EA Engineering, Science,
and Technology

15 Loveton Circle
Sparks, MD 21152
Telephone: 410-771-4950
Fax: 410-771-4204
www.eaest.com

15 May 2009

Northeast Maryland Waste Disposal Authority
Tower II - Suite 402
100 South Charles Street
Baltimore, MD 21201-2705

Attn: Mr. Andrew Kays

RE: Aerial Mapping, Field Surveying and Limit of Waste Delineation for Montgomery County Gude Landfill Nature and Extent Study - EA Proposal #0790147

Dear Mr. Kays,

EA Engineering, Science, and Technology (EA) is pleased to submit this proposal to provide aerial mapping, field surveying, and delineation of the limit of waste for the Montgomery County Gude Landfill. This proposal has been prepared in accordance with Contract #08-6 between the Northeast Maryland Waste Disposal Authority (Authority) and EA.

The proposed work is part of the Nature and Extent Study that is to be the first phase of the remediation effort at the landfill. The draft scope of work (SOW) for the Nature and Extent Study, dated 27 March 2009, includes a brief description of each of the tasks, as well as all other proposed tasks for the study.

SCOPE OF WORK

EA will subcontract and manage an aerial survey/mapping firm, a professional land surveying firm, a utility locating service provider, and a subcontractor to perform test pitting with a backhoe/excavator to provide the services detailed in this SOW. Applied Mapping Solutions will coordinate the aerial photography and provide mapping services; C.C. Johnson and Malhotra, P.C. (CCJM) will perform property research and field surveying, including setting targets for the aerial photogrammetry, a metes and bounds survey, and surveying site features that aerial photogrammetry cannot capture; Utility Locating Service, Inc. will perform underground utility locating; and C.T. Stanley & Son, Inc. will provide equipment and an operator to perform test pitting. The proposal for each of these subcontractors is attached to our proposal, and all assumptions included in our subcontractors proposals are part of our proposal.

For the survey, the horizontal datum will be NAD 83, the vertical datum will be NAVD 88, and the coordinate system will be Maryland State Plane (feet).

Task 1 – Aerial Photography and Mapping

Task 1 will begin as soon as Notice-to-Proceed (NTP) is issued so the aerial photography can be taken as soon as possible. The aerial photography is most effective when there is no foliage on the trees. Specific scope items include:

- Establish targets and ground controls needed for the aerial survey within one week of NTP. The targets will be set at the approximate locations shown in the attached figure, "Gude Landfill Control." The County will visit the site with CCJM to coordinate access to properties for the appropriate placement of controls shown (six of the nine controls are located off the landfill property).
- Perform aerial photography of Gude Landfill at an approximate photo scale of 1"=450', using high resolution, high precision, photogrammetric aerial camera. The photography will cover the area shown in blue in the attached figure, "Gude Landfill Control."
- Provide geo-referenced, color TIF of site at 1-foot pixel resolution. Provide 2 CD-ROMs of the electronic photo for review before any hardcopies are provided.
- Provide 2, 36" x 48" aerial photos mounted on gator board and PDFs of photos, based on the coverage requested by the County after review of the electronic geo-referenced photos.
- Map site physical and topographic features, including:
    - 1"=100' mapping with 2-foot contours within site and to 500-foot limit beyond property boundary
    - Visible and identifiable features to be collected include:
        1. Buildings and other structures (including fence and building corners of the enclosed stack flare station and former power plant building)
        2. Fence lines
        3. Tanks and major pieces of stationary equipment
        4. Utility poles and visible utilities (manholes, etc.)
        5. Stockpiles
        6. Edge of roads, trails, paved areas, and gravel areas
        7. Grade breaks/tops and bottoms of slopes and mass points to support generation of contours at 2-foot intervals, to meet National Map Accuracy Standards

8. Roadways and rail lines
9. Above-ground landfill gas extraction system piping
10. Treelines and significant vegetation
11. Edge of streams and other water
12. Other major site features
13. Areas obscured by vegetation, shadow, or other features will be identified, but may not meet accuracy requirements and will be field-checked as needed under Task 2

- Provide 3 draft prints of mapping to the County for review (approximately 45 days from receipt of aerial survey and ground control data).
- Provide 5 final prints and 2 final mylars and PDFs of survey to the County (30 days from County approval).
- Provide 2 CD-ROMs of electronic files in AutoCAD R14 compatible format to the County.
- Provide all proofs to the County once the photography and mapping are approved.

Task 2 – Field Surveying

Task 2 will commence after NTP is issued and ground controls are set for Task 1. Specific scope items include:

- Integrate the compilation from tax map information provided by the County showing the surrounding property parcels within a ½-mile radius of the site into the survey basemap.
- Perform a metes and bounds survey of the Gude Landfill and recover or re-establish property corners. Place permanent monuments (brass plates on 4”x4”x30” concrete showing elevation and northing and easting coordinates) at the property corners and approximately every 500 feet along other segments of the property line as-needed to provide line-of-site from one monument to the next (approximately 37 monuments).
    - *Alternative 1 – Concrete Monuments and Capped Iron Rods* - Place permanent monuments (brass plates on 4”x4”x30” concrete monument showing elevation and northing and easting coordinates) at the property corners. Place iron rods with caps approximately every 500 feet along other segments of the property line as-needed to provide line-of-site from one monument to the next (approximately 20 concrete monuments).
    - *Alternative 2 – Capped Iron Rods* - Place capped iron rods at the property corners and approximately every 500 feet along other segments of the property line as-

needed to provide line-of-site from one rod to the next (approximately 37 iron rods).

- Field survey site features that will not be captured on the aerial survey, including:
    - Topography of open drainage features including benches, swales, downchutes, and ponds.
    - Horizontal location and inverts of culverts, storm drains, and pond risers.
    - Horizontal location, top of casing elevation, and ground surface elevation of existing groundwater (approximately 20) and landfill gas (approximately 7) monitoring wells.
    - Horizontal location and ground surface elevation of all existing gas extraction wells and landfill conveyance piping.
    - Horizontal location and elevation of landfill gas header pipe junctions.
    - Horizontal location and ground surface elevation of building corners and fence line for flare station and power plant.
- Field survey topography and site features in areas obscured from aerial photography. This effort assumes 10 field days and will need to be re-evaluated upon completion of the aerial mapping.
- Match up the outline of the currently-designed yard trim processing facility with the new survey and stake out the approximate limits of the yard trim processing facility in the field with stakes at approximate 100-foot intervals.

Task 3 – Coordination and Waste Delineation

Task 3 will commence after the NTP is issued and includes test pitting for the waste delineation with EA coordination, as well as EA's effort to coordinate and manage Tasks 1 and 2 of this proposal.

Task 3A

This task includes EA's effort to provide coordination and management for the services described in Task 1.

Task 3B

This task includes EA's effort to provide coordination and management for the services described in Task 2.

Task 3C

EA will perform a waste delineation study to locate the approximate horizontal extent of waste at the landfill. Two EA personnel will perform a site visit with County personnel to stake the approximate location of the limit of waste based on the County's best estimate of the limit of waste. Stakes will be placed in the field at an approximate spacing of 50 feet and each stake will represent a location where the horizontal limit of waste will be identified by EA. After the staking is complete, EA will provide an environmental technician or geologist with waste delineation experience to coordinate, observe, and document the waste delineation study. EA will subcontract a backhoe/excavator and equipment operator to dig test pits at the staked locations. Locations that are not accessible by backhoe/excavator will be delineated using a hand auger or other manual method. This task assumes a twenty (20) day field effort based on 10-hour days. If the duration of the waste delineation study is longer than 20, 10-hour days, a modification to the task order will be required.

EA assumes the County will coordinate with adjacent property owners for site access and permission to dig in areas where the limit of waste is believed to be off County property. EA will not dig in streams or apparent wetland areas and will not obtain a Section 404 Joint Permit Application for the waste delineation study.

Specific scope items include:

- Develop site health and safety plan.
- Utilize any filling records and any other estimates regarding the limit of waste along the property boundary to stake the estimated limit of waste at 50-foot intervals (assumes a two day effort with County collaboration).
- Call Miss Utility. Provide clearance of utilities with a private utility locater along the property boundary following the staking of the anticipated extent of waste and metes and bounds survey prior to beginning any test pit or hand auger excavation. Subcontractor will utilize electro-magnetic or other detection methods to sense the presence of subsurface utilities and mark the horizontal location of utilities on the ground surface. Utilities will be located within an approximate 100-foot wide area along the property boundary or anticipated extent of waste in areas where the County estimates the limit of waste diverges from the property boundary.
- Perform test pitting with backhoe/excavator along the anticipated limit of waste at approximate 50-foot intervals and as necessary (approximately 200 test pits). Test pit locations will be previously determined in the field and staked based on any filling

records and any other estimates regarding the extent of waste along the property boundary the County is able to provide. Test pits will be three to six feet in depth. A hand auger or other manual means will be used to locate the horizontal limit of waste in locations where utilities have been identified and locations that are not accessible with a backhoe/excavator. Immediately following excavation, all waste/soil will be placed back into the test pit. Due to potential sediment control issues, work will not be performed while it is raining or following large rain events.

- Flag, stake, or provide other field markers for the horizontal limit of waste at each location.
- Field survey limit of waste delineation flags, stakes, or other field markers.
- Develop a field log for each test pit that includes approximate site location, test pit method, visual soil/waste description, and approximate depth to waste, if applicable.

SOW SCHEDULE

The following is a summary of the key work items to be performed under these tasks and the approximate start dates and durations in work days for each task:

Task	SOW Item	Approximate Start Date	Approximate Duration
1	Establish Targets and Ground Controls	NTP	5 days
1	Aerial Flyover	NTP + 5 days	1 day
1	Aerial Mapping	NTP + 10 days	45 days
2	Metes and Bounds Survey (placement of monuments)	NTP + 5 days	40 days
2	Field Survey	NTP + 15 days	18 days
3	Stake Approximate Test Pit Locations	NTP + 5 days	2 days
3	Utility Clearance	NTP + 7 days	5 days
3	Waste Delineation Study	NTP + 12 days	30 days

FEE AND SCHEDULE

This proposal has been prepared in accordance with Contract #08-6 between the Northeast Maryland Waste Disposal Authority and EA. The fee is based on a labor multiplier of 2.54 and a markup of 0% on subcontractors and other direct costs. The Principal rate is fixed at $92 per hour with no markup. EA can perform these services for the lump sum fees shown below for the alternatives discussed in Task 2.

Alternative	Description	Lump Sum Fee
Base	All Concrete Monuments	$193,657
Alternative 1	Concrete Monuments and Capped Iron Rods	$187,149
Alternative 2	All Capped Iron Rods	$183,293

Our base fee is detailed in the attached cost breakdown. The fee for the alternatives is based on CCJM's fee for those alternatives. EA can begin work upon receipt of Notice to Proceed.

If you have any questions about our proposal, please call Mark Gutberlet at 410-329-5135. We look forward to the opportunity to work with you on this project.

Sincerely,

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Mark J. Gutberlet, P.E.
Project Manager

Jonathan B. Brownstein, Ph.D.
Vice President

Enclosures

cc: Stephen T. Lezinski (Montgomery County)
John H. Kumm, P.E., BCEE (EA)
Laura Jo Bertrand, P.E. (EA)

Applied Mapping Solutions, Inc.

April 20, 2009

EA Engineering, Science, and Technology
Attn: Mr. Mark Gutberlet, PE
15 Loveton Circle
Sparks, MD 21152

RE: Proposal 090402, Gude Landfill Aerial Survey

Dear Mr. Gutberlet:

I am pleased to submit this proposal for performing photogrammetric work for the above referenced project in response to your request.

This proposal is valid for 90 days. If signed authorization is not provided within that period of time, Applied Mapping Solutions, Inc. reserves the right to disregard its agreement to perform the outlined services for the quoted prices.

Should this proposal be acceptable, the return of one executed copy of this Agreement will be considered an official Agreement and Notice to Proceed.

Thank you for considering Applied Mapping Solutions, Inc. I am looking forward to working with you on this project.

Very truly yours,

David H. Keilly, CP
President

320 Chandlers Way, Lititz, Pennsylvania, 17543
Phone: 717-917-1154 Fax: 717-581-9177 Email: mappingsolutions@comcast.net

Proposal 090402, Gude Landfill Aerial Survey

This agreement is made between Applied Mapping Solutions, Inc. (AMS), and EA Engineering, Science, and Technology, the Client. Under this agreement, AMS will provide the services and documents set forth below in accordance with the terms and conditions of this agreement as set forth below. This agreement is intended to benefit only AMS and EA Engineering, Science, and Technology and no other party has any right to claim any duty of either AMS or EA Engineering, Science, and Technology under this agreement.

Project

The project is approximately 200 acres, as shown on the attached portion of the Gaithersburg MD USGS quad.

We will obtain new color aerial photography of the project area at an approximate photo scale of 1"=450'. The photography will be obtained with a high precision aerial camera and delivery will include one (1) set of contact prints.

The mapping will be compiled utilizing digital softcopy photogrammetric workstations to produce CADD files at a scale of 1"=100' with a 2' contour interval. The mapping is limited to those features visible and identifiable from the photography as identified within your "Aerial Surveying Scope of Work" within the Landfill and a 500' buffer outside the landfill limits. We will also utilize the aerial photography and terrain data to produce a digital geo-referenced digital orthophoto at a 1 foot pixel resolution. The photogrammetric services will be completed by a Certified Photogrammetrist and the aerial photography and mapping will conform to the scale relevant National Map Accuracy Standards. Digital files will be delivered as AutoCAD drawing files and will adhere to the current graphic standards of Applied Mapping Solutions, Inc. Digital orthophoto will be delivered as a TIFF or JPEG image file prior to producing any hardcopy products.

We will coordinate timing and placement of ground control panels with your contracted surveyor prior to photo acquisition. The aerial photography will be scheduled when ground control panels are in place and will be acquired as soon as weather permits. Final delivery of the digital AutoCAD files will be made within ***one hundred twenty (120) days*** after receipt of the aerial photography or ground control, whichever is received later, barring matters beyond our control.

Compensation

In exchange for the performance of these services, the Client will pay a lump sum amount of:

Aerial photography	$1,450.00
Digital mapping	$8,750.00
Digital orthophoto production	$1,800.00
Digital orthophoto prints (2; 36" X 48" mounted on ½" gatorboard)	500.00
Lump Sum Total	**$12,500.00**

An invoice for the costs will be submitted upon completion of the mapping. Payment will be due within thirty (30) days of the date of the Invoice. Interest, at the rate of 1.5% per month, may be charged on all balances that are not paid within that time. Client agrees to pay all legal fees and court costs for overdue accounts should outside collection become necessary.

Client responsibilities

Provide contractor information for coordination with chosen surveyor for placement and survey of nine (9) ground control panels as shown on the attached quad to provide coordinates and elevations tied to your required datum.

Failure to notify AMS within sixty (60) days of any errors and/or omissions shall be deemed an acceptance of the map by Buchart Horn and any and all claims as a result of such defects are waived.

Areas obscured by vegetation will be identified, may not meet National Map Accuracy Standards, and should be field verified prior to use.

Conditions of the Contract

Termination and disputes

This agreement may be terminated by either party, without cause, after providing other party with 30 days advance written notice.

In the event that Client believes it may have reason to terminate AMS for cause, it must first cite its reasons, in writing, then provide AMS with 10 calendar days following receipt of notice to cure its default. In the event that AMS fails to cure its default, Client may terminate this Agreement.

In the event of any termination, regardless of cause, Client shall immediately pay AMS all outstanding fees, including reimbursable expenses due to AMS, through the date of termination.

In the event of an unresolved claim or fee dispute arising under this Agreement, Client and AMS shall submit to mediation in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. In the event that mediation shall not settle any outstanding dispute, then the dispute shall be subject to and decided by arbitration with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect

Indemnification

AMS and Client each agree to indemnify the other (including their respective owners, officers, employees, agents and representatives) from all claims, including reasonable attorney's fees, arising out of and to the extent caused by the other party's negligence. In addition, Client agrees to indemnify AMS, including reasonable attorney's fees, for any and all claims arising from work performed by any third party hired by Client or resulting from any outside information provided by Client to AMS which was incorporated into the services of Applied Mapping Solutions, Inc..

Limitation of Liability

To the fullest extent allowed by law, Applied Mapping Solutions' total liability to the Client for all claims arising from this project or under this Agreement shall not exceed the total amount of Applied Mapping Solutions' fees listed in the Agreement or $50,000, whichever is less.

Controlling law

This agreement is executed by the parties with the intent to be bound by its terms. The law of Pennsylvania will be controlling.

This agreement constitutes the entire agreement between parties and both parties acknowledge that neither has made any promises to the other outside of this agreement.

In witness of the above, and intending to be bound hereby, the parties do hereby execute this agreement as of the date set forth below.

EA Engineering, Science and Technology		Applied Mapping Solutions, Inc.	
_____	_____	_____	04/20/2009
(Signature)	(Date)		
_____		David Keilly, CP, President	
(Printed Name/Title)		(Printed Name/Title)	

Gude LAndfill control, , Scale 1: 12000

CCJM
C.C. Johnson & Malhotra, P.C.
9115 Guilford Road
Suite 100
Columbia, MD 21046-2597
410.461.9920
Fax: 410.750.8565
www.ccjm.com

May 4, 2009

EA Engineering, Science, and Technology, Inc.
15 Loveton Circle
Sparks, MD 21152
ATTN: Laura Bertrand

Re: Remediation At Gude Landfill
Field Surveying Scope of Work:

C.C. Johnson & Malhotra, P.C. (CCJM) is pleased to present this proposal to survey the Gude Landfill. We are offering to perform the effort detailed in the scope of work for $118,064 for a fixed price subject to negotiation of a contract with mutually acceptable terms and conditions. This price is without the monumenting alternatives. Our proposal includes the bid form, resumes of senior surveyors, and a statement of qualifications.

CCJM has extensive experience surveying landfills in Maryland. Landfills where they have completed extensive survey work include: Sandy Hill in Prince George's County, Oak Ave in Harford County, Oaks in Montgomery County, PST in Anne Arundel County, Midshore near Easton, Somerset in Somerset County, Beulah in Dorchester County, Quarantine Road/Millenium in Baltimore City, and Alpha Ridge in Howard County. CCJM is also currently working at the Gude Landfill for SCS Energy Services. Their bid incorporates their knowledge of the site and takes advantage of their previous survey work.

CCJM survey crews have 40 hour OSHA health and safety training for hazardous waste work and are included in the corporate medical monitoring program. They have the qualifications to work on any area of the landfill.

CCJM looks forward to providing survey services at the Gude Landfill. If you have any questions, please feel free to call Thom Holbrook at 410-505-9145.

Sincerely,

Donald Koch
Vice President

Ann Arbor
Baltimore
Camp Hill
Chicago
Columbia
Detroit
Grand Rapids
Washington, DC
Cairo, Egypt

Engineering Infrastructure Solutions

Scope of Work

1. CCJM will establish nine (9) ground control points with targets required for aerial survey throughout the site at locations as close as possible to those specified by the aerial mapping firm. Horizontal and vertical datums will be Maryland North American Datum of 1983 (NAD-83) and North American Vertical Datum of 1988 (NAVD-88). Targets to be in place within one week of receiving contract and Notice to Proceed.

2. Extend ground controls for other surveying activities to be performed as specified.

3. Perform a metes and bounds survey of the Gude Landfill property. CCJM will recover or re-establish the property corners.

4. Prepare a property mosaic or compilation of the Gude Landfill and surrounding properties as found in the metes and bounds survey. Create a base map in AutoCAD format and print in hard copy.

5. Place permanent monuments (brass discs on 4"x4"x30" concrete showing northing, easting and elevation coordinates) at the property corners and approximately every 500 feet along property line segments as needed to provide line-of-sight from one monument to the next (no more than 37 monuments). Or one of the other two alternates listed below.
   - Alt.1 Place permanent monuments (brass discs on 4"x4"x30" concrete showing northing, easting and n coordinates) at the property corners and iron rods with caps approximately every 500 feet along property line segments as needed to provide line-of-sight from one marker to the next (no more than 20 monuments and 17 markers).
   - Alt.2 Place iron rods with caps at the property corners and approximately every 500 feet along property line segments as needed to provide line-of-sight from one marker to the next (no more than 37 markers).

6. Integrate the compilation from tax map information as provided by the County showing the surrounding property parcels within ½ mile of the Gude Landfill property into the survey base map.

7. Survey limit-of-waste delineation flags, stakes, or other field markers placed by others as coordinated by EA Engineering (approximately 200 locations along the property boundary).

8. Stakeout the approximate limits of the proposed Yard Trim Processing Facility in the field at approximately 100 foot intervals (7-8 acres).

9. Field survey site features that are not captured on the aerial survey, including:
   - Topography of open drainage features including benches, swales, downchutes and ponds.

- Horizontal location and inverts of culverts, storm drains and pond risers.
- Horizontal location, top of casing and ground surface elevations of existing groundwater (approximately 20) and landfill gas (approximately 7) monitoring wells.
- Horizontal location and ground surface elevation of existing gas extraction wells.
- Horizontal location and elevation of landfill gas header pipe junctions.
- Horizontal location and ground surface elevation of building corners and fence line around flare station and power plant.

10. Field survey topography and site features in areas obscured from aerial topography. This effort assumes 13 field days and will need to be reevaluated upon completion of the aerial mapping.

BID FORM
Field Surveying Services
REMEDIATION AT GUDE LANDFILL
ROCKVILLE, MONTGOMERY COUNTY, MARYLAND

Item	Description	Personnel	Hours	Hourly Rate	Total Cost
1	Aerial Targets and Ground Controls	Office	8	113	904
		2 man crew	24	125	3000
		ODC			82
				Task Subtotal	3986
2	Establish Field Survey Ground Controls	Office	8	113	904
		2 man crew	8	125	1000
		ODC			44
				Task Subtotal	1948
3	Metes and Bounds Survey	Office	120	113	13560
		Surveyor	24	140	3360
		3 man crew	160	173	27680
		ODC			930
				Task Subtotal	45530
4	Gude Landfill Property Mosaic	Office	40	113	4520
		Surveyor	16	140	2240
		ODC			20
				Task Subtotal	6780
5	Placement Concrete Monuments Only	Office	16	113	1808
		3 man crew	80	173	13840
		ODC			4440
				Task Subtotal	20088
5	Alternative 1 - Placement Concrete Monuments and Capped Iron Rods	Office	16	113	1808
		3 man crew	40	173	6920
		2 man crew	20	125	2500
		ODC			2352
				Task Subtotal	13580

BID FORM
Field Surveying Services
REMEDIATION AT GUDE LANDFILL
ROCKVILLE, MONTGOMERY COUNTY, MARYLAND

5	Alternative 2 - Placement Capped Iron Rods Only	Office	16	113	1808
		3 man crew	24	173	4152
		2 man crew	24	125	3000
		ODC			764
				Task Subtotal	9724
6	Mosaic Properties within 1/2 mile Radius	Office	24	113	2712
		ODC			20
				Task Subtotal	2732
7	Survey Test Pit Stakes (approx. 200)	Office	4	113	452
		2 man crew	16	125	2000
		ODC			88
				Task Subtotal	2540
8	Stake Out Yard Trim Facility	Office	4	113	452
		2 man crew	16	125	2000
		ODC			88
				Task Subtotal	2540
9	Site Features Field Survey	Office	32	113	3616
		2 man crew	40	125	5000
		ODC			220
				Task Subtotal	8836
10	Field Survery Obscured Areas	Office	40	113	4520
	Assume 13 Field Days	3 man crew	104	173	17992
		ODC			572
				Task Subtotal	23084
	TOTAL BASE BID AMOUNT (Items 1 through 10, Not Including Task 5 Alternatives)				$118,064.00

Total in Words: One hundred eighteen thousand sixty four Dollars

SIGNATURE:

FIRM: C.C. Johnson & Malhotra, P.C.

DATE: 30-Apr-09

CCJM

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
Clifford A. Elgin, PLS	Chief of Surveys	43	13

15. FIRM NAME AND LOCATION *(City and State)*
C.C. Johnson & Malhotra, P.C., Columbia, MD

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
68 credits / Civil Engineering	MD / Licensed Property Line Surveyor / 623

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
MD Society of Surveyors

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
WSSC - Water and Sewer Replacement / Rehabilitation BOA
Prince George's and Montgomery Counties, MD

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2008
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Chief of Surveys responsibilities include the establishment and expansion of horizontal and vertical control and obtaining topography of approximately 2,600 feet of strip mapping for water main relocation at Stoneybrook Estates in Montgomery County, MD. Also performed topographic surveys of areas where water mains were relocated for water main replacement in Oxon Hill, Prince George's County, MD.

b.

(1) TITLE AND LOCATION *(City and State)*
WSSC - Patuxent WTP Phase 1 Upgrade and Raw Water Pipeline Cleaning
Montgomery and Prince George's Counties, MD

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: On-going
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Chief of Surveys prepared survey data for the preparation of construction plans for the cleaning and relining of raw water transmission mains from the Rocky Gorge Water Pumping Station. Also performed topography at the Patuxent Water Filtration Plant for design and refurbishing of various large water storage tanks.

c.

(1) TITLE AND LOCATION *(City and State)*
WSSC – Southern Prince George's County Elevated Water Storage Tank
Accokeek, MD

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2006
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Chief of Surveys responsible for a topographic survey of the existing site, establishment of horizontal and vertical control using GPS surveying equipment, and preparation of legal descriptions for easements and land swaps.

d.

(1) TITLE AND LOCATION *(City and State)*
Little Patuxent Parallel Sewer Survey
Howard County, MD

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2006
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Chief of Surveys responsible for the overseeing of surveying a two mile strip map of topography along the Little Patuxent River in support of a sewer alignment design. The survey included topography of the river bottom and thalweg location. Also researched and verified the existing underground sewer connections.

e.

(1) TITLE AND LOCATION *(City and State)*
Ballenger Creek Stream Restoration
Frederick County, MD

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2006
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Chief of Surveys providing survey services including horizontal and vertical control expansion, developing a topographic map consisting of over 1200 linear feet, a thalweg survey, detailed cross sections for the stream restoration design, flood plain sections, and easement description and plat . CCJM also calculated flood flows for the design reach using TR-20.

CCJM

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE a. TOTAL	b. WITH CURRENT FIRM
Thomas W. Holbrook	Surveys Manager	38	12

15. FIRM NAME AND LOCATION *(City and State)*
C.C. Johnson & Malhotra, P.C., Columbia, MD

16. EDUCATION *(DEGREE AND SPECIALIZATION)*
Survey Law I and II
Minor Engineering I and II
AutoCAD 13 Intermediate Design
Intergraph Seminar / ICS Cogo Labs and ESP Training / North American Datum-83 Workshop / 83 Transformation of coordinates

17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MD / NSPS, CST Cert., Construction Certificate, Level 3
MD / NSPS, CST Cert., Chief Computer Operator, Level 3
MD / 40-Hour HAZMAT Training
MD / Confined Space Entry Training
AMTRAK - On-Track Safety for Contractors

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
National Society of Professional Surveyors
Maryland Society of Surveyors

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
WSSC - Water and Sewer Replacement / Rehabilitation BOA
Prince George's and Montgomery Counties, MD

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2008
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Surveys Manager responsibilities included the establishment and expansion of horizontal and vertical control and obtaining topography of approximately 2,600 feet of strip mapping for water main relocation at Stoneybrook Estates in Montgomery County, MD. Also performed topographic surveys of areas where water mains were relocated for water main replacement in Oxon Hill, Prince George's County, MD

b.

(1) TITLE AND LOCATION *(City and State)*
WSSC - Patuxent WTP Phase 1 Upgrade and Raw Water Pipeline Cleaning
Montgomery and Prince George's Counties, MD

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: On-going
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Surveys Manager prepared survey data for the preparation of construction plans for the cleaning and relining of raw water transmission mains from the Rocky Gorge Water Pumping Station. Also performed topography at the Patuxent Water Filtration Plant for design and refurbishing of various large water storage tanks.

c.

(1) TITLE AND LOCATION *(City and State)*
Basic Ordering Agreement - Infrastructure II (DCFA #366-WSA)
D.C. Water & Sewer Authority, Washington, DC

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2007
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Surveys Manager responsible for the establishment of horizontal and vertical control and performed topography of strip mapping at various locations in excess of 5,000 linear feet.

d.

(1) TITLE AND LOCATION *(City and State)*
Basic Ordering Agreement - Infrastructure V (DCFA #395-WSA)
D.C. Water & Sewer Authority, Washington, DC

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: On-going
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Surveys Manager responsible for the establishment of horizontal and vertical control and performed topography of strip mapping at various locations in excess of 30,000 linear feet.

e.

(1) TITLE AND LOCATION *(City and State)*
WSSC – Southern Prince George's County Elevated Water Storage Tank
Accokeek, MD

(2) YEAR COMPLETED
PROFESSIONAL SERVICES: 2006
CONSTRUCTION *(If Applicable)*:

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Surveys Manager responsible for a topographic survey of the existing site, establishment of horizontal and vertical control using GPS surveying equipment, and preparation of legal descriptions for easements and land swaps.

C.C. Johnson & Malhotra, P.C. (CCJM), founded in 1979, is a multi-disciplinary engineering firm. CCJM has a staff over 55 professionals and has completed a wide range of projects including water and wastewater system designs, energy-saving and environmentally conscious building designs, bridge and highway designs, hazardous waste management, remedial investigation, infrastructure rehabilitation and designs, groundwater modeling, construction management and surveying. CCJM has offices in Washington, DC, Baltimore, MD, Columbia, MD, Camp Hill, PA, Ann Arbor, MI, Grand Rapids, MI, Chicago, IL, and New York, NY.

CCJM

C.C. JOHNSON & MALHOTRA, P.C.

STATEMENT OF QUALIFICATIONS

SURVEY SERVICES PROFILE

Thomas W. Holbrook
Survey Manager
C.C. Johnson & Malhotra, P.C.

9115 Guilford Road, Suite 100
Columbia, Maryland 21046-2597
(410) 461-9920

ENGINEERING
INFRASTRUCTURE SOLUTIONS

C.C. JOHNSON & MALHOTRA STATEMENT OF QUALIFICATIONS

SURVEY SERVICES

C.C. JOHNSON & MALHOTRA, P.C., established in 1979, C.C. Johnson & Malhotra, P.C. (**CCJM**) is a multi-disciplinary professional consulting engineering firm that provides a wide range of services to the public and private sectors. Our highly qualified staff provides services in the areas of environmental, civil, structural, mechanical and electrical engineering; geology; hydrogeology; hazardous waste risk assessments; sustainable green building design; and surveying.

SURVEY CAPABILITIES

CCJM's Survey Department works under the direction and supervision of a Maryland registered surveyor with over 40 years of experience. This knowledge provides our clients with a survey/design project supervisor capable of assessing the survey needs for each particular project based on the owner's requests and the requirements of local, state, and federal government agencies.

CCJM's survey crews use state-of-the-art total stations, robotic stations and GPS dual-frequency stations, each equipped with data collectors. This equipment permits field crews to collect data and reductions 'on-the-fly', allowing immediate grade staking information, thereby increasing the contractor's efficiency.

CCJM employs computer-aided drafting technology using TDS software and Autodesk's Land Development and Civil Series software to expedite the conversion of field data to final drawing formats.

SURVEY SERVICES

CCJM provides the following services:

- Topographic
- Boundary
- Construction Stakeout
- GPS Control Monumentation
- As-built Surveys
- Volume Computations
- Utility Relocations
- Roadway and Highway Designs

ENGINEERING
INFRASTRUCTURE SOLUTIONS

UNCONVENTIONAL PROJECTS

CCJM also specializes in more unconventional projects:

- Landfills and Hazardous Materials Sites
- Stream Restoration
- Bathymetric and Thalweg Surveys
- Floodplain and Wetlands Delineation

STAFF EXPERIENCE

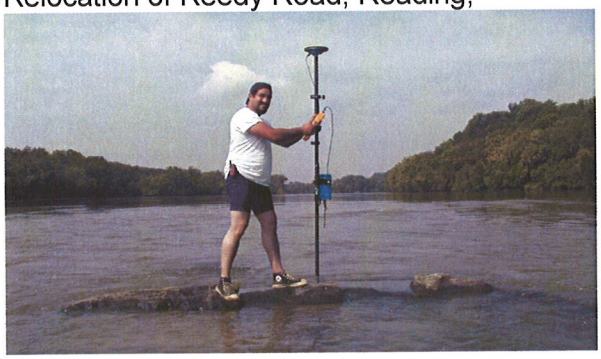
CCJM's Survey Department has extensive experience in topographic, boundary, and construction stakeout surveying for numerous applications. CCJM's survey office personnel are experienced in preparing the following documents:

- Record plats
- Right-of-way plats
- Easement plats
- ALTA/ACSM surveys
- Quantity surveys for contractor payment
- Detailed thalweg and cross-section surveys supporting stream restoration
- Red-line drawings in accordance with local and state government standards

PROJECT EXPERIENCE

CCJM has performed a wide array of services for various municipalities:

- Sandy Hill Creative Disposal Landfill Project Prince George's County, MD
- Southern Prince George's County Elevated Water Tank - Prince George's County, MD
- Topographic Engineering Support Services Prince George's County, MD
- Brown Station Landfill, Prince George's County, MD
- Upper Jones Falls Sewer Interceptor, Baltimore, MD
- Anacostia First High Water Main Replacement, Washington, DC
- Blue Plains Egg Digester Facility, Washington, DC
- Fairmont Landfill Cell 2, Somerset County, MD
- Beulah Landfill Cell 4, Dorchester County, MD
- Ballenger Creek Stream Restoration, Frederick County, MD
- Oak Avenue Rubble Fill, Harford County, MD
- Relocation of Reedy Road, Reading,



Utility Locating Service, Inc.
P.O. Box 61
Brookeville, MD 20833
301 378 9778

Utility Mapping Consultants

Laura Jo Bertrand, P.E.
EA Engineering, Science, and Technology, Inc.
15 Loveton Circle
Sparks, MD 21152

April 27, 2009

Proposal

We propose to perform utility locating services (designating) of underground utilities in Rockville, MD at the Montgomery County Landfill site

Scope Of Work

?? Perform search for underground utilities approximately 30 feet surrounding the flare station and power plant buildings utilizing electro-magnetic detection to sense the presence of subsurface utilities and mark the horizontal location of utilities on the ground surface.

?? Perform utility clearance along a 100'corridor of the identified and staked property or limit-of-waste line utilizing electro-magnetic detection to sense the presence of subsurface utilities and mark the horizontal location of utilities on the ground surface.

Procedures and Limitations

Designation shall be made by electromagnetic geophysical prospecting techniques currently accepted as normal practice of the profession subject to the typical limitations of utilities in such condition or configuration that prevents accurate detection by practical means.

Examples of normal limitations include but are not limited to: non-metallic pipes without access to pipe or bend fittings that prevent propulsion of sonde device; utilities in such position that the target field is obscured by other underground structures or utilities; utilities of poor conductivity; utilities without access for application of locating equipment, gas services that have been sleeved or otherwise have a damaged or non existent locating system, soil conditions.

Utility Locating Service, Inc.
P.O. Box 61
Brookeville, MD 20833
301 378 9778

Utility Mapping Consultants

Utility locating proposal, continued

Access to Utilities

Property and Facility owner/operator shall provide access to site and pertinent utility points of connection for locating equipment such as meter boxes, valves, building interiors where utility services enter, manholes, vaults, etc.

Data Collection and Survey

Survey and data collection of field markings etc. shall be made by others

Cost And Payment

The cost to perform the locating of utilities and data collection is Seventy-Five ($75.00) dollars per hour on site. The initial search for utilities per scope of work herein shall not exceed $3,000. An additonal two-hour minimum charge per request to locate will be charged, plus one- hour travel charge in the event EA engineering should request additional locating service after the initial search for utilities has been completed

The terms shall be Net 10 days after receipt EA Engineering. of invoice.

C.T. STANLEY & SON, INC.

POST OFFICE BOX 577
DAMASCUS, MD 20872

PROPOSAL

DATE	PROPOSAL #
4/27/2009	8

NAME / ADDRESS
EA Engineering, Science & Technology 15 Loveton Circle Sparks, MD 21152

PROJECT

ITEM	DESCRIPTION	QTY	COST	TOTAL
	Testing Pitting at Gude Landfill			
BACKH...	Backhoe Monthly Charge	1	10,503.00	10,503.00
Manual T...	Manual Test Pitting; Hourly Rate, per person	1	45.00	45.00

We look forward to doing business with you.

TOTAL $10,548.00