

APRIL 12, 2016

RESUME

One of the identified goals of the Stormwater Utility Fund program is to restore stream corridors and channels, particularly in the areas of the County showing failing stormwater infrastructure. Two of the top five priority areas in the County are the Cedar Creek subdivision and Birchett Estates subdivision. Staff has worked with one of the County's engineering firms, retained on annual contract, to provide proposals for design services, bid documents, construction documents and grant consulting to assist with completing three critical projects identified in these subdivisions.

Recently the County applied for grants for both of these subdivisions, and was awarded a \$178,750 grant for work in Cedar Creek. Contract "A" attached is for the design and bid documents for the grant project, labeled as "Reach 2 Cedar Creek". The design and construction documents costs will be reimbursed to the County by DEQ (see attached Stormwater Local Assistance Fund notification letter). The grant is a 50% matching grant, with the County's portion expended from the Stormwater Utility Fund.

Contract "B" attached is for "Reach 5, Cedar Creek" design and construction drawings. Reach 5 is at a critical erosion stage as well, and having the design and construction drawings done at the same time as Reach 2 will help reduce overall expenditures for design, and provide greater opportunities for grant awards for this project. "Shovel ready" projects typically score higher on grant applications, and this will allow the County to have the next project ready for grant opportunities and for construction.

Contract "C" is for the design and construction/bid documents for "Reach 1, Birchett Estates". The estimated costs for design and construction of this stream channel restoration project are over \$1.1 million, and grant opportunities are being actively pursued for this work. Having the project designed and construction documents ready for bid will increase the County's ability to receive assistance. The design proposed will also allow the County to proceed with repairs and restoration at the upper end of Reach 1 without delay (Phase 1), while working for grant funding on the lower ends of Reach 1 and its tributaries (Phase 2).

Staff is recommending approval of the three proposals received from Timmons Engineering for these projects. Funding is available through the grant award and the Stormwater Utility Fund. Attached for the Board's review and consideration are the three proposals, the grant notifications, maps of the construction areas, and proposed resolutions. Mrs. Julie Walton will be available to answer any questions.

Board of Supervisors
County of Prince George, Virginia

Resolution

At a regular meeting of the Board of Supervisors of the County of Prince George held in the Boardroom, Third Floor, County Administration Building, 6602 Courts Drive, Prince George, Virginia this 12th day of April, 2016:

<u>Present:</u> William A. Robertson, Jr., Chairman Jerry J. Skalsky, Vice Chairman Alan R. Carmichael Donald A. Hunter T.J. Webb	<u>Vote:</u>
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A-

On motion of _____, seconded by _____, which carried _____, the following Resolution was adopted:

AUTHORITY TO EXECUTE CONTRACT FOR ENGINEERING SERVICES FOR DESIGN AND CONSTRUCTION DOCUMENTS, REACH 2, CEDAR CREEK SUBDIVISION;

WHEREAS, a request was developed to accept proposals for design and construction documents for the Cedar Creek Reach 2 stream restoration and repair project; and

WHEREAS, the County has been awarded a SWLAF grant in the amount of \$178,750 for the design and construction of Reach 2, Cedar Creek; and

WHEREAS, after a review by staff of the response received from Timmons Engineering, a current firm under annual contract with County; and

WHEREAS, after careful consideration, review and negotiations, staff has recommended that Timmons Engineering be retained by the County to provide the services outlined in their proposal;

NOW, THEREFORE, BE IT RESOLVED That the Board of Supervisors of the County of Prince George this 12th day of April, 2016 does hereby authorize the County Administrator to execute a contract with Timmons Engineering for provision of services as outlined in the proposal entitled Cedar Creek Design Proposal (Reach 2) in the amount of \$68,960.00.

A Copy Teste:

Percy C. Ashcraft
County Administrator



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

March 1, 2016

Ms. Julie Walton
6602 Courts Drive
P.O. Box 68
Prince George, Virginia 23875

Re: Stormwater Local Assistance Fund (SLAF)
Prince George County, Virginia

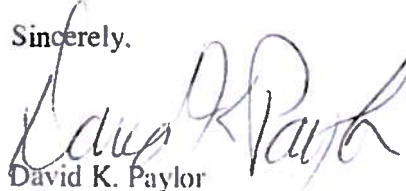
Dear Ms. Walton:

I am pleased to inform you that I have authorized SLAF matching grant funds for your community for the project and amount shown below. This authorization is contingent upon compliance with all program requirements. Actual grant award will not occur until after your receipt of construction bids and DEQ's approval of a final project budget based on those bids. My staff will be in contact with you in the near future to set up a meeting to discuss the next steps and schedule for moving forward with your project.

- Cedar Creek - Stream Restoration \$178,750

Please do not hesitate to contact Walter Gills (804-698-4133) or Kelly Ward (804-698-4295) if you have any questions or need assistance.

Sincerely,


David K. Paylor

/dch

pc: Walter Gills- DEQ/CWFAP



COMMONWEALTH of VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

March 31, 2016

Julie Walton
Prince George County
6602 Courts Drive
Prince George, Virginia 23875

**RE: Stormwater Local Assistance Fund
Grant # SLAF 16 - 09**

Dear Ms. Walton:

As you are aware, the Director of the Department of Environmental Quality (DEQ) recently authorized Stormwater Local Assistance Fund (SLAF) matching grant funds for your community. This is to confirm an initial meeting to be held at 2:00 pm on April 6, 2016 at Prince George Government Complex. The address for the meeting is 6602 Courts Drive, Prince George, VA 23875.

The purposes of the meeting are as follows:

1. To ensure you are aware of all of the requirements and procedures of the SLAF Program and to identify the status and courses of action needed for your project to comply with these requirements. A SLAF Initial Meeting outline that will be discussed is attached for your information.
2. To discuss any scope-of work or eligibility issues that may relate to your project.
3. To outline your project's schedule for attainment of key milestones.
4. To answer any questions or address any issues you may wish to discuss.

Several members of our Clean Water Financing and Assistance Program central office staff along with the project manager from our regional office and staff from the Virginia Water Protection Program, if available, will be in attendance. I recommend that you arrange for the attendance of your project manager, consulting engineer, financial officer and any other persons you feel would be beneficial at this meeting.

Prince George County
March 31, 2016
Page 2

Should you have any questions regarding the meeting or the attachments, please feel free to contact me at 804-698-4012.

Sincerely,



Michael D. Crocker, Jr.
Project Oversight Team Leader
Clean Water Financing and Assistance Program

Enclosed

xc: Rebecca Napier, Timmons Group
Walter Gills, DEQ-CWFAP
Pantea Westermann, DEQ-CWFAP

Stormwater Local Assistance Fund- Initial Meeting

Procedures/Requirements/Schedule

General Procedures: The letter you received from DEQ Director Paylor dated March 1, 2016 (attached) is the Letter of Commitment from the agency provided so that you may proceed with your project(s) with the certainty of a funding commitment. DEQ staff will work with you to complete the program requirements so that you may advertise for construction bids. Upon the receipt of construction bid(s) and the development and approval of a final grant budget based on as-bid construction and contractual engineering costs, the grant will be awarded and you may begin requesting monthly reimbursements for 50% of the eligible costs incurred. Although you may have funding approval for multiple projects, we intend to only issue one grant to you to address all of those projects. To the extent practicable, we would like you to receive bids on most (if not all) of those projects within the same time period so that actual costs are known and can be included in the initial grant award. If it is necessary to delay bidding of some projects, we will only initially award the grant based on as bid projects' costs and amend the grant at a later date once bids are received on the remaining projects.

Program Requirements

Procurement: All goods and services that you will be requesting reimbursement for must be procured in accordance with the Virginia Public Procurement Act, regardless of population size. The following documentation must be provided to the Project Officer at DEQ for engineering services procurement: Evidence of RFP or RFQ advertisement, evaluation criteria used, ranking of respondents, statement detailing final selection, and copy of executed contract. **FOR ENGINEERING PROCUREMENT ONLY:** The Grantee may choose to provide a letter certifying that the procurement of engineering services has been conducted in accordance with the Virginia Public Procurement Act. For an example of this letter please contact your DEQ Project Officer. For construction contract procurement please provide the following: Evidence of bid advertisement, the Bid Form(s) or Bid Proposal(s); the Bid Tabulation(s), and the Bid Bond.

Design/Contract Documents: The plans and specifications for your project(s) must be reviewed and approved by the Project Manager at DEQ in order for the construction costs to be eligible. A completed Best Management Practice (BMP) Design Certification (attached) and completed DEQ checklist must also be submitted to the Project Manager at DEQ with a copy of the final construction plans and specifications (electronic preferred).

Environmental Permits: All required environmental permits must be in place prior to the initiation of construction. As permits are obtained please submit copies to the Project Manager at DEQ. DEQ staff will discuss the permitting requirements during the initial meeting.

Responsibilities and Maintenance Plan: Provisions for the long-term responsibility and maintenance of the stormwater management facilities and other techniques specified to manage the quantity and quality of runoff, including an inspection and maintenance schedule, shall be developed and implemented for all projects funded through the SLAF. These provisions shall include, at a minimum, a description of the requirements for maintenance of the stormwater management facilities, a recommended schedule of inspection and maintenance, and the identification of a person or persons who will be responsible for maintenance. Long-term responsibility and maintenance requirements for stormwater management facilities located on private property shall be set forth in an instrument recorded in the local land records and shall be consistent with 9VAC25-870-112 of the Virginia Stormwater Management Program (VSMP) Permit Regulations. Disbursements shall be held at ninety-five percent (95%) of the total grant amount to ensure satisfactory completion of the Eligible Project. Satisfactory completion includes the submittal of

the Responsibilities and Maintenance Plan to the Project Manager.

Site Visits and Inspections: To gauge progress and compliance with approved plans and specifications, site visits may be scheduled at various times throughout the project construction. The DEQ Project Manager will coordinate these visits with the Grant Recipient.

Project Schedule: We will begin discussion on the anticipated project schedule during the initial meeting. Ultimately a project schedule will be included in the grant agreement.

Project Inspections: During construction the grant recipient must provide for project inspection. Inspections may be carried out by staff of the grant recipients consulting engineering firm, third party inspection firm or by qualified internal staff of the grant recipient. These inspections will keep the grant recipient aware of construction progress, quality, and conformance with plans and specifications. Inspections are very valuable in claim resolution, change order negotiation and ensuring that payments are made for work in place. Inspections should be documented with construction progress reports that can be reviewed by DEQ CWFAP staff during on-site monitoring.

DEQ Clean Water Financing and Assistance Program Staff Contacts

SLAF Grant Year: FY 16

SLAF Grant Recipient: Prince George County

SLAF Projects: Cedar Creek Stream Restoration

Project Oversight Team Leader:

Michael Crocker
(804) 698-4012
Michael.Crocker@deq.virginia.gov
629 E. Main Street
Richmond, VA 23219

Project Officer:

Pantea Westermann
(804) 698-4176
Pantea.Westermann@deq.virginia.gov
629 E. Main Street
Richmond, VA 23219

Project Manager:

Pantea Westermann
(804) 698-4176
Pantea.Westermann@deq.virginia.gov
629 E. Main Street
Richmond, VA 23219

VWP Permits Contact:

Allison Dunaway
(804) 527-5086
Allison.Dunaway@deq.virginia.gov
4949-A Cox Road
Glen Allen, VA 23060



Proposal for Stream Restoration Design Cedar Creek – Reach 2

Submitted to:
Prince George County, Virginia

June 26, 2015
revised March 29, 2016

Project Understanding

The purpose of this project is to reduce the streambank erosion potential of approximately 1,300 linear feet of stream channel located in Cedar Creek. This stream reach, identified as Reach 2, is actively eroding causing large amounts of sediment to be deposited in the downstream waterways. Stream restoration is proposed to stabilize the stream and reduce erosion potential.

Timmons Group proposes to prepare complete design plans and specifications for restoration of approximately 1,300 linear feet of stream channel.

Scope of Services

Task 1: Wetland Delineation and Confirmation

Timmons Group will review existing, readily obtainable environmental information on the site such as USGS mapping, aerial photography, NWI mapping and NRCS soil survey information. A wetland delineation of the subject property will be performed in accordance with the 1987 U.S. Army Corps of Engineers (COE) Wetland Delineation Manual and appropriate Regional Supplement. A preliminary wetland delineation map will be prepared depicting the approximate size, shape and location of wetlands and/or waters of the U.S. present on the subject property. Timmons Group will facilitate the confirmation of wetland locations through submittal of a Jurisdictional Determination (JD) package to the COE. This package will consist of a narrative, wetland delineation map and wetland delineation field data sheets. Timmons Group will conduct a site visit with the COE to review the site conditions, flagged wetland limits and confirm findings. A JD letter for the wetland delineation will be obtained from the COE.

Task 2: Design Survey

Timmons Group will provide a field run topographical survey for the project site. The survey will include location of visible physical improvements, wetland flagging, storm and sanitary sewer structure invert data, pavement locations and 0.5' contouring with a DTM. Survey limits will include approximately 1,300 linear feet of stream plus 50' from the top of bank on each side. Existing property lines and easements will be shown. The final survey will be provided in a cad format suitable for engineering design and the survey will be tied to the NAD 83 (horizontal) and NAVD 88 (vertical).



Task 3: Schematic Plans

Timmons Group will perform the following sub-tasks to establish schematic stream restoration design plans (50% design) for review by the County and the permitting agencies:

1. Develop a stream restoration plan illustrating stream improvement measures, cross sections, details and other applicable information.
2. Obtain County review and approval for submission of any permit applications prior to submittal of the permits to applicable State agencies.
3. The plans will include:
 - a. Cover sheet with location map;
 - b. Design concept narrative and scope of work;
 - c. Design parameter summary;
 - d. Typical structure and construction approach design details;
 - e. Typical cross sections; and
 - f. General planting plan information.
4. Prepare for and attend up to two (2) meetings with County staff to discuss the design plans.
5. Prepare for and attend one public information meeting.

Task 4: Wetland Impact Permitting

A Pre-Construction Notification (PCN) for a Nationwide Permit (NWP) 27 will be prepared and submitted to the COE. The NWP 27 authorizes activities required for stream restoration activities in Waters of the United States. The PCN submittal will contain a narrative describing in detail the purpose of the project and the necessity of the proposed disturbance to demonstrate that this disturbance is warranted. Responses to Requests for Additional Information (RAI) will be prepared to answer any questions posed by the COE as a result of the PCN. Negotiation of NWP authorization will be undertaken to facilitate regulatory approval of the project.

Task 5: Preliminary Construction Documents

Timmons Group will prepare Preliminary Construction Documents (90% design plans) from the Schematic design. The preparation of the Preliminary Construction Documents are based on the design of approximately 1,300 linear feet of stream restoration and includes the following sub-tasks:

1. Address County and permitting agency comments from the 50% submittal;
2. Hydraulic and Hydrologic Analysis;
3. Determine construction access locations;
4. Prepare erosion and sediment control plan;
5. Finalize stream restoration design, including grading plan, profiles, and sections;
6. Finalize pond outfall retrofit design;
7. Prepare 90% submittal of "Engineers' Opinion of Probable Construction Cost;"
8. Establish construction sequence;
9. Prepare planting plan; and



10. Submit draft bid documents and technical specifications.

Task 6: Final Construction Documents

Timmons Group will prepare the Final Construction Documents from the previously prepared Preliminary Construction Documents. This task will include addressing any previous comments, finalizing the Engineers' Opinion of Probable Construction Cost, preparing final bid documents/technical specifications, and preparation and attendance at one (1) public meeting, if necessary. Additionally, bidding assistance will be provided, as follows:

1. Provide bidding assistance to include coordination with the County purchasing office during advertisement of the project, attendance at the pre-bid meeting, responding to contractor questions, issuing addendums and attendance at the bid opening.
2. Provide services to assist the County in evaluation of contractor bids and submit a recommendation for award.

Project Fee

Timmons Group can provide the scope of services above for the following fixed fee:

Task 1: Wetland Delineation and Confirmation	\$ 6,500.00
Task 2: Design Survey	\$ 6,860.00
Task 3: Schematic Plans	\$ 20,800.00
Task 4: Wetland Impact Permitting	\$ 3,600.00
Task 5: Preliminary Construction Documents	\$ 23,400.00
<u>Task 6: Final Construction Documents</u>	<u>\$ 7,800.00</u>
Project Total:	\$ 68,960.00

Construction Cost

Based on projects of similar scope and complexity, we anticipate construction cost will be in the range of \$210,000-\$250,000.



Exclusions

Timmons Group will not perform the following services under this Agreement. At the request of the Client, these services can be added for an additional fee, but are not included in this Agreement:

1. Underground Utility Location Survey - \$2,460.

An underground utility survey will be performed to designate and map underground facilities on the project site. This utility survey will include horizontal designation through geophysical methods and is defined as Quality Level "B" by the American Society of Civil Engineers (ASCE). The accuracies of the markings are subject to the depth and electrical conductivity of the utility as well as site conditions and manhole access. Plastic and fiber optics lines without tracer wires may be unlocatable. This service does not include the use of ground penetrating radar. Exclusions: sanitary & storm lines including laterals and roof drains; irrigation systems; and abandoned lines.

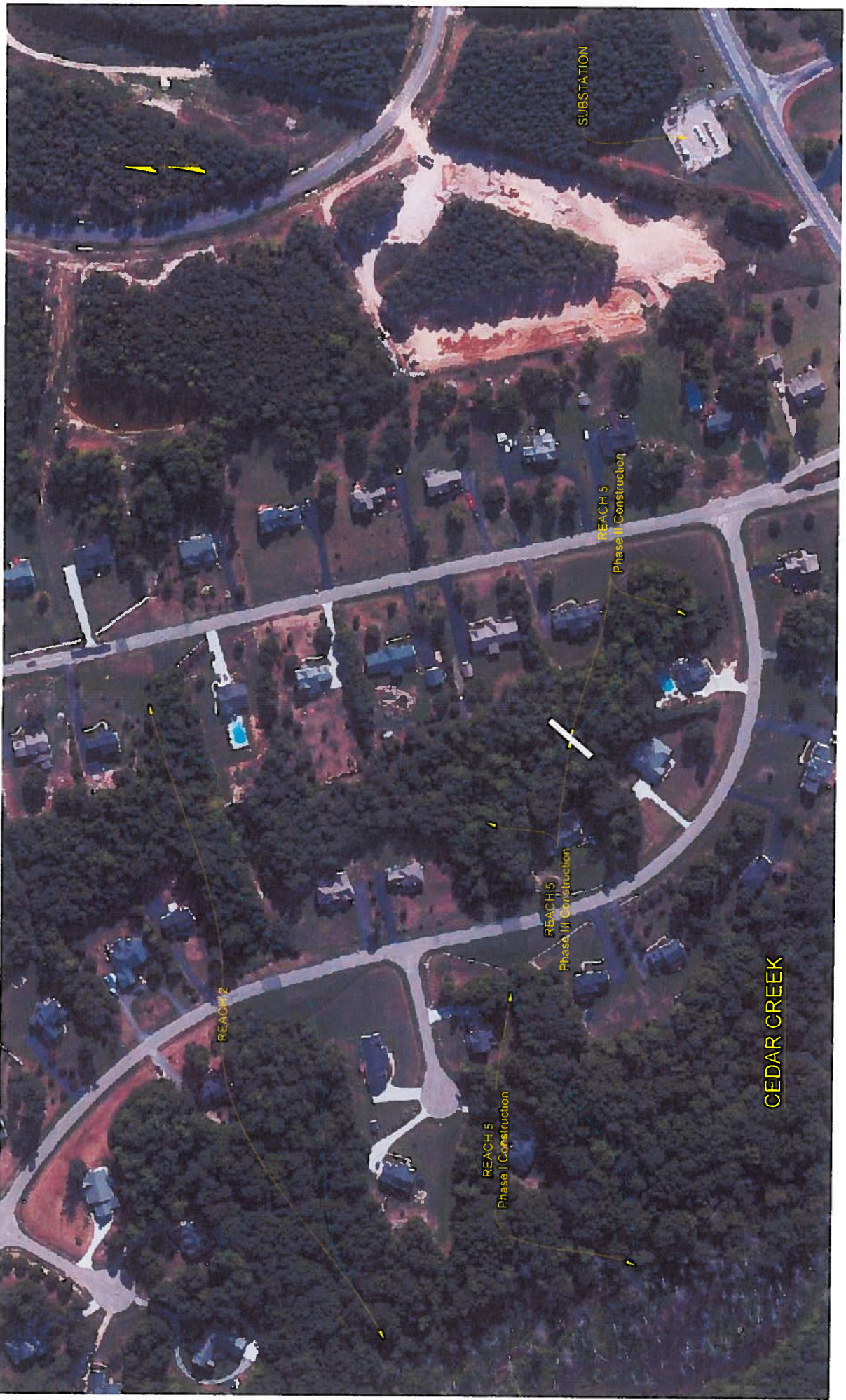
2. Easement Plat Preparation - \$600 per plat.

Easement plats will be prepared to meet the recoration requirements of Prince George County.

3. Construction Administration – TBD.

Based on the construction window, Timmons Group will provide construction administration, to include:

- a. Hold a pre-construction meeting on-site with County staff, Contractor, and Owner.
- b. Review construction schedules and material submittals.
- c. Review Contractor payment applications.
- d. Provide on-site consulting assistance to Contractor during stream restoration construction.



CEDAR CREEK

Board of Supervisors
County of Prince George, Virginia

Resolution

At a regular meeting of the Board of Supervisors of the County of Prince George held in the Boardroom, Third Floor, County Administration Building, 6602 Courts Drive, Prince George, Virginia this 12th day of April, 2016:

<u>Present:</u>	<u>Vote:</u>
William A. Robertson, Jr., Chairman	
Jerry J. Skalsky, Vice Chairman	
Alan R. Carmichael	
Donald A. Hunter	
T.J. Webb	

A-

On motion of _____, seconded by _____, which carried _____, the following Resolution was adopted:

AUTHORITY TO EXECUTE CONTRACT FOR ENGINEERING SERVICES FOR DESIGN AND CONSTRUCTION DOCUMENTS, REACH 5, CEDAR CREEK SUBDIVISION;

WHEREAS, a request was developed to accept proposals for design and construction documents for the Cedar Creek Reach 5 stream restoration and repair project; and

WHEREAS, after a review by staff of the response received from Timmons Engineering, a current firm under annual contract with County; and

WHEREAS, after careful consideration, review and negotiations, staff has recommended that Timmons Engineering be retained by the County to provide the services outlined in their proposal;

NOW, THEREFORE, BE IT RESOLVED That the Board of Supervisors of the County of Prince George this 12th day of April, 2016 does hereby authorize the County Administrator to execute a contract with Timmons Engineering for provision of services as outlined in the proposal entitled Cedar Creek Design Proposal (Reach 5) in the amount of \$71,680.00.

A Copy Teste:

Percy C. Ashcraft
County Administrator



Proposal for Stream Restoration Design Cedar Creek – Reach 5

Submitted to:
Prince George County, Virginia
March 15, 2016
revised March 29, 2016

Project Understanding

The purpose of this project is to reduce the streambank erosion potential of approximately 1,000 linear feet of stream channel located in Cedar Creek. This stream reach, identified as Reach 5, is actively eroding causing large amounts of sediment to be deposited in the downstream waterways. Stream restoration is proposed to stabilize the stream and reduce erosion potential.

Timmons Group proposes to prepare complete design plans and specifications for restoration of approximately 1,000 linear feet of stream channel using a three phase approach:

- Phase 1: approx. 525' starting at Running Creek Lane and ending at the streams intersection with the main channel (area where rip-rap is currently failing).
- Phase 2: approx. 320' starting at the intersection of Cedar Creek Lane and Running Creek Lane and moving downstream towards the intersection of Jay bird Court with Running Creek Lane (area near bridge).
- Phase 3: approx. 150' starting at the downstream limit of Phase 1 and ending at its intersection with Running Creek Lane.

These phases will be designed within one construction plan but have the ability to be constructed at different times.

Scope of Services

Task 1: Wetland Delineation and Confirmation

Timmons Group will review existing, readily obtainable environmental information on the site such as USGS mapping, aerial photography, NWI mapping and NRCS soil survey information. A wetland delineation of the subject property will be performed in accordance with the 1987 U.S. Army Corps of Engineers (COE) Wetland Delineation Manual and appropriate Regional Supplement. A preliminary wetland delineation map will be prepared depicting the approximate size, shape and location of wetlands and/or waters of the U.S. present on the subject property. Timmons Group will facilitate the confirmation of wetland locations through submittal of a Jurisdictional Determination (JD) package to the COE. This package will consist of a narrative, wetland delineation map and wetland delineation field data



sheets. Timmons Group will conduct a site visit with the COE to review the site conditions, flagged wetland limits and confirm findings. A JD letter for the wetland delineation will be obtained from the COE.

Task 2: Design Survey

Timmons Group will provide a field run topographical survey for the project site. The survey will include location of visible physical improvements, wetland flagging, storm and sanitary sewer structure invert data, pavement locations and 0.5' contouring with a DTM. Survey limits will include approximately 1,000 linear feet of stream plus 75' from the top of bank on each side. Existing property lines and easements will be shown. The final survey will be provided in a cad format suitable for engineering design and the survey will be tied to the NAD 83 (horizontal) and NAVD 88 (vertical).

Task 3: Schematic Plans

Timmons Group will perform the following sub-tasks to establish schematic stream restoration design plans (50% design) for review by the County and the permitting agencies:

1. Develop a stream restoration plan illustrating stream improvement measures, cross sections, details and other applicable information.
2. Obtain County review and approval for submission of any permit applications prior to submittal of the permits to applicable State agencies.
3. The plans will include:
 - a. Cover sheet with location map;
 - b. Design concept narrative and scope of work;
 - c. Design parameter summary;
 - d. Typical structure and construction approach design details;
 - e. Typical cross sections; and
 - f. General planting plan information.
4. Prepare for and attend up to two (2) meetings with County staff to discuss the design plans.
5. Prepare for and attend one public information meeting.

Task 4: Wetland Impact Permitting

A Pre-Construction Notification (PCN) for a Nationwide Permit (NWP) 27 will be prepared and submitted to the COE. The NWP 27 authorizes activities required for stream restoration activities in Waters of the United States. The PCN submittal will contain a narrative describing in detail the purpose of the project and the necessity of the proposed disturbance to demonstrate that this disturbance is warranted. Responses to Requests for Additional Information (RAI) will be prepared to answer any questions posed by the COE as a result of the PCN. Negotiation of NWP authorization will be undertaken to facilitate regulatory approval of the project.



Task 5: Preliminary Construction Documents

Timmons Group will prepare Preliminary Construction Documents (90% design plans) from the Schematic design. The preparation of the Preliminary Construction Documents are based on the design of approximately 1,000 linear feet of stream restoration and includes the following sub-tasks:

1. Address County and permitting agency comments from the 50% submittal;
2. Hydraulic and Hydrologic Analysis;
3. Determine construction access locations;
4. Prepare erosion and sediment control plan;
5. Finalize stream restoration design, including grading plan, profiles, and sections;
6. Finalize pond outfall retrofit design;
7. Prepare 90% submittal of "Engineers' Opinion of Probable Construction Cost;"
8. Establish construction sequence;
9. Prepare planting plan; and
10. Submit draft bid documents and technical specifications.

Task 6: Final Construction Documents

Timmons Group will prepare the Final Construction Documents from the previously prepared Preliminary Construction Documents. This task will include addressing any previous comments, finalizing the Engineers' Opinion of Probable Construction Cost, preparing final bid documents/technical specifications, and preparation and attendance at one (1) public meeting, if necessary. Additionally, bidding assistance will be provided, as follows:

1. Provide bidding assistance to include coordination with the County purchasing office during advertisement of the project, attendance at the pre-bid meeting, responding to contractor questions, issuing addendums and attendance at the bid opening.
2. Provide services to assist the County in evaluation of contractor bids and submit a recommendation for award.

Project Fee

Timmons Group can provide the scope of services above for the following fixed fee:

Task 1: Wetland Delineation and Confirmation	\$ 5,500.00
Task 2: Design Survey	\$ 5,100.00
Task 3: Schematic Plans	\$ 22,840.00
Task 4: Wetland Impact Permitting	\$ 3,600.00
Task 5: Preliminary Construction Documents	\$ 23,400.00
Task 6: Final Construction Documents	\$ 11,240.00
	Project Total: \$ 71,680.00



Construction Cost

Based on projects of similar scope and complexity, we anticipate construction cost will be in the range of \$550,000-\$700,000 (Phase 1: \$288,750-\$367,500; Phase 2: \$176,000-\$224,000; Phase 3: \$82,500-\$105,000).

Exclusions

Timmons Group will not perform the following services under this Agreement. At the request of the Client, these services can be added for an additional fee, but are not included in this Agreement:

1. Underground Utility Location Survey - \$2,190.

An underground utility survey will be performed to designate and map underground facilities on the project site. This utility survey will include horizontal designation through geophysical methods and is defined as Quality Level "B" by the American Society of Civil Engineers (ASCE). The accuracies of the markings are subject to the depth and electrical conductivity of the utility as well as site conditions and manhole access. Plastic and fiber optics lines without tracer wires may be unlocatable. This service does not include the use of ground penetrating radar. Exclusions: sanitary & storm lines including laterals and roof drains; irrigation systems; and abandoned lines.

2. Easement Plat Preparation - \$600 per plat.

Easement plats will be prepared to meet the recoration requirements of Prince George County.

3. Construction Administration – TBD.

Based on the construction window, Timmons Group will provide construction administration, to include:

- a. Hold a pre-construction meeting on-site with County staff, Contractor, and Owner.
- b. Review construction schedules and material submittals.
- c. Review Contractor payment applications.
- d. Provide on-site consulting assistance to Contractor during stream restoration construction.



Board of Supervisors
County of Prince George, Virginia

Resolution

At a regular meeting of the Board of Supervisors of the County of Prince George held in the Boardroom, Third Floor, County Administration Building, 6602 Courts Drive, Prince George, Virginia this 12th day of April, 2016:

<u>Present:</u> William A. Robertson, Jr., Chairman Jerry J. Skalsky, Vice Chairman Alan R. Carmichael Donald A. Hunter T.J. Webb	<u>Vote:</u>
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A-

On motion of _____, seconded by _____, which carried _____, the following Resolution was adopted:

AUTHORITY TO EXECUTE CONTRACT FOR ENGINEERING SERVICES FOR DESIGN AND CONSTRUCTION DOCUMENTS, REACH 1, BIRCHETT ESTATES SUBDIVISION;

WHEREAS, a request was developed to accept proposals for design and construction documents for the Birchett Estates Reach 1 stream restoration and repair project; and

WHEREAS, after a review by staff of the response received from Timmons Engineering, a current firm under annual contract with County; and

WHEREAS, after careful consideration, review and negotiations, staff has recommended that Timmons Engineering be retained by the County to provide the services outlined in their proposal;

NOW, THEREFORE, BE IT RESOLVED That the Board of Supervisors of the County of Prince George this 12th day of April, 2016 does hereby authorize the County Administrator to execute a contract with Timmons Engineering for provision of services as outlined in the proposal entitled Birchett Estates Reach 1 in the amount of \$96,018.00.

A Copy Teste:

Percy C. Ashcraft
County Administrator



Proposal for Stream Restoration Design Birchett Estates – Reach 1

Submitted to:

Prince George County, Virginia

June 15, 2015

revised March 15, 2016 and March 29, 2016

Project Understanding

The purpose of this project is to reduce the streambank erosion potential of approximately 1,800 linear feet of stream channel bisecting Birchett Estates. This stream reach, identified as Reach 1, is actively eroding causing safety concerns and potential for infrastructure failure (i.e. sanitary sewer failure and septic failure). Stream restoration is proposed to stabilize the stream banks and streambed, to prevent further incision and erosion from occurring.

Timmons Group proposes to prepare complete design plans and specifications for the restoration of approximately 1,800 linear feet of stream channel and its five (5) contributing tributaries (approximately 1,200 linear feet) as a two phased plan. In addition, Timmons Group will explore the design feasibility of constructing stormwater best management practices in two potential areas identified during the stream assessment site visit.

Scope of Services

Task 1: Wetland Delineation and Confirmation

Timmons Group will review existing, readily obtainable environmental information on the site such as USGS mapping, aerial photography, NWI mapping and NRCS soil survey information. A wetland delineation of the subject property will be performed in accordance with the 1987 U.S. Army Corps of Engineers (COE) Wetland Delineation Manual and appropriate Regional Supplement. A preliminary wetland delineation map will be prepared depicting the approximate size, shape and location of wetlands and/or waters of the U.S. present on the subject property. Timmons Group will facilitate the confirmation of wetland locations through submittal of a Jurisdictional Determination (JD) package to the COE. This package will consist of a narrative, wetland delineation map and wetland delineation field data sheets. Timmons Group will conduct a site visit with the COE to review the site conditions, flagged wetland limits and confirm findings. A JD letter for the wetland delineation will be obtained from the COE.

Task 2: Design Survey

Timmons Group will provide a field run topographical survey for the project site. The survey will include location of visible physical improvements, wetland flagging, storm and sanitary sewer structure invert data, pavement locations and 0.5' contouring with a DTM. Survey limits will include



approximately 1,800 linear feet of stream plus 50' from the top of bank on each side and the contributing tributaries (25' each side if C/L). Existing property lines and easements will be shown. The final survey will be provided in a cad format suitable for engineering design and the survey will be tied to the NAD 83 (horizontal) and NAVD 88 (vertical).

Task 3: Schematic Plans

Timmons Group will perform the following sub-tasks to establish schematic stream restoration design plans (50% design) for review by the County and the permitting agencies:

1. Develop a stream restoration plan illustrating stream improvement measures, cross sections, details and other applicable information.
2. Obtain County review and approval for submission of any permit applications prior to submittal of the permits to applicable State agencies.
3. The plans will include:
 - a. Cover sheet with location map;
 - b. Design concept narrative and scope of work;
 - c. Design parameter summary;
 - d. Typical structure and construction approach design details;
 - e. Typical cross sections; and
 - f. General planting plan information.
4. Prepare for and attend up to two (2) meetings with County staff to discuss the design plans.
5. Prepare for and attend one public information meeting.

Task 4: Wetland Impact Permitting

A Pre-Construction Notification (PCN) for a Nationwide Permit (NWP) 27 will be prepared and submitted to the COE. The NWP 27 authorizes activities required for stream restoration activities in Waters of the United States. The PCN submittal will contain a narrative describing in detail the purpose of the project and the necessity of the proposed disturbance to demonstrate that this disturbance is warranted. Responses to Requests for Additional Information (RAI) will be prepared to answer any questions posed by the COE as a result of the PCN. Negotiation of NWP authorization will be undertaken to facilitate regulatory approval of the project.

Task 5: Preliminary Construction Documents

Timmons Group will prepare Preliminary Construction Documents (90% design plans) from the Schematic design. The preparation of the Preliminary Construction Documents are based on the design of approximately 1,800 linear feet of stream restoration and its tributaries, and includes the following sub-tasks:

1. Address County and permitting agency comments from the 50% submittal;
2. Hydraulic and Hydrologic Analysis;



3. Determine construction access locations;
4. Prepare erosion and sediment control plan;
5. Finalize stream restoration design, including grading plan, profiles, and sections;
6. Prepare 90% submittal of “Engineers’ Opinion of Probable Construction Cost;”
7. Establish construction sequence;
8. Prepare planting plan; and
9. Submit draft bid documents and technical specifications.

Task 6: Final Construction Documents

Timmons Group will prepare the Final Construction Documents from the previously prepared Preliminary Construction Documents. This task will include addressing any previous comments, finalizing the Engineers’ Opinion of Probable Construction Cost, preparing final bid documents/technical specifications, and preparation and attendance at one (1) public meeting, if necessary. Additionally, bidding assistance will be provided, as follows:

1. Provide bidding assistance to include coordination with the County purchasing office during advertisement of the project, attendance at the pre-bid meeting, responding to contractor questions, issuing addendums and attendance at the bid opening.
2. Provide services to assist the County in evaluation of contractor bids and submit a recommendation for award.

Project Fee

Timmons Group can provide the scope of services above for the following fixed fee:

Task 1: Wetland Delineation and Confirmation	\$ 6,860.00
Task 2: Design Survey	\$ 8,250.00
Task 3: Schematic Plans	\$ 29,524.00
Task 4: Wetland Impact Permitting	\$ 3,600.00
Task 5: Preliminary Construction Documents	\$ 34,540.00
<u>Task 6: Final Construction Documents</u>	<u>\$ 13,244.00</u>
Project Total:	\$ 96,018.00

Construction Cost

Based on projects of similar scope and complexity, we anticipate construction cost will be in the range of \$850,000-\$950,000 (Phase 1: \$509,400-\$568,800; Phase 2: \$339,600-\$379,200).



Exclusions

Timmons Group will not perform the following services under this Agreement. At the request of the Client, these services can be added for an additional fee, but are not included in this Agreement:

1. Underground Utility Location Survey - \$2,635.

An underground utility survey will be performed to designate and map underground facilities on the project site. This utility survey will include horizontal designation through geophysical methods and is defined as Quality Level "B" by the American Society of Civil Engineers (ASCE). The accuracies of the markings are subject to the depth and electrical conductivity of the utility as well as site conditions and manhole access. Plastic and fiber optics lines without tracer wires may be unlocatable. This service does not include the use of ground penetrating radar. Exclusions: sanitary & storm lines including laterals and roof drains; irrigation systems; and abandoned lines.

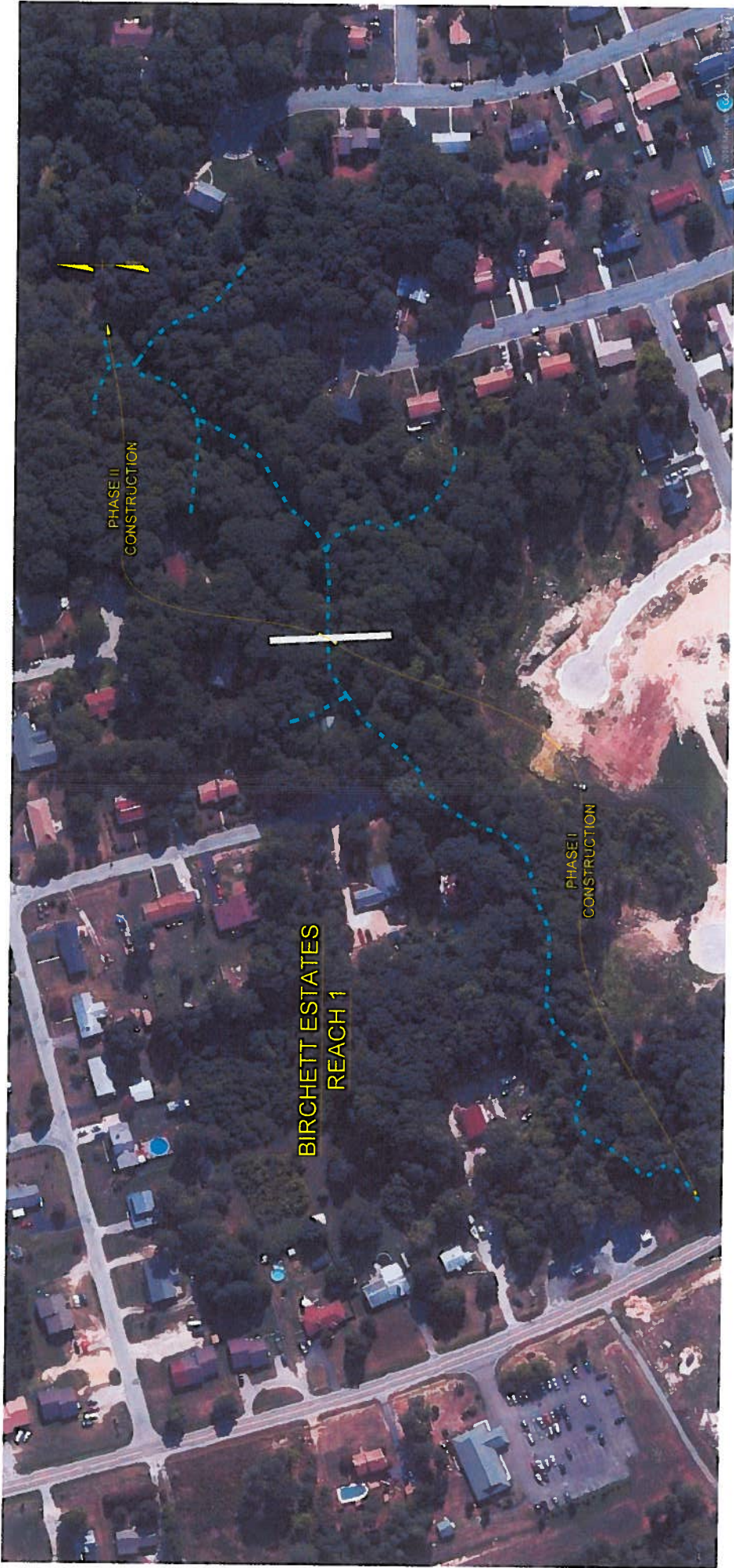
2. Easement Plat Preparation - \$600 per plat.

Easement plats will be prepared to meet the recoration requirements of Prince George County.

3. Construction Administration – TBD.

Based on the construction window, Timmons Group will provide construction administration, to include:

- a. Hold a pre-construction meeting on-site with County staff, Contractor, and Owner.
- b. Review construction schedules and material submittals.
- c. Review Contractor payment applications.
- d. Provide on-site consulting assistance to Contractor during stream restoration construction.



PHASE II
CONSTRUCTION

BIRCHETT ESTATES
REACH 1

PHASE I
CONSTRUCTION