

AGREEMENT #12116 FOR ENGINEERING SERVICES

This AGREEMENT is entered into by and between Lake County (County) and Clark Dietz, Inc. 5017 Green Bay Road, Suite 126, Kenosha, Wisconsin 53144 (hereafter "Engineer").

RECITALS

WHEREAS, Lake County is seeking an Engineer to provide Engineering services for

Project Name: Vernon Hills NCT WRF High Efficiency Blower Installation and D.O. Control Project (PW# 2012.019) as described in Attachment A; and

WHEREAS, the Engineer is a professional provider of Engineering services; and

NOW, THEREFORE, Lake County and the Engineer AGREE AS FOLLOWS:

SECTION 1. AGREEMENT DOCUMENTS

This AGREEMENT constitutes the entire agreement between the County and the Engineer.

SECTION 2. SCOPE OF SERVICES

The Engineer shall provide engineering services described in Attachment A

SECTION 3. DURATION

The works shall be completed within 375 days after execution of this Agreement.

SECTION 4. INDEMNIFICATION

The Engineer agrees to indemnify, save harmless and defend the County, their agents, servants, and employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses and expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of Engineer's negligent acts in connection with the services covered by this Agreement. The foregoing indemnity shall apply except if such injury, death or damage is caused directly by the willful and wanton conduct of the County, their agents, servants, or employees or any other person indemnified hereunder.

SECTION 5. INSURANCE

The Engineer must obtain, for the Contract term and any extension of it, insurance issued by a company or companies qualified to do business in the State of Illinois and provide the County with evidence of insurance. Insurance in the following types and amounts is necessary:

- **Worker's Compensation Insurance** covering all liability of the Engineer arising under the Worker's Compensation Act and Worker's Occupational Disease Act at statutory limits.
- **Professional Liability** to include, but not be limited to, coverage for Errors and Omissions to respond to claims for loss there from.
 - **General Aggregate Limit** \$3,000,000
 - **Each Occurrence Limit** \$1,000,000
- **Automobile Liability:**
 - **Bodily Injury, Property Damage (Each Occurrence Limit)** \$1,000,000

Engineer agrees that with respect to the above required Automobile Liability insurance, Lake County shall:

- Be named as additional insured by endorsement to the extent of the negligence of the Engineer;
- Be provided with thirty (30) days notice, in writing, of cancellation of material change;
- Be provided with Certificates of Insurance evidencing the above required insurance, prior to commencement of this Contract and thereafter with certificates evidencing renewals or replacements of said policies of insurance at least fifteen (15) days prior to the expiration of cancellation of any such policies. Forward Notices and Certificates of Insurance to: Lake County Central Services, 18 N. County St, Waukegan, IL 60085-4350.

SECTION 6. AGREEMENT PRICE

Lake County will pay to the Engineer the amount not to exceed \$ 60,550.00.

SECTION 7. INVOICES & PAYMENT

Invoices may be submitted for work performed on a monthly basis based upon the percent of work completed in the amount not-to-exceed in Section 6. Submit invoice(s) detailing the services provided. Payments shall be made in accordance with the Local Government Prompt Payment Act.

Engineer will address Invoices to:

Lake County Department of Public Works
 650 Winchester Road
 Libertyville, IL 60048-1391
 Attn: Charles DeGrave

County will make Payments to:

Clark Dietz Inc.
 5017 Green Bay Road, Suite 126
 Kenosha, Wisconsin 53144

SECTION 8. STATEMENT OF OWNERSHIP

The drawings, specifications and other documents prepared by the Engineer for this Project are the property of the County, and Engineer may not use the drawings and specifications for any purpose not relating to the Project without the County's consent, except for the Engineer's services related to this Project. All such documents shall be the property of the County who may use them without Engineer's permission for any current or future Lake County project; provided, however, any use except for the specific purpose intended by this Agreement will be at the County's sole risk and without liability or legal exposure to the Engineer.

The Engineer shall retain its copyright and ownership rights in its design, drawing details, specifications, data bases, computer software, and other proprietary property. Intellectual property developed, utilized, or modified in the performance of the services shall remain the property of the Engineer.

SECTION 9. TERMINATION

The County reserves the right to terminate this Agreement, or any part of this Agreement, upon thirty(30) days written notice. In case of such termination, the Engineer shall be entitled to receive payment from the County for work completed to date in accordance with terms and conditions of this Agreement. In the event that this Agreement is terminated due to Engineer's default, the County shall be entitled to contract for consulting services elsewhere and charge the Engineer with any or all losses incurred, including attorney's fees and expenses.

SECTION 10. JURISDICTION, VENUE, CHOICE OF LAW

This Agreement shall be governed by and construed according to the laws of the State of Illinois. Jurisdiction and venue shall be exclusively found in the 19th Judicial Circuit Court, State of Illinois.

SECTION 11. INDEPENDENT CONTRACTOR

The Engineer is an independent contractor and no employee or agent of the Engineer shall be deemed for any reason to be an employee or agent of the County.

SECTION 12. WARRANTIES

The Engineer represents and warrants to the County that none of the work included in this contract will in any way infringe upon the property rights of others. The Engineer shall defend all suits or claims for Engineer's infringement of any patent, copyright or trademark rights and shall hold the County harmless from loss on account thereof.

SECTION 13. ASSIGNMENT

Neither the Engineer nor the County shall assign any duties of performance under this Agreement without the express prior written consent of the other.

SECTION 14. MODIFICATION

This Agreement may be amended or supplemented only by an instrument in writing executed by the party against whom enforcement is sought.

SECTION 15. DISPUTE RESOLUTION

All issues, claims, or disputes arising out of this Agreement shall be resolved in accordance with the Appeals and Remedies Provisions in Article 9 of the Lake County Purchasing Ordinance.

SECTION 16. NO IMPLIED WAIVERS

The failure of either party at any time to require performance by the other party of any provision of this Agreement shall not affect in any way the full right to require such performance at any time thereafter. Nor shall the waiver by either party of a breach of any provision of this Agreement be taken or held to be a waiver of the provision itself.

SECTION 17. SEVERABILITY

If any part of this Agreement shall be held to be invalid for any reason, the remainder of this Agreement shall be valid to the fullest extent permitted by law.

SECTION 18. CHANGE IN STATUS

The Engineer shall notify the County promptly of any change in its status resulting from any of the following: (a) vendor is acquired by another party; (b) vendor becomes insolvent; (c) vendor, voluntary or by operation law, becomes subject to the provisions of any chapter of the Bankruptcy Act; (d) vendor ceases to conduct its operations in normal course of business. The County shall have the option to terminate this Agreement with the Engineer immediately on written notice based on any such change in status.

SECTION 19. DELIVERABLES

The Engineer shall provide deliverables as identified in Attachment A.

IN WITNESS HEREOF, the undersigned have caused this Agreement to be executed in their respective names on the dates hereinafter enumerated.

Lake County:

Clark Dietz, Inc.

Peter E. Kolb
Director
Lake County Public Works



John Boldt,
President

Date: _____

Date: 4/25/12

ATTACHMENT A

SCOPE OF SERVICES

This project consists of the addition of one (1) high speed turbo style blower at the Vernon Hills NCT Water Reclamation Facility and the evaluation of upgrades to the dissolved oxygen (DO) control system at the Facility. The project will also include the evaluation of future phosphorus and nitrogen removal options at the Facility and a recommendation regarding the potential reconfiguration of the diffusers and other equipment within the aeration basins to more effectively achieve biological nutrient removal within the secondary treatment process.

This design effort will include a review of the existing air flow data for the aeration system to determine air flow requirements, development of a preliminary design report to summarize the proposed blower equipment, development of the construction bid documents, bidding and construction phase services.

It is also understood that the County intends to submit an application for DCEO Public Sector Energy Efficiency grant funds and that the Consultant will prepare the necessary application documents.

The scope of services and production methodology for this project is summarized as follows:

1. Project Administration

- 1.1. Develop a written project work plan that addresses work tasks, milestones, schedules, deliverables, roles/responsibilities, project implementation and communication details.
- 1.2. Conduct a project kickoff meeting with the County to finalize the project objectives and to review and discuss work tasks, deliverables, milestones, schedules, and similar project details. The kickoff meeting will also include discussion regarding the future phosphorus and nitrogen limits for the plant and alternative arrangements of the secondary treatment systems to provide biological removal of phosphorus and nitrogen.
- 1.3. Meet with operations personnel and County Public Works staff to determine their preferences and make a site visit to the treatment facility to review the blower and aeration system configurations. Discuss the blower layout and operational options, as well as the SCADA and DO requirements for the system.
- 1.4. Prepare monthly project status reports in a format approved by the County.
- 1.5. Project Management

2. Project Development Phase

- 2.1. Obtain and review record drawings, basis of design reports, and O&M manuals for the treatment plant process design.
- 2.2. Obtain the last 2 years of plant operating data. This data will need to include historical data for the aeration tank dissolved oxygen levels, loadings to the primary and secondary treatment unit

processes, daily average and peak flows, hourly diurnal flows, air flows to the aeration tanks, as well as effluent discharge concentrations.

- 2.3. Obtain diffused aeration system design and/or original submittal information to review and develop aeration system design criteria for modeling of the secondary treatment system.
- 2.4. Develop both spreadsheet based and BioWin (wastewater modeling software) based aeration system calculations for the conventional activated sludge process to establish a baseline. The BioWin model will be further developed to review up to four (4) alternative aeration system arrangements to simulate biological nutrient removal processes for the plant. The arrangements likely to be considered for evaluation include: the Modified Ludzack-Ettinger (MLE), Phoredox (A/O), University of Cape Town (UCT), and Bardenpho processes.
- 2.5. Obtain Houston Service Industries (HSI) blower information, recommended design, and cost information from the vendor for the developed current and future design criteria.
- 2.6. Develop preliminary blower equipment layouts within the existing blower building.
- 2.7. Develop preliminary electrical power and one line electrical drawings.
- 2.8. Develop electrical interconnect diagrams for the blower and aeration DO control system. Improvements to the DO system may include the addition of modulating valve actuators, DO and ORP probes and signal converters, and a master control system for the blower control.
- 2.9. Prepare and submit to County up to three (3) copies of a Preliminary Design Memorandum documenting the aeration system design criteria, aeration blower alternatives, electrical and instrumentation design requirements, and a preliminary opinion of probable costs. The memorandum will include preliminary drawings showing the recommended alternative.
- 2.10. Meet with the County staff to discuss the draft Preliminary Design Memorandum. This design memo will be finalized based on the Owner's input and will serve as the Basis of Design for the Final Design.
- 2.11. Upon acceptance of the Preliminary Design Memorandum, Clark Dietz will review the shop drawings for the new Houston Service Industries (HSI) blower to allow for early release of the blower for fabrication. The blower will be directly purchased by the County.
- 2.12. Perform a Quality Assurance / Quality Control check of the Basis of Design and Preliminary Design Memorandum, as well as the drawings and calculations completed to date.

3. Final Design Phase

- 3.1. Conduct additional field investigation to obtain final information for the development of drawings and specifications.
- 3.2. Prepare and submit up to three (3) sets of plans, specifications, and the project cost estimate (90% submittal) to the County and meet with the County to discuss and receive their final review comments.

These documents will generally include:

Construction Drawings

- Cover Drawing
- General Notes, Index, Legend, Benchmarks
- Site Plans
- Blower Plan and Section Drawings
- Electrical One Line Diagrams
- Electrical Plans and Details
- SCADA Plans
- Misc. Detail Drawings

Construction Specifications

- Notice to Bidders
- Bid Proposal
- Certification
- Bid Bond
- Performance and Payment Bond
- Instructions to Bidders
- General Conditions
- Supplementary Conditions
- Technical Specifications

- 3.3. Prepare opinion of probable construction cost.
- 3.4. Meet with the County to review and discuss the 90% complete documents submitted.
- 3.5. Finalize all design calculations for the project.
- 3.6. Finalize the blower equipment controls and sequence of operations.
- 3.7. Prepare IEPA construction permit applications for submittal by the County.
- 3.8. Prepare DCEO grant application.
- 3.9. Perform a final QA / QC review of the final construction documents prior to bidding.
- 3.10. Prepare and submit final construction documents in hard copy (3 sets) and electronic format to the County. Original documents shall be in Microsoft Word, Excel, and/or AutoCAD format.

Electronic copies will also be delivered in Adobe (PDF) format to be made available electronically to contractors and vendors during bidding.

4. Bidding Process

- 4.1. Prepare advertising notice for project and submit to the County for publication.
- 4.2. Attend the Pre-bid Meeting with the County and contractors and prepare meeting minutes to be included via addenda.
- 4.3. Respond to contractor questions during bidding and prepare and issue addenda as needed.
- 4.4. Attend the bid opening and prepare a tabulation of bids.
- 4.5. Review contractor bids and make a recommendation regarding construction contract award.
- 4.6. Prepare contract documents for execution by the contractor and County.

5. Construction Phase

- 5.1. Assist County in conducting a pre-construction conference.
- 5.2. Review all shop drawings for the project.
- 5.3. Answer contractor questions, provide clarifications and issue change orders, as necessary.
- 5.4. Review contractor provided O&M Manuals.
- 5.5. Provide periodic site observation services.
- 5.6. Provide project startup testing. Assist in coordinating the contractor provided equipment training.

SCHEDULE

The anticipated project schedule for the Blower Project, based on a May 15, 2012 Notice to Proceed from the County, is as follows:

- | | | |
|-----|--|--------------------|
| 1. | Kickoff Meeting | May 21, 2012 |
| 2. | Preliminary BioWin Model findings | June 25, 2012 |
| 3. | Review / Approve HSI blower submittal | July 10, 2012 |
| 4. | Submit Preliminary Design Memo (final) | July 16, 2012 |
| 5. | Submit Final Plans and Specifications | September 14, 2012 |
| 6. | Submit IEPA permit application | September 14, 2012 |
| 7. | Submit DCEO grant application | September 14, 2012 |
| 8. | Bid Opening | October 18, 2012 |
| 9. | County Board Approval of Contract | November 13, 2012 |
| 10. | Notice to Proceed for Construction | December 1, 2012 |
| 11. | Construction Complete | May 30, 2012 |

ASSUMPTIONS AND EXCLUSIONS

The agreement and project work plan is subject to the following assumptions/conditions:

1. This Agreement and any legal actions concerning its validity, interpretation and performance shall be governed by the laws of the State of Illinois.
2. This agreement does not include the preparation of right-of-way or temporary construction easement drawings, descriptions or negotiation/acquisition services.
3. This agreement does not include the preparation of assessment roles or schedules.
4. This agreement does not include geotechnical investigations.
5. Local permits for this project (street cuts, utility relocations, etc.) will be obtained by the Client with information provided by Clark Dietz. All permit fees will be paid by the Client.
6. State permits for this project will be obtained by the Client with information provided by Clark Dietz. All permit fees will be paid by the Client.
7. No Federal permits are anticipated for this project.
8. This agreement does not include contaminated site Phase I or Phase II environmental assessment investigations or remediation activities.
9. This agreement does not include cultural, historic, archeological, or wetland assessment investigations or remediation activities.
10. This agreement assumes there will be no major structural design required and that the new blower(s) will be able to be installed on the existing blower equipment pads.
11. It is assumed the all new construction will be performed on County property and no easements from private land owners will be required.

CLARK DIETZ - FEE ESTIMATE
Blower Addition
Lake County Public Works - Vernon Hills NCT

WORK TASKS	Project Director	Sr. Engineer	Project Manager	Project Engineer	Engr/ Sr. Tech	Engr/ Tech	Tech	Total Hours / Task	Expenses	Task Total
	P-7	P-6	P-5	P-4	P-3/T-4	P-2/T-3	T-2			
1. Project Administration								32		\$4,460
1.1. Develop a written project Work Plan			2					2		\$290
1.2. Conduct project Kickoff Meeting			6	6				12	\$30	\$1,650
1.3. Meet with LCPWD and NCT staff at the Facility			6	6				12	\$30	\$1,650
1.4. Monthly project status reports			4					4		\$580
1.5. Project Management			2					2		\$290
2. Project Development Phase								178		\$20,760
2.1. Obtain current drawings, basis of design, reports, and O&Ms for the treatment plant process design.				4				4		\$500
2.2. Obtain the last 2 years of plant operating data.				2				2		\$250
2.3. Obtain diffused aeration system information to review and develop aeration system design criteria.				2				2		\$250
2.4. Develop both spreadsheet based and BioWin (wastewater modelling software) based aeration system calculations for the conventional activated sludge process to establish a baseline.			4	16	80			100		\$11,380
2.5. Obtain Houston Service Industries blower design information to review cost and design parameters			2	2				4	\$30	\$570
2.6. Develop preliminary blower equipment layouts				4			16	20	\$240	\$1,940
2.7. Develop preliminary electrical power and one-line drawings.					8			8		\$880
2.8. Develop electrical interconnect diagrams.					8			8		\$880
2.9. Prepare Preliminary Design Report.			4	4				8	\$50	\$1,130
3.10. Meet with County to discuss the Preliminary Design Report.			4	4				8	\$30	\$1,110
2.11. Complete shop drawing review of new blower for early release.			2	4	4			10		\$1,230
2.12. Perform QA/QC.		4						4		\$640
3. Final Design Phase								166		\$21,040
3.1. Final field investigation for the development of drawings and specifications.				8				8	\$50	\$1,050
3.2. Prepare 90% construction contract documents for review by the County.			4					4	\$50	\$650
Construction Drawings										
- Cover Drawing							2	2	\$30	\$180
- General Notes, Index, Legend, Benchmarks				1			2	3	\$30	\$305
- Site Plans				1			8	9	\$120	\$845
- Blower Plan and Section Drawings				1			12	13	\$180	\$1,205
- Electrical One Line Diagrams				1			12	13	\$180	\$1,205
- Electrical Plans and Details				2			18	18	\$240	\$1,690
- SCADA Plans				2			12	14	\$180	\$1,330
- Miscellaneous Detail Drawings				2			4	6	\$60	\$610
Construction Specifications										
- Notice to Bidders			4					4		\$590
- Bid Proposal				1				1		\$125
- Certification				1				1		\$125
- Bid Bond				1				1		\$125
- Performance and Payment Bond				1				1		\$125
- Instructions to Bidders				1				1		\$125
- General Conditions				1				1		\$125
- Supplementary Conditions				8				8		\$1,000
- Technical Specifications				8				8		\$1,000
3.3. Prepare opinion of probable construction cost.			1	2				5		\$585
3.4. Meet with Client to discuss and receive final review comments.			4	4	2			8	\$50	\$1,130
3.5. Prepare and submit final construction documents.			2	2			4	8	\$50	\$680

