



August 17, 2022

Mr. Alan Chen, P.E.

Department of Public Works  
Town of Vienna  
127 Center Street South  
Vienna, VA 22180

Re: Manvell Road SE Drainage Improvements

Dear Mr. Chen:

Whitman, Requardt and Associates, LLP is pleased to provide you with this proposal to perform engineering services for the design of new curb and gutter and storm drainage improvements along Manvell Road SE from Park Street SE to Glyndon SE. The concept and scope of work was provided by the Town. The engineering services will include the design of approximately 700 feet of concrete curb & gutter along the west side of Manvell Road SE and approximately 400 feet of concrete curb gutter and sidewalk along the east side of Manvell Road SE. The design will also include new curb inlets and approximately 90 feet of storm sewer pipe.

## **I. SCOPE OF WORK**

### **Task 1: Survey Services**

WRA's survey sub-consultant, Rice Associates, will conduct the property, topographic, drainage surveys with subsurface utility mapping, test pits and prepare easement plats as described in the attached scope of service and fee.

### **Task 2: Plan Development**

Plans will be developed in accordance with the Town's Public Infrastructure Manual (PIM). WRA will provide 1 hard copy full size plan sets and PDFs at each submission. AutoCAD and/or Microstation files will be provided at the final submission if requested by the Town. It is anticipated that one complete plan assembly for construction will be provided.

#### *Conceptual and Preliminary Design*

- WRA will visit the site to gain an overall understanding of the existing site conditions and identify design and/or construction constraints to confirm the scope provided by the Town.
- WRA will develop a preliminary layout of the curb gutter and drainage to minimize impacts to utilities and private properties. It is anticipated that the proposed improvements will be mostly within the existing Right of Way. If proposed improvements are ultimately outside of the existing Right of Way, it is assumed the Town will acquire Permanent Easements in lieu of Right of Way. Temporary easements may be required for final grading. This preliminary layout will be provided to the Town for review.
- WRA will prepare preliminary plans (30%) for submission. The preliminary plans will include typical sections, plans and curb profiles.
- The preliminary layout will be updated to address the Town's review comments. Preliminary Design will be used for one Public Meeting.

- A preliminary cost estimate will be developed for the preliminary plan submission. The cost estimate will be based on the Town's unit price contract with an on-call Contractor.

#### *Intermediate Submission*

Following the first Public Meeting, WRA will advance the plans to the Intermediate Design (90%) stage. The plans are anticipated to include:

- Title Sheet
- Survey Alignment Sheet(s)
- Construction Alignment Data Sheet(s)
- General Notes
- Typical Sections
- Plan Sheets
- Profile Sheets
- Erosion and Sediment Control Plans
- Drainage/Stormwater Management (SWM) Design Sheet(s) (drainage divides, storm computations, other necessary documentation)
- Grading Plan Sheet(s)
- Staking Details of curb and gutter
- Demolition and clearing plan
- Sequence of Construction Sheets
- Cross Sections

The Intermediate Submission will include quantities and cost estimate. Plan sets will be reviewed for constructability and will be submitted to the Town for review and approval.

- Plans will be updated to address the Town's review comments. Intermediate Design will be used for the second of two Public Meetings.

#### *Final Submission*

WRA will coordinate with the Town Project Manager and will incorporate review comments. Final plans (100%), special provisions (if any), and bid items/quantities will be prepared for project advertisement and construction.

Upon acceptance of the Final Plans, WRA will perform a final constructability review, and sign and seal the Construction Plan Set.

#### **Drainage and Stormwater Management Design**

WRA will collect, review, and study all available and applicable drainage related data including:

- Town or County GIS layers (land use, zoning, drainage, soils, contours, watersheds, etc.);
- Project Survey and
- Existing roadway drainage plans and computations, as-built plans, and any plans for existing and proposed development nearby.

The existing drainage systems and outfalls will be analyzed to document their hydraulic performance under existing conditions.



WRA will conduct field visits to the project area and surrounding areas to review existing drainage and stormwater management systems and facilities and to verify other existing conditions. WRA will coordinate with the Town to discuss stormwater management options for the project.

WRA will conduct a detailed drainage and hydrology analysis for the area within the limits of the project. For the preliminary design, existing storm drainage features and patterns will be reviewed, and the systems analyzed for hydraulic capacity to confirm existing performance and to establish baseline conditions. Outfall locations will be identified, confirmed, and analyzed for capacity per adequate outfall criteria and performance under existing conditions.

WRA will develop the proposed drainage design for the project in accordance with Town criteria. This task includes design of inlets, storm pipes, Erosion and Sediment Control (E&SC) measures, and outfall improvements that may require additional easements.

The analysis and design will be documented on plan sheets as part of the plan submittals. It is assumed this project will meet the DEQ Part IIB VSMP regulations since it is anticipated the project does not qualify for grandfathering considerations.

WRA will evaluate the feasibility of various best management practices (BMPs) including purchasing of nutrient credits to provide the required level of pollutant removal for water quality.

A standalone Drainage/SWM report will not be provided.

#### Erosion and Sediment Control Design

WRA will delineate preliminary limits of disturbance and identify locations of erosion and sediment control devices to determine the need for additional easements. This will be based on topography, drainage areas and the preliminary horizontal and vertical geometry. An Erosion and Sediment Control Plan will be prepared for the project and incorporated into the plan set. The Erosion and Sediment Control plans will meet the requirements of the Virginia Erosion and Sediment Control Regulations and VDOT's Erosion and Sediment Control Standards and Specifications as approved by the Department of Conservation and Recreation (DCR).

#### **Public Involvement**

It is assumed that the project will include two (2) Public Meetings for the community. WRA will assist the Town in holding the meetings, including preparations of handouts and presentation materials, and preparing responses to citizen comments. 2 WRA staff members will attend the public meetings.

#### **Project Management**

WRA will submit progress reports with invoices which will provide status updates on schedule, budget, and deliverables to the Town. WRA assumes 3 meetings with the Town in addition to the Public Meetings.

## **II. SUMMARY OF DELIVERABLES**

The following is a summary of deliverables anticipated for this project:

- Conceptual/Preliminary layouts
- Intermediate (90%) Plan Set
- Final (100%) Plan Set
- Construction Plan Set (Signed and Sealed Final Plans)
- Public Meeting materials (display board, handouts)
- Construction Cost Estimates



### III. EXCLUSIONS

1. Environmental Documentation
2. Standalone Drainage/SWM Report
3. Dry Utility Coordination
4. Lighting / Dry Utility design and/or relocation
5. Traffic Counts
6. Landscape design
7. Geotechnical investigation and design
8. Value Engineering
9. Nutrient Credit Purchase Fees
10. Construction Related Services and Inspection
11. Bid documents
12. Services not included in this scope are excluded

### IV. Estimated Fee

The estimated fee for this project is **\$118,582.25** and is included in Appendix A.

WRA will work with the Town to accelerate the schedule as much as possible to ensure on-time project completion.

We are prepared to begin immediately upon your notice to proceed. Should the Town have any questions please contact us.

Very truly yours,



Tyler L. Long, P.E.  
Whitman Requardt & Associates, LLP

Enclosures

cc: Dean Westman, PE



**Attachment A**  
**Town of Vienna On-Call Task Order Contract**  
**Task - Manvell Road SE Drainage Improvements**

**COST PLUS BILLABLE HOURLY RATES CONTRACT**

A.	DIRECT LABOR, ESCALATION, PAYROLL BURDEN, FEE Est. Man-hours X Fixed Billable Hourly Rates	\$	54,985.51
B.	NONSALARY DIRECT COSTS, ESTIMATE	\$	502.00
C.	SUB-CONSULTANT FEES  Rice Associates	\$	63,094.74
D.	TOTAL ESTIMATED COST PLUS FIXED FEE (BASE FEE) (A+B+C)	\$	118,582.25
E.	ALLOWANCE (D)	\$	-
F.	TOTAL CONTRACT AMOUNT (BASE + ALLOWANCE) (D+E)	\$	<b>118,582.25</b>

**COMPUTATION OF SALARY, PAYROLL BURDEN AND FEE**

	<u>HOURS</u>	<u>RATE</u>	<u>AMOUNT</u>
PROJECT MANAGER/SENIOR PROJECT ENGINEER	52	\$155.96	\$8,110
PROJECT ENGINEER	162	\$127.94	\$20,726
ENGINEER	235	\$98.15	\$23,065
DESIGNER	42	\$73.43	\$3,084
<b>TOTAL</b>	<b>491</b>	<b>NA</b>	<b>\$54,986</b>

**Town of Vienna On-Call Task Order Contract**  
**Task - Manvell Road SE Drainage Improvements**

**Distribution of Manhours**

TASK	PROJECT MANAGER/SENIOR PROJECT ENGINEER		PROJECT ENGINEER		ENGINEER		DESIGNER		TOTAL	
	\$155.96		\$127.94		\$98.15		\$73.43			
	HOURS	DOLLARS	HOURS	DOLLARS	HOURS	DOLLARS	HOURS	DOLLARS	HOURS	DOLLARS
<b>PRELIMINARY</b>	18	\$2,807	49	\$6,269	92	\$9,030	22	\$1,615	181	\$19,721.60
<b>INTERMEDIATE</b>	18	\$2,807	71	\$9,084	99	\$9,717	16	\$1,175	204	\$22,782.75
<b>FINAL</b>	16	\$2,495	42	\$5,373	44	\$4,319	4	\$294	106	\$12,481.16
<b>PERCENT</b>	<b>10.59%</b>	<b>14.75%</b>	<b>32.99%</b>	<b>37.69%</b>	<b>47.86%</b>	<b>41.95%</b>	<b>8.55%</b>	<b>5.61%</b>	100%	100%
<b>TOTALS</b>	<b>52</b>	<b>\$8,109.92</b>	<b>162</b>	<b>\$20,726.28</b>	<b>235</b>	<b>\$23,065.25</b>	<b>42</b>	<b>\$3,084.06</b>	<b>491</b>	<b>\$54,985.51</b>

**Town of Vienna On-Call Task Order Contract**  
**Task - Manvell Road SE Drainage Improvements**

**LABOR ESTIMATE**

Task	PROJECT MANAGER/SENIOR PROJECT ENGINEER	PROJECT ENGINEER	ENGINEER	DESIGNER	Total
<b>CONCEPT/PRELIMINARY DESIGN</b>					
Data (Base Mapping, DTM, etc.) Review	1	1	4		6
Field Visit	2	4	4		10
Develop Layouts based on concepts provided by the Town		4	6		10
Develop Title Sheet	1	1	2		4
Develop Preliminary Typical Sections	1	2	4		7
Develop Preliminary Plan Sheets	1	4	6		11
Develop Preliminary Curb Profiles	1	2	8		11
Develop Critical Cross Sections (Not submitted)		2	6		8
Determine Easements Needs	1	2	2		5
<b>PRELIMINARY DRAINAGE DESIGN</b>					
Site Visits	2	2	2		6
Obtain GIS Mapping for CADD Use			4	8	12
Locate Existing Outfalls and Drainage Areas		2	6		8
Delineate Watershed Areas		1	4	8	13
Determine Appropriate Peak Discharges	1	4	4		9
Field Verify and Analyze Existing Drainage Structures		2	4		6
Preliminary ESC Design for Determination of Easement Needs			2		2
Preliminary Outfall Adequacy Analysis for Easement Needs	1	2	2		5
SWM Conceptual Analysis and Layout		1	2		3
Determine Pre- and Post-Development Impervious Areas, Disturbed Area and Right-of-Way Area per Outfall		1	2		3
Determine Pre- and Post-Development Discharges		1	2		3
Determine Requirement for Water Quality, Water Quantity, and Sediment Control		1	2		3
Determine Storage Volume Requirements & Preliminary Layout of SWM/ESC Facilities for Right-of-Way Needs		1	4		5
<b>FIRST PUBLIC MEETING</b>					
Prepare Displays for Public Meeting		2	4	4	10
Staff Attendance at Public/Council Meeting	2	2			4
Public Coordination / As-needed meetings		2	2		4
Respond to Town comments on preliminary layouts	1	1	4		6
Quantity Take-off and Cost Estimate	1	1		2	4
QA/QC and submission of Preliminary Design	2	1			3
<b>Task Subtotal</b>	<b>18</b>	<b>49</b>	<b>92</b>	<b>22</b>	<b>181</b>

**Town of Vienna On-Call Task Order Contract**  
**Task - Manvell Road SE Drainage Improvements**

**LABOR ESTIMATE**

Task	PROJECT MANAGER/SENIOR PROJECT ENGINEER	PROJECT ENGINEER	ENGINEER	DESIGNER	Total
<b>INTERMEDIATE DESIGN</b>					
Incorporate Preliminary Review Comments	1	1	4		6
Refine Title Sheet			1		1
General Notes Sheet		1	1		2
Update Typical Sections	1	2	4		7
Update Plan Sheets	1	6	6		13
Update Curb Profiles	1	3	4		8
Develop Cross Sections	1	6	8		15
Develop Staking Details for Curb Ramps	1	8	8		17
Refine SOC sheets	1	2	8		11
Prepare Grading Plan/Demo Plan/Pavt Marking Plan	1	8	8		17
Design Relocated Fire Hydrants	1	6	6		13
Update Proposed Easements		2	2		4
<b>INTERMEDIATE DRAINAGE DESIGN</b>					
Design storm drain system	1	2	4	2	9
Design drainage structures	1	1	4	1	7
Design Erosion and Siltation Control Measures	1	1	4	1	7
Develop storm drain profiles and sheets	1	1	3	2	7
Develop ESC sheets		1	4	2	7
Develop plan sheets for incorporation of drainage analysis		2	4	4	10
<b>SECOND PUBLIC MEETING</b>					
Prepare Displays for Public Meeting		2	6		8
Staff Attendance at Public/Council Meeting		2	2		4
Public Coordination / As-needed meetings	1	1			2
Respond to Town comments on Intermediate design	1	3	6		10
Quantity Take-off and Cost Estimate	1	4	2	4	11
QA/QC, Constructability Review and submission of Intermediate Design	2	6			8
<b>Task Subtotal</b>	<b>18</b>	<b>71</b>	<b>99</b>	<b>16</b>	<b>204</b>



**Town of Vienna On-Call Task Order Contract**  
**Task - Manvell Road SE Drainage Improvements**

**LABOR ESTIMATE**

Task	PROJECT MANAGER/SENIOR PROJECT ENGINEER	PROJECT ENGINEER	ENGINEER	DESIGNER	Total
<b>FINAL DESIGN</b>					
Incorporate Intermediate Review Comments	1	2	4		7
Finalize Title Sheet	1	1			2
Finalize General Notes Sheet		1	1		2
Finalize Typical Sections		1	1		2
Finalize Plan Sheets		1	4		5
Finalize Curb Profiles		1	3		4
Finalize Cross Sections		1	3		4
Finalize Staking Details for Curb Ramps		1	4		5
Finalize SOC sheets		1	4		5
Finalize Grading Plan/Demo Plan/Pavt Marking Plan	1	2	4		7
Finalize Proposed Easements	1	1			2
<b>FINAL DRAINAGE DESIGN</b>					
Address Comments from Intermediate Review	1	2	3		6
Finalize Drainage and SWM Computations and Analysis	1	2	3		6
Finalize Drainage and SWM Plan and Profile Sheets	1	2	3		6
Finalize Erosion and Sediment Control Plans		1	1		2
Respond to comments prior to construction submission	2	4	4		10
Quantity Takeoff / Estimate	2	4	2	4	12
QA/QC and Constructability Review of Final Plans	2	10			12
QA/QC Construction Plan submission	1	4			5
Sign and Seal Plans	2				2
<b>Task Subtotal</b>	<b>16</b>	<b>42</b>	<b>44</b>	<b>4</b>	<b>106</b>

**COST PLUS FIXED BILLABLE HOURLY RATES CONTRACT  
COMPUTATION OF FEE**

<u>TRAVEL</u>					
Travel for design meetings (preliminary, field, etc.) and site visits					
Anticipate	10 round trips @	11 miles	110 miles @	0.585 /mi	\$64.00
▪ <u>POSTAGE/OVERNIGHT MAIL</u>					\$0.00
Allowance for shipment of plans, reports, brochures, etc.					
▪ <u>REPRODUCTION</u>					\$188.00
Includes printing meeting materials and roll plans					
▪ <u>PUBLIC MEETINGS DISPLAYS</u>					
We will prepare display boards, typical sections, plans for use in information meetings, public hearings and various other presentations. We will have all displays mounted for each public meeting.					
We estimate	50 SF	@	\$5.00 /SF		\$250.00
▪ <u>MATERIALS &amp; SUPPLY</u>					
Includes film, developing and enlargements of photographs for inventory of existing conditio					\$0.00
▪ <u>IN-HOUSE PLOTTING</u>					
Plotting charges will only be billed for color plots for stakeholder meetings.					
We estimate	SF	@	\$5.00 /SF		\$0.00

<b>TOTAL</b>	<b>\$502.00</b>
--------------	-----------------

# COST PLUS FIXED BILLABLE HOURLY RATES CONTRACT

## COMPUTATION OF FEE

### REPRODUCTION

Charge will be made for printing various submittals for the Town including three internal distribution and permanent file copies. Cost of review and check prints during design will not be charged to the job.

Printing of submittals is normally done through an outside firm. The current cost of prints = \$.10/sq.ft.

Estimated number of sheets.

"1 Series"	Title Sheet	1
	Survey Alignment Data Sheets	1
	Construction Alignment Data Sheets	1
	Sequence of Construction	1
"2 Series"	General Notes	1
	Typical Sections	1
	Summary Sheets	1
	Roadway Detail Sheets	2
	SWPP and SWM Computations/Analysis	4
	Staking Detail Sheets	2
3, 4 etc	Design Plan/Profile Sheets (scale 1"=25')	1
	Demolition/Clearing Plan	1
	E&S Control Sheets	1
	Drainage Description Sheets	1
	Storm Drain Profiles	1
X-Section	Scale 1" = 5'	5

Subtotal      25

3 Full-Size (6 SF Each) and 2 Half-Size Plans (1.5 SF Each)	90%	Cost=	\$83
3 Full-Size (6 SF Each) and 2 Half-Size Plans (1.5 SF Each)	100%	Cost=	\$53
3 Full-Size (6 SF Each) and 2 Half-Size Plans (1.5 SF Each)	Constr.	Cost=	\$53
		<b>Total=</b>	<b>\$188</b>



December 23, 2021

Revised: December 29, 2021; January 3, 2022; January 12, 2022; June 15, 2022; July 8, 2022

Tyler L. Long, P.E.

Associate

Whitman, Requardt & Associates, LLP

12700 Fair Lakes Circle, Suite 300

Fairfax, VA 22033

**Subject: Robinson Sidewalk Program – Manvell Road SE  
Topographic, Drainage, Property, Subsurface Utility Mapping (QL-A & QL-B)  
and Easement Plats  
Vienna, Virginia**

Dear Mr. Long,

Rice Associates is pleased to provide the following proposal for professional surveying services for the above referenced project. The scope of work in this proposal includes providing a topographic, drainage, and property survey with subsurface utility mapping (QL-B), utility test holes (QL-A) and easement plats. The approximate limits of the survey are shown in yellow on the attached graphics and are generally twenty-five (25) feet behind the curb gutter or edge of pavement. The limits will also include fifteen (15) feet of any existing sidewalk within the survey limits. The horizontal and vertical basis of this survey will be NAD83 and NAVD88 via GPS observation unless otherwise directed at notice to proceed.

## **Section I - Scope of Work**

### Task 1 - Mapping

#### Topographic Survey

The following items are generally incorporated in the mapping product:

- Permanent planimetric features that are visible to the surveyor include, but are not limited to signs, edge of pavement, roadways, utility pedestals, manholes, curbing, curb cuts, pavement striping, visible surface evidence of non-gravity utilities (power poles and lines, water wells, meters, valves, fire hydrants, etc.) and witness posts.
- Trees and tree lines are depicted as follows: where an area is totally wooded, or there are large groups of trees forming a continuous canopy, the tree line will be clearly shown and

Surveying • Photogrammetry • 3-D Laser Scanning • Subsurface Utility Designation and Mapping

---

Corporate Office • 10661 Gaskins Way • Manassas, Virginia 20109 • Telephone 703.968.3200 • Fax 703.968.2705  
Richmond Office • 308 Turner Road • Suite G • Richmond, Virginia 23225 • Telephone 804.674.9723 • Fax 804.674.9726  
Virginia Beach Office • 3145 Virginia Beach Blvd. • Suite 103 • Virginia Beach, Virginia 23452 • Telephone 757.306.4260

labeled. Individual trees within a totally wooded area or within a large group of trees are not required to be individually located. Any individual free-standing trees four (4) inches or larger will be located and labeled as to size, basic name (oak, pine, maple, etc.), and diameter of dripline. Hedges or bushes will not normally be individually located; however these areas will be outlined as planted or landscape areas.

- Contours will be generated utilizing data from LIDAR, conventional means, or a combination of these technologies. The end deliverable will show two (2) foot contours and the supporting surface data.

#### Property Surveys

- Property lines for the affected properties will be shown on the mapping.
- Properties and right-of-ways that are within the survey limits shown on the attached graphics will be included on the mapping.
- Property lines will be based on deeds and plats of record, limited monument ties and physical features. These surveys will not represent a boundary survey and property corners not recovered, will not be set.
- Easements will be graphically plotted to the extent that sufficient geometry exists to relate them to the property lines. No title report will be provided to the surveyor and all encumbrances may not be shown.

#### Drainage Surveys

- Drainage facilities that are visible to the surveyor will be depicted. These include both sanitary and storm. Pipe types, pipe diameters and associated inverts will be obtained to the extent they are visible. Storm and sanitary drainage inverts will be obtained one (1) structure off upstream and downstream for systems that commence within the limits.

#### Task 2 - Subsurface Utility Mapping: Quality Level “B” Utility Designation

Rice Associates will provide subsurface utility engineering designating services within the area outlined on the attached Graphic, in accordance with CI/ASCE Standard 38-02, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.

#### Designating Utilities – Quality Level B Services

- Designating and marking underground utilities within the project limits using an appropriate suite of geophysical methods.
- The underground utilities shall be marked at a maximum of 50-foot intervals and at all changes in direction.
- Water lines, force mains, and other facilities where an inductive tone may not be achieved will be shown as Quality Level D or Quality Level C depending on the available information.

- Each utility run shall be labeled, and this information will be noted on the field sketch and used for assisting the surveyor and for quality control purposes.
- Designating of residential service lines, irrigation lines, and other such small non detectable utilities will not be included.
- Survey all markings that indicate the presence of a subsurface utility. This survey will be to the accuracies and precision dictated by the project's survey control.

*It may not be possible to detect utilities without prior knowledge, such as systems that are not depicted on records made available to Rice Associates or systems without above ground feature. Non-metallic and or non-locatable lines will be shown as Quality Level D or Quality Level C depending on the available information.*

#### Task 3 – Utility Test Hole – Quality Level “A” Services (Optional)

Rice Associates will determine the location and depth of critical utilities which may conflict with the proposed construction or design within the project limits. The fee proposed is limited to eight (8) test hole locations. Additional test holes shall be completed on a per test hole basis as described below in Section VIII. The location of test holes will be determined by the client and reviewed by the Rice Associates project manager for feasibility.

Rice Associates shall use minimally intrusive excavation techniques, which ensure the safety of the excavation, the integrity of the utility facility to be measured, and that of other facilities which may be encountered during excavation. The excavation shall be by means of air-and/or water-assisted vacuum excavation equipment manufactured specifically for this purpose. The following will be included:

#### Excavation of Test Holes:

- Clear the Test Hole area of surface debris.
- In paved areas, neatly cut and remove existing pavement.
- Excavate the Test Hole. The nominal diameter of the Test Hole shall not exceed 15 inches unless otherwise approved.
- Expose the utility only to the extent required for identification and data collection purposes.
- Avoid damage to lines, wrappings, coatings, cathodic protection or other protective coverings and features.
- Hand-dig as needed to supplement excavation and to ensure safety.
- For lines that can be field designated, we will revise the Test Hole location one (1) time to positively expose the utility.
- If a utility cannot be traced or designated, one attempt will be made to locate the utility. If the utility is not exposed, a test hole report will be generated saying that no utility was found.

### Collection, Recording, and Presentation of Data:

Measure and/or record the following information on an appropriately formatted Test Hole data sheet that will be subsequently sealed and dated by Rice Associates.

- Elevation of survey marker set at grade.
- Difference in elevation of top and/or bottom of the utility and the above ground mark to a vertical accuracy of +/- 0.05 feet.
- Field sketch showing horizontal location referenced to a minimum of two (2) swing ties to physical structures existing in the field.
- Outside diameter of pipe, width of duct banks, and configuration of multi-conduit systems.
- Utility structure material composition, when reasonably ascertainable.
- Other pertinent information as is reasonably ascertainable from test hole, such as utility owner.

### Site Restoration:

- Replace bedding material around exposed utility lines.
- Backfill and compact the excavation.
- As applicable, provide permanent cold patch pavement restoration within the limits of the original cut using materials, compaction, and pavement thickness similar or equal to that found.
- For excavations in unpaved areas, restore disturbed area as nearly as practicable to pre-existing conditions.
- Furnish and install permanent surface marker (e.g., P.K. nail, peg, steel pin, or hub) directly above the centerline of the utility.

If the utilities are over ten (10) feet deep, they may not be able to be found using our non-destructive vacuum excavation techniques for Test Holes. In those cases, a test hole report will be generated noting that no utility was found within the general depth of ten (10) feet.

**Test holes not conducted will not be billed.**

### Task 4 – Easement Plats (Optional)

- Rice Associates will prepare up to nine (9) easement plats where it is determined necessary by the client based upon proposed improvements.
- **Plats not initiated will not be billed.**

## **Section II – Factors**

- All fieldwork will be performed continuously, once started.

- Portions of the survey area are in areas that may require access approval. Rice Associates will rely on the client to notify property owners as appropriate.
- Client understands that the fieldwork may involve minimal tree and brush trimming and that Rice Associates will not be restricted from this activity.
- The survey deliverable will be limited to existing conditions. No site plans or other conceptual information will be depicted.

### **Section III - Exclusions and Expansions**

#### **General**

- Wetlands locations are excluded.
- Arborist services are excluded.
- Rice Associates will not be responsible for the removal of debris or obstruction from any area or structure for the purpose of gathering survey information.
- Rice Associates personnel may not be able to access private property until after property owners have been notified in writing by the client or Town of impending survey activity. Time of Performance identified in Section VI may be impacted to allow for the proper notification process.
- This proposal includes one (1) office revisions to an associated plat based on engineering design revisions and/or Town review comments.
- Fees associated with plat review and/or recordation are excluded.
- Any service not specifically included is excluded.

#### **Subsurface Utility Mapping**

- Rice Associates will depict the non-gravity subsurface utility features within the project limits. No attempt will be made to determine the location/depth of subsurface utilities via invasive methods except as identified within Task 3 of this proposal.
- This service is not intended to depict structures such as, but not limited to, irrigation distribution systems, wells, roof drains, or the limits of subsurface utility structures such as vaults, manholes, septic systems, tunnels or other underground structures or facilities.
- Our work does not relieve the users of our drawings from calling MISS UTILITY and we are not responsible for damage to utilities caused by others due to the responsibilities of utility owning agencies and the one call system.
- Water and sewer service lines will be designated to the extent possible provided their construction allows for detection by electronic methods.
- The scope of services as outlined above is for one-time only. Utility mapping re-marking due to reasons beyond the control of Rice Associates is excluded.
- Utilities may exist which are not locatable.



- Client will assist Rice Associates to aid in the acquisition of utility plans/records from project owner.
- Rice Associates will not be responsible for the removal of debris or obstruction from any area or structure for the purpose of gathering utility information.
- Test hole activity is dependent on reasonable and suitable site access and site conditions.
- Test holes for utility conduits require two (2) test holes to locate each side of the conduit, and the top and bottom of the conduit.
- Any service not specifically included is excluded.

#### **Section IV - Items to be provided by Client**

- Property owner notification of survey activities.
- Written notice to proceed.
- Continuous, non-disrupted access to the subject properties (no work disruptions).
- At time of plat preparation, current design file, in a CAD format, showing proposed easement lines.
- Sketch showing test hole locations

#### **Section V - Deliverables**

##### Tasks 1 & 2 - Mapping

The deliverable will include a MicroStation compatible project disc with all supporting files, a hard copy topographic worksheet, two (2) foot contours and the associated surface at a scale of one-inch equals twenty-five feet (1" = 25').

##### Task 3 – Utility Test Hole – Quality Level A Services (Optional)

Test hole deliverable will be a PDF sketch depicting the location of the utility test hole Northing, Easting, and Elevation along with a test hole data report as appropriate.

##### Task 4 – Easement Plats (Optional)

Rice Associates will provide a hardcopy of each plat at a scale and sheet size suitable for recordation among the land records of Fairfax County, Virginia

#### **Section VI – Time of Performance**

##### Tasks 1 & 2– Mapping

The delivery date will be a mutually agreed upon date at notice to proceed and receipt of the items delineated in Section IV, with the exception of the design files. This schedule is subject to uncontrollable impacts, such as weather, and access disruptions.

Task 3 – Utility Test Hole – Quality Level “A” Services (Optional)

Rice Associates will make its best efforts to complete the test holes at a mutually agreed upon time and receipt of the items delineated in Section IV. This schedule is subject to uncontrollable impacts, such as weather, and access disruptions.

Task 4 – Easement Plats (Optional)

The delivery date will be a mutually agreed upon date at notice to proceed and receipt of the necessary electronic file containing the proposed easement geometry.

**Section VII - Basis of Payment**

We propose to perform the services described under Section I of this proposal, on a lump sum basis. If for any reason additional work is required, you will be formally notified (for approval) prior to starting the additional work. Additional work will be invoiced on an hourly basis or mutually agreed to lump sum fee.

**Section VIII- Fee Schedule**

Task 1 – Survey Mapping (Lump Sum Fee)	\$ 19,439.21
Task 2 - Subsurface Utility Mapping (Lump Sum Fee)	\$ 12,912.80
Task 3 – Utility Test Holes (8 test holes @ \$1,191.97 per test hole) (Optional)	\$ 9,535.76
Task 4 – Easement Plat (9 plats @ \$2,311.53 per plat) (Optional)	\$ 20,803.77
Direct Costs (Mileage)	\$ 403.20

Thank you for your confidence in our firm. We look forward to working with you on this and future projects. Please call if you have any questions or require further information.

Sincerely,



Bill Lippy, LS

Attachments:

Fee Schedule

Graphics

Surveying • Photogrammetry • 3-D Laser Scanning • Subsurface Utility Designation and Mapping

Client:	WRA
Project #:	WR2106.00D
Project Name:	Robinson Sidewalk Project - Manvell Road SE
Location:	Vienna, Virginia
Type of Survey:	Topographic, Drainage and Property Surveys with Subsurface Utility Mapping
Date:	December 23, 2021
	Revised: December 29, 2021; January 3, 2022; January 12, 2022; June 15, 2022; July 8, 2022

	Project Manager	RLS / Task Manager	Survey Coordinator	Senior Survey Technician	CADD Technician	Researcher	Administration	Survey Crew Chief	Survey Instrument Person	2 Person Survey Crew	Photogrammetry Manager	Photogrammetrist	LIDAR Manager	LiDAR Technician	Subsurface Utility Manager	Subsurface Utility Tech	TOTAL	
Labor Bill Rates	186.93	186.93	101.73	133.74	112.46	115.24	57.22	104.32	71.80	176.12	186.93	90.05	186.93	89.41	186.93	75.50		
Task 1 - Survey																		
Drainage Surveys		0.5	0.5	2	3			5	5								16.00	
G.P.S. Surveys		0.5	0.5	3				4	4								12.00	
Horizontal/Vertical Control		0.5	0.5	3	2			6	6								18.00	
Meetings and Project Coordination		1															1.00	
Property Surveys		4		12	12	12		14	14								68.00	
Quality Assurance/Control		1															1.00	
Topographic Survey		1	1	8	14			22	22								68.00	
Survey Total Hours	-	8.50	2.50	28.00	31.00	12.00	-	51.00	51.00	-	-	-	-	-	-	-	184.00	
Survey Total Fee	-	1,588.91	254.33	3,744.72	3,486.26	1,382.88	-	5,320.32	3,661.80	-	-	-	-	-	-	-	19,439.21	
Task 4 - Easement Plats (Optional)																		
Easement Plats		27		27	108												162.00	
Easement Plats Total Hours	-	27.00	-	27.00	108.00	-	-	-	-	-	-	-	-	-	-	-	162.00	
Easement Plats Total Fee	-	5,047.11	-	3,610.98	12,145.68	-	-	-	-	-	-	-	-	-	-	-	20,803.77	
Task 3 - Utility Test Holes (Optional)																		
Utility Test Holes					16			8	8						8	64	104.00	
Utility Test Holes Total Hours	-	-	-	-	16.00	-	-	8.00	8.00	-	-	-	-	-	8.00	64.00	104.00	
Utility Test Holes Total Fee	-	-	-	-	1,799.36	-	-	834.56	574.40	-	-	-	-	-	1,495.44	4,832.00	9,535.76	
Task 2 - Subsurface Utility Mapping																		
Mobilizaiton/DeMob								3	3							5	11.00	
Quality Assurance/Control					2			2							2	3	9.00	
SUE Survey				2	5			17	19								43.00	
Utility Designation QLB		2		2	15										2	57	78.00	
SUE Total Hours	-	2.00	-	4.00	22.00	-	-	22.00	22.00	-	-	-	-	-	4.00	65.00	141.00	
SUE Total Fee	-	373.86	-	534.96	2,474.12	-	-	2,295.04	1,579.60	-	-	-	-	-	747.72	4,907.50	12,912.80	
Total Hours	-	37.50	2.50	59.00	177.00	12.00	-	81.00	81.00	-	-	-	-	-	12.00	129.00	591.00	
Total Labor	-	7,009.88	254.33	7,890.66	19,905.42	1,382.88	-	8,449.92	5,815.80	-	-	-	-	-	2,243.16	9,739.50	62,691.54	
Direct Costs																		
Utility Test Holes - Task 3																-	-	-
Subconsultant - Traffic Control																1,100.00		-
Survey Mileage - Task 1																0.560	280.00	156.80
SUE Mileage - Task 2																0.560	440.00	246.40
Field Expenses																	-	-
Postage - Per Letter																0.52	-	-
Lodging - Per Day																89.00	-	-
Per Diem - Per Day																56.00	-	-
Total Direct Costs																		
TOTAL FEE																		



Manvell Road SE

Survey Limits

