

**RESOLUTION NO. 2016-82**

**WHEREAS**, the Township Council of the Township of Aberdeen is in need of professional engineering environmental services associated with Woodfield Section Gravity and Force Main Installation and Roadway Improvements; and

**WHEREAS**, David Samuel, CME Associates submitted a proposal on July 21, 2014 for aforementioned engineering services.

**NOW, THEREFORE, BE IT RESOLVED** by the Township Council of the Township of Aberdeen that the Mayor And Clerk are authorized to execute an agreement with CME Associates for a cost not to exceed the sum of \$892,917.00, in accordance with a proposal dated July 21, 2014, attached hereto and made part of this resolution.

This agreement is made without competitive bidding as a “professional service” under the provisions of the Local Public Contracts Law, N.J.S.A. 40A:11-5(1)a(I).

**BE IT FURTHER RESOLVED** that this resolution is subject to the Township Manager’s certification of availability of Township of Aberdeen funds.

JOHN H. ALLGAIR, PE, PP, LS (1983-2001)  
DAVID J. SAMUEL, PE, PP, CME  
JOHN J. STEFANI, PE, LS, PP, CME  
JAY B. CORNELL, PE, PP, CME  
MICHAEL J. McCLELLAND, PE, PP, CME  
GREGORY R. VALES, PE, PP, CME



TIMOTHY W. GILLEN, PE, PP, CME  
BRUCE M. KOCH, PE, PP, CME  
LOUIS J. PLOSKONKA, PE, CME  
TREVOR J. TAYLOR, PE, PP, CME  
BEHRAM TURAN, PE, LSRP

July 21, 2014

Ms. Holly Reycraft  
Township Manager  
Township of Aberdeen  
One Aberdeen Square  
Aberdeen, New Jersey 07747

**Re: Proposal for Professional Services for the  
Woodfield Section Gravity and Force Main Installation  
& Roadway Improvements  
Our File No. PAB00320.01**

Dear Ms. Reycraft:

Thank you for considering our firm for the above referenced work and allowing us to submit this Proposal for Professional Services associated with the installation of gravity sanitary sewer mains and the construction of a new pump station and force main to service the Woodfield Development.

Per the request of Council, we have been requested to effectuate the design of the sanitary sewer facilities to facilitate complete road reconstruction to minimize future disruption to residents and further to utilize as much of the roadway reconstruction as necessary for the sanitary sewers in the ultimate roadway design. Accordingly, we understand that the above referenced sanitary improvements will require improvements to Anna Avenue, Charles Street, Euclid Avenue, Grand Avenue, Ruth Place, Spring Lawn Avenue and Willow Avenue.

## INTRODUCTION

We have reviewed the scope of services for the project, and we have prepared the following proposal with the specific Woodfield neighborhood and its unique characteristics in mind in order to provide a project that is consistent with meeting both the residents and Township's anticipated concerns.

In actuality, the overall project will consist of two sub-projects with multiple components. The primary sub-project is to serve the Woodfield Section of the Township with sanitary sewer facilities. Accordingly, it is our understanding that the scope of these improvements consists of the design of gravity sanitary mains and laterals within the development area, and the design of a new pump station and force main from the proposed pump station to its discharge location near Gravelly Brook, which will include trenchless installation across two (2) NJ State Highways and open trenching along Monmouth County Route 516 and the Henry Hudson Trail. Normally, this project would also include trench repair to the roadways within the development area. However, due to the age of the roadway system and the extensive damage that will result from the installation of sanitary mains and laterals, the EIT was petitioned, and they consented to, a 3 inch thick stabilized base pavement throughout the development as being an eligible cost.

Accordingly, as previously indicated, per the Council's request, the second sub – project consists of



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 2 of 11

design of the roadway restoration to permit the future full reconstruction of the Woodfield development roadways with minor roadway widening where necessary to obtain a consistent 24' width in the neighborhood, as well as the replacement of a significant portion of the storm sewer system and the construction of the above noted dense graded aggregate base course and 3" of hot mix asphalt (HMA) base course which will be laid as the finished surface until such time that the Township ultimately proceeds with the final roadway reconstruction. In addition, driveway aprons and turf restoration will be performed to meet the new interim finished pavement grades.

It should be noted that there will be no curbs or sidewalks proposed with this design, as the majority of the current neighborhood does not currently have same, and it is our further understanding that the residents do not want to have any sidewalks as they want to retain the rural nature of the area. In addition, if the Township wishes to install curbs, the Township should be made aware that the construction costs will be significantly higher and the associated permitting requirements will be more complex in order to comply with the current NJDEP water quality and run-off reduction requirements.

Our proposal below has considered all the elements of the work outlined in the scope of services, and our firm has the capabilities of providing the necessary land surveying and engineering services associated with the overall project.

## **WOODFIELD SANITARY SEWER COLLECTION SYSTEM**

### **SURVEY AND BASE MAPPING**

Concerning the survey and base mapping, we anticipate performing field surveys to establish baselines, locate topographic features and elevations will be taken at the roadway centerline. Spot elevations will be taken, if and where required..

A balanced control survey and traverse line with recoverable ties will be established. Basis of the horizontal and vertical control will be the New Jersey State Plane Coordinate System, NAD 1983 U.S. Survey Foot, and National American Vertical Datum of 1988, respectively. Permanent points (Capped Rebar, PK Nails, etc.) will be set along the control line. A minimum of four (4) horizontal and vertical control points will be established along the project limits. GPS methodology will be used to establish horizontal and vertical control.

A Topographic Plan will be prepared showing natural and manmade features, including: existing above and, where possible, underground utilities, survey baseline (traverse line), and spot elevations and contours at an interval of 1.00-foot within and adjacent to the project limits only. Spot elevations, utility information and miscellaneous locations shall be limited to that information necessary to facilitate the design process. Topographic plan will be compiled from field locations and edits. Plan will be drafted at a scale of 1" = 30'. The bandwidth shall not exceed 10-feet beyond the right-of-way line, if accessible.



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 3 of 11

As-builts of existing utilities will be prepared, if and where necessary, to support the design process.

Private property or public right-of-way lines in the immediate vicinity of the proposed improvements, for the purpose of evaluating the necessity for fee or easement acquisitions, shall be based upon the current record documents and shall not constitute a comprehensive survey of the properties-in-question.

Acquisition mapping and descriptions will be prepared, where necessary, to facilitate the construction of the proposed improvements.

The base map and survey are being prepared to facilitate the design process and shall be incorporated into the design set; a separate map of the surveying scope shall not be prepared in hard copy.

Post construction record drawings for the sanitary and sewerage system improvements will be prepared once the construction is completed. Preparation of a "Record Drawing" will be limited to those utility features, rim, invert and pipe size, within the area of study and shall not include underground improvements that are not visible at grade. Plan will be drafted at a scale of 1" = 30' or other suitable scale as determined by the project engineer.

CME Associates represent that our surveyors are neither qualified nor do we accept the responsibility to identify and/or locate unwritten easements, subsurface improvements, underground storage facilities and/or hardware, and/or hazardous materials on or about this site.

This survey is not being prepared to NJDEP Green Acres, SADC or ALTA/ACSM standards.

#### DESIGN AND PREPARATION OF PLANS, SPECIFICATIONS

With regard to the design phase for the project, we anticipate meeting with representatives of the Township prior to commencing the design phase in order to review the project schedule and other preliminary issues. Construction Plans for Euclid Avenue, Willow Avenue, Anne Avenue, Spring Lawn Avenue, Charles Street and Grand Avenue and the force main alignment outside of the Woodfield Development will be prepared in plan and profile format.

In addition to the pre-design meeting, we anticipate meeting with representatives of the Township when the plans are 75% complete. The plans will be revised to comply with Township comments, and preliminary cost estimates will be submitted for Township review at the 75% complete meeting.

The sanitary sewer portion of the design will include the following items:

1. Gravity sewers to provide sanitary sewer service to the Woodfield Area.



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 4 of 11

2. Submersible type pumping station along Grand Avenue including piping, electrical and control systems.
3. Utility building to house electrical equipment associated with the pumping station. It is anticipated that the emergency generator will be installed outside of the building, in a sound attenuated enclosure.
4. Force main piping from the pumping station to a discharge location along Route 34, near the Gravelly Brook. Force main design includes trenchless installation across Route 79, Route 34 and the Gravelly Brook.
5. Soil borings and geotechnical evaluation of the existing subsurface geotechnical conditions along the gravity sewer alignment, location of the pumping station and locations where the trenchless force main will be installed.
6. Analysis of downstream sanitary sewer capacities from the force main discharge location to Pump Station #7 and a capacity analysis of Pump Station #7. Any improvements required to the immediate downstream facilities including gravity sewer, Pump Station #7 and its associated force main will be brought the attention of Township.

#### PERMITTING

Concerning the permit acquisition phase of the project, we anticipate submitting a complete application for the permits outlined below, and our scope of services will include one (1) plan revision to comply with review agency comments. In addition, we anticipate the Township will provide the required application fees.

##### NJDEP Treatment Works Approval (TWA)

We anticipate obtaining the required approvals from the NJDEP Division of Water Quality for the construction of the sanitary sewers, pump station and force main as required. The work includes the preparation of a Design Report to correspond to the NJDEP design criteria including necessary calculations and other design related information.

##### NJDEP Environmental Infrastructure Trust Loan (EIT)

This phase of the project consists of the preparation of the commitment letter and associated planning document and preparation of the required loan application and subsequent efforts related to obtaining funding for the improvements through the New Jersey Environmental Infrastructure Trust Loan Program.



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 5 of 11

#### Flood Hazard Area Control Act (FHA)

The excavation, fill and grading of the directional drilling pits required for the construction of the sanitary force main crossing under the Gravelly Brook will require the removal of vegetation in the 150' wide riparian zone stream buffers on each side of the Brook. It is anticipated that an Individual Permit under the Flood Hazard Area Control Act (FHA) N.J.S.A. 7:13 will be required for the proposed stream crossing.

#### Freshwater Wetlands (FWL)

A Freshwater Wetlands Statewide General Permit No. 11 will be required for the construction or replacement of stormwater outfalls in a regulated area. A field delineation of State open waters and freshwater wetlands in the area of the new or replaced outfalls will be required. The new delineation will be located by field survey and plotted on the Permit Plan.

#### Freehold Soil Conservation District Certification

A certification from the Freehold Soil Conservation District will be required since the project will disturb more than 5,000 SF. The Soil Conservation District application will include the preparation of the application, four (4) copies of the Soil Erosion and Sediment Control Plans; Construction Plans; Engineering Report.

#### NJDOT Permits

We anticipate obtaining the required Highway Occupancy Permit from the New Jersey Department of Transportation. For the purpose of this proposal we have anticipated two (2) Highway Occupancy Permit applications to NJDOT for the proposed directional drilling on Route 79 and Rt. 34 respectively.

#### Monmouth County Road Opening Permit

We anticipate obtaining the required County Road Opening Permit from the Monmouth County Engineering Office. For the purpose of this proposal we have anticipated one (1) Permit application to Monmouth County for the proposed sanitary trenching on County Route 516.

#### Railroad ROW Occupancy Permit

We anticipate obtaining a renewal of the previously obtained Railroad ROW Occupancy Permit from New Jersey Transit as required for that portion of the force main alignment between Routes 79 and 34.



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 6 of 11

### BID PHASE SERVICES

We anticipate that bid phase services will generally include the furnishing of 20 sets of plans and specifications prior to advertisement for bids, coordination with prospective bidders during the bid period, issuance of any addenda required, attendance at the bid opening, and the preparation of a report recommending award of the project.

### COST PROPOSAL

The projected construction cost of the above work described in this proposal is approximately **\$4,938,355** which includes approximately 5500 LF of sanitary force main, approximately 8600 LF of gravity main with laterals, a new pump station, and subbase and 3" of stabilized base roadway reconstruction as well as associated restoration within the project limits.

These construction costs do not include any property acquisitions, or the second portion of the overall project, which includes the storm water facilities, and the final 3" of base pavement and 2" of top course for the Woodfield roadways.

Survey and Base Mapping	\$	101,598
Design and Specifications	\$	259,920
Permitting	\$	49,291
EIT Coordination	\$	14,342
Bid services	\$	10,002
<b>Total</b>	<b>\$</b>	<b>435,153</b>

### CONSTRUCTION ADMINISTRATION SERVICES

We anticipate that construction phase services will generally include preconstruction meeting, coordination with the contractor, review of shop drawings, review of partial payments, and other elements of work in order to effectuate the project completion. Please note that said services are approximate and may vary depending upon the contractors schedule/performance and unforeseen nature of the construction project. However, the costs, estimated at **\$420,760** will not be exceeded without authorization for the Township Council.

### WOODFIELD ROADWAY AND DRAINAGE IMPROVEMENTS

In accordance with the direction of the Governing Body, we have been asked to include the design of the roadways' subbase and base pavement and a storm drainage system so that, when the Township desires to provide a more extensive roadway project, the grading will work and any potential future disruption of the roadways' base pavement will be minimized. This consideration requires us to provide, up-front, the design for the future more-extensive project.



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 7 of 11

### SURVEY AND BASE MAPPING

The previously noted survey and base mapping field surveys will be supplemented by cross-sectional data at 50' intervals within the limits specified above. Cross section elevations will be taken at the roadway centerline and at the top and bottom of curb or edge of pavement. Spot elevations will be taken, if and where required, in order to supplement the cross-section data, including elevations at driveways in order to minimize potential conflicts.

The previously noted Topographic Plan will be supplemented with contours at an interval of 1.00-foot within and adjacent to the project limits only.

The base map and survey are being prepared to facilitate the design process and shall be incorporated into the design set; a separate map of the surveying scope shall not be prepared in hard copy.

Post construction record drawings for the storm sewerage system improvements will be prepared once the construction is completed. Preparation of a "Record Drawing" will be limited to those utility features, rim, invert and pipe size, within the area of study and shall not include underground improvements that are not visible at grade. Plan will be drafted at a scale of 1" = 30' or other suitable scale as determined by the project engineer.

### DESIGN AND PREPARATION OF PLANS, SPECIFICATIONS

With regard to the design phase for the project, we anticipate meeting with representatives of the Township prior to commencing the design phase in order to review the project schedule and other preliminary issues. Construction Plans for Euclid Avenue, Willow Avenue, Anne Avenue, Spring Lawn Avenue, Charles Street and Grand Avenue within the Woodfield Development will be prepared in plan and profile format.

In addition to the pre-design meeting, we anticipate meeting with representatives of the Township when the plans are 75% complete. The plans will be revised to comply with Township comments, and preliminary cost estimates will be submitted for Township review at the 75% complete meeting.

The roadway / drainage portion of the design will include the following items:

The proposed roadways in the Woodfield Section will be designed at a consistent 24' width with no addition of curb or sidewalk in keeping with the existing aesthetics of the neighborhood. The roadway profiles, driveway profiles and drainage system (inlet grate elevations) will be designed to accommodate the interim and future final paving project. The design of the driveway aprons and landscape restoration will also be performed to meet the new pavement grades.





Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 8 of 11

In addition, a storm drainage analysis of the roadways within the Woodfield Development will be performed and will include an analysis of the existing and proposed roadway and drainage facilities.

Should it be determined that a zero net increase in peak runoff rate and volume from the site is not attainable, stormwater detention and water quality measures will be required for all runoff from the roadways.

Where increased storm sewer capacity for the pipes is required for compliance with the 25-year storm design requirement, our office will design an upgraded storm sewer system. Three (3) of the existing five (5) pipe outfalls are anticipated to be under capacity to convey full roadway runoff and will need to be redesigned to accommodate the 25-year storm.

#### PERMITTING

Concerning the permit acquisition phase of this portion of the project, we anticipate submitting a complete application for the permits outlined below, and our scope of services will include one (1) plan revision to comply with review agency comments. In addition, we anticipate the Township will provide the required application fees.

##### Flood Hazard Area Control Act (FHA)

New storm sewer pipe outfalls with headwalls and rip rap apron splash pads are likely to be required due to the 25-year design requirement for proposed storm sewers. It is anticipated that an Individual Permit under the Flood Hazard Area Control Act (FHA) N.J.S.A. 7:13 will be required for the proposed and/or replaced storm sewer outfalls discharging the 25-year design storm into State regulated areas.

##### Freshwater Wetlands (FWL)

A Freshwater Wetlands Statewide General Permit No. 11 will be required for the construction or replacement of stormwater outfalls in a regulated area. A field delineation of State open waters and freshwater wetlands in the area of the new or replaced outfalls will be required. The new delineation will be located by field survey and plotted on the Permit Plan.

##### Freehold Soil Conservation District Certification

The previously noted certification from the Freehold Soil Conservation District for the sanitary sewer portion of the project will be combined with the roadway reconstruction project since the project will disturb more than 5,000 SF. The Soil Conservation District application will include the preparation of the application, four (4) copies of the Soil Erosion and Sediment Control Plans; Construction Plans; Engineering Report.



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 9 of 11

### CONTRACT DOCUMENTS

It is anticipated that the documents prepared under this initial Road element would be included in the Sewer project as an ineligible expense to the NJEIT funding.

### ROLLED CONCRETE CURB INSTALLATION

If the Township were to proceed with the installation of rolled concrete curb [and/or sidewalks] along the roadways within the limits of the project, it would result in an additional four (4) [or eight (8)] feet of impervious coverage along each roadway resulting in the project being classified by the NJDEP as a 'Major Project'. Accordingly, there would be significant additional costs that would be incurred for the additional survey, design and permitting costs that would be associated with acquiring approval for the 'Major Project'.

In addition, there would be an added expense for property acquisition that the Township would need for the required water quality measures and detention basins associated with the "Major Project" classification due to the installation of curbing [and sidewalks].

Lastly, it should be noted that the addition of rolled concrete curbs will increase the construction cost for the ultimate final phase of the project when the Township completes the final 3" of HMA base course and 2" of HMA top course.

For these reasons the rolled curbing on the roadways has not be anticipated in our Proposal.

### COST PROPOSAL

The projected initial construction cost of the above work described in this proposal is approximately **\$1,500,000**, which includes those portions of the storm drainage system that would be under pavement and such other work that is necessary to be done in conjunction with the sewer portion of the project. Later, after completion of the sewers and the time to allow sewer trenches to settle, the Township can utilize these base maps for the future phased paving of the Woodfield area roadways. Please recognize that the amount of the total construction value of the design will be much greater than the amount indicated herein, since only the minimum improvements to the storm sewers will be installed under this construction project. The new storm sewer system will be designed, where possible, to accommodate the 25-year storm event as well as the associated yard and driveway restoration.



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 10 of 11

The construction cost does not include the potential for storm water retention basins and water quality facilities, if deemed necessary, nor any property acquisition for said detention basins.

Survey and Base Mapping	\$	10,898
Design and Specifications	\$	178,526
Permitting	\$	20,080
Bid Services (inc in Sanitary Imps Project)	\$	- 0 -
<b>Total</b>	<b>\$</b>	<b>209,504</b>

#### CONSTRUCTION ADMINISTRATION SERVICES

We anticipate that construction phase services will generally include a preconstruction meeting, coordination with the contractor, review of shop drawings, review of partial payments, and other elements of work in order to effectuate the project completion. Please note that said services are approximate and may vary depending upon the contractor's schedule/performance and the unforeseen nature of the construction project. However, the costs, estimated at **\$127,500** will not be exceeded without authorization for the Township Council.

#### SUMMARY

Our hourly rates shall be firm until January 1, 2015 after which they may be subject to re-negotiation. Invoices shall be paid within 30 days of presentation of same. In accordance with State requirements we have attached our Affirmative Action Statement and Business Registration Certificate.

Our contract documents will include wording that requires the contractor to be responsible for all applicable OSHA and other regulatory agency requirements, as well as safety, construction means and methods, and the usual other requirements that are normally included in our standard specifications.

Our proposal does not include the preparation of permits other than those listed that may be required for the proposed project. Only limited right of way / easement acquisitions (maximum of six) are included in this proposal, if required, for road improvements outside of the public right-of-way. Our proposal does not include the property acquisitions or design that would be required for detention areas should same be required by the NJDEP.



Ms. Holly Reycraft  
Woodfield Sanitary & Roadway Proposal  
July 21, 2014  
Page 11 of 11

Your return of a signed copy of this proposal indicating your acceptance to the terms and conditions presented herein will represent your authorization for us to proceed.

Thank you again for permitting our firm to submit this proposal, and we look forward to serving your municipality.

Should you have any questions regarding this matter, do not hesitate to contact this office.

Very truly yours,

CME ASSOCIATES

David J. Samuel, P.E.  
Township Engineer's Office

ACCEPTED BY: Holly Reycraft

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2014

ATTESTED BY: \_\_\_\_\_