, LOOPS, FLYOVERS, C-D's	
SERVICE ROADS	
TOTAL C&G SECTION	
TOTAL SHOULDER SECTION	

SCALE :	**UNIT:** FEET	
PLAN	1" =	
PROFILE	1" =	H
PROFILE	1" =	V
X-SECTIONS	1" =	

PUBLIC HEARING / WORKSHOP (Y/N) :	
PREPARE MAP	
ATTEND MAP REVIEW MEETING	
ATTEND HEARING / WORKSHOP	
OVERNIGHT STAY	
ATTEND POST PUBLIC HEARING MEETING	

DESIGN EXCEPTION PACKAGE (Y/N) :

CAPACITY ANALYSIS (Y/N) :

CONSTRUCTION PHASING NARRATIVE (Y/N) :

WALLS REQUIRING ENVELOPE	**UNIT:** FEET
NOISE	
RETAINING (ROADWAY PAY ITEM)	

NUMBER OF FIELD INSPECTIONS :	
OVERNIGHT STAY (Y/N)	

PLAN PREPARATION STAGE (Y/N) :	
R/W	
LET	

NUMBER OF TYPICAL SECTIONS :	
BASIC SHOULDER (2 & 3 LANES)	
BASIC CURB & GUTTER (3 LANES)	
MEDIAN SHOULDER (4 LANES & UP)	
MEDIAN CURB & GUTTER (4 LANES & UP)	

NUMBER OF :	
-Y- LINES > 300'	
-Y- LINES < 300'	
RAMPS, LOOPS	
FLYOVERS, C-D's	
GORE AREAS	
SERVICE ROADS	
DRIVEWAYS >100' (REQUIRES GRADE)	
BRIDGE SITES OVER ROADWAYS	
BRIDGE SITES OVER WATERWAYS	
WALLS	
PARCELS	
SUB-CONSULTANTS	

NUMBER OF AT GRADE INTERSECTIONS :	
4 LEG (WITH BULB)	
4 LEG (WITHOUT BULB)	
T (WITH BULB)	
T (WITHOUT BULB)	
ROUNDABOUT	
LEFTOVER	

NUMBER OF INTERCHANGES :	
DIAMOND	
CLOVERLEAF	
SPUI	
DDI	
MULTILEVEL	

NUMBER OF PLAN SHEETS :	
-L-	
-Y-	
SERVICE ROADS	
DETOURS	
INTERCHANGE DETAIL	

NUMBER OF X-SECTIONS PER SHEET :

Roadway Corridor Modeling Project Worksheet TIP NUMBER: BL-0071A FIRM: STANTEC CONSULTING SERVICES INC

Group #	Corridor #	Alignment	Corridor Type			Begin Station	End Station	Corridor Length (Miles)			Typical Section/Template Type
			Major	Minor	Detour			Major	Minor	Detour	
		Sheet Total:	0	0	0			0.00	0.00	0.00	

Roadway Workday Estimate

BL-0071A TIP NUMBER

STANTEC CONSULTING SERVICES INC FIRM

elow in green are standard tasks following standard scopes. The tasks should not be modified unless In that case they can be written over or deleted but do not cut/paste. Keep tasks in the correct phase 2RD1/2RDs, 3RD1, 4RD1.	TOTAL	WORKDAYS	
	EMPLOYEE	(SS)	
Description	CLASSIFICATION	PROJECT ENGINEER	**NOTES:**
2RD2	WORKDAYS		
Design Criteria and Associated Typical Sections	2.00	1.00	
Horizontal and Vertical Layout for L	4.00	1.00	
Horizontal and Vertical Layout for Y lines, service roads, loops, ramps	6.00	2.00	
Horizontal and Vertical Layout for Detours	4.00	1.00	Assume Detour design is not needed
3D Model for mainline and y-lines	6.00	1.00	
3D Model for intersections, driveways, and small y-lines	13.50	1.50	
Right of Way and Easement Layout	3.00	1.00	
Design Public Meeting/Hearing Maps	3.50	1.00	
Prepare Title Sheet, Typical Sections, and Earthwork summary	6.00	1.00	
Sheeting for Plans, Profiles, Cross sections	5.00	1.00	
Complete the Draft Design Recommendation Plan Set and QC	5.00	1.00	
Design Recommendation Plan Set Review and Finalization	6.50	1.50	
Complete Design Exception Checklist	1.00	0.50	
Prepare and submit design review request for NCDOT IMD review of roadway design plans	1.50	0.50	
Task Management	2.00	1.00	
Complete QC Procedures	4.00	2.00	
2RD1 Misc. Item: Conceptual plan on aerial	6.00	1.00	No profile or cross section deliverables
2RD1 Misc. Item:Provide various typical options on 22"x34"	2.00	0.50	
Incorporate Geotechnical Recommendations	2.00	0.50	
Incoporate Hydro into Plans, Profiles, and X-sections	5.00	1.00	
Refine Right of Way and Easements on Plans	3.00	1.00	
Complete the Field Inspection Plan Set submittal (PDFs and supporting electronic files)	2.50	0.50	

Attend Field Inspection Review Meeting	2.00	1.00	
Construction Estimate Quantities	6.00	1.00	
Task Management	4.00	2.00	
Complete QC Procedures	4.00	2.00	
2RD2 Misc. Item:	2.00	1.00	
TOTAL STAGE 2 WORKDAYS	111.50	29.50	
3RD1	WORKDAYS		**NOTES:**
Complete Right-of-Way Plan Set (PDFs and supporting electronic files)	7.00	1.00	
Attend Plan-in-Hand Review Meeting	2.00	1.00	
Pavement Management Coordination	1.50	0.50	
Construction Estimate Quantities	5.00	1.00	
Task Management	1.00	0.50	
Complete QC Procedures	3.00	2.00	
3RD1 Misc. Item: Encroachment coordination	4.00	2.00	
TOTAL STAGE 3 WORKDAYS	23.50	8.00	
4RD1	WORKDAYS		**NOTES:**
Review Set of Final Plans	4.00	2.00	
Final Construction Quantities	6.00	1.00	
Sealed Contract Roadway Design Plans	4.00	2.00	
Task Management	4.00	2.00	
Complete QC Procedures	4.00	2.00	
4RD1 Misc. Item: Bid Document	6.00	3.00	
TOTAL STAGE 4 WORKDAYS	28.00	12.00	
TOTAL ESTIMATED WORKDAYS:	**TOTAL** CLASSIFICATION	**WORKDAYS** PROJECT ENGINEER	
	163.00	**49.50**	

Roadway Supplemental Workday Estimate

BL-0071A — TIP NUMBER

STANTEC CONSULTING SERVICES INC — FIRM

SUPPLEMENTAL REASON, Key the reason on the OVERALL SUMMARY worksheet

w in green are standard tasks following standard scopes. The tasks should not be modified unless this hat case they can be written over or deleted but do not cut/paste. Keep tasks in the correct phase 2RD1/2RDs, 3RD1, 4RD1.	TOTAL EMPLOYEE	WORKDAYS (SS)	
Description	CLASSIFICATION	PROJECT ENGINEER	**NOTES:**
2RD2 - SUPPLEMENTAL	WORKDAYS		
3RD1 - SUPPLEMENTAL	WORKDAYS		**NOTES:**
4RD1 - SUPPLEMENTAL	WORKDAYS		**NOTES:**
TOTAL ESTIMATED WORKDAYS:	**TOTAL**	**WORKDAYS**	
	CLASSIFICATION	PROJECT ENGINEER	

Roadway Lighting Workday Estimate

BL-0071A TIP NUMBER

STANTEC CONSULTING SERVICES INC FIRM

elow in green are standard tasks following standard scopes. The tasks should not be modified unless In that case they can be written over or deleted but do not cut/paste. Keep tasks in the correct phase 2RD1/2RDs, 3RD1, 4RD1.	TOTAL	WORKDAYS									
	EMPLOYEE	(SS)	(MF)	(TH)							
Description	CLASSIFICATION	PROJECT ENGINEER	DESIGN ENGINEER	ENGINEER ADVANCED							**NOTES:**
2RD2	WORKDAYS										
Initial Lighting Assessment											
Lighting Evaluation											
Coordinate with local government on lighting needs											
2RD1 Misc. Item:											
2RD1 Misc. Item:											
2RD1 Misc. Item:											
TOTAL STAGE 2 WORKDAYS											

3RD1	WORKDAYS										**NOTES:**
Complete Lighting Layout											
Lighting Design Package											
3RD1 Misc. Item:											
3RD1 Misc. Item:											
3RD1 Misc. Item:											
3RD1 Misc. Item:											
TOTAL STAGE 3 WORKDAYS											

TOTAL ESTIMATED WORKDAYS:	TOTAL	WORKDAYS								
	CLASSIFICATION	PROJECT ENGINEER	DESIGN ENGINEER	ENGINEER ADVANCED						

☑ PLEASE CHECK IF THIS IS THE INITIAL ESTIMATE

TIP NUMBER : BL-0071A
COUNTY : GUILFORD
FIRM: STANTEC CONSULTING SERVICES INC

ROADWAY INITIAL PEF DIRECT & IN-DIRECT SALARY COST

CLASSIFICATION	EMPLOYEE NAME	WORKDAYS		RATE / HOUR	COST
PROJECT ENGINEER	(SS) Steve Smallwood	49.50	x	$ 77.13	$ 30,543.48
DESIGN ENGINEER	(MF) Matt Ferguson	72.00	x	$ 52.57	$ 30,280.32
ENGINEER ADVANCED	(TH) Thomas Hoppe	41.50	x	$ 36.86	$ 12,237.52
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**163.00**			
Total Direct Salary					$ 73,061.32
Overhead				165.25%	$ 120,732.37
Subtotal					$ 193,793.69
Fee				9.00%	$ 17,441.43
Cost of Capital				0.19%	$ 135.16
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ 211,370.29**
TOTAL DIRECT NON-SALARY COST					**$ 117.90**
TOTAL ROADWAY COST					**$ 211,488.19**

Notes:
Rate = Rate Per Workhour
Direct Salary = Workdays x Rate x 8
OH = OH Rate (as approved by the Fiscal Section) x Total Direct Salary
Subtotal = Direct Salary + OH
Fee = 9% x Subtotal
COC = COC Rate (as approved by the Fiscal Section) x Total Direct Salary
Total Direct and Indirect Salary Costs = Subtotal + Fee + COC
Total Direct Non-Salary Costs is calculated on the "TRAVEL & MISC." tab
Total Roadway Costs = Total Direct & Indirect Salary Costs + Total Direct Non-Salary Costs

SUPPLEMENTAL ONLY

INITIAL PEF DIRECT & IN-DIRECT SALARY COST

CLASSIFICATION	EMPLOYEE NAME	WORKDAYS		RATE / HOUR	COST
PROJECT ENGINEER	(SS) Steve Smallwood	0.00	x	$ 77.13	$ -
DESIGN ENGINEER	(MF) Matt Ferguson	0.00	x	$ 52.57	$ -
ENGINEER ADVANCED	(TH) Thomas Hoppe	0.00	x	$ 36.86	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**0.00**			
Total Direct Salary					$ -
Overhead				165.25%	$ -
Subtotal					$ -
Fee				9.00%	$ -
Cost of Capital				0.19%	$ -
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ -**

EXCLUDING SUPPLEMENTAL

INITIAL PEF DIRECT & IN-DIRECT SALARY COST

CLASSIFICATION	EMPLOYEE NAME	WORKDAYS		RATE / HOUR	COST
PROJECT ENGINEER	(SS) Steve Smallwood	49.50	x	$ 77.13	$ 30,543.48
DESIGN ENGINEER	(MF) Matt Ferguson	72.00	x	$ 52.57	$ 30,280.32
ENGINEER ADVANCED	(TH) Thomas Hoppe	41.50	x	$ 36.86	$ 12,237.52
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**163.00**			
Total Direct Salary					$ 73,061.32
Overhead				165.25%	$ 120,732.37
Subtotal					$ 193,793.69
Fee				9.00%	$ 17,441.43
Cost of Capital				0.19%	$ 135.16
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ 211,370.29**

RIGHT OF WAY PLAN COSTS

INITIAL PEF DIRECT & IN-DIRECT SALARY COST

CLASSIFICATION	EMPLOYEE NAME	WORKDAYS		RATE / HOUR	COST
PROJECT ENGINEER	(SS) Steve Smallwood	37.50	x	$ 77.13	$ 23,139.00
DESIGN ENGINEER	(MF) Matt Ferguson	59.00	x	$ 52.57	$ 24,813.04
ENGINEER ADVANCED	(TH) Thomas Hoppe	38.50	x	$ 36.86	$ 11,352.88
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**135.00**			
Total Direct Salary					$ 59,304.92
Overhead				165.25%	$ 98,000.19
Subtotal					$ 157,305.11
Fee				9.00%	$ 14,157.46
Cost of Capital				0.19%	$ 109.71
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ 171,572.29**
TOTAL ROADWAY RIGHT OF WAY PLAN COST					**$ 171,572.29**

FINAL PLAN COSTS

INITIAL PEF DIRECT & IN-DIRECT SALARY COST

CLASSIFICATION	EMPLOYEE NAME	WORKDAYS		RATE / HOUR	COST
PROJECT ENGINEER	(SS) Steve Smallwood	12.00	x	$ 77.13	$ 7,404.48
DESIGN ENGINEER	(MF) Matt Ferguson	13.00	x	$ 52.57	$ 5,467.28
ENGINEER ADVANCED	(TH) Thomas Hoppe	3.00	x	$ 36.86	$ 884.64
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**28.00**			
Total Direct Salary					$ 13,756.40
Overhead				165.25%	$ 22,732.18
Subtotal					$ 36,488.58
Fee				9.00%	$ 3,283.97
Cost of Capital				0.19%	$ 25.45
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ 39,798.00**
TOTAL DIRECT NON-SALARY COST					**$ 117.90**
TOTAL ROADWAY FINAL PLAN COST					**$ 39,915.90**

ROADWAY TRAVEL AND MISCELLANEOUS COSTS

FIRM:	STANTEC CONSULTING SERVICES INC	TIP NUMBER:	BL-0071A

(A) * BOND (includes DOT and Firm's Record Sets)

	SUBMITTAL	NO. SHTS.		SETS		TOTAL SHTS.
	Stage 1 (1RD1)					
	Plans		x		=	0
	Interchange Sheets		x		=	0
	Cross-Sections (11x17)		x		=	0
	Stage 2 (2RD1, 2RD2)					
	Plans		x		=	0
	Interchange Sheets		x		=	0
	Cross-Sections (11x17)		x		=	0
	Stage 3 (3RD1)					
	Plans		x		=	0
	Interchange Sheets		x		=	0
	Cross-Sections (11x17)		x		=	0
	Stage 4 (4RD1)					
	Plans		x		=	0
	Interchange Sheets		x		=	0
	Cross-Sections (11x17)		x		=	0
	PEF's Work Sets					
	Plans		x		=	0
	Interchange Sheets		x		=	0
	Cross-Sections (11x17)		x		=	0

+	TOTAL PLANS (22" x 34")	0	x	$ 0.42	/ sheet	=	$ -
+	TOTAL INTERCHANGE SHEETS (34" x 68")	0	x	$ 3.50	/ sheet	=	$ -
+	TOTAL CROSS-SECTIONS (11" x 17")	0	x	$ 0.15	/ sheet	=	$ -

(B) XEROX

+	TOTAL XEROX COPIES (Say)		x	$ 0.09	/ sheet	=	$ -
+	COVERS & BINDING (Say)		x	$ 1.00	/ set	=	$ -

TOTAL REPRODUCTION (A + B) = $ -

(C) TRAVEL

	PURPOSE of TRIP	TRIPS		MILES		TOTAL		RATE		COSTS
+	Preliminary Field Review		x		=	0.00	x	$ 0.655	=	$ -
+	Public Meeting/Hearing/Workshops		x		=	0.00	x	$ 0.655	=	$ -
+	Field Inspections (Preliminary, Combined, Final)		x		=	0.00	x	$ 0.655	=	$ -
+	Scheduled Reviews/Miscellaneous Meetings with NCDOT		x		=	0.00	x	$ 0.655	=	$ -
+	Miscellaneous Local Meetings(Pre Bid)	1	x	180.00	=	180.00	x	$ 0.655	=	$ 117.90
+			x		=	0.00	x	$ 0.655	=	$ -
+			x		=	0.00	x	$ 0.655	=	$ -

	PER DIEM	TRIPS		# ATTEND		TOTAL		RATE		COSTS
+	Breakfast		x		=	0	x	$ 9.00	=	$ -
+	Lunch		x		=	0	x	$ 11.80	=	$ -
+	Dinner		x		=	0	x	$ 20.50	=	$ -
+	Lodging		x		=	0	x	$ 85.00	=	$ -

(D) MISC.

	LIST	NUMBER		RATE		COSTS
+	Postage		x		=	$ -
+			x		=	$ -
+			x		=	$ -

TOTAL TRAVEL & MISCELLANEOUS COSTS (C + D) = $ 117.90

TOTALS

TOTAL REPRODUCTION =	**$ -**
TOTAL TRAVEL & MISCELLANEOUS COSTS (C + D) =	**$ 117.90**
TOTAL DIRECT NON-SALARY COSTS =	**$ 117.90**

NOTES

* Use only items that are not included in overhead.

\+ See DOT Guidelines for current maximum allowable non-salary direct costs.

EROSION CONTROL

PEF NAME: SUNGATE DESIGN GROUP PA

PREPARED BY: _____ DATE: _____

SUBMITTED BY: _____ DATE: _____

TIP NUMBER: BL-0071A

PROJECT NUMBER: 0

COUNTY: GUILFORD

FA NUMBER: 710043

PROJECT DESCRIPTION: **Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue**

		ESTIMATED WORKHOURS						
TASK	CLASSIFICATION	PROJECT MANAGER	PROJECT ENGINEER	DESIGN ENGINEER	SENIOR TECH.	TECH. / DRAFT.		
	EMPLOYEE NAME	(JD)	(BE)	(ME)	(JH)	(DS)	TOTAL	NOTES
1.2	Water Quality Worksheet			2			2	
1.3	Environmental Document Review			2			2	
3.0	Field Inspection Plans for Clearing & Grubbing and Final Construction Phases	2	8	16	4	8	38	
5.0	Review Field Inspection E&SC Plan Set and Attend Field Inspection		2				2	
8.0	Complete QC/QA Procedures	2					2	
1.1	E&SC Plans for Clearing and Grubbing (C&G)		4	4			8	
1.3	E&SC Plans for Final Construction Phase		4	4			8	
1.4	Calculate Matting Requirements for Ditches and Slopes					2	2	
1.5	Add details, notes, and vegetation management Plans				4		4	
2.0	Calculate Final E&SC Qualities and Develop Project Specific E&SC Special	2	4			4	10	
3.0	Apply for other Applicable Permits Related to the E&SC Plans	2		8		8	18	DEQ Permit Package
5.0	Complete QC/QA Procedures	2					2	
	TOTAL WORKHOURS	10	22	36	8	22	98	12.25
							WORKHOURS	WORKDAYS
	Rates	$64.00	$60.00	$42.00	$43.00	$37.00		
	Cost	$640.00	$1,320.00	$1,512.00	$344.00	$814.00		

Total Salary Cost		$4,630.00
Overhead Rate	200.10%	$9,264.63
Subtotal		**$13,894.63**
Fee	9.00%	$1,250.52
Cost of Capital	0.1400%	$6.48
TOTAL SALARY COST		**$15,151.63**

EROSION CONTROL DIRECT COSTS

A. PRINTING

	No. of Sets	Sheets per Set	Total Sheets	Cost per Sheet	Cost
Full-size Final Review Plans	2	24	48	$0.42	$20.16
Half-size Final Review Plans	2	24	48	$0.15	$7.20
Full-size Final Plans	2	24	48	$0.42	$20.16
Half-size Final Plans	2	24	48	$0.15	$7.20
Permit Fees	1 LS			$1,000.00	$1,000.00
TOTAL DIRECT NON-SALARY COSTS =					**$1,054.72**

TOTAL DIRECT SALARY AND NON-SALARY COSTS = **$16,206.35**

RAIL DIVISION BREAKDOWN WORKSHEET -- ENTER WORKHOURS

PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue	FIRM:	STANTEC CONSULTING SERVICES INC	TASK ORDER NUMBER: 0	DATE PREPARED:
PREPARED BY:		TIP NUMBER:	BL-0071A	WBS NUMBER: 50651.1.1 :	REVISION DATE:

TASK TYPE: Planning

TASK NO.	TASK DESCRIPTION	EMPLOYEE NAMES / CLASSIFICATION	(RW) TRANS. ENG. 2 (ENVIRO. SPVR. 2) (TE II) (ES II)											SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
	You selected Planning. When the task is ALL CAPS, this is a header row, if you choose to key mandays associated with that header row the row total will not be displayed but the column and overall total will sum appropriately		**ESTIMATED WORKHOURS**														
1	Rail Coordination (up to 80 hours)		80.00											80.00	100.00%		
2	PORT MASTER PLAN REVIEW																
3	RAIL INVENTORY AND REVIEW OF EXISTING OPERATIONS																
4	CAPACITY AND VELOCITY																
5	RAIL INFRASTRUCTURE IMPROVEMENTS																
6	DEVELOP SUGGESTIONS FOR OPERATIONAL AND LOGISTICAL ENHANCEMENTS																
7	ENVIRONMENTAL SCREENING																
8	ESTIMATE PROJECT SCENARIO BENEFITS																
9	GENERATE DATA NEEDED FOR SCORING IN STI																
10	IDENTIFY POTENTIAL PROJECTS FOR FEDERAL PROGRAMS																
11	PREPARE PROGRAM OF PROJECTS																
12	STAKEHOLDER INVOLVEMENT																
13	SCHEDULE																
14	REPORT																
15	PROJECT COORDINATION																
16	TRUCK ALTERNATIVE ROUTE ANALYSIS																
17	FEASIBILITY STUDY																
	TOTAL WORKHOURS/CATEGORY:		80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.00	100.00%	0.00	
	TOTAL WORKDAYS/CATEGORY:		10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
	HOURLY SALARY RATE:		$73.21	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$585.68	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$5,856.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	TOTAL WORKDAYS:		10.00														
	TOTAL PAYROLL BURDEN:		$5,856.80														
	AVERAGE COST PER HOUR:		$73.21														
	GENERAL OVERHEAD:	**165.25%**	$9,678.24														
	SUBTOTAL:		$15,535.04														
	COMPARATIVE FEE:	**9.00%**	$1,398.15														
	FACILITIES COST OF CAPITAL:	**0.1850%**	$10.84														
	TOTAL:		$16,944.03														
	DIRECT EXPENSES:		$0.00														
	RAIL GRAND TOTAL:		**$16,944.03**														

RAIL--PRIME DIRECT EXPENSES

TIP NUMBER BL-0071A FIRM: STANTEC CONSULTING SERVICES INC

GENERAL PROJECT WORK:	ITEM		QTY	DESCRIPTION		UNIT COST	
	Travel:						
		Sedan	0 Trip(s) @		0 miles @	$0.655	$0.00
		Carry All	0 Trip(s) @		0 miles @	$0.675	$0.00
		Car Rental			0 days @	$50.00	$0.00
MAPS AND DOCUMENTS:	ITEM		QTY	DESCRIPTION		UNIT COST	-
Miscellaneous Other	ITEM		QTY	DESCRIPTION		UNIT COST	-
							-
							-
	*** Sum of all plots**						-

MDEST6.XLS SIGNING ESTIMATE WORKSHEET
REV 07-14-11

DATE:
TIP #: BL-0071A

CONSULTANT: ALTA PLANNING + DESIGN
PROJECT #: XXXXXX
PREL EST WORKDAYS: **2.00**

0 >UTILITY

EST SIGNING RDWY SHEETS:	# DAYS FIELD TRIPS:	(PRELIM)	
TOTAL SIGN PLAN SHEETS:	# DAYS FIELD TRIPS:	(SUPPORTS)	TOTAL # OF SIGNS NEEDING SUPPORTS: 0.00
# OH STRUCTURES:	# A&B GRND-MT SIGNS:		
# DMS STRUCTURES:	# A&B OVERHEAD SIGNS:		
# Y-LINES - INTERCHANGE:	# D SIGNS		
# Y-LINES - AT GRADE:	SIGNS / SUPPORTS ONLY		
(only count -Y-lines requiring more than a stop sign)	TOT.# A,B,D SIGNS:	0	

ALLOWED ROUNDTRIP MILEAGE PER TRIP: MILES

		ESTIMATED WORKHOURS							
TASK	EMPLOYEE CLASSIFICATION	(MR)	(BB)	(EB)					TOTAL	NOTES
Wayfinding		2.000	2.000	12.000					16.000	
TOTAL WORKHOURS		2.000	2.000	12.000	0.000	0.000	0.000	0.000	16.000	
TOTAL WORKDAYS		0.250	0.250	1.500	0.000	0.000	0.000	0.000	2.000	
		---	---	---	---	---	---	---	---	
TOTAL WORKDAYS									**2.000**	

AVERAGE STANDARD RATE PER HOUR

CLASSIFICATION	A NO.WORKDAYS	B % TOT WD	C RATE	D FACTOR	EMPLOYEE NAMES	(B*C)/D AVG STD RATE
	0.250	0.125	$74.32	1.000	(MR)	$9.29
	0.250	0.125	$53.69	1.000	(BB)	$6.71
	1.500	0.750	$37.50	1.000	(EB)	$28.13
TOTAL	2.000	1.000				$44.13

SALARIES	=	(AVG STD RATE)(WORKDAYS)(8 HRS)=		$706.02
OVERHEAD	=	(XXX.XX%)(SALARIES)	= 155.42%	$1,097.30
FEE	=	(9%)(SALARIES+OVERHEAD)	= 0.09	$162.30
FACILITIES COST OF CAPITAL	=		0.5000%	$3.53
TOT. DIR. SALARY COST	=	(SALARIES+OVERHEAD+FEE)	=	$1,969.14

		RATE	COST
TRAVEL:	0	TRIPS x	
TOTAL DIRECT NON-SALARY COST -		=	$0.00

TOTAL ESTIMATE	=	$1,969.14
COST PER WORKDAY	=	984.57

CONSULTANT'S TOTAL =	$1,969.14
CONSULTANT'S TOTAL - TOTAL COST IN_HOUSE ESTIMATE / TOTAL COST IN_HOUSE ESTIMATE =	0.00%

ESTIMATE PREPARED BY: _____ DATE: _____

ITS - FIBER

ITS - FIBER WITH WIRELESS

ITS - FIBER W

FIBER AND/OR WIRELESS COMMUNICATIONS

ITS - FIBER WITH WIRELESS

SCOPING ESTIMATE PREPARED

FOR

TIP: BL-0071A | **WBS: 50651.1.1 :**

COUNTY: GUILFORD

Project Description: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

FIRM: STANTEC CONSULTING SERVICES INC

RMM

5/24/2023

		ESTIMATED WORK HOURS							
	POSITION	**TEM II**	**TES III**	**TE III**	**TE III**	**TE II**			
TASK	**EMPLOYEE NAME**	**(LO)**	**(JG)**	**(RM)**	**(DW)**	**(JH)**		**SUBTOTAL OF**	
NUMBER	**RATE**	**$ 70.34**	**$ 66.86**	**$ 51.45**	**$ 49.55**	**$ 44.36**	**$ -**	**HOURS BY TASK**	**NOTES**
1.1	Coordination and Discussions with NCDOT	1	4		8			**13**	
2.1	Develop Base Map Drawings for Cable Routing Plans/Radio Plans		4		12	8		**24**	
3.1	Field Survey to Identify Possible Cable Routing Path, Utility Conflicts and if Applicable, Verify Elements Involved with Tying the Intersections into an Existing System		8	8				**16**	
Task 4.0	**UTILITY MAKE-READY PLANS**								
6.1	Develop Preliminary Plans and Details for Communications Cable Routing Plans		8		16	8		**32**	
6.2	Prepare Preliminary Splice Plans		4		6			**10**	
8.1	Develop Preliminary Specifications	1	2					**3**	
8.2	Develop Preliminary Quantities Estimate	0.5	2		6			**8.5**	
8.3	Preliminary Quality Control & Review	1	2	2				**5**	
10.1	Prepare Final Plans and Details for Communications Cable Routing and Wireless Communications	1	4		8			**13**	
10.2	Prepare Final Splice Plans	2	2	3				**7**	
10.3	Prepare Final Specifications		1	1				**2**	
10.4	Prepare Final Quantities Estimate		1	2				**3**	
10.5	Final Quality Control & Review	1	2	2				**5**	
11.1	Submit Final Plans and Data		4	4				**8**	
	TOTAL HOURS	**7.5**	**48**	**22**	**56**	**16**	**0**	**149.5**	
	TOTAL WORKDAYS	**0.9375**	**6**	**2.75**	**7**	**2**	**0**	**18.6875**	
	TOTAL RAW LABOR	**$ 527.55**	**$ 3,209.28**	**$ 1,131.90**	**$ 2,774.80**	**$ 709.76**	**$ -**	**$ 8,353.29**	
	Contract Overhead Rate	**165.25%**						**165.25%**	
	Overhead Cost							**$ 13,803.64**	
	Fee	**9.00%**						**$ 1,994.12**	
	FCCM	**0.1850%**						**$ 15.45**	
	TOTAL RAW LABOR							**$ 24,166.51**	
	DIRECT EXPENSES							**$ -**	

ITS - FIBER

ITS - FIBER WITH WIRELESS

ITS - FIBER W

FIBER AND/OR WIRELESS COMMUNICATIONS

ITS - FIBER WITH WIRELESS

SCOPING ESTIMATE PREPARED

FOR

TIP: BL-0071A | **WBS: 50651.1.1 :**

COUNTY: GUILFORD

Project Description: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue

FIRM: STANTEC CONSULTING SERVICES INC

RMM

5/24/2023

ESTIMATED WORK HOURS

TASK NUMBER	POSITION / EMPLOYEE NAME / RATE	TEM II (LO) $ 70.34	TES III (JG) $ 66.86	TE III (RM) $ 51.45	TE III (DW) $ 49.55	TE II (JH) $ 44.36	$ -	SUBTOTAL OF HOURS BY TASK	NOTES
	CABLE ROUTING ESTIMATE							**$ 24,166.51**	

Direct Cost Computation

	Qty.		Unit Cost	Sub-Total
Total Phase Cost				**$0.00**

Signal Design Scoping Cost Estimate
FOR
TIP: BL-0071A | ***WBS: 50651.1.1 :***
COUNTY: GUILFORD

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue
FIRM: STANTEC CONSULTING SERVICES INC

Prepared By: Regina Muncey
Date: 5/24/2023

ESTIMATED WORKHOURS (SECTIONS BELOW INDICATE "WORKHOURS PER PLAN" OR "WORKHOURS PER PROJECT")

TASK NUMBER	CLASSIFICATION	TEM II	TES III	TE III	TE III	TE II						TOTAL	NOTES
	EMPLOYEE NAME	(BW)	(JG)	(RM)	(DW)	(JH)							
	SALARY RATE	$90.39	$66.86	$51.45	$49.55	$44.36	$0.00	$0.00	$0.00	$0.00	$0.00		
	Traffic Signal Plan Preparation	WORKHOURS PER PLAN											
	Subtotal	3.5	7	28	0	0	0	0	0	0	0	**38.5**	
	Subtotal	4.5	9	18	0	0	0	0	0	0	0	**31.5**	
	Subtotal	0	10	14	8	0	0	0	0	0	0	**32**	
	Subtotal	2	4	4	0	0	0	0	0	0	0	**10**	
	Total Workhours for 2SG1	10	30	64	8	0	0	0	0	0	0	**112**	
	Subtotal	0	63	72	162	0	0	0	0	0	0	**297**	
	Subtotal	0	18	36	36	0	0	0	0	0	0	**90**	
	Subtotal	0	14	0	28	0	0	0	0	0	0	**42**	
	Subtotal	1.5	2	4	8	6	0	0	0	0	0	**21.5**	
	Subtotal	0	20	16	8	0	0	0	0	0	0	**44**	
	Subtotal	4	16	8	0	0	0	0	0	0	0	28	
	Total Workhours	15.5	163	200	250	6	0	0	0	0	0	634.5	
	Total Workdays	1.9375	20.375	25	31.25	0.75	0	0	0	0	0	**79.3125**	
	Total Labor Cost	$1,401.05	$10,898.18	$10,290.00	$12,387.50	$266.16	$0.00	$0.00	$0.00	$0.00	$0.00	**$35,242.89**	
	General Overhead	**165.25%**										**$58,238.16**	
	Comparative Fee	**9%**										**$8,413.29**	
	Facilities Cost of Capital	**0.1850%**										**$65.20**	
	Signal SALARY Subtotal											**$101,959.54**	

Signal Design Scoping Cost Estimate
FOR
TIP: BL-0071A ***WBS: 50651.1.1 :***
COUNTY: GUILFORD

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue
FIRM: STANTEC CONSULTING SERVICES INC

Prepared By: Regina Muncey
Date: 5/24/2023

ESTIMATED WORKHOURS (SECTIONS BELOW INDICATE "WORKHOURS PER PLAN" OR "WORKHOURS PER PROJECT")

TASK	CLASSIFICATION	TEM II	TES III	TE III	TE III	TE II						TOTAL	NOTES
	EMPLOYEE NAME	(BW)	(JG)	(RM)	(DW)	(JH)							
	SALARY RATE	$90.39	$66.86	$51.45	$49.55	$44.36	$0.00	$0.00	$0.00	$0.00	$0.00		
	Direct Cost											$0.00	
	PROJECT TOTAL											$101,959.54	

NON-SALARY DIRECT COSTS

Signals

REPRODUCTION

Xerox Copies (8.5" x 11")													
Draft/Final Special Provisions		Sets	X		Sheets/Set	X	$0.09	per Sheet	=	$	-	
Miscellaneous (Corres., etc.)					Sheets	X	$0.09	per Sheet	=	$	-	
Xerox Copies (11" x 17")													
Draft Final (90%) Signal Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Final Signal Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Draft Final UMR Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Final UMR Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Draft Final Cable Routing Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Final Cable Routing Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Bond Prints (22" x 34")													
Draft Final (90%) Signal Plans		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Final Signal Plans		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Draft Final Cable Routing Plans		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Final Cable Routing Plans		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	

MILEAGE

FIELD VISIT Trips		Trips	X		Miles/Trip	X	$0.655	per Mile	=	$	-
Garner - NCDOT (LOCAL) Trips		Trips	X		Miles/Trip	X	$0.655	per Mile	=	$	-

PER DIEM

LODGING		Persons	X		LODGING	X	$85.00		=	$	-
BREAKFAST		Persons	X		BREAKFAST	X	$9.00		=	$	-
LUNCH		Persons	X		LUNCH	X	$11.80		=	$	-
DINNER		Persons	X		DINNER	X	$20.50		=	$	-

OTHER

Film & Developing		Rolls	X	$20	per Roll				=	$	-
Postage & Courier			X						=	$	-
Long Distance Phone			X						=	$	-
			X						=	$	-
			X						=	$	-
			X						=	$	-
			X						=	$	-
			X						=	$	-
								Total		$	-

Title Sheet	
Signal Plan	
Metal Pole	
Wiring Diagrams	
Total Signal Sheets	***0***
Construction Notes	FORMULAE to DIRECT COST SHEET.
Cable Routing	
Splice Diagrams	
Misc Details	
Total Cable Routing Sheets	***0***
Title Sheet	
UMR	
Total Cable Routing Sheets	***0***
Total Sheets	**0**

ESTIMATED WORKHOURS FOR PREPARING BRIDGE PLANS

County: GUILFORD	TIP# BL-0071A	Firm: ITEC CONSULTING SERVICE
Prepared By:	Date:	Chk. By:

EMPLOYEE	(TD)	(BE)	(VF)	(JG)						
Task CLASSIFICATION	Trans. Eng. Supervisor II	Trans. Engineer III	Trans. Engineer I	Trans. Technician V			Subtotal	Superstructure Drafting Details	Draft	NOTES
Site Visit & Develop Site Data		8	16				24			Site visit for bridge reconossaince to capture details not recordable by field survey
Layout File Development		8	16				24			
Revised Loading Analysis	8	20	40				68			Development of revised loads, beam analysis model, review of existing load ratings, deve
Demolition Plan	4	12	24	16			56			Demolition details for the removal of sidewalk, railing, lighting, and utility coordination
Sidewalk Design	4	8	16	2			30			
Sidewalk Drafting & Details	4		16	32			52			Development of plan, details for sidewalk installation, including aesthetic design
Exp. Joint Design	2	4					6			
Exp. Joint Drafting	1	2	8	12			23			
Utility Coordination/Design	2	4	4	8			18			
Bridge Railing Design	2	8	16				26			Assumed design of texas classic aesthetic railing
Bridge Rail Drafting		2	16	32			50			
End of Bridge Railing/Wall Details	1	4	8				13			
End of Bridge Railing Design/Draft		4	8	16			28			Coordination of railing design at end of curved/flared end of bridge
Lighting Design/Drafting	4	4	8	16			32			
Railroad Coordination	2	4					6			
Project Team Coordination	2	2	2	2			8			
Plan Submission & Responses			2	4			6			
Coordination with High Point	1	2					3			
Total Workhours = 473	37	96	200	140			473			

ESTIMATED COSTS FOR PREPARING BRIDGE PLANS

Class	Workhours	Rate/Hour	Total
Trans. Eng. Supervisor II	37	$75.73	$ 2,802.01
Trans. Engineer III	96	$50.96	$ 4,892.16
Trans. Engineer I	200	$50.49	$ 10,098.00
Trans. Technician V	140	$43.28	$ 6,059.20
Total Workhours	473	TOTAL WORKDAYS 59.13	

		Subtotal	=	$ 23,851.37
% Overhead =	165.25%	Additives & Overhead	=	$ 39,413.91
		Subtotal	=	$ 63,265.28
% Fee =	9.00%	Profit	=	$ 5,693.88
C. of C. =	0.1850%	Cost of Capital	=	$ 44.13
		Subtotal	=	$ 69,003.28
Non-Salary Cost:		Non Salary Costs	=	$ 53.60
		Total Cost	**=**	**$ 69,056.88**

FOR NCDOT USE ONLY.

DIRECT COSTS

Paper copies

	Number		Cost		
8-1/2"x11"	100	x	$ 0.09	$	9.00
11"x17"	20	x	$ 0.15	$	3.00
Breakfast	2	x	$ 9.00	$	18.00
Lunch	2	x	$ 11.80	$	23.60

TOTAL = $ 53.60

WZTC Cost Estimate

Type:		STANTEC CONSULTING SERVICES INC	
TIP Project:	BL-0071A	Estimate Date:	
WBS #:	**50651.1.1 :**	Estimator:	

TASKS	CLASSIFICATIONS	TEM I	TES III	TE II				TOTAL	NOTES
		Workday Estimate							
	EMPLOYEES' NAMES	(BW)	(JW)	(DR)					
2TM2	**Initiate Transportation Management Plan**								
	Analyze Design Recommendation Plan Set, including Roadway, Preliminary Bridge General Drawings, and Hydraulic Design		1	1				2.00	
	Coordinate as necessary with other disciplines/units		1	1				2.00	
	Determine Work Zone Capacity, Lane and Road Closure Time Restrictions		0.25	0.25				0.50	
	Determine Traffic management Strategy for vehicular traffic and pedestrians		1.5	1.5				3.00	
	Concept Sketches, including overviews and cut sections	0.5	2	15				17.50	
	Preliminary General notes that include proposed lane and road closure time restrictions and hauling restrictions		0.25	0.5				0.75	
	Written Construction Staging		0.25	0.5				0.75	
	Set up and lead meeting in accordance with guidance in 2TM2		0.5	0.5				1.00	
	Prepare and distribute agenda, meeting minutes, and action items to complete final TTC plans			0.25				0.25	
3.0	Task Management		1					1.00	
4.0	Complete QC Procedures	0.5						0.50	
	Other Meetings		1					1.00	
3TM1	**Complete Transportation Management Plan**			**Workday Estimate**					
	Coordinate as necessary with other disciplines/units		1	0.5				1.50	
	Final TMP Title sheet/Legend/List of Roadway Standard Drawings		0.25	0.5				0.75	
	Final General Notes/Local Notes/Transportation Management Strategies		0.25	0.5				0.75	

WZTC Cost Estimate

Type:		STANTEC CONSULTING SERVICES INC	
TIP Project:	BL-0071A	Estimate Date:	
WBS #:	**50651.1.1 :**	Estimator:	

		Workday Estimate							
TASKS	**CLASSIFICATIONS**	**TEM I**	**TES III**	**TE II**				*TOTAL*	*NOTES*
	EMPLOYEES' NAMES	(BW)	(JW)	(DR)					
	Final Written Phasing		0.5	0.5				1.00	
	Final Offsite Detour Details		0.5	2				2.50	
	Final Special Details		0.25	0.5				0.75	
	Final Traffic Control Details/Overviews/Cut Sections		2	7				9.00	
	Draft Quantity Estimate		0.5	0.75				1.25	
	Draft Intermediate Contract Times		0.25	0.25				0.50	
	Management Plan, Draft Estimate, Provisions, and ICTs for Review	0.5						0.50	
	Sealed Transportion Managemt Plan	0.5	1.5	3				5.00	
	Sealed Special Provisions		0.25					0.25	
	Final Quantity Estimate		0.25	0.25				0.50	
	Final Intermediate Contract Time Documents		0.25	0.25				0.50	
3.0	Task Management		1					1.00	
4.0	Complete QC Procedures	0.5	0.5					1.00	
	ENGINEERING RATES	**$90.39**	**$71.25**	**$44.42**	**$0.00**	**$0.00**	**$0.00**		
Total Workdays:		2.50	18.00	36.50	0.00	0.00	0.00	**57.00**	
Direct Salary (w/o Overhead):		$1,807.80	$10,260.00	$12,970.64	$0.00	$0.00	$0.00	**$25,038.44**	
Overhead *		**165.25%**						**$41,375.52**	
TOTAL Direct Salary + Overhead		**$66,413.96**							

Cost of Capital:		**0.1850%**	**=**	**$46.32**
Escalation :	**0** **Yrs**	**0.00%**	**=**	**$0.00**
Fee:		**9.00%**	**=**	**$5,977.26**
	TOTAL Indirect Costs		**=**	**$6,023.58**

TOTAL Direct Salary + Overhead + Indirect Costs	**=**	**$72,437.54**

TOTAL Non-salary Direct Costs:	**=**	**$0.00**

WZTC Cost Estimate

Type:		STANTEC CONSULTING SERVICES INC	
TIP Project:	BL-0071A	Estimate Date:	
WBS #:	**50651.1.1 :**	Estimator:	

		Workday Estimate							
TASKS	**CLASSIFICATIONS**	**TEM I**	**TES III**	**TE II**				*TOTAL*	*NOTES*
	EMPLOYEES' NAMES	(BW)	(JW)	(DR)					
TOTAL COST ESTIMATE:				**=**	**$72,437.54**				

	Workdays	Cost
NCDOT Estimate	**57.00**	**$72,437.54**
PEF Estimate	**57.00**	**$72,437.54**
% Difference	**0.00%**	**0.00%**

A.	*** REPRODUCTION COSTS**										
	SUBMITTALS:	**SHEETS**	**x**	**SETS**	**=**	**Total**	**@**	**Each**	**=**	**Cost**
	25% - Staging									
	Full-Size Bond	0	x	0	=	0	@	$0.42	=	$0.00
	Half-Size 11x17	0	x	0	=	0	@	$0.15	=	$0.00
	Full-Size Bond **(COLOR)**	0	x	0	=	0	@	$3.00	=	$0.00
	OTHER:	**SHEETS**	**x**	**SETS**	**=**	**Total**	**@**	**Each**	**=**	**Cost**
	MISCELLANEOUS XEROX COPIES	**SHEETS**					**@**	**Each**	**=**	**Cost**
	PURPOSE of TRIP	**TRIPS**	**x**	**MILES**	**x**	**RATE**				**COST**
2.	**SUBTOTAL MISCELLANEOUS COSTS**								**=**	$0.00
B.	**TOTAL TRAVEL & MISCELLANEOUS COSTS**								**=**	**$0.00**
A+B.	**TOTAL DIRECT NON-SALARY COSTS (sent to 'Salary & Total Cost' Sheet):**								**=**	**$0.00**

** Use Only Items That Are Not Included In Overhead
See Engineering Guidelines for current max.allowable non-salary direct costs

CONGESTION MANAGEMENT DESIGN BREAKDOWN WORKSHEET

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue | FIRM: STANTEC CONSULTING SERVICES INC | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071A | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	EMPLOYEE CLASSIFICATION PLEASE KEY THE CLASSIFICATION RATES ON THE PEF CLASSIFICATION SHEET PRIOR TO GETTING STARTED	ESTIMATED WORK DAYS (MP) Traffic Unit Head (TM-1)	(JW) Project Engineer Sup. (TES-3)	(PT) Project Engineer Sup. (TES-2)	(RC) Project Engineer (TE-3)	Project Engineer (TE-2)	Project Engineer (TE-1)						SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
	HCS SYNCRO SIDRA																
1	PROJECT MANAGEMENT, COORDINATION AND ADMINISTRATION																
1.1	Project Management and Administration		0.25	0.38	0.38	1.00	0.00	0.00						2.00	8.60%		
1.2	Project Coordination		0.13	0.13	0.13	0.50	0.00	0.00						0.88	3.76%		
1.3	Subconsultant Coordination		0.13	0.13	0.13	0.50	0.00	0.00						0.88	3.76%		
2	DATA COLLECTION AND FIELD VISIT																
2.1	Data Collection		0.13	0.13	0.13	0.38	0.00	0.00						0.75	3.23%		
4	20XX BASE YEAR MODEL																
4.2	Synchro Analysis		0.50	0.75	0.88	2.00	0.00	0.00						4.13	17.74%		
6	20XX BUILD ANALYSIS																
6.2	Synchro Analysis		0.50	0.75	0.88	2.00	0.00	0.00						4.13	17.74%		
6.4	Design Iterations (Determine Based on Complexity and Level of Design)		0.38	0.50	0.63	1.50	0.00	0.00						3.00	12.90%		
8	DOCUMENTATION																
8.1	Traffic Capacity Analysis Technical Memorandum		0.25	0.50	0.50	1.25	0.00	0.00						2.50	10.75%		
	Traffic Signal Warrant Analysis		0.50	0.75	1.00	2.75								5.00	21.51%		
	TOTAL WORKDAYS/CATEGORY:		2.75	4.00	4.63	11.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.25	100.00%	0.00	
	HOURLY SALARY RATE:		$75.27	$58.75	$46.56	$37.32	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$602.16	$470.00	$372.48	$298.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$1,655.94	$1,880.00	$1,722.72	$3,545.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				

TOTAL WORKDAYS:		23.25
TOTAL PAYROLL BURDEN:		$8,804.06
AVERAGE COST PER HOUR:		$47.33
GENERAL OVERHEAD:	**165.25%**	$14,548.53
SUBTOTAL:		$23,352.59
COMPARATIVE FEE:	**9.00%**	$2,101.73
FACILITIES COST OF CAPITAL:	**0.1850%**	$16.29
TOTAL:		$25,470.61
DIRECT EXPENSES:		$5,460.00
CONGESTION MANAGEMENT GRAND TOTAL:		**$30,930.61**

Last Updated: 2/20/19

	Level of Complexity	3 - Moderate							
	Size of Existing Network (# of signalized intersections)	3 - Medium (5-9)							
	Estimation Index (1-10)	6			Unit Cost Workdays (Low)	Unit Cost Workdays (High)	Total Workdays (Low)	Total Workdays (High)	
1	**Project Management, Coordination and Administration**								
1.1	Project Management and Administration	3 months			0.75000	1.50000	2.25	4.5	Based on complexity of project and how much coordination is needed. If part of a contract from another branch, should be removed or only 1 month allowed. If standalone project may be toward higher end.
							1.777818	2.066047	Cap of 10% of workdays to complete analysis
1.2	Project Coordination	3 months			0.25000	0.75000	0.75	2.25	Based on complexity of project and how much coordination is needed with other groups or branches
							0.888909	1.033024	Cap of 5% of workdays to complete analysis
		0 meetings	0 persons/mtg		0.50000	0.50000	0	0	Depending on likely length of meetings. Includes travel and prep time for local meetings
	Additional travel time (beyond 1 hour assumed for local meetings)	0 hours	0 person-meetings		0.12500	0.12500	0	0	Add additional travel time for meetings not local to attendees (column E is number of meeting * attendees from line above. If not all meetings are out of town overwrite with number of person-meetings requiring additional travel.)
1.3	Consultant Coordination	3 months	1 subconsultants		0.25000	0.75000	0.75	2.25	Based on complexity of project and how much coordination is needed with other groups or branches
							0.888909	1.033024	Cap of 5% of workdays to complete analysis
2	**Data Collection and Field Visit**	**Required**							
2.1	Data Collection (0 or 1 only) - Included once per project	1 each			0.5	1	0.5	1	Depend on size of network and how much data is needed
	Field Visit	**Not Required**							
2.2	Field Visit - Preparation	1 each			0.25	0.75	0	0	Depends on how large the study is
	Field Visit Travel	0 hours	2 persons		0.125	0.125	0	0	Travel time to project
	Field Visit Observation	0 hours	2 persons		0.125	0.125	0	0	Assume only observing 1 peak and field review
3	**Traffic Volume Development**	**Not Required**							
3.1	Convert Forecast to Peak Hour Volumes - Balanced	0 scenarios	0 intersections		0.03000	0.03000	0	0	15 minutes per intersection per scenario
	Breakouts for interchanges/alternative designs	0 scenarios	0 intersections		0.03000	0.06000	0	0	15-30 minutes per breakout to interchange or alternative intersection
	Balance Network (if required and included in scope)	0 scenarios	0 intersections		0.0200	0.0300	0	0	10-15 minutes per intersection to balance. This is essentially developing a spreadsheet that may be more for a single scenario, but is much lower for additional scenarios as it is already setup
4	**20XX BASE YEAR MODEL**	**Required**							
4.1	Highway Capacity Software (HCS) Analysis								
	Freeway Facilities Analysis/FREEVAL	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Basic Freeway Segments	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Ramp Merge and Diverge Segments	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Freeway Weaving Segments	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Multi-lane Highway Segments	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Two-Lane Highway Segments	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Report Figures, Tables, Output Sheets, etc.	0 Segments			0.03125	0.03125	0	0	15 minutes per analysis point
	Quality Control				5%	10%	0	0	5-10% of sum of above time
4.2	Synchro Analysis								
	Unsignalized Intersection	1 intersections			0.08333	0.08333	0.08333	0.08333	40 minutes per intersection
	Signalized Intersection (Standard)	9 intersections			0.37500	0.37500	3.375	3.375	3 hours per intersection
	Signalized Intersection (Unconventional)	0 intersections			0.50000	0.50000	0	0	4 hours per intersection
	Report Figures, Tables, Output Sheets, etc.	10 intersections			0.04167	0.04167	0.4167	0.4167	20 minutes per analysis point
	Quality Control				5%	10%	0.193752	0.387503	5-10% of sum of above time
4.3	Sidra Analysis								
	Roundabout Intersection	0 intersections			0.25000	0.25000	0	0	2 hours per intersection
	Report Figures, Tables, Output Sheets, etc.	0 intersections			0.04167	0.04167	0	0	20 minutes per analysis point
	Quality Control				5%	10%	0	0	5-10% of sum of above time
5	**20XX NO-BUILD ANALYSIS**	**Not Required**							
5.1	Highway Capacity Software (HCS) Analysis								
	Freeway Facilities Analysis/FREEVAL - Analyzed in Base Year	0 Segments			0.04167	0.04167	0	0	50% of new analysis
	Basic Freeway Segments - Analyzed in Base Year	0 Segments			0.03125	0.03125	0	0	50% of new analysis
	Ramp Merge and Diverge Segments - Analyzed in Base Year	0 Segments			0.04167	0.04167	0	0	50% of new analysis
	Freeway Weaving Segments - Analyzed in Base Year	0 Segments			0.04167	0.04167	0	0	50% of new analysis
	Multi-lane Highway Segments - Analyzed in Base Year	0 Segments			0.03125	0.03125	0	0	50% of new analysis
	Two-Lane Highway Segments - Analyzed in Base Year	0 Segments			0.03125	0.03125	0	0	50% of new analysis
	Freeway Facilities Analysis/FREEVAL - New Analysis Segment	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Basic Freeway Segments - New Analysis Segment	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Ramp Merge and Diverge Segments - New Analysis Segment	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Freeway Weaving Segments - New Analysis Segment	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Multi-lane Highway Segments - New Analysis Segment	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Two-Lane Highway Segments - New Analysis Segment	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Report Figures, Tables, Output Sheets, etc.	0 Segments			0.01563	0.01563	0	0	50% assumes most everything is same from Base Year
	Quality Control				5%	10%	0	0	5-10% of sum of above time
5.2	Synchro Analysis								
	Unsignalized Intersection - Analyzed in Base Year	0 intersections			0.04167	0.04167	0	0	50% of new analysis
	Signalized Intersection (Standard) - Analyzed in Base Year	0 intersections			0.18750	0.18750	0	0	50% of new analysis
	Signalized Intersection (Unconventional) - Analyzed in Base Year	0 intersections			0.25000	0.25000	0	0	50% of new analysis
	Unsignalized Intersection - New Analysis Intersection	0 intersections			0.08333	0.08333	0	0	40 minutes per segment
	Signalized Intersection (Standard) - New Analysis Intersection	0 intersections			0.37500	0.37500	0	0	3 hours per intersection
	Signalized Intersection (Unconventional) - New Analysis Intersection	0 intersections			0.50000	0.50000	0	0	4 hours per intersection
	Report Figures, Tables, Output Sheets, etc.	0 intersections			0.02084	0.02084	0	0	50% assumes most everything is same from Base Year
	Quality Control				5%	10%	0	0	5-10% of sum of above time
5.3	Sidra Analysis								
	Roundabout Intersection - Analyzed in Base Year	0 intersections			0.12500	0.12500	0	0	50% of new analysis
	Roundabout Intersection - New Analysis Intersection	0 intersections			0.25000	0.25000	0	0	2 hours per intersection
	Report Figures, Tables, Output Sheets, etc.	0 intersections			0.02084	0.02084	0	0	50% assumes most everything is same from Base Year
	Quality Control				5%	10%	0	0	5-10% of sum of above time
6	**20XX BUILD ANALYSIS**	**Required**							
	(Add totals for all alternatives and enter below)								
6.1	Highway Capacity Software (HCS) Analysis								
	Freeway Facilities Analysis/FREEVAL - Analyzed in Base Year	0 Segments			0.04167	0.04167	0	0	50% of new analysis
	Basic Freeway Segments - Analyzed in Base Year	0 Segments			0.03125	0.03125	0	0	50% of new analysis
	Ramp Merge and Diverge Segments - Analyzed in Base Year	0 Segments			0.04167	0.04167	0	0	50% of new analysis
	Freeway Weaving Segments - Analyzed in Base Year	0 Segments			0.04167	0.04167	0	0	50% of new analysis
	Multi-lane Highway Segments - Analyzed in Base Year	0 Segments			0.03125	0.03125	0	0	50% of new analysis
	Two-Lane Highway Segments - Analyzed in Base Year	0 Segments			0.03125	0.03125	0	0	50% of new analysis
	Freeway Facilities Analysis/FREEVAL - New Analysis Segment	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Basic Freeway Segments - New Analysis Segment	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Ramp Merge and Diverge Segments - New Analysis Segment	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Freeway Weaving Segments - New Analysis Segment	0 Segments			0.08333	0.08333	0	0	40 minutes per segment
	Multi-lane Highway Segments - New Analysis Segment	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Two-Lane Highway Segments - New Analysis Segment	0 Segments			0.06250	0.06250	0	0	30 minutes per segment
	Report Figures, Tables, Output Sheets, etc.	0 Segments			0.02344	0.02344	0	0	75% assumes that portion has been developed in BY and 2040 No-Build
	Quality Control				5%	10%	0	0	5-10% of sum of above time
6.2	Synchro Analysis								
	Unsignalized Intersection - Analyzed in Base Year	0 intersections			0.04167	0.04167	0	0	50% of new analysis
	Signalized Intersection (Standard) - Analyzed in Base Year	0 intersections			0.18750	0.18750	0	0	50% of new analysis
	Signalized Intersection (Unconventional) - Analyzed in Base Year	0 intersections			0.25000	0.25000	0	0	50% of new analysis
	Unsignalized Intersection - New Analysis Intersection	1 intersections			0.08333	0.08333	0.08333	0.08333	40 minutes per segment
	Signalized Intersection (Standard) - New Analysis Intersection	9 intersections			0.37500	0.37500	3.375	3.375	3 hours per intersection
	Signalized Intersection (Unconventional) - New Analysis Intersection	0 intersections			0.50000	0.50000	0	0	4 hours per intersection
	Report Figures, Tables, Output Sheets, etc.	10 intersections			0.03125	0.03125	0.312525	0.312525	75% assumes that portion has been developed in BY and 2040 No-Build
	Quality Control				5%	10%	0.188543	0.377086	5-10% of sum of above time

6.3	Sidra Analysis						
	Roundabout Intersection - Analyzed in Base Year	0 intersections	0.12500	0.12500	0	0	50% of new analysis
	Roundabout Intersection - New Analysis Intersection	0 intersections	0.25000	0.25000	0	0	2 hours per intersection
	Report Figures, Tables, Output Sheets, etc.	0 intersections	0.03125	0.03125	0	0	75% assumes that portion has been developed in BY and 2040 No-Build
	Quality Control		5%	10%	0	0	5-10% of sum of above time
6.4	Design Iterations **(Determine Based on Complexity and Level of Design)**	3 mandays			3	3	
7	**20XX BUILD ANALYSIS**	**Not Required**					
7.1	Synchro Analysis						
	Signalized Intersection (Standard) - Analyzed in Base Year	0 intersections	0.18750	0.18750	0	0	50% of new analysis
	Signalized Intersection (Unconventional) - Analyzed in Base Year	0 intersections	0.25000	0.25000	0	0	50% of new analysis
	Report Figures, Tables, Output Sheets, etc.	0 intersections	0.03125	0.03125	0	0	75% assumes that portion has been developed in BY and 2040 No-Build
	Quality Control		5%	10%	0	0	5-10% of sum of above time
8	**Documentation**						
8.1	Traffic Capacity Analysis Technical Memorandum						Assumes all breakouts, figures, tables and output sheets are included in above tasks - simply the process of writing the documentation and assembling the report.
	Exec Summary, Background, Methodology, Conclusions, etc.	1 each	0.25	0.75	0.25	0.75	2-6 hours to develop text and supporting data
	Traffic Volume Development	0 each	0.25	0.5	0	0	2-4 hours to document procedure for volume development and add data to Appendix
	20XX BASE YEAR MODEL	1 each	0.25	1	0.25	1	2-8 hours to document base year analysis
	20XX NO-BUILD ANALYSIS	0 each	0.25	0.75	0	0	2-6 hours to document future year no-build analysis
	20XX BUILD ANALYSIS	1 each	0.75	1.5	0.75	1.5	6-12 hours to document future year build analysis
	20XX BUILD ANALYSIS	0 each	0.25	0.5	0	0	2-4 hours to document base year build analysis
11	**Additional Scope Items**						
11.1	Multi-hour Analysis Adjustment - HCS Analysis	0 hours	0%	0%	0	0	10-30% of sections 4.1, 5.1, 6.1
11.2	Multi-hour Analysis Adjustment - Synchro Analysis	0 hours	0%	0%	0	0	10-30% of sections 4.2, 5.2,6.2, 7.1
11.3	Multi-hour Analysis Adjustment - Sidra Analysis	0 hours	0%	0%	0	0	10-30% of sections 4.3, 5.3, 6.3
	Insert Additional Scope Items TOTAL Workdays Here:	5 mandays			5.00	5.00	Insert Number of Workdays Here for inclusion in claculation of project management time

Last Updated: 06/19/2019

	Level of Complexity	1 - Simple						
	Size of Existing Network (# of signalized intersections)	1 - Isolated (1)						
	Estimation Index (1-10)	2		Unit Cost Workdays (Low)	Unit Cost Workdays (High)	Total Workdays (Low)	Total Workdays (High)	
1	**Project Management, Coordination and Administration**							
1.1	Project Management and Administration	0 months		0.75000	1.50000	0	0	Based on complexity of project and how much coordination is needed. If part of a contract from another branch, should be removed or only 1 month allowed. If standalone project may be toward higher end.
						0	0	Cap of 10% of Workdays to complete analysis
1.2	Project Coordination	0 months		0.25000	0.75000	0	0	Based on complexity of project and how much coordination is needed with other groups or branches
						0	0	Cap of 5% of Workdays to complete analysis
	Meetings	0 meetings	0 persons/mtg	0.50000	0.50000	0	0	Depending on likely length of meetings. Includes travel and prep time
	Additional travel time (beyond 1 hour assumed for local meetings)	0 hours	0 person-meetings	0.12500	0.12500	0	0	Add additional travel time for meetings not local to attendees (column E is number of meeting * attendees from line above. If not all meetings are out of town overwrite with number of person-meetings requiring additional travel.)
1.3	Consultant Coordination	0 months	0 Consultants	0.25000	0.75000	0	0	Based on complexity of project and how much coordination is needed with prime or sub consultants. Enter number of consultants that require substantial coordination
						0	0	Cap of 5% of Workdays to complete analysis
2	**Data Collection and Field Visit**							
2.1	Data Collection (0 or 1 only)	0 each		0.5	2	0	0	Depend on size of network and how much data is needed
2.2	**Field Visit**	**Not Required**						
	Field Visit - Preparation	1 each		0.25	0.75	0	0	Depends on how large the study is
	Field Visit Travel - One Way	0 hours	2 persons	0.125	0.125	0	0	Travel time to project
	Field Visit Observation	0 hours	2 persons	0.125	0.125	0	0	Assume only observing 1 peak and field review
3	**Traffic Volume Development**	**Not Required**						
3.1	Convert Forecast to Peak Hour Volumes - Balanced	0 scenarios	0 intersections	0.0300	0.0300	0	0	15 minutes per intersection per scenario
	Breakouts for interchanges/alternative designs	0 scenarios	0 intersections	0.0300	0.0600	0	0	15-30 minutes per breakout to interchange or alternative intersection
3.2	Balance Network	0 scenarios	0 intersections	0.0200	0.0300	0	0	10-15 minutes per intersection to balance. This is essentially developing a spreadsheet that may be more for a single scenario, but is much lower for additional scenarios as it is already setup
3.3	OD Matrix Development							
	Method 1: Corridor Turn Proportions	0 scenarios	0 intersections	0.0417	0.0417	0	0	20 minutes per intersection to input data into spreadsheet
	Method 2: Engineering Judgment/Manual Balancing	0 scenarios	0 intersections	0.0625	0.0833	0	0	30-40 minutes per intersection to develop matrix. This is essentially developing a spreadsheet that may be more for a single scenario, but is much lower for additional scenarios as it is already setup
	Method 3: Travel Demand Models	0 scenarios	0 intersections	0.0938	0.125	0	0	4 hours + 45-60 minutes per intersection to develop matrix. This includes running the travel demand model. If extensive work on the travel demand model is required it should be scoped separately
	Method 4: OD Data Collection	0 origins	0 destinations	0.0313	0.0313	0	0	3 hours + 15 minutes per intersection to run the StreetLight Data Insight data
		0 scenarios	0 intersections	0.0313	0.0417	0	0	15-20 minutes per intersection to develop matrix. This is essentially developing a spreadsheet that may be more for a single scenario, but is much lower for additional scenarios as it is already setup
	Method 5: Turning Movement Based Simulation Output	0 scenarios	0 intersections	0.0313	0.0313	0	0	4 hours + 15 minutes per intersection to run TransModeler and average the outputs
3.4	Origin Destination Matrix Estimation (ODME) Development	0 scenarios						
		0 origins	0 destinations	0.0208	0.0208	0	0	3-4 hours per scenario + 10 minutes per origin or destination
3.5	Class Based OD Matrix Development	0 scenarios						
		0 origins	0 destinations	0.0208	0.0208	0	0	3 hours + 10 minutes per origin or destination
3.6	Multi-hour Simulation OD Matrix Development							
	Option 1: Scaling Factor and Loading Curve		0 hours	0.0625	0.0625	0	0	2 hours + 30 minutes for each hour greater than standard 2 hours
	Option 2: Individual OD matrices for each hour	0 scenarios	0 hours			0	0	total time to develop 2 peak hour matrices (Section 3.3) multiplied by 50% for 4 hours and 12.5% for each hour beyond 4
3.7	Add Origin Destination Matrices in TransModeler	0 each				0	0	2 hours + 15 minutes for each hourly matrix
4	**20XX BASE YEAR MODEL**	**Not Required**						
4	20XX Base Year Model - Non-Calibrated							
4.1	Model Development							
4.1.1	Initial Model Setup							
	Develop Default File/Reference Aerial Photography	0 each		0.2500	0.5000	0	0	2-4 hours
	Merge Existing Models into Network	0 models		0.2500	0.5000	0	0	2-4 hours per model - Depending on size and quality of model
4.1.2	Develop Base Year Model in TransModeler							
	Freeway Coding	0.0 miles		0.1563	0.1875	0	0	75-90 minutes per mile
	Arterial/Collector/Local Coding	0.0 miles		0.1875	0.2500	0	0	90-120 minutes per mile
	System Interchange (Standard)	0 interchanges		0.5000	0.7500	0	0	4-6 hours per interchange
	System Interchange (Complex)	0 interchanges		1.5000	2.0000	0	0	12-16 hours per interchange
	Service Interchange (Standard)*	0 interchanges		0.3750	0.5000	0	0	3-4 hours per interchange
	Service Interchange (DDI)*	0 interchanges		0.5000	1.0000	0	0	4-8 hours per interchange
	Unsignalized Intersection	0 intersections		0.0417	0.0833	0	0	20-40 minutes per intersection
	Unsignalized Superstreet (includes main intersection and 2 u-turns)	0 intersections		0.2500	0.5000	0	0	2-4 hours per intersection
	Single Lane Roundabout	0 intersections		0.1250	0.1875	0	0	60-90 minutes per intersection
	Dual Lane Roundabout	0 intersections		0.2500	0.3750	0	0	2-3 hours per intersection
	Signalized Intersection (Simple)	0 intersections		0.1875	0.4167	0	0	120-200 minutes per intersection
	Signalized Intersection (Complex)	0 intersections		0.3125	0.5000	0	0	180-240 minutes per intersection
	Signalized Intersection (Unconventional)	0 intersections		0.5000	0.7500	0	0	4-6 hours per intersection
	Signalized Intersection (Superstreet) (includes main intersection and 2 u-turns)	0 intersections		0.5000	1.0000	0	0	4-8 hours per intersection
	Adding Z-Elevations (0 or 1 only)	0 each		0.2500	0.7500	0	0	Depending on size of model and number of bridges that require hand manipulating elevations
4.1.3	Adding Volume Data to Model							
	Add Peak Hour Volumes - Balanced	0 intersections		0.0104	0.0208	0	0	5-10 minutes per intersection to add volumes to intersection in TransModeler - multiplied by 2 for AM and PM Peaks
	Add vehicle composition data or heavy vehicle data	0 each		0.2500	0.5000	0	0	1-2 hours per model (unless class based matrices are being utilized)
4.1.4	Optimize Signalized Intersections	0 corridors	0 intersections	0.1875	0.2500	0	0	90-120 minutes per corridor + 15-30 minutes per signal
		0 intersections		0.0625	0.1250	0	0	30-60 minutes per intersection
4.1.5	Dynamic Traffic Assignment	0 rounds	0 iterations	0.0021	0.0042	0	0	4 hours + 1-2 minutes per iteration
		0 intersections		0.0208	0.0417	0	0	10-20 minutes per intersection
4.1.6	Code Measures of Effectiveness	1 each		0.0625	0.25	0	0	30-120 minutes per model
	Develop Output Spreadsheet							
	Intersections	0 intersections		0.0625	0.0625	0	0	30 minutes per intersection
	Freeway Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Multi-lane Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Two-Lane Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Corridor Heat Maps	0 corridors		0.2500	0.5000	0	0	2-4 hours per corridor
	Corridor/Route MOE's (0 or 1 only)	0 each		0.3750	0.7500	0	0	3-6 hours
4.1.7	Error Check/Visual Validation/Quality Control	1 each		8%	10%	0	0	8-10% of model development time
4.1.8	Default Values/Visual Validation/Calibration	**Add 1 each to one of the categories below**						
0 each	Default Values	0 each		0%	0%	0	0	No effort required
	Visual Validation	0 each		4%	8%	0	0	4-7.5% of model development time
	Calibration	0 each		0%	0%	0	0	Develop Custom Scope in Section 10
4.1.9	Run Model/Extract Outputs - Setup Run Controls/Run Simulation	1 scenario(s)		0.2500	0.7500	0	0	2-6 hours per model
4.1.10	Multi-hour Simulation Adjustment	0 hours		0%	0%	0	0	10-30% of sections 4.1.1 through 4.1.9
5	**20XX NO-BUILD ANALYSIS**	**Not Required**						
5.1	Model Development							
5.1.1	Develop Future Year No-Build Model							
	Freeway Coding	0.0 miles		0.1563	0.1875	0	0	75-90 minutes per mile
	Arterial/Collector/Local Coding	0.0 miles		0.1875	0.2500	0	0	90-120 minutes per mile
	System Interchange (Standard)	0 interchanges		0.5000	0.7500	0	0	4-6 hours per interchange
	System Interchange (Complex)	0 interchanges		1.5000	2.0000	0	0	12-16 hours per interchange
	Service Interchange (Standard)*	0 interchanges		0.3750	0.5000	0	0	3-4 hours per interchange
	Service Interchange (DDI)*	0 interchanges		0.5000	1.0000	0	0	4-8 hours per interchange

	Unsignalized Intersection	0 intersections		0.0417	0.0833	0	0	20-40 minutes per intersection
	Unsignalized Intersection	0 intersections		0.2500	0.5000	0	0	2-4 hours per intersection
	Unsignalized Superstreet (includes main intersection and 2 u-turns)	0 intersections		0.1250	0.1875	0	0	60-90 minutes per intersection
	Single Lane Roundabout	0 intersections		0.2500	0.3750	0	0	2-3 hours per intersection
	Signalized Intersection (Simple)	0 intersections		0.1875	0.4167	0	0	120-200 minutes per intersection
	Signalized Intersection (Complex)	0 intersections		0.3125	0.5000	0	0	180-240 minutes per intersection
	Signalized Intersection (Unconventional)	0 intersections		0.5000	0.7500	0	0	4-6 hours per intersection
	Signalized Intersection (Superstreet) (includes main intersection and 2 u-turns	0 intersections		0.5000	1.0000	0	0	4-8 hours per intersection
	Adding Z-Elevations (0 or 1 only)	0 each		0.2500	0.7500	0	0	Depending on size of model and number of bridges that require hand manipulating elevations
5.1.2	Adding Volume Data to Model							
	Add Peak Hour Volumes - Balanced	0 intersections		0.0104	0.0208	0	0	5-10 minutes per intersection to add volumes to intersection in TransModeler - multiplied by 2 for AM and PM Peaks
	Add vehicle composition data or heavy vehicle data	0 each		0.0625	0.1250	0	0	25% of Base Year
5.1.3	Optimize Signalized Intersections	0 corridors	0 intersections	0.1875	0.2500	0	0	90-120 minutes per corridor + 15-30 minutes per signal
		0 intersections		0.0625	0.1250	0	0	30-60 minutes per intersection
5.1.4	Dynamic Traffic Assignment	0 rounds	0 iterations	0.0021	0.0042	0	0	4 hours + 1-2 minutes per iteration
0		0 intersections		0.0208	0.0417	0	0	10-20 minutes per intersection
5.1.5	Code Measures of Effectiveness	1 each		0.0313	0.1250	0	0	50% of Base Year
	Develop Output Spreadsheet							
	Intersections	0 intersections		0.0625	0.0625	0	0	30 minutes per intersection
	Freeway Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Multi-lane Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Two-Lane Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Corridor Heat Maps	0 corridors		0.2500	0.5000	0	0	2-4 hours per corridor
	Corridor/Route MOE's (0 or 1 only)	0 each		0.3750	0.7500	0	0	3-6 hours
	(Only new intersections/analysis points not in BY Model)							
5.1.6	Error Check/Visual Audit/Quality Control	1 each		10%	10%	0	0	10% of model development time
5.1.7	Run Model/Extract Outputs - Setup Run Controls/Run Simulation	1 scenario(s)		0.2500	0.7500	0	0	2-6 hours per model
5.1.8	Multi-hour Simulation Adjustment	0 hours		0%	0%	0	0	10-30% of sections 4.1.1 through 4.1.9
6	**20XX BUILD ANALYSIS**	**Not Required**						
6.1	Model Development							
6.1.1	Develop Future Year Build Model **(Add totals for all alternatives and enter below)**							
	Freeway Coding	0.0 miles		0.1563	0.1875	0	0	75-90 minutes per mile
	Arterial/Collector/Local Coding	0.0 miles		0.1875	0.2500	0	0	90-120 minutes per mile
	System Interchange (Standard)	0 interchanges		0.5000	0.7500	0	0	4-6 hours per interchange
	System Interchange (Complex)	0 interchanges		1.5000	2.0000	0	0	12-16 hours per interchange
	Service Interchange (Standard)*	0 interchanges		0.3750	0.5000	0	0	3-4 hours per interchange
	Service Interchange (DDI)*	0 interchanges		0.5000	1.0000	0	0	4-8 hours per interchange
	Unsignalized Intersection	0 intersections		0.0417	0.0833	0	0	20-40 minutes per intersection
	Unsignalized Superstreet (includes main intersection and 2 u-turns)	0 intersections		0.2500	0.5000	0	0	2-4 hours per intersection
	Single Lane Roundabout	0 intersections		0.1250	0.1875	0	0	60-90 minutes per intersection
	Dual Lane Roundabout	0 intersections		0.2500	0.3750	0	0	2-3 hours per intersection
	Signalized Intersection (Simple)	0 intersections		0.1875	0.4167	0	0	120-200 minutes per intersection
	Signalized Intersection (Complex)	0 intersections		0.3125	0.5000	0	0	180-240 minutes per intersection
	Signalized Intersection (Unconventional)	0 intersections		0.5000	0.7500	0	0	4-6 hours per intersection
	Signalized Intersection (Superstreet) (includes main intersection and 2 u-turns	0 intersections		0.5000	1.0000	0	0	4-8 hours per intersection
	Adding Z-Elevations	0 Alternatives		25%	75%	0	0	Depending on size of model and number of bridges that require hand manipulating elevations
6.1.2	Adding Volume Data to Model							
	Add Peak Hour Volumes	0 intersections		0.0104	0.0208	0	0	5-10 minutes per intersection to add volumes to intersection in TransModeler - multiplied by 2 for AM and PM Peaks
	Add vehicle composition data or heavy vehicle data	0 each		0.1250	0.2500	0	0	50% of Base Year
6.1.3	Optimize Signalized Intersections	0 corridors	0 intersections	0.1875	0.2500	0	0	90-120 minutes per corridor + 15-30 minutes per signal
		0 intersections		0.0625	0.1250	0	0	30-60 minutes per intersection
6.1.4	Dynamic Traffic Assignment	0 rounds	0 iterations	0.0021	0.0042	0.000	0.0000	4 hours + 1-2 minutes per iteration
0 intersections		0 intersections		0.0208	0.0417	0.000	0.000	10-20 minutes per intersection
6.1.5	Code Measures of Effectiveness	0 Alternatives		0.0625	0.125	0	0	30-60 minutes per model
	Develop Output Spreadsheet							
	Intersections	0 intersections		0.0625	0.0625	0	0	30 minutes per intersection
	Freeway Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Multi-lane Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Two-Lane Segments	0 analysis points		0.0417	0.0417	0	0	20 minutes per analysis point
	Corridor Heat Maps	0 corridors		0.2500	0.5000	0	0	2-4 hours per corridor
	Corridor/Route MOE's (0 or 1 only)	0 each		0.3750	0.7500	0	0	3-6 hours
	(Only new intersections/analysis points not in BY or FYNB Model)							
6.1.6	Error Check/Visual Audit/Quality Control	1 each		10%	15%	0	0	10-15% of model development time
6.1.7	Run Model/Extract Outputs - Setup Run Controls/Run Simulation	1 scenario(s)		0.2500	0.7500	0	0	2-6 hours per model for each scenario
6.1.8	Multi-hour Simulation Adjustment	0 hours		0%	0%	0	0	10-30% of sections 4.1.1 through 4.1.9
6.1.9	Design Iterations (Determine Based on Complexity and Level of Design)	0 mandays				0.00	0.00	
7	**20XX BUILD ANALYSIS**	**Not Required**						
7.1	Model Development							
7.1.1	Adding Volume Data to Model							
	Add Peak Hour Volumes	0 intersections		0.0104	0.0208	0	0	5-10 minutes per intersection to add volumes to intersection in TransModeler - multiplied by 2 for AM and PM Peaks
7.1.2	Optimize Signalized Intersections	0 corridors	0 intersections	0.1875	0.2500	0	0	90-120 minutes per corridor + 15-30 minutes per signal
		0 intersections		0.0625	0.1250	0	0	30-60 minutes per intersection
7.1.3	Dynamic Traffic Assignment	0 rounds	0 iterations	0.0021	0.0042	0	0	4 hours + 1-2 minutes per iteration
0 intersections		0 intersections		0.0208	0.0417	0	0	10-20 minutes per intersection
7.1.4	Run Model/Extract Outputs - Setup Run Controls/Run Simulation	1 each		0.2500	0.7500	0	0	2-6 hours per model
8	**Documentation**							
8.1	Traffic Operations Analysis Technical Memorandum							
	Exec Summary, Background, Methodology, Conclusions, etc.	0 each		0.375	1	0	0	3-8 hours to develop text and supporting data
	Traffic Volume Development	0 each		0.375	1	0	0	3-8 hours to document procedure for volume development and add OD matrices to Appendix
	20XX BASE YEAR MODEL	0 each		0.5	2	0	0	4-16 hours to document base year analysis and develop supporting figures
	20XX NO-BUILD ANALYSIS	0 each		0.5	1.5	0	0	4-12 hours to document future year no-build analysis and develop supporting figures
	20XX BUILD ANALYSIS	0 scenario(s)		0.5	1.5	0	0	4-12 hours per alternative to document future year build analysis and develop supporting figures
	20XX BUILD ANALYSIS	0 each		0.375	0.75	0	0	3-6 hours to document base year build analysis and develop supporting figures
8.2	Interchange Access Report	0 each		1.5	4	0	0	12-32 hours to develop Policy Point discussion and coordinate w/ NCDOT/FHWA
11	**Additional Scope Items**							
	Insert Additional Scope Items TOTAL Workdays Here:	0 mandays				0.00	0.00	Insert Number of Workdays Here for inclusion in calculation of project management time

CONGESTION MANAGEMENT DIRECT EXPENSES

FIRM:	STANTEC CONSULTING SERVICES INC					
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue					
PREPARED BY:	STANTEC CONSULTING SERVICES INC			TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
MISCELLANEOUS OTHER:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Subconsultant Fees	1	Traffic Counts		$5,460.00	$5,460.00
				Subtotal		$5,460.00
				TOTAL		**$5,460.00**

Project TIP BL-0071A WBS PE WBS UT County GUILFORD

Professional Services Firm Name STANTEC CONSULTING SERVICES INC

Contract official

Task Order I - UTILITY COORDINATION

Use WBS PE 0

Classification/Name	Utility Coordination Supervisor	Senior Utility Coordinator	Utility Coordinator	Junior Technician	MISCELLANEOUS1	MISCELLANEOUS2	MISCELLANEOUS3						SubTotal
Project Estimate	(MB) Melvin Briggs			(GM) Garin Mayemba									SubTotal
1UT2	96			80									176
2UT1	120			80									200
2UT2	16			0									16
3UT1	24			16									40
3UT2	36			0									36
4UT1	40												40
4UT2	54												54
Workhours	386.0	0.0	0.0	176.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	562.0
Hourly Rate	$ 62.63	$ -	$ -	$ 42.16	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
SubTotal	$ 24,175.18	$ -	$ -	$ 7,420.16	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 31,595.34

		Overhead	165.25%	$ 52,210.67
		Subtotal		$ 83,806.01
		Fee	9%	$ 7,542.54
		CoC	0.1850%	$ 58.45
		Subtotal		$ 91,407.00
		Direct Costs		$ -
		Total Cost		**$ 91,407.00**

Invoicing Percentages	Workhours	Workdays	% Work	$
1UT2	176.0	22.00	31.3%	$ 28,625.68
2UT1	200.0	25.00	35.6%	$ 32,529.18
2UT2	16.0	2.00	2.8%	$ 2,602.33
3UT1	40.0	5.00	7.1%	$ 6,505.84
3UT2	36.0	4.50	6.4%	$ 5,855.25
4UT1	40.0	5.00	7.1%	$ 6,505.84
4UT2	54.0	6.75	9.6%	$ 8,782.88
Other Tasks	0.0	0.00	0.0%	$ -
Total	562.0	70.25	100.0%	$ 91,407.00

Direct Costs	8-1/2"x11" B&W	11"x17" B&W	11"x17" Color	Bond (34"x22")	Bond Color (34"x22")	Permit Fees	Overnight Per Diem (Lodging, Breakfast, Lunch, Dinner)	Breakfast Only	Lunch Only	Dinner Only	Lodging Only	Mileage			Subtotals
Totals	0	0	0	0	0		0	0	0	0	0	0	0	0	$ -
Rate	$ 0.09	$ 0.15	$ 1.66	$ 0.42	$ 3.00		$ 126.30	$ 9.00	$ 11.80	$ 20.50	$ 85.00	$ 0.655			Total
Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**

Total Project Estimates

	TO I	$/Workday	Total Project Subtotal	$/Workday	TOTAL WORKDAYS
Labor & OH & CoC	$ 91,407.00	$ 1,301.17	$ 91,407.00	$ 1,301.17	70.25
Direct Costs	$ -		$ -		
Totals	**$ 91,407.00**		**$ 91,407.00**		

Project TIP BL-0071A WBS PE WBS RW County GUILFORD

PEF Utilities Design Name STANTEC CONSULTING SERVICES INC Firm's LSA Contract ID

Project Contact Contract official

Task Order II - UTILITY DESIGN

Classification/Name	Utility Design Supervisor	Senior Utility Engineer	Utility Engineer	Junior Technician	Junior Technician	MISCELLANEOUS2	MISCELLANEOUS3						SubTotal	0	0	0
Project Estimate	(LP) LINDA PASS	(KR) KEN ROBINSON	(LW) LAURA WILSON	(SC) SONIA CHAMBERS	(GM) GARIN MAYEMBA								SubTotal	Notes		
2UT1	82	8	226	280									596			
2UT2	2	4	20	4									30			
3UT1	123	32	339	420	120								1034			
3UT2	2	4	20	4									30			
4UT1	41	16	113	140									310			
5UT1													0			
Workhours	250.0	64.0	718.0	848.0	120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2000.0			
Hourly Rate	$ 73.64	$ 52.59	$ 36.90	$ 42.40	$ 42.16	$ -	$ -	$ -	$ -	$ -	$ -	$ -				
SubTotal	$ 18,410.00	$ 3,365.76	$ 26,494.20	$ 35,955.20	$ 5,059.20	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 89,284.36			

Invoicing Percentages		Workhours	% Work
2UT1		596.0	29.8%
2UT2		30.0	1.5%
3UT1		1034.0	51.7%
3UT2		30.0	1.5%
4UT1		310.0	15.5%
5UT1		0.0	0.0%
	Total	2000.0	100.0%

WORKDAYS
250.00

Overhead	165.25%	$ 147,540.62
Subtotal		$ 236,824.98
Fee	9%	$ 21,314.25
CoC	0.1850%	$ 165.18
Subtotal		$ 258,304.40
Direct Costs		$ 10,215.30
Total Cost		**$ 268,519.70**

Direct Costs	8-1/2"x11" B&W	11"x17" B&W	11"x17" Color	Bond (34"x22")	Bond Color (34"x22")	Permit Fees	Overnight Per Diem (Lodging, Breakfast, Lunch, Dinner)	Breakfast Only	Lunch Only	Dinner Only	Lodging Only	Mileage						Subtotals
2UT1	50	200	100	200								4000						$ 2,904.50
2UT2	10																	$ 0.90
3UT1	50	200	100	200		$1,500.00						4000						$ 4,404.50
3UT2	10																	$ 0.90
4UT1	50	200	100	200								4000						$ 2,904.50
5UT1	50																	$ -
Totals	170	600	300	600	0		0	0	0	0	0	12000	0	0	0	0	0	$ 10,215.30
Rate	$ 0.09	$ 0.15	$ 1.66	$ 0.42	$ 3.00		$ 126.30	$ 9.00	$ 11.80	$ 20.50	$ 85.00	$ 0.655						Total
Costs	$ 15.30	$ 90.00	$ 498.00	$ 252.00	$ -	$ 1,500.00	$ -	$ -	$ -	$ -	$ -	$ 7,860.00	$ -	$ -	$ -	$ -	$ -	**$ 10,215.30**

PEF--UTILITY DESIGN

Project Mgmt--SUB1 DESIGN BREAKDOWN WORKSHEET

PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue		FIRM:	STANTEC CONSULTING SERVICES INC		TASK ORDER NUMBER:		0				DATE PREPARED:		
PREPARED BY:			TIP NUMBER:	BL-0071A		WBS NUMBER:		50651.1.1 :				REVISION DATE:		
			ESTIMATED WORK DAYS											
		Employee		(MR)	(SS)	(AT)								
TASK NO.	TASK DESCRIPTION	Classification		CS Group Leader (CPSC)	Roadway Design Eng (E-A)	Administrative Assistant (AA-I)						SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2PM1/3PM1/4PM1	Project Management														
1	Project Management and Coordination			4.00	12.00							16.00	29.63%		
	Coordination with NCDOT PM														
	Coordination with other NCDOT disciplines/units														
	Coordination with external stakeholders and agencies														
	Internal coordination with project team			4.00	8.00							12.00	22.22%		
	Document all meetings and calls				2.00							2.00	3.70%		
	Maintain administrative record and internal project files					10.00						10.00	18.52%		
	Maintain Connect/SharePoint files and ATLAS Workbench														
	Prepare for and attend meetings														
2	Project Schedule														
	Develop Schedule														
	Maintain Schedule														
3	Monthly PM Status Reports and Invoicing					8.00						8.00	14.81%		
4	QC/QA Procedures			6.00								6.00	11.11%		
5	Value Management Tasks														
	Other Tasks														
	TOTAL WORKDAYS/CATEGORY:		0.00	14.00	22.00	18.00	0.00	0.00	0.00	0.00	0.00	54.00	100.00%	0.00	
	HOURLY SALARY RATE:		$0.00	$89.71	$77.13	$35.68	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$0.00	$717.68	$617.04	$285.44	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$0.00	$10,047.52	$13,574.88	$5,137.92	$0.00	$0.00	$0.00	$0.00	$0.00				
	TOTAL WORKDAYS:		54.00												
	TOTAL PAYROLL BURDEN:		$28,760.32												
	AVERAGE COST PER HOUR:		$66.57												
	GENERAL OVERHEAD:	**165.25%**	$47,525.85												
	SUBTOTAL:		$76,286.17												
	COMPARATIVE FEE:	**9.00%**	$6,865.76												
	FACILITIES COST OF CAPITAL:	**0.1850%**	$53.21												
	TOTAL:		$83,205.14												
	DIRECT EXPENSES:		$50.50												
	OTHER GRAND TOTAL:		**$83,255.64**												

Project Mgmt--SUB1 ***DIRECT EXPENSES***

FIRM:	STANTEC CONSULTING SERVICES INC					
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Reproduction:	100	8 1/2 x 11 B & W Copies @		$0.09	$9.00
		25	11 x 17 Color Copies @		$1.66	$41.50
				Subtotal		$50.50
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Workshop					
	Postage:					
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
				TOTAL		**$50.50**

*** Sum of all plots**

PUBLIC INVOLVEMENT BREAKDOWN WORKSHEET - SUBCONSULTANT 1

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue | FIRM: ALTA PLANNING + DESIGN | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071A | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	ESTIMATED WORK DAYS (MR)	(BS)	(CC)								SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2P11	Continue Public Engagement															
1	Public Involvement Plan (PIP)															
	Submit ETRACS for PI Team to review draft or develop PIP															
	Prepare and submit draft and final PIP (if PIP is to be prepared by PEF)															
2	Project Mailing List															
	Submit ETRACS request and study area Shapefile for project mailing list															
	Create project mailing list															
3	Project Website															
	Submit request for project website or PublicInput.com site															
	Provide updates at project milestones															
4	Newsletter/Postcards															
	Prepare and submit draft Newsletter/Postcard (using NCDOT templates)															
	Revise and resubmit Newsletter/Postcard for approval															
	Reproduce and distribute approved Newsletter /Postcard (insert #copies)															
5	Public Meeting(s)/Hearing(s)															
	In-person Open House (3 hr meeting)		1.00										1.00	8.89%		
	Virtual Meeting (X hr meeting)															
	Formal Presentation															
	Submit meeting request via ETRACS (6 weeks prior to meeting date)															
	Coordinate with NCDOT PI and Division on venue and dates															
	Prepare and submit public meeting maps															
	Schedule and attend map review meeting															
	Revise and resubmit public meeting maps															
	Prepare and submit draft public meeting handout															
	Revise and resubmit public meeting handout for approval															
	Reproduce public meeting handout (insert # copies)															
	Prepare and submit draft public meeting displays															
	Revise and resubmit public meeting displays															
	Provide digital copies of handout, displays, and public meeting maps to NCDOT PI for web posting															
6	Local Officials Information Meeting (LOIM)															
	Coordinate with NCDOT PI on schedule and invitees															
	Prepare and submit draft LOIM Invitation letter															
	Revise and resubmit LOIM Invitation letter for approval															
	Prepare and submit draft PowerPoint presentation															
	Revise and resubmit PowerPoint presentation															
	Prepare and submit draft local officials meeting handout (only when no public meeting is held)															
	Revise and resubmit local officials meeting handout for approval															
	Prepare and submit draft and final meeting summary															
	Prep for meeting, travel, attend, meeting, meeting summary		1.00										1.00	8.89%		
7	Public Comments															
	Collect public comments															
	Compile comments in a database and prepare draft responses as needed (export from PublicInput.com site)															
	Submit draft database and responses															
	Revise and resubmit database and responses															
	Prepare for and attend post-public meeting/hearing meeting															
8	Public Engagement Summary															
	Prepare and submit draft public engagement summary, including comment summary and responses using NCDOT template															
	Revise and resubmit public engagement summary															
	Prep for, attend response to public comments meeting, and finalize comment summary		1.00										1.00	8.89%		
9	Project Visualizations															
	Renderings (digital static image)		0.25	0.25	3.75								4.25	37.78%		
	Level I															
	Level II															
	Level III															
	Animations (video with motion)															
	Level I															
	Level II															
	Level III															
	Level IV															
	Level V															
	Level VI															
	Level VII															
	Video Production															
	Level I															
	Level II															
	Virtual 3D Models															
10	Task Management															
11	Complete QA/QC Procedures															
	Other Tasks: (i.e. small group meetings)															
	Prep for, travel, attend, and meeting minutes for 4 stakeholder meetings		4.00										4.00	35.56%		
	TOTAL WORKDAYS/CATEGORY:		7.25	0.25	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.25	100.00%	0.00	
	HOURLY SALARY RATE:		$74.32	$62.01	$28.94	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$594.56	$496.08	$231.52	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$4,310.56	$124.02	$868.20	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				

TOTAL WORKDAYS:		11.25
TOTAL PAYROLL BURDEN:		$5,302.78
AVERAGE COST PER HOUR:		$58.92
GENERAL OVERHEAD:	155.42%	$8,241.58
SUBTOTAL:		$13,544.36
COMPARATIVE FEE:	9.00%	$1,218.99
FACILITIES COST OF CAPITAL:	0.5000%	$26.51
TOTAL:		$14,789.87
DIRECT EXPENSES:		$733.60
PUBLIC INVOLVEMENT GRAND TOTAL:		**$15,523.47**

PUBLIC INVOLVEMENT DIRECT EXPENSES - SUBCONSULTANT 1

FIRM:	ALTA PLANNING + DESIGN					
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	1 Trip(s) @		140 miles @	$0.655	$91.70
				Subtotal		$91.70
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	7 Trip(s) @		140 miles @	$0.655	$641.90
	Workshop					
	Postage:					
				Subtotal		$641.90
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
				TOTAL		**$733.60**

*** Sum of all plots**

PUBLIC INVOLVEMENT BREAKDOWN WORKSHEET - SUBCONSULTANT 2

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue | FIRM: CONSULTANT NAME | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071A | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	ESTIMATED WORK DAYS (JO) Project Engineer (E-J)	(AS) Public Inv. Eng. (E-A)									SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2P11	Continue Public Engagement															
1	Public Involvement Plan (PIP)															
	Submit ETRACS for PI Team to review draft or develop PIP															
	Prepare and submit draft and final PIP (if PIP is to be prepared by PEF)															
2	Project Mailing List															
	Submit ETRACS request and study area Shapefile for project mailing list															
	Create project mailing list															
3	Project Website															
	Submit request for project website or PublicInput.com site															
	Provide updates at project milestones															
4	Newsletter/Postcards															
	Prepare and submit draft Newsletter/Postcard (using NCDOT templates)															
	Revise and resubmit Newsletter/Postcard for approval															
	Reproduce and distribute approved Newsletter /Postcard (insert #copies)															
	Spanish translation of postcard and door hanger		0.75										0.75	37.50%		
5	Public Meeting(s)/Hearing(s)															
	In-person Open House (X hr meeting)															
	Virtual Meeting (X hr meeting)															
	Formal Presentation															
	Submit meeting request via ETRACS (6 weeks prior to meeting date)															
	Coordinate with NCDOT PI and Division on venue and dates															
	Prepare and submit public meeting maps															
	Schedule and attend map review meeting															
	Revise and resubmit public meeting maps															
	Prepare and submit draft public meeting handout															
	Revise and resubmit public meeting handout for approval															
	Reproduce public meeting handout (insert # copies)															
	Prepare and submit draft public meeting displays															
	Revise and resubmit public meeting displays															
	Provide digital copies of handout, displays, and public meeting maps to NCDOT PI for web posting															
	Spanish translator at public meeting (3 hours plus travel)			1.00									1.00	50.00%		
6	Local Officials Information Meeting (LOIM)															
	Coordinate with NCDOT PI on schedule and invitees															
	Prepare and submit draft LOIM Invitation letter															
	Revise and resubmit LOIM Invitation letter for approval															
	Prepare and submit draft PowerPoint presentation															
	Revise and resubmit PowerPoint presentation															
	Prepare and submit draft local officials meeting handout (only when no public meeting is held)															
	Revise and resubmit local officials meeting handout for approval															
	Prepare and submit draft and final meeting summary															
7	Public Comments															
	Collect public comments															
	Compile comments in a database and prepare draft responses as needed (export from PublicInput.com site)															
	Submit draft database and responses															
	Revise and resubmit database and responses															
	Prepare for and attend post-public meeting/hearing meeting															
8	Public Engagement Summary															
	Prepare and submit draft public engagement summary, including comment summary and responses using NCDOT template															
	Revise and resubmit public engagement summary															
9	Project Visualizations															
	Renderings (digital static image)															
	Level I															
	Level II															
	Level III															
	Animations (video with motion)															
	Level I															
	Level II															
	Level III															
	Level IV															
	Level V															
	Level VI															
	Level VII															
	Video Production															
	Level I															
	Level II															
	Virtual 3D Models															
10	Task Management															
	Project coordination		0.25										0.25	12.50%		
11	Complete QA/QC Procedures															
	Other Tasks: (i.e. small group meetings)															
	TOTAL WORKDAYS/CATEGORY:		1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	100.00%	0.00	
	HOURLY SALARY RATE:		$59.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$472.00	$320.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$472.00	$320.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				

TOTAL WORKDAYS:		2.00
TOTAL PAYROLL BURDEN:		$792.00
AVERAGE COST PER HOUR:		$49.50
GENERAL OVERHEAD:	**190.27%**	$1,506.94
SUBTOTAL:		$2,298.94
COMPARATIVE FEE:	**9.00%**	$206.90
FACILITIES COST OF CAPITAL:	**0.0600%**	$0.48
TOTAL:		$2,506.32
DIRECT EXPENSES:		$0.00
PUBLIC INVOLVEMENT GRAND TOTAL:		**$2,506.32**

PUBLIC INVOLVEMENT DIRECT EXPENSES - SUBCONSULTANT 2

FIRM:	CONSULTANT NAME					
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Workshop					
	Postage:					
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	

*** Sum of all plots**

ENVIRONMENTAL POLICY BREAKDOWN WORKSHEET - SUBCONSULTANT 1

PROJECT DESCRIPTION: Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue
FIRM: STANTEC CONSULTING SERVICES INC
TASK ORDER NUMBER: 0
DATE PREPARED:
PREPARED BY:
TIP NUMBER: BL-0071A
WBS NUMBER: 50651.1.1 :
REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	ESTIMATED WORK DAYS (ADG) Group Leader (E/A Sup. - A)										SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
1EP1	MERGER SCREENING															
1.1	Merger Pre-Screening															
1.2	Merger Screening															
1.3	Screening/CP1															
1.4	Merger Plan															
2.0	INITIATE ENVIRONMENTAL DOCUMENTATION															
2.1	PSR Coordination															
2.2	Project Initiation Meeting/Coordination															
3.0	TASK MANAGEMENT															
4.0	COMPLETE QC PROCEDURES		0.38										0.38	27.27%		
2EP1	PROJECT INITIATION (if not under 1EP1 above)															
	Prepare/Update initiation/scoping materials															
	Attend/Conduct Scoping meeting with internal/external partners															
1.0	MERGER PREPARATION															
1.1/1.2	Setup and Prepare Materials															
1.3	Pre-Meeting															
1.4	Other Meetings															
2.0	MERGER CONCURRENCE															
2.1	Distribute Materials and Provide Coordination															
2.2	Concurrence Meeting															
3.0	ENVIRONMENTAL (NEPA/SEPA) DOCUMENTATION															
3.1	4(f) De Minimis Coordination															
	4(f) Programmatic Evaluation															
3.2	Other Supporting Documentation															
3.3	Draft Environmental Document(ation)															
	Prepare draft															
	Submit draft for review and address revisions															
3.4	Final Environmental Document(ation)															
	Acquire signatures															
	Upload and distribute (as appropriate)															
4.0	TASK MANAGEMENT															
5.0	COMPLETE QC PROCEDURES		1.00										1.00	72.73%		
3EP1	Right-of-Way Consultation															
1.0	Data Collection															
2.0	Prepare Draft ROW Consultation															
3.0	Submit Final ROW Consultation															
4.0	Task Mngmt															
5.0	Complete QC Procedures															
4EP1	CONSTRUCTION Consultation															
1.0	Data Collection															
2.0	Prepare Draft Construction Consultation															
3.0	Submit Final Construction Consultation															
4.0	Task Mngmt															
5.0	Complete QC Procedures															
	TOTAL WORKDAYS/CATEGORY:		1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38	100.00%	0.00	
	HOURLY SALARY RATE:		$79.93	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$639.44	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$879.23	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				

TOTAL WORKDAYS:		1.38
TOTAL PAYROLL BURDEN:		$879.23
AVERAGE COST PER HOUR:		$79.93
GENERAL OVERHEAD:	**165.25%**	$1,452.88
SUBTOTAL:		$2,332.11
COMPARATIVE FEE:	**9.00%**	$209.89
FACILITIES COST OF CAPITAL:	**0.1850%**	$1.63
TOTAL:		$2,543.63
DIRECT EXPENSES:		$0.00
PLANNING GRAND TOTAL:		**$2,543.63**

ENVIRONMENTAL POLICY DIRECT EXPENSES - SUBCONSULTANT 1

FIRM:	STANTEC CONSULTING SERVICES INC						
PROJECT DESCRIPTION:	Construct Improvements on Elm Street from Sunset Drive to West Commerce Avenue						
PREPARED BY:					TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071A				WBS NUMBER:	50651.1.1 :	
DATE PREPARED:					REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION			UNIT COST	
	Travel:						
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION			UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION			UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION			UNIT COST	
ENVIRONMENTAL DOCUMENT(S):	ITEM	QTY	DESCRIPTION			UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION			UNIT COST	
	Travel:						
	Workshop						
	Postage:						
Miscellaneous Other	ITEM	QTY	DESCRIPTION			UNIT COST	

*** Sum of all plots**

MDEST6.XLS SIGNING ESTIMATE WORKSHEET - SUBCONSULTANT 1
REV 07-14-11

DATE: 5/24/2023
TIP #: BL-0071A

CONSULTANT: STANTEC CONSULTING SERVICES INC
PROJECT #: XXXXXX
PREL EST WORKDAYS: **33.50**

0 >UTILITY

EST SIGNING RDWY SHEETS:	10	# DAYS FIELD TRIPS:	1	(PRELIM)	
TOTAL SIGN PLAN SHEETS:	18	# DAYS FIELD TRIPS:	0	(SUPPORTS)	TOTAL # OF SIGNS NEEDING SUPPORTS:
# OH STRUCTURES:	0	# A&B GRND-MT SIGNS:	0		0.00
# DMS STRUCTURES:	0	# A&B OVERHEAD SIGNS:	0		
# Y-LINES - INTERCHANGE:	0	# D SIGNS	20		
# Y-LINES - AT GRADE:	14	SIGNS / SUPPORTS ONLY	0		
(only count -Y-lines requiring more than a stop sign)		TOT.# A,B,D SIGNS:	20		
		ALLOWED ROUNDTRIP MILEAGE PER TRIP:	180	MILES	

TASK	CLASSIFICATION	ESTIMATED WORKHOURS BW - TEM I	TES III	RH - TE II	TE I	TT V			TOTAL	NOTES
Determine Concept		8.000		8.000					16.000	
Field Trip		8.000		8.000					16.000	
Select Sign Messages				16.000					16.000	
Prepare Prelim Plans				40.000					40.000	
Spacing Design				80.000					80.000	Incl 6 wayfinding
Check Designs		8.000							8.000	will require coord.
Drafting/Sheet clean up				16.000					16.000	
Prepare Signing Plans				16.000					16.000	
Checking		8.000							8.000	
Corrections				8.000					8.000	
10.00	HR								10.000	
10.00	HR								10.000	
8.00	HR								8.000	
16.00	HR								16.000	
TOTAL WORKHOURS		44.000	0.000	224.000	0.000	0.000	0.000	0.000	268.000	
TOTAL WORKDAYS		5.500	0.000	28.000	0.000	0.000	0.000	0.000	33.500	
		---	---	---	---	---	---	---	---	
TOTAL WORKDAYS									**33.500**	

AVERAGE STANDARD RATE PER HOUR

CLASSIFICATION	A NO.WORKDAYS	B % TOT WD	C RATE	D FACTOR	EMPLOYEE NAMES	(B*C)/D AVG STD RATE
	5.500	0.164	$ 90.39	1.000	BW -	$14.84
	28.000	0.836	$ 43.06	1.000	RH -	$35.99
TOTAL	33.500	1.000				$50.83
	SALARIES	=	(AVG STD RATE)(WORKDAYS)(8 HRS)=			$13,622.60
	OVERHEAD	=	(XXX.XX%)(SALARIES)	=	165.25%	$22,511.07
	FEE	=	(9%)(SALARIES+OVERHEAD)	=	0.09	$3,252.03

	FACILITIES COST OF CAPITAL	=		0.1850%	$25.20
TOT. DIR. SALARY COST		=	(SALARIES+OVERHEAD+FEE)	=	$39,410.91
				RATE	COST
TRAVEL:	1	TRIPS x 180	MILES RNDTRP	$0.655	$117.90
TOTAL DIRECT NON-SALARY COST -				=	$117.90

TOTAL ESTIMATE	=	$39,528.81
COST PER WORKDAY	=	1179.96

CONSULTANT'S TOTAL = $39,528.81

$$\frac{\text{CONSULTANT'S TOTAL - TOTAL COST IN\_HOUSE ESTIMATE}}{\text{TOTAL COST IN\_HOUSE ESTIMATE}} = 0.00\%$$

ESTIMATE PREPARED BY: _____ DATE: 5/24/2023

Project Understanding

The City of High Point has secured USDOT RAISE grant funding (2021 round) for its High Point on the RISE project, and now seeks to secure professional engineering services for public involvement, permitting, design, and final construction plans for a component of that project, the construction of the Southwest Heritage Greenway (Phases 1-3). The greenway alignment will be a combination of sidepath along existing roadways, new off-road greenway segments, and potential reuse of existing sidewalks and existing streets reconfigured as bike boulevards. The alignment of the proposed greenway is as follows:

- Sidepath on West Commerce Avenue between South Elm Street and Jacobs Place and Jacobs Place between West Commerce Avenue and West Green Drive. There will be a mid-block crossing of West Green Drive with a Rectangular Rapid Flashing Beacon (RRFB).
- The original alignment was to go through private property along an old railroad line between West Green Street and West Russell Avenue, however a parcel has been redeveloped and a new parking lot has been constructed. Either revisions to the parking lot or an alternate alignment for a sidepath along South Lindsay Street to West Russell Avenue will be required. The roadway crossing of West Russell Avenue will have a RRFB.
- The greenway will diverge at this point with a segment running along Tomlinson Street to West Grimes Avenue to connect to a recently built segment of the greenway with a RRFB for the roadway crossing at West Grimes Avenue. The other section is proposed along the old railroad corridor from West Russell Avenue to West Green Drive. The greenway will cross West Green Drive at the signalized intersection of Taylor Avenue with pedestrian signal upgrades. The crossing with West Grimes Avenue will have an RRFB.
- The greenway is proposed to run along the former railroad from Taylor Avenue to Tryon Avenue with roadway crossings at Ennis Street, Southern Place, and Tryon Avenue.
- The greenway alignment will include a sidepath on Tryon Avenue between the old railroad and Ennis Street, Ennis Street between Tryon Avenue to West Ward Avenue, and West Ward Avenue between Ennis Street and Lincoln Drive with a connection on West Ward Avenue from Ennis Street to West Green Drive and pedestrian signal upgrades at the intersection of West Green Drive and West Ward Avenue. The sidepath will go under an existing railroad bridge on West Ward Avenue. It is assumed that no structural modifications to the railroad bridge structure will be required. A RRFB is proposed at the roadway crossing of West Ward Avenue.
- The greenway alignment will go off-road from the intersection of West Ward Avenue and Lincoln Drive to South Elm Street going through Harvell Park and then following Richland Creek. A RRFB with median island for the West Green Drive at the southeast corner of Harvell Park may be warranted.
- The greenway alignment will include a sidepath on South Elm Street to Goldston Park that will go under an existing railroad bridge. It is assumed that the roadway can be modified on South Elm Street at the Richland Creek culvert and that no modifications to the existing structure will be necessary.
- The greenway alignment will go off-road from Goldston Park to connect to the greenway recently built at Vail Avenue. There will be a roadway crossing at West Ward Avenue, West Willis Avenue, and Tryon Avenue. It is assumed roadway modifications can be made on West Ward Avenue and West Willis Avenue so that the existing culverts that convey a tributary to Richland Creek will not require modifications. A RRFB is proposed for the crossing of West Ward Avenue.

Given portions of the alignment run along a former railroad where the property has not been acquired at this time, the City has requested that an alternate alignment along West Green Drive from the vicinity of South Lindsay Street to West Ward Avenue be designed to the 65% design stage. The City will determine, after the 65% design submittal, which design alignment shall progress forward. The City is currently negotiating with the railroad to acquire the property.

Additional design scope items known as of the date of this scoping include railroad coordination; design of drainage reconstruction, utility adjustments, private utility relocations, pedestrian signal improvements, and potential retaining walls; development of wayfinding signage; and landscaping plans along off-road greenway sections. The project does not include any trailhead design. If trailheads are proposed, it will be an additional service provided as part of a supplemental agreement. Project plans views will be done at a horizontal scale of 1"=20' and in AutoCAD Civil3D format unless approved otherwise.

The project has federal funding and is considered a NCDOT Locally Administered Project (LAP). Plans and designs will conform to City of High Point and NCDOT standard practices for greenway and highway construction which are based on the AASHTO "A Policy on Geometric Design of Highways and Streets" and "Guide for the Development of Bicycle Facilities" 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 expected to impact existing wetlands and surface water features and will require environmental permits. It is unknown if mitigation will be required at this time. The project will also have construction in the 100-year floodplain. The project will be designed to minimize impacts to the floodplain and an analysis will need to be performed to determine the impacts of the greenway. 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 known that property acquisition 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: RR-Rail
Task 14: SD-Signing
Task 15: SG-Signal Communications

Task 16: SS-Signals
Task 17: ST-Structures
Task 18: TM-Work Zone Traffic Control (WZTC)
Task 19: UT-Utilities Coordination
Task 20: UT-Utilities Design
Task 21: 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 will be prepared for each meeting. It is expected these meetings will be attended for up to 15 months.
- Various Meetings – The Consultant will attend the following meetings 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, if desired by the City.
    - Recommended Plan Set Review Meeting (25% Design) – The Consultant will attend a virtual meeting to discuss the 25% Design submission comments.
    - Field Inspection Plan Set Review Meeting (65% Design) – The Consultant will attend a virtual meeting to discuss the 65% Design submission comments.
    - Right of Way Acquisition Plan Set Review Meeting (75% Design) – The Consultant will attend a virtual meeting to discuss the 75% Design submission comments.
    - Final Contract Package Review Meeting (100% Design) – The Consultant 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
    - Identify and delineate potential jurisdictional waters of the U.S. (wetlands, streams, surface waters)
    - Surveys/habitat assessments for relevant protected species
- Complete Draft and Final Preliminary Jurisdictional Determination (PJD) Package
- Complete Agency Site Visit
- Complete Draft and Final NRTM documents
- Complete Permit Packages

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 this scope, the USFWS lists the following species for the project:
        - Bald eagle – Bald and Golden Eagle Protection Act
        - Tricolored Bat - Proposed Endangered
        - Schweinitz's Sunflower – Endangered
    - If habitat is present, species surveys will be completed for these species during optimal survey windows.
- Creation of WEX and WET files
    - Delineated stream, wetland, and surface water data will be integrated into a WEX fie in both MicroStation and AutoCAD format. Changes from the agency site visit with the City of High Point and regulatory agencies will be incorporated into a FINAL WET file, also in both file types.
- Preparation of Preliminary Jurisdictional Package (PJD)
    - Draft and Final PJD packages will be prepared in accordance with the requirements of USACE and NCDWR. Information/documentation will include the following:
        - A cover letter, including tables identifying potential stream, wetland, and surface water features in the study area
        - A USACE Preliminary ORM Data Entry Fields for New Actions form
        - A USACE Jurisdictional Determination Request form
        - A USACE Appendix 2 - PJD form
        - A USACE Waters Upload Microsoft Excel worksheet
        - An Agent Authorization Form (to allow Consultant to submit on the City’s behalf)
        - Right of Entry forms, if required (if agencies will have to access property other than the City’s to assess the delineation)
        - USACE Wetland Determination forms (wetland and upland) for wetlands in the study area
        - NCDWR Stream Identification forms for streams in the study area
        - N.C. Stream Assessment Method forms for low quality/disturbed streams that are potentially being impacted as part of this project.

        - N.C. Wetland Assessment Method forms for low quality/disturbed wetlands that are potentially being impacted as part of this project
        - Detailed mapping of the project, including a vicinity map, a project study area map on topographic imagery, a jurisdictional features map on aerial imagery, and a jurisdictional features map on LIDAR
    - Internal quality assurance using three signature sign-off by the preparer, technical reviewer, and quality assurance reviewer will be documented for the Draft PJD Package. Revisions will be incorporated, and the Final PJD Package will be submitted to regulatory agencies.
- Agency Site Visit
    - The Consultant will coordinate a site visit with the City of High Point and regulatory agencies.
- 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

It is assumed that the project will qualify for authorization under the criteria for Nationwide Permit 14 for linear transportation projects. The Consultant will review the proposed design and calculate impacts to stream, wetland, open water, and/or riparian buffers resulting from the project. Based on those impacts, Consultant will prepare a draft 404/401 permit application package and submit to the City for review. Consultant will revise the application package as requested by the City. Consultant will submit a Pre-Filing Meeting request to the NCDWR 30-days ahead of the permit submittal and will conduct a pre-application meeting with the USACE and the NCDWR to present the permit approach, avoidance/minimization measures, and alternatives analysis, if necessary. As part of this meeting, Consultant will work with the agencies to determine whether mitigation will be required for the project, and if so, the type and amount necessary. If the regulatory agencies determine that the project does not qualify for authorization under the Nationwide permit program and an Individual Section 404/401 Permit is required, these efforts will be considered an additional service and performed as part of a supplemental agreement. Consultant will coordinate with the NC Division of Mitigation Services (NCDMS) or an approved mitigation bank to reserve mitigation for the proposed impacts. On-site mitigation design services are not included in this scope of services but can be provided as an additional service if required.

The Consultant will submit the final 404/401 application package to the agencies using the online PCN tool. It is assumed that no hard copies will be submitted to the regulatory agencies. Upon submittal, the Consultant will track the application through the regulatory review process. This will include addressing up to one round of additional information requests made by the permitting agencies.

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 approval by Division 7.

- Cultural Resource Project Review
    - 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.

- 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 meetings 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 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 may be required with Federal Highway Administration (FHWA), NCDOT Division 7, and the City of High Point.

The Consultant shall prepare the draft CE, exhibits, and supporting documentation necessary. Section 4(f) De Minimis Coordination will be required due to the project impacting Harvell and Goldston Parks. 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

Based on the current understanding of the project, there potentially will be retaining walls and/or box culverts required. As of the time of scoping, these items have yet to be identified. In addition, the City may during the design want to assess soil conditions within the floodplain to determine required undercut. If retaining walls/culvert are identified in the design process and/or the City wishes to do geotechnical investigations in the floodplain areas to determine required undercut, these services will be provided as part of a supplemental agreement.

TASK 7: HY-HYDRAULICS

Based on the proposed improvements at the time of this scoping and based on Light Detection and Ranging (LIDAR) data, the following drainage improvements are expected:

- Modification of drainage structures along existing curb and gutter sections of roadways where sidepath is proposed that will alter the existing curb and gutter
- Proposed drainage systems along roadways without existing curb and gutter where sidepath is proposed with new curb and gutter, replacing an existing ditch
- Proposed ditches along off-road greenway sections, as required
- Proposed pipe culvert crossing of a blue line stream, east of West Green Drive near Dorris Avenue
- Proposed pipe culvert crossing of an existing ditch east of blue line stream crossing
- Proposed pipe culvert crossing of an existing ditch southwest of the intersection of Cassell Street and Roy Avenue

Given the scope of the project, it is not expected that an NCDOT style Stormwater Management Plan will be required and thus it is not included in the scope. In addition, no proposed box culverts and/or extension of existing box culverts is 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.

The project will have construction within the 100-year floodplain. It will be assumed that a No-Rise certification can be achieved. If a No-Rise certification cannot be achieved, the preparation of a Conditional Letter of Map Revision (CLOMR) will be considered an additional service to be provided as part of a supplemental agreement.

There are expected wetland, surface water, and buffer impacts with the construction of the greenway. Permit drawings will be prepared for these impacts and will be used in the permit applications. A Stormwater Management Plan suitable for the permit applications will be prepared.

Permit fees are unknown at this time and are not included in the scope.

7.1 – Preliminary Flood Study (65% Design)

- Conduct a preliminary flood study including HEC-RAS analysis to determine if a No-Rise is achievable.
- Since no extensions to the existing roadway crossings are anticipated, the flood study will only include the greenway within the floodplain and the crossing east of West Green Drive.

7.2 – 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 contain curb and gutter will be evaluated for spread conditions along the roadway edges.
- Hydraulic design will be developed for approximately 23,500 LF of greenway (17,600 LF for one alternative and 5,900 LF for the other alternative).
- Evaluate and design necessary revisions to existing hydraulic structures (storm rain, 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.
- Following the preliminary flood study, the crossing will be designed and analyzed in HEC-RAS. The greenway profile will be analyzed in HEC-RAS, and revisions will be suggested as needed to achieve a No-Rise. The HEC-RAS analysis will only consist of modeling the flows from the effective FEMA model and the 2-year storm to calculate scour. A condensed Culvert Survey Report (CSR) or Pipe Data Sheet (PDS) will be developed to document the hydraulic performance of each crossing, included in the No-Rise package and used for structural design. The BSR/CSR will only consist of plan and profile views of the bridge/culvert, a typical section, and the FEMA performance table. The 2-Year scour will be calculated and shown on the BSR.
- 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.
- Conduct condition survey of drainage structures that will remain.
- Attend virtual 65% design review meeting.

7.3 – 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.
- Develop permit drawing package and associated SMP.
- Develop No-Rise package, and coordinate submittal to NC Floodplain Mapping. It is assumed that one crossing on Richland Creek (Stream No 30) and the greenway within Stream 31's floodplain will be included in the No-Rise Package.

7.4 - 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:

- 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 is 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 Digital Terrain Models (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 -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 Non-gravity U/G Utilities – The Consultant will include above ground utility structures such as water valves, water meters, fire hydrants, gas valves, telephone pedestals, and cable TV pedestals etc. in areas where construction is proposed.
- 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, a WORK ZONE Next _ Miles sign in the middle of the work zone, 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.
- Floodplain Hydraulic Survey – There may be the need to provide additional hydraulic survey required to facilitate the "no-rise" permit or a CLOMR. If additional survey is required, 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 will be drawn at a scale of 1" =20'. Deliverables will 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.

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. Utilities that cannot be designated due to non-conductive material or no tracer wire will be shown per level "C".

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
    - Pavement Marking Schedule
    - Notes
    - 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 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:

- 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. The City has requested that two alignments be designed through 65% design, the original alignment and an alternate alignment along West Green Drive from the vicinity of South Lindsay Street to West Ward Avenue

11.1 – Recommendation Plan Set (25%)

After 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:
    - Preliminary retaining wall locations, if proposed
    - Proposed right of way/easement lines
    - Sight Distance Calculations at bridges, intersections, and other obstructions, where 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.

11.2 – 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.

11.3 - 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 design will be modified based on the alignment that the City decides at this stage.

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.

11.4 - 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 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.

11.5 - 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

11.6 – 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
- 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

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 and the 401 Water Quality Certification has issued. The Consultant will also coordinate with the City to complete the Financial Responsibility Form. The Consultant will be responsible for the permit 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 from the PS&E submittal.

TASK 13: RR-RAIL

Railroad coordination will be required for work proposed under the existing Norfolk Southern (NS) railroad bridges on West Ward Avenue and South Elm Street. Coordination with NS will follow their "Public Improvements Project Manual" dated January 1, 2022.

The Consultant will contact the NS Public Improvement Engineer to provide the project location and initial project information. The Consultant will also coordinate with the City and NS to complete a standard Preliminary agreement.

The Consultant will submit design submissions at the 25%, 65%, 75%, and 100% and PS&E stages to NS in PDF format for review. The Consultant shall prepare a response to comments for every design submission and address comments for the next design submission.

The Consultant will prepare required special provisions from NS in the Project Manual at the 75% design stage and revise once based on one set of comments. The Consultant will work with NS and the City to receive the final RR agreement, if necessary.

NS comments that require bridge modifications and/or canopy designs will be considered an additional service and could be provided as part of a supplemental agreement. In addition, the City is currently negotiating with NS to acquire properties of a former rail line. It is unknown at the time of scoping if any services from the Consultant will be required for the acquisition of NS right of way along the project alignment. If additional services are required, it will be considered an additional service and provided as part of a supplemental agreement.

TASK 14: SD-SIGNING

The Consultant shall design roadway 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 City has also requested wayfinding signage along the corridor. The scope of the wayfinding signage is as follows.

14.1 - Kick Off and Inventory Summary

- Kick-Off/Early Branding Input
    - The Consultant will work with the Client to identify the client team, or key City staff, to be involved in the project. An early virtual kick-off meeting with the Client will identify vision and goals for the branding and wayfinding, identify key destinations on or just off the

Southwest Greenway, and discuss what types of design elements should influence the greenway wayfinding.

- Field Visit/Inventory Signage
    - The Consultant will conduct a photo inventory of existing vehicular, Downtown, trail, and park signage within High Point. The Consultant will review any Client–provided documentation on existing signage guidelines.

- Memo Provided on Existing Signage
    - A summary of the signage inventory with photos and documentation will be provided. The Client will be provided a chance to review and provide comments on the inventory.

14.2 - Branding and Development of a Family of Sign Types

- Branding
    - A virtual meeting will be the launch for the branding of the greenway wayfinding system. This meeting will include a virtual presentation to the group about wayfinding branding opportunities and signage types, examples from other communities, and considerations in design. A series of exercises will be conducted with the client team, including:
        - An assessment and discussion of existing branding that influences the City/area
        - A branding exercise to identify which brands/logos/images residents/visitors may respond to
        - A visual preference survey of sign styles

      Our team will work collaboratively with the City to develop a brand that speaks to the unique character of High Point that can be applied in their greenway wayfinding system, used to reinforce local identity, and used to promote active transportation throughout High Point.

    - Based on input from the meeting and research findings, we will prepare up to three visual style concepts or “mood boards” to develop a base for the brand, or brand platform. These mood boards will be used to gather feedback on a brand “voice”, and which visual style preferences (i.e., colors, imagery, layout, and typography) are appealing and aligned with the vision for High Point’s Greenway brand.

    - Based on input from the mood boards, our team will begin designing logos; bringing the visual style preferences to fruition. Three unique logo design concepts will be developed. Based on City feedback, Alta will move forward with one design concept for refinement in the next round. The City will supply consolidated feedback and clear direction for refinement.

    - In the second round, we will refine the selected logo design concept and will present options for colors. The City will select a color palette and, if needed, we will present one final round of logo refinements.

    - The finalization of the logo design will include a brand guidelines document describing the do’s and don’ts for use of the logo, color palette, and font guidelines. Our team will provide a full suite of logos (full color and black and white), and will deliver final files in a variety of formats and sizes suitable for both print and web use (including JPG, EPS, and TIFF).

- Deliverables:
  - Summary of branding exercises from kick-off call
  - Mood boards (3 concepts)
  - Logo concepts (3 concepts)
  - Refined logo with color palette options
  - Final logo files and brand guidelines

- Conceptual Development of Wayfinding Template Design
  - Using the input gathered in the Branding task along with the developed brand guidelines, Alta will create draft concept options for two (2) wayfinding "family" options with up to six (6) sign types. Both sign "families" will consider hierarchy of signage and potential co-branding (including incorporation of existing branding of the Client). The client team will provide consolidated, non-contradictory feedback on one sign family to move forward with.

  - In the second round, we will refine the selected wayfinding family concept. If needed, we will present one final round of signage refinements. If necessary, the Consultant will also coordinate with a sign fabrication shop to review constructability and sign material recommendations.

  - Deliverables:
    - Wayfinding family concepts (2 concepts)
    - Refined wayfinding family
    - Final full-size Illustrator files of template signs*

      *Please note: this does not include a sign schedule nor every iteration of the sign; these full-sized files will be templates that can later be populated and customized

- Design Intent Drawings (Construction Details)
  - Once the final set is approved, we will craft design intent drawings. A set of construction details will be developed in AutoCAD with dimensions, materials, details, specifications for colors, fasters, and other fabrication details that will meet NCDOT material requirements.

    *Please note: These will not yet be specific to each location and directional content, which will be done in the next task (Sign Schedule).

14.3 - Southwest Greenway Wayfinding Placement Plan

- Draft Placement Plan and Sign Schedule
  - A draft placement plan and sign schedule will be developed for 40 signs along the RAISE grant segment of the Southwest Greenway. The schedule will detail how each of the site-specific signs in the wayfinding family will appear, with text icons, or other information. The draft placement plan will give an approximate location to be used when developing the greenway construction documents.

    The client team will have one round of review and comments at the end of this task.

- Placement Plan Refinement and Design Intent Drawings Finalization
    - Once the Placement Plan has been refined per Client comments, the Consultant will refine the plan using the full suite of signs that could include confidence markers, turn signs, mileage markers, or pavement markings, as deemed appropriate throughout the process. If updates are needed to the Design Intent Drawings, they can be finalized in this task.

The complete signing design will consist of the following sheets:

- Title Sheet – Which will include
    - Roadway Standard Drawings
    - Notes
    - Summary of Quantities
    - Index
- Detail Sheets
    - Type D Signs
    - Wayfinding Details
- Sign Plan Sheets
    - Identify existing signs and note their disposition (remove, reset, dispose, etc.).
    - Identify proposed warning, regulatory, route marker, guide, and wayfinding 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 Consultant shall prepare a response to comments for each 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 required special provisions for the project at the 75% design stage that will be incorporated into the Project Manual.

TASK 15: SG-SIGNAL COMMUNICATIONS

It is assumed that there will not be impacts to traffic signal communications for traffic signals within the project limits. If impacts are identified during the design process, design services will be provided as an additional service as part of a supplemental agreement.

TASK 16: SS-SIGNALS

At the time of scoping, the proposed traffic signal design work is as follows, assuming the original alignment:

- Replace vehicle loop detection (if existing), and install pedestrian signals at the intersections of:
    - West Green Drive at Taylor Avenue
    - West Green Drive at West Ward Avenue

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 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. If NCDOT and/or the City requests additional upgrades to the existing traffic signals, those services will be considered an additional service as well. 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 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 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 17: ST-STRUCTURES

At the time of scoping, the extent of potential structural design services is unknown. It is expected that retaining walls might be required, but the location and extent of the walls needed is not known. In addition, it is not known if any box culvert design or the potential of railroad canopies under the railroad bridges or some other bridge modification is needed. As design progresses and the structural design requirements become clear, these services will be considered an additional service and provided under a supplemental agreement.

TASK 18: TM-WORK ZONE TRAFFIC CONTROL (WZTC)

Traffic Management Plans will be developed in accordance with the NCDOT "Transportation Management Plan Design Manual," latest edition. To construct the proposed improvements, it is expected that only pedestrian detours, daily lane closures, and daily two-way one-lane operations with flaggers will be required.

18.1 - Initiate Transportation Management Plan

Due to the nature of the project, Temporary Traffic Control (TTC) Concept Plans will not be prepared.

18.2 - Complete Transportation Management Plan

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

- Title Sheet
- Roadway Standard Drawings and Legend
- Transportation Operation Notes
    - General Notes
    - Local Notes
    - Transportation Management Strategies
- Written Phasing

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 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 100% Design and PS&E.

TASK 19: UT-UTILITIES COORDINATION

19.1 - Initiate Utility Coordination

After the 25% design submission, the Consultant shall contact utility owners for coordination and provide the 25% design plans requesting review of the plans for accuracy in the surveyed depiction of their facilities and omitted/incorrect information depicted. The Consultant shall incorporate information from the utility company that was missing in the survey.

19.2 – Advance/Complete Utility Coordination

The Consultant shall continue utility coordination throughout the design process until design completion and submit to the utility companies submissions made after the 25% design stage. Relocations required will be shown in Utility by Others Plans completed under Task 20 and be provided by the respective utility owner. The Consultant will complete a Utility by Others Special Provision that shall be incorporated in the Project Manual.

TASK 20: UT-UTILITIES DESIGN

It is assumed that any City impacts to water and sanitary sewer impacts will be adjustment of surface utilities, such as gate valves and manhole covers. If utility relocation design is required, those services will be provided as an additional service as part of a supplemental agreement. In addition, 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 as well.

The Consultant shall provide the following at 25% design:

- Utility Plans:
    - Title Sheet
    - Legend Symbology
    - Notes
    - Plan Sheets
    - Quantities to be incorporated into the project cost estimate
- Utility by Others Plans based on information known at 25% design as follows:
    - Title Sheet
    - Plan Sheets

The Consultant shall prepare a response to one set of 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 65% Design, 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.

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

TASK 21: RIGHT OF WAY

As of this time, Right of Way impacts are unknown. It is known that property acquisition will be required for the project. 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.

Version: 2023.(3.30).SPM

OVERALL SUMMARY

TIP NUMBER:	BL-0071B	When initial estimate is complete, lock initial estimates	
COUNTY:	GUILFORD		
TASK ORDER NUMBER: (if applicable)			
FA NUMBER: (if applicable)	710043		
ESTIMATE SUBMITTAL NUMBER: (Version Control-if needed) (Ex. InitialV2 (initial estimate version 2))		**WBS NUMBER(s):** Firm: fill out WBS Number(s) section on "Acct Initiation Request" DOT: the Project Manager fills out the entire "Acct Initiation Request"	50651.1.1 :
OTHER PROJECT IDENTIFIER INFORMATION: (if needed)			
DESCRIPTION: (List the project parameters; where the project starts and stops)	Construct Southwest Heritage Greenway (Phases 1-3)		
DISCIPLINE USED: (List each discipline that will be involved in this project)	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : LS-SUE : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SS-Signals : TM-Work Zone Traffic Control (WZTC) : UT-Utilities Coordination : UT-Utilities Design		

DISCIPLINE		INITIAL			FINAL		
ITEM		WD	COST	COST/WORKDAY	WD	COST	COST/WORKDAY
PM-Project Mgmt		46.375	$ 64,762.78	$ 1,396.50			
	Direct Costs		$ 91.70				
EN-Natural Env		12.750	$ 13,662.12	$ 1,071.54			
	Direct Costs		$ 303.75				
EN-Community Studies		6.750	$ 8,171.64	$ 1,210.61			
	Direct Costs		$ -				
EN-Public Involvement		57.500	$ 61,505.95	$ 1,069.67			
	Direct Costs		$ 1,277.60				
EP-Env Policy		19.625	$ 24,890.71	$ 1,268.32			
	Direct Costs		$ 1,098.25				
HY-Hydraulics		125.375	$ 138,925.02	$ 1,108.08			
	Direct Costs		$ 1,104.90				
LS-Location Surveys		351.250	$ 218,049.29	$ 620.78			
	Direct Costs		$ 603.45				
LS-SUE		54.375	$ 34,796.34	$ 639.93			
	Direct Costs		$ 165.72				
PD-Final Pavement Marking & Markers		58.250	$ 57,888.21	$ 993.79			
	Direct Costs		$ -				
RD-Roadway		421.250	$ 425,423.59	$ 1,009.91			
	Direct Costs		$ -				
RE-Erosion Control		64.000	$ 67,030.80	$ 1,047.36			
	Direct Costs		$ 2,000.00				
RR-Rail		7.250	$ 10,193.97	$ 1,406.06			
	Direct Costs		$ -				
SD-Signing		104.750	$ 98,406.59	$ 939.44			
	Direct Costs		$ 91.70				
SS-Signals		25.063	$ 33,720.57	$ 1,345.46			
	Direct Costs		$ -				
TM-Work Zone Traffic Control (WZTC)		33.000	$ 35,234.87	$ 1,067.72			
	Direct Costs		$ -				
UT-Utilities Coordination		14.000	$ 17,890.26	$ 1,277.88			
	Direct Costs		$ -				
UT-Utilities Design		36.125	$ 35,856.67	$ 992.57			
	Direct Costs		$ -				
EN-Public Involvement--SUB1		2.000	$ 2,506.32	$ 1,253.16			
	Direct Costs		$ -				
Grand Total - All Disciplines		**1439.688**	**$ 1,355,652.77**				

Labor, Overhead & Fee

MANAGING DOT DISCIPLINE:

ENGINEERING FIRM: Alta Planning + Design

ENGINEERING FIRM CONTRACT NUMBER: **CONTRACT TYPE:** **PAYMENT TYPE:**

SCOPE/WORKDAY ESTIMATE PREPARED BY: **DATE:**

SCOPE/WORKDAY ESTIMATE APPROVED BY: **DATE:**

REASON FOR SUPPLEMENTAL:
(If this is a supplemental to the original Scope of Services, state reason for supplemental.)

PO NUMBER: (If Available) **SUPPLEMENTAL NUMBER:** (If Applicable)

Account Initiation Request

NOTE: If this is the Firm, please go to cell B29 and fill out WBS number(s) only. After completing WBS number entry, the remainder of this worksheet can be ignored.
If this is NCDOT, all information on this worksheet is to be filled out in its entirety by the NCDOT PROJECT MANAGER for the NCDOT estimate.

Primary Consultant: Alta Planning + Design

NCDOT Unit: 0

Primary Consultant Project Manager Name: Michael Repsch

Primary Consultant Project Manager Email: mikerepsch@altago.com

Contract #: 0

P.O. #: 0

DOT Project Manager Name:

DOT Project Manager Tel. #:

Project Name: This field does not need to be filled out as there is a TIP number.

OR

T.I.P. Number: BL-0071B

Project Description: Construct Southwest Heritage Greenway (Phases 1-3)

Payment Type: 0

Disciplines Used: PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : LS-SUE : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SS-Signals : TM-Work Zone Traffic Control (WZTC) : UT-Utilities Coordination : UT-Utilities Design

Total Utilization: 0.00%

DOT : Repeat the WBS number for each Discipline, Cost Center, and Function Code that the WBS number is being applied to AND complete all workday estimates to incur a proper Percent Utilization

WBS Number (This column is the only column required by both the Firm and DOT estimates)	% Utilization	$'s Allotted to WBS	Discipline SAP Code	Discipline *Only 1 Unit Per WBS number*	Discipline Cost	% Utilization	Cost Center	Function Code	Note
50651.1.1	0.00%	$0.00							

Supplemental Number:

Fiscal # (If available):

Approved by:

Date:

TIP NUMBER: BL-0071B
WBS NUMBER(s): 50651.1.1 :
COUNTY: GUILFORD

DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)

DISCIPLINE(S) SELECTED: PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : LS-SUE : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SS-Signals : TM-Work Zone Traffic Control (WZTC) : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT: ALTA PLANNING + DESIGN — STANDARD FEE IS 9% UNLESS APPRO

DISCIPLINE	CLASSIFICATION	EMPLOYEE NAME / INITIALS (First initial, Last initial) Name as submitted to NCDOT	RAW HOURLY RATE**	OVERHEAD* *	FEE	COST OF CAPITAL**
PM-Project Mgmt	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
Project Mgmt		(SF) Spencer Finch	$ 72.12			
		(MR) Michael Repsch	$ 74.32			
		(BB) Branden Bergeron	$ 53.69			
		(EB) Elizabeth Braswell	$ 37.50			
		(MH) Matt Hayes	$ 76.37			
		(HB) Hillary Butler	$ 28.37			
EN-Natural Env	THREE OAKS ENGINEERING INC			190.27%	9.00%	0.0600%
	Section Head (E/A Man. -C)	(JM) Jim Mason	$56.00			
	Group Leader (EPS - III)	(AE) Adam Efird	$47.00			
	Env. Snr. Specialist (ESS)	(NH) Nathan Howell (NH)	$35.75			
	Env. Specialist (ES)	(BL) Byron Levan	$26.50			
	Env. Program Consultant (EPC)	(CR) Cary Rowells	$43.25			
EN-Community Studies	THREE OAKS ENGINEERING INC			190.27%	9.00%	0.0600%
	Group Leader (E/A Sup. - A)	(CY) Craig Young	$72.00			
	Project Engineer (E-A)	(LW) Liz Workman-Maurer	$60.00			
	Project Engineer (E-C)	(JS) Joanna Salvucci	$28.50			
	GIS Technician (ET-J)	(CR) Cary Rowells	$43.25			
EN-Public Involvement	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
		(SF) Spencer Finch	$ 72.12			
		(MR) Michael Repsch	$ 74.32			
		(EB) Elizabeth Braswell	$ 37.50			
		(BS) Britt Storck	$ 62.01			
		(MH) Matt Hayes	$ 76.37			
		(CC) Chelsea Cole	$ 28.94			
		(MB) Meg Bryson	$ 31.25			
EP-Env Policy	THREE OAKS ENGINEERING INC			190.27%	9.00%	0.0600%
	Group Leader (E/A Sup. - A)	(CY) Craig Young	$72.00			
	Project Engineer (E-A)	(LW) Liz Workman-Maurer	$60.00			
	Project Engineer (E-J)	(JO) Jackie Obediente	$59.00			
	Project Engineer (E-C)	(JS) Joanna Salvucci	$28.50			
	GIS Technician (ET-J)	(CR) Cary Rowells	$43.25			
HY-Hydraulics	THREE OAKS ENGINEERING INC			190.27%	9.00%	0.0600%
	ESA	(CY) Craig Young	$72.00			
	EA	(JP) Jason Patskoski	$63.50			

TIP NUMBER: BL-0071B
WBS NUMBER(s): 50651.1.1 :
COUNTY: GUILFORD

DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)

DISCIPLINE(S) SELECTED: PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : LS-SUE : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SS-Signals : TM-Work Zone Traffic Control (WZTC) : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT: ALTA PLANNING + DESIGN — STANDARD FEE IS 9% UNLESS APPRO

DISCIPLINE	CLASSIFICATION	EMPLOYEE NAME / INITIALS (First initial, Last initial) Name as submitted to NCDOT	RAW HOURLY RATE**	OVERHEAD* *	FEE	COST OF CAPITAL**
	EJ	(HB) Hannah Behr	$32.25			
	EC	(CR) Cary Rowells	$43.25			
	ETJ					
	ETC					
LS-Location Surveys	DAVIS MARTIN POWELL & ASSOCIATES INC DBA DAVIS MARTIN POWELL ENGINEERS & SURVEYORS			147.06%	9.00%	0.2400%
	Project Engineer Manager	(KH) Kimberly Haney				
	Project Survey Supervisor	(JW) John Willis	$54.09			
	Advanced Survey Coordinator	(JM) Joshua May	$33.00			
	Survey Crew Leader	(RD) Ryan Dunlap	$32.00			
	Assistant Survey Crew Leader	(WH) Will Hayes	$19.00			
	Survey Crew Member	(ZM) Zachary Martin	$15.00			
	Survey Crew Leader	(BD) Bradley Deaton	$23.00			
	Survey Crew Leader	(SR) Stuart Ragland	$40.95			
		(AG) Anthony Goodyear	$32.45			
		(BP) Bradley Phillips	$62.51			
		(KH) Kimberly Haney	$25.50			
LS-SUE	DAVIS MARTIN POWELL & ASSOCIATES INC DBA DAVIS MARTIN POWELL ENGINEERS & SURVEYORS			147.06%	9.00%	0.2400%
	SR CADD TECHNICIAN	(AG) Anthony Goodyear	$32.45			
	PROJECT MANAGER					
	CADD TECHNICIAN					
	SURVEY ANALYST					
	SUE PROJ. ANALYST	(GS) Garrett Saffold	$28.85			
	TECHNICIAN II					
	TECHNICIAN I					
	ACCOUNTING CLERK	(TS) Taylor Salmons	$17.00			
	PRINCIPAL / PROF. ENGR.					
PD-Final Pavement Marking & Markers	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
		(SF) Spencer Finch	$ 72.12			
		(MR) Michael Repsch	$ 74.32			
		(BB) Branden Bergeron	$ 53.69			
		(EB) Elizabeth Braswell	$ 37.50			
		(AE) Adrian Esteban	$ 70.90			
RD-Roadway	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
	PRINCIPAL	(SF) Spencer Finch	$ 72.12			
For Roadway	PROJECT MANAGER	(MR) Michael Repsch	$ 74.32			
If needed, List Additional Classifications	PROJECT ENGINEER	(BB) Branden Bergeron	$ 53.69			
PRINCIPAL	DESIGN ENGINEER	(EB) Elizabeth Braswell	$ 37.50			
3RD PARTY QA/QC	3RD PARTY QA/QC	(AE) Adrian Esteban	$ 70.90			
PROJECT MANAGER	PROJECT MANAGER	(BS) Britt Storck	$ 62.01			
	DESIGN ENGINEER	(CW) Chloe Weigle	$ 38.94			
RE-Erosion Control	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
		(SF) Spencer Finch	$ 72.12			
	PROJECT MANAGER	(MR) Michael Repsch	$ 74.32			
	PROJECT ENGINEER	(BB) Branden Bergeron	$ 53.69			
	DESIGN ENGINEER	(EB) Elizabeth Braswell	$ 37.50			
	PROJECT ENGINEER	(CA) Chris Allen	$ 50.17			
RR-Rail	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
		(SF) Spencer Finch	$ 72.12		FEE = 0% if using fully-loaded rates.	
		(MR) Michael Repsch	$ 74.32			
		(BB) Branden Bergeron	$ 53.69			
		(EB) Elizabeth Braswell	$ 37.50			

TIP NUMBER:	BL-0071B
WBS NUMBER(s):	50651.1.1 :
COUNTY:	GUILFORD
DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)
DISCIPLINE(S) SELECTED:	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : LS-SUE : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SS-Signals : TM-Work Zone Traffic Control (WZTC) : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT: ALTA PLANNING + DESIGN — STANDARD FEE IS 9% UNLESS APPRO

DISCIPLINE	CLASSIFICATION	EMPLOYEE NAME / INITIALS (First initial, Last initial) Name as submitted to NCDOT	RAW HOURLY RATE**	OVERHEAD* *	FEE	COST OF CAPITAL**
SD-Signing	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
		(SF) Spencer Finch	$ 72.12			
		(MR) Michael Repsch	$ 74.32			
		(BB) Branden Bergeron	$ 53.69			
		(EB) Elizabeth Braswell	$ 37.50			
		(AE) Adrian Esteban	$ 70.90			
		(MH) Matt Hayes	$ 76.37			
		(KW) Kimberly Williams	$ 55.29			
		(MS) Marguerite Schumm	$ 43.27			
		(JA) Joseph Abad	$ 34.62			
		(EB) Elizabeth Burke	$ 27.88			
SS-Signals	STANTEC CONSULTING SERVICES INC			165.25%	9.00%	0.1850%
	TEM II	(BW) Betsy Watson	$90.39			
	TES III	(JG) Jason Galloway	$66.86			
	TE III	(RM) Regina Muncey	$51.45			
	TE III	(DW) Derrick Waller	$49.55			
	TE II	(JH) James Hambright	$44.36			
TM-Work Zone Traffic Control (WZTC)	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
		(SF) Spencer Finch	$ 72.12			
		(MR) Michael Repsch	$ 74.32			
		(BB) Branden Bergeron	$ 53.69			
		(EB) Elizabeth Braswell	$ 37.50			
		(AE) Adrian Esteban	$ 70.90			
UT-Utilities Coordination	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
	Utility Coordination Supervisor	(MR) Michael Repsch	$ 74.32			
	Senior Utility Coordinator	(BB) Branden Bergeron	$ 53.69			
	Utility Coordinator	(EB) Elizabeth Braswell	$ 37.50			
	Junior Technician					
	MISCELLANEOUS1					
	MISCELLANEOUS2					
	MISCELLANEOUS3					
UT-Utilities Design	ALTA PLANNING + DESIGN			155.42%	9.00%	0.5000%
	Utility Design Supervisor	(MR) Michael Repsch	$ 74.32			
	Senior Utility Engineer	(BB) Branden Bergeron	$ 53.69			
	Utility Engineer	(EB) Elizabeth Braswell	$ 37.50			
	Junior Technician					
	3rd Oarty QA/QC	(AE) Adrian Esteban	$ 70.90			
	MISCELLANEOUS2					
	MISCELLANEOUS3					
EN-Public Involvement--SUB1	THREE OAKS ENGINEERING INC			190.27%	9.00%	0.0600%
	Project Engineer (E-J)	(JO) Jackie Obediente	$59.00			
	Public Inv. Eng. (E-A)	(AS) Ana Santiago	$40.00			

TIP NUMBER:	BL-0071B
WBS NUMBER(s):	50651.1.1 :
COUNTY:	GUILFORD
DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)
DISCIPLINE(S) SELECTED:	PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : LS-SUE : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SS-Signals : TM-Work Zone Traffic Control (WZTC) : UT-Utilities Coordination : UT-Utilities Design

** PLEASE NOTE: Rates (Salary, Overhead, Cost of Capital) in this Estimate should match those Rates (Salary, Overhead, Cost of Capital) in CRS (Consultant Rate System).

PRIMARY CONSULTANT OR NCDOT UNIT: ALTA PLANNING + DESIGN — STANDARD FEE IS 9% UNLESS APPRO

DISCIPLINE	CLASSIFICATION	EMPLOYEE NAME / INITIALS (First initial, Last initial) Name as submitted to NCDOT	RAW HOURLY RATE**	OVERHEAD* *	FEE	COST OF CAPITAL**

Project Mgmt DESIGN BREAKDOWN WORKSHEET - Project Mgmt

PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)				FIRM:	ALTA PLANNING + DESIGN	TASK ORDER NUMBER:	0				DATE PREPARED:		
PREPARED BY:					TIP NUMBER:	BL-0071B	WBS NUMBER:	50651.1.1 :				REVISION DATE:		
			ESTIMATED WORK DAYS											
		Employee	(SF)	(MR)	(BB)	(EB)	(MH)	(HB)						
TASK NO.	TASK DESCRIPTION	Classification										SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2PM1/3PM1/4PM1	Project Management														
1	Project Management and Coordination														
	Coordination with NCDOT PM														
	Coordination with other NCDOT disciplines/units														
	Coordination with external stakeholders and agencies														
	Internal coordination with project team														
	Document all meetings and calls														
	Maintain administrative record and internal project files														
	Maintain Connect/SharePoint files and ATLAS Workbench														
	Prepare for and attend meetings		4.50	6.75	0.25	0.25	0.50					12.25	26.42%		
2	Project Schedule														
	Develop Schedule		0.13	1.00				1.00				2.13	4.58%		
	Maintain Schedule		4.50	4.50				4.50				13.50	29.11%		
3	Monthly PM Status Reports and Invoicing		4.50	4.50				4.50				13.50	29.11%		
4	QC/QA Procedures														
5	Value Management Tasks														
	Other Tasks														
	Sub Coordination/QA/QC			3.00	2.00							5.00	10.78%		
	TOTAL WORKDAYS/CATEGORY:		13.63	19.75	2.25	0.25	0.50	10.00	0.00	0.00	0.00	46.38	100.00%	0.00	
	HOURLY SALARY RATE:		$72.12	$74.32	$53.69	$37.50	$76.37	$28.37	$0.00	$0.00	$0.00				
	RATES PER DAY:		$576.96	$594.56	$429.52	$300.00	$610.96	$226.96	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$7,861.08	$11,742.56	$966.42	$75.00	$305.48	$2,269.60	$0.00	$0.00	$0.00				
	TOTAL WORKDAYS:		46.38												
	TOTAL PAYROLL BURDEN:		$23,220.14												
	AVERAGE COST PER HOUR:		$62.59												
	GENERAL OVERHEAD:	**155.42%**	$36,088.74												
	SUBTOTAL:		$59,308.88												
	COMPARATIVE FEE:	**9.00%**	$5,337.80												
	FACILITIES COST OF CAPITAL:	**0.5000%**	$116.10												
	TOTAL:		$64,762.78												
	DIRECT EXPENSES:		$91.70												
	OTHER GRAND TOTAL:		**$64,854.48**												

Project Mgmt | ***DIRECT EXPENSES - Project Management***

FIRM:	ALTA PLANNING + DESIGN					
PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071B			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	1 Trip(s) @		140 miles @	$0.655	$91.70
				Subtotal		$91.70
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Workshop					
	Postage:					
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
				TOTAL		**$91.70**

*** Sum of all plots**

NATURAL ENVIRONMENT BREAKDOWN WORKSHEET

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3) | FIRM: THREE OAKS ENGINEERING INC | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071B | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	(JM) Jim Mason Section Head (E/A Man. -C)	(AE) Group Leader (EPS - III)	(NH) Env. Snr. Specialist (ESS)	(BL) Env. Specialist (ES)	(CR) Env. Program Consultant (EPC)					SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
			ESTIMATED WORK DAYS												
2EN1	Assess Natural Environmental Impacts														
1	Pre-Field Work		0.25				0.25					0.50	3.92%		
2	Jurisdictional Delineation Field Work			1.00	1.00							2.00	15.69%		
3	Protected Species Surveys			0.75	0.75							1.50	11.76%		
4	WEX file				0.25		0.25					0.50	3.92%		
5	WET file				0.13		0.13					0.25	1.96%		
6	Preliminary Jurisdictional Package (PJD)		0.25	0.25	1.00		0.38					1.88	14.71%		
7	Agency Site Visit				0.50							0.50	3.92%		
8	NRTM		0.25	1.00	0.25	0.25	0.25					2.00	15.69%		
9	Task Management		0.25									0.25	1.96%		
10	Task Management														
11	Complete QC/QA Procedures														
	Other Tasks (i.e Additional Biological Surveys work)														
3EN3	Apply for Permits														
1	Review Project Documents				0.50							0.50	3.92%		
2	Prepare Section 404/401 Permit Application		0.25		1.00							1.25	9.80%		
3	Task Management		0.25									0.25	1.96%		
4	Complete QC/QA Procedures		0.25									0.25	1.96%		
5	Task Management														
6	Complete QC/QA Procedures														
	Other Tasks:														
4EN1	Secure Permits														
1	Receive issued permits, review conditions, and update Project Special Commitments				0.38							0.38	2.94%		
2	Permit Package				0.38							0.38	2.94%		
3	Task Management		0.13									0.13	0.98%		
4	Complete QC/QA Procedures		0.25									0.25	1.96%		
	Other Tasks:														
	TOTAL WORKDAYS/CATEGORY:		2.13	3.00	6.13	0.25	1.25	0.00	0.00	0.00	0.00	12.75	100.00%	0.00	
	HOURLY SALARY RATE:		$56.00	$47.00	$35.75	$26.50	$43.25	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$448.00	$376.00	$286.00	$212.00	$346.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$952.00	$1,128.00	$1,751.75	$53.00	$432.50	$0.00	$0.00	$0.00	$0.00				

TOTAL WORKDAYS:		12.75
TOTAL PAYROLL BURDEN:		$4,317.25
AVERAGE COST PER HOUR:		$42.33
GENERAL OVERHEAD:	**190.27%**	$8,214.43
SUBTOTAL:		$12,531.68
COMPARATIVE FEE:	**9.00%**	$1,127.85
FACILITIES COST OF CAPITAL:	**0.0600%**	$2.59
TOTAL:		$13,662.12
DIRECT EXPENSES:		$303.75
NES GRAND TOTAL:		**$13,965.87**

PDEA RELATED DATA :

SIZE OF STUDY AREA (SQUARE FEET) _____

JURISDICTIONAL RESOURCES PRESENT _____

POTENTIAL ENDANGERED SPECIES

NATURAL ENVIRONMENT DIRECT EXPENSES

FIRM:	THREE OAKS ENGINEERING INC					
PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071B			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Carry All	3 Trip(s) @		150 miles @	$0.675	$303.75
				Subtotal		$303.75
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
				TOTAL		**$303.75**

*** Sum of all plots**

COMMUNITY STUDIES BREAKDOWN WORKSHEET

PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)	FIRM:	THREE OAKS ENGINEERING INC	TASK ORDER NUMBER:	0	DATE PREPARED:
PREPARED BY:		TIP NUMBER:	BL-0071B	WBS NUMBER:	5065.1.1 :	REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	ESTIMATED WORK DAYS (CY) Group Leader (E/A Sup. - A)	(LW) Project Engineer (E-A)	(JS) Project Engineer (E-C)	(CR) GIS Technician (ET-J)							SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2EN2	Assess Human Environmental Impacts															
1	Direct and Indirect Screening Tool (DIST)															
1.1	DIST Project Initiation & Set-up			0.13									0.13	1.85%		
1.2	DIST Data Gathering			1.25	1.25								2.50	37.04%		
1.3	DIST Project Documentation			0.25	0.25								0.50	7.41%		
1.4	DIST Deliverables			0.25	0.25	0.50							1.00	14.81%		
	Task Management		0.25										0.25	3.70%		
	Complete QC/QC Procedures		0.13	0.13									0.25	3.70%		
2	Short Form Community Impacts Assessment (CIA)															
2.1	CIA Project Initiation & Set-up															
2.2	CIA Data Gathering															
2.3	Short Form CIA Project Documentation															
2.4	Short Form CIA Deliverables															
	Task Management															
	Complete QC/QC Procedures															
3	Checkbox Community Characteristics Report (CCR) and Community Impacts Assessment (CIA)															
3.1	CCR Project Initiation & Set-up															
3.2	CCR Data Gathering															
3.3	CCR Project Documentation															
3.4	CCR Deliverables															
3.5	CIA Project Initiation & Set-up															
3.6	CIA Project Documentation															
3.7	CIA Deliverables															
	Task Management															
	Complete QC/QC Procedures															
4	Narrative Community Characteristics Report (CCR) and Community Impacts Assessment (CIA)															
4.1	CCR Project Initiation & Set-up															
4.2	CCR Data Gathering															
4.3	CCR Project Documentation															
4.4	CCR Deliverables															
4.5	CIA Project Initiation & Set-up															
4.6	CIA Project Documentation															
4.7	CIA Deliverables															
	Task Management															
	Complete QC/QC Procedures															
5	Short Form Indirect and Cumulative Effects (ICE)															
5.1	Project Initiation & Set-up															
5.2	Conduct Base Screening															
5.3	Conduct Analytical Screening															
5.4	Analyze and Evaluate Data															
5.5	ICE Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
6	Checkbox Indirect and Cumulative Effects (ICE)															
6.1	Project Initiation & Set-up															
6.2	Conduct Base Screening															
6.3	Conduct Analytical Screening															
6.4	Analyze and Evaluate Data															
6.5	ICE Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
7	Narrative Indirect and Cumulative Effects (ICE)															
7.1	Project Initiation & Set-up															
7.2	Conduct Base Screening															
7.3	Conduct Analytical Screening															
7.4	Analyze and Evaluate Data															
7.5	ICE Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
8	Short Form Land Use Scenario Assessment (LUSA)															
8.1	Project Initiation & Set-up															
8.2	Verify and Update Information from ICE Screening Report															
8.3	Create Land Use Development Scenarios															
8.4	Land Use Scenario Assessment															
8.5	Indirect and Cumulative Effects Summary															
8.6	Land Use Scenario Assessment Report Deliverables															
	Task Management															
	Complete QC/QC Procedures															
9	Land Use Scenario Assessment (LUSA)															
9.1	Project Initiation & Set-up															
9.2	Verify and Update Information from ICE Screening Report															
9.3	Land Use Development Scenarios															
9.4	Land Use Scenario Assessment															
9.5	Indirect and Cumulative Effects Summary															
9.6	Land Use Scenario Assessment Report Deliverables															
	Task Management															

	Complete QC/QC Procedures																
	Other Tasks:																
	Prepare & SubmitNC-HPO Project Review Checklist		0.25	0.75	0.25	0.50								1.75	25.93%		
	Prepare & Submit Tribal Coordination Letters				0.25	0.13								0.38	5.56%		
	TOTAL WORKDAYS/CATEGORY:		0.63	2.75	2.25	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.75	100.00%	0.00	
	HOURLY SALARY RATE:		$72.00	$60.00	$28.50	$43.25	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$576.00	$480.00	$228.00	$346.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$360.00	$1,320.00	$513.00	$389.25	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				

TOTAL WORKDAYS:		6.75
TOTAL PAYROLL BURDEN:		$2,582.25
AVERAGE COST PER HOUR:		$47.82
GENERAL OVERHEAD:	**190.27%**	$4,913.25
SUBTOTAL:		$7,495.50
COMPARATIVE FEE:	**9.00%**	$674.59
FACILITIES COST OF CAPITAL:	**0.0600%**	$1.55
TOTAL:		$8,171.64
DIRECT EXPENSES:		$0.00
COMMUNITY STUDIES GRAND TOTAL:		**$8,171.64**

COMMUNITY STUDIES DIRECT EXPENSES

FIRM:	THREE OAKS ENGINEERING INC		
PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)		
PREPARED BY:		TASK ORDER NUMBER:	0
TIP NUMBER:	BL-0071B	WBS NUMBER:	50651.1.1 :
DATE PREPARED:		REVIEWED BY UNIT HEAD ON:	

GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST
	Travel:				
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST
	Travel:				
	Workshop				
	Postage:				
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST

*** Sum of all plots**

PUBLIC INVOLVEMENT BREAKDOWN WORKSHEET

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3) | FIRM: ALTA PLANNING + DESIGN | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071B | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	ESTIMATED WORK DAYS (SF)	(MR)	(EB)	(BS)	(MH)	(CC)	(MB)					SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2PI1	Continue Public Engagement																
1	Public Involvement Plan (PIP)																
	Submit ETRACS for PI Team to review draft or develop PIP																
	Prepare and submit draft and final PIP (if PIP is to be prepared by PEF)																
2	Project Mailing List																
	Submit ETRACS request and study area Shapefile for project mailing list																
	Create project mailing list			0.25					1.00					1.25	2.17%		
3	Project Website																
	Submit request for project website or PublicInput.com site																
	Provide updates at project milestones																
4	Newsletter/Postcards																
	Prepare and submit draft Newsletter/Postcard (using NCDOT templates)						0.13	0.25	1.25					1.63	2.83%		
	Revise and resubmit Newsletter/Postcard for approval						0.13		3.00					3.13	5.43%		
	Reproduce and distribute approved Newsletter /Postcard (insert 200 copies)								8.00					8.00	13.91%		
5	Public Meeting(s)/Hearing(s)																
	In-person Open House (3 hr meeting)		1.00	1.00	1.00		1.00							4.00	6.96%		
	Virtual Meeting (X hr meeting)																
	Formal Presentation																
	Submit meeting request via ETRACS (6 weeks prior to meeting date)																
	Coordinate with NCDOT PI and Division on venue and dates																
	Prepare and submit public meeting maps																
	Schedule and attend map review meeting																
	Revise and resubmit public meeting maps																
	Prepare and submit draft public meeting handout			0.13			0.50		2.00					2.63	4.57%		
	Revise and resubmit public meeting handout for approval						0.13		0.50					0.63	1.09%		
	Reproduce public meeting handout (insert 200 copies)								0.25					0.25	0.43%		
	Prepare and submit draft public meeting displays			0.13			0.25	2.00	2.50					4.88	8.48%		
	Revise and resubmit public meeting displays						0.13	0.50	1.00					1.63	2.83%		
	Provide digital copies of handout, displays, and public meeting maps to NCDOT PI for web posting																
6	Local Officials Information Meeting (LOIM)																
	Coordinate with NCDOT PI on schedule and invitees																
	Prepare and submit draft LOIM Invitation letter																
	Revise and resubmit LOIM Invitation letter for approval																
	Prepare and submit draft PowerPoint presentation			0.13			0.25		1.00					1.38	2.39%		
	Revise and resubmit PowerPoint presentation			0.13			0.13		0.25					0.50	0.87%		
	Prepare and submit draft local officials meeting handout (only when no public meeting is held)																
	Revise and resubmit local officials meeting handout for approval																
	Prepare and submit draft and final meeting summary																
	Prep for meeting, travel, attend, meeting, meeting summary		1.00	1.00			1.50		1.25					4.75	8.26%		
7	Public Comments																
	Collect public comments																
	Compile comments in a database and prepare draft responses as needed (export from PublicInput.com site)																
	Submit draft database and responses																
	Revise and resubmit database and responses																
	Prepare for and attend post-public meeting/hearing meeting																
8	Public Engagement Summary																
	Prepare and submit draft public engagement summary, including comment summary and responses using NCDOT template		0.13				0.50		1.00					1.63	2.83%		
	Revise and resubmit public engagement summary																
	Prep for, attend response to public comments meeting, and finalize comment summary		1.00	1.50	0.50		1.00		0.50					4.50	7.83%		
9	Project Visualizations																
	Renderings (digital static image)			0.25		0.25		3.75						4.25	7.39%		
	Level I																
	Level II																
	Level III																
	Animations (video with motion)																
	Level I																
	Level II																
	Level III																
	Level IV																
	Level V																
	Level VI																
	Level VII																
	Video Production																
	Level I																
	Level II																
	Virtual 3D Models																
10	Task Management																
11	Complete QA/QC Procedures																
	Other Tasks: (i.e. small group meetings)																
	Prep for, travel, attend, and meeting minutes for 4 stakeholder meetings		4.00	4.50	4.00									12.50	21.74%		
	TOTAL WORKDAYS/CATEGORY:		7.13	9.00	5.50	0.25	5.63	6.50	23.50	0.00	0.00	0.00	0.00	57.50	100.00%	0.00	
	HOURLY SALARY RATE:		$72.12	$74.32	$37.50	$62.01	$76.37	$28.94	$31.25	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$576.96	$594.56	$300.00	$496.08	$610.96	$231.52	$250.00	$0.00	$0.00	$0.00	$0.00				

PAYROLL BURDEN:		$4,110.84	$5,351.04	$1,650.00	$124.02	$3,436.65	$1,504.88	$5,875.00	$0.00	$0.00	$0.00	$0.00
TOTAL WORKDAYS:		57.50										
TOTAL PAYROLL BURDEN:		$22,052.43										
AVERAGE COST PER HOUR:		$47.94										
GENERAL OVERHEAD:	**155.42%**	$34,273.89										
SUBTOTAL:		$56,326.32										
COMPARATIVE FEE:	**9.00%**	$5,069.37										
FACILITIES COST OF CAPITAL:	**0.5000%**	$110.26										
TOTAL:		$61,505.95										
DIRECT EXPENSES:		$1,277.60										
PUBLIC INVOLVEMENT GRAND TOTAL:		**$62,783.55**										

PUBLIC INVOLVEMENT DIRECT EXPENSES

FIRM:	ALTA PLANNING + DESIGN					
PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071B			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	1	Trip(s) @	140 miles @	$0.655	$91.70
				Subtotal		$91.70
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	7	Trip(s) @	140 miles @	$0.655	$641.90
	Workshop					
	- Reproduction	1	8 1/2 x 11 B & W Copies @	200 Handouts	$0.09	$18.00
		200	8 1/2 x 11 Color Copies @		$0.83	$166.00
		36	SQ. FT. of Plots (B & W or Color)	≥65 SQ. FT.*	$1.50	$54.00
		36	SQ. FT. Foam Mounting Board @		$1.25	$45.00
	Mailing Labels:	4	Laser Peel & Stick (box)	750 per box	$4.00	$16.00
	Postage:					
	- Public Workshops:	1	Notice or Newsletter @	500 copies @	$0.49	$245.00
				Subtotal		$1,185.90
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
				TOTAL		**$1,277.60**

*** Sum of all plots**

ENVIRONMENTAL POLICY BREAKDOWN WORKSHEET

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3) | FIRM: THREE OAKS ENGINEERING INC | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071B | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	ESTIMATED WORK DAYS (CY) Group Leader (E/A Sup. - A)	(LW) Project Engineer (E-A)	(JO) Project Engineer (E-J)	(JS) Project Engineer (E-C)	(CR) GIS Technician (ET-J)						SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
1EP1	MERGER SCREENING															
1.1	Merger Pre-Screening															
1.2	Merger Screening															
1.3	Screening/CP1															
1.4	Merger Plan															
2.0	INITIATE ENVIRONMENTAL DOCUMENTATION															
2.1	PSR Coordination															
2.2	Project Initiation Meeting/Coordination															
3.0	TASK MANAGEMENT															
4.0	COMPLETE QC PROCEDURES															
2EP1	PROJECT INITIATION (if not under 1EP1 above)															
	Prepare/Update initiation/scoping materials															
	Attend/Conduct Scoping meeting with internal/external partners															
1.0	MERGER PREPARATION															
1.1/1.2	Setup and Prepare Materials															
1.3	Pre-Meeting															
1.4	Other Meetings															
2.0	MERGER CONCURRENCE															
2.1	Distribute Materials and Provide Coordination															
2.2	Concurrence Meeting															
3.0	ENVIRONMENTAL (NEPA/SEPA) DOCUMENTATION															
3.1	4(f) De Minimis Coordination		0.50		1.00		0.50						2.00	10.19%		
	4(f) Programmatic Evaluation															
3.2	Other Supporting Documentation															
	Field Visit			1.00		1.00	0.50						2.50	12.74%		
	Data Collection and Mapping (Study Area, Vicinity, Quad, Environmental Features)			0.50	0.75	0.50	1.50						3.25	16.56%		
3.3	Draft Environmental Document(ation)															
	Prepare draft		0.25		2.00	3.00	0.50						5.75	29.30%		
	Submit draft for review and address revisions		0.13		0.50		0.25						0.88	4.46%		
3.4	Final Environmental Document(ation)															
	Acquire signatures					0.50							0.50	2.55%		
	Upload and distribute (as appropriate)					0.25							0.25	1.27%		
4.0	TASK MANAGEMENT		3.00		1.00	0.50							4.50	22.93%		
5.0	COMPLETE QC PROCEDURES															
3EP1	Right-of-Way Consultation															
1.0	Data Collection															
2.0	Prepare Draft ROW Consultation															
3.0	Submit Final ROW Consultation															
4.0	Task Mngmt															
5.0	Complete QC Procedures															
4EP1	CONSTRUCTION Consultation															
1.0	Data Collection															
2.0	Prepare Draft Construction Consultation															
3.0	Submit Final Construction Consultation															
4.0	Task Mngmt															
5.0	Complete QC Procedures															
	TOTAL WORKDAYS/CATEGORY:		3.88	1.50	5.25	5.75	3.25	0.00	0.00	0.00	0.00	0.00	19.63	100.00%	0.00	
	HOURLY SALARY RATE:		$72.00	$60.00	$59.00	$28.50	$43.25	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$576.00	$480.00	$472.00	$228.00	$346.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$2,232.00	$720.00	$2,478.00	$1,311.00	$1,124.50	$0.00	$0.00	$0.00	$0.00	$0.00				

TOTAL WORKDAYS:		19.63
TOTAL PAYROLL BURDEN:		$7,865.50
AVERAGE COST PER HOUR:		$50.10
GENERAL OVERHEAD:	**190.27%**	$14,965.69
SUBTOTAL:		$22,831.19
COMPARATIVE FEE:	**9.00%**	$2,054.81
FACILITIES COST OF CAPITAL:	**0.0600%**	$4.72
TOTAL:		$24,890.71
DIRECT EXPENSES:		$1,098.25
PLANNING GRAND TOTAL:		**$25,988.96**

ENVIRONMENTAL POLICY DIRECT EXPENSES

FIRM:	THREE OAKS ENGINEERING INC					
PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)					
PREPARED BY:				TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071B			WBS NUMBER:	50651.1.1 :	
DATE PREPARED:				REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	1 Trip(s) @		150 miles @	$0.655	$98.25
				Subtotal		$98.25
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION		UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION		UNIT COST	
ENVIRONMENTAL DOCUMENT(S):	ITEM	QTY	DESCRIPTION		UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Workshop					
	Postage:					
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	
	PERMIT FEES	1	PERMIT FEES		$1,000.000	$1,000.00
				Subtotal		$1,000.00
				TOTAL		**$1,098.25**

*** Sum of all plots**

HYDRAULICS DESIGN ESTIMATE

DATE:			
TIP:	BL-0071B	ESTIMATE TYPE:	Project Estimate
COUNTY:	GUILFORD	SUPPLEMENTAL NUMBER	
COMPILED BY:		CONTRACT NUMBER	0
CONSULTANT:	THREE OAKS ENGINEERING INC		

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)

PROJECT SCOPE: PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : LS-SUE : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SS-Signals : TM-Work Zone Traffic Control (WZTC) : UT-Utilities Coordination : UT-Utilities Design

		ESTIMATED WORKHOURS								
	EMPLOYEE	(CY)	(JP)	(HB)	(CR)					
TASKS	CLASSIFICATION	ESA	EA	EJ	EC	ETJ	ETC		TOTAL	NOTES
2PEF									**0**	
Develop Preliminary Hydraulic Recommendations									-	
Hydraulic Planning Report									-	
Hydraulics Field Review			2	8	2				1.50	
NEPA/Section 404 Merger Support			4						0.50	
Preliminary Flood Study		4	20	40	12				9.50	
2PEF SUBTOTAL		4	26	48	14	0	0	0		**11.5 WORKDAYS**
3PEF									-	
Complete Drainage for Field Inspection									-	
Review and provide comments on Design Recommendations Plan Set(s)									-	
Review/provide comments on Design Recommendations Plan Set(s)			4						0.50	
Hydraulics Pre-Design Meeting			2	2					0.50	
Field Reconnaissance and Survey									-	
Pipe Drainage, Ditches -L-			24	24					6.00	
Pipe Drainage, Ditches -Y-			8	8					2.00	
Travel			3	3					0.75	
Hydraulic Design Report(s)									-	
Box Culverts with a Model (1)		2	20	40	4				8.25	
Redline Drainage Plans for Field Inspection									-	
Pipes, Storm Drainage , Ditches -L-		8	88	200	56				44.00	
Pipes, Storm Drainage , Ditches -Y-		2	32	68	16				14.75	
Outlet Analysis (5)		2	12	32	2				6.00	
CADD			4	24	24				6.50	
Field Inspection			4						0.50	
Coordinate Railroad Drainage Design			2	2					0.50	
Task Management			4						0.50	
Complete QC Procedures			4						0.50	
3PEF SUBTOTAL		14	211	403	102	0	0	0		**91.25 WORKDAYS**
4PEF									-	
Complete Hydraulic Design									-	
Complete Final Drainage Design			2	4					0.75	
FEMA Compliance Packages - SFCs (1) CLOMRs (0)		4	20	28	4				7.00	
Hydraulic Summary Sheet(s)			2	8					1.25	
Stormwater Management Plan			1	3					0.50	
Environmental Permit Drawing Package			12	32	4				6.00	
Task Management			2						0.25	
Complete QC Procedures			2						0.25	
Complete Open Hydraulic Tasks									-	
Address unforseen issues/comments			2	2	2				0.75	
4PEF SUBTOTAL		4	43	77	10	0	0	0		**16.75 WORKDAYS**
2PEF, 3PEF, 4PEF SUBTOTAL		22	280	528	126	0	0	0		**119.5 WORKDAYS**

REVIEW AND REWORK R/W & FINAL PLAN DEVELOPMENT (Phase 3 & 4)	PERCENT FOR REVIEW AND REWORK			5%					
Review and Rework	1	14	26	6	0	0	0		WORKDAYS
TOTAL WORKHOURS:	23	294	554	132	0	0	0	1003	125.375
TOTAL WORKDAYS:	2.88	36.75	69.25	16.50	0.00	0.00	0.00		
HOURLY SALARY RATE:	$72.00	$63.50	$32.25	$43.25	$0.00	$0.00	$0.00		
RATES PER DAY:	$576.00	$508.00	$258.00	$346.00	$0.00	$0.00	$0.00		
PAYROLL BURDEN:	$1,656.00	$18,669.00	$17,866.50	$5,709.00	$0.00	$0.00	$0.00		
TOTAL WORKDAYS:		125.375							
TOTAL PAYROLL BURDEN:		$43,900.50							
AVERAGE COST PER HOUR:		$43.77							
COST PER WORKDAY:		$1,108.08							
GENERAL OVERHEAD:	**190.27%**	$83,529.48							
SUBTOTAL:		$127,429.98							
COMPARATIVE FEE:	**9.00%**	$11,468.70							
FACILITIES COST OF CAPITAL:	**0.0600%**	$26.34							
TOTAL DIRECT AND INDIRECT SALARY COST:		$138,925.02							
DIRECT EXPENSES:		$1,104.90							
SUBCONSULTANT FEES (*IF NO SEPARATE ESTIMATE*):									
HYDRAULICS GRAND TOTAL:		**$140,029.92**							

TIP: **BL-0071B** **Date:**

TRAVEL EXPENSE:

MILEAGE: # field trips 1 # meeting trips 0 # local trips 0

		Miles to site (one way)		Miles to meeting (one way)		Local Miles (one way)	
			70		0		0
Carryall (survey trip)	$ 0.675	(per mile) X	140	Miles =	**$94.50**		
Sedan (meeting trip)	$ 0.655	(per mile) X	0	Miles =	**$0.00**		
Sedan (Local Mileage)	$ 0.655	(per mile) X	0	Miles =	**$0.00**		

PER DIEM EXPENSE:

LODGING + MEALS (BREAKFAST, LUNCH, DINNER)	2	# of People X	$126.30	(per day) X	4	# of Days =	**$1,010.40**
BREAKFAST		# of People X	$9.00	(per day) X		# of Days =	**$0.00**
LUNCH		# of People X	$11.80	(per day) X		# of Days =	**$0.00**
DINNER		# of People X	$20.50	(per day) X		# of Days =	**$0.00**
LODGING		# of People X	$85.00	(per day) X		# of Days =	**$0.00**

MISCELLANEOUS EXPENSES:

Description	Quantity	Unit of Measure		Cost Per Unit		
			X		=	**$0.00**
			X		=	**$0.00**
			X		=	**$0.00**
			X		=	**$0.00**
			X		=	**$0.00**
Total Miscellaneous Expenses						$0.00

SUBTOTAL: **$1,104.90**

PROJECT ESTIMATE TOTAL: **$140,029.92**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS PEF COST ESTIMATE

DATE: _____

TIP NO.: BL-0071B FIRM: WELL & ASSOCIATES INCDBA DAVIS MARTIN POWELL ENGINEEI

LS NO.: _____ MI

WBS: 50651.1.1 : COUNTY: GUILFORD

LENGTH:

L-LINE: _____ MI RAMPS: _____ MI

Y-LINE(S): _____ MI RAILROADS: _____ MI

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)

TASKS & PARAMETERS	ESTIMATED WORKHOURS PEM	PSS	ASC	SCL	ASCL	SCM	SCL			TOTAL	NOTES
1. Courthouse Research No. of Properties:									80	80	
2. Contacting Property Owners No. of Property Owners:										0	
3. NC Grid Tie (Horiz.) to NAD 1983 Approx. Length:										0	
4. Vertical Control Tie to NAVD 1988 Approx. Length:										0	
5. Baseline Traverse Approx. Length:				60		60	30	30		180	
6. Intermediate Staking of Baseline Approx. Length:										0	
7. Compute Best-Fit Alignment (Graphically) Approx. Length:										0	
8. Hub & Stake Design -L- & -Y- Alignments Approx. Length -L-: Approx. Length -Y-:										0	
9. Establish/Elevate Temp. Bench Marks No. of TBM's:				40		40	20	30		130	
10. Pavement DTMs Approx. Length:			60							60	
11. Hydrographic Surveys & -T- Lines Approx. Length:										0	
12. Suppl. Info for DTM's (Obscured Areas) No. of Acres / Hectares:										0	
13. Field Property Ties & Recon No. of Properties:				280		280				560	
14. Property Analysis and Computations No. of Properties:								300		300	
15. Property Line Ties to Design Alignment No. of Properties:										0	
16. Property Strip Maps No. of Maps:										0	
17. Data for Appraisal Report No. of Properties:										0	
18. Classif. of Features on Aerial Maps No. of Maps: Scale:			30	40		40				110	
19. Field Loc. of Topo & Plan. Features (Dense, Med., or LT.):			70	150		150				370	
20. Loc. of Non-Gravity U/G Utilities (Dense, Med., or LT.):				35		35				70	
21. Loc. of Gravity Utilities & Pipe Inverts (Dense, Med., or LT.):				60		60				120	
22. Mapping Pre. Prop. from Tax Map Info. No. of Properties:								30		30	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS PEF COST ESTIMATE

DATE: _____

TIP NO.: BL-0071B FIRM: VELL & ASSOCIATES INCDBA DAVIS MARTIN POWELL ENGINEEI

LS NO.: _____ MI

WBS: 50651.1.1 : COUNTY: GUILFORD

LENGTH: _____

L-LINE: _____ MI RAMPS: _____ MI

Y-LINE(S): _____ MI RAILROADS: _____ MI

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)

ESTIMATED WORKHOURS

TASKS & PARAMETERS	PEM	PSS	ASC	SCL	ASCL	SCM	SCL			TOTAL	NOTES
23. Pole Data Sheets (Dense, Med., LT.):										0	
24. Setting Photo Con. Panels No. of Points:										0	
25. Photogrammetric Control No. of Points:										0	
26. Staking and Flagging R/W & Easements No. of R/W Points: No. of EASEMENT Points:										0	
27. Production of Base Mapping No. of Sheets:			200					80		280	
28. GPS Points No. of Points:				80		80	40			200	
29. Misc. Staking No. of Points:										0	
33. Travel Hrs R.T.										0	
34. Project Mgmt. & Supervision		180								180	
35. Traffic Control & Safety				70		70				140	
Property 1 Description Property 2 Description										0	
Property 1 Description Property 2 Description										0	
Property 1 Description Property 2 Description										0	
Property 1 Description Property 2 Description										0	
Property 1 Description Property 2 Description										0	
TOTAL WORKHOURS:	0	180	360	815	0	815	90	470	80	2810	

Classification	Employee Name	Hours	Rate	Cost
Project Engineer Manager	(KH) Kimberly H	0	$0.00	$0.00
Project Survey Supervisor	(JW) John Willis	180	$54.09	$9,736.20
Advanced Survey Coordinator	(JM) Joshua May	360	$33.00	$11,880.00
Survey Crew Leader	(RD) Ryan Dunla	815	$32.00	$26,080.00
Assistant Survey Crew Leader	(WH) Will Hayes	0	$19.00	$0.00
Survey Crew Member	(ZM) Zachary Ma	815	$15.00	$12,225.00
Survey Crew Leader	(BD) Bradley Dea	0	$23.00	$0.00
Survey Crew Leader	(SR) Stuart Ragla	90	$40.95	$3,685.50
	(AG) Anthony Go	470	$32.45	$15,251.50
	(BP) Bradley Phil	0	$62.51	$0.00

TOTAL WORKHOURS: **2810**

TOTAL DIRECT SALARY COSTS: $80,898.20

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS PEF COST ESTIMATE

DATE: _____

TIP NO.: BL-0071B FIRM: WELL & ASSOCIATES INCDBA DAVIS MARTIN POWELL ENGINEEI

LS NO.: _____ MI

WBS: 50651.1.1 : COUNTY: GUILFORD

LENGTH:

L-LINE: _____ MI RAMPS: _____ MI

Y-LINE(S): _____ MI RAILROADS: _____ MI

PROJECT DESCRIPTION:

Construct Southwest Heritage Greenway (Phases 1-3)

TASKS & PARAMETERS	PEM	PSS	ASC	SCL	ESTIMATED WORKHOURS ASCL	SCM	SCL	TOTAL	NOTES
	(KH) Kimberly H	80	$25.50	$2,040.00					

INDIRECT SALARY COSTS

Total Dir. Salary Costs	$80,898.20		
Overhead (%)	147.06%	$118,968.89	
Fee (%)	9.00%	$17,988.04	
Cost of Capt. (%)	0.2400%	$194.16	
		Total Indirect Salary Costs:	$137,151.09

TOTAL WORKDAYS: **351.25**

TOTAL DIR. and INDIR. SALARY COSTS: $218,049.29

DIRECT COSTS

Carry-all $/Day	$33.75		Days =	$0.00
or $/Mi	$0.675	894	Miles=	$603.45
Sedan $/Day	$32.75		Days =	$0.00
or $/ Mi	$0.655		Miles=	$0.00
			Misc. Survey Supplies=	

TOTAL DIRECT COSTS: $603.45

PER DIEM EXPENSES

	$ / Day	Persons		Days
Lodging	$85.00		x	
Breakfast	$9.00		x	
Lunch	$11.80		x	
Dinner	$20.50		x	

TOTAL PER DIEM: $0.00

MISCELLANEOUS EXPENSES

Description	Quantity	Unit of Measure		Cost Per Unit
			x	
			x	
			x	
			x	
			x	

TOTAL MISC. EXPENSES: $0.00

Cost per MI

Workhours per MI

TOTAL DIRECT NON-SALARY COSTS: $603.45

ESTIMATE BY: _____

PROJECT ESTIMATE TOTAL: $218,652.74

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS SUBSURFACE UTILITY ENGINEERING (SUE) COST ESTIMATE

DATE:

CONTRACT: FIRM: DAVIS MARTIN POWELL & ASSOCIATES INCDBA DAVIS MARTIN POWELL ENGINEERS &S

PUR. ORDER: ADDRESS:

ESTIMATE PREPARED BY:

WBS: 50651.1.1 : COUNTY: GUILFORD ROUTE: TIP NO.: BL-0071B

LENGTH: MI LS NO.:

L-LINE: MI RAMPS MI

Y-LINE(S): MI RAILROADS: MI

PROJECT DESCRIPTION:

Construct Southwest Heritage Greenway (Phases 1-3)

TOTAL PROJECT ESTIMATE: $34,962.06

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS SUE COST ESTIMATE

SECTION A:

TIP NUMBER: BL-0071B
PEF NAME: SSOCIATES INCDBA DAVIS MARTIN POWELL EN

1. MOBILIZATION FOR PROJECTS WORKHOURS BY CLASSIFICATION:

DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)

	ESTIMATE WORKHOURS																		
Employee Name	(AG) Anthony Gc				(GS) Garrett Saff			(TS) Taylor Salm											
Classification TASKS & PARAMETERS	SR CADD TECHNICIAN	PROJECT MANAGER	CADD TECHNICIAN	SURVEY ANALYST	SUE PROJ. ANALYST	TECHNICIAN II	TECHNICIAN I	ACCOUNTING CLERK	PRINCIPAL / PROF. ENGR.									TOTAL	NOTES
PARAMETERS	SR CADD	PROJECT	CADD	SURVEY	SUE PROJ.	TECHNICIAN II	TECHNICIAN I	ACCOUNTING	PRINCIPAL /									TOTAL	NOTES
Utility Records Research & Retrieval					60.00													60.00	
Hourly Field SUE Investigations					275.00													275.00	
Mapping of SUE Utility Data	100.00																	100.00	
TOTAL	100.00				335.00													435.00	54.38

WORKDAYS

54.38

TOTAL WORKDAYS

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
LOCATION AND SURVEYS SUE COST ESTIMATE

PEF NAME: L & ASSOCIATES INCDBA DAVIS MARTIN POWELL ENGINE TIP NUMBER: BL-0071B

CONTRACT: WBS: 50651.1.1 : LENGTH:

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)

SECTION A cont.:

TASK & PARAMETERS
(Direct & Indirect Cost based on negotiated contract items.)

1. MOBILIZATION FOR PROJECTS WORKHOURS BY CLASSIFICATION:
(See Section D for Tasks & Parameters)

EMPLOYEE NAME				RATE			
(AG) Anthony Goodye	SR CADD TECHNICIAN		HRS. X	32.45	PER HR.	=	
	PROJECT MANAGER		HRS. X		PER HR.	=	
	CADD TECHNICIAN		HRS. X		PER HR.	=	
	SURVEY ANALYST		HRS. X		PER HR.	=	
(GS) Garrett Saffold	SUE PROJ. ANALYST		HRS. X	28.85	PER HR.	=	
	TECHNICIAN II		HRS. X		PER HR.	=	
	TECHNICIAN I		HRS. X		PER HR.	=	
(TS) Taylor Salmons	ACCOUNTING CLERK		HRS. X	17.00	PER HR.	=	
	PRINCIPAL / PROF. ENGR.		HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
	TOTAL HRS =				TOTAL	=	

TOTAL DIRECT & INDIRECT SALARY COST		
COST	RATE	TOTAL
TOTAL DIRECT LABOR		
OVERHEAD (PERCENT)	147.06%	
SUBTOTAL		
FEE (PERCENT)	9.00%	
COST OF CAPITAL	0.2400%	
TOTAL		

2. TASK/PARAMETER WORKHOURS BY CLASSIFICATION:

Records Research For Quality Level D Mapping		Special Projects Authorized by PEF Coordinator	

EMPLOYEE NAME							
(AG) Anthony Goodye	SR CADD TECHNICIAN	100.00	HRS. X	32.45	PER HR.	=	3245.00
	PROJECT MANAGER		HRS. X		PER HR.	=	
	CADD TECHNICIAN		HRS. X		PER HR.	=	
	SURVEY ANALYST		HRS. X		PER HR.	=	
(GS) Garrett Saffold	SUE PROJ. ANALYST	335.00	HRS. X	28.85	PER HR.	=	9664.75
	TECHNICIAN II		HRS. X		PER HR.	=	
	TECHNICIAN I		HRS. X		PER HR.	=	
(TS) Taylor Salmons	ACCOUNTING CLERK		HRS. X	17.00	PER HR.	=	
	PRINCIPAL / PROF. ENGR.		HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
			HRS. X		PER HR.	=	
	TOTAL HRS =	435.00			TOTAL	=	$12,909.75

TOTAL DIRECT & INDIRECT SALARY COST		
COST	RATE	TOTAL
TOTAL DIRECT LABOR		12909.75
OVERHEAD (PERCENT)	147.06%	18985.08
SUBTOTAL		31894.83
FEE (PERCENT)	9.00%	2870.53
COST OF CAPITAL	0.2400%	30.98
TOTAL		$34,796.34

4. QUALITY LEVEL C MAPPING : TOTAL LINEAR FOOT ESTIMATE

	LN FT RANGE		
LINEAR FEET RANGE VALUES	> or >/=	< or </=	RATE
lower range			
mid range			
upper range			

UTILITY	LN FT	RATE	FEE
SEWER FORCE MAIN			
WATER			
TELEPHONE (Fiber Optic)			
TELEPHONE (Dir Bur)			
TELEPHONE (Duct)			
GAS			
ELECTRIC			
CABLE (Fiber Optic)			
CABLE (Dir Bur)			
		TOTAL =	

5. QUALITY LEVEL B SERVICES: TOTAL DESIGNATING LF ESTIMATE

LINEAR FEET RANGE VALUES	LN FT RANGE > or >/=	LN FT RANGE < or </=	RATE
lower range			
mid range			
upper range			

UTILITY	LN FT	RATE	FEE
SEWER FORCE MAIN			
WATER			
TELEPHONE (Fiber Optic)			
TELEPHONE (Dir Bur)			
TELEPHONE (Duct)			
GAS			
ELECTRIC			
CABLE (Fiber Optic)			
CABLE (Dir Bur)			
		TOTAL =	

6. QUALITY LEVEL A SERVICES: TOTAL LOCATING SERVICES

A. LESS THAN 10 TEST HOLES:		AT		PER TEST HOLE =	
B. 10 OR MORE TEST HOLES:		AT		PER TEST HOLE =	
C. EXTRA DEPTH BELOW 6 FEET:		AT		PER FT =	
				TOTAL =	

TOTAL OF SECTION A: = $34,796.34

SECTION B: DIRECT COSTS

DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)

(1) VEHICLE USAGE:

AUTOMOBILE:	253	MILES AT	$ 0.655	PER MILE	=	165.72
CARRYALL:		MILES AT	$ 0.675	PER MILE	=	
VACUUM TRUCK:		MILES AT		PER MILE	=	
				TOTAL MILEAGE=		$165.72

(2) PER DIEM:

MEALS (BREAKFAST+LUNCH+DINNER):		DAYS AT	$ 41.30	PER DAY	=	
BREAKFAST:		DAYS AT	$ 9.00	PER DAY	=	
LUNCH:		DAYS AT	$ 11.80	PER DAY	=	
DINNER:		DAYS AT	$ 20.50	PER DAY	=	
LODGING:		DAYS AT	$ 85.00	PER DAY	=	
				TOTAL PER DIEM	=	

(3) REPRODUCTION:

XEROX COPIES		AT	$ 0.09	PER COPY	=	
BLUEPRINTS		AT	$ 0.35	PER SHEET	=	
BOND		AT	$ 0.42	PER SHEET	=	
MYLARS		AT	$ 5.90	PER SHEET	=	
VELLUMS		AT	$ 3.00	PER SHEET	=	
STICK-ONS		AT	$ 1.00	PER SHEET	=	
COVERS & BINDINGS		AT	$ 1.00	PER SHEET	=	
				TOTAL REPRODUCTIONS	=	

(4) MISCELLANEOUS OTHER:

	AT		=	
	AT		=	
	AT		=	
	AT		=	
	AT		=	
	AT		=	
	AT		=	
			TOTAL =	

TOTAL SECTION B (DIRECT COST) = $165.72

PROJECT ESTIMATE TOTALS

SECTION A TOTAL =	$34,796.34
SECTION B TOTAL =	$165.72
TOTAL PROJECT ESTIMATE =	**34962.06**

MDEST6.XLS PAVEMENT MARKING AND MARKERS ESTIMATE WORKSHEET
REV 11/02/15

DATE:
TIP #: BL-0071B

CONSULTANT: **ALTA PLANNING + DESIGN**
LSC#:
PREL EST WORKDAYS: **58.25**

EST RDWY SHEETS:	0	# DAYS FIELD TRIPS:	0
TOTAL PLAN SHEETS:	0		
# Y-LINES - INTERCHANGE:	0	LONGITUDINAL MARKING (Y=1,N=0):	0
# Y-LINES - AT GRADE:	0		
		MILEAGE PER TRIP:	0 MILES

		ESTIMATED WORKHOURS							
	EMPLOYEE	(SF)	(MR)	(BB)	(EB)	(AE)			
TASK	CLASSIFICATION							TOTAL	NOTES
DEVELOP PLAN / MARKING									
65% Design Items		2.000	24.000	60.000	248.000	8.000		342.000	
342.00	HR								
FINALIZE QUANTITIES / ESTIMATE									
0.00	HR								
MARKING ROADWAY SHEETS									
75% Design to Final		4.000	8.000	24.000	80.000	8.000		124.000	
124.00	HR								
MISCELLANEOUS									
0.00	HR								
QUANTITIES/CALC SHEETS									
SPECIAL PROVISIONS									
REPRODUCTIONS,PLOTS									
MEETINGS, ADMIN									
TOTAL MAN-HRS		6.000	32.000	84.000	328.000	16.000	0.000	466.000	
TOTAL WORKDAYS		0.750	4.000	10.500	41.000	2.000	0.000	58.250	
TOTAL WORKDAYS								**58.250**	

AVERAGE STANDARD RATE PER HOUR

CLASSIFICATION	NO.WORKDAYS	A % TOT WD	B RATE	C FACTOR	D EMPLOYEE NAMES	(B*C)/D AVG STD RATE
	0.750	0.013	$72.12	1.000	(SF)	$0.93
	4.000	0.069	$74.32	1.000	(MR)	$5.10
	10.500	0.180	$53.69	1.000	(BB)	$9.68
	41.000	0.704	$37.50	1.000	(EB)	$26.39
	2.000	0.034	$70.90	1.000	(AE)	$2.43
TOTAL	58.250	1.000				$44.54
	SALARIES	=	(AVG STD RATE)(WORKDAYS)(8 HRS)=			$20,755.32
	OVERHEAD	=	155.42%	ALARIES) =		$32,257.92
	FEE	=	9.00%	(SALARIES+OVERHEAD) =		$4,771.19
COST OF CAPITAL	0.5000%	=				$103.78
TOT. DIR. SALARY COST		=	(SALARIES+OVERHEAD+FEE) =			$57,888.21
					RATE	COST

TRAVEL:	TRAVEL:	0	TRIPS x	
TOTAL DIRECT NON-SALARY COST -			=	$0.00

TOTAL ESTIMATE	=	$57,888.21
COST PER WORKDAY	=	993.79

CONSULTANT'S TOTAL = $57,888.21

CONSULTANT'S TOTAL - TOTAL COST IN_HOUSE ESTIMATE
---------- = 0.00%
TOTAL COST IN_HOUSE ESTIMATE

ESTIMATE PREPARED BY: _____ DATE: _____

ROADWAY PROJECT DATA

TIP NUMBER : BL-0071B **ESTIMATE SUBMITTAL NUMBER :** _____

WBS NUMBER : 50651.1.1 :

FA NUMBER : 710043

COUNTY : GUILFORD

DESCRIPTION : Construct Southwest Heritage Greenway (Phases 1-3)

DISCIPLINE(S) SELECTED : PM-Project Mgmt : EN-Natural Env : EN-Community Studies : EN-Public Involvement : EP-Env Policy : HY-Hydraulics : LS-Location Surveys : LS-SUE : PD-Final Pavement Marking & Markers : RD-Roadway : RE-Erosion Control : RR-Rail : SD-Signing : SS-Signals : TM-Work Zone Traffic Control (WZTC) : UT-Utilities Coordination : UT-Utilities Design

CONSULTANT : Alta Planning + Design

(ENGLISH UNITS)

TYPE OF FACILITY (Y/N) :	
BRIDGE PROJECT	
2 & 3-LANE SHOULDER	
3-LANE C&G	
MEDIAN DIVIDED	
DIVIDED WITH RAISED MEDIAN	
SUPERSTREET	

NUMBER OF TYPICAL SECTIONS :	
BASIC SHOULDER (2 & 3 LANES)	
BASIC CURB & GUTTER (3 LANES)	
MEDIAN SHOULDER (4 LANES & UP)	
MEDIAN CURB & GUTTER (4 LANES & UP)	

DESIGN LENGTHS:	**UNIT:** FEET
-L-	
DETOURS	
-Y- LINES > 300'	
RAMPS, LOOPS, FLYOVERS, C-D's	
SERVICE ROADS	
TOTAL C&G SECTION	
TOTAL SHOULDER SECTION	

NUMBER OF :	
-Y- LINES > 300'	
-Y- LINES < 300'	
RAMPS, LOOPS	
FLYOVERS, C-D's	
GORE AREAS	
SERVICE ROADS	
DRIVEWAYS >100' (REQUIRES GRADE)	
BRIDGE SITES OVER ROADWAYS	
BRIDGE SITES OVER WATERWAYS	
WALLS	
PARCELS	
SUB-CONSULTANTS	

SCALE :	**UNIT:** FEET	
PLAN	1" =	
PROFILE	1" =	H
PROFILE	1" =	V
X-SECTIONS	1" =	

NUMBER OF AT GRADE INTERSECTIONS :	
4 LEG (WITH BULB)	
4 LEG (WITHOUT BULB)	
T (WITH BULB)	
T (WITHOUT BULB)	
ROUNDABOUT	
LEFTOVER	

PUBLIC HEARING / WORKSHOP (Y/N) :	
PREPARE MAP	
ATTEND MAP REVIEW MEETING	
ATTEND HEARING / WORKSHOP	
OVERNIGHT STAY	
ATTEND POST PUBLIC HEARING MEETING	

NUMBER OF INTERCHANGES :	
DIAMOND	
CLOVERLEAF	
SPUI	
DDI	
MULTILEVEL	

DESIGN EXCEPTION PACKAGE (Y/N) :

CAPACITY ANALYSIS (Y/N) :

CONSTRUCTION PHASING NARRATIVE (Y/N) :

WALLS REQUIRING ENVELOPE	**UNIT:** FEET
NOISE	
RETAINING (ROADWAY PAY ITEM)	

NUMBER OF PLAN SHEETS :	
-L-	
-Y-	
SERVICE ROADS	
DETOURS	
INTERCHANGE DETAIL	

NUMBER OF FIELD INSPECTIONS :	
OVERNIGHT STAY (Y/N)	

NUMBER OF X-SECTIONS PER SHEET :

PLAN PREPARATION STAGE (Y/N) :	
R/W	
LET	

Roadway Corridor Modeling Project Worksheet TIP NUMBER: BL-0071B FIRM: ALTA PLANNING + DESIGN

Group #	Corridor #	Alignment	Corridor Type			Begin Station	End Station	Corridor Length (Miles)			Typical Section/Template Type
			Major	Minor	Detour			Major	Minor	Detour	
		Sheet Total:	0	0	0			0.00	0.00	0.00	

Roadway Workday Estimate

BL-0071B TIP NUMBER

ALTA PLANNING + DESIGN FIRM

elow in green are standard tasks following standard scopes. The tasks should not be modified unless In that case they can be written over or deleted but do not cut/paste. Keep tasks in the correct phase 2RD1/2RDs, 3RD1, 4RD1.	TOTAL EMPLOYEE	WORKDAYS (SF)	
Description	CLASSIFICATION	PRINCIPAL	**NOTES:**
2RD2	WORKDAYS		
Horizontal and Vertical Layout for L	42.00	1.00	
Maintenance of Traffic Narrative	1.00		
Design Public Meeting/Hearing Maps	19.50	0.50	
Prepare Title Sheet, Typical Sections, and Earthwork summary	10.25		
Sheeting for Plans, Profiles, Cross sections	130.50	1.50	
Complete QC Procedures	4.00		
Complete the Field Inspection Plan Set submittal (PDFs and supporting electronic files)	84.50	1.50	
Complete QC Procedures	4.00		
Landscape Plans	33.00		
TOTAL STAGE 2 WORKDAYS	328.75	4.50	
3RD1	WORKDAYS		**NOTES:**
Complete Right-of-Way Plan Set (PDFs and supporting electronic files)	56.00	1.50	
Complete QC Procedures	4.00		
TOTAL STAGE 3 WORKDAYS	60.00	1.50	
4RD1	WORKDAYS		**NOTES:**
Review Set of Final Plans	28.50	0.50	
Sealed Contract Roadway Design Plans	2.00		
Complete QC Procedures	2.00		
TOTAL STAGE 4 WORKDAYS	32.50	0.50	

TOTAL ESTIMATED WORKDAYS:	TOTAL WORKDAYS	
	CLASSIFICATION	PRINCIPAL
	421.25	**6.50**

Roadway Supplemental Workday Estimate

BL-0071B — TIP NUMBER

ALTA PLANNING + DESIGN — FIRM

SUPPLEMENTAL REASON, Key the reason on the OVERALL SUMMARY worksheet

w in green are standard tasks following standard scopes. The tasks should not be modified unless this se they can be written over or deleted but do not cut/paste. Keep tasks in the correct phase 2RD1/2RDs, 3RD1, 4RD1.	TOTAL EMPLOYEE CLASSIFICATION	WORKDAYS (SF) PRINCIPAL	NOTES:
2RD2 - SUPPLEMENTAL	WORKDAYS		
3RD1 - SUPPLEMENTAL	WORKDAYS		**NOTES:**
4RD1 - SUPPLEMENTAL	WORKDAYS		**NOTES:**
TOTAL ESTIMATED WORKDAYS:	**TOTAL** CLASSIFICATION	**WORKDAYS** PRINCIPAL	

Roadway Lighting Workday Estimate

BL-0071B — TIP NUMBER

ALTA PLANNING + DESIGN — FIRM

elow in green are standard tasks following standard scopes. The tasks should not be modified unless In that case they can be written over or deleted but do not cut/paste. Keep tasks in the correct phase 2RD1/2RDs, 3RD1, 4RD1.	TOTAL	WORKDAYS									
	EMPLOYEE	(SF)	(MR)	(BB)	(EB)	(AE)	(BS)	(CW)			
Description	CLASSIFICATION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	DESIGN ENGINEER	3RD PARTY QA/QC	PROJECT MANAGER	DESIGN ENGINEER			**NOTES:**
2RD2	WORKDAYS										
Initial Lighting Assessment											
Lighting Evaluation											
Coordinate with local government on lighting needs											
2RD1 Misc. Item:											
2RD1 Misc. Item:											
2RD1 Misc. Item:											
TOTAL STAGE 2 WORKDAYS											

3RD1	WORKDAYS										**NOTES:**
Complete Lighting Layout											
Lighting Design Package											
3RD1 Misc. Item:											
3RD1 Misc. Item:											
3RD1 Misc. Item:											
3RD1 Misc. Item:											
TOTAL STAGE 3 WORKDAYS											

TOTAL ESTIMATED WORKDAYS:	TOTAL	WORKDAYS								
	CLASSIFICATION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	DESIGN ENGINEER	3RD PARTY QA/QC	PROJECT MANAGER	DESIGN ENGINEER		

☑ PLEASE CHECK IF THIS IS THE INITIAL ESTIMATE

TIP NUMBER : BL-0071B
COUNTY : GUILFORD
FIRM: ALTA PLANNING + DESIGN

ROADWAY INITIAL PEF DIRECT & IN-DIRECT SALARY COST

CLASSIFICATION	EMPLOYEE NAME	WORKDAYS		RATE / HOUR	COST
PRINCIPAL	(SF) Spencer Finch	6.50	x	$ 72.12	$ 3,750.24
PROJECT MANAGER	(MR) Michael Repsch	23.50	x	$ 74.32	$ 13,972.16
PROJECT ENGINEER	(BB) Branden Bergeron	85.75	x	$ 53.69	$ 36,831.34
DESIGN ENGINEER	(EB) Elizabeth Braswell	147.00	x	$ 37.50	$ 44,100.00
3RD PARTY QA/QC	(AE) Adrian Esteban	14.00	x	$ 70.90	$ 7,940.80
PROJECT MANAGER	(BS) Britt Storck	5.00	x	$ 62.01	$ 2,480.40
DESIGN ENGINEER	(CW) Chloe Weigle	139.50	x	$ 38.94	$ 43,457.04
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**421.25**			
Total Direct Salary					$ 152,531.98
Overhead				155.42%	$ 237,065.20
Subtotal					$ 389,597.18
Fee				9.00%	$ 35,063.75
Cost of Capital				0.50%	$ 762.66
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ 425,423.59**
TOTAL DIRECT NON-SALARY COST					**$ -**
TOTAL ROADWAY COST					**$ 425,423.59**

Notes:
Rate = Rate Per Workhour
Direct Salary = Workdays x Rate x 8
OH = OH Rate (as approved by the Fiscal Section) x Total Direct Salary
Subtotal = Direct Salary + OH
Fee = 9% x Subtotal
COC = COC Rate (as approved by the Fiscal Section) x Total Direct Salary
Total Direct and Indirect Salary Costs = Subtotal + Fee + COC
Total Direct Non-Salary Costs is calculated on the "TRAVEL & MISC." tab
Total Roadway Costs = Total Direct & Indirect Salary Costs + Total Direct Non-Salary Costs

SUPPLEMENTAL ONLY

INITIAL PEF DIRECT & IN-DIRECT SALARY COST

CLASSIFICATION	EMPLOYEE NAME	WORKDAYS		RATE / HOUR	COST
PRINCIPAL	(SF) Spencer Finch	0.00	x	$ 72.12	$ -
PROJECT MANAGER	(MR) Michael Repsch	0.00	x	$ 74.32	$ -
PROJECT ENGINEER	(BB) Branden Bergeron	0.00	x	$ 53.69	$ -
DESIGN ENGINEER	(EB) Elizabeth Braswell	0.00	x	$ 37.50	$ -
3RD PARTY QA/QC	(AE) Adrian Esteban	0.00	x	$ 70.90	$ -
PROJECT MANAGER	(BS) Britt Storck	0.00	x	$ 62.01	$ -
DESIGN ENGINEER	(CW) Chloe Weigle	0.00	x	$ 38.94	$ -
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**0.00**			
Total Direct Salary					$ -
Overhead				155.42%	$ -
Subtotal					$ -
Fee				9.00%	$ -
Cost of Capital				0.50%	$ -
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ -**

EXCLUDING SUPPLEMENTAL

INITIAL PEF DIRECT & IN-DIRECT SALARY COST

CLASSIFICATION	EMPLOYEE NAME	WORKDAYS		RATE / HOUR	COST
PRINCIPAL	(SF) Spencer Finch	6.50	x	$ 72.12	$ 3,750.24
PROJECT MANAGER	(MR) Michael Repsch	23.50	x	$ 74.32	$ 13,972.16
PROJECT ENGINEER	(BB) Branden Bergeron	85.75	x	$ 53.69	$ 36,831.34
DESIGN ENGINEER	(EB) Elizabeth Braswell	147.00	x	$ 37.50	$ 44,100.00
3RD PARTY QA/QC	(AE) Adrian Esteban	14.00	x	$ 70.90	$ 7,940.80
PROJECT MANAGER	(BS) Britt Storck	5.00	x	$ 62.01	$ 2,480.40
DESIGN ENGINEER	(CW) Chloe Weigle	139.50	x	$ 38.94	$ 43,457.04
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**421.25**			
Total Direct Salary					$ 152,531.98
Overhead				155.42%	$ 237,065.20
Subtotal					$ 389,597.18
Fee				9.00%	$ 35,063.75
Cost of Capital				0.50%	$ 762.66
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ 425,423.59**

RIGHT OF WAY PLAN COSTS

INITIAL PEF DIRECT & IN-DIRECT SALARY COST					
CLASSIFICATION	**EMPLOYEE NAME**	**WORKDAYS**		**RATE / HOUR**	**COST**
PRINCIPAL	(SF) Spencer Finch	6.00	x	$ 72.12	$ 3,461.76
PROJECT MANAGER	(MR) Michael Repsch	21.50	x	$ 74.32	$ 12,783.04
PROJECT ENGINEER	(BB) Branden Bergeron	79.25	x	$ 53.69	$ 34,039.46
DESIGN ENGINEER	(EB) Elizabeth Braswell	136.00	x	$ 37.50	$ 40,800.00
3RD PARTY QA/QC	(AE) Adrian Esteban	12.00	x	$ 70.90	$ 6,806.40
PROJECT MANAGER	(BS) Britt Storck	4.50	x	$ 62.01	$ 2,232.36
DESIGN ENGINEER	(CW) Chloe Weigle	129.50	x	$ 38.94	$ 40,341.84
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**388.75**			
Total Direct Salary					$ 140,464.86
Overhead				155.42%	$ 218,310.49
Subtotal					$ 358,775.35
Fee				9.00%	$ 32,289.78
Cost of Capital				0.50%	$ 702.32
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ 391,767.45**
TOTAL ROADWAY RIGHT OF WAY PLAN COST					**$ 391,767.45**

FINAL PLAN COSTS

INITIAL PEF DIRECT & IN-DIRECT SALARY COST					
CLASSIFICATION	**EMPLOYEE NAME**	**WORKDAYS**		**RATE / HOUR**	**COST**
PRINCIPAL	(SF) Spencer Finch	0.50	x	$ 72.12	$ 288.48
PROJECT MANAGER	(MR) Michael Repsch	2.00	x	$ 74.32	$ 1,189.12
PROJECT ENGINEER	(BB) Branden Bergeron	6.50	x	$ 53.69	$ 2,791.88
DESIGN ENGINEER	(EB) Elizabeth Braswell	11.00	x	$ 37.50	$ 3,300.00
3RD PARTY QA/QC	(AE) Adrian Esteban	2.00	x	$ 70.90	$ 1,134.40
PROJECT MANAGER	(BS) Britt Storck	0.50	x	$ 62.01	$ 248.04
DESIGN ENGINEER	(CW) Chloe Weigle	10.00	x	$ 38.94	$ 3,115.20
	0	0.00	x	$ -	$ -
	0	0.00	x	$ -	$ -
TOTAL NUMBER OF WORKDAYS		**32.50**			
Total Direct Salary					$ 12,067.12
Overhead				155.42%	$ 18,754.72
Subtotal					$ 30,821.84
Fee				9.00%	$ 2,773.97
Cost of Capital				0.50%	$ 60.34
TOTAL DIRECT & INDIRECT SALARY COSTS					**$ 33,656.14**
TOTAL DIRECT NON-SALARY COST					**$ -**
TOTAL ROADWAY FINAL PLAN COST					**$ 33,656.14**

ROADWAY TRAVEL AND MISCELLANEOUS COSTS

FIRM:	ALTA PLANNING + DESIGN	TIP NUMBER:	BL-0071B

(A) * BOND (includes DOT and Firm's Record Sets)

SUBMITTAL	NO. SHTS.		SETS		TOTAL SHTS.
Stage 1 (1RD1)					
Plans		x		=	0
Interchange Sheets		x		=	0
Cross-Sections (11x17)		x		=	0
Stage 2 (2RD1, 2RD2)					
Plans		x		=	0
Interchange Sheets		x		=	0
Cross-Sections (11x17)		x		=	0
Stage 3 (3RD1)					
Plans		x		=	0
Interchange Sheets		x		=	0
Cross-Sections (11x17)		x		=	0
Stage 4 (4RD1)					
Plans		x		=	0
Interchange Sheets		x		=	0
Cross-Sections (11x17)		x		=	0
PEF's Work Sets					
Plans		x		=	0
Interchange Sheets		x		=	0
Cross-Sections (11x17)		x		=	0

+	TOTAL PLANS (22" x 34")	0	x	$ 0.42	/ sheet	=	$ -
+	TOTAL INTERCHANGE SHEETS (34" x 68")	0	x	$ 3.50	/ sheet	=	$ -
+	TOTAL CROSS-SECTIONS (11" x 17")	0	x	$ 0.15	/ sheet	=	$ -

(B) XEROX

+	TOTAL XEROX COPIES (Say)		x	$ 0.09	/ sheet	=	$ -
+	COVERS & BINDING (Say)		x	$ 1.00	/ set	=	$ -

TOTAL REPRODUCTION (A + B) = $ -

(C) TRAVEL

	PURPOSE of TRIP	TRIPS		MILES		TOTAL		RATE		COSTS
+	Preliminary Field Review		x		=	0.00	x	$ 0.655	=	$ -
+	Public Meeting/Hearing/Workshops		x		=	0.00	x	$ 0.655	=	$ -
+	Field Inspections (Preliminary, Combined, Final)		x		=	0.00	x	$ 0.655	=	$ -
+	Scheduled Reviews/Miscellaneous Meetings with NCDOT		x		=	0.00	x	$ 0.655	=	$ -
+	Miscellaneous Local Meetings		x		=	0.00	x	$ 0.655	=	$ -
+			x		=	0.00	x	$ 0.655	=	$ -
+			x		=	0.00	x	$ 0.655	=	$ -

	PER DIEM	TRIPS		# ATTEND		TOTAL		RATE		COSTS
+	Breakfast		x		=	0	x	$ 9.00	=	$ -
+	Lunch		x		=	0	x	$ 11.80	=	$ -
+	Dinner		x		=	0	x	$ 20.50	=	$ -
+	Lodging		x		=	0	x	$ 85.00	=	$ -

(D) MISC.

	LIST	NUMBER		RATE		COSTS
+	Postage		x		=	$ -
+			x		=	$ -
+			x		=	$ -

TOTAL TRAVEL & MISCELLANEOUS COSTS (C + D) = $ -

TOTALS

TOTAL REPRODUCTION	**= $ -**
TOTAL TRAVEL & MISCELLANEOUS COSTS (C + D)	**= $ -**
TOTAL DIRECT NON-SALARY COSTS	**= $ -**

NOTES

*	Use only items that are not included in overhead.
+	See DOT Guidelines for current maximum allowable non-salary direct costs.

EROSION CONTROL

PEF NAME: ALTA PLANNING + DESIGN

PREPARED BY: _____ DATE: _____

SUBMITTED BY: _____ DATE: _____

TIP NUMBER: BL-0071B

PROJECT NUMBER: 0

COUNTY: GUILFORD

FA NUMBER: 710043

PROJECT DESCRIPTION: **Construct Southwest Heritage Greenway (Phases 1-3)**

		ESTIMATED WORKHOURS						
TASK	CLASSIFICATION		PROJECT MANAGER	PROJECT ENGINEER	DESIGN ENGINEER	PROJECT ENGINEER		
	EMPLOYEE NAME	(SF)	(MR)	(BB)	(EB)	(CA)	TOTAL	NOTES
3.0	Field Inspection Plans for Clearing & Grubbing and Final Construction Phases	4	18	120	210		352	
8.0	Complete QC/QA Procedures					16	16	
1.0	Complete E&SC Plans for Clearing and Grubbing Construction Phase	4	24	44	60		132	
5.0	Complete QC/QA Procedures					12	12	
	TOTAL WORKHOURS	8	42	164	270	28	512	64
							WORKHOURS	WORKDAYS
	Rates	$72.12	$74.32	$53.69	$37.50	$50.17		
	Cost	$576.96	$3,121.44	$8,805.16	$10,125.00	$1,404.76		

Total Salary Cost		$24,033.32
Overhead Rate	155.42%	$37,352.59
Subtotal		**$61,385.91**
Fee	9.00%	$5,524.73
Cost of Capital	0.5000%	$120.17
TOTAL SALARY COST		**$67,030.80**

EROSION CONTROL DIRECT COSTS

A. PRINTING

	No. of Sets	Sheets per Set	Total Sheets	Cost per Sheet	Cost
Permit Fee	1	LS		$2,000.00	$2,000.00
TOTAL DIRECT NON-SALARY COSTS =					**$2,000.00**

TOTAL DIRECT SALARY AND NON-SALARY COSTS = **$69,030.80**

RAIL DIVISION BREAKDOWN WORKSHEET -- ENTER WORKHOURS

PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)	FIRM:	ALTA PLANNING + DESIGN	TASK ORDER NUMBER:	0	DATE PREPARED:	
PREPARED BY:		TIP NUMBER:	BL-0071B	WBS NUMBER:	50651.1.1 :	REVISION DATE:	

TASK TYPE: Select Task Type

TASK NO.	TASK DESCRIPTION	EMPLOYEE NAMES / CLASSIFICATION	ESTIMATED WORKHOURS (SF)	(MR)	(BB)	(EB)								SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
	Select the TASK TYPE from drop down list in cell AA4 to populate the task list																
1	Coordination with NS per Scope		6.00	24.00	24.00	4.00								58.00	100.00%		
	TOTAL WORKHOURS/CATEGORY:		6.00	24.00	24.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	58.00	100.00%	0.00	
	TOTAL WORKDAYS/CATEGORY:		0.75	3.00	3.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
	HOURLY SALARY RATE:		$72.12	$74.32	$53.69	$37.50	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	RATES PER DAY:		$576.96	$594.56	$429.52	$300.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	PAYROLL BURDEN:		$432.72	$1,783.68	$1,288.56	$150.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00				
	TOTAL WORKDAYS:		7.25														
	TOTAL PAYROLL BURDEN:		$3,654.96														
	AVERAGE COST PER HOUR:		$63.02														
	GENERAL OVERHEAD:	**155.42%**	$5,680.54														
	SUBTOTAL:		$9,335.50														
	COMPARATIVE FEE:	**9.00%**	$840.19														
	FACILITIES COST OF CAPITAL:	**0.5000%**	$18.27														
	TOTAL:		$10,193.97														
	DIRECT EXPENSES:		$0.00														
	RAIL GRAND TOTAL:		**$10,193.97**														

RAIL--PRIME DIRECT EXPENSES

TIP NUMBER BL-0071B FIRM: ALTA PLANNING + DESIGN

GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION		UNIT COST	
	Travel:					
	Sedan	0 Trip(s) @		0 miles @	$0.655	$0.00
	Carry All	0 Trip(s) @		0 miles @	$0.675	$0.00
	Car Rental			0 days @	$50.00	$0.00
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION		UNIT COST	-
Miscellaneous Other	ITEM	QTY	DESCRIPTION		UNIT COST	-
						-
						-

*** Sum of all plots** -

MDEST6.XLS SIGNING ESTIMATE WORKSHEET
REV 07-14-11

DATE:
TIP #: BL-0071B

CONSULTANT: ALTA PLANNING + DESIGN
PROJECT #: XXXXXX
PREL EST WORKDAYS: **104.75**

0 >UTILITY

EST SIGNING RDWY SHEETS:	# DAYS FIELD TRIPS:	1	(PRELIM)
TOTAL SIGN PLAN SHEETS:	# DAYS FIELD TRIPS:		(SUPPORTS)
# OH STRUCTURES:	# A&B GRND-MT SIGNS:		
# DMS STRUCTURES:	# A&B OVERHEAD SIGNS:		
# Y-LINES - INTERCHANGE:	# D SIGNS		
# Y-LINES - AT GRADE:	SIGNS / SUPPORTS ONLY		
(only count -Y-lines requiring more than a stop sign)	TOT.# A,B,D SIGNS:	0	

ALLOWED ROUNDTRIP MILEAGE PER TRIP: 140 MILES

TOTAL # OF SIGNS NEEDING SUPPORTS: 0.00

		ESTIMATED WORKHOURS											
	EMPLOYEE	(SF)	(MR)	(BB)	(EB)	(AE)	(MH)	(KW)	(MS)	(JA)	(EB)	TOTAL	NOTES
TASK	CLASSIFICATION												
Planning Wayfinding					50.000		30.000	76.000	40.000	120.000	150.000	466.000	
Spacing Design				20.000	80.000							100.000	
Check Designs			8.000									8.000	
65% Design Items		2.000	6.000	30.000	100.000	8.000						146.000	
75% Design to Final		4.000	12.000	24.000	70.000	8.000						118.000	
TOTAL WORKHOURS		6.000	26.000	74.000	300.000	16.000	30.000	76.000	40.000	120.000	150.000	838.000	
TOTAL WORKDAYS		0.750	3.250	9.250	37.500	2.000	3.750	9.500	5.000	15.000	18.750	104.750	
		---	---	---	---	---	---	---	---	---	---	---	
TOTAL WORKDAYS												**104.750**	

AVERAGE STANDARD RATE PER HOUR

CLASSIFICATION	A NO.WORKDAYS	B % TOT WD	C RATE	D FACTOR	EMPLOYEE NAMES	(B*C)/D AVG STD RATE
	0.750	0.007	$72.12	1.000	(SF)	$0.52
	3.250	0.031	$74.32	1.000	(MR)	$2.31
	9.250	0.088	$53.69	1.000	(BB)	$4.74
	37.500	0.358	$37.50	1.000	(EB)	$13.42
	2.000	0.019	$70.90	1.000	(AE)	$1.35
	3.750	0.036	$76.37	1.000	(MH)	$2.73
	9.500	0.091	$55.29	1.000	(KW)	$5.01
	5.000	0.048	$43.27	1.000	(MS)	$2.07
	15.000	0.143	$34.62	1.000	(JA)	$4.96
	18.750	0.179	$27.88	1.000	(EB)	$4.99
TOTAL	104.750	1.000				$42.10

SALARIES	=	(AVG STD RATE)(WORKDAYS)(8 HRS)=			$35,282.84
OVERHEAD	=	(XXX.XX%)(SALARIES)	=	155.42%	$54,836.59
FEE	=	(9%)(SALARIES+OVERHEAD)	=	0.09	$8,110.75
FACILITIES COST OF CAPITAL	=			0.5000%	$176.41
TOT. DIR. SALARY COST	=	(SALARIES+OVERHEAD+FEE)	=		$98,406.59

				RATE	COST
TRAVEL:	1	TRIPS x 140	MILES RNDTRP	$0.655	$91.70
TOTAL DIRECT NON-SALARY COST - - - - - - - - - - - - - - - - - -				=	$91.70

TOTAL ESTIMATE = $98,498.29

COST PER WORKDAY	=	940.32

CONSULTANT'S TOTAL =	$98,498.29
CONSULTANT'S TOTAL - TOTAL COST IN_HOUSE ESTIMATE / TOTAL COST IN_HOUSE ESTIMATE =	0.00%

ESTIMATE PREPARED BY: _____ DATE: _____

Signal Design Scoping Cost Estimate
FOR
TIP: BL-0071B | ***WBS: 50651.1.1 :***
COUNTY: GUILFORD

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)
FIRM: STANTEC CONSULTING SERVICES INC

Prepared By: Regina Muncey
Date: 5/24/2023

ESTIMATED WORKHOURS (SECTIONS BELOW INDICATE "WORKHOURS PER PLAN" OR "WORKHOURS PER PROJECT")

TASK NUMBER	CLASSIFICATION	TEM II	TES III	TE III	TE III	TE II						TOTAL	NOTES
	EMPLOYEE NAME	(BW)	(JG)	(RM)	(DW)	(JH)							
	SALARY RATE	$90.39	$66.86	$51.45	$49.55	$44.36	$0.00	$0.00	$0.00	$0.00	$0.00		
	Traffic Signal Plan Preparation	WORKHOURS PER PLAN											
	Subtotal	1	2	8	0	0	0	0	0	0	0	**11**	
	Subtotal	0	10	6	8	0	0	0	0	0	0	**24**	
	Subtotal	2	2	0	0	0	0	0	0	0	0	**4**	
	Total Workhours for 2SG1	3	14	14	8	0	0	0	0	0	0	**39**	
	Subtotal	0	14	16	32	0	0	0	0	0	0	**62**	
	Subtotal	0	4	8	4	0	0	0	0	0	0	**16**	
	Subtotal	1.5	2	4	8	6	0	0	0	0	0	**21.5**	
	Subtotal	0	20	16	8	0	0	0	0	0	0	**44**	
	Subtotal	9	9	0	0	0	0	0	0	0	0	18	
	Total Workhours	13.5	63	58	60	6	0	0	0	0	0	200.5	
	Total Workdays	1.6875	7.875	7.25	7.5	0.75	0	0	0	0	0	**25.0625**	
	Total Labor Cost	$1,220.27	$4,212.18	$2,984.10	$2,973.00	$266.16	$0.00	$0.00	$0.00	$0.00	$0.00	**$11,655.71**	
	General Overhead	**165.25%**										**$19,260.82**	
	Comparative Fee	**9%**										**$2,782.49**	
	Facilities Cost of Capital	**0.1850%**										**$21.56**	
	Signal SALARY Subtotal											**$33,720.57**	

Signal Design Scoping Cost Estimate
FOR
TIP: BL-0071B | ***WBS: 50651.1.1 :***
COUNTY: GUILFORD

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3)
FIRM: STANTEC CONSULTING SERVICES INC

Prepared By: Regina Muncey
Date: 5/24/2023

ESTIMATED WORKHOURS (SECTIONS BELOW INDICATE "WORKHOURS PER PLAN" OR "WORKHOURS PER PROJECT")

TASK	CLASSIFICATION	TEM II	TES III	TE III	TE III	TE II						TOTAL	NOTES
	EMPLOYEE NAME	(BW)	(JG)	(RM)	(DW)	(JH)							
	SALARY RATE	$90.39	$66.86	$51.45	$49.55	$44.36	$0.00	$0.00	$0.00	$0.00	$0.00		
	Direct Cost											$0.00	
	PROJECT TOTAL											$33,720.57	

NON-SALARY DIRECT COSTS

Signals

REPRODUCTION

Xerox Copies (8.5" x 11")												
Draft/Final Special Provisions		Sets	X		Sheets/Set	X	$0.09	per Sheet	=	$	-	
Miscellaneous (Corres., etc.)					Sheets	X	$0.09	per Sheet	=	$	-	
Xerox Copies (11" x 17")												
Draft Final (90%) Signal Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Final Signal Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Draft Final UMR Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Final UMR Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Draft Final Cable Routing Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Final Cable Routing Plans		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.15	per Sheet	=	$	-	
Bond Prints (22" x 34")												
Draft Final (90%) Signal Plans		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Final Signal Plans		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Draft Final Cable Routing Plans		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Final Cable Routing Plans		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	
Miscellaneous Check Plots		Sets	X		Sheets/Set	X	$0.42	per Sheet	=	$	-	

MILEAGE

FIELD VISIT Trips		Trips	X		Miles/Trip	X	$0.655	per Mile	=	$	-
Garner - NCDOT (LOCAL) Trips		Trips	X		Miles/Trip	X	$0.655	per Mile	=	$	-

PER DIEM

LODGING		Persons	X		LODGING	X	$85.00		=	$	-
BREAKFAST		Persons	X		BREAKFAST	X	$9.00		=	$	-
LUNCH		Persons	X		LUNCH	X	$11.80		=	$	-
DINNER		Persons	X		DINNER	X	$20.50		=	$	-

OTHER

Film & Developing		Rolls	X	$20	per Roll				=	$	-
Postage & Courier			X						=	$	-
Long Distance Phone			X						=	$	-
			X						=	$	-
			X						=	$	-
			X						=	$	-
			X						=	$	-
			X						=	$	-
								Total		$	-

Title Sheet	
Signal Plan	
Metal Pole	
Wiring Diagrams	
Total Signal Sheets	***0***
Construction Notes	FORMULAE to DIRECT COST SHEET.
Cable Routing	
Splice Diagrams	
Misc Details	
Total Cable Routing Sheets	***0***
Title Sheet	
UMR	
Total Cable Routing Sheets	***0***
Total Sheets	**0**

WZTC Cost Estimate

Type:		ALTA PLANNING + DESIGN	
TIP Project:	BL-0071B	Estimate Date:	
WBS #:	**50651.1.1 :**	Estimator:	

TASKS	CLASSIFICATIONS	Workday Estimate						TOTAL	NOTES
	EMPLOYEES' NAMES	(SF)	(MR)	(BB)	(EB)	(AE)			
2TM2	**Initiate Transportation Management Plan**	**Workday Estimate**							
3TM1	**Complete Transportation Management Plan**	**Workday Estimate**							
1.0	Complete Final Unsealed Transportation Management Plan	0.25	2.25	5	12.5	1.25		21.25	
2.0	Complete Sealed Final TMP	0.25	1	3	6.5	1		11.75	
	ENGINEERING RATES	**$72.12**	**$74.32**	**$53.69**	**$37.50**	**$70.90**	**$0.00**		
	Total Workdays:	0.50	3.25	8.00	19.00	2.25	0.00	**33.00**	
	Direct Salary (w/o Overhead):	$288.48	$1,932.32	$3,436.16	$5,700.00	$1,276.20	$0.00	**$12,633.16**	
	Overhead *	**155.42%**						**$19,634.46**	
	TOTAL Direct Salary + Overhead	**$32,267.62**							

Cost of Capital:		**0.5000%**	**=**	**$63.17**
Escalation :	**0 Yrs**	**0.00%**	**=**	**$0.00**
Fee:		**9.00%**	**=**	**$2,904.09**
	TOTAL Indirect Costs		**=**	**$2,967.25**

TOTAL Direct Salary + Overhead + Indirect Costs	**=**	**$35,234.87**

TOTAL Non-salary Direct Costs:	**=**	**$0.00**

TOTAL COST ESTIMATE:	**=**	**$35,234.87**

	Workdays	Cost
NCDOT Estimate	**33.00**	**$35,234.87**
PEF Estimate	**33.00**	**$35,234.87**
% Difference	**0.00%**	**0.00%**

A.	* REPRODUCTION COSTS									
		SUBMITTALS:	**SHEETS**	**x**	**SETS**	**=**	**Total**	**@ Each**	**=**	**Cost**
		25% - Staging								
		Full-Size Bond	0	x	0	=	0	@ $0.42	=	$0.00
		Half-Size 11x17	0	x	0	=	0	@ $0.15	=	$0.00
		Full-Size Bond **(COLOR)**	0	x	0	=	0	@ $3.00	=	$0.00
		OTHER:	**SHEETS**	**x**	**SETS**	**=**	**Total**	**@ Each**	**=**	**Cost**
		MISCELLANEOUS XEROX COPIES	**SHEETS**					**@ Each**	**=**	**Cost**
		PURPOSE of TRIP	**TRIPS**	**x**	**MILES**	**x**	**RATE**			**COST**
	2.	**SUBTOTAL MISCELLANEOUS COSTS**							**=**	$0.00
B.	**TOTAL TRAVEL & MISCELLANEOUS COSTS**								**=**	**$0.00**
A+B.	**TOTAL DIRECT NON-SALARY COSTS (sent to 'Salary & Total Cost' Sheet):**								**=**	**$0.00**

** Use Only Items That Are Not Included In Overhead
See Engineering Guidelines for current max.allowable non-salary direct costs

Project TIP BL-0071B WBS PE WBS UT County GUILFORD

Professional Services Firm Name ALTA PLANNING + DESIGN

Contract official

Task Order I - UTILITY COORDINATION

Use WBS PE 0

Classification/Name	Utility Coordination Supervisor	Senior Utility Coordinator	Utility Coordinator	Junior Technician	MISCELLANEOUS1	MISCELLANEOUS2	MISCELLANEOUS3						SubTotal	
Project Estimate	(MR) Michael Repsch	(BB) Branden Bergeron	(EB) Elizabeth Braswell										SubTotal	Notes
2UT1	8	16	4										28	
2UT2	8	16	4										28	
3UT1	8	16	4										28	
3UT2	8	16	4										28	
Workhours	32.0	64.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	112.0	
Hourly Rate	$ 74.32	$ 53.69	$ 37.50	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
SubTotal	$ 2,378.24	$ 3,436.16	$ 600.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,414.40	
											Overhead	155.42%	$ 9,969.26	
												Subtotal	$ 16,383.66	
											Fee	9%	$ 1,474.53	
											CoC	0.5000%	$ 32.07	
												Subtotal	$ 17,890.26	
												Direct Costs	$ -	

Invoicing Percentages	Workhours	Workdays	% Work	$
1UT2	0.0	0.00	0.0%	$ -
2UT1	28.0	3.50	25.0%	$ 4,472.57
2UT2	28.0	3.50	25.0%	$ 4,472.57
3UT1	28.0	3.50	25.0%	$ 4,472.57
3UT2	28.0	3.50	25.0%	$ 4,472.57
4UT1	0.0	0.00	0.0%	$ -
4UT2	0.0	0.00	0.0%	$ -
Other Tasks	0.0	0.00	0.0%	$ -
Total	112.0	14.00	100.0%	$ 17,890.26

Total Cost **$ 17,890.26**

Direct Costs	8-1/2"x11" B&W	11"x17" B&W	11"x17" Color	Bond (34"x22")	Bond Color (34"x22")	Permit Fees	Overnight Per Diem (Lodging, Breakfast, Lunch, Dinner)	Breakfast Only	Lunch Only	Dinner Only	Lodging Only	Mileage			Subtotals
Totals	0	0	0	0	0		0	0	0	0	0	0	0	0	$ -
Rate	$ 0.09	$ 0.15	$ 1.66	$ 0.42	$ 3.00		$ 126.30	$ 9.00	$ 11.80	$ 20.50	$ 85.00	$ 0.655			Total
Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**

Total Project Estimates

	TO I	$/Workday	Total Project Subtotal	$/Workday	TOTAL WORKDAYS
Labor & OH & CoC	$ 17,890.26	$ 1,277.88	$ 17,890.26	$ 1,277.88	14
Direct Costs	$ -		$ -		
Totals	**$ 17,890.26**		**$ 17,890.26**		

Project TIP BL-0071B WBS PE _____ WBS RW _____ County GUILFORD

PEF Utilities Design Name ALTA PLANNING + DESIGN Firm's LSA Contract ID _____

Project Contact _____ Contract official _____

Task Order II - UTILITY DESIGN

Classification/Name	Utility Design Supervisor	Senior Utility Engineer	Utility Engineer	Junior Technician	3rd Oarty QA/QC	MISCELLANEOUS2	MISCELLANEOUS3						SubTotal	
Project Estimate	(MR) Michael Repsch	(BB) Branden Bergeron	(EB) Elizabeth Braswell		(AE) Adrian Esteban								SubTotal	Notes
2UT1	8	20	120		12								160	
2UT2	6	12	70		4								92	
3UT1	4	6	16		2								28	
4UT1	2	2	4		1								9	
Workhours	20.0	40.0	210.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	289.0	
Hourly Rate	$ 74.32	$ 53.69	$ 37.50	$ -	$ 70.90	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
SubTotal	$ 1,486.40	$ 2,147.60	$ 7,875.00	$ -	$ 1,347.10	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$	12,856.10
											Overhead	155.42%	$	19,980.95
												Subtotal	$	32,837.05
											Fee	9%	$	2,955.33
											CoC	0.5000%	$	64.28
												Subtotal	$	35,856.67
												Direct Costs	$	-
											Total Cost		**$**	**35,856.67**

Invoicing Percentages		Workhours	% Work
2UT1		160.0	55.4%
2UT2		92.0	31.8%
3UT1		28.0	9.7%
3UT2		0.0	0.0%
4UT1		9.0	3.1%
5UT1		0.0	0.0%
	Total	289.0	100.0%

WORKDAYS
36.13

Direct Costs	8-1/2"x11" B&W	11"x17" B&W	11"x17" Color	Bond (34"x22")	Bond Color (34"x22")	Permit Fees	Overnight Per Diem (Lodging, Breakfast, Lunch, Dinner)	Breakfast Only	Lunch Only	Dinner Only	Lodging Only	Mileage			Subtotals
Rate	$ 0.09	$ 0.15	$ 1.66	$ 0.42	$ 3.00		$ 126.30	$ 9.00	$ 11.80	$ 20.50	$ 85.00	$ 0.655			Total
Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**

PEF--UTILITY DESIGN

PUBLIC INVOLVEMENT BREAKDOWN WORKSHEET - SUBCONSULTANT 1

PROJECT DESCRIPTION: Construct Southwest Heritage Greenway (Phases 1-3) | FIRM: THREE OAKS ENGINEERING INC | TASK ORDER NUMBER: 0 | DATE PREPARED:

PREPARED BY: | TIP NUMBER: BL-0071B | WBS NUMBER: 50651.1.1 : | REVISION DATE:

TASK NO.	TASK DESCRIPTION	Employee Classification	ESTIMATED WORK DAYS (JO) Project Engineer (E-J)	(AS) Public Inv. Eng. (E-A)									SUB-TOTAL	% OF PROJECT	PEF ESTIMATE	COMMENTS
2P11	Continue Public Engagement															
1	Public Involvement Plan (PIP)															
	Submit ETRACS for PI Team to review draft or develop PIP															
	Prepare and submit draft and final PIP (if PIP is to be prepared by PEF)															
2	Project Mailing List															
	Submit ETRACS request and study area Shapefile for project mailing list															
	Create project mailing list															
3	Project Website															
	Submit request for project website or PublicInput.com site															
	Provide updates at project milestones															
4	Newsletter/Postcards															
	Prepare and submit draft Newsletter/Postcard (using NCDOT templates)															
	Revise and resubmit Newsletter/Postcard for approval															
	Reproduce and distribute approved Newsletter /Postcard (insert #copies)															
	Spanish translation of postcard and door hanger		0.75										0.75	37.50%		
5	Public Meeting(s)/Hearing(s)															
	In-person Open House (3 hr meeting)															
	Virtual Meeting (X hr meeting)															
	Formal Presentation															
	Submit meeting request via ETRACS (6 weeks prior to meeting date)															
	Coordinate with NCDOT PI and Division on venue and dates															
	Prepare and submit public meeting maps															
	Schedule and attend map review meeting															
	Revise and resubmit public meeting maps															
	Prepare and submit draft public meeting handout															
	Revise and resubmit public meeting handout for approval															
	Reproduce public meeting handout (insert # copies)															
	Prepare and submit draft public meeting displays															
	Revise and resubmit public meeting displays															
	Provide digital copies of handout, displays, and public meeting maps to NCDOT PI for web posting															
	Spanish translator at public meeting (3 hours plus travel)			1.00									1.00	50.00%		
6	Local Officials Information Meeting (LOIM)															
	Coordinate with NCDOT PI on schedule and invitees															
	Prepare and submit draft LOIM Invitation letter															
	Revise and resubmit LOIM Invitation letter for approval															
	Prepare and submit draft PowerPoint presentation															
	Revise and resubmit PowerPoint presentation															
	Prepare and submit draft local officials meeting handout (only when no public meeting is held)															
	Revise and resubmit local officials meeting handout for approval															
	Prepare and submit draft and final meeting summary															
7	Public Comments															
	Collect public comments															
	Compile comments in a database and prepare draft responses as needed (export from PublicInput.com site)															
	Submit draft database and responses															
	Revise and resubmit database and responses															
	Prepare for and attend post-public meeting/hearing meeting															
8	Public Engagement Summary															
	Prepare and submit draft public engagement summary, including comment summary and responses using NCDOT template															
	Revise and resubmit public engagement summary															
9	Project Visualizations															
	Renderings (digital static image)															
	Level I															
	Level II															
	Level III															
	Animations (video with motion)															
	Level I															
	Level II															
	Level III															
	Level IV															
	Level V															
	Level VI															
	Level VII															
	Video Production															
	Level I															
	Level II															
	Virtual 3D Models															
10	Task Management															
	Project coordination		0.25										0.25	12.50%		
11	Complete QA/QC Procedures															
	Other Tasks: (i.e. small group meetings)															
	TOTAL WORKDAYS/CATEGORY:		1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	100.00%	0.00
	HOURLY SALARY RATE:		$59.00	$40.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
	RATES PER DAY:		$472.00	$320.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
	PAYROLL BURDEN:		$472.00	$320.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			

TOTAL WORKDAYS:		2.00
TOTAL PAYROLL BURDEN:		$792.00
AVERAGE COST PER HOUR:		$49.50
GENERAL OVERHEAD:	190.27%	$1,506.94
SUBTOTAL:		$2,298.94
COMPARATIVE FEE:	9.00%	$206.90
FACILITIES COST OF CAPITAL:	0.0600%	$0.48
TOTAL:		$2,506.32
DIRECT EXPENSES:		$0.00
PUBLIC INVOLVEMENT GRAND TOTAL:		**$2,506.32**

PUBLIC INVOLVEMENT DIRECT EXPENSES - SUBCONSULTANT 1

FIRM:	THREE OAKS ENGINEERING INC						
PROJECT DESCRIPTION:	Construct Southwest Heritage Greenway (Phases 1-3)						
PREPARED BY:					TASK ORDER NUMBER:	0	
TIP NUMBER:	BL-0071B				WBS NUMBER:	50651.1.1 :	
DATE PREPARED:					REVIEWED BY UNIT HEAD ON:		
GENERAL PROJECT WORK:	ITEM	QTY	DESCRIPTION			UNIT COST	
	Travel:						
MAPS AND DOCUMENTS:	ITEM	QTY	DESCRIPTION			UNIT COST	
TECHNICAL REPORTS:	ITEM	QTY	DESCRIPTION			UNIT COST	
DESIGN:	ITEM	QTY	DESCRIPTION			UNIT COST	
MEETINGS & PUBLIC INVOLVEMENT:	ITEM	QTY	DESCRIPTION			UNIT COST	
	Travel:						
	Workshop						
	Postage:						
Miscellaneous Other	ITEM	QTY	DESCRIPTION			UNIT COST	

*** Sum of all plots**