LOCAL AGENCY		CONSULTANT
Local Agency: Lake County Division of Transportation County: Lake Section: 15-00038-07-WR Project No.: Job No.: Contact Name/Phone/E-mail Address: Chuck Gleason 847.377.7447 cgleason@lakecountyil.gov	Illinois Department of Transportation **Preliminary Engineering Services Agreement For Federal Participation**	Consultant: Christopher B. Burke Engineering, Ltd. Address: 9575 W. Higgins Road, Suite 600 City: Rosemont State: IL Zip Code: 60018 Contact Name/Phone/E-mail Address: Mike Matkovic 847.823.0500 mmatkovic@cbbel.com

THIS AGREEMENT is made and entered into this _____ day of _____, _____ 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 Route 1257 (Key) Length 2.01 mi Structure No. 049-0174

Termini US45/IL21 (Milwaukee Avenue) to Saunders Road/Riverwoods Road

Description: Phase I Engineering and Environmental Studies for the reconstruction and widening of Deerfield Road.

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 1095 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 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 Local Roads and Streets 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:

   a. 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,
   b. 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
   c. 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.
   d. are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency,
   e. 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,
   f. 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
   g. 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. The detailed Scope of Services to be provided by the ENGINEER is included as ATTACHMENT A, and includes the following:

☒ 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 including the Project Development Report, Environmental Class of Action Determination or Environmental Assessment, State Clearinghouse, Substate Clearinghouse and all necessary environmental clearances.

☒ 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

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 90% 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 95% 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 MUTALLY 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 be 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.

10. The ENGINEER or subconsultant shall not discriminate on the basis of race, color, national origin or sex in the performance of this AGREEMENT. The ENGINEER shall carry out applicable requirements of 49 CFR part 26 in the administration of DOT assisted contracts. Failure by the ENGINEER to carry out these requirements is a material breach of this AGREEMENT, which may result in the termination of this AGREEMENT or such other remedy as the LA deems appropriate.

Agreement Summary

Prime Consultant:	TIN Number	Agreement Amount
Christopher B. Burke Engineering, Ltd.	36-3468939	$1,599,011.65

Sub-Consultants:	TIN Number	Agreement Amount
Images, Inc.	45-0482737	$230,669.95
Testing Services Corporation, Inc.	35-0937582	$107,950.00
Terra Engineering, Ltd.	36-3853964	$8,112.02
	Sub-Consultant Total:	$346,731.97
	Prime Consultant Total:	$1,599,011.65
	Total for all Work:	$1,945,743.62

Executed by the LA:

_____
(Municipality/Township/County)

ATTEST:

By: _____ By: _____

_____ Clerk Title: _____

(SEAL)

Executed by the ENGINEER:

ATTEST: Christopher B. Burke Engineering, Ltd.

By: _____ By: _____

Title: Vice President Title: Executive Vice President

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

Deerfield Road; US 45/IL 21 (Milwaukee Avenue) to Saunders Road/Riverwoods Road

FIRM Christopher B. Burke Engineering, Ltd. **DATE** 11/09/15

PTB n/a **OVERHEAD RATE** 1.2526

PRIME/SUPPLEMENT Prime **COMPLEXITY FACTOR** 0.035

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	1. Data Collection	233	9,749.07	12,211.69		3,442.15	1,680.00			27,082.92	1.39%
	2. Topographic Survey	2085	85,290.43	106,834.80		30,113.92	1,350.00			223,589.15	11.49%
	3. Traffic Counts and Analysis	428	18,541.78	23,225.44		6,546.64	120.00	8,112.02		56,545.88	2.91%
	4. Crash Analysis	322	12,030.46	15,069.35		4,247.65	120.00			31,467.46	1.62%
	5. Roadway Drainage	2156	93,353.27	116,934.31		32,960.71	17,200.00			260,448.28	13.39%
	6. Alternate Geometric Studies	1764	80,115.11	100,352.18		28,286.64	5,750.00			214,503.93	11.02%
	7. Intersection Design Studies	588	25,577.63	32,038.54		9,030.82	750.00			67,396.99	3.46%
	8. PBDHR and TSL Drawings	716	33,703.22	42,216.66		11,899.77	1,650.00			89,469.65	4.60%
	9. Environmental Assessment	2288	100,849.95	126,324.65		35,607.60	3,460.00			266,242.19	13.68%
	10. Project Development Report	384	16,497.10	20,664.26		5,824.71	2,400.00			45,386.07	2.33%
	11. Traffic Maintenance Analysis	192	7,754.79	9,713.65		2,738.02	120.00			20,326.46	1.04%
	12. Public Involvement	1602	76,173.38	95,414.77		26,894.91	26,400.00	230,669.95	230,669.95	455,553.01	23.41%
	13. Geotechnical Investigation	48	1,871.66	2,344.45		660.84	0.00	107,950.00		112,826.95	5.80%
	14. Project Administration	504	27,127.21	33,979.54		9,577.94	4,220.00			74,904.68	3.85%
	TOTALS	13310	588,635.06	737,324.27	0.00	207,832.32	65,220.00	346,731.97	230,669.95	**1,945,743.62**	100.00%

CPFF = 14.5%[DL + R(DL) + 1.4(DL) + IHDC]. R = 0.035 (Add-Lanes and EA) and IHDC = 0. Therefore, CPFF = 0.353075 * DL

DBE 11.86%

Exhibit B

Illinois Department of Transportation

Engineering Payment Report

Prime Consultant

Name	Christopher B. Burke Engineering, Ltd.
Address	9575 W. Higgins Road, Suite 600, Rosemont, IL 60018
Telephone	847-823-0500
TIN Number	36-3468939

Project Information

Local Agency	Lake County Division of Transportation
Section Number	15-00038-07-WR
Project Number	
Job Number	

This form is to verify the amount paid to the Sub-consultant on the above captioned contract. Under penalty of law for perjury or falsification, the undersigned certifies that work was executed by the Sub-consultant for the amount listed below.

Sub-Consultant Name	TIN Number	Actual Payment from Prime
Images, Inc.	45-0482737	$230,669.95
Testing Services Corporation, Inc.	35-0937582	$107,950.00
Terra Engineering, Ltd.	36-3853964	$8,112.02
	Sub-Consultant Total:	$346,731.97
	Prime Consultant Total:	$1,599,011.65
	Total for all Work Completed:	$1,945,743.62

Signature and title of Prime Consultant

Date

Note: The Department of Transportation is requesting disclosure of information that is necessary to accomplish the statutory purpose as outlined under state and federal law. Disclosure of this information is REQUIRED and shall be deemed as concurring with the payment amount specified above.

For information about IDOTs collection and use of confidential information review the department's Identity Protection Policy.

Attachment A

Detailed Proposal

Deerfield Road (CH 11)
US 45/IL 21 (Milwaukee Ave) to Saunders Rd/Riverwoods Rd (CH 58)
SN: 15-00038-07-WR

Phase I Engineering – Scope of Work
November 2015

This project includes Phase I Engineering and Environmental Studies (Phase I Study) for Deerfield Road (County Highway 11) from US 45/IL 21 (Milwaukee Avenue) to Saunders Road/Riverwoods Road (County Highway 58), in Lake County, a mainline distance of approximately 10,625 feet, or 2.01 miles. This project is located within the municipal boundaries of the Village of Riverwoods on the east and the Village of Buffalo Grove on the west. This project also traverses the Edward L. Ryerson Woods Forest Preserve, a Lake County Forest Preserve District (LCFPD) holding, which includes an Illinois Dedicated Nature Preserve east of the Des Plaines River and north of Deerfield Road.

This project is anticipated to include widening and/or reconstruction of Deerfield Road to provide two travel lanes in each direction. The existing rural cross section including shoulders and a generally open drainage system, is anticipated to be converted to an urban section with curb and gutter and a closed drainage system. Based on the adjacent forest preserve property and residential property, a range of alternatives will be investigated including 12 and 11 foot lane widths, with no median or a variable median width that may be only four feet wide near the forest preserve area, and widened for left turning vehicles in other areas. In addition, replacement of the bridge carrying Deerfield Road over the Des Plaines River is anticipated with this project based on the extent of proposed widening. A separate off-road bike path will also be included along the south side of Deerfield Road, which will connect with existing bike paths at the east and west project limits, and the existing bike path bridge over the Des Plaines River.

Since federal funding will be used for the Phase I Study, and is anticipated to be used for subsequent phases of project development and construction, the Phase I Study will follow federal project development procedures and will be coordinated with the Illinois Department of Transportation (IDOT) and Federal Highway Administration (FHWA) for reviews and for Phase I Design Approval.

It is anticipated that the Phase I Study will be documented via an Environment Assessment per IDOT and FHWA requirements, and a Project Development Report (IDOT-BLR form 22210).

Based on the variety of known project stakeholders, and to ensure engagement of these stakeholders in the project development process, Context Sensitive Solutions (CSS) project development principles will be utilized as part of the overall project development process. This, coupled with the anticipated Environmental Assessment and associated timeline, and the potential for NEPA/404 coordination dictates a 36-month Phase I project development schedule. However, all efforts will be made to shorten the project development schedule to the extent possible.

The following describes the individual work tasks included in the overall scope of work for this Phase I Study.

Task 1 - Data Collection, Compilation, Review and Evaluation

This task includes obtaining all pertinent data required to proceed with the Phase I Study. Coordination will occur with LCDOT, Lake County Public Works, IDOT, the Lake County Stormwater Management Commission (LCSMC), LCFPD, the Village of Riverwoods, the Village of Buffalo Grove, and all other agencies necessary to obtain base data for the project area, including but not necessarily limited to the following information:

- Copies of any previous studies/reports and correspondence.
- Record roadway and drainage plans.
- Record grading and drainage plans and stormwater reports for adjacent developments.
- Recorded centerline and right-of-way plans for Deerfield Road.
- Available traffic and crash data.
- Available survey data and control data for tying to the Lake County LiDAR mapping.
- Existing and proposed land use and zoning maps.
- Public and private utility plans and atlases (CBBEL will work the LCDOT utility coordinator to obtain this information).
- USGS maps and Flood Insurance Rate Maps, and latest FEMA and LCSMC hydrologic and hydraulic models for the Des Plaines River and Thorngate Creek.
- Public Service routes including Bus, Mail, and Emergency Services.
- Available flooding records and drainage complaints.

CBBEL will coordinate with Lake County GIS Department to obtain available GIS data for the identified project study area, including aerial photography, LiDAR contour mapping, environmental resources, property lines, roadway names, etc. This will include CBBEL coordination with Lake County headquarters in Waukegan.

CBBEL will coordinate with Lake County Public Works to obtain best available information on the location of utilities within and adjacent to the Deerfield Road right-of-way as important based data for evaluation of alternatives considered.

CBBEL will determine facility deficiencies based on information gathered, and prepare maps and charts of data collected and analyze the data. It is anticipated that this task will include field review of the project area, and contact and/or meetings with each municipality to facilitate data collection efforts and to introduce the project team.

CBBEL will coordinate with LCDOT to prepare a property owner notification letter prior to initiating field survey work on private property. In addition, CBBEL will contact property owners, to the extent possible, in advance of surveying on private property.

Specific work tasks will include:

- Initial project field review(s)
- Project data collection
- Coordination to obtain base project mapping data (LiDAR) and Lake County GIS data
- Review, analyze and catalog project data
- Prepare maps, charts, exhibits of data collected
- Coordination with LCDOT for "right of entry letter" for field reviews and survey
- Determine facility deficiencies

Task 2 - Topographic Survey

This task includes development of a complete topographic and stream survey for Deerfield Road from west of US 45/IL 21 to east of Saunders/Riverwoods in accordance with LCDOT Survey Procedures which is included as Attachment A. The survey will include the intersections of US 45/IL 21,

Portwine, and Saunders/Riverwoods, all of which are anticipated to include some level of capacity improvements.

In the 2013 update to the LCSMC Watershed Development Ordinance, SMC switched from NGVD 29 to NAVD 88. On this basis, the project survey for Deerfield Road will be based on NAVD 88 for better correlation of the hydraulic modeling.

The survey will be prepared to be used for both Phase I and Phase II Engineering Services. The topographic survey will extend approximately 50 feet beyond the existing right-of-way line as determined to be required, and tied to the Lake County one-foot contour LiDAR mapping as available. Survey beyond the existing right-of-way line is anticipated to be required due to considerable anticipated voids in the LiDAR mapping due to ground cover. Supplemental field survey will be included to pick up any development that may occur over the course of the Phase I Study and/or to resolve other topographic uncertainties. The survey limits will typically extend 1,500 feet in each direction at the US 45/IL 21 intersection, 1,200 feet in each direction at the Portwine Road and Saunders/Riverwoods Road intersections, 200 feet beyond the existing Deerfield Road right-of-way line at all side streets (public and private), and 50 feet beyond the existing right-of-way at commercial and residential driveways. On this basis, the total survey length is estimated as follows:

- Deerfield Road = 13,500 feet
- US 45/IL 21 (north and south) = 3,000 feet
- Portwine Road (north and south) = 2,400 feet
- Saunders/Riverwoods Road (north and south)= 2,400 feet
- Sidestreet Legs (11) = 2,200 feet
- Driveways (30) = 1,500 feet
  Total = 25,000 feet

On this basis, CBBEL will perform the following survey tasks in accordance with applicable Lake County Survey Procedures:

Horizontal Control: Utilizing state plane coordinates, CBBEL will set recoverable primary control utilizing our GPS equipment, tied to the control for the one-foot contour Lake County LiDAR mapping.

Vertical Control: CBBEL will perform a level circuit within the above identified survey limits establishing benchmarks and assigning elevations to the horizontal control points. The elevations will be based on NAVD 88 and correlated with available FIRM bench marks for the Des Plaines River, tied to the control for the one-foot contour Lake County LiDAR mapping.

Stream Survey: CBBEL will complete full stream surveys for purposes of preparing Hydraulic Reports at the Des Plaines River and for Thorngate Creek (near Jasmine Lane). A stream profile will be taken for a distance of approximately 1000' upstream and downstream of the Deerfield Road right-of-way lines. At least three channel and floodplain cross-sections are anticipated to be required both upstream and downstream of the existing drainage structures. The existing major structures will be surveyed in detail, including but not limited to abutments, piers, bridge low beam and channel shape at each bridge face, headwalls, wingwalls, and culvert size, shape, and material.

Upstream and downstream building foundation elevations within the survey limits and floodplain boundaries will be surveyed as required.

Existing Right-of-Way: CBBEL will establish the existing right-of-way along Deerfield Road within the identified survey limits, based on monumentation found in the field, and based on available plats

of highways, subdivision plats and any other available information. This will include records research and review, along with preliminary right-of-way calculations and analysis.

Of particular concern is the potential presence of underlying utility easements or right-of-way that would result in a County cost responsibility for relocations.

Topographic Survey: CBBEL will field locate all pavements, driveways, curb and gutters, pavement markings, signs, minor drainage structures, driveway culverts, cross road culverts, etc., within the above noted survey limits.

Cross Sections: CBBEL will survey roadway cross sections at 50' intervals within the survey limits, at driveways, and at all other grade controlling features. The cross sections will extend to the existing Deerfield Road right-of-way line.

Utility Survey: All existing storm and sanitary sewers will be surveyed to determine rim and invert elevations and pipe sizes. Above ground facilities of any additional underground utilities including water main, gas, electric, cable, etc. will also be located. CBBEL will work with the LCDOT utility coordinator to determine if a JULIE locate will be requested for the Preferred Alternative prior to initiating topographic survey.

Tree Survey: CBBEL will locate and size all trees 6 inches in diameter breast height (dbh) and greater within the above noted survey limits. The tree survey will extend 30 feet outside of the existing right-of-way where practical. This information will be used to quantify tree impacts. The located trees will be evaluated for species and health as part of Task 9c.

Base Mapping: CBBEL will compile all of the above information into one base map at 1'=20' scale that is representative of existing conditions for use in all Phase I and Phase II engineering work in developing the detailed plan, profile and cross sections for the Preferred Alternative.

Supplemental Field Survey: CBBEL will perform supplement field surveys as necessary over the duration of the project to resolve conflicts such as utilities, drainage features, etc., to complete LiDAR mapping voids due to trees/brush, pick-up any new developments/features along the corridor as required, and to survey potential off-site compensatory storage areas likely on adjacent LCFPD property (three locations assumed).

Task 3 - Traffic Counts, Projections, and Analysis

This task includes the following work related to collection of existing traffic data, development of 2040 traffic projections, and the associated traffic analysis.

Traffic Volume Counts: CBBEL will use Terra Engineering, Ltd. to obtain traffic counts at the following intersections. All traffic counts will be 12-hour counts (6 a.m. to 6 p.m.) for warrant analysis and Intersection Design Study (IDS) preparation as applicable, and will include all through and turning movements and full vehicle classifications:

- US 45/IL 21
- Portwine Road
- Saunders Road/Riverwoods Road
- Parkway North
- I-94 southbound entrance ramp terminal
- Three contingency local side street locations to be determined

Twenty-four (24) hour roadway traffic counts will also be obtained at the following locations and will include vehicle classifications:

- East of US 45/IL 21
- West of Portwine Road
- West of Saunders Road/Riverwoods Road
- East of I-94 southbound entrance ramp terminal (west of I-94 bridge)
- Three contingency locations to be determined

Traffic Projections and Analysis: CBBEL will coordinate with the Chicago Metropolitan Agency for Planning (CMAP) to obtain year 2040 traffic volume projections for the Deerfield Road project. The 2040 traffic projection scenarios are anticipated to include No-Build (no geometric improvements), 2040 3-lane (added center turn lane), 2040 4-lane (no center turn lane), and 2040 5-lane. The 2040 projected traffic volumes will be analyzed to determine what (if any) future geometric improvements will be necessary at each intersection to maintain satisfactory operations. This will include conducting intersection capacity analyses for existing, 2040 No-Build and 2040 Build scenarios for the intersections of Deerfield Road at US 45/IL 21, Portwine, Saunders/Riverwoods Road, Parkway North, and the I-94 southbound entrance ramp terminal.

In addition, CBBEL will coordinate with CMAP to perform a select-link analysis for the Deerfield Road corridor to assess the origins and destinations of travelers using the corridor, as well as the unrealized latent demand currently avoiding the corridor due to daily congestion that could reroute to the corridor with the proposed improvement.

Based on the traffic counts collected and projected 2040 traffic volumes, traffic signal warrants will be reviewed for all locations.

Synchro/Sim Traffic Analysis: In addition, a Synchro/SimTraffic analysis will be prepared for the full project limits for existing conditions, for 2040 No-Build conditions, and for each of the six anticipated concept alternatives considered under Task 6 (Alternative Geometric Studies). In addition, a potential modern roundabout will be evaluated at the Deerfield/Portwine intersection.

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, and the warrant analysis. The report will include supporting data in appendix form.

Task 4 - Crash Analysis

Analysis of Crash History: This task includes obtaining the last five (5) years of crash data from LCDOT (and possibly IDOT for the US 45/IL 21 intersection) including segment and intersection crash data, in order to prepare a project Crash Analysis Report (CAR). It is assumed that two years of additional crash data will become available over the course of project development. CBBEL will add this data and prepare two annual updates based on this additional information. It is anticipated that the crash data will be available through LCDOT which provides access to State, County and municipal crash data and collision diagrams. If necessary, IDOT can also provide the intersection collision diagram for the US 45/IL 21 intersection. CBBEL will prepare supplemental intersection collision diagrams if necessary within the project study area, and other exhibits as necessary to summarize the crash data.

Specific work tasks will include:
- Obtain Crash Data
- Develop CAR Format
- Develop CAR Maps, Tables, Exhibits
- Prepare Preliminary CAR for review
- Prepare Final CAR with disposition of comments

- CAR Update #1
- CAR Update #2

Crash Prediction: CBBEL will utilize the FHWA Interactive Highway Safety Design Model (IHSDM) as a tool to compare the predicted relative safety of each of the six concept alternatives considered under Task 6, as well as the 2040 No-Build alternative.

Task 5 - Roadway Drainage

This task includes development of an Existing Drainage Plan (EDP), hydrologic and hydraulic analysis and preparation of Waterway Information Tables (WITs) for one bridge over the Des Plaines River and two major culverts, coordination with adjacent communities regarding drainage patterns and concerns, development of the Proposed Drainage Plan (PDP), coordination with the LCSMC regarding potential stormwater detention and compensatory storage needs and locations, and coordination with the Illinois Department of Transportation (IDOT) regarding potential drainage connections to US 45/IL 21 at the west end of the project area. Based on coordination with IDOT, and due to the potential improvements at the US 45/IL 21 intersection and the influence of the Des Plaines River floodplain, IDOT will required a formal Location Drainage Study for this intersection.

Existing Drainage Plan

Development of the EDP includes an evaluation of existing drainage conditions through a review of record roadway plans, maps, reports and field reconnaissance trips. Data collection as part of this task includes obtaining pertinent as-built plans, USGS maps, soils maps, topographic maps, existing FEMA studies and drainage reports, and other pertinent data. Off-site and on-site drainage areas and existing drainage systems will be delineated on the base project mapping. Specific work tasks associated with development of the EDP includes the following:

- Identify the tributary drainage area.
- Identify existing drainage outfalls.
- Evaluate outfall sensitivity and suitability for continued use.
- Hydrologic and hydraulic analysis will be prepared for three major crossings, one at the Des Plaines River and two at Thorngate Creek, and WITs will be developed.
- One additional minor culvert crossing also exists within the project area.
- BFE Determination will be required at the downstream crossing of Thorngate Creek.

CBBEL will coordinate with Riverwoods and Buffalo Grove, as well as LCDOT, IDOT, LCFPD, and LCSMC to identify any sensitive drainage areas and outlets, including evaluation of roadway flooding records and complaints, and determine adequacy of existing drainage structures to remain as part of the proposed improvement.

Proposed Drainage Plan

Development of the Proposed Drainage Plan (PDP) includes an evaluation of proposed drainage conditions for the identified Preferred Alternative as discussed in the Alternate Geometric Studies task. Specific work tasks associated with development of the PDP includes the following:

- Delineate off-site and on-site drainage areas and perform hydrologic analyses. Develop the off-site and on-site drainage concept plans.
- Prepare a Proposed Drainage Plan to fully describe the proposed drainage concept and reflect drainage calculations for drainage system size, type and location.
- Complete hydrologic and hydraulic analyses for the three major waterway crossings for proposed improvement conditions, including evaluation of alternate structure sizes and configurations. Complete a WIT and scour analysis for the selected alternative at each major crossing.
- Evaluate the needs for additional rights-of-way and drainage easements for drainage purposes.

- Prepare preliminary stormwater detention analysis and design based on proposed conditions in accordance with the Lake County Watershed Development Ordinance (WDO).
- Underground detention in oversized storm sewer pipes or chambers will be evaluated.
- Prepare preliminary compensatory storage analysis and design to compensate for floodway and floodplain fill based on IDNR-OWR and WDO rules.
- Coordination with LCSMC and LCFPD will occur to discuss the best approach and potential alternative locations for providing compensatory storage and stormwater detention requirements. This is anticipated to include some level of concept plan development for off-site locations, given the limited (if any) suitable areas directly adjacent to the project.
- Evaluate alternatives for water quality Best Management Practices and runoff volume reduction (RVR) requirements in accordance with the WDO.
- Prepare an IDOT Location Drainage Study for work affecting the drainage system along US 45/IL 21.
- Coordinate the PDP with IDOT, LCFPD, LCSMC, Riverwoods and Buffalo Grove.

Meetings: In addition to coordination meetings as part of the EDP and PDP development as noted above, CBBEL drainage staff will also attend all Public Meetings and the Public Hearing for this project.

Task 6 - Alternate Geometric Studies

The Alternate Geometric Studies task includes developing preliminary geometry for initial alternatives for coordination with project stakeholders and for presentation at a Public Meeting, with subsequent development of detailed geometry for the preferred alternative to be presented at the Public Hearing and included in the Project Development Report.

Preliminary Geometry

Concept level geometry will be developed for six alternatives for comparative analysis and coordination with project stakeholders. The concept geometry will be developed and evaluated based on the environmental resource data collected by CBBEL and/or as provided by IDOT through the environmental survey process, based on the traffic and crash analysis performed, based on potential utility impacts through coordination with Lake County Public Works, and based on initial stakeholder input. This is anticipated to be an iterative process including concept design variations as necessary to address design concerns identified through stakeholder coordination including LCDOT and LCSMC. The basic concept alternatives to be developed are anticipated to incorporate the following variables:

- Proposed cross sections ranging from three to five lanes
- 11’ or 12’ wide travel lanes
- Variable median types ranging from no median to striped or raised median(s) with landscaping as a traffic calming measure
- Variable median widths including medians only at dedicated locations or continuous median of variable width ranging from (4’ across the Des Plaines River, or 12’ to 18’ for added landscape features)
- Horizontal alignment variations to minimize impacts

For purposes of this proposal, it is assumed that six concept alternatives as combinations of these variables will be developed for purposes of comparing travel performance, impacts, and costs. In addition to the horizontal alignment alternatives, there will be vertical alignment alternatives based on the proposed Des Plaines River bridge clearance and roadway freeboard requirements. Vertical alignment adjustment may be limited due to access requirements to adjacent properties.

The following assumptions are also made with respect to development of the concept geometry:

- Pedestrian and bicycle accommodations will be consistent across all alternatives based on LCDOT standards and any additional requirements identified through stakeholder coordination.
- A closed drainage system (i.e.; curb and gutter) will be used to minimize overall right-of-way impacts along the corridor.
- Stormwater detention and compensatory storage requirements and locations will be similar for all alternatives. This information will be identified based on stakeholder coordination and finalized as part of the Preferred Alternative.
- For each concept alternative, preliminary plan, profile and critical cross sections will be developed to determine likely right-of-way needs for assessment of environmental impacts and development of concept level cost estimates.
- The project traffic analysis will include Parkway North and the I-94 southbound entrance ramp terminal intersections to access operational performance results. However, the east project termini is assumed to be Saunders Road/Riverwoods Road, with improvements at this intersection transitioning to meet the existing five-lane roadway cross section to the east, with no improvements anticipated at Parkway North or the I-94 southbound entrance ramp terminal intersections.

As discussed in the public involvement task below, it is anticipated that multiple meetings will be held with project stakeholders to discuss the development and evaluation of the initial alternatives. This is anticipated to include multiple meetings with LCDOT, Lake County Public Works, LCFPD, LCSMC, Riverwoods, Buffalo Grove, individual property owners and/or homeowners associations.

Preferred Alternative

Based on the results of the alternatives development and comparative analysis, and based on the results of stakeholder coordination, the Preferred Alternative will be identified. Detailed plan, profile and cross section studies will be developed for the Preferred Alternative as required to complete the Phase I Study. The Preferred Alternative will be the basis for development of the Proposed Drainage Plan and for determination of right-of-way easement requirements for the project. The Preferred Alternative will also be the basis for the discussion of impacts and mitigation in the Abbreviated Environmental Assessment.

CBBEL will prepare preliminary plan and profile sheets showing existing and proposed horizontal and vertical geometry at a scale of 1"=20'. The proposed geometry will be set to meet all applicable LCDOT design criteria or approved design exceptions. The proposed stormwater detention and compensatory storage needs will be included with the proposed plans for the Preferred Alternative.

Existing and proposed cross-sections will be provided at 50' intervals and at all side streets, driveways and other grade controlling features to determine right-of-way and easement requirements, wetland impacts (if/where present), ditch locations and drainage patterns, and to fine-tune the proposed vertical geometry. These cross-sections will show existing right-of-way, existing and proposed top surface grade elevation, and the proposed right-of-way and easements where necessary.

This task will include attendance at IDOT/FHWA coordination meetings at the IDOT District One office in Schaumburg to present the project scope and limits, and to request concurrence with the Abbreviated Environmental Assessment. For the purpose of this proposal, it is assumed that attendance at three (3) coordination meetings will be required to complete the Phase I Study.

This task also includes development of the construction cost estimate for the Preferred Alternative.

Specific work tasks will include:

- Develop preliminary geometry (six alternatives plus refinements, including horizontal and vertical preliminary geometry).
- Comparative analysis of the preliminary alternatives.
- Develop detailed geometry for the Preferred Alternative.
- Determine right-of-way/easement requirements for the Preferred Alternative based on geometry, drainage, environmental, and pedestrian/bicycle considerations. This will include preparing a separate set of proposed right-of-way plans.
- Up to 15 coordination meetings with IDOT, LCDOT, Lake County Public Works, LCFPD, LCSMC, Riverwoods, Buffalo Grove, and Property Owners.
- Attendance at up to three IDOT/FHWA coordination meetings.
- Prepare construction cost estimate for the Preferred Alternative.

Task 7 - Intersection Design Studies

CBBEL will prepare four Intersection Design Studies (IDSs) at a scale of 1" = 20' for the intersections of Deerfield Road at US 45/IL 21, at Portwine Road, at Saunders Road/Riverwoods Road, and at the proposed signalized intersection by the Village of Riverwood's just west of Brentwood Rehabilitation Center, which will include the results of existing and 2040 Build traffic analysis, the proposed intersection geometry, the proposed traffic signal layout, and the associated design criteria/design exceptions/general notes. A potential modern roundabout will be analyzed at the Deerfield/Portwine intersection under Task 3, and if it advances as part of the Preferred Alternative, a roundabout IDS will be prepared for that location. The preliminary IDS documents will be submitted to LCDOT and IDOT for review, and revised based on any review comments received. An IDS is not included in the scope of work for either the Parkway North or the I-94 southbound entrance ramp terminal intersections.

Task 8 - Preliminary Bridge Design and Hydraulic Report, and TSL Drawings.

This task includes completion of all required bridge inspections, preparation of the bridge Type, Size, and Location (TSL) drawings, and preparation of the Preliminary Bridge Design and Hydraulic Report (PBDHR - BLR form 10210) with supporting documentation per IDOT requirements for the Des Plaines River bridge (SN 049-0174).

Although the Des Plaines River bridge may ultimately be replaced as part of the proposed improvement recommendation from this Phase I Study, for purposes of documenting current conditions, appropriately evaluating alternatives that could potential reused substructure elements, and identifying any near term maintenance needs, a full inspection of the Des Plaines River bridge will be prepared along with a Bridge Condition Report.

The culvert conveying Thorngate Creek near Jasmine Lane will also be inspected to determine condition, which along with the hydraulic analysis prepared in Task 5 will be evaluated to determine if the culvert needs to be replaced or just lengthened due to roadway widening.

It is anticipated that retaining walls along the north right-of-way of Deerfield Road may be required to prevent encroachment into the Edward L. Ryerson Nature Preserve. If exposed height is 7 feet or taller, IDOT will require TSL drawings during the Phase I Study. For purposes of this proposal, it is assumed that TSL drawings will be required for two locations of proposed retaining walls with an exposed height of 7 feet or more.

Task 9 - Environmental Assessment

This work task includes development of an Environment Assessment in accordance with Federal project development procedures for reconstruction and add-lanes projects. Development of the Environmental Assessment (EA) will comply with IDOT BDE Procedures.

Development of the EA includes all work necessary to prepare and submit the EA for IDOT and FHWA approval in advance of the Public Hearing. It is anticipated that this will include two main submittals of the EA with the first submittal for initial LCDOT and IDOT review. Based on comments received from this review, a revised EA will be resubmitted with disposition of comments, for review and approval by FHWA.

There is the potential that NEPA/404 merger coordination will be required for this project based on the potential impacts to wetlands/waters of the US exceeding 1.0 acres, and based on potential impacts to mapping ADID or otherwise high quality wetlands. On this basis, it is assumed that four (4) presentations at NEPA/404 merger meetings will be required.

Based on the IDOT BDE Manual, since the highest design-year (2040) approach-volume on the busiest leg of the busiest intersection within the project limits (i.e.; US 45/IL 21) is less than 5,000 vph or 62,500 ADT, this project is exempt from requiring microscale air quality analysis.

The anticipated work tasks associated with development of the EA are as follows:

A. Environmental Field Survey and Technical Memorandum

An environmental field survey of the project area will be completed to determine the limits of any waters of the U.S./wetlands, to assess wildlife and plant communities and qualities, and to complete a visual assessment of the project area.

The waters of the U.S./wetland limits will be recorded using GPS for direct inclusion in the project mapping and design files. The delineation will be completed based on the methodology established by the U.S. Army Corps of Engineers (USACE). Waters of the U.S./wetland quality ratings, based on the Swink and Wilhelm Methodology (1994), will be developed.

The results of the waters of the U.S./wetlands field survey will be summarized in a Technical Memorandum that will include the USACE Routine On-Site Data Forms for the identified waters of the U.S./wetlands, exhibits depicting the delineated waters of the U.S./wetland boundaries, National Wetland Inventory sites, Lake County Wetland Inventory sites, Soil Survey information, floodplains, USGS topography, and supporting site photographs. The Technical Memorandum will also summarize the assessment of wildlife and plant community qualities.

As part of the environmental field survey task, CBBEL will also complete a visual assessment of the study area to inventory existing scenic resources and potential public concerns to the proposal. The following visual quality evaluation criteria will be evaluated to confirm that appropriate visual quality is integrated into the project. This input will be coordinated with the project engineer in developing the Preferred Alternative:

- Natural landscape elements.
- Topographical and physical characteristics.
- Recreational sites.
- Residential areas and their character.
- Historical and/or unique cultural features/properties.
- Existing land uses (e.g., residential, commercial, parks/open space).
- Existing and proposed project profile as it relates to these elements/features.

The results of the visual assessment and project recommendations will be summarized in a Technical Memorandum.

B. ESR Submittal to IDOT

Based on the above field surveys CBBEL will submit an Environmental Survey Request (ESR) to IDOT for processing in accordance with IDOT procedures based on right-of-way acquisition being anticipated for this project. Development of the ESR includes preparation of a photo log of structures adjacent to the project corridor that are approximately 50 years old or older for completion of the cultural resource review.

C. Tree Tabulation and Evaluation

The survey of all trees greater than or equal to 6" diameter at breast height (dbh) will be completed as part of Task 2 to include location and size. As part of this task, CBBEL will also tabulate all surveyed trees and evaluate them with respect to species and health.. Each evaluated tree will be 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. The tree inventory will be included in the Project Development Report.

In addition, a habitat assessment for the Northern Long-Eared Bat (NLEB) will be completed per IDOT requirements, based on tree removal anticipated with the Preferred Alternative. This includes field investigation and preparation of a technical memorandum.

D. Wetland Impact Evaluation Forms

CBBEL will prepare waters of the U.S./wetland Impact Evaluation (WIE) forms as required by IDOT for all identified waters of the U.S./wetlands in the project corridor, whether impacted or not. This task will include a resource review, preparation of supporting documentation, submittal of the WIE forms, coordination and follow-up with the reviewer as required. It is assumed that eight (8) waters of the U.S./wetlands sites will be identified that will require WIE submittal.

E. Preliminary Environmental Site Assessment

This task includes preparation of a Preliminary Environmental Site Assessment (PESA) for special waste, per IDOT requirements. CBBEL will prepare the PESA for the entire project area, accept for areas within right-of-way owned by the State of Illinois (i.e.; US 45/IL 2). As part of the ESR submittal, IDOT will be requested to complete the PESA for the US 45/IL 21 right-of-way as required per IDOT policy.

If the PESA results determine there are properties within the project limits with Recognized Environmental Conditions (RECs), a PESA Response form will be prepared indicating whether or not the project will avoid each property with an REC. For purposes of this proposal, it is assumed that RECs will be identified and a PESA Response will be prepared.

F. Traffic Noise Analysis and Report

A traffic noise analysis will be prepared for the project area as required by IDOT and FHWA policies and procedures based on the proposed add-lanes scope of work, including use of the FHWA Traffic Noise Model (TNM).

Data collection for the noise analysis includes information on land uses, traffic volume data, existing roadway design features (i.e. speed limits, roadway elevation, and ROW limits), and sensitive receptor locations. Sensitive receptor locations will be identified within adjacent residential areas, based on the 2040 peak hour traffic projection data and the horizontal and vertical roadway alignment information. Noise measurements will be obtained at the identified sensitive noise receptors in order to calibrate the noise modeling effort. Data inputs for the model will include a CADD file of topographical information and geometry as well as traffic characteristics.

A separate Traffic Noise Report will be prepared which summarizes the above traffic noise analysis.

Specific work tasks include the following:

- Data collection for the traffic noise analysis.
- Noise monitoring for calibration of the TNM.
- Existing conditions (existing traffic) noise prediction using TNM.
- 2040 No-Build conditions (2040 traffic with no roadway improvements) noise prediction using TNM.
- 2040 Build conditions (2040 traffic with proposed roadway improvements) noise prediction using TNM.
- Coordination, documentation and preparation of exhibits.
- Noise Abatement Analysis including Computer Time and Abatement options.
- Prepare Traffic Noise Report.
- Completion of benefitted receptor "view-point" coordination. This is assumed to include a separate open house meeting, individual coordination meetings with benefitted receptors as/if required, and potential two rounds of "view point" correspondence.

G. Determine Comprehensive Impacts and Measures to Minimize Harm

This task includes evaluating/determining the comprehensive impacts for the Preferred Alternative for discussion in the EA, and determining required mitigation measures and proposed sustainability treatments. This includes any required water quality analysis, and to evaluate the use of water quality BMP's at drainage outfalls, and other measures/treatments as determined appropriate.

Impacts from both construction and operation of the proposed project will be assessed for the following environmental issues areas at a minimum:

- Social/Economic
- Agricultural
- Cultural
- Air Quality
- Noise
- Natural Resources
- Water Quality/Resources
- Flood Plains
- Wetlands
- Special Waste
- Special Lands (4(f), 6(f), OSLAD)

Specific work tasks will include:

- Evaluation and determination of comprehensive impacts for the Preferred Alternative.
- Evaluation of suitable sustainability treatments (i.e.; Green Infrastructure) for incorporation into the Preferred Alternative, including coordination with project stakeholders.
- Develop the "Environmental Consequences" and "Commitments" Sections of the EA.
- Prepare for and attend IDOT/FHWA Coordination meetings for discussion of impacts and potential mitigation measures.

H. Section 4(f) Evaluation

A Section 4(f) Evaluation is required if the project will impact publicly owned recreational lands and/or any sites/structures eligible for inclusion on the National Register of Historic Places (NRHP). No impacts to properties/structures currently include on, or eligible for, the NRHP is anticipated.

While avoidance of Section 4(f) lands will be an important goal of the project, depending on the Preferred Alternative identified, this project has the potential to impact property owned by the LCFPD under two scenarios, at separate locations:

- Potential relocation/replacement of the Des Plaines River Trail that exists along the west bank of the Des Plaines River beneath the Deerfield Road bridge.
- Potential use of LCFPD property for compensatory storage and/or stormwater detention.

The Edward L. Ryerson Nature Preserve along the north side of Deerfield Road will be avoided. There are otherwise no other known parks or recreational areas within the project limits that would be impacted by the project.

Any use of the LCFPD property as part of the Preferred Alternative would have to be agreeable to the LCFPD, under which circumstances a *de minimis* impact finding would ultimately occur for each separate location by the FHWA, thus not requiring separate Section 4(f) reports to be prepared. Coordination with the LCFPD as LCDOT, IDOT and FHWA will be required to document the proposed use of LCFPD property and to facilitate the FHWA *de minimis* finding. For the purposes of preparing this proposal, it is assumed that the proposed project will be involved in two separate LCFPD locations or Section 4(f) sites whether as part of the proposed improvement footprint and/or associated stormwater detention and compensatory storage sites.

Specific work tasks will include:

- Coordination meetings with the LCFPD to discuss propose use of LCFPD property.
- Develop exhibits for use with the property owner coordination.
- Evaluate alternatives and measures to minimize harm.
- Prepare the Section 4(f) *de minimis* documentation for two separate locations as required for the AEA.
- Prepare *de minimis* correspondence to the LCFPD after the Public Hearing.
- Prepare for and attend FHWA coordination meetings for concurrence with the Section 4(f) *de minimis* finding.

<u>I. Prepare Environmental Assessment (EA)</u>
The EA will be developed in accordance with IDOT BDE Manual Procedures as applicable. The sections of the EA to be developed are as follows:

- Section I – Introduction & Purpose and Need
- Section II – Affected Environment
- Section III – Alternatives
- Section IV – Impacts, Documentation, and Mitigation
- Section V – Public Coordination and Comments
- Section VI - Appendices

CBBEL will prepare draft Section I during the initial phase of the project after necessary data collection is complete, the traffic and crash analysis is complete, and initial stakeholder coordination has occurred to identify stakeholder issues/concerns.

The draft Section I will be submitted to LCDOT/IDOT/FHWA for formal review and concurrence prior to developing initial project alternatives.

Section III will identify the preliminary alternatives including the No-Build alternative, methods for comparative analysis and results, reasons for eliminating preliminary alternatives, alternatives to

avoid certain environmental resources or sensitive areas, and the selection of the Preferred Alternative.

Section IV will identify the environmental consequences and mitigation strategies for the Preferred Alternative.

Coordination and review meetings with LCDOT, IDOT and FHWA are anticipated to secure FHWA concurrence to release the EA for public comment and proceed to a Public Hearing.

J. NEPA/404 Merger Meetings

There is the potential that NEPA/404 merger coordination will be required for this project based on the potential impacts to wetlands/waters of the US exceeding 1.0 acres, and based on potential impacts to mapping ADID or otherwise high quality wetlands. On this basis, it is assumed that four (4) presentations at NEPA/404 merger meetings will be required as follows:

- Initial Presentation – Presence of Resources
- Purpose and Need Concurrence
- Preliminary Concept Alternatives and Potential Impacts – Finalist Alternatives Concurrence
- Results of the Public Meeting – Preferred Alternative Concurrence

Specific work tasks will include:

- Prepare Section I and submit for LCDOT, IDOT and FHWA review.
- Prepare Section II based on the environmental survey results.
- Prepare Section III to summarize the alternatives considered, alternatives eliminated and why, and the Preferred Alternative.
- Prepare Section IV summarizing the results of the detailed environmental analysis of the Preferred Alternative and identified mitigation strategies as applicable.
- Compile Maps, Charts, Graphs and Exhibits for the EA.
- Prepare and maintain the project Environmental Inventory Map/Exhibit, which will be included in the EA.
- Prepare complete Preliminary EA Report and submit to LCDOT and IDOT for review.
- Revise and resubmit the EA based on review comments for IDOT and FHWA concurrence to proceed to the Public Hearing.
- Post Public Hearing, finalize the EA and submit to LCDOT, IDOT and FHWA for approval.
- Prepare for and attend four IDOT/FHWA coordination meetings to discuss the EA.
- Prepare for and attend four NEPA/404 merger meetings.

Task 10 - Project Development Report

This task includes development of the Project Development Report (PDR) in accordance with IDOT-BLR Form 22210, and coordinated with LCDOT and IDOT for review/approval. This task includes development of the PDR and all supporting exhibits.

Preliminary PDR

CBBEL will prepare a complete preliminary PDR for LCDOT and IDOT review prior to the Public Hearing.

Specific work tasks include:

- Compile Maps, Charts, Graphs and Exhibits for the PDR.
- Prepare complete Preliminary PDR and submit to LCDOT and IDOT for review prior to the Public Hearing.
- Revise and resubmit Preliminary PDR based on review comments received.
- Coordination/Review Meetings

Final PDR

CBBEL will incorporate Public Hearing input/disposition of comments; and address any additional comments received from LCDOT and IDOT, revise the preliminary PDR accordingly and submit to LCDOT and IDOT for Phase I Design Approval.

Specific work tasks will include:

- After the Public Hearing, revise the PDR including maps, charts, graphs and exhibits based on outstanding review comments and comments received at the Public Hearing.
- Submit the final PDR to LCDOT and IDOT for Phase I Design Approval.

Task 11 - Traffic Maintenance Analysis

CBBEL will prepare a Traffic Maintenance Analysis (TMA) for construction of the Preferred Alternative. This will include a determination of the most effective method for construction staging and traffic maintenance, including an evaluation of the need for maintaining left turn traffic during construction and any associated temporary pavement needs. The need for temporary construction easements will also be evaluated for inclusion on the proposed right-of-way plan sheets. This task will be summarized in a TMA report for this project that is anticipated to be included in the Project Development Report as an appendix.

Specific work tasks will include:

- Determine stage construction methodology.
- Determine traffic maintenance requirements.
- Determine temporary construction easement need.
- Prepare TMA report with exhibits.

Task 12 - Public Involvement

CBBEL will lead the public involvement effort for this project and will utilize Images, Inc. to provide support for initial project branding, public involvement material production, stakeholder meeting organization and preparation, and website development and management in coordination with LCDOT. The following provides the overall scope of work for this task.

An initial project kickoff meeting will be held with LCDOT and the CBBEL team to confirm the overall public involvement approach and to confirm initial public involvement activities. Project branding will be discussed at this time.

Initial project stakeholder coordination meetings will be held with the Village of Riverwoods, the Village of Buffalo Grove, the LCFPD, the LCSMC, and one other project stakeholder (as determined) to introduce the project team, to discuss the proposed project development process (including the planned public involvement activities) and seek support from each community, and to provide an opportunity for each community to provide early project input.

Subsequent to these initial meetings, it is anticipated that an initial Public Informational Meeting (PIM) will be held as a lead project task to present the project, provide an opportunity for early stakeholder input, and to request volunteers for participation in a Stakeholder Involvement Group (SIG) for Deerfield Road. The SIG will provide a structured process by which the project team and project stakeholders will have the opportunity for direct information exchange as part of strategic points within the overall project development process.

The SIG process will be guided by a Stakeholder Involvement Plan (SIP) developed for the Deerfield Road project that establish the framework for the overall public involvement program for this project.

The following is the general scope of work anticipated as part of the overall public involvement program for this project.

Stakeholder Identification and SIP Development:
The first step in the overall project development approach is the preparation of an initial list of project Stakeholders and SIG participants, and development of a formal SIP for the project. The primary purpose of the SIP is to provide the framework for overall stakeholder involvement throughout the project development process. The SIP will remain flexible based on the needs of the project, and may be updated throughout the project development process as necessary. The SIP will be presented at the initial SIG meeting for acceptance.

Specific work tasks include the following:

- Identification and prepare initial list of project Stakeholders.
- Develop preliminary SIP and submit to LCDOT for initial review/concurrence.

Public Informational Meeting
An initial Public Informational Meeting (PIM) will be advertised and held to explain the overall project development process requirements, present the public involvement program, provide an opportunity for early public comment, and solicit additional participants in the SIG. The initial PIM is anticipated to be an open house meeting with various stations established to describe the project, the federal project development process, the SIP, the roles and responsibilities of the SIG, and solicit applications for SIG membership. An audio-visual presentation will not be prepared for the initial Public Information Meeting.

SIG Meetings:
Five (5) separate SIG Meetings and/or Workshops are anticipated for the project, however, this will remain flexible based on actual project needs. SIG meetings are intended to be held as informational meetings guided by an audio-visual presentation, and typically followed by a workshop as follows:

- SIG Meeting 1: Introduction of project team and SIG members. Review the overall project development process and schedule, and review the SIP, including the decision making process and authority (LCDOT, IDOT, and FHWA based on federal project development process), for SIG acceptance. Present traffic data and analysis (including 2040 projections and 2040 No-Action conditions), and crash data and analysis. A workshop will be facilitated for development of the SIG Project Problem Statement.
- SIG Meeting 2: Present the project Draft Purpose and Need statement incorporating project analysis and SIG input, for SIG acceptance. A workshop will be facilitated to identify project design concerns and opportunities, and the range of potential alternatives for consideration and development by the consultant team as the preliminary concept alternatives.
- SIG Meeting 3: Present the range of preliminary concept alternatives developed and a comparative analysis with respect to travel performance, socioeconomic and environmental impacts, and planning level cost estimates. A workshop will be facilitated to obtain SIG input on the comparative analysis of the range of preliminary concept alternatives, with the objective to narrow the full range of alternatives to the finalist alternatives (anticipated to be two) for presentation at the Public Meeting, along with a disposition of all alternatives considered but dismissed.
- SIG Meeting 4: Present the results of the Public Meeting, and further comparative analysis of the finalist alternatives based on any (if any) new information relative to travel performance, impacts, and costs, and agency coordination (i.e.; IDOT, FHWA, NEPA/404). Based on this information, a workshop will be facilitated to obtain SIG input for consideration by LCDOT/IDOT/FHWA in identifying the Preliminary Preferred Alternative.

- SIG Meeting 5: Pre-Public Hearing meeting to present the detailed geometric plans for the Preliminary Preferred Alternative identified by LCDOT, IDOT, and FHWA. A pre-view of the Public Hearing materials will be presented including detailed proposed improvement plan and profile exhibits, the draft Environmental Assessment, including right-of-way requirements, traffic noise analysis results and other pertinent materials. A workshop will be facilitated for SIG input on any remaining design concerns and opportunities associated with the Preferred Alternative, such as aesthetics and Maintenance of Traffic (MOT) that will be addressed in the project engineering and environmental reports, and for inclusion in the Public Hearing presentation.

Specific work tasks associated with the SIG meetings includes the following:

- Identify location for each SIG meeting with assistance from LCDOT.
- Prepare Meeting Agenda and submit to LCDOT for concurrence.
- Prepare SIG meeting invite letters and emails, and distribute pre-meeting materials.
- Prepare meeting presentation and materials.
- Staff attendance at SIG meetings.
- Prepare SIG meeting minutes/summary and distribute.

Public Meeting and Hearing:

One Public Meeting and One Public Hearing is assumed for the project. The Public Meeting will present the project finalist alternatives and comparative analysis for public comment. The Public Hearing will present the Preliminary Preferred Alternative and the draft engineering and environmental reports for public comment. Both the Public Meeting and Public Hearing will utilize an open house format with various stations to present the pertinent materials. A comment station will be available for both the Public Meeting and the Public Hearing, with a court reporter also available for the Public Hearing. A brief (less than 10 minutes desired) audio-visual presentation will be prepared for the Public Meeting and the Public Hearing.

Specific work tasks for both the Public Meeting and Public Hearing include the following:

- Compile Mailing List (including Stakeholders and all adjacent property owners).
- Preparation of Public Meeting & Hearing Brochures/Handouts.
- Preparation of Public Meeting & Hearing Display Exhibits (Aerial Displays with Alternatives, Cross Sections, Traffic Data, Crash Data, Environmental Data, and other displays as appropriate).
- Attendance at Public Meeting & Hearing "Dry Runs".
- Secure location for Public Meeting & Hearing Site.
- Preparation of Public Meeting & Hearing Newspaper Display Ads and Press Releases.
- Attendance at Public Meeting and Hearing.
- Securing a Court Reporter for the Public Hearing.
- Preparation of record summaries of the Public Meeting and Public Hearing which will include at a minimum copies of all notices, presentation material, attendance lists, comments, and responses.
- Preparation of Post Public Meeting & Hearing project updates for posting on the Lake County project website (see below) that will summarize the PM/PH proceedings, general comments received and responses, and an overview of the next steps in project development.
- Prepare individual response letters to uncommon comments received, or requests for information received at the Public Meeting and Public Hearing.

Project Website:

An independent project website will be developed to provide a central location for the exchange of project information between the project team (LCDOT and consultants) and project stakeholders. The website can also be used as a secure location for posting of project information for review by LCDOT only.

The website will be located on a project specific internet domain acquired by the consultant and linked to the LCDOT project website. The website will incorporate graphics and messaging developed specifically for the Deerfield Road project.

Website content will be developed and maintained throughout the Phase I project development process (anticipated to be approximately two years) by the consultant. All website content will be reviewed and approved by LCDOT before posting. The website will include at least the following information/capabilities for the project team and stakeholders:

- List of project stakeholders including contact information
- Background project information including schedule
- Provide a list of Frequently Asked Questions (FAQs) and responses
- SIG and Public Information Meeting/Public Meeting/Public Hearing notifications
- Project team contact information
- Resource for submitting questions and comments
- Posting of project documents for information and/or review

At the conclusion of the Phase I project development process, the website and domain ownership will be assumed by LCDOT unless otherwise specified.

Task 13 - Geotechnical Investigation

CBBEL will utilize Testing Service Corporation to complete a geotechnical investigation for the project including roadway/subgrade borings initially and later structural borings as determined to be required, and a pavement design life-cycle cost analysis (LCCA) report. Reconstruction of the existing Deerfield Road pavement from east of US 45/IL 21 to west of Saunders Road/Riverwoods Road is assumed based on the anticipated widening and/or likely roadway profile adjustments to address pavement drainage issues. On this basis, a pavement condition analysis is not proposed.

However, this task includes preparation of a complete soils report per LCDOT and IDOT requirements for Deerfield Road within the project limits for assessment of subbase condition, for determination of any likely subbase remedial measures and associated costs, and for use during Phase II Engineering. In addition, structure borings will be obtained at proposed retaining wall locations and at the Des Plaines River bridge as/if required. A pavement design life-cycle cost analysis report will be prepared.

CBBEL anticipates using Testing Service Corporation (TSC) for this work.

Specific work tasks will include:

- Obtain pavement cores and soil borings as required.
- Pre-field work coordination with LCDOT on the boring plan, including traffic maintenance prior to field work.
- Post-field work meeting at LCDOT to discuss results and report preparation.
- Prepare Soils Report for pavement design per IDOT and LCDOT requirements as applicable.
- Preparation of a pavement design life-cycle cost analysis report.

Task 14 - Project Administration and Quality Reviews

This task includes overall project administration and management, as well as Quality Assurance (QA) reviews associated with major project deliverables, over the duration of the Phase I project development process, which is anticipated to be 36 months.

Project administration includes managing the day to day work effort on the project to ensure an efficient project development process including work force allocations, budget oversight, monthly progress reviews to ensure project milestones are being met to the extent possible, and periodic progress coordination meetings.

QA reviews will occur in advance of major project deliverables in accordance with CBBEL's established QA procedures.

Specific work tasks will include:

- General project management/administration including staff resource allocation, task/schedule oversight, quality reviews, etc.
- Prepare monthly progress reports including a copy of the overall project schedule.
- Attend quarterly project status meetings with LCDOT as determined to be necessary.
- Coordination Meetings (assume 6 meetings including travel and preparing meeting summaries).

ATTACHMENT A

LCDOT DESIGN SURVEY PROCEDURES

(Revised 12/4/14)

HORIZONTAL ALIGNMENT

Unless otherwise specified in the services contract, the CONSULTANT is to provide the horizontal alignment. The CONSULTANT will conduct all surveying, stationing, and preparation of required plans using English units of measure and the U.S. Survey Foot. The CONSULTANT'S SURVEYOR will try to re-establish the original horizontal alignment as shown on the recorded R.O.W. plats. The CONSULTANT shall contact LCDOT's Land Surveyor to obtain R.O.W. plats and field notes before establishing the horizontal alignment and stationing. The CONSULTANT shall notify LCDOT's Surveyor immediately if the alignment cannot be reproduced or if in the CONSULTANT'S opinion the existing alignment information is in error.

The CONSULTANT'S SURVEYOR, prior to construction, shall stake the PCs, PIs, PTs, and POTs so that the alignment location can be verified before construction staking is initiated. The CONSULTANT'S SURVEYOR will provide four reference ties to all U.S. Public Land Survey Monuments that are located within the construction limits. The reference points should be located outside of the anticipated construction limits if practical, so that they can be used after construction to replace the monuments. The CONSULTANT shall record Monument Records for all Section and Quarter Section corners set or found within the construction limits.

The CONSULTANT will mark all 100-foot interval station locations on the survey base line for construction when on paved surfaces with a P.K. or Mag nail and spray paint. The baseline for relocated alignments when off pavement will be marked at the PCs, PTs, and POTs with iron rods. The rods shall be set one foot below the surface in farmed land. The CONSULTANT will advise the County of any pavement alignment variations. In cases where the proposed centerline of construction or survey baseline is different from the existing centerline of R.O.W., both shall be shown and the relationship between them shall be indicated on an Alignment & Tie sheet.

ALIGNMENT & TIE SHEET

An Alignment & Tie Sheet shall be provided as part of the final plans. The plans are to be prepared using English units of measure and the U.S. Survey Foot. The station, offset, and coordinates of the alignment points (PCs, PTs, PIs, and POTs) and survey control (traverse) points shall be shown. Coordinates for all projects shall be on the Illinois State Plane Coordinate System, - East zone, NAD83 (adjustment). The grid (combination) factor for the project shall be shown.

VERTICAL ALIGNMENT

The North American Vertical Datum of 1988 (NAVD 88) shall be used for vertical control. Lake County Mapping Benchmarks are available on-line (http://gis.lakeco.org/maps/).

NAVD88 benchmarks are available on-line from the National Geodetic Survey. LCDOT's Land Surveyor may also be contacted for benchmarks that may be in the area. The primary benchmarks and site benchmarks shall be listed and described on the Alignment & Tie Sheet. The location of the site benchmarks shall also be shown on the plan sheets with a symbol. Site benchmarks are to be located at less than 1000-foot intervals with a minimum of two (2) on each project.

All benchmarks shall be located on stable objects. LCDOT prefers these objects to be outside the construction limits. Some acceptable benchmark examples are, spikes in poles, bolts on fire hydrant rings, and concrete foundations.

TOPOGRAPHY

The CONSULTANT shall cut cross-sections at 50-foot intervals and at all points needing clarification. For areas of superelevation or requiring greater detail, cross-sections shall be cut at 25-foot intervals. The cross section interval should be defined in the engineering services contract.

Full cross-section profiles will be taken at all cross streets, alleys, cross road culverts, and entrances (commercial, private, and field). Half cross-sections will not be accepted because they skew the computer terrain model.

The CONSULTANT will locate and identify all trees (6 inches in diameter or greater) within the area either side of the centerline, defined by the proposed ROW or construction limits (whichever is greater) plus an additional 10 feet. The trees shall be identified by species and size. The trees shall be located by station/offset and have a ground elevation.

Streams, tributaries, or major drainage ditches located within a lateral distance of 250 feet from centerline (upstream and downstream) shall be surveyed. Alignment, profiles, and cross-sections shall be taken. The stream width shall be shown as the distance measured between the tops of the stream banks. Profile elevations along the bottom of the watercourse shall be taken at a minimum of 50-foot intervals.

The survey shall extend a minimum of 200 feet beyond the roadway construction limits. Cross-sections shall be taken a minimum of 10 feet beyond the proposed R.O.W. or construction limits (whichever is greater). Cross-sections will extend 30 feet beyond the proposed R.O.W. at entrances and 150 feet at minor side roads.

All survey data shall be collected in Illinois State Plane Coordinates – East Zone. The collected survey data for the existing topography shall have a minimum of 3rd Order Accuracy horizontally with readings to the nearest 0.1 feet for vertical on gravel or ground and readings to the nearest 0.01 feet for vertical on all other surfaces.

RAILROAD INSURANCE

The CONSULTANT will comply with the railroad's requirements when conducting a survey on the railroad's R.O.W. Usually, this includes obtaining a permit, paying a fee, obtaining Railroad Protective Liability Insurance, notification of a flagman to be present near the rails

during the survey operations, and any other requirements of the railroad. The CONSULTANT is responsible for all of the foregoing requirements.

DELIVERABLES

I. Copies from the CONSULTANT'S field books, showing benchmarks, level circuits, & structure details, such as size and inverts etc.

II. Base Drawing at 1:1. All the topographic information shall be plotted electronically. The data shall be in Illinois State Plane Coordinates – East Zone and be recorded in a MICROSTATION .DGN format. All CAD work shall be according to LCDOT CAD Standards. ASCII files, gpk files, and/or InRoads files containing all point information as described below shall be included. A filename "ID" acronym explanation sheet shall be provided. Backup CDs shall be provided.

III. Point Information:

(1) Point number
(2) Northing and Easting coordinate values
(3) "Z" elevations
(4) Point identification by code
(5) Notes

PLAT OF HIGHWAYS & LEGAL DESCRIPTION CHECKLIST

REVISED 5/29/2015

A copy of this initialed and dated checklist shall be submitted to Lake County Division of Transportation along with the Plats of Highway and Legal Descriptions.

		Initials or N/A	Date
1.	Plat of Highways sheet size is 22" x 34".		
2.	A project cover sheet is required.		
3.	All lettering should be 1/10th inch or greater.		
4.	Complete the project box in the lower right-hand corner.		
5.	Show survey company name, address and/or logo (if applicable) above the title box.		
6.	Show North Arrow, up or to the right and appropriate scale bar on each page.		
7.	Coordinates for all projects should be based on Illinois State Plane Coordinate System, East zone, NAD83 (Adjustment). The referenced NGS monumentation should be noted on the plat.		
8.	Plat will include the following notes: • Bearings and distances shown hereon reference the Illinois State Plane Coordinate System, East Zone, North American Datum of 1983 (adjustment year) "grid". NOTE: added "grid" for those who look at the plats, such as appraisers, and are not aware that state plane and grid are synonymous and it ties into the next statement. • All measured and calculated distances are "grid" not "ground". To obtain ground distances, divide grid distances shown by the combination factor of 0.xxxxxxx. • Areas shown on this plat are "ground".		
9.	Label the Section, Township, Range, Principal meridian and County at the top of each applicable sheet.		
10.	Label all subdivisions, (incl. recording date and document number), blocks, and lots on the plat of highways.		
11.	All known recording dates and document numbers (subdivision, right-of-way, deed, etc.) will be included in the legal descriptions.		
12.	Show all section/quarter section corners and ties on the Plat of Highway. These should relate to the ties on the corresponding monument records. Label the monument recording date and document number.		
13.	Show necessary land lines with proper line types (section lines, lot lines, property lines, etc.)		
14.	Indicate and label the following lines (use the proper line types): • Existing and proposed right-of-way lines (use the proper line types) • Existing and proposed access control lines • Existing roadway easements lines and proposed IDPT easement lines		
15.	Show width of existing right-of way at least once per sheet.		

16. Reference the documents which established the existing right-of-way or "As monumented and occupied" on the plat of highway.
17. Show all distances and bearings as used in the legal descriptions.
18. Show the radius (R), length (L), chord length (CH) and chord bearing (CB) for all curves as used in the legal descriptions (Use curve tables as applicable).
19. Label the Point of Commencing (P.O.C.) and Point of Beginning (P.O.B.) for every parcel when applicable.
20. Total holding property (including contiguous property) should be shown and labels (bearings, distances, angles, etc.) will be identical to the title report legal description.
21. Use land hooks to show common lines of ownership for contiguous property.
22. The property line symbol should be shown on all sides of the total holding parcel.
23. Indicate any land locked remainders.
24. Parcel numbers are to be shown as four (4) digits and boxed in a rectangle. Use the suffix "PE" for Permanent easement "TE" for temporary easement and "AC" for access control. No suffix is needed for a parcel being conveyed.
25. Areas shall be shown to the nearest 0.001 Acre. All parcels 0.010 of an acre or less should also be shown to the nearest square foot.
26. Complete the Parcel Table:
    - Parcel Number
    - Total Holdings Acres
    - Part Taken Acres (Include Square Feet when 0.010 of an acre or less)
    - Areas in existing R.O.W. Acres (prescription, monumented, occupied or common law)
    - Remainder Area Acres
    - Easement Area Acres (Include Square Feet when 0.010 of an acre or less)
    - Parcel Index Number (List all P.I.N.'s for the total holdings)
27. Complete the Index Table on cover or as 2nd sheet if too many parcels for cover:
    - Parcel Number
    - Owners' Name (as listed in the title commitment)
    - Sheet Number
    - Property Acquired By
28. Legal Description Heading to be on right side & on each sheet:
    - Route
    - Section
    - County
    - Parcel Number
    - Beginning to ending station (Both stations should be from same center line)
    - Parcel Index Number (List only P.I.N.'s for the affected parcel)
29. Legal Descriptions will include the following:
    - CAPTION FORMAT: "… In (Name) County, Illinois, bearings and distances Based on the Illinois State Plane Coordinate System, East Zone, NAD83 (Adjustment year), with a combined factor of _____", described as follows…"
    - …BODY OF LEGAL…
    - END WITH AREA STATEMENT: Said parcel Containing X.XXX acres, more or less, of which X.XXX acres, more or less, was previously dedicated or used for highway purposes.
30. The type and use of all buildings on the total holding should be indicated.
    - All buildings within 100 feet of the proposed right-of-way or easement should be dimensioned and tied perpendicular to the proposed right-of-way.
    - All buildings beyond 100 feet from the proposed right-of-way or easement should just be outlined on the plat.

31. Show and label all private improvements in the proposed/existing Right-of-Way and proposed easement lines in the parcel. This includes fences, signs, light standards, private utilities, canopies, driveways, parking lots, etc.

32. Show all fuel pump islands with perpendicular ties to the proposed right-of-way or proposed easements.

33. Show all encroachments within the existing right of way. (This would include parking areas)

34. Label the route and street name designation once per sheet.

35. Label the project's beginning and ending stations

36. Show the proposed centerline and label with IDOT stationing for State highways and LCDOT stationing for County highways, including all station equations.

37. Label the station and offset at the following points:

- All proposed take and easement corners.
- Intersection of all property lines with the proposed right-of-way lines and easement lines.

38. The station of the intersection of the proposed centerline with all Section and Quarter Section lines should be shown.

39. The bearing and distance of all section and quarter section lines measured for the project shall be shown.

40. Show all found monumentation with reference to true corner location. (Note: Following the completion of construction, all property corner monumentation found where new R.O.W. was not acquired shall be verified to still be in place. Any property corner monumentation destroyed during construction is to be replaced in the previously located positions. This will be coordinated with the Resident Engineer).

41. Show all set monumentation. (Note: Momumentation for proposed R.O.W. is to be placed after completion of construction in areas that may be disturbed during construction, e.g., temporary construction easements. The consultant will be notified by the Resident Engineer).

42. List in tabular form the state plane coordinates for:

- All centerline control points
- P.C., P.I., P.T.
- Station equations
- Project begin and project end points
- Proposed right of way monuments
- All found monumentation
- All section/quarter section corners utilized.
- Header for coordinate table text box.

PROJECT COORDINATES Illinois State Plane, East Zone, NAD 83 (Adjustment Year)

Items 43 and 44 shall be completed after initial approval.

43. Monument Record Documents should be prepared and recorded for Section/Quarter Section corners utilized for which no Monument Record exists. New Monument Records should be prepared and recorded for those documents which show ties within the proposed right-of-way.

44. Submit one complete set of signed and sealed mylars, a MicroStation file (.dgn), a .pdf file of the signed Plat of Highways, and the legal descriptions in Microsoft Word format and in a .pdf file.

Deerfield Road (CH 11) - IL 21 to Saunders Rd/Riverwoods Rd (CH 58)
SN: 15-00038-07-WR
Work Hour Estimate
Project Development Report - Environmental Assessment

	Task (*refer to detailed scope of work document for further explanation*)	CBBEL		Subconsultants - Work Hours		
		Units	Work Hours	Images	TSC	Terra
1.	**Data Collection, Compilation, Review and Evaluation**					
a	Agency coordination for collection of base project data: LCDOT, LC Public Works, LC LCSMC, LCFPD, IDOT, PACE, US Post Office, School Districts, Village of Riverwoods and Buffalo Grove	5 hrs per agency	55			
b	Compile and catalog project data: Available traffic and crash data, record roadway and drainage plans, plat of highways, current FEMA maps and models, property owners information, utilities, zoning maps, bike/ped facilities and plans, public lands ownership and use, soils data, existing drainage problem areas, public transit routes, mail delivery routes.		86			
c	Review data and determine existing facility deficiencies and/or design factors.		60			
d	Field reconnaisance (project photo log, resolve questions from data collection and review)	4 trips x 2 ppl x 4 hrs	32			
		SUBTOTAL:	233	0	0	0
2.	**Topographic Survey**					
a	Coordination with LCDOT for survey right-of-entry letter and survey control data.		16			
b	Coordination with LC GIS Department for available LiDAR mapping and control data.		24			
c	Coordination with LCDOT Utilities Coordinator		32			
d	Roadway survey (alignment, topography, right-of-way, utilities, BFE sections)		1225			
e	Records research and review. Right-of-way calculations and analysis.		192			
f	Tree survey (Very Dense). Tabulation in Task 9.		112			
g	Compile survey and prepare base mapping		224			
h	Supplemental Survey (pick up survey for LiDAR voids, utility details, new development/access, and three potential compensatory storage locations)		260			
		SUBTOTAL:	2085	0	0	0
3.	**Traffic Counts, Projections and Analysis**					
a	Prepare traffic counts (Terra). CBBEL coordination with traffic count subconsultant		24			See Attached Proposal
b	Develop 2040 No-Build and Build (add-lanes) traffic projections, and coordinate with LCDOT and CMAP for concurrence.		68			
c	Existing and 2040 No-Build capacity analysis (Synchro/Simtraffic) for all traffic count locations. Includes model setup.		68			
d	Warrant analysis (existing and 2040 No-Build)	4 hrs x 6 locations x 2 scenarios	48			
e	Existing & 2040 No-Build Capacity Analysis - Technical Memorandum		52			
f	Synchro/Simtraffic analysis for 6 Build alternatives for all traffic count locations, including potential RAB at Portwine	26 hrs x 6 alts	168			
		SUBTOTAL:	428	0	0	0
4.	**Crash Analysis**					
a	Obtain, review, tabulate crash data (latest five years)		32			
b	Preliminary Crash Analysis Report (CAR) for intersections and segments.		62			

	Task (*refer to detailed scope of work document for further explanation*)	CBBEL		Subconsultants - Work Hours		
		Units	Work Hours	Images	TSC	Terra
c	CAR report updates based on new crash data availability over time. Assume two updates with two additional years	2 updates x 26 hrs	52			
d	2040 No-Build crash prediction using latest FHWA IHSDM		32			
e	2040 Build Alternatives crash prediction using latest FHWA IHSDM, including Saunders to I-94 segment based on traffic projections. Assume 6 Build alternatives	24 hrs x 6	144			
		SUBTOTAL:	322	0	0	0
5.	**Roadway Drainage**					
a	General Location Drainage Map - Overall Project		18			
b	Existing Drainage Plan - Overall Project Survey Area		226			
c	Drainage Outlet Evaluations (determine suitability for re-use)		46			
d	BFE determination and coordination with LCSMC - Thorngate Creek		48			
e	Evaluate identified existing drainage issues (based on coordination as part of Task 1 with LCDOT, IDOT, Riverwoods, Buffalo Grove, LCSMC, and LCFPD)		68			
f	Hydraulic Analysis for Des Plaines River, including scour. PBDHR prep in Task 8.		148			
g	Determine off-site flows (hydrology) and develop on-site/off-site concept plan		64			
h	Preliminary Proposed Drainage Plan		486			
i	Determine stormwater detention and compensatory storage requirements and incorporate in PDP		146			
j	Coordination with LCSMC and LCFPD for potential alternative sites for compensatory storage and detention. This is anticipated to include feasible concept plan preparation.	3 sites x 48 hrs	144			
k	Right-of-way determination for proposed drainage plan		96			
l	PDP Coordination meetings with LCDOT, IDOT, LCSMC, Riverwoods, Buffalo Grove, and LCFPD (as/if require).	8 mtgs x 2ppl x 6 hrs, includes mtg summary	96			
m	Finalize Proposed Drainage Plan based on local coordination and LCDOT and IDOT review		132			
n	Erosion and Sediment Control Table		16			
o	BMP White Paper		46			
p	US 45/IL 21 Intersection LDS for IDOT review/approval		186			
q	Draft Drainage Technical Memorandum		142			
r	Final Drainage Technical Memorandum (with disposition of draft review comments by LCDOT and IDOT for US 45/IL 21.		48			
		SUBTOTAL:	2156	0	0	0
6.	**Alternate Geometric Studies**					
a	Develop project Design Criteria		24			
b	Preliminary concept alternatives development for 6 alternatives	80 hrs x 6 alts	480			
	Preliminary concept alternatives cost estimates, 6 alternatives.	16 hrs x 6 alts	120			
c	Prepare concept alternatives comparative evaluation summary table (performance, impacts, cost)	18 hrs x 6 alts	108			
d	Prepare concept alternatives comparison Technical Memorandum.		68			

Deerfield Road (CH 11) - IL 21 to Saunders Rd/Riverwoods Rd (CH 58)
SN: 15-00038-07-WR
Work Hour Estimate
Project Development Report - Environmental Assessment

	Task (*refer to detailed scope of work document for further explanation*)	CBBEL		Subconsultants - Work Hours		
		Units	Work Hours	Images	TSC	Terra
e	Detailed Geometry (plan, profile and cross sections) for the Preferred Alternative .		536			
f	Right-of-way determination for Preferred Alternative based on detailed geometry.		132			
g	Coordination meetings with LCDOT, LCSMC, LCFPD, IDOT, Riverwoods, Buffalo Grove, and adjacent property owners as required.	16 mtgs x 2 ppl x 4 hrs, includes preparing summary	128			
h	Prepare for and attend IDOT/FHWA coordination meetings	4 mtgs x 3 ppl x 4 hrs, includes summary	48			
i	Preferred Alternative Construction cost estimates		120			
		SUBTOTAL:	1764	0	0	0
7.	**Intersection Design Studies**					
a	Proposed conditions capacity analysis (HCS) based on final geometry (US 45/IL 21, Portwine, Saunders/Riverwoods, New Int west of Brentwood)	12 hrs x 4 Int	48			
b	Prepare Intersection Design Study (4 locations, 1 potential RAB)	120 hrs x 3 Int 156 hrs x 1 RAB	516			
c	Coordination meetings with LCDOT and IDOT	3 mtgs x 2ppl x 4hrs	24			
		SUBTOTAL:	588	0	0	0
8.	**Preliminary Bridge Design and Hydraulic Report and TSL Drawings**					
a	Bridge Inspection - SN 049-0174 Des Plaines River (100) and Thorngate Creek Culvert (40)		140			
b	Bridge Condition Report (100). Culvert Condition Tech Memo (32)		132			
c	Des Plaines River Bridge TSL for PBDHR		120			
d	Retaining Wall TSL at Ryerson Woods. Assume 2 separate walls	100 hrs x 2 walls	200			
e	PBDHR Report Preparation		100			
f	Meetings with LCDOT and LCSMC	2 mtgs x 2 ppl x 6 hrs	24			
		SUBTOTAL:	716	0	0	0
9.	**Environmental Assessment**					
a	Environmental Field Survey and Technical Memorandum		92			
b	ESR preparation and submittal to IDOT		68			
c	Tree Tabulation and Evaluation for Preferred Alternative		72			
	Northern Long-Eared Bat (NLEB) Habitat Assessment for Preferred Alternative, and Technical Memorandum		96			
d	Wetland Impact Evaluation (WIE) Forms	8 x 22 hrs	176			
e	Preliminary Environmental Site Assessment (PESA) - Non-IDOT right-of-way.		168			
f	Traffic Noise Analysis and Report, and viewpoint coordination, including open house meeting and correspondence		332			
g	Determine Comprehensive Impacts and Measures to Minimize Harm		168			
h	Section 4(f) *de minimis* coordination and documentation.	2 locations x 96 hrs	192			
i	Prepare Environmental Assessment Report. Includes revisions to address review comments and preparation of EA Errata post Public Hearing and draft FONSI for IDOT and FHWA review.		428			
j	Prepare for and attend IDOT/FHWA coordination meetings for environmental processing and clearances.	4 mtgs x 3 ppl x 4 hrs, includes summary	48			

Deerfield Road (CH 11) - IL 21 to Saunders Rd/Riverwoods Rd (CH 58)
SN: 15-00038-07-WR
Work Hour Estimate
Project Development Report - Environmental Assessment

	Task (*refer to detailed scope of work document for further explanation*)	CBBEL		Subconsultants - Work Hours		
		Units	Work Hours	Images	TSC	Terra
k	Prepare for and attend four (4) NEPA/404 Merger meetings. Includes meeting preparation (ppt and handouts), attend, and prepare summary.	4 mtgs x 112 hrs	448			
		SUBTOTAL:	2288	0	0	0
10.	**Project Development Report**					
a	Preliminary Project Development Report (BLR 22210).		264			
b	Address LCDOT and IDOT review comments for preliminary PDR		48			
c	Prepare and submit Final PDR		72			
		SUBTOTAL:	384	0	0	0
11.	**Traffic Maintenance Analysis**					
a	Determine stage construction method		16			
b	Determine traffic maintenance requirements, including detour requirements		32			
c	Determine temporary pavement needs		24			
d	Determine temporary construction easement needs		24			
e	Prepare TMA report with exhibits (1 report for all 3 intersections)		96			
		SUBTOTAL:	192	0	0	0
12.	**Public Involvement**					
a	Coordination with PI Subconsultant (Images) providing PI support.		224	See Attached Proposal		
b	Stakeholder Coordination (Initial and duration of project)	20 mtgs x 2 ppl x 6 hours. Includes meeting reparation and meeting summary	240			
c	Stakeholder Involvement Plan (review and comment)		52			
d	Public Information Meeting (Prepare, Dry Run, Attend, prepare Summary)		180			
e	Stakeholder Involvement Group Meetings (5 assumed). Includes Prepare, Dry Run, Attend Meetings, prepare Summary.	5 mtgs x 124 hrs	620			
f	Public Meeting. (Finalist Alternatives - Prepare brief PPT (60 hrs), Dry Run, Attend, prepare Summary)	180 + 60	240			
g	Public Hearing (Preferred Alternative - Prepare brief PPT (60 hrs), Dry Run, Attend, prepare Summary)	210 + 60	270			
		SUBTOTAL:	1602	0	0	0
13.	**Geotechnical Investigation**					
a	Coordination with Geo Tech Consultant (TSC)		48		See Attached Proposal	
		SUBTOTAL:	48	0	0	0
14.	**Project Administration and QA/QC**					
a	Project Management and Administration	6 hrs x 36 months	216			
b	Monthly Progress Reports	2 hrs x 36 months	72			
	Project Status Meetings (LCDOT, IDOT as required)	12 mtgs x 3 ppl x 4 hours	144			
c	Quality Assurance Reviews		72			
		SUBTOTAL:	504	0	0	0
		Work Hour Totals:	**13,310**			

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME	**Christopher B. Burke Engineering, Ltd.**	**DATE**	**11/09/15**
PRIME/SUPPLEMENT	**Prime**	**PTB NO.**	

CONTRACT TERM	**36**	**MONTHS**	**OVERHEAD RATE**	**125.26%**
START DATE	**12/15/2015**		**COMPLEXITY FACTOR**	**0.035**
RAISE DATE	**1/1/2016**		**% OF RAISE**	**3.00%**

ESCALATION PER YEAR

12/15/2015 - 1/1/2016	1/2/2016 - 1/1/2017	1/2/2017 - 1/1/2018	1/2/2018 - 12/1/2018	
1	12	12	11	
36	36	36	36	
= 2.78%	34.33%	35.36%	33.39%	

= 1.0586

The total escalation for this project would be: **5.86%**

PAYROLL RATES

FIRM NAME Christopher B. Burke En **DATE** 11/09/15
PRIME/SUPPLEMENT Prime
PTB NO.

ESCALATION FACTOR 5.86%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE	
Engineer VI (Principal)	$70.00	$70.00	Max Allowed Per IDOT
Engineer V (Project Manager)	$60.06	$63.58	
Engineer IV	$49.19	$52.07	
Engineer III	$41.19	$43.61	
Engineer I/II	$30.23	$32.00	
Survey V	$70.00	$60.00	Max Allowed Per IDOT
Survey IV	$61.50	$60.00	Max Allowed Per IDOT
Survey III	$52.50	$55.58	
Survey II	$37.40	$39.59	
Survey I	$25.88	$27.40	
Engineering Tech V	$60.00	$60.00	Max Allowed Per IDOT
Engineering Tech IV	$45.00	$47.64	
Engineering Tech III	$41.02	$43.43	
Engineering Tech I/II	$41.17	$43.58	
Cad Manager	$55.50	$58.75	
Asst. Cad Manager	$47.00	$49.76	
Cad II	$43.48	$46.03	
Cad I	$33.25	$35.20	
Landscape Architect	$50.00	$52.93	
GIS Specialist III	$43.00	$45.52	
GIS Specialist I/II	$26.00	$27.52	
Env. Res. Spec. V	$66.50	$60.00	Max Allowed Per IDOT
Env. Res. Spec.IV	$50.58	$53.55	
Env. Res. Spec. III	$38.37	$40.62	
Env. Res. Spec. I/II	$25.25	$26.73	
Env. Res. Technician	$34.00	$35.99	
Administrative	$29.15	$30.86	
Engineering Intern	$12.95	$13.71	

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

Deerfield Road; US 45/IL 21 (Milwaukee Avenue) to Saunders Road/Riverwoods Road

FIRM Christopher B. Burke Engineering, Ltd. **DATE** 11/09/15

PTB n/a **OVERHEAD RATE** 1.2526

PRIME/SUPPLEMENT Prime **COMPLEXITY FACTOR** 0.035

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	1. Data Collection	233	9,749.07	12,211.69		3,442.15	1,680.00			27,082.92	1.39%
	2. Topographic Survey	2085	85,290.43	106,834.80		30,113.92	1,350.00			223,589.15	11.49%
	3. Traffic Counts and Analysis	428	18,541.78	23,225.44		6,546.64	120.00	8,112.02		56,545.88	2.91%
	4. Crash Analysis	322	12,030.46	15,069.35		4,247.65	120.00			31,467.46	1.62%
	5. Roadway Drainage	2156	93,353.27	116,934.31		32,960.71	17,200.00			260,448.28	13.39%
	6. Alternate Geometric Studies	1764	80,115.11	100,352.18		28,286.64	5,750.00			214,503.93	11.02%
	7. Intersection Design Studies	588	25,577.63	32,038.54		9,030.82	750.00			67,396.99	3.46%
	8. PBDHR and TSL Drawings	716	33,703.22	42,216.66		11,899.77	1,650.00			89,469.65	4.60%
	9. Environmental Assessment	2288	100,849.95	126,324.65		35,607.60	3,460.00			266,242.19	13.68%
	10. Project Development Report	384	16,497.10	20,664.26		5,824.71	2,400.00			45,386.07	2.33%
	11. Traffic Maintenance Analysis	192	7,754.79	9,713.65		2,738.02	120.00			20,326.46	1.04%
	12. Public Involvement	1602	76,173.38	95,414.77		26,894.91	26,400.00	230,669.95	230,669.95	455,553.01	23.41%
	13. Geotechnical Investigation	48	1,871.66	2,344.45		660.84	0.00	107,950.00		112,826.95	5.80%
	14. Project Administration	504	27,127.21	33,979.54		9,577.94	4,220.00			74,904.68	3.85%
	TOTALS	13310	588,635.06	737,324.27	0.00	207,832.32	65,220.00	346,731.97	230,669.95	**1,945,743.62**	100.00%

CPFF = 14.5%[DL + R(DL) + 1.4(DL) + IHDC]. R = 0.035 (Add-Lanes and EA) and IHDC = 0. Therefore, CPFF = 0.353075 * DL

DBE 11.86%

AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.
PTB
PRIME/SUPPLEMENT Prime

DATE 11/09/15

SHEET 1 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			1. Data Collection			2. Topographic Survey			3. Traffic Counts and Analy			4. Crash Analysis			5. Roadway Drainage		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Engineer VI (Principa	70.00	770	5.79%	4.05							24	5.61%	3.93				48	2.23%	1.56
Engineer V (Project M	63.58	826	6.21%	3.95	16	6.87%	4.37	16	0.77%	0.49	24	5.61%	3.57	12	3.73%	2.37	186	8.63%	5.49
Engineer IV	52.07	1552	11.66%	6.07	32	13.73%	7.15	32	1.53%	0.80	68	15.89%	8.27	24	7.45%	3.88	324	15.03%	7.83
Engineer III	43.61	2334	17.54%	7.65	52	22.32%	9.73	32	1.53%	0.67	156	36.45%	15.89	72	22.36%	9.75	568	26.35%	11.49
Engineer I/II	32.00	2203	16.55%	5.30	65	27.90%	8.93				156	36.45%	11.66	156	48.45%	15.50	568	26.35%	8.43
Survey V	60.00	48	0.36%	0.22				48	2.30%	1.38									
Survey IV	60.00	186	1.40%	0.84				186	8.92%	5.35									
Survey III	55.58	186	1.40%	0.78				186	8.92%	4.96									
Survey II	39.59	586	4.40%	1.74				586	28.11%	11.13									
Survey I	27.40	586	4.40%	1.21				586	28.11%	7.70									
Engineering Tech V	60.00	0																	
Engineering Tech IV	47.64	0																	
Engineering Tech III	43.43	0																	
Engineering Tech I/II	43.58	0																	
Cad Manager	58.75	110	0.83%	0.49				24	1.15%	0.68									
Asst. Cad Manager	49.76	210	1.58%	0.79				48	2.30%	1.15							32	1.48%	0.74
Cad II	46.03	592	4.45%	2.05				164	7.87%	3.62							98	4.55%	2.09
Cad I	35.20	635	4.77%	1.68				177	8.49%	2.99							128	5.94%	2.09
Landscape Architect	52.93	0																	
GIS Specialist III	45.52	160	1.20%	0.55										12	3.73%	1.70	36	1.67%	0.76
GIS Specialist I/II	27.52	304	2.28%	0.63	24	10.30%	2.84							24	7.45%	2.05	36	1.67%	0.46
Env. Res. Spec. V	60.00	126	0.95%	0.57	24	10.30%	6.18												
Env. Res. Spec.IV	53.55	528	3.97%	2.12													32	1.48%	0.79
Env. Res. Spec. III	40.62	632	4.75%	1.93													32	1.48%	0.60
Env. Res. Spec. I/II	26.73	216	1.62%	0.43															
Env. Res. Technician	35.99	0																	
Administrative	30.86	520	3.91%	1.21	20	8.58%	2.65							22	6.83%	2.11	68	3.15%	0.97
TOTALS		13310	100%	$44.23	233	100.00%	$41.84	2085	100%	$40.91	428	100%	$43.32	322	100%	$37.36	2156	100%	$43.30

AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.
PTB
PRIME/SUPPLEMENT Prime

DATE 11/09/15

SHEET 2 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	6. Alternate Geometric Studie			7. Intersection Design Studies			8. PBDHR and TSL Drawings			9. Environmental Assessment			10. Project Development Repo			11. Traffic Maintenance Analys		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Engineer VI (Principa	70.00	96	5.44%	3.81	24	4.08%	2.86	48	6.70%	4.69	72	3.15%	2.20	24	6.25%	4.38	8	4.17%	2.92
Engineer V (Project I	63.58	128	7.26%	4.61	36	6.12%	3.89	48	6.70%	4.26	124	5.42%	3.45	24	6.25%	3.97	16	8.33%	5.30
Engineer IV	52.07	356	20.18%	10.51	96	16.33%	8.50	132	18.44%	9.60	128	5.59%	2.91	48	12.50%	6.51	16	8.33%	4.34
Engineer III	43.61	428	24.26%	10.58	186	31.63%	13.79	184	25.70%	11.21	148	6.47%	2.82	128	33.33%	14.54	46	23.96%	10.45
Engineer I/II	32.00	428	24.26%	7.76	186	31.63%	10.12	96	13.41%	4.29	90	3.93%	1.26	52	13.54%	4.33	52	27.08%	8.67
Survey V	60.00																		
Survey IV	60.00																		
Survey III	55.58																		
Survey II	39.59																		
Survey I	27.40																		
Engineering Tech V	60.00																		
Engineering Tech IV	47.64																		
Engineering Tech III	43.43																		
Engineering Tech I/II	43.58																		
Cad Manager	58.75	38	2.15%	1.27				24	3.35%	1.97									
Asst. Cad Manager	49.76	38	2.15%	1.07	12	2.04%	1.02	48	6.70%	3.34									
Cad II	46.03	126	7.14%	3.29	24	4.08%	1.88	68	9.50%	4.37									
Cad I	35.20	126	7.14%	2.51	24	4.08%	1.44	68	9.50%	3.34									
Landscape Architect	52.93																		
GIS Specialist III	45.52										86	3.76%	1.71	20	5.21%	2.37	6	3.13%	1.42
GIS Specialist I/II	27.52										172	7.52%	2.07	24	6.25%	1.72	24	12.50%	3.44
Env. Res. Spec. V	60.00										96	4.20%	2.52						
Env. Res. Spec.IV	53.55										464	20.28%	10.86						
Env. Res. Spec. III	40.62										568	24.83%	10.08						
Env. Res. Spec. I/II	26.73										216	9.44%	2.52						
Env. Res. Technician	35.99																		
Administrative	30.86										124	5.42%	1.67	64	16.67%	5.14	24	12.50%	3.86
TOTALS		1764	100%	$45.42	588	100%	$43.50	716	100%	$47.07	2288	100%	$44.08	384	100%	$42.96	192	100%	$40.39

AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.
PSB
PRIME/SUPPLEMENT Prime

DATE 11/09/15

SHEET 3 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	12. Public Involvement			13. Geotechnical Investigation			14. Project Administration												
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Engineer VI (Principa	70.00	224	13.98%	9.79				202	40.08%	28.06									
Engineer V (Project I	63.58	128	7.99%	5.08				68	13.49%	8.58									
Engineer IV	52.07	224	13.98%	7.28	4	8.33%	4.34	68	13.49%	7.03									
Engineer III	43.61	312	19.48%	8.49	22	45.83%	19.99												
Engineer I/II	32.00	332	20.72%	6.63	22	45.83%	14.67												
Survey V	60.00																		
Survey IV	60.00																		
Survey III	55.58																		
Survey II	39.59																		
Survey I	27.40																		
Engineering Tech V	60.00																		
Engineering Tech IV	47.64																		
Engineering Tech III	43.43																		
Engineering Tech I/II	43.58																		
Cad Manager	58.75	24	1.50%	0.88															
Asst. Cad Manager	49.76	32	2.00%	0.99															
Cad II	46.03	112	6.99%	3.22															
Cad I	35.20	112	6.99%	2.46															
Landscape Architect	52.93																		
GIS Specialist III	45.52																		
GIS Specialist I/II	27.52																		
Env. Res. Spec. V	60.00	6	0.37%	0.22															
Env. Res. Spec.IV	53.55	32	2.00%	1.07															
Env. Res. Spec. III	40.62	32	2.00%	0.81															
Env. Res. Spec. I/II	26.73																		
Env. Res. Technician	35.99																		
Administrative	30.86	32	2.00%	0.62				166	32.94%	10.16									
TOTALS		1602	100%	$47.55	48	100%	$38.99	504	100%	$53.82	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

Illinois Department of Transportation

Direct Costs Check Sheet

COMPANY NAME: **Christopher B. Burke Engineering, Ltd.**

PTB NUMBER: **Deerfield Road; US 45/IL 21 to Saunders/Riverwoods**

TODAY'S DATE: **11/6/2015**

ITEM	ALLOWABLE	UTILIZE W.O. ONLY	QUANTITY J.S. ONLY	CONTRACT RATE	TOTAL
Per Diem (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			$0.00	$0.00
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)			$0.00	$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			$0.00	$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum	X	6,000	$0.575	$3,450.00
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day	X	90	$65.00	$5,850.00
Vehicle Rental	Actual cost (Up to $55/day)			$0.00	$0.00
Tolls	Actual cost			$0.00	$0.00
Parking	Actual cost			$0.00	$0.00
Overtime	Premium portion (Submit supporting documentation)			$0.00	$0.00
Shift Differential	Actual cost (Based on firm's policy)			$0.00	$0.00
Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)	X	200	$25.00	$5,000.00
Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)			$0.00	$0.00
Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)			$0.00	$0.00
Project Specific Insurance	Actual cost			$0.00	$0.00
Monuments (Permanent)	Actual cost			$0.00	$0.00
Photo Processing	Actual cost			$0.00	$0.00
2-Way Radio (Survey or Phase III Only)	Actual cost			$0.00	$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual cost			$0.00	$0.00
CADD	Actual cost (Max $15/hour)			$0.00	$0.00
Web Site	Actual cost (Submit supporting documentation)			$0.00	$0.00
Advertisements	Actual cost (Submit supporting documentation)			$0.00	$0.00
Public Meeting Facility Rental	Actual cost (Submit supporting documentation)			$0.00	$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)			$0.00	$0.00
Recording Fees	Actual cost			$0.00	$0.00
Transcriptions (specific to project)	Actual cost			$0.00	$0.00
Courthouse Fees	Actual cost			$0.00	$0.00
Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Testing of Soil Samples*	Actual cost			$0.00	$0.00
Lab Services*	Actual cost (Provide breakdown of each cost)			$0.00	$0.00
Equipment and/or Specialized Equipment Rental*	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
81/2 x 11 Color Laser	Actual Cost Per Page	X	6,400	$0.55	$3,520.00
81/2 x 11 Color Stock	Actual Cost Per Page	X	5,400	$0.10	$540.00
81/2 x 11 Card Stock	Actual Cost Per Page	X	3,600	$0.12	$432.00
Scan Setup	Actual Cost Per Sheet	X	1,800	$0.50	$900.00
Scan to File	Actual Cost Per Sheet	X	900	$2.00	$1,800.00
Color Scan to pdf	Actual Cost Per Square Foot	X	900	$1.40	$1,260.00
11x17 Color Paper	Actual Cost Per Page	X	6,800	$0.16	$1,088.00
11x17 Color Laser	Actual Cost Per Page	X	6,800	$0.95	$6,460.00
Digital Bond Prints	Actual Cost Per Square Foot	X	48,000	$0.16	$7,680.00
Color Inkjet Prints	Actual Cost Per Square Foot	X	9,200	$2.70	$24,840.00
Burn CD	Actual Cost Each	X	200	$12.00	$2,400.00
TOTAL DIRECT COST					**$65,220.00**

**If other allowable costs are needed and not listed, please add in the above spaces provided.*

LEGEND

W.O. = Work Order

J.S. = Job Specific

Images, Inc.

		Deerfield Road- Phase I	Images, Inc.
		Project total Hours	1,463
11		**Public Involvement**	
	1	**Public Outreach Documentation and Branding**	
		Project Strategy	16
		Public involvement plan and updates	18
		Project Branding/logo	16
		QA/QC	20
		Administration **(36mos.)**	60
		Sub total	**130**
	2	**Project Mailing List**	*0*
		ID/Compare Initial Stakeholders	15
		Maintain mailing list (36 mos.)	25
		Sub total	**40**
	3	**Stakeholder Involvement Group (5)**	*0*
		Identify and reserve location and needed equipment	10
		Prepare and send/email Save the date and formal invitations, manage RSVPs (5)	54
		Prepare and Attend Pre-Dry Run (5)	54
		Prepare and Attend Dry Run (5)	54
		Draft and Design graphics/maps (4 per meeting)	32
		Prepare handouts- badges, sign-in sheets	24
		Prepare and design PowerPoints (5)	180
		Review exhibits	14
		Set up and attend meetings **(5)**	70
		Sub total	**492**
	5	**Website**	*0*
		Prepare initial website structure,content,graphics, and design	55
		Website content and graphics updates **(5)**	40
		Build, host,domain, and provide technical maintanence-direct cost	*0*
		Sub total	**95**
	6	**Media Relations and Social Media**	
		Prepare, editing, and distribute press releases (4)	20
		Media Kits	4
		Monitor media/social media correspondence and maintain 3rd party information (36 months)	46
		Sub total	**70**
	7	**Public Information Meeting** (2 meetings)	
		Draft & finalize letters to elected officials	18
		Prepare and send invitation e-blast	18
		Identify, reserve, and set up meeting sites and dates; public meeting planning; equipment rental	20
		Meeting materials- sign-in sheets, badges & other meeting supplies	10
		Secure and place ad placements	10
		3rd Party Outreach	10
		Develop, design, edit and review meeting brochure- Up to 4 pages- 2 rounds of edits	60
		Develop, design,review, and edit of exhibit boards (up to 15 boards)- 4 rounds (dry run and final)	110
		Prepare and Attend Pre-dry run	32
		Prepare and Attend dry Run	16
		Attend and facilitate Public Meetings	48
		Sub total	**352**
	9	**Public Hearing (1)**	
		Draft & finalize letters to elected officials	9
		Identify, reserve, and set up meeting site and date; public meeting planning; equipment rental	10
		Prepare and send invitation e-blast	9
		Meeting materials- sign-in sheets, badges & other meeting supplies	5
		Secure and place ad placements	5
		3rd Party Outreach	5
		Develop, design, and review meeting brochure	30
		Develop, design, and review of exhibit boards (10 boards)	45
		Prepare and Attend Pre-Dry Run	16
		Prepare and Attend Dry Run	16
		Attend, facilitate Public Meetings (includes spanish translator)	24
		ID and Reserve Court Reporter (1)	4
		Sub total	**178**
	10	**LCDOT and Consultant Coordination**	
		Quarterly Status Meetings (10)	50
		PI Strategy Meetings (5)	20
		LCDOT /Consultant Coordination (36 months)	36
		Sub total	**106**
		Sub total	**0**
		Total	**1463**

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME Images, Inc. **DATE** 11/06/15
PRIME/SUPPLEMENT PRIME **PTB NO.**

CONTRACT TERM	36	**MONTHS**	**OVERHEAD RATE**	119.35%
START DATE	12/1/2015		**COMPLEXITY FACTOR**	0.035
RAISE DATE	7/1/2016		**% OF RAISE**	3.00%

ESCALATION PER YEAR

12/1/2015 - 7/1/2016	7/2/2016 - 7/1/2017	7/2/2017 - 7/1/2018	7/2/2018 - 12/1/2018	
7 / 36	12 / 36	12 / 36	5 / 36	
= 19.44%	34.33%	35.36%	15.18%	

= 1.0432

The total escalation for this project would be: **4.32%**

PAYROLL RATES

FIRM NAME Images, Inc. **DATE** 11/06/15
PRIME/SUPPLEMENT PRIME
PSB NO.

ESCALATION FACTOR **4.32%**

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
Project Manager I	$60.00	$62.59
Sr. Associate Project Manag	$35.58	$37.12
Project Assistant	$36.50	$38.08
Project Administrator	$32.00	$33.38
Sr. Graphic Designer I	$51.11	$53.32
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
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		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00

LakeCounty
Division of Transportation

24-039
REV 12/04

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

FIRM Images, Inc. **DATE** 11/06/15

PSB **PRIME** **OVERHEAD RATE** 1.1935

PRIME/SUPPLEMENT **COMPLEXITY FACTOR** 0.035

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
			0.00	0.00		0.00				0.00	0.00%
DBE	11.1 Project Branding and Stakeholder Involvement Plan	130	6,105.51	7,286.92		2,472.73			15,865.16	15,865.16	6.88%
DBE	11.2 Project Mailing List	40	1,739.40	2,075.97		704.46	0.00		4,519.82	4,519.82	1.96%
DBE	11.3 Stakeholder Involvement Group Meetings	492	23,917.43	28,545.45		9,686.56	6,955.00		69,104.44	69,104.44	29.95%
DBE	11.4 Website	95	4,405.92	5,258.46		1,784.40	22,000.00		33,448.78	33,448.78	14.50%
DBE	11.5 Media Relations and Social Media	70	2,958.62	3,531.12		1,198.24			7,687.98	7,687.98	3.33%
DBE	11.6 Public Meetings	352	17,690.98	21,114.18		7,164.85	12,403.00		58,373.00	58,373.00	25.30%
DBE	11.7 Public Hearing	178	8,793.22	10,494.71		3,561.26	3,325.00		26,174.19	26,174.19	11.35%
DBE	11.8 LCDOT and Consultant Coordination	106	5,921.33	7,067.11		2,398.14	140.00		15,526.58	15,526.58	6.73%
						0.00				0.00	0.00%
	Subconsultant DL	1463	71,532.40	85,373.92	0.00	28,970.62	44,823.00	0.00	230,699.95	**230,699.95**	100.00%
	TOTALS										

DBE 100.00%

DBE

PREPARED BY THE AGREEMENTS UNIT

Printed 11/6/2015 7:18 PM

AVERAGE HOURLY PROJECT RATES

FIRM Images, Inc.
PSB
PRIME/SUPPLEMENT PRIME

DATE 11/06/15

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			11.1 Project Branding and Stakeholder Involvement Plan			11.2 Project Mailing List			11.3 Stakeholder Involvement Group Meetings			11.4 Website			11.5 Media Relations and Social Media		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Project Manager I	62.59	495	33.83%	21.18	46	35.38%	22.15	10	25.00%	15.65	145	29.47%	18.45	25	26.32%	16.47	14	20.00%	12.52
Sr. Associate Project Manag	37.12	566	38.69%	14.36	33	25.38%	9.42	30	75.00%	27.84	192	39.02%	14.48	55	57.89%	21.49	52	74.29%	27.57
Project Assistant	38.08	77	5.26%	2.00	0			0			36	7.32%	2.79	0			4	5.71%	2.18
Project Administrator	33.38	36	2.46%	0.82	36	27.69%	9.24	0			0			0			0		
Sr. Graphic Designer I	53.32	289	19.75%	10.53	15	11.54%	6.15	0			119	24.19%	12.90	15	15.79%	8.42	0		
		0																	
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TOTALS		1463	100%	$48.89	130	100.00%	$46.97	40	100%	$43.48	492	100%	$48.61	95	100%	$46.38	70	100%	$42.27

PREPARED BY THE AGREEMENTS UNIT

AVERAGE HOURLY PROJECT RATES

FIRM Images, Inc.
PSB
PRIME/SUPPLEMENT PRIME

DATE 11/06/15

SHEET 2 **OF** 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	11.6 Public Meetings			11.7 Public Hearing			11.8 LCDOT and Consultant Coordination									#REF!		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Project Manager I	62.59	118	33.52%	20.98	59	33.15%	20.75	78	73.58%	46.06									
Sr. Associate Project Manag	37.12	134	38.07%	14.13	42	23.60%	8.76	28	26.42%	9.80									
Project Assistant	38.08	0			37	20.79%	7.91	0											
Project Administrator	33.38	0			0			0											
Sr. Graphic Designer I	53.32	100	28.41%	15.15	40	22.47%	11.98	0											
TOTALS		352	100%	$50.26	178	100%	$49.40	106	100%	$55.86	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

PREPARED BY THE AGREEMENTS UNIT

LakeCounty
Division of Transportation

Direct Costs Check Sheet

Firm Name: Images, Inc. PTB/Item No: Deerfield Road Project

REQUIRED – DIRECT COSTS WILL ONLY BE ACCEPTED FOR INCLUSION IN CONTRACT WHEN DOCUMENTED ON THIS FORM.
(Indicate only rate and quantities for this specific project.)

Item	Allowable	Contract (1) Rate	Quantity (n/a for work orders)	Total
*Per Diem	Up to State Rate Maximum			$0.00
*Lodging (Overnight)	Up to State Rate Maximum			$0.00
*Lodging (Extended)	Actual Cost (based on IDOT's and firm's policy)			$0.00
Air Fare Coach Rate (with two weeks' notice)	As Approved			$0.00
*Vehicles: Mileage	Up to State Rate Maximum	$0.565	1,200.00	$678.00
Daily Rate (owned or leased)	$45/day			$0.00
Overtime	(Premium Portion)			$0.00
Tolls	Actual Cost			$0.00
Digital Photo Processing	Actual Cost			$0.00
Photo Processing	Actual Cost			$0.00
**Cell Phones – (traffic systems, survey, phase III only)	$70/month/phone (maximum) – Phase III (max. of three without IDOT approval)			$0.00
Telephone Usage (traffic system monitoring)	Actual Cost			$0.00
2-Way Radio (survey or phase III only)	Actual Cost			$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost	$35.00	4.00	$140.00
Copies of Deliverables/Mylars (in-house)	Actual Cost	$0.50	300.00	$150.00
Copies of Deliverables/Mylars (outside)	Actual Cost			$0.00
Specific Insurance (required for project)	Actual Cost			$0.00
CADD	Actual Cost (max. $15.00/hour)			$0.00
Monuments (permanent)	Actual Cost			$0.00
Advertisements	Actual Cost	$500.00	6.00	$3,000.00
Web Site	Actual Cost	$22,000.00	1.00	$22,000.00
Facility Rental for Public Meetings & Exhibits/Renderings & AV	Actual Cost	$800.00	8.00	$6,400.00
Transcriptions (specific to project)	Actual Cost			$0.00
Recording Fees	Actual Cost			$0.00
Courthouse Fees	Actual Cost			$0.00
Testing of Soil Samples	Actual Cost			$0.00
***Lab Services	Actual Cost			$0.00
Storm Sewer Cleaning and Televising	Actual Cost (requires 2-3 quotes)			$0.00
Traffic Control and Protection	Actual Cost (requires 2-3 quotes)			$0.00
Aerial Photography and Mapping	Actual Cost (requires 2-3 quotes)			$0.00
Utility Exploratory Trenching	Actual Cost (requires 2-3 quotes)			$0.00
Shift Differential	Actual Cost (based on firm's policy)			$0.00
PROJECT Site Travel	Actual Cost (based on IDOT's and firm's policy)			$0.00
Equipment Rental and/or Specific Equipment on a as needed basis when requested by IDOT	Actual Cost (requires 2-3 quotes)			$0.00
	Actual Cost (requires 2-3 quotes)			$0.00
Meeting exhibit boards	Actual Costs	$55.00	50.00	$2,750.00
Stakeholder Involvement Group Presenation Copies (5 meetings- 50 sets each)	Actual Costs	$1.00	5,625.00	$5,625.00
Court Reporter (1)	Actual Costs	$500.00	1.00	$500.00
Meeting brochures (print)- 3	Actual Costs	$2.00	1,700.00	$3,400.00

Item	Allowable	Contract (1) Rate	Quantity (n/a for work orders)	Total
Meeting materials- comment and sign-in sheets	Actual Costs	$0.50	300.00	$150.00
Meeting Badges		$30.00	1.00	$30.00
TOTAL				$44,823.00

Terra Engineering, Ltd.

TERRA
ENGINEERING LTD.

November 3, 2015

Mr. G. Michael Ziegler, P.E., PTOE
Christopher B. Burke Engineering, Ltd.
9575 W. Higgins Road
Suite 600
Rosemont, IL 60018
(847) 823-0500
mziegler@cbbel.com

Re: Riverwoods, IL Traffic Counts
Proposal for Traffic Data Collection Services

Dear Mr. Ziegler,

We are pleased to provide the following proposal for the traffic counts along Deerfield Road between US 45 and the Interstate 94 East Ramp in Riverwoods, IL.

This fee proposal is based on email conversations in October of 2015 with Frank Nemes and our e-mail and phone conversations thereafter. This scope and fee includes coordination with you as required to provide the traffic data for the project. A specific list of scope of work and deliverables is listed below:

SCOPE OF WORK

1. **General**
   A. Coordinate with the Christopher B. Burke Team as required.
   B. Provide Deliverables.

2. **Traffic Data Collection**
   A. **Field Investigation/Equipment Preparation:** TERRA will field verify all locations with respect to considerations for performing the counts in the most efficient and appropriate manner. TERRA will discuss the count schedule with CBB in order to verify locations, identify special needs, and to detail turning movement count locations. This task also consists of Quality Assurance/Quality Control (QA/QC) of the count data.
   B. **Weekday Data Collection:** The Consultant will perform turning movement counts at each intersection from 6:00 am to 6:00 pm on a typical weekday or some other variation to include twelve (12) hours of video collection as requested by client at each location. Such counts will be done using automatic traffic recorders (ATRs). In addition, CBB has requested 24-hour mainline counts, these will collect mainline volumes using lane counters.
   C. **Count Locations:** Turning movement counts will be collected at the following intersections. It should be noted that the data will be collected using typical count procedures such as no work during days where a well-publicized threat of frozen precipitation has been forecast, on state-recognized holidays, nor during the times

influenced by holidays, unless otherwise directed by the client. Turning movement counts will be collected in 15-minute increments and summarized hourly for each movement at every noted intersection. Data will be provided in both excel format as well as PDF format. In addition tube counts will be collected over a 24-hour period at the locations listed below. The locations to be collected are as follows:

i. **Riverwoods, IL**

Turning Movement Counts

a) US 45/IL 21
b) Portwine Rd
c) Saunders Rd/Riverwoods Rd
d) Parkway North
e) I-94 southbound entrance ramp terminal
f) Three contingency local side street locations to be determined

Lane Counts

a) Just east of US 45/IL 21
b) Just west of Portwine
c) Just west of Saunders Rd/Riverwoods Rd
d) Just east of I-94 southbound entrance ramp terminal (but west of bridge abutment)
e) Three contingency locations to be determined.

ANTICIPATED DELIVERABLES

1. Traffic Data Collection
   A. Turning movement counts
   B. Lane counts

LIMIT OF SERVICES / ASSUMPTIONS

1. A proposal for the following will be provided if requested as these items are currently excluded:
   A. Surveying
   B. Civil Engineering
   C. Landscape Architecture
   D. Site Electrical Engineering
   E. Geotechnical Engineering
   F. Environmental engineering
   G. Security Systems
   H. Traffic Engineering/Studies
   I. Maintenance of Traffic (MOT)
   J. Structural engineering, including retaining walls
   K. LEED accreditation and/or design
   L. Sewer televising
   M. Multi-phase design or construction plans
   N. Creation of construction cost opinions.
   O. Site Logistics Planning
   P. Sheet wall and retaining wall design
   Q. Permitting through Highway Department(s)
   R. Site excavation ("EX") or earth retention ("ERS") Drawings
   S. Graphic Information System (GIS) analysis
2. This scope of work is based on documents available as of this date.

SCHEDULE

Upon agreement on scope of work and receipt of signed fee proposal, TERRA will commence with traffic data collection within one week of receipt of the signed contract. The traffic data will be delivered within two weeks, weather permitting.

COMPENSATION

TASK	FEE
A. Traffic Data Collection	
a. Traffic Data Collection	$8,112.02
(TOTAL)	**$8,112.02**

ADDITIONAL SERVICES

Changes to completed counts due to revised input or direction, change of project limits or scope and preparation of additional drawings shall be invoiced as an Additional Service. Work will not be performed without your expressed, written consent. Estimates for additional services will be provided upon your request.

ACCEPTANCE

This proposal, with the signature of the appropriate personnel, constitutes acceptance of fee and terms as stated herein. Please return one copy of the signed proposal to me as authorization to begin work.

If you have any questions or need clarification on any of the above, please do not hesitate to call. We look forward to working with you on this project and appreciate you including us on your team.

Sincerely yours,
TERRA ENGINEERING, LTD.

Michael C. Hutchinson

M. Chris Hutchinson, P.E., PTOE
Senior Transportation Engineer

ACCEPTED BY

Date: _____

Printed name: _____

Signed name: _____

Title: _____

Cc: George Ghareeb, Vice President – TERRA Engineering

BILLING AND PAYMENT

Billing and payment shall be in accordance with the fee proposal as noted in the Compensation schedule of this proposal. Scope of services under a fixed fee basis shall be billed upon fulfillment and/or percentage of the completed task. Scope of services under a time and material basis shall be billed per unit rate as services are performed.

1. Timing/Format
   A. Invoices shall be submitted monthly for Services completed at the time of billing and are due upon receipt, unless negotiated otherwise with Terra Engineering. Invoices shall be considered past due if not paid within 30 calendar days of the due date. Such invoices shall be prepared in a form supported by documentation as Client may reasonably require.
   B. If payment in full is not received by TERRA Engineering within 30 calendar days of the due date, invoices shall bear interest at one-and-one-half (1.5) percent of the past due amount per month, which shall be calculated from the invoice due date.
   C. If the Client fails to make payments within 30 calendar days of due date or otherwise is in breach of this Agreement, TERRA Engineering may suspend performance of services upon seven (7) calendar days' notice to the Client. TERRA Engineering shall have no liability whatsoever to the Client for any costs or damages as a result of suspension caused by any breach of this Agreement by the Client. Upon payment in full by the Client, TERRA Engineering shall resume services under this Agreement, and the time schedule and compensation shall be equitably adjusted to compensate for the period of suspension plus any other reasonable time and expense necessary for TERRA Engineering to resume performance.
2. Billing Records
   A. TERRA Engineering shall maintain accounting records of its costs in accordance with generally accepted practices. Access to such records will be provided during normal business hours with reasonable notice during the term of this Agreement and for 3 years after completion.

STANDARD TERMS AND CONDITIONS

1. STANDARD OF CARE. Services shall be performed in accordance with the standard of professional practice ordinarily exercised by the applicable profession at the time and within the locality where the services are performed. No warranty or guarantee, express or implied is provided, including warranties or guarantees contained in any uniform commercial code.

2. CHANGE OF SCOPE. The scope of Services set forth in this Agreement is based on facts known at the time of execution of this Agreement, including, if applicable, information supplied by TERRA Engineering and Client. TERRA Engineering will promptly notify Client of any perceived changes of scope in writing and the parties shall negotiate modifications to this Agreement.

3. DELAYS. If events beyond the control of TERRA Engineering, including, but not limited to, fire, flood, explosion, riot, strike, war, process shutdown, act of God or the public enemy, and act or regulation of any government agency, result in delay to any schedule established in this Agreement, such schedule shall be extended for a period equal to the delay. In the event such delay exceeds 90 days, TERRA Engineering shall be entitled to an equitable adjustment in compensation and extension of time.

4. TERMINATION/SUSPENSION. Either party may terminate this Agreement upon 30 days written notice to the other party in the event of substantial failure by the other party to perform in accordance with its obligations under this Agreement through no fault of the terminating party. Client shall pay TERRA Engineering for all Services, including profit relating thereto, rendered prior to termination, plus any expenses of termination.

5. REUSE OF INSTRUMENTS OF SERVICE. All reports, drawings, specifications, computer data, field data notes and other documents prepared by TERRA Engineering as instruments of service shall remain the property of TERRA Engineering. TERRA Engineering shall retain all common law, statutory and other reserved rights, including the copyright thereto. Reuse of any instruments of service including electronic media, for any purpose other than that for which such documents or deliverables were originally prepared, or alteration of such documents or deliverables without written authorization or adaptation by TERRA Engineering for the specific purpose intended, shall be at Client's sole risk.

6. ELECTRONIC MEDIA. Electronic files furnished by either party shall be subject to an acceptance period of 30 days during which the receiving party agrees to perform appropriate acceptance tests. The party furnishing the electronic file shall correct any discrepancies or errors detected and reported within the

acceptance period. After the acceptance period, the electronic files shall be deemed to be accepted and neither party shall have any obligation to correct errors or maintain electronic files. In the event of a conflict between the signed construction documents prepared by TERRA Engineering and electronic files, the signed or sealed hard-copy construction documents shall govern. Under no circumstances shall delivery of electronic files for use by Client be deemed a sale by TERRA Engineering and TERRA Engineering makes no warranties, either express or implied, of merchantability and fitness for any particular purpose. In no event shall TERRA Engineering be liable for indirect or consequential damages as a result of the Client's use or reuse of the electronic files.

7. OPINIONS OF CONSTRUCTION COST. Any opinion of construction costs prepared by TERRA Engineering is supplied for the general guidance of the Client only. Since TERRA Engineering has no control over competitive bidding or market conditions, TERRA Engineering cannot guarantee the accuracy of such opinions as compared to contract bids or actual costs to Client.

8. SAFETY. TERRA Engineering shall establish and maintain programs and procedures for the safety of its employees. TERRA Engineering specifically disclaims any authority or responsibility for general job site safety and safety of persons other than TERRA Engineering employees.

9. RELATIONSHIP WITH CONTRACTORS. TERRA Engineering shall serve as Client's professional representative for the Services, and may make recommendations to Client concerning actions relating to Client's contractors, but TERRA Engineering specifically disclaims any authority to direct or supervise the means, methods, techniques, sequences or procedures of construction selected by Client's contractors.

10. THIRD PARTY CLAIMS: This Agreement does not create any right or benefit for parties other than TERRA Engineering and Client.

11. MODIFICATION. This Agreement, upon execution by both parties hereto, can be modified only by a written instrument signed by both parties.

12. PROPRIETARY INFORMATION. Information relating to the Project, unless in the public domain, shall be kept confidential by TERRA Engineering and shall not be made available to third parties without written consent of Client, unless so required by court order.

13. INSURANCE. TERRA Engineering will maintain insurance coverage for Professional, Comprehensive General, Automobile, Worker's Compensation and Employer's Liability in amounts in accordance with legal, and TERRA Engineering business requirements. Certificates evidencing such coverage will be provided to Client upon request. For projects involving construction, Client agrees to require its construction contractor, if any, to include TERRA Engineering as an additional insured on its commercial general liability policy relating to the Project, and such coverages shall be primary.

14. INDEMNITIES. TERRA Engineering agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Client, its officers, directors and employees against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by TERRA Engineering' negligent performance of professional services under this Agreement and that of its subconsultants or anyone for whom TERRA Engineering is legally liable. The Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless TERRA Engineering, its officers, directors, employees and subconsultants against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by the Client's negligent acts in connection with the Project and that of its contractors, subcontractors or consultants or anyone for whom the Client is legally liable. Neither the Client nor TERRA Engineering shall be obligated to indemnify the other party in any manner whatsoever for the other party's own negligence.

15. LIMITATIONS OF LIABILITY. No employee or agent of TERRA Engineering shall have individual liability to Client. Client agrees that, to the fullest extent permitted by law, TERRA Engineering' total liability to Client for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in any way related to the Project or this Agreement from any causes including, but not limited to, TERRA Engineering' negligence, error, omissions, strict liability, or breach of contract shall not exceed the total compensation covered by TERRA Engineering's professional liability insurance.

16. ACCESS. Client shall provide TERRA Engineering safe access to the project site necessary for the performance of the services.

17. ASSIGNMENT. The rights and obligations of this Agreement cannot be assigned by either party without written permission of the other party. This Agreement shall be binding upon and insure to the benefit of any permitted assigns.

18. HAZARDOUS MATERIALS. TERRA Engineering and TERRA Engineering' consultants shall have no responsibility for discovery, presence, handling, removal or disposal of or exposure of persons to hazardous materials in any form at the project site, including but not limited to asbestos, asbestos products, polychlorinated biphenyl (PCB) or other toxic substances. If required by law, the client shall accomplish all necessary inspections and testing to determine the type and extent, if any, of hazardous materials at the project site. Prior to the start of services, or at the earliest time such information is learned, it shall be the duty of the Client to advise TERRA Engineering (in writing) of any known or suspected hazardous materials. Removal and proper disposal of all hazardous materials shall be the responsibility of the Client.

19. REMODELING AND RENOVATION. For TERRA Engineering' services provided to assist the Client in making changes to an existing facility, the Client shall furnish documentation and information upon which TERRA Engineering may rely for its accuracy and completeness. Unless specifically authorized or confirmed in writing by the Client, TERRA Engineering shall not be required to perform or have others perform destructive testing or to investigate concealed or unknown conditions. The Client shall indemnify and hold harmless TERRA Engineering, TERRA Engineering' consultants, and their employees from and against claims, damages, losses and expenses which arise as a result of documentation and information furnished by the Client.

20. CLIENT'S CONSULTANTS. Contracts between the Client and other consultants retained by Client for the Project shall require the consultants to coordinate their drawings and other instruments of service with those of TERRA Engineering and to advise TERRA Engineering of any potential conflict. TERRA Engineering shall have no responsibility for the components of the project designed by the Client's consultants. The Client shall indemnify and hold harmless TERRA Engineering, TERRA Engineering' consultants and their employees from and against claims, damages, losses and expenses arising out of services performed for this project by other consultants of the Client.

21. NO WAIVER. No waiver by either party of any default by the other party in the performance of any particular section of this Agreement shall invalidate another section of this Agreement or operate as a waiver of any future default, whether like or different in character.

22. SEVERABILITY. The various terms, provisions and covenants herein contained shall be deemed to be separate and severable, and the invalidity or unenforceability of any of them shall not affect or impair the validity or enforceability of the remainder.

23. STATUTE OF LIMITATION. To the fullest extent permitted by law, parties agree that, except for claims for indemnification, the time period for bringing claims under this Agreement shall expire one year after Project Completion.

24. DISPUTE RESOLUTION. In the event of a dispute arising out of or relating to this Agreement or the services to be rendered hereunder, TERRA Engineering and the Client agree to attempt to resolve such disputes in the following manner: First, the parties agree to attempt to resolve such disputes through direct negotiations between the appropriate representatives of each party. Second, if such negotiations are not fully successful, the parties agree to attempt to resolve any remaining dispute by formal nonbinding mediation conducted in accordance with rules and procedures to be agreed upon by the parties. Third, if the dispute or any issues remain unresolved after the above steps, the parties agree to attempt resolution by submitting the matter to voluntary nonbinding arbitration in accordance with rules and procedures to be agreed upon by the parties.

SCHEDULE OF GENERAL BILLING RATES

LABOR CLASSIFICATION	HOURLY RATE			
	2012	2013	2014	2015
Principal	$189.00	$195.00	$202.00	$207.00
Sr. Project Manager	$165.00	$171.00	$176.00	$180.00
Project Manager	$155.00	$161.00	$169.00	$174.00
Assistant Project Manager	$145.00	$151.00	$159.00	$163.00
Senior Project Engineer	$165.00	$171.00	$177.00	$182.00
Project Engineer	$118.00	$124.00	$130.00	$134.00
Chief Structural Engineer	$180.00	$187.00	$196.00	$201.00
Structural Engineer	$145.00	$151.00	$158.00	$163.00
Project Designer	$116.00	$121.00	$127.00	$131.00
Senior Landscape Architect	$165.00	$171.00	$177.00	$182.00
Landscape Architect	$116.00	$121.00	$127.00	$131.00
Survey Manager	$165.00	$171.00	$177.00	$182.00
Survey Crew	$164.00	$168.00	$176.00	$180.00
Party Chief	$95.00	$98.00	$101.00	$104.00
Instrument Man	$75.00	$78.00	$82.00	$85.00
GIS Analyst	$95.00	$98.00	$101.00	$104.00
Traffic Counts	$75.00	$78.00	$82.00	$85.00
Traffic Counts Staff	$95.00	$98.00	$101.00	$104.00
Planner	$95.00	$98.00	$101.00	$104.00
Cad Manager	$95.00	$98.00	$101.00	$104.00
Cad Technician	$81.00	$85.00	$89.00	$92.00
Senior Technician	$95.00	$98.00	$101.00	$104.00
On-Site Representative	$85.00	$89.00	$93.00	$96.00
Intern	$54.00	$55.50	$57.50	$59.00
Administration	$75.00	$78.00	$82.00	$85.00
Clerical	$65.00	$68.00	$71.00	$73.00

Services subcontracted and reimbursable expenses will be billed to the Owner at invoiced at cost plus 10%. Use of special equipment such as television and sewer cleaning devices, soil density testers, flow meters samplers and dippers, etc., will be charged to the project per the standard equipment rate schedule, which is available upon request.

MISCELLANEOUS EXPENSE RATES

DESCRIPTION	EXPENSE RATE
Printing	
11"x17" (black/white)	$0.65 / page
11"x17" (color)	$1.30 / page
24"x36" (black/white)	$3.00 / page
24"x36" (color)	$6.00 / page
30"x42" (black/white)	$4.37 / page
30"x42" (color)	$8.75 / page
36"x48" (black/white)	$6.00 / page
36"x48" (color)	$12.00 / page
External Plotting	Cost plus 10%
Shipping/Messenger Services	Cost plus 10%
Sub-consulting Services	Cost plus 10%
Travel	
Mileage	$0.51 / mile
Parking	Cost plus 10%
Per Diem	$28.00 / day
Taxi	Cost plus 10%
Document Retrieval	Cost plus 10%

Illinois Department of Transportation

Payroll Escalation Table
Fixed Raises
New Formula

FIRM NAME	TERRA Engineering	**DATE**	11/06/15
PRIME/SUPPLEMENT		**PTB NO.**	

CONTRACT TERM	2	**MONTHS**	**OVERHEAD RATE**		149.92%
START DATE	11/1/2015		**COMPLEXITY FACTOR**		
RAISE DATE			**% OF RAISE**		3.00%

ESCALATION PER YEAR

11/1/2015 - 12/31/2015				
2				
2				

= 100.00%
= 1.0000

The total escalation for this project would be: **0.00%**

Illinois Department of Transportation

Payroll Rates

FIRM NAME **TERRA Engineering** **DATE** **11/06/15**
PRIME/SUPPLEMENT ________
PTB NO. ________

ESCALATION FACTOR **0.00%**

CLASSIFICATION	CURRENT RATE	ESCALATED RATE
Principal	$70.00	$70.00
Senior Project Engineer	$50.96	$50.96
Field Technician	$24.50	$24.50
Project Engineer	$28.20	$28.20
Administrative Manager	$32.69	$32.69
		$0.00
		$0.00
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		$0.00

Illinois Department of Transportation

Cost Estimate of Consultant Services
(Direct Labor Multiple)

Firm	TERRA Engineering	Date	11/06/15
Route			
Section		Overhead Rate	**149.92%**
County			
Job No.		Complexity Factor	**0**
PTB & Item			

ITEM	MANHOURS (A)	PAYROLL (B)	(3+R) TIMES PAYROLL (C)	DIRECT COSTS (D)	SERVICES BY OTHERS (E)	DBE TOTAL (C+D+E)	TOTAL (C+D+E)	% OF GRAND TOTAL
Data Collection	50	1,398.56	4,195.68	2,266.28	0.00		6,461.96	79.66%
QA/QC	10	312.72	938.16				938.16	11.57%
Administration	5	237.30	711.90				711.90	8.78%
TOTALS	65	1,948.58	5,845.74	2,266.28	0.00	0.00	8,112.02	100.00%

BDE 028 (Rev. 2/06)

Illinois Department of Transportation

Average Hourly Project Rates

Route
Section
County
Job No.
PTB/Item

Consultant TERRA Engineering

Date 11/06/15

Sheet 1 **OF** 1

Payroll Classification	Avg Hourly Rates	Total Project Rates			Data Collection			QA/QC			Administration								
		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	1	1.54%	1.08							1	20.00%	14.00						
Senior Project Engineer	$50.96	10	15.38%	7.84	6	12.00%	6.12	2	20.00%	10.19	2	40.00%	20.38						
Field Technician	$24.50	44	67.69%	16.58	40	80.00%	19.60	4	40.00%	9.80									
Project Engineer	$28.20	8	12.31%	3.47	4	8.00%	2.26	4	40.00%	11.28									
Administrative Manager	$32.69	2	3.08%	1.01							2	40.00%	13.08						
		0																	
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TOTALS		65	100%	$29.98	50	100%	$27.97	10	100%	$31.27	5	100%	$47.46	0	0%	$0.00	0	0%	$0.00

Illinois Department of Transportation

Direct Costs Check Sheet

COMPANY NAME: **TERRA Engineering**

PTB NUMBER:

TODAY'S DATE: **11/3/2015**

ITEM	ALLOWABLE	UTILIZE W.O. ONLY	QUANTITY J.S. ONLY	CONTRACT RATE	TOTAL
Per Diem (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			$0.00	$0.00
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)			$0.00	$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			$0.00	$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum		650	$0.58	$377.00
Vehicle Owned or Leased	$32.50/half day (4 hours or less) or $65/full day			$0.00	$0.00
Vehicle Rental	Actual cost (Up to $55/day)			$0.00	$0.00
Tolls	Actual cost			$0.00	$0.00
Parking	Actual cost			$0.00	$0.00
Overtime	Premium portion (Submit supporting documentation)			$0.00	$0.00
Shift Differential	Actual cost (Based on firm's policy)			$0.00	$0.00
Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)			$0.00	$0.00
Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)			$0.00	$0.00
Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)			$0.00	$0.00
Project Specific Insurance	Actual cost			$0.00	$0.00
Monuments (Permanent)	Actual cost			$0.00	$0.00
Photo Processing	Actual cost			$0.00	$0.00
2-Way Radio (Survey or Phase III Only)	Actual cost			$0.00	$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual cost			$0.00	$0.00
CADD	Actual cost (Max $15/hour)			$0.00	$0.00
Web Site	Actual cost (Submit supporting documentation)			$0.00	$0.00
Advertisements	Actual cost (Submit supporting documentation)			$0.00	$0.00
Public Meeting Facility Rental	Actual cost (Submit supporting documentation)			$0.00	$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)			$0.00	$0.00
Recording Fees	Actual cost			$0.00	$0.00
Transcriptions (specific to project)	Actual cost			$0.00	$0.00
Courthouse Fees	Actual cost			$0.00	$0.00
Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Testing of Soil Samples*	Actual cost			$0.00	$0.00
Lab Services*	Actual cost (Provide breakdown of each cost)			$0.00	$0.00
Equipment and/or Specialized Equipment Rental*	Actual cost (Requires 2-3 quotes with IDOT approval)			$0.00	$0.00
Video Traffic Count Processing	Per Hour of Video		96	$19.68	$1,889.28
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
TOTAL DIRECT COST					**$2,266.28**

**If other allowable costs are needed and not listed, please add in the above spaces provided.*

LEGEND

W.O. = Work Order

J.S. = Job Specific

Testing Service Corporation

TESTING SERVICE CORPORATION

Corporate Office

360 South Main Place, Carol Stream, IL 60188-2404
630.462.2600 ● Fax 630.653.2988

October 28, 2015

Mr. Matthew Huffman, P.E.
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920

RE: P.N. 55,835
Geotechnical Exploration
Deerfield Road, US 45/IL21, Portwine Road,
Saunders/Riverwoods Road Improvements
Roadway Borings
Lake County, IL

Dear Mr. Huffman:

Testing Service Corporation (TSC) is pleased to submit this proposal to provide Geotechnical Engineering Services for the above captioned project. It responds to your email dated October 12, 2015. The objectives of the Geotechnical Study are to explore soil conditions and provide recommendations for pavement design in connection with the proposed reconstruction/rehabilitation.

Project Description:

This project includes Phase I Engineering and Environmental Studies (Phase I Study) for Deerfield Road (County Highway 11) from US 45/IL 21 (Milwaukee Avenue) to Saunders Road/Riverwoods Road (County Highway 58), in Lake County, a mainline distance of approximately 10,625 feet, or 2.01 miles. This project is located within the municipal boundaries of the Village of Riverwoods on the east and the Village of Buffalo Grove on the west. This project also traverses the Edward L. Ryerson Woods Forest Preserve, a Lake County Forest Preserve District (LCFPD) holding, which includes an Illinois Dedicated Nature Preserve east of the Des Plaines River and north of Deerfield Road.

This project is anticipated to include widening and/or reconstruction of Deerfield Road to provide two travel lanes in each direction. The existing rural cross section including shoulders and a generally open drainage system, is anticipated to be converted to an urban section with curb and gutter and a closed drainage system. Based on the adjacent forest preserve property and residential property, a range of alternatives will be investigated including 12 and 11 foot lane widths, with no median or a variable median width that may be only four feet wide near the forest preserve area, and widened for left turning vehicles in other areas. In addition, replacement of the bridge carrying Deerfield Road over the Des Plaines River is anticipated with this project based on the extent of proposed widening. A separate off-road bike path will also be included along the south side of Deerfield Road, which will connect to existing bike paths at the east and west project limits, and the existing bike path bridge over the Des Plaines River.

Boring Program:

We are proposing to drill eighty-two (82) soil borings extended to a depth of 10 feet and forty-two (42) pavement cores as part of our Geotechnical Exploration.

Road	Length	Borings	Depth	Footage	Cores
Deerfield Road	13,500	45	10	450	15
US45 / IL 21 (North)	1,500	5	10	50	2
US45 / IL 21 (South)	1,500	5	10	50	2
Portwine Road (North)	1,200	4	10	40	2
Portwine Road (South)	1,200	4	10	40	2
Riverwood Rd (North)	1,200	4	10	40	2
Riverwood Rd (South)	1,200	4	10	40	2
Side Streets (11)	2,200	11	10	110	11
Driveways Extra Cores	0	0	0	0	5
TOTALS	**23500**	**82**		**820**	**43**

Total drilling footage on this basis is estimated to be about 820 lineal feet.

The cores will be taken using a 4-inch diameter core barrel. Auger samples will also be obtained of underlying base course/subbase materials. A split-spoon will then be taken of the upper subgrade to a depth of approximately 3 feet below the top of pavement. The core holes will be patched upon completion using a cold mix asphalt or non-shrink concrete grout.

For the purposes of this proposal we have assumed that the boring locations will be accessible to conventional drilling equipment. In this regard, they should not be located in standing water, within wooded or landscaped areas, or on steeply sloping ground. No provisions have been made for tree/brush clearing or other obstruction removal should borehole access be impeded. Landscape restoration or crop damage (if required) is also not included in the project budget.

TSC will utilize personnel who are trained in layout procedures to stake the borings in the field. Ground surface elevations for each borehole will be determined by level survey methods (benchmark to be provided). Utility clearance for the borings will be obtained by contacting JULIE (Joint Utility Locating Information for Excavators). Secondary and /or private underground utility lines will have to be marked by the property owner or their agents; a private locator can be hired (at an added cost) if necessary.

Soil samples will primarily be obtained by split-spoon methods, with thin-walled tube also taken if conditions dictate. Sampling will be performed at continuously for the entire depth of the boring. A representative portion of the split-spoon samples will be placed in a glass jar with screw-type lid for transportation to our laboratory. Groundwater observations will also be made during and following completion of drilling operations, with any boreholes in pavement areas to be backfilled immediately and patched at the surface.

TSC has included traffic control for this project. If it is determined that traffic control is not needed you will not be charged for this service.

Laboratory Testing:

Samples obtained from the borings will be examined by experienced laboratory personnel in order to verify field descriptions as well as to visually classify in accordance with the Unified Soil Classification System. Laboratory testing will include moisture content and dry unit weight determinations as well as measurements of unconfined compressive strength by direct or indirect methods, as appropriate. In addition, grain size analysis/hydrometer (17), atterberg limits (17) and LOI/Wet combustion (10) will be performed. Other tests deemed to be necessary by TSC's Project Engineer may also be recommended for your approval.

Engineering Report:

Upon completion of drilling and testing, you will receive an engineering report summarizing field and laboratory test data, including a boring location plan and boring logs. The report will address anticipated soil and groundwater conditions impacting site development, based upon the information obtained from the borings. It will also provide recommendations to guide design and specification preparation pertaining to geotechnical issues relevant to the structure or purpose described in this proposal. These may include the following:

- General earthwork and construction considerations.
- Remedial work and/or treatment of unstable or unsuitable soil types.
- Fill placement and compaction requirements for pavements.

This proposal does not include preparing a pavement design life-cycle cost analysis.

TSC has allowed for a pre and post meeting with Lake County Division of Transportation meeting.

Fees and Scope:

In accordance with the Cost Estimate attached, TSC is proposing a not-to-exceed budget amount of Eighty Two Thousand Eight Hundred Fifty Dollars ($82,850.00) to provide the Geotechnical Exploration outlined above. Our proposal is based on the understanding that: the boring locations are accessible to a conventional truck or All-Terrain Vehicle (ATV) mounted drill; none of the borings will be located in standing water; in wooded or landscaped areas or on steeply slopping ground; and that the work can be performed during standard business hours. Our fee is further subject to this proposal being accepted by you on or before December 31, 2016.

Should the study reveal unexpected subsurface conditions requiring a change in the scope of work, you will be contacted before we proceed with additional work. Our invoice would then based on the unit rates given in the attached Cost Estimate or as otherwise agreed upon. While our quoted fee does not include excavation, fill, earthwork, footing or foundation observations during construction phase, the project budget should include a provision for these services. Plan review, preconstruction meetings and/or other consulting and professional services that are provided subsequent to delivery of TSC's report would be covered by separate invoice.

Closure:

The geotechnical services being performed are subject to TSC's attached General Conditions. Unless stated otherwise, TSC fees include all state and federal taxes and permits that may be required. However, they do not include any license, permit or bond fees that local governments may impose. The local fees, if any, will be added to the invoice. Unless we receive written instructions to the contrary, invoices will be sent to:

Mr. Matthew Huffman, P.E.
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920
Tel: (847) 823-0500
Fax: (847) 823-0520
email: mhuffman@cbbel.com

If this proposal meets with your approval, please indicate your acceptance by signing one copy and returning it to our Carol Stream, Illinois office. It would be helpful if you could also complete the attached Project Data form indicating who is to receive copies of TSC's report and other related information.

Your consideration of our proposal is appreciated. We look forward to being of service to you on this project.

Respectfully submitted,

TESTING SERVICE CORPORATION

Michael V. Machalinski, P.E.
Vice President

Prepared by,

Michael D. Billings
Vice President

MVM:MDB:kw

Enc: Cost Estimate
General Conditions
Project Data Sheet

Approved and accepted for _____ by:

_____
(NAME)

_____
(TITLE)

_____
(DATE)

COST ESTIMATE
Deerfield Road, US 45/IL21, Portwine Road,
Saunders/Riverwoods Road Improvements
Roadway Borings
Lake County, IL
TSC P.N. 55,835

	ITEM	UNITS	QTY	RATE	COST
STAKING AND UTILITY CLEARANCE					
1.1	Layout Person to Mark Boring Locations, Obtain Surface Elevations and/or Arrange for Clearance of Underground Utilities	Hour	40.0	110.00	$ 4,400.00
1.2	Permits, Bonds and Other Direct Charges	Cost + 10%	0	0.00	$ 0.00
DRILLING AND SAMPLING					
2.1	Drill Mounted on Truck and Two Person Crew (Portal-to-Portal)	Lump Sum	1	22,050.00	$ 22,050.00
OBTAIN PAVEMENT CORES Includes coring with 4 inch diameter barrel, retrieving all pavement materials to maximum depth of 18 inches, taking auger samples of base course/subbase materials and split-spoons of upper subgrade.					
3.1	Core Van and One-Man Crew (Portal to Portal)	Lump Sum	1	8,400.00	$ 8,400.00
3.2	Bit Wear - Per Inch of Asphalt Pavement	Inch	336.0	2.50	$ 840.00
3.3	Patch Holes with Cold Patch Asphalt or Non-Shrink Grout	Each	42	10.00	$ 420.00
3.4	Materials Technician to Measure and Describe Core Sample in Laboratory	Each	42	15.00	$ 630.00
TRAFFIC CONTROL					
4.1	Single Flagman, Regular Time (Portal to Portal)	Hour	0.0	135.00	$ 0.00
4.2	Single Flagman, Overtime	Hour	0.0	170.00	$ 0.00
4.3	2-Man Flagging Crew, Regular Time (Portal to Portal)	Hour	56.0	270.00	$ 15,120.00
4.4	2-Man Flagging Crew, Overtime	Hour	10.0	340.00	$ 3,400.00
4.5	TSC Pickup and Arrowboard	Day	0	125.00	$ 0.00
LABORATORY TESTING					
5.1	Examine Samples to Describe by Textural System and Classify Using the Unified Soil Classification System	Each	574	4.00	$ 2,296.00
5.2	Water Content Determination (Includes Pocket Penetrometer Reading on Cohesive Samples)	Each	574	7.00	$ 4,018.00
5.3	Unconfined Compressive Strength of Cohesive Soils (or Torvane Shear Strength Measurement)	Each	136	14.00	$ 1,904.00

ITEM		UNITS	QTY	RATE	COST
5.4	Dry Unit Weight Determination	Each	42	7.00	$ 294.00
5.5	Atterberg Limit Determination	Each	17	100.00	$ 1,700.00
5.6	Sieve Analysis with #200 Wash	Each	0	90.00	$ 0.00
5.7	Sieve Analysis with Hydrometer	Each	17	130.00	$ 2,210.00
5.8	Loss-On-Ignition (Organic Content)	Each	10	115.50	$ 1,155.00
5.9	Visual Classification and Water Content/Dry Unit Weight Determination of Core Subgrade Sample (CORES)	Each	60	12.00	$ 720.00
ENGINEERING SERVICES					
6.1	Prepare Geotechnical Report with Boring Logs and Location Plan	Lump Sum	1	11,350.00	$ 11,350.00
6.2	Geotechnical Engineer to Perform Special Calculations or Run Slope Stability Analyses	Hour	0.0	120.00	$ 0.00
6.3	CADD Operator	Hour	0	95.00	$ 0.00
6.4	Professional Engineer to Consult or Attend Project Meetings	Hour	16.0	120.00	$ 1,920.00
				ESTIMATED TOTAL:	$ 82,827.00
				RECOMMENDED BUDGET:	$ 82,850.00

GENERAL CONDITIONS

Geotechnical and Construction Services

TESTING SERVICE CORPORATION

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C.§ 6901, et, seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. ~~Client agrees to pay each invoice within thirty (30)~~ days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs ~~and reasonable attorney's fees.~~

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

~~Should TSC or any of its employees be found to have been~~ negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to $50,000 or the total amount of the fee paid to TSC for its services performed with respect ~~to the project, whichever amount is greater.~~

~~In the event Client is unwilling or unable to limit the damages~~ for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to $500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award ~~of greater damages.~~

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

October 28, 2015

TESTING SERVICE CORPORATION

Corporate Office

360 South Main Place, Carol Stream, IL 60188-2404
630.462.2600 ● Fax 630.653.2988

Mr. Matthew Huffman, P.E.
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920

RE: P.N. 55,837
Geotechnical Exploration
Deerfield Road
Bridge Abutments Only
Lake County, IL

Dear Mr. Huffman:

Testing Service Corporation (TSC) is pleased to submit this proposal to provide Geotechnical Engineering Services for the above captioned project. It responds to your email dated October 12, 2015. The objectives of the Geotechnical Study are to explore soil conditions and provide recommendations for foundation design in connection with bridge abutments only(no piers).

Project Description:

This project includes Phase I Engineering and Environmental Studies (Phase I Study) for Deerfield Road (County Highway 11) from US 45/IL 21 (Milwaukee Avenue) to Saunders Road/Riverwoods Road (County Highway 58), in Lake County, a mainline distance of approximately 10,625 feet, or 2.01 miles. This project is located within the municipal boundaries of the Village of Riverwoods on the east and the Village of Buffalo Grove on the west. This project also traverses the Edward L. Ryerson Woods Forest Preserve, a Lake County Forest Preserve District (LCFPD) holding, which includes an Illinois Dedicated Nature Preserve east of the Des Plaines River and north of Deerfield Road.

This project is anticipated to include widening and/or reconstruction of Deerfield Road to provide two travel lanes in each direction. The existing rural cross section including shoulders and a generally open drainage system, is anticipated to be converted to an urban section with curb and gutter and a closed drainage system. Based on the adjacent forest preserve property and residential property, a range of alternatives will be investigated including 12 and 11 foot lane widths, with no median or a variable median width that may be only four feet wide near the forest preserve area, and widened for left turning vehicles in other areas. In addition, replacement of the bridge carrying Deerfield Road over the Des Plaines River is anticipated with this project based on the extent of proposed widening. A separate off-road bike path will also be included along the south side of Deerfield Road, which will connect to existing bike paths at the east and west project limits, and the existing bike path bridge over the Des Plaines River.

Boring Program:

We are proposing to drill two (2) soil borings extended to a depth of 75 feet as part of our Geotechnical Exploration.

Wall	Length	Borings	Depth	Footage	Cores
East Bridge Abutment		1	75	75	0
West Bridge Abutment		1	75	75	0
TOTALS		**2**		**150**	**0**

Total drilling footage on this basis is estimated to be about 150 lineal feet.

For the purposes of this proposal we have assumed that the boring locations will be accessible to conventional drilling equipment. In this regard, they should not be located in standing water, within wooded or landscaped areas, or on steeply sloping ground. No provisions have been made for tree/brush clearing or other obstruction removal should borehole access be impeded. Landscape restoration or crop damage (if required) is also not included in the project budget.

TSC will utilize personnel who are trained in layout procedures to stake the borings in the field. Ground surface elevations for each borehole will be determined by level survey methods (benchmark to be provided). Utility clearance for the borings will be obtained by contacting JULIE (Joint Utility Locating Information for Excavators). Secondary and /or private underground utility lines will have to be marked by the property owner or their agents; a private locator can be hired (at an added cost) if necessary.

Soil samples will primarily be obtained by split-spoon methods, with thin-walled tube also taken if conditions dictate. Sampling will be performed at 2½-foot intervals for the first 30 feet and not exceed 5-foot intervals below this level. A representative portion of the split-spoon samples will be placed in a glass jar with screw-type lid for transportation to our laboratory. Groundwater observations will also be made during and following completion of drilling operations, with any boreholes in pavement areas to be backfilled immediately and patched at the surface.

Laboratory Testing:

Samples obtained from the borings will be examined by experienced laboratory personnel in order to verify field descriptions as well as to visually classify in accordance with the Unified Soil Classification System. Laboratory testing will include moisture content and dry unit weight determinations as well as measurements of unconfined compressive strength by direct or indirect methods, as appropriate. Other tests deemed to be necessary by TSC's Project Engineer may also be recommended for your approval.

Engineering Report:

Upon completion of drilling and testing, you will receive an engineering report summarizing field and laboratory test data, including a boring location plan and boring logs. The report will address anticipated soil and groundwater conditions impacting site development, based upon the information obtained from the borings. It will also provide recommendations to guide design and specification preparation pertaining to geotechnical issues relevant to the structure or purpose described in this proposal. These may include the following:

- General earthwork and construction considerations.
- Remedial work and/or treatment of unstable or unsuitable soil types.
- Fill placement and compaction requirements for foundations for bridge abutments.

Fees and Scope:

In accordance with the Cost Estimate attached, TSC is proposing a not-to-exceed budget amount of Eight Thousand Seven Hundred Dollars ($8,700.00) to provide the Geotechnical Exploration outlined above. Our proposal is based on the understanding that: the boring locations are accessible to a conventional truck or All-Terrain Vehicle (ATV) mounted drill; none of the borings will be located in standing water; in wooded or landscaped areas or on steeply slopping ground; and that the work can be performed during standard business hours. Our fee is further subject to this proposal being accepted by you on or before December 31, 2016.

Should the study reveal unexpected subsurface conditions requiring a change in the scope of work, you will be contacted before we proceed with additional work. Our invoice would then based on the unit rates given in the attached Cost Estimate or as otherwise agreed upon. While our quoted fee does not include excavation, fill, earthwork, footing or foundation observations during construction phase, the project budget should include a provision for these services. Plan review, preconstruction meetings and/or other consulting and professional services that are provided subsequent to delivery of TSC's report would be covered by separate invoice.

Closure:

The geotechnical services being performed are subject to TSC's attached General Conditions. Unless stated otherwise, TSC fees include all state and federal taxes and permits that may be required. However, they do not include any license, permit or bond fees that local governments may impose. The local fees, if any, will be added to the invoice. Unless we receive written instructions to the contrary, invoices will be sent to:

Mr. Matthew Huffman, P.E.
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920
Tel: (847) 823-0500
Fax: (847) 823-0520
email: mhuffman@cbbel.com

If this proposal meets with your approval, please indicate your acceptance by signing one copy and returning it to our Carol Stream, Illinois office. It would be helpful if you could also complete the attached Project Data form indicating who is to receive copies of TSC's report and other related information.

Your consideration of our proposal is appreciated. We look forward to being of service to you on this project.

Respectfully submitted,

TESTING SERVICE CORPORATION

Michael V. Machalinski, P.E.
Vice President

Prepared by,

Michael D. Billings
Vice President

MVM:MDB:kw

Enc: Cost Estimate
General Conditions
Project Data Sheet

Approved and accepted for _____ by:

_____
(NAME)

_____
(TITLE)

_____
(DATE)

COST ESTIMATE
Deerfield Road
Bridge Abutments
Lake County, IL
TSC P.N. 55,837

ITEM		UNITS	QTY	RATE	COST
STAKING AND UTILITY CLEARANCE					
1.1	Layout Person to Mark Boring Locations, Obtain Surface Elevations and/or Arrange for Clearance of Underground Utilities	Hour	4.0	110.00	$ 440.00
1.2	Permits, Bonds and Other Direct Charges	Cost + 10%	0	0.00	$ 0.00
DRILLING AND SAMPLING					
2.1	Drill Mounted on Truck and Two Person Crew (Portal-to-Portal)	Lump Sum	1	6,300.00	$ 6,300.00
TRAFFIC CONTROL					
3.1	Single Flagman, Regular Time (Portal to Portal)	Hour	0.0	135.00	$ 0.00
3.2	Single Flagman, Overtime	Hour	0.0	170.00	$ 0.00
3.3	2-Man Flagging Crew, Regular Time (Portal to Portal)	Hour	0.0	270.00	$ 0.00
3.4	2-Man Flagging Crew, Overtime	Hour	0.0	340.00	$ 0.00
3.5	TSC Pickup and Arrowboard	Day	0	125.00	$ 0.00
LABORATORY TESTING					
4.1	Examine Samples to Describe by Textural System and Classify Using the Unified Soil Classification System	Each	42	4.00	$ 168.00
4.2	Water Content Determination (Includes Pocket Penetrometer Reading on Cohesive Samples)	Each	41	7.00	$ 287.00
4.3	Unconfined Compressive Strength of Cohesive Soils (or Torvane Shear Strength Measurement)	Each	10	14.00	$ 140.00
4.4	Dry Unit Weight Determination	Each	2	7.00	$ 14.00
4.5	Atterberg Limit Determination	Each	0	100.00	$ 0.00
4.6	Sieve Analysis with #200 Wash	Each	0	90.00	$ 0.00
4.7	Sieve Analysis with Hydrometer	Each	0	130.00	$ 0.00
4.8	Loss-On-Ignition (Organic Content)	Each	0	115.50	$ 0.00
ENGINEERING SERVICES					
5.1	Prepare Geotechnical Report with Boring Logs and Location Plan	Lump Sum	1	1,350.00	$ 1,350.00

ITEM		UNITS	QTY	RATE	COST
5.2	Geotechnical Engineer to Perform Special Calculations or Run Slope Stability Analyses	Hour	0.0	120.00	$ 0.00
5.3	CADD Operator	Hour	0	95.00	$ 0.00
5.4	Professional Engineer to Consult or Attend Project Meetings	Hour	0.0	120.00	$ 0.00
				ESTIMATED TOTAL:	$ 8,699.00
				RECOMMENDED BUDGET:	$ 8,700.00

GENERAL CONDITIONS

Geotechnical and Construction Services

TESTING SERVICE CORPORATION

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C.§ 6901, et, seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. ~~Client agrees to pay each invoice within thirty (30)~~ days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs ~~and reasonable attorney's fees.~~

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

~~Should TSC or any of its employees be found to have been~~ negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to $50,000 or the total amount of the fee paid to TSC for its services performed with respect ~~to the project, whichever amount is greater.~~

~~In the event Client is unwilling or unable to limit the damages~~ for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to $500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award ~~of greater damages.~~

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

October 28, 2015

TESTING SERVICE CORPORATION

Corporate Office

360 South Main Place, Carol Stream, IL 60188-2404
630.462.2600 ● Fax 630.653.2988

Mr. Matthew Huffman, P.E.
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920

RE: P.N. 55,836
Geotechnical Exploration
Deerfield Road
Retaining Walls
Lake County, IL

Dear Mr. Huffman:

Testing Service Corporation (TSC) is pleased to submit this proposal to provide Geotechnical Engineering Services for the above captioned project. It responds to your email dated October 12, 2015. The objectives of the Geotechnical Study are to explore soil conditions and provide recommendations for foundation design in connection with two proposed retaining walls. Retaining walls will be located on north side of Deerfield Road (east and west of Des Plaines River) and will be 10' - 15' high.

Project Description:

This project includes Phase I Engineering and Environmental Studies (Phase I Study) for Deerfield Road (County Highway 11) from US 45/IL 21 (Milwaukee Avenue) to Saunders Road/Riverwoods Road (County Highway 58), in Lake County, a mainline distance of approximately 10,625 feet, or 2.01 miles. This project is located within the municipal boundaries of the Village of Riverwoods on the east and the Village of Buffalo Grove on the west. This project also traverses the Edward L. Ryerson Woods Forest Preserve, a Lake County Forest Preserve District (LCFPD) holding, which includes an Illinois Dedicated Nature Preserve east of the Des Plaines River and north of Deerfield Road.

This project is anticipated to include widening and/or reconstruction of Deerfield Road to provide two travel lanes in each direction. The existing rural cross section including shoulders and a generally open drainage system, is anticipated to be converted to an urban section with curb and gutter and a closed drainage system. Based on the adjacent forest preserve property and residential property, a range of alternatives will be investigated including 12 and 11 foot lane widths, with no median or a variable median width that may be only four feet wide near the forest preserve area, and widened for left turning vehicles in other areas. In addition, replacement of the bridge carrying Deerfield Road over the Des Plaines River is anticipated with this project based on the extent of proposed widening. A separate off-road bike path will also be included along the south side of Deerfield Road, which will connect to existing bike paths at the east and west project limits, and the existing bike path bridge over the Des Plaines River.

Boring Program:

We are proposing to drill nine (9) soil borings extended to a depth of 45 feet as part of our Geotechnical Exploration.

Wall	Length	Borings	Depth	Footage	Cores
Retaining Wall (West)	200	3	45	120	0
Retaining Wall (East)	400	6	45	270	0
TOTALS	**600**	**9**		**390**	**0**

Total drilling footage on this basis is estimated to be about 390 lineal feet.

For the purposes of this proposal we have assumed that the boring locations will be accessible to conventional drilling equipment. In this regard, they should not be located in standing water, within wooded or landscaped areas, or on steeply sloping ground. No provisions have been made for tree/brush clearing or other obstruction removal should borehole access be impeded. Landscape restoration or crop damage (if required) is also not included in the project budget.

TSC will utilize personnel who are trained in layout procedures to stake the borings in the field. Ground surface elevations for each borehole will be determined by level survey methods (benchmark to be provided). Utility clearance for the borings will be obtained by contacting JULIE (Joint Utility Locating Information for Excavators). Secondary and /or private underground utility lines will have to be marked by the property owner or their agents; a private locator can be hired (at an added cost) if necessary.

Soil samples will primarily be obtained by split-spoon methods, with thin-walled tube also taken if conditions dictate. Sampling will be performed at 2½-foot intervals for the first 30 feet and not exceed 5-foot intervals below this level. A representative portion of the split-spoon samples will be placed in a glass jar with screw-type lid for transportation to our laboratory. Groundwater observations will also be made during and following completion of drilling operations, with any boreholes in pavement areas to be backfilled immediately and patched at the surface.

Laboratory Testing:

Samples obtained from the borings will be examined by experienced laboratory personnel in order to verify field descriptions as well as to visually classify in accordance with the Unified Soil Classification System. Laboratory testing will include moisture content and dry unit weight determinations as well as measurements of unconfined compressive strength by direct or indirect methods, as appropriate. Other tests deemed to be necessary by TSC's Project Engineer may also be recommended for your approval.

Engineering Report:

Upon completion of drilling and testing, you will receive an engineering report summarizing field and laboratory test data, including a boring location plan and boring logs. The report will address anticipated soil and groundwater conditions impacting site development, based upon the information obtained from the borings. It will also provide recommendations to guide design and specification preparation pertaining to geotechnical issues relevant to the structure or purpose described in this proposal. These may include the following:

- General earthwork and construction considerations.
- Remedial work and/or treatment of unstable or unsuitable soil types.
- Fill placement and compaction requirements for foundations for retaining walls.

Fees and Scope:

In accordance with the Cost Estimate attached, TSC is proposing a not-to-exceed budget amount of Sixteen Thousand Four Hundred Dollars ($16,400.00) to provide the Geotechnical Exploration outlined above. Our proposal is based on the understanding that: the boring locations are accessible to a conventional truck or All-Terrain Vehicle (ATV) mounted drill; none of the borings will be located in standing water; in wooded or landscaped areas or on steeply slopping ground; and that the work can be performed during standard business hours. Our fee is further subject to this proposal being accepted by you on or before December 31, 2016.

Should the study reveal unexpected subsurface conditions requiring a change in the scope of work, you will be contacted before we proceed with additional work. Our invoice would then based on the unit rates given in the attached Cost Estimate or as otherwise agreed upon. While our quoted fee does not include excavation, fill, earthwork, footing or foundation observations during construction phase, the project budget should include a provision for these services. Plan review, preconstruction meetings and/or other consulting and professional services that are provided subsequent to delivery of TSC's report would be covered by separate invoice.

Closure:

The geotechnical services being performed are subject to TSC's attached General Conditions. Unless stated otherwise, TSC fees include all state and federal taxes and permits that may be required. However, they do not include any license, permit or bond fees that local governments may impose. The local fees, if any, will be added to the invoice. Unless we receive written instructions to the contrary, invoices will be sent to:

Mr. Matthew Huffman, P.E.
Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road Suite 600
Rosemont, IL 60018-4920
Tel: (847) 823-0500
Fax: (847) 823-0520
email: mhuffman@cbbel.com

If this proposal meets with your approval, please indicate your acceptance by signing one copy and returning it to our Carol Stream, Illinois office. It would be helpful if you could also complete the attached Project Data form indicating who is to receive copies of TSC's report and other related information.

Your consideration of our proposal is appreciated. We look forward to being of service to you on this project.

Respectfully submitted,

TESTING SERVICE CORPORATION

Michael V. Machalinski, P.E.
Vice President

Prepared by,

Michael D. Billings
Vice President

MVM:MDB:kw

Enc: Cost Estimate
General Conditions
Project Data Sheet

Approved and accepted for _____ by:

_____
(NAME)

_____
(TITLE)

_____
(DATE)

COST ESTIMATE
Deerfield Road
Retaining Walls
Lake County, IL
TSC P.N. 55,836

	ITEM	UNITS	QTY	RATE	COST
STAKING AND UTILITY CLEARANCE					
1.1	Layout Person to Mark Boring Locations, Obtain Surface Elevations and/or Arrange for Clearance of Underground Utilities	Hour	6.0	110.00	$ 660.00
1.2	Permits, Bonds and Other Direct Charges	Cost + 10%	0	0.00	$ 0.00
DRILLING AND SAMPLING					
2.1	Drill Mounted on Truck and Two Person Crew (Portal-to-Portal)	Lump Sum	1	10,200.00	$ 10,200.00
TRAFFIC CONTROL					
3.1	Single Flagman, Regular Time (Portal to Portal)	Hour	0.0	135.00	$ 0.00
3.2	Single Flagman, Overtime	Hour	0.0	170.00	$ 0.00
3.3	2-Man Flagging Crew, Regular Time (Portal to Portal)	Hour	0.0	270.00	$ 0.00
3.4	2-Man Flagging Crew, Overtime	Hour	0.0	340.00	$ 0.00
3.5	TSC Pickup and Arrowboard	Day	0	125.00	$ 0.00
LABORATORY TESTING					
4.1	Examine Samples to Describe by Textural System and Classify Using the Unified Soil Classification System	Each	135	4.00	$ 540.00
4.2	Water Content Determination (Includes Pocket Penetrometer Reading on Cohesive Samples)	Each	135	7.00	$ 945.00
4.3	Unconfined Compressive Strength of Cohesive Soils (or Torvane Shear Strength Measurement)	Each	35	14.00	$ 490.00
4.4	Dry Unit Weight Determination	Each	9	7.00	$ 63.00
4.5	Atterberg Limit Determination	Each	0	100.00	$ 0.00
4.6	Sieve Analysis with #200 Wash	Each	0	90.00	$ 0.00
4.7	Sieve Analysis with Hydrometer	Each	0	130.00	$ 0.00
4.8	Loss-On-Ignition (Organic Content)	Each	0	115.50	$ 0.00
ENGINEERING SERVICES					
6.1	Prepare Geotechnical Report with Boring Logs and Location Plan	Lump Sum	1	3,500.00	$ 3,500.00

ITEM		UNITS	QTY	RATE	COST
6.2	Geotechnical Engineer to Perform Special Calculations or Run Slope Stability Analyses	Hour	0.0	120.00	$ 0.00
6.3	CADD Operator	Hour	0	95.00	$ 0.00
6.4	Professional Engineer to Consult or Attend Project Meetings	Hour	0.0	120.00	$ 0.00
				ESTIMATED TOTAL:	$ 16,398.00
				RECOMMENDED BUDGET:	$ 16,400.00

GENERAL CONDITIONS

Geotechnical and Construction Services

TESTING SERVICE CORPORATION

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C.§ 6901, et, seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. ~~Client agrees to pay each invoice within thirty (30)~~ days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs ~~and reasonable attorney's fees.~~

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

~~Should TSC or any of its employees be found to have been~~ negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to $50,000 or the total amount of the fee paid to TSC for its services performed with respect ~~to the project, whichever amount is greater.~~

~~In the event Client is unwilling or unable to limit the damages~~ for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to $500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award ~~of greater damages.~~

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.