


Local Agency Lake County Division of Transportation	 <b>Illinois Department of Transportation</b>  <b>Preliminary Engineering Services Agreement For Federal Participation</b>	Consultant Christopher B. Burke Engineering, Ltd.
County Lake		Address 9575 West Higgins Road, Suite 600
Section 10-00038-05-BT		City Rosemont
Project No.		State Illinois
Job No.		Zip Code 60188
Contact Name/Phone/E-mail Address Michael J. Burke (847)377-7462 MJBurke@lakecountyil.gov		Contact Name/Phone/E-mail Address Mike Matkovic 847/823-0500 / mmatkovic@cbbel.com

THIS AGREEMENT is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2011 between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the PROJECT. Federal-aid funds allotted to the LA by the state of Illinois under the general supervision of the Illinois Department of Transportation (STATE) will be used entirely or in part to finance engineering services as described under AGREEMENT PROVISIONS.

#### Project Description

Name Deerfield Road Bike Path Route Deerfield Length 2,400 ft Structure No. n/a  
Termini Des Plaines River Trail to IL Route 21 (Milwaukee Avenue)

Description: This agreement covers Phase I Engineering Services for extension of the Deerfield Road Bike Path from the Des Plaines River Trail to IL Route 21 (Milwaukee Avenue), a distance of about 2,400 feet depending on the preferred alignment selected.

#### Agreement Provisions

##### I. THE ENGINEER AGREES,

1. To perform or be responsible for the performance, in accordance with STATE approved design standards and policies, of engineering services for the LA for the proposed improvement herein described.
2. To attend any and all meetings and visit the site of the proposed improvement at any reasonable time when requested by representatives of the LA or STATE.
3. To complete the services herein described within 730 calendar days from the date of the Notice to Proceed from the LA, excluding from consideration periods of delay caused by circumstances beyond the control of the ENGINEER.
4. The classifications of the employees used in the work should be consistent with the employee classifications and estimated man-hours shown in attached EXHIBIT A. If higher-salaried personnel of the firm, including the Principal Engineer, perform services that are indicated in Exhibit A to be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the payroll rate for the work performed.
5. That the ENGINEER is qualified technically and is entirely conversant with the design standards and policies applicable for the PROJECT; and that the ENGINEER has sufficient properly trained, organized and experienced personnel to perform the services enumerated herein.
6. That the ENGINEER shall be responsible for the accuracy of the work and shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of work by the STATE will not relieve the ENGINEER of the responsibility to make subsequent correction of any such errors or omissions or for clarification of any ambiguities.
7. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by the ENGINEER and will affix the ENGINEER's professional seal when such seal is required by law. Plans for structures to be built as a part of the improvement will be prepared under the supervision of a registered structural engineer and will affix structural engineer seal when such seal is required by law. It will be the ENGINEER's responsibility to affix the proper seal as required by the Bureau of Design and Environment manual published by the STATE.

8. That the ENGINEER will comply with applicable federal statutes, state of Illinois statutes, and local laws or ordinances of the LA.
9. The undersigned certifies neither the ENGINEER nor I have:
- employed or retained for commission, percentage, brokerage, contingent fee or other considerations, any firm or person (other than a bona fide employee working solely for me or the above ENGINEER) to solicit or secure this AGREEMENT,
  - agreed, as an express or implied condition for obtaining this AGREEMENT, to employ or retain the services of any firm or person in connection with carrying out the AGREEMENT or
  - paid, or agreed to pay any firm, organization or person (other than a bona fide employee working solely for me or the above ENGINEER) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the AGREEMENT.
  - are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
  - have not within a three-year period preceding the AGREEMENT been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property,
  - are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (e) and
  - have not within a three-year period preceding this AGREEMENT had one or more public transactions (Federal, State or local) terminated for cause or default.
10. To pay its subconsultants for satisfactory performance no later than 30 days from receipt of each payment from the LA.
11. To submit all invoices to the LA within one year of the completion of the work called for in this AGREEMENT or any subsequent Amendment or Supplement.
12. To submit BLR 05613, Engineering Payment Report, to the STATE upon completion of the project (Exhibit B).
13. Scope of Services to be provided by the ENGINEER:
- Make such detailed surveys as are necessary for the planning and design of the PROJECT.
  - Make stream and flood plain hydraulic surveys and gather both existing bridge upstream and downstream high water data and flood flow histories.
  - Prepare applications for U.S. Army Corps of Engineers Permit, Illinois Department of Natural Resources Office of Water Resources Permit and Illinois Environmental Protection Agency Section 404 Water Quality Certification.
  - Design and/or approve cofferdams and superstructure shop drawings.
  - Prepare Bridge Condition Report and Preliminary Bridge Design and Hydraulic Report, (including economic analysis of bridge or culvert types and high water effects on roadway overflows and bridge approaches).
  - Prepare the necessary environmental and planning documents as required, including the Project Development Report (PDR), Environmental Survey Request to IDOT, and State Clearinghouse.
  - Make such soil surveys or subsurface investigations including borings and soil profiles as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations to be made in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE.
  - Analyze and evaluate the soil surveys and structure borings to determine the roadway structural design and bridge foundation.
  - Prepare preliminary roadway and drainage structure plans and meet with representatives of the LA and STATE at the site of the improvement for review of plans prior to the establishment of final vertical and horizontal alignment, location and size of drainage structures, and compliance with applicable design requirements and policies.
  - Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
  - Complete the general and detailed plans, special provisions and estimate of cost. Contract plans shall be prepared in accordance with the guidelines contained in the Bureau of Local Roads and Streets manual. The special provisions and detailed estimate of cost shall be furnished in quadruplicate.
  - Furnish the LA with survey and drafts in quadruplicate all necessary right-of-way dedications, construction easements and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.

II. THE LA AGREES,

1. To furnish the ENGINEER all presently available survey data and information
2. To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT, on the basis of the following compensation formulas:

Cost Plus Fixed Fee       CPFF = 14.5%[DL + R(DL) + OH(DL) + IHDC], or  
                                  CPFF = 14.5%[DL + R(DL) + 1.4(DL) + IHDC], or  
                                  CPFF = 14.5%[(2.3 + R)DL + IHDC]

Where:    DL = Direct Labor  
             IHDC = In House Direct Costs  
             OH = Consultant Firm's Actual Overhead Factor  
             R = Complexity Factor (0.00)

Specific Rate             (Pay per element)  
Lump Sum                 \_\_\_\_\_

3. To pay the ENGINEER using one of the following methods as required by 49 CFR part 26 and 605 ILCS 5/5-409:

With Retainage

- a) For the first 50% of completed work, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to 97% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) After 50% of the work is completed, and upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments covering work performed shall be due and payable to the ENGINEER, such payments to be equal to 97% of the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- c) Final Payment – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and the STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

Without Retainage

- a) For progressive payments – Upon receipt of monthly invoices from the ENGINEER and the approval thereof by the LA, monthly payments for the work performed shall be due and payable to the ENGINEER, such payments to be equal to the value of the partially completed work minus all previous partial payments made to the ENGINEER.
- b) Final Payment – Upon approval of the work by the LA but not later than 60 days after the work is completed and reports have been made and accepted by the LA and STATE, a sum of money equal to the basic fee as determined in this AGREEMENT less the total of the amounts of partial payments previously paid to the ENGINEER shall be due and payable to the ENGINEER.

4. The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR part 26. The recipient shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR part 26 and as approved by DOT, is incorporated by reference in this AGREEMENT. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as violation of this AGREEMENT. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31U.S.C. 3801 et seq.).

III. IT IS MUTUALLY AGREED,

1. That no work shall be commenced by the ENGINEER prior to issuance by the LA of a written Notice to Proceed.
2. That tracings, plans, specifications, estimates, maps and other documents prepared by the ENGINEER in accordance with this AGREEMENT shall be delivered to and become the property of the LA and that basic survey notes, sketches, charts and other data prepared or obtained in accordance with this AGREEMENT shall be made available, upon request, to the LA or to the STATE, without restriction or limitation as to their use.

3. That all reports, plans, estimates and special provisions furnished by the ENGINEER shall be in accordance with the current Standard Specifications for Road and Bridge Construction, Bureau of Local Roads and Streets Administrative Policies, Federal-Aid Procedures for Local Highway Improvements or any other applicable requirements of the STATE, it being understood that all such furnished documents shall be approved by the LA and the STATE before final acceptance. During the performance of the engineering services herein provided for, the ENGINEER shall be responsible for any loss or damage to the documents herein enumerated while they are in the ENGINEER's possession and any such loss or damage shall be restored at the ENGINEER's expense.
4. That none of the services to be furnished by the ENGINEER shall be sublet, assigned or transferred to any other party or parties without written consent of the LA. The consent to sublet, assign or otherwise transfer any portion of the services to be furnished by the ENGINEER shall not be construed to relieve the ENGINEER of any responsibility for the fulfillment of this AGREEMENT.
5. To maintain, for a minimum of 3 years after the completion of the contract, adequate books, records and supporting documents to verify the amounts, recipients and uses of all disbursements of funds passing in conjunction with the contract; the contract and all books, records and supporting documents related to the contract shall be available for review and audit by the Auditor General and the STATE; and to provide full access to all relevant materials. Failure to maintain the books, records and supporting documents required by this section shall establish a presumption in favor of the STATE for the recovery of any funds paid by the STATE under the contract for which adequate books, records and supporting documentation are not available to support their purported disbursement.
6. The payment by the LA in accordance with numbered paragraph 3 of Section II will be considered payment in full for all services rendered in accordance with this AGREEMENT whether or not they are actually enumerated in this AGREEMENT.
7. That the ENGINEER shall be responsible for any and all damages to property or persons arising out of an error, omission and/or negligent act in the prosecution of the ENGINEER's work and shall indemnify and save harmless the LA, the STATE, and their officers, agents and employees from all suits, claims, actions or damages of any nature whatsoever resulting there from. These indemnities shall not be limited by the listing of any insurance policy.
8. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all drawings, plats, surveys, reports, permits, agreements, soils and foundation analysis, provisions, specifications, partial and completed estimates and data, if any from soil survey and subsurface investigation with the understanding that all such material becomes the property of the LA. The LA will be responsible for reimbursement of all eligible expenses to date of the written notice of termination.
9. This certification is required by the Drug Free Workplace Act (30ILCS 580). The Drug Free Workplace Act requires that no grantee or contractor shall receive a grant or be considered for the purpose of being awarded a contract for the procurement of any property or service from the State unless that grantee or contractor will provide a drug free workplace. False certification or violation of the certification may result in sanctions including, but not limited to, suspension of contract or grant payments, termination of a contract or grant and debarment of the contracting or grant opportunities with the State for at least one (1) year but no more than five (5) years.

For the purpose of this certification, "grantee" or "contractor" means a corporation, partnership or other entity with twenty-five (25) or more employees at the time of issuing the grant, or a department, division or other unit thereof, directly responsible for the specific performance under a contract or grant of \$5,000 or more from the State, as defined in the Act.

The contractor/grantee certifies and agrees that it will provide a drug free workplace by:

- a. Publishing a statement:
  - (1) Notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance, including cannabis, is prohibited in the grantee's or contractor's workplace.
  - (2) Specifying the actions that will be taken against employees for violations of such prohibition.
  - (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will:
    - (a) abide by the terms of the statement; and
    - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.
- b. Establishing a drug free awareness program to inform employees about:
  - (1) The dangers of drug abuse in the workplace;
  - (2) The grantee's or contractor's policy of maintaining a drug free workplace;
  - (3) Any available drug counseling, rehabilitation and employee assistance program; and
  - (4) The penalties that may be imposed upon an employee for drug violations.
- c. Providing a copy of the statement required by subparagraph (a) to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.
- d. Notifying the contracting or granting agency within ten (10) days after receiving notice under part (B) of paragraph (3) of subsection (a) above from an employee or otherwise receiving actual notice of such conviction.
- e. Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by,
- f. Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.
- g. Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.





**Lake County**  
Division of Transportation

**EXHIBIT A**

**Cost Estimate of  
Consultant Services  
(CPFF)**

Firm Christopher B. Burke Engineering, Ltd. Date 06/29/11  
 Route Deerfield Road Bike Path II  
 Section 10-00038-05-BT Overhead Rate 144.80%  
 County Lake Complexity Factor 0  
 Job No. TBD  
 PTB & Item N/A

Item	Work Hours	Payroll	Overhead & Fringe Benefits	In-House Direct Costs *	Fixed Fee	Outside Direct Costs	Subs	Total (C+D+E+F+G+H)	% of Grand Total
1. Data Collection and Review	30	1,214.36	1,756.39	76.50	431.05	88.08		3,491.87	1.63%
2. Traffic Impact Study	304	12,414.41	17,976.06	81.60	4,417.71	134.30		35,018.98	16.33%
3. Topographic Survey	224	7,944.82	11,504.10	61.20	2,831.93	20.40		22,382.84	10.44%
4. Environmental Surveys	180	6,777.39	9,813.66	30.60	2,414.58	3,132.92		22,199.75	10.35%
5. Proposed Geometry	214	8,372.32	12,123.12	122.40	2,971.84	162.38		23,629.66	11.02%
6. Proposed Drainage Plan	74	2,877.95	4,167.28	163.20	1,026.00	70.48		8,172.31	3.81%
7. Coordination	140	5,834.55	8,448.43	122.40	2,088.76	190.72		16,684.88	7.78%
8. Public Involvement	356	13,504.21	19,554.09	30.60	4,817.12	3,269.70		41,308.32	19.26%
9. Project Development Report	150	5,762.00	8,343.37		2,045.28	310.20		16,460.85	7.67%
10. Geotechnical Studies	4	202.95	293.97		72.04	5,550.00		6,118.86	2.85%
11. Plans and Legals	176	6,682.90	9,676.94	30.60	2,376.60	242.60		19,009.54	8.86%
<b>TOTALS</b>	<b>1852</b>	<b>71,587.85</b>	<b>103,659.21</b>	<b>566.10</b>	<b>25,492.91</b>	<b>13,171.78</b>	<b>0.00</b>	<b>214,477.85</b>	<b>100.00%</b>

\* Mileage Only. All other direct costs are "outside"

Avg Hnty: 38.65



Lake County  
Division of Transportation

**EXHIBIT A**

**Average Hourly Project Rates**

Route Deerfield Road Bike Path II  
 Section 10-00038-05-BT  
 County Lake  
 Job No. TBD  
 PTB/Item \_\_\_\_\_

Consultant Christopher B. Burke Engineering, Ltd.

Date 06/29/11

Sheet 1 OF 3

Payroll Classification	Avg Hourly Rates	Total Project Rates			1. Data Collection and Review			2. Traffic Impact Study			3. Topographic Survey			4. Environmental Surveys			5. Proposed Geometry		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00	0			2	6.67%	4.67	26	8.55%	5.99	4	1.79%	1.25	2	1.11%	0.78	6	2.80%	1.96
Engineer VI (PM)	70.00	78	4.21%	2.95															
Engineer V	58.56	0																	
Engineer IV	47.56	160	8.64%	4.11	12	40.00%	19.03	38	12.50%	5.95	4	1.79%	0.85	2	1.11%	0.53	24	11.21%	5.33
Engineer III	38.88	264	14.25%	5.54				84	27.63%	10.74							64	29.91%	11.63
Engineer I/II	31.48	388	20.95%	6.59	16	53.33%	16.79	112	36.84%	11.60							64	29.91%	9.41
Env. Res. Spec. V	59.38	26	1.40%	0.83													10	5.56%	3.30
Env. Res. Spec. IV	46.44	94	5.05%	2.96													42	23.33%	10.84
Env. Res. Spec. III	39.69	0																	
Env. Res. Spec. II	31.21	96	5.16%	1.82													96	53.33%	16.65
Env. Res. Spec. I	32.23	0																	
Survey V	60.00	16	0.86%	0.52							8	3.57%	2.14						
Survey IV	49.99	20	1.08%	0.54							8	3.57%	1.79						
Survey III	47.71	0																	
Survey II	31.80	168	9.07%	2.88							72	32.14%	10.22						
Survey I	27.74	72	3.89%	1.08							72	32.14%	8.92						
Cad Manager	49.23	14	0.76%	0.37															
Asst. Cad Manager	43.90	68	3.67%	1.61				12	3.95%	1.94							4	2.22%	0.98
Cad II	40.76	198	10.69%	4.36				32	10.53%	4.62							12	6.67%	2.72
Cad I	30.45	0															48	21.43%	6.73
Engineering Tech V	60.00	0																	
Engineering Tech IV	46.86	0																	
Engineering Tech III	41.23	20	1.08%	0.45															
Engineering Tech I/II	28.10	0																	
GIS Specialist III	38.57	44	2.38%	0.92															
GIS Specialist I/II	28.10	46	2.48%	0.70															
Administrative	28.45	80	4.32%	1.23															
		0																	
		0																	
		0																	
<b>TOTALS</b>		1852	100%	\$38.65	30	100%	\$40.48	304	100%	\$40.84	224	100%	\$35.47	180	100%	\$37.65	214	100%	\$39.12



Route Deerfield Road Bike Path II  
 Section 10-00036-05-BT  
 County Lake  
 Job No. TBD  
 PT/Item

**EXHIBIT A**

**Average Hourly Project Rates**

Consultant Christopher B. Burke Engineering, Ltd.

Date 06/29/11

Sheet 2 OF 3

Payroll Classification	Hourly Rates	6. Proposed Drafting Plan			7. Coordination			8. Public Involvement			9. Project Development Report			10. Geotechnical Studies			11. Plats and Legals		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal Engineer VI (PM)	70.00	4	5.41%	3.76	8	5.71%	4.00	14	3.93%	2.75	8	5.33%	3.73	2	50.00%	35.00	2	1.14%	0.80
Engineer V	58.56																		
Engineer IV	47.56				16	11.43%	5.44	28	7.87%	3.74	32	21.33%	10.15				4	2.27%	1.08
Engineer III	38.88	24	32.43%	12.61	32	22.86%	8.89	60	16.85%	6.55									
Engineer I/II	31.48	24	32.43%	10.21	32	22.86%	7.19	68	19.10%	6.01	70	46.67%	14.69	2	50.00%	15.74			
Env. Res. Spec. V	59.38				16	11.43%	6.79												
Env. Res. Spec. IV	46.44				16	11.43%	5.31	24	6.74%	3.13	12	8.00%	3.71						
Env. Res. Spec. III	39.69																		
Env. Res. Spec. I/II	31.21																		
Env. Res. Technician	32.23																		
Survey V	60.00																		
Survey IV	49.99																		
Survey III	47.71																		
Survey II	31.80																		
Survey I	27.74																		
Cad Manager	49.23																		
Asst. Cad Manager	43.90	4	5.41%	2.37				4	1.12%	0.49	2	1.33%	0.59				6	3.41%	1.50
Cad II	40.76	18	24.32%	9.92				18	5.06%	2.08	6	4.00%	1.63				48	27.27%	11.72
Cad I	30.45																		
Engineering Tech V	60.00																		
Engineering Tech IV	46.86																		
Engineering Tech III	41.23																		
Engineering Tech II	28.10																		
Engineering Tech I/II	38.57																		
GIS Specialist III	28.10																		
GIS Specialist I/II	38.57																		
Administrative	28.45				20	14.29%	4.06	48	13.48%	3.84	12	5.00%	2.28						
<b>TOTALS</b>		74	100%	\$38.89	140	100%	\$41.66	356	100%	\$37.93	150	100%	\$38.41	4	100%	\$50.74	176	100%	\$37.97





## SCOPE OF WORK

Christopher B. Burke Engineering, Ltd. (CBBEL) will perform Phase I Engineering Services for the construction of a bike path from the west terminus of the recently constructed bike path over the Des Plaines River (near the Des Plaines River Trail) to IL Route 21 (Milwaukee Avenue), a distance of approximately 1,800 to 2,400 feet depending on the preferred bike path alignment selected. Depending on the selected alignment, the eastern most portion of this bike path may be located on Lake County Forest Preserve District (LCFPD) property and the western most portion will be located on IDOT property. The remainder of the bike path to the west is within the Village of Riverwoods. CBBEL understands that the Phase I Study will determine the location of the bike path based on multiple potential alternatives as presented in the Lake County Project Scoping Report. Since federal funding will be used for this project, federal project development procedures will be followed and this project will be coordinated through IDOT-Bureau of Local Roads and Streets. It is anticipated that the project will be processed as a Categorical Exclusion (Group II) based on the potential for unusual environmental circumstances, and the Phase I Report will follow IDOT's Form BLR 22210.

This Phase I Engineering project is estimated to take approximately 12 months to complete, contingent upon the need to prepare the advance Traffic Impact Study (Task 2 below), and overall progress with respect to the multi-agency coordination and the public involvement proceedings. A detailed scope of services and work hour estimate is provided below.

**Task 1 – Data Collection and Review:** CBBEL will collect and review data to be utilized for Phase I Engineering Services. This data will include the following:

- Survey Data
  - Plats of highways for Deerfield Road.
  - Adjacent subdivision plats, Lake County tax maps, and any other available information to identify existing right-of-way and existing property lines.
  - Information on state plane monuments to be utilized for horizontal control for the project.
  - Information on benchmarks to be utilized for vertical control for the project.
- Existing FEMA maps, flood insurance studies and previous studies for the Des Plaines River.
- Wetland information including Lake County Wetland Inventory (LCWI) maps, ADID wetland maps, National Wetland Inventory maps, Lake County soils maps, and any other information.
- Other state, county and village information including utility atlases, land use plans, ordinances, etc.

**Task 1 Work Hour Estimate = 30 hours**

**Task 2 – Traffic Impact Study and Preliminary IDS:** CBBEL will prepare a Traffic Impact Study (TIS) for the anticipated developments located at the southwest, southeast, and northwest quadrants of the Illinois Route 21 (Milwaukee Avenue) and

Deerfield Road intersection. Based on the TIS, a preliminary Intersection Design Study (IDS) will be prepared to ensure the proposed bike path location is compatible with the potential future improvement needs at this intersection. Task 2 will include the following specific work tasks:

TIS Data Collection: CBBEL will obtain existing data as it relates to the proposed development and the adjacent roadways. The data to be collected will include the following:

- 1) Proposed site plans will be requested from the Villages of Buffalo Grove and Riverwoods. This information will be solicited for the purposes of identifying the types of land uses and site layouts including building footprint of the proposed facilities to estimate the trip generation of the development.
- 2) This task will consist of reviewing the proposed site plans. In addition, CBBEL will review the requirements of LCDOT access ordinance and applicable IDOT policies to verify base line requirements for major access driveways.
- 3) CBBEL will obtain and review historical traffic count data for the existing roadway network.
- 4) The data will be supplemented with roadway plan information that CBBEL will obtain from IDOT, LCDOT and the Villages for the surrounding roadway network and a field reconnaissance of the project area to verify conditions.

*Work Hour Estimate = 32 hours*

Traffic Volume Counts: CBBEL will arrange for manual traffic counts to be conducted in the study area. Peak hour manual turning movement counts will be conducted from 6:00 A.M. to 9:00 A.M. and 3:00 P.M. to 6:00 P.M. at the intersection of Illinois Route 21 (Milwaukee Avenue) and Deerfield Road during a typical weekday (Tuesday – Thursday).

*Work Hour Estimate = 14 hours*

Traffic Analyses: CBBEL will estimate the number of trips to be generated by the anticipated development sites. The directional distribution of site-generated traffic on the adjacent street system will be estimated based on existing traffic count data. The number of estimated trips that will be generated by the proposed developments will be developed based on trip generation rates published by the Institute of Transportation Engineers (ITE). Background peak hour traffic (non-site) will be combined with the peak period site-generated traffic and assigned to the critical intersections in the study area. The total assigned traffic will be used for evaluation purposes to identify roadway, access and internal circulation improvements that are necessary to accommodate the proposed development. This will include conducting intersection capacity analyses of existing and baseline conditions for the intersection of Illinois Route 21 (Milwaukee Avenue) and Deerfield Road. CBBEL will also model the intersection in Synchro to evaluate operations within the existing coordinated traffic signal system.

*Work Hour Estimate = 48 hours*

Traffic Projections: CBBEL will develop projected 2040 traffic volumes for the area roadway network and will coordinate with the Chicago Metropolitan Agency for Planning (CMAP) to obtain concurrence on the projections. The 2040 projected traffic volumes combined with the site traffic estimated for the anticipated developments will be evaluated to determine what future geometric improvements will be necessary at the intersection to maintain satisfactory operations. This will include conducting intersection capacity analyses of projected 2040 conditions for the intersection of Illinois Route 21 (Milwaukee Avenue) and Deerfield Road. CBBEL will also model the intersection in Synchro to evaluate operations within the existing coordinated traffic signal system.

*Work Hour Estimate = 24 hours*

Technical Memorandum: CBBEL will provide a technical memorandum summarizing the results of the traffic operations analyses for existing traffic volumes, as well as the projected 2040 traffic volumes. The report will include supporting data in appendix form.

*Work Hour Estimate = 48 hours*

Preliminary Intersection Design Study: CBBEL will prepare a preliminary Intersection Design Study (IDS) based on the traffic data from Task 2a through 2d. The preliminary IDS will be prepared at a scale of 1" = 50' and will include the following:

- 1) Intersection capacity analyses for a.m. and p.m. peak hour design year traffic volumes.
- 2) Existing and projected peak hour volumes.
- 3) Preliminary intersection geometry.
- 4) Signal layout.
- 5) Design and general notes.
- 6) Traffic signal warrant analysis.

The preliminary IDS is anticipated to be submitted to LCDOT and IDOT for review, and revised based on any review comments received.

*Work Hour Estimate = 90 hours*

Coordination: Coordination meetings with LCDOT, IDOT, Village of Buffalo Grove, and Village of Riverwoods staff are anticipated to clarify the land uses anticipated at the intersection and to determine any specific requirements for incorporation into the Traffic Impact Study. Up to eight coordination meetings are anticipated.

*Work Hour Estimate = 48 hours*

**Task 2 Work Hour Estimate = 304 hours**

**Task 3 – Survey:** CBBEL will perform a full topographic survey of the project area.

CBBEL will perform the following survey tasks:

Project Control and Contour Tie-In: CBBEL will set benchmarks and control points project wide for use in tying in Lake County's one-foot contour mapping, and for future topographic survey for the preferred alternative when selected. CBBEL will collect eight cross sections for use in developing typical cross sections and as contour tie-in points.

*Work Hour Estimate = 36 hours*

Topographic Survey: CBBEL will collect (and plot) full topographic survey with cross sections every 50 feet, at entrances and other critical locations for an assumed corridor width of 100 feet. This includes picking up flagged wetlands and special identified trees by CBBEL Environmental Department, and all trees greater than or equal to 6" diameter.

*Work Hour Estimate = 160 hours*

Utility Coordination: CBBEL will coordinate with the Lake County Utility Coordinator and/or send atlas/info request to all utility companies within the selected preferred alternative corridor. Identified utilities will be plotted on the project base map.

*Work Hour Estimate = 20 hours*

Compensatory Storage Survey: CBBEL will collect full topography with cross sections every 50 feet for the selected compensatory storage site for the project, which is assumed to be an area approximately 450' x 450' in dimension.

*Work Hour Estimate = 40 hours*

### **Task 3 Work Hour Estimate = 256 hours**

Task 4 – Environmental Surveys: The following services are proposed to comply with Section 404 of the Clean Water Act and Lake County Watershed Development Ordinance, and for submittal of an Environmental Survey Request Form (ESRF) to IDOT for overall project environmental review.

Field Reconnaissance: An investigation of the study area will be completed to determine the limits of any wetlands or waters of the United States present. The delineation will be completed based on the methodology established by the U.S. Army Corps of Engineers. Also during the site visit, wildlife and plant community qualities will be assessed. The limits of the wetland community will be field staked so that they can be located in relation to the project coordinate system.

*Work Hour Estimate = 48 hours*

Threatened and Endangered Species Consultation: CBBEL will submit a request for threatened and endangered species consultation to the Illinois Department of Natural Resources (IDNR) and we will complete a review of threatened and

endangered species in accordance with the U.S. Fish and Wildlife Service procedures.

*Work Hour Estimate = 12 hours*

Wetland Delineation Letter Report: The results of the field reconnaissance will be summarized in a letter report. The wetlands' generalized quality ratings, according to the Swink and Wilhelm Methodology (1994), will be included along with exhibits depicting the approximate wetland and project boundaries, National Wetland Inventory, Soil Survey, floodplain, USGS topography, site photographs and their locations, and the U.S. Army Corps of Engineers (COE) Routine On-Site Data Forms. If the delineation is field surveyed, that will be used as our base wetland boundary map, otherwise we will use the best available aerial photograph.

*Work Hour Estimate = 32 hours*

Visual Assessment: CBBEL staff will complete a visual assessment of the study area to inventory the scenic resources of the project site, estimating potential changes to that character, and identifying viewer groups and potential public concerns to the proposal. A project's visual quality is ensured by encouraging a positive visual change that will improve or enhance the surrounding landscape. To better provide for visual quality in a project, the project's relationship with the following will be evaluated to ensure that appropriate visual quality is integrated into the project. This input will be coordinated with the project engineer in developing the preferred alternative and cited in the Project Development Report (PDR – Task 9):

- natural landscape elements;
- topographical and physical characteristics;
- ecological influences;
- recreational sites;
- residential areas and their character;
- historical features;
- visual values;
- existing land uses (e.g., industrial, junkyards); and
- existing and proposed project profile.

*Work Hour Estimate = 16 hours*

Tree Inventory: Within the preferred route, CBBEL staff will tag all trees greater than or equal to 6" diameter at breast height on the subject site. CBBEL will provide a tree inventory listing including size, species, condition, form and general comments regarding the quality of the identified trees. Each tree will be evaluated and assigned a number rating from 1 – 5 based on general observations at the time of the inventory. A rating of 1 (excellent) has the highest value in terms of protection or preservation. A rating of 5 (poor) has the lowest value and represents lower quality individuals.

*Work Hour Estimate = 48 hours*

Preparation of WIE: CBBEL staff will prepare, submit and process the Wetland Impact Evaluation (WIE) form as required by IDOT for all identified wetlands in the project corridor, whether impacted or not. This task will include a resource review, preparation of support documentation, submittal of the document, coordination and follow-up with the reviewer as required. It is assumed that three wetlands sites will be identified that will require WIE submittal.

*Work Hour Estimate = 24 hours*

Preliminary Environmental Site Assessment: CBBEL will use Huff & Huff, Inc. to perform a special waste screening for the project to determine if a PESA report will be required as part of Phase I Engineering. Given the past land use in the southeast corner of Deerfield Road and IL Route 21 that may have included a gas station, it is assumed that a PESA will be required. No CBBEL staff time is required for this task. An outside direct cost of \$3,000 has been added to reflect the anticipated cost for the PESA.

**Task 4 Work Hour Estimate = 180 hours**

Task 5 – Proposed Geometry: CBBEL will prepare proposed geometry including proposed horizontal and vertical geometry and a right-of-way/easement assessment for up to three bike trail alternatives conceptually, and one preferred alternative in detail.

The conceptual alternatives will include adjacent to the south side of Deerfield Road, behind the Brentwood North Healthcare Center, and north or south of the planned development at the southeast quadrant of the IL Route 21 intersection.

CBBEL will prepare preliminary plan and profile sheets showing existing and proposed horizontal and vertical geometry. It is anticipated that two plan and profile sheets will be prepared for each alternative at a scale of 1"=20'. The proposed geometry will be set to meet design criteria for federally funded projects and to minimize right-of-way and easement requirements. Typical sections for the proposed improvement will be developed concurrently.

Existing and proposed cross-sections will be templated at 50' intervals and at all side streets, driveways and other grade controlling features to determine right-of-way and easement requirements, wetland impacts, ditch locations and drainage patterns, and to fine-tune the proposed vertical geometry. Existing conditions cross-sections will be developed utilizing the topographic survey performed by CBBEL. It is anticipated that six cross-section sheets will be prepared for this project. These cross-sections will show existing right-of-way, existing grade, proposed grade (top surface only) and proposed right-of-way and easements where necessary.

During this task, it is expected that alternatives will be informally presented to LCDOT and IDOT for their concurrence and/or comment. At the end of this task the project team will have completed preliminary geometry and identified the proposed

project limits including the right-of-way acquisitions and easements necessary for the construction of the proposed improvement.

**Task 5 Work Hour Estimate = 214 hours**

**Task 6 – Proposed Drainage Plan:** CBBEL will prepare an existing and proposed drainage plan for the identified preferred alternative.

The existing area drainage outfall(s) for the project area will be analyzed for sensitivity. The condition of the existing drainage system outfall(s), as well as the added impervious pavement area with this project, will be factors in determining the extent of storm water detention needs for the project to ensure compliance with the LCSMC Watershed Development Ordinance. Based on the extent of the Deerfield Road Bike Path improvement in the Des Plaines River floodplain, the amount of normal to 10-year and 10-year to 100-year floodplain fill will be determined. LCSMC requires compensatory storage at a 1.2 to 1 ratio. Potential locations for compensatory storage will be evaluated to determine if the required compensatory storage can be obtained and where it will be provided.

Specifically, development of the proposed drainage plan will include the following major tasks:

- Develop existing conditions drainage plan
- Identify and evaluate sensitivity of existing drainage outfalls
- Develop proposed drainage plan based on proposed geometry
- Determine storm water detention needs based on added impervious area
- Determine compensatory storage needs and desirable location

**Task 6 Work Hour Estimate = 74 hours**

**Task 7 – Coordination:** Contingent upon the preferred alternative selected, project coordination will be required with the Lake County Forest Preserve District (LCFPD), USACOE, IDOT, LCSMC, the Village of Riverwoods, and adjacent Property Owners along the project corridor.

Per the project scoping report, the following coordination meetings are anticipated to be required:

- LCFPD – Up to 3 meetings
- Riverwoods – Up to 3 meetings
- Buffalo Grove – Up to 3 meetings (in addition to TIS coordination)
- LCSMC and/or USACOE – Up to 3 meetings
- Adjacent Property Owners – Up to 6 meetings

An initial project coordination meeting is anticipated to be required with both LCDOT and IDOT, with three LCDOT progress meetings throughout the duration of the project. In addition, it is anticipated that this project will be presented at two FHWA coordination meetings to secure concurrence on the project scope and limits,



environmental processing, and the preferred alternative. Meeting agendas and advance materials will be prepared for each meeting. One or two CBEL staff members will attend each meeting, and meeting minutes will be prepared.

**Task 7 Work Hour Estimate = 140 hours**

**Task 8 – Public Involvement:** Per the Project Scoping Report, three Public Meetings are anticipated for this project as follows:

- Public Meeting #1 – Project introduction. Early input from interested parties
- Public Meeting #2 – Present bike path alternatives for public comment
- Public Meeting #3 – Present the preferred alternative for public comment

For each Public Meeting, CBEL will develop the exhibits and handout materials. Public Meeting materials will include aerial exhibits to illustrate the scope of the improvement, colored exhibits to illustrate proposed right of way impacts and written handouts that describe the overall project. It is assumed that public notices in the local newspaper(s) will be required and direct costs have been added for this purpose. The aerial exhibits will consist of the proposed improvements shown on the color digital orthophotographs at a scale of 1"=50'.

It is assumed that three CBEL staff members will attend each meeting at a minimum.

Detailed summaries will be prepared to summarize the content and results of each Public Meeting.

**Subtotal Work Hour Estimate = 186 hours**

An independent project website will be developed to provide a location for the project team to post project related materials for stakeholders to retrieve and/or review, and as a central location for project stakeholders to submit questions or comments. The required effort includes establishing a website domain (2 hours), developing the website (120 hours), and maintaining the project website on a monthly basis over the anticipated two year project schedule (2 hours per month = 48 hours).

**Subtotal Website Work Hour Estimate = 170 hours**

**Task 8 Work Hour Estimate = 356 hours**

**Task 9 – Project Development Report:** The culmination of all of the above tasks will be a Phase I Project Development Report (PDR) in accordance with BLR Form 22210 (Categorical Exclusion Group II).

It is assumed that an initial preliminary PDR will be submitted to both LCDOT and IDOT for review. Based on comments received from this initial review, the PDR will be revised and resubmitted for Phase I Design Approval.

**Task 9 Work Hour Estimate = 150 hours**

**Task 10 – Geotechnical Studies:** A geotechnical analysis and report will be prepared for the preferred bike path alternative. CBBEL will subcontract this work to ECS Midwest, LLC. in the amount of \$5,550.

**Task 10 Work Hour Estimate = 4 hours**

**Task 11 – Plats and Legals:** Based on the preferred bike path alternative, and based on title commitments assumed to be provided by Lake County, CBBEL will prepare right-of-way plats and legal descriptions in accordance with IDOT's Acquisition Procedures for Local Agency projects. It is estimated that up to eight (8) parcels will be affected. This task will not be initiated until after the Public Meeting to present the preferred alternative.

**Task 11 Work Hour Estimate = 176 hours**





**Lake County**  
Division of Transportation

**EXHIBIT A**

**Cost Estimate of  
Consultant Services  
(CPFF)**

Firm Christopher B. Burke Engineering, Ltd.  
Route Deerfield Road Bike Path II  
Section 10-00038-05-BT  
County Lake  
Job No. TBD  
PTB & Item N/A

Date 06/29/11  
Overhead Rate 144.80%  
Complexity Factor 0

Item	Work Hours	Payroll	Overhead & Fringe Benefits	In-House Direct Costs *	Fixed Fee	Outside Direct Costs	Subs	Total (C+D+E+F+G+H)	% of Grand Total
1. Data Collection and Review	30	1,214.36	1,758.39		431.05	88.08		3,491.87	1.63%
2. Traffic Impact Study	304	12,414.41	17,976.06	76.50	4,417.71	134.30		35,018.98	16.33%
3. Topographic Surveys	224	7,944.82	11,504.10	81.60	2,831.93	20.40		22,382.84	10.44%
4. Environmental Surveys	180	6,777.39	9,813.66	61.20	2,414.58	3,132.92		22,199.75	10.35%
5. Proposed Geometry	214	8,372.32	12,123.12		2,971.84	162.38		23,629.66	11.02%
6. Proposed Drainage Plan	74	2,877.95	4,167.28	30.60	1,026.00	70.48		8,172.31	3.81%
7. Coordination	140	5,834.55	8,448.43	122.40	2,088.78	190.72		16,684.88	7.78%
8. Public Involvement	356	13,504.21	19,554.09	163.20	4,817.12	3,269.70		41,308.32	19.26%
9. Project Development Report	150	5,762.00	8,343.37		2,045.28	310.20		16,460.85	7.67%
10. Geotechnical Studies	4	202.95	293.87		72.04	5,550.00		6,118.86	2.85%
11. Plans and Legals	176	6,882.90	9,676.84	30.60	2,376.60	242.60		19,009.54	8.86%
<b>TOTALS</b>	<b>1852</b>	<b>71,587.85</b>	<b>103,659.21</b>	<b>566.10</b>	<b>25,492.91</b>	<b>13,171.78</b>	<b>0.00</b>	<b>214,477.85</b>	<b>100.00%</b>

Avg Hrly: **38.65**

\* Mileage Only. All other direct costs are "outside"



Lake County  
Division of Transportation

EXHIBIT A

Average Hourly Project Rates

Route Deerfield Road Bike Path II  
Section 10-00038-05-BT  
County Lake  
Job No. TBD  
PTB/Item

Consultant Christopher B. Burke Engineering, Ltd.

Date 06/29/11

Sheet 1 OF 3

Payroll Classification	Total Project Rates			1. Data Collection and Review			2. Traffic Impact Study			3. Topographic Survey			4. Environmental Surveys			5. Proposed Geometry			
	Avg Hourly Rates	Hours	% Part.	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	
Principal	70.00	0																	
Engineer VI (PM)	70.00	78	4.21%	2	6.67%	4.67	26	8.55%	5.99	4	1.79%	1.25	2	1.11%	0.78	6	2.80%	1.96	
Engineer V	58.56	0																	
Engineer IV	47.56	160	8.64%	12	40.00%	19.03	38	12.50%	5.95	4	1.79%	0.85	2	1.11%	0.53	24	11.21%	5.33	
Engineer III	38.88	264	14.25%	16	53.33%	16.79	84	27.63%	10.74							64	29.91%	11.63	
Engineer I/II	31.48	388	20.95%	16	53.33%	16.79	112	36.84%	11.60							64	29.91%	9.41	
Env. Res. Spec. V	59.38	26	1.40%													10	5.56%	3.30	
Env. Res. Spec. IV	46.44	94	5.08%													42	23.33%	10.84	
Env. Res. Spec. III	39.69	0																	
Env. Res. Spec. I/II	31.21	96	5.18%													96	53.33%	16.65	
Env. Res. Technician	32.23	0																	
Survey V	60.00	16	0.86%							8	3.57%	2.14							
Survey IV	49.99	20	1.08%							8	3.57%	1.79							
Survey III	47.71	0																	
Survey II	31.80	168	9.07%							72	32.14%	10.22							
Survey I	27.74	72	3.88%							72	32.14%	8.92							
Cad Manager	49.23	14	0.76%				12	3.95%	1.94										
Asst. Cad Manager	43.90	68	3.67%				32	10.53%	4.62	8	3.57%	1.57	4	2.22%	0.98	8	3.74%	1.64	
Cad II	40.76	198	10.69%							48	21.43%	8.73	12	6.67%	2.72	48	22.43%	9.14	
Cad I	30.45	0																	
Engineering Tech V	60.00	0																	
Engineering Tech IV	46.86	0																	
Engineering Tech III	41.23	20	1.08%																
Engineering Tech I/II	28.10	0																	
GIS Specialist III	38.57	44	2.38%																
GIS Specialist I/II	28.10	46	2.48%													12	6.67%	1.87	
Administrative	28.45	80	4.32%																
		0																	
		0																	
		0																	
<b>TOTALS</b>		1852	100%	30	100%	\$40.48	304	100%	\$40.84	224	100%	\$35.47	180	100%	\$37.65	214	100%	\$39.12	



Lake County  
Division of Transportation

EXHIBIT A

Average Hourly Project Rates

Route Deerfield Road Bike Path II  
 Section 10-00038-05-BT  
 County Lake  
 Job No. TBD  
 PTB/Item

Consultant Christopher B. Burke Engineering, Ltd.

Date 06/29/11

Sheet 2 OF 3

Payroll Classification	Avg Hourly Rates	6. Proposed Drainage Plan			7. Coordination			8. Public Involvement			9. Project Development Report			10. Geotechnical Studies			11. Plans and Legals		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00																		
Engineer VI (PM)	70.00	4	5.41%	3.78	8	5.71%	4.00	14	3.93%	2.75	8	5.33%	3.73	2	50.00%	35.00	2	1.14%	0.80
Engineer V	58.56																		
Engineer IV	47.56				16	11.43%	5.44	28	7.87%	3.74	32	21.33%	10.15				4	2.27%	1.08
Engineer III	38.88	24	32.43%	12.61	32	22.86%	8.89	60	16.85%	6.55									
Engineer I/II	31.48	24	32.43%	10.21	32	22.86%	7.19	68	19.10%	6.01	70	46.67%	14.69	2	50.00%	15.74			
Env. Res. Spec. V	59.38				16	11.43%	6.79												
Env. Res. Spec. IV	46.44				16	11.43%	5.31	24	6.74%	3.13	12	8.00%	3.71						
Env. Res. Spec. III	39.69																		
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Survey III	47.71																		
Survey II	31.80																		
Survey I	27.74																		
Cad Manager	49.23																		
Asst. Cad Manager	43.90	4	5.41%	2.37				2	0.56%	0.28									
Cad II	40.76	18	24.32%	9.92				4	1.12%	0.49	2	1.33%	0.59				6	3.41%	1.50
Cad I	30.45							18	5.06%	2.06	6	4.00%	1.63				48	27.27%	11.12
Engineering Tech V	60.00																		
Engineering Tech IV	46.86																		
Engineering Tech III	41.23							20	5.62%	2.32									
Engineering Tech I/II	28.10							42	11.80%	4.55	2	1.33%	0.51						
GIS Specialist III	38.57							28	7.87%	2.21	6	4.00%	1.12						
GIS Specialist I/II	28.10				20	14.29%	4.06	48	13.48%	3.84	12	8.00%	2.28						
Administrative	28.45																		
<b>TOTALS</b>		74	100%	\$38.89	140	100%	\$41.68	356	100%	\$37.93	150	100%	\$38.41	4	100%	\$50.74	176	100%	\$37.97

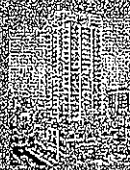
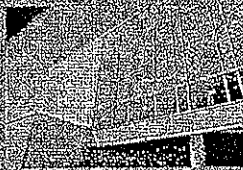


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PROPOSAL FOR  
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May 9, 2011

Mr. Bryan L. Luke, P.E.  
Christopher B. Burke Engineering, Ltd.  
9575 West Higgins Road  
Suite 600  
Rosemont, IL 60018

ECS Proposal No. 16:9037-GP

Reference: Proposal for Subsurface Exploration and Geotechnical Engineering Services,  
Proposed Deerfield Road Bike Path, Deerfield, Lake County, Illinois

Dear Mr. Luke:

As requested in your email correspondence, ECS Midwest, LLC (ECS) is pleased to present the following Lump Sum cost proposal for providing subsurface exploration and geotechnical engineering services for the proposed Deerfield Road Bike Path to be located in Lake County, Illinois.

In preparing this proposal, we have had the opportunity to review the site plans of the proposed project and discuss the overall project requirements with you. We have also reviewed the available geologic and geotechnical information for the general site vicinity including previous exploration performed by ECS for the Deerfield Road Bike Path over Des Plaines River project in 2009. ECS has provided geotechnical exploration for the Deerfield Road Bike Path over Des Plaines River project in 2009. We are therefore familiar with the soils likely to be encountered at the project site and better able to provide relevant and efficient services for the proposed bike path.

#### Project Description

We understand that the proposed Deerfield Road Bike Path will be located south of Deerfield Road and will run from Milwaukee Avenue to approximately 2,500 feet east of Milwaukee Avenue. We understand the proposed bike path will be at grade and will not include structures such as board walk/bridge. There are three alternates for the proposed bike path as indicated in the provided image of the alternates. The proposed bike path will either be along Deerfield Road or along Milwaukee Avenue then on LCFP property. The soil borings will be performed in State Right-of-Way, County Right-of-Way, Lake County Forest Preserve and Private Corporation Property areas. The soil boring work is anticipated to be performed sometime in 2012. The boring in the southeast corner of the intersection will be in the area of an old gas station. We understand one of the alternate routes may be located on the edge of an old landfill.

In order to evaluate the subsurface conditions along the proposed bike path, a subsurface exploration consisting of a series of soil borings will be performed. The scope of services



proposed for this subsurface exploration and geotechnical engineering analysis is given in the following section.

### Scope of Services

As requested, we propose to perform ten (10) subgrade borings and one (1) pavement core for the project along the chosen alternate bike path route. The ten subgrade borings will be extended to a depth of about 10 feet below existing grade. We anticipate the soil borings will be accessible for a truck-mounted drill rig. Samples will be collected with split-spoon samplers at 2½ feet intervals to end of the borings. The existing pavement at one pavement core location will be cored using water-cooled rotary coring equipment. Upon completion of drilling operations, the samples will be returned to our laboratory in Buffalo Grove, Illinois for further identification and testing. Upon completion of testing and engineering analysis, we will prepare a written engineering report that presents our findings and recommendations.

Upon completion of drilling operations, groundwater readings will be obtained; the borings will be backfilled with soil cuttings or patched with cold patch asphalt/fast set concrete mix where appropriate. Some damage to the ground surface may result from the drilling operations near the work areas and along ingress/egress pathways. ECS will attempt to minimize such damage, but no restoration other than backfilling and patching the borings is included in our scope of services. Our proposal is based on Christopher B. Burke Engineering, Ltd. providing topographic info at boring location including surveyed boring ground elevations.

Our integrated services will include the drilling of soil borings by union drill crews under our direct supervision, laboratory testing of representative soil samples for pertinent engineering properties, and various engineering analyses in preparation of an engineering report. The engineering report will include the following items:

- a. Observations from our site reconnaissance including current site conditions, surface drainage features, and surface topographic conditions.
- b. A subsurface characterization and a description of the field exploration and laboratory tests performed. Groundwater concerns relative to the planned construction, if any, will be summarized.
- c. Final logs of the soil borings and records of the field exploration prepared in accordance with the standard practice for geotechnical engineering. A boring location plan will be included, and the results of the laboratory tests will be plotted on the final boring logs or included on a separate test report sheet.
- d. Soil Profile of the soil conditions encountered in the soil borings and summary of the encountered conditions in tabular and narrative formats.
- e. Recommendations for bike path pavement design, including recommendations for subgrade improvements, if necessary.
- f. Specifically, we will discuss the suitability of the on-site materials for reuse as engineered fill to support pavements. We will also include compaction requirements and suitable material guidelines.
- g. Recommendations for additional testing and/or consultation that might be required to complete the geotechnical assessment and related engineering for this project.

Cost Estimate

ECS will provide our services on a Lump Sum cost-basis in accordance with the fees depicted on the detailed "Cost Estimate" below. We have provided a total cost based on the scope of services described above.

We understand that prevailing wages will be applied for this project. As such, based on our contract with IUOE Local 150, ECS is in conformance with the Responsible Bidders Act in accordance with 30 ILCS 500/30-22 Illinois Procurement by participating applicable apprenticeship and training programs approved by and registered with the United States Department of Labor's Bureau of Apprenticeship and Training.

The Lump Sum cost for the described services is as noted below:

➤ Field Exploration:	\$ 3,150
➤ Laboratory Testing:	\$ 700
➤ Engineering Services:	\$ 1,100
<b>Total:</b>	<b>\$ 4,950</b>

In the event, an ATV mounted rig will be required/used to access the boring locations based upon the site conditions at the time of field exploration, an additional ATV rig mobilization cost of \$300 and ATV Rig daily use of \$200 per day will be invoiced. Before mobilizing an ATV rig on the site, you will be informed of our intentions for both your review and authorization. If clearing of trees is required, we will provide costs for your approval prior to initiation of these additional services.

Optional ServicesPrivate Utility Locator

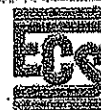
ECS requests that site utility plans and related documents be provided prior to the subsurface exploration to avoid damaging underground structures. As required by local regulations, our driller will contact a public utility location service to clear public utility lines at the Subject Property prior to the start of field exploration. However, if private utilities are located on the site please note that in most cases, municipal and utility representatives will not locate private utilities that are located on private property. Therefore, if requested, ECS can engage a private utility locator to identify on-site utilities to reduce the potential of encountering utilities during drilling activities. The cost of engaging a private locator would be an additional \$600.

Additional Environmental Soil Sampling and Analysis

If future construction activities will result in removal and disposal of excavation spoils per Illinois Public Act 96-1416, soil sampling and analysis along with certification from a licensed professional engineer that the soil is uncontaminated will be required prior to clean construction and demolition debris (CCDD) landfill acceptance. Please note that this only applies to Industrial/Commercial Properties. If the Subject Property is a non-Industrial/Commercial Property (any real property that does not meet the definition of residential property, conservation property, or agricultural property) then the property owner may certify that the soils are uncontaminated. Based on this, ECS is prepared to pre-sample the excavation area(s) in order to obtain CCDD landfill approval prior to excavation activities. This approach will accommodate

**ECS MIDWEST, LLC**

GEOTECHNICAL CONSTRUCTION MATERIALS ENVIRONMENTAL FACILITIES



same day "dig and haul activities" and could reduce overall costs and the potential for delay in the future. Please note that the total number of soil samples required will depend on site specific information (size, previous site use, neighboring property site use, amount of soil to be removed, etc.). If you have any questions, need additional information, or would like to schedule us to sample and analyze your material, please give us a call at 847-279-0366 and ask to speak to someone in the Environmental Department. Additional information concerning CCDD soil sampling and analysis can be found attached to this proposal.

As an option, we propose the following environmental scope of work.

*Task 1: Soil Sampling and Analysis*

ECS proposes to collect two composite soil samples from the on-site soils and analyze the sample for the following:

Number of Samples	Analytical Parameters
2	Soil Illinois Target Compound List (VOCs, SVOCs, Pesticides, PCBs, Metals/Cyanide) and pH

VOCS – Volatile Organic Compounds via Method 5035/8260B

SVOCs – Semi-volatile Organic Compounds via Method 8270

PCBs – Polychlorinated biphenyls via Method 8082

Pesticides – Via Method 8081

TAL Metals/Cyanide – Via Method 6020/7470/7471

pH – Via Method 9045

The soil samples will be analyzed on a standard (7-10 day) laboratory turnaround basis. However, if requested, analytical results can be expedited to meet your needs. (4-day turnaround – costs x 1.25 or 3-day turnaround – costs x 1.5).

*Task 2: Data Evaluation and Report Preparation*

ECS will compare the soil data to remedial objectives for residential properties as cited in 35 Illinois Administrative Code 742 (35 IAC 742): *Tiered Approach to Corrective Action Objectives (TACO)*. These comparisons will be used to gauge the relative severity of chemical impacts, if any. ECS will forward the laboratory results to the client upon receipt. If the soil is determined to be non-impacted, ECS will also provide the IEPA *Uncontaminated Soil Certification Form (LPC-663)* and certification by our P.E. that the soil is not contaminated. Please note that if the soils are found to be impacted additional analyses (specific to the appropriate landfill that can accept impacted soils) may be required prior to acceptance. Costs associated with these additional landfill specific analyses are not included in this proposal.

ECS can initiate work as soon as we received your written authorization to proceed. The soil analysis will be performed on a standard (7-10 day) turnaround basis. ECS will provide a verbal report of the findings following receipt of the laboratory data. If requested, we anticipate that a written Letter Report will be provided within two days of receipt of the laboratory data.

We propose to complete the above scope of services on a Lump Sum basis in accordance with our current fee schedule. We have estimated the time requirements based upon the level of effort deemed appropriate for the proposed tasks. The cost of collecting two (2) composite samples and analyze the soil samples on a standard laboratory turnaround basis would be \$2,800. If additional soil samples are requested, and samples are obtained at the same time as

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our drilling operations (one mobilization), the additional cost would be \$900 per sample. The proposed budget will not be exceeded by 10% without receipt of prior authorization from Client.

### Schedule

In preparing this proposal, we have assumed that the client will assist in the coordination of our access to the site with the current site owners/occupants. We understand the soil boring work will be performed sometime in 2012. We anticipate being able to mobilize to the site within approximately 1½ week after written authorization to proceed and notification that the appropriate on-site personnel have been informed.

We anticipate that the drilling operations will require about 1 to 2 days, and that the laboratory testing, after drilling is completed, will require about 2 to 3 days. Therefore, for time budget purposes, the entire scope should take about 3 to 3½ weeks from initial authorization through final report submission.

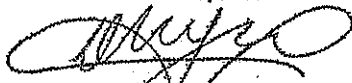
### Closing

If other items are required because of unexpected field conditions or because of a request for additional services, they would be invoiced in accordance with our current Fee Schedule. Before modifying or expanding the extent of our exploration program, you would be informed of our intentions for both your review and authorization. Our "Terms and Conditions of Service," which are included as an attachment to this letter, is an integral part of our proposal. These conditions represent the current recommendations of the ASFE The GeoProfessional Business Association Practicing in the GeoSciences, the Consulting Engineers' Council, and the Geoinstitute of the American Society of Civil Engineers.

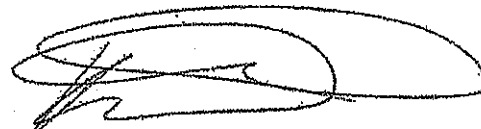
Our insurance carrier requires that we receive written authorization prior to initiation of work, and a signed contract prior to the release of any work product. This letter is the agreement for our services. Your acceptance of this proposal may be indicated by signing and returning the enclosed copy to us. Issuance of a purchase order, or other types of notices to proceed (verbal, written or electronic), implicitly acknowledges acceptance of the Terms and Conditions of Service and this proposal. We are pleased to have this opportunity to offer our services and look forward to working with you on the project.

Respectfully,

ECS MIDWEST, LLC



Danilo A. Guevarra  
Senior Project Engineer



Brett Glitskin, P.E.  
President

Enclosures: Proposal Acceptance Sheet  
Terms and Conditions of Service

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