LOCAL AGENCY		CONSULTANT
Municipality	Illinois Department of Transportation **Preliminary Engineering Services Agreement For Motor Fuel Tax Funds**	Name: Crawford, Murphy and Tilly, Inc.
Township		Address: 550 N. Commons Drive, Suite 116
County: Lake County		City: Aurora
Section: 08-00065-02-RS		State: IL

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 improvement of the above SECTION. Motor Fuel Tax Funds, allotted to the LA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT", will be used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Section Description

Name Cedar Lake Road

Route _____ Length .96 Mi. 5080 FT (Structure No. _____)

Termini IL Route 120 to Nippersink Road

Description:
Phase I Project to study the existing two-lane section of Cedar Lake Road for safety and capacity. A determination will be made to widen the existing road as well as whether or not a complete reconstruction is required.

Agreement Provisions

The Engineer Agrees,

1. To perform or be responsible for the performance of the following engineering services for the LA, in connection with the proposed improvements herein before described, and checked below:
   - a. ☒ Make such detailed surveys as are necessary for the preparation ~~of detailed roadway plans~~ **Phase I Report**
   - b. ☐ Make stream and flood plain hydraulic surveys and gather high water data, and flood histories for the preparation of detailed bridge plans.
   - c. ☒ Make or cause to be made such soil surveys or subsurface investigations including borings and soil profiles and analyses thereof as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations are to be made in accordance with the current requirements of the DEPARTMENT.
   - d. ☐ 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.
   - e. ☒ Prepare Army Corps of Engineers Permit, Department of Natural Resources-Office of Water Resources Permit, ~~Bridge waterway sketch, and/or Channel Change sketch~~, Utility plan and locations, ~~and Railroad Crossing work agreements.~~ **Lake County Stormwater Management Commission Permit, Lake County Watershed Development Permit and IEPA 401 Water Quality Certification.**
   - f. ☐ Prepare Preliminary Bridge design and Hydraulic Report, (including economic analysis of bridge or culvert types) and high water effects on roadway overflows and bridge approaches.
   - g. ☐ Make complete general and detailed plans, special provisions, proposals and estimates of cost and furnish the LA with five (5) copies of the plans, special provisions, proposals and estimates. Additional copies of any or all documents, if required, shall be furnished to the LA by the ENGINEER at his actual cost for reproduction.
   - h. ☒ Furnish the LA with survey and drafts in **duplicate** ~~quadruplicate~~ of all necessary right-of-way dedications, construction easement and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.

~~Note: Four copies to be submitted to the Regional Engineer~~

i. ☐ Assist the LA in the tabulation and interpretation of the contractors' proposals

j. ☒ Prepare the necessary environmental documents in accordance with the procedures adopted by the DEPARTMENT's Bureau of Local Roads & Streets.

k. ☒ Prepare the Project Development Report when required by the DEPARTMENT.

l. ☒ **Additional services as included and/or defined in the attached Scope of Services (Exhibit "A").**

(2) That all reports, plans, plats and special provisions to be furnished by the ENGINEER pursuant to the AGREEMENT, will be in accordance with current standard specifications and policies of the **LA** ~~DEPARTMENT~~. It is being understood that all such reports, plats, plans and drafts shall, before being finally accepted, be subject to approval by the LA ~~and the DEPARTMENT.~~

(3) To attend conferences at any reasonable time when requested to do so by representatives of the LA ~~or the Department~~.

(4) In the event plans or surveys are found to be in error during construction of the SECTION and revisions of the plans or survey corrections are necessary, the ENGINEER agrees that he will perform such work without expense to the LA, even though final payment has been received by him. He shall give immediate attention to these changes so there will be a minimum delay to the Contractor.

(5) That basic survey notes and sketches, charts, computations and other data prepared or obtained by the Engineer pursuant to this AGREEMENT will be made available, upon request, to the LA or the DEPARTMENT without cost and without restriction or limitations as to their use.

(6) That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by him and will show his professional seal where such is required by law.

The LA Agrees,

1. ~~To pay the ENGINEER as compensation for all services performed as stipulated in paragraphs 1a, 1g, 1i, 2, 3, 5 and 6 in accordance with one of the following methods indicated by a check mark:~~

~~a. ☐ A sum of money equal to _____ percent of the awarded contract cost of the proposed improvement as approved by the DEPARTMENT.~~

~~b. ☐ A sum of money equal to the percent of the awarded contract cost for the proposed improvement as approved by the DEPARTMENT based on the following schedule:~~

~~Schedule for Percentages Based on Awarded Contract Cost~~

~~Awarded Cost~~	~~Percentage Fees~~
~~Under $50,000~~	_____ ~~(see note)~~
	_____ ~~%~~
	_____ ~~%~~
	_____ ~~%~~
	_____ ~~%~~
	_____ ~~%~~

~~Note: Not necessarily a percentage. Could use per diem, cost-plus or lump sum.~~

2. To pay for services rendered in accordance with this AGREEMENT at actual cost of performing such work plus 14.5 percent to cover profit, overhead and readiness to serve - "actual cost" being defined as material cost plus payrolls, insurance, social security and retirement deductions. Traveling and other out-of-pocket expenses will be reimbursed to the ENGINEER at his actual cost. Subject to the approval of the LA, the ENGINEER may sublet all or part of the services provided under the paragraph 1b, 1c, 1d, 1e, 1f, 1h, 1j & 1k. If the ENGINEER sublets all or part of this work, the LA will pay the cost to the ENGINEER plus a five (5) percent service charge.

"Cost to Engineer" to be verified by furnishing the LA ~~and the DEPARTMENT~~ copies of invoices from the party doing the work. The classifications of the employees used in the work should be consistent with the employee classifications for the services performed. If the personnel of the firm, including the Principal Engineer, perform routine services that should normally be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the work performed.

The Total Not-to-Exceed Contract Amount shall be $394,372.25. A copy of CECS is included as Exhibit "B".

3. That payments due the ENGINEER for services rendered in accordance with this AGREEMENT will be made as soon as practicable after the services have been performed in accordance with the following schedule:

   a. Upon completion of detailed plans, special provisions, proposals and estimate of cost - being the work required by paragraphs 1a through 1g under THE ENGINEER AGREES - to the satisfaction of the LA and their approval by the DEPARTMENT, 90 percent of the total fee due under this AGREEMENT based on the approved estimate of cost.

   b. Upon award of the contract for the improvement by the LA ~~and its approval by the DEPARTMENT~~, 100 percent of the total fee due under the AGREEMENT based on the awarded contract cost, less any amounts paid under "a" above.

   By Mutual agreement, partial payments, not to exceed 90 percent of the amount earned, may be made from time to time as the work progresses.

4. That, should the improvement be abandoned at any time after the ENGINEER has performed any part of the services provided for in paragraphs 1a, through 1h and prior to the completion of such services, the LA shall reimburse the ENGINEER for his actual costs plus 14.5 percent incurred up to the time he is notified in writing of such abandonment -"actual cost" being defined as in paragraph 2 of THE LA AGREES.

5. That, should the LA require changes in any of the detailed plans, specifications or estimates except for those required pursuant to paragraph 4 of THE ENGINEER AGREEs, ~~after they have been approved by the DEPARTMENT~~, the LA will pay the ENGINEER for such changes on the basis of actual cost plus 14.5 percent to cover profit, overhead and readiness to serve -"actual cost" being defined as in paragraph 2 of THE LA AGREES. It is understood that "changes" as used in this paragraph shall in no way relieve the ENGINEER of his responsibility to prepare a complete and adequate set of plans and specifications.

It is Mutually Agreed,

1. That any difference between the ENGINEER and the LA concerning their interpretation of the provisions of this Agreement shall be referred to a committee of disinterested parties consisting of one member appointed by the ENGINEER, one member appointed by the LA and a third member appointed by the two other members for disposition and that the committee's decision shall be final.

2. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at his last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all surveys, permits, agreements, preliminary bridge design & hydraulic report, drawings, specifications, partial and completed estimates and data, if any from traffic studies and soil survey and subsurface investigations with the understanding that all such material becomes the property of the LA. The ENGINEER shall be paid for any services completed and any services partially completed in accordance with Section 4 of THE LA AGREES.

3. That if the contract for construction has not been awarded one year after the acceptance of the plans by the LA ~~and their approval by the DEPARTMENT,~~ the LA will pay the ENGINEER the balance of the engineering fee due to make 100 percent of the total fees due under this AGREEMENT, based on the estimate of cost as prepared by the ENGINEER and approved by the LA ~~and the DEPARTMENT.~~

4. That the ENGINEER warrants that he/she has not employed or retained any company or person, other than a bona fide employee working solely for the ENGINEER, to solicit or secure this contract, and that he/she has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the ENGINEER, any fee, commission, percentage, brokerage fee, gifts or any other consideration, contingent upon or resulting from the award or making of this contract. For Breach or violation of this warranty the LA shall have the right to annul this contract without liability.

IN WITNESS WHEREOF, the parties have caused the AGREEMENT to be executed in quadruplicate counterparts, each of which shall be considered as an original by their duly authorized officers.

Executed by the LA:

County of Lake of the
(~~Municipality/Township~~/County)

ATTEST:

By

Lake County Clerk

(Seal)

State of Illinois, acting by and through its

County Board

By

Title Board Chairman

RECOMMENDED FOR EXECUTION

Martin G. Buehler, P.E.
Director of Transportation/County Engineer
Lake County

Crawford, Murphy and Tilly, Inc.

550 North Commons Drive, Suite 116

Aurora, IL 60504

ATTEST:

By

Title

By

Title

NOTE: Three (3) Original Executed Contracts – (2) LCDOT, (1) Consultant

EXHIBIT “A”

CMT Phase I Scope

ATTACHMENT A

Lake County Division of Transportation
Project Scope Description to Provide
Phase I (Study) Services for
Cedar Lake Road – IL Route 120 to Nippersink Road

ENGINEERING SERVICES

General Project Information

1. This project is anticipated to begin in June 2011 and be completed by December 2012.

2. Roadway limits: IL Route 120 to Nippersink Road.
   a. Scope assumes that our south limits of the project will match into the north limits of the IL Route 120/Cedar Lake Road Extension project that is scheduled for 2011 construction.
   b. Scope assumes that our north limits will match in south of the Nippersink Road intersection.

3. The Phase I Scope of Services generally include: Topographical surveys, Location Drainage Study, Hydraulic Analysis, Geometric Analysis, Traffic Analysis (Safety and Capacity), Complete Streets Analysis, Environmental Studies and Geotechnical Investigations.

4. CMT will prepare Right-of-way Plats, Permanent Easement Plats and Temporary Easement Plats as part of this project. (Legal efforts, property appraisals, review appraisals and negotiations are not included in the project scope.)

Phase I Engineering - Detailed Scope of Services

A. Data Collection

1. Obtain, Review, and Inventory the following:
   a. Existing utility information (electric, natural gas, gas pipelines, transmission lines, telecommunication, cable TV, water, sewer).
   b. Available roadway plans / record drawings (to be obtained from Lake County and Village of Round Lake)
   c. Establish survey datum and ground control
   d. Obtain/Review accident data (to be provided by the Lake County Sheriff's Department and LCDOT/TARS)
   e. Existing ADT traffic data provided by LCDOT, CMAP Traffic projections will be obtained by CMT
   f. Property ownership / Tax Maps
   g. Soil Conservation Service Maps
   h. U.S.G.S. Maps
   i. NWI maps

j. Current development plans
k. Obtain School Bus Route Information
l. Perform Turn Movement Counts at: Sweet Clover, Wildspring, Forest Avenue, Park Avenue, Church Access. ADT counting will not be performed.

2. Project Site Visit by Project Manager and Project Engineer

B. Field Surveys
(Accordance w/ LCDOT Survey Procedures–Attachment "C")

1. Office setup and coordination (State Plane)
   a. Obtain and review locations of Vertical/Horizontal control points and section corners for property line monumentation (to be provided by the Lake County)
   b. Schedule and coordinate field survey activities

2. Preliminary Field Work
   a. Run traverse between control points to verify closure, and to set additional control points
   b. Run level circuit between bench marks to verify closure, horizontal control points, and set temporary bench marks

3. Conduct topographic surveys and cross-sectional (50' centers). Surveys shall be taken 20' beyond the existing right-of-way. The following are the limits of surveys: (Total Length of survey is approximately 5,000 feet)
   a. Cedar Lake Road – IL. 120 to Nippersink Road (Approx 4500')
   b. Side Streets - Four (4) total (100' beyond radius returns)
   c. Cedar Lake Road (Section 06-00266-01-FP) post construction (Nov 2011)

4. Drainage Surveys
   a. Type, size, condition and invert of existing storm sewers, structures and culverts.
   b. Type, size, condition of utility structures.

5. Plot of Survey Data
   a. Download of survey data
   b. Create existing conditions plan view
   c. Create existing Digital Terrain Model (DTM) (Contours)
   d. Generate existing condition cross sections
   e. Generate existing centerline profile.

6. Existing survey in hand field review by Project Engineer
7. Pick-up surveys

C. Location Drainage Study

1. Existing Drainage System
   a. Identify Drainage Problems
      1.) Research, obtain, and document the location and description of any identified drainage problems.
      2.) Define factors leading to non-maintenance drainage problems, if any, and determine responsibility for corrective measures.

   b. Identify Base Floodplains
      1.) Squaw Creek floodplain is located within project limits.

   c. Identify Major Drainage Features:
      1.) Major Culvert Crossings
      2.) Existing Detention Facilities
         a.) Obtain and review any available hydraulic information pertaining to existing detention facilities within the project vicinity.
         b.) Perform tasks to identify impacts by the proposed improvements. Verify overflow route is maintained.
         c.) Evaluate alternatives to avoid or minimize impacts to existing facilities.
         d.) If proposed improvement impacts the facility, determine, if any, significant impacts to upstream / downstream properties
      3.) Identify existing drainage outlets and outlet treatments
      4.) Identify wetland areas as flagged by Huff & Huff.

2. Proposed Drainage System for Roadway
   a. Review and establish design criteria
      1.) Provide written documentation for non – compliance where design criteria are not met
      2.) Develop Concept Drainage Plan-(trunk line pipe sizes, layout and outlet locations)

   b. Outlet Evaluation
      1.) Qualitatively evaluate whether each existing outlet is suitable for continued use, sensitive, or unsuitable.
      2.) Document location and source of unsuitable or sensitive outlets
      3.) Perform quantitative evaluation of unsuitable or sensitive outlets.
         a.) Determine if there is an increase in runoff as a result of proposed improvements.
         b.) Analyze existing outlet with proposed flow to determine potential impacts.
         c.) Analyze capacity of existing system.

d.) Analyze depressional storage areas, ponds, and wetlands to determine potential increases in water surface elevation or impacts of increased volume runoff.

4.) Develop feasible, cost effective recommendations in accordance with Lake County and IDOT policies, practices, and procedures.

c. Storm Water Detention / Retention Analysis
   1.) Determine if detention is required for project. Determine required detention volume if necessary.
   2.) Develop a concept plan for providing bio-infiltration swales and determine the proposed storage volumes.
   3.) Refine concept plan and develop concept size and location drawings bio-infiltration swales.
   4.) Provide cross section and profile of bio-infiltration swales.

d. Right of Way Analysis
   1.) Review ROW and easement needs for outlet pipes, ditch drainage, culvert extensions, and detention ponds.
   2.) Tabulate ROW and easement requirements, including station and offsets.

e. Summarize Drainage Alternatives

f. Develop Proposed Drainage Plans
   1.) Identify locations of ditch re-grading
   2.) Identify locations where sheet flow is proposed
   3.) Identify existing storm sewers to be maintained
   4.) Design of proposed storm sewers
   5.) Provide plan and profile of proposed trunk line sewers
   6.) Plot Hydraulic Grade Line
   7.) Proposed Action for major Drainage Features – Determine Alternatives for Cedar Lake Road culvert sizing (if required)

3. Floodplain Encroachment Evaluation
   a. Determine floodplain encroachment and resulting fill volumes.
   b. Determine amount and location for compensatory storage.
   c. Create exhibit and cross-sections

4. IDNR – OWR Permit
   a. Complete application and submit to LCSMC for review and approval.
   b. Address permit review comments and issues
   c. Obtain approval.

5. Exhibits
    a. General Location Drainage Map
    b. Existing Drainage Plan
    c. Flood Insurance Rate Map (FIRM) Exhibit
    d. Proposed Concept Drainage Plan
    e. Existing Typical Sections
    f. Proposed Typical Sections

6. Other Anticipated Permits
    a. USACOE 404 Permit Coordination
    b. IEPA 401 Water Quality Certification
    c. Lake County Watershed Development Permit

7. Water Quality/Best Management Practices (BMPs)
    a. Provide narrative to discuss water quality benefits of bio-infiltration swales.

D. Hydraulic Report (if required)

1. Narrative
    a. Project Description
    b. Existing Conditions
    c. Historical Observations/records
    d. Datum Correlation
    e. Sensitive Flood Receptors
    f. Hydrologic Methodology
    g. Hydraulic Methodology
    h. Summary of natural and existing hydraulic analyses
    i. Description of Proposed Structure
    j. Proposed Structure Analysis
    k. Scour Analysis
    l. Compensatory Storage
    m. Permit Requirements
    n. Conclusion

2. Waterway Information Table
3. Hydraulic Report Data Sheets
4. USGS & Aerial Location Maps
5. Photographs
6. Hydrology
7. Streambed Profile
8. Roadway Profile
9. Cross-Section Plots
10. Culvert Waterway Bridge Opening Plots
11. Hydraulics
    a. Current Effective model provided from FEMA or Lake County
    b. Existing Conditions based on proposed survey data

c. Natural Conditions Analysis
d. Proposed Conditions Analysis and alternative analysis

12. Permit Summary Form (District 1)
13. Compensatory Storage
14. Survey Notes

E. Conceptual Roadway Design

1. Establish project design criteria and standards
   (Criteria will be based on Project Scoping Report Dated 2/17/11)
2. Perform roadway capacity to determine roadway geometrics
   (Tech Memo)
3. Review accident reports and conduct safety analysis to establish roadway geometrics (Tech Memo)
4. Develop and finalize roadway typical sections. Determine if a complete reconstruction and widening will be justified based on safety and capacity.
5. Determine geometric and location requirements/need for bike path/pedestrian facilities (Tech Memo)
6. Establish preliminary horizontal and vertical alignments
7. Develop proposed pavement design based on geotechnical report.
8. Develop conceptual Maintenance of Traffic/Construction Staging Plan

F. Preliminary Design Studies

1. Refine horizontal and vertical geometry based on concept review comments
2. Evaluation of pavement design (preliminary), reconstruction versus widening/resurfacing.
3. Identify Barrier Warrant Analysis locations
4. Prepare preliminary opinion of construction costs
5. Utility conflict identification
6. Finalize Maintenance of Traffic/Construction Staging Plan

G. Public Involvement

1. Public Information Meetings (Open House Format) (1 Meeting)
   a. Identify locations and schedules
   b. Advertisements and mailings
   c. Prepare displays, exhibits and handouts
   d. Attendance at meeting
   e. Summarize public comments
   f. Coordination with facility staff and subconsultants regarding meetings
   g. Two Coordination Meetings with LCDOT Staff
      (Hours included under Task M)
2. Project Website

a. A public project website will be established by the consultant to serve as the central source of project information.
b. The website will be located on a separate internet domain acquired by the consultant and linked to via Lake County's website. Site address will be a project-specific domain name related to the project name, and incorporate graphics and marketing messages developed for the project.
c. Website content will be developed and maintained throughout the Phase I process/contract by consultant's project staff, and approved by Lake County prior to posting.
d. The website will include, but is not limited to, the following functions:
    - Collect information from stakeholders; name, address, email address
    - Notify subscribers of public meetings
    - Allow submittal of public comments
    - Provide access to displays, documents, renderings, schedules etc. which have been prepared for public information purposes
    - Address frequently asked questions
e. At the conclusion of the Phase I process, the website and domain ownership will be assumed by the Lake County Division of Transportation unless otherwise specified. Web pages are to be provided in .asp, .html or SharePoint format and include all related images, documentation, and files.

H. Environmental Studies: Environmental Scope is submitted as Attachment "A" and will be performed by Huff & Huff, Inc.

1. Subconsultant coordination and meetings (assume 2 meetings)
2. Review environmental reports and permits. Huff & Huff, Inc will provide a PDF copy of final report.

I. Geotechnical Investigations and Reports: Geotechnical Scope is submitted as Attachment "B" and will be performed by Chicago Testing Laboratory, Inc.

1. Subconsultant coordination and meetings (assume 1 meeting)
2 Provide sketches to subconsultant for boring layout program
3. Provide elevation information for boring logs
4. Review/analyze available soils surveys for roadway pavement design
5. Two Meetings with LCDOT Staff to Discuss Boring Locations and Results (Hours included under Task M)

J. Draft Project Development Report

1. Prepare Report Outline
2. List environmental and engineering commitments

3. Develop text portion of report
4. Assemble exhibits, text and submit report

K. Final Project Development Report

1. Incorporate review comments from Draft Report
2. Incorporate comments from Public Information Meetings
3. Revisions to text and exhibits
4. Update preliminary opinion of construction costs
5. Address final report review comments (if necessary)

L. Right of Way Services

1. Existing ROW conditions
   a. Obtain existing plats (Approx 47 parcels)
   b. Reconcile differences between monumentation survey and existing recorded plats
   c. Property line mapping

2. Right-of-Way Impact Analysis
   a. Identify Right-of-way impacts based on proposed improvements.
   b. Identify property ownership, parcel number and information

3. Right-of-Way Plats and Acquisition
   a. Finalize impact analysis need for easements and right-of-way necessary to accommodate Phase II design.
   b. Preparation of plats and legal descriptions. (Assume 15 Parcels)

4. Plat of Highways (Not included in scope and man-hours)

M. Meetings and Coordination (assume 2 people per meeting @ 3 hours per meeting)

1. Kick-off meeting with LCDOT (1 Meeting)
2. Draft Report review meeting with LCDOT (1 Meeting)
3. Progress meetings LCDOT (assume 3 Meetings)
4. Coordination meetings with LCDOT staff to discuss Public Information meeting (2 Meetings)
5. Soil Review meetings with LCDOT Staff (2 Meeting)
6. Meet with IDOT Bureau of Programming (assume 4 meetings)
7. Meet with Lake County Stormwater Management Commission (2 Meetings)
8. Meet with Forest Preserve (1 Meeting)
9. Meet with Village of Round Lake (2 Meetings)
10. Preparation time prior to meetings (Total of 18 meetings)
11. Prepare Meeting Minutes (Total of 18 meetings)

12. Coordination time with IDOT Bureau of Programming, LCDOT, Forest Preserve and Village of Round Lake as necessary

N. Project Administration

1. Project Setup
   a. Project Manual for team members
   b. File Management (electronic and design binders)
   c. Accounting and Billings
   d. Project close-out
2. Project Management
   a. Scope of Work reviews
   b. Create and maintain progress schedule
   c. Budget control
   d. Resource planning
   e. Project team meetings
   f. Prepare progress reports
3. Quality Assurance
   a. Prepare and maintain Quality Assurance Plan
   b. Quality Assurance Reviews
   c. Constructability Reviews

EXHIBIT “B”

CMT Cost Estimate of Consultant Services (CECS)

"Exhibit B"

Route: Cedar Lake Road - Phase I Improvement Project

Local Agency: Lake County

*Firm's **approved rates** on file with DOT'S Bureau of Accounting and Auditing:

Overhead Rate (OH) 164.38%
Complexity Factor '® 0.00
Calendar Days 580

Method of Compensation:

Cost Plus Fixed Fee 1 [X] 14.5%[DL + R(DL) + OH(DL) + IHDC]
Cost Plus Fixed Fee 2 [ ] 14.5%[DL + R(DL) + 1.4(DL) + IHDC]
Cost Plus Fixed Fee 3 [ ] 14.5%[(2.3 + R)DL + IHDC]

Cost Estimate of Consultant's Services in Dollars

	Element of Work	Man-Hours	Payroll Rate	Payroll Costs (DL)	Overhead*	Services by others (+5%)	In-House Direct Costs (IHDC)	Profit	Total	% of Grand Total
	Phase I Tasks									
A	Data Collection	64.0	$33.17	$2,122.88	$3,489.59	$0.00	$204.00	$843.39	$6,659.86	1.69%
B	Field Surveys	382.0	$34.49	$13,175.18	$21,657.36	$0.00	$915.00	$5,183.39	$40,930.93	10.38%
C	Location Drainage Study	410.0	$34.42	$14,112.20	$23,197.63	$0.00	$300.00	$5,453.43	$43,063.26	10.92%
D	Hydraulic Report	180.0	$35.53	$6,395.40	$10,512.76	$0.00	$0.00	$2,451.68	$19,359.84	4.91%
E	Conceptual Roadway Design	174.0	$34.53	$6,008.22	$9,876.31	$0.00	$0.00	$2,303.26	$18,187.79	4.61%
F	Preliminary Design Studies	106.0	$34.29	$3,634.74	$5,974.79	$0.00	$0.00	$1,393.38	$11,002.91	2.79%
G	Public Involvement	274.0	$39.49	$10,820.26	$17,786.34	$0.00	$4,390.00	$4,784.51	$37,781.11	9.58%
H	Environmental Studies	32.0	$35.99	$1,151.68	$1,893.13	$44,248.68	$0.00	$441.50	$47,734.99	12.10%
I	Geotechnical Investigations	36.0	$35.57	$1,280.52	$2,104.92	$31,494.84	$0.00	$490.89	$35,371.17	8.97%
J	Draft PDR	132.0	$36.03	$4,755.96	$7,817.85	$0.00	$300.00	$1,866.70	$14,740.51	3.74%
K	Final PDR	100.0	$35.42	$3,542.00	$5,822.34	$0.00	$300.00	$1,401.33	$11,065.67	2.81%
L	Right of Way Services	480.0	$37.79	$18,139.20	$29,817.22	$0.00	$5,250.00	$7,714.93	$60,921.35	15.45%
M	Meetings and Coordination	204.0	$40.12	$8,184.48	$13,453.65	$0.00	$660.96	$3,233.37	$25,532.46	6.47%
N	Project Administration	170.0	$42.79	$7,274.30	$11,957.49	$0.00	$0.00	$2,788.61	$22,020.40	5.58%
Totals		2744.0	$36.66	$100,597.02	$165,361.38	$75,743.52	$12,319.96	$40,350.36	**$394,372.25**	100.00%

Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

Summary of Man Hours

	Item	CMT Total Hours
	Phase I Tasks	
A	Data Collection	64.0
B	Field Surveys	382.0
C	Location Drainage Study	410.0
D	Hydraulic Report	180.0
E	Conceptual Roadway Design	174.0
F	Preliminary Design Studies	106.0
G	Public Involvement	274.0
H	Environmental Studies	32.0
I	Geotechnical Investigations	36.0
J	Draft PDR	132.0
K	Final PDR	100.0
L	Right of Way Services	480.0
M	Meetings and Coordination	204.0
N	Project Administration	170.0
	Total Project Hours:	**2,744.0**

Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

		Hours	
A	**Data Collection**		
A-1	Data Collection	50	
A-2	Project Site Visit	14	
	Sub - total		**64**
B	**Field Surveys**		
B-1	Office Set-up and Coordination	24	
B-2	Preliminary Field Work	36	
B-3	Topographic Surveys	220	
B-4	Drainage Surveys	20	
B-5	Plot of Survey Data	30	
B-6	Field Review	12	
B-7	Pick-up Surveys	40	
	Sub - total		**382**
C	**Location Drainage Study**		
C-1	Existing Drainage System	110	
C-2	Proposed Drainage System	160	
C-3	Floodplain Encroachment Evaluation	20	
C-4	IDNR - OWR Permit	20	
C-5	Exhibits	30	
C-6	Other Permits	50	
C-7	Water Quality/Best Management Practices	20	
	Sub - total		**410**
D	**Hydraulic Report**		
D-1	Narrative	40	
D-2	Waterway Information Table	6	
D-3	Hydraulic Report Data Sheets	6	
D-4	USGS & Aerial Location maps	2	
D-5	Photographs	2	
D-6	Hydrology	6	
D-7	Streambed Profile	4	
D-8	Roadway Profile	4	
D-9	Cross-Section Plots	4	
D-10	Bridge Opening Plots	4	
D-11	Hydraulics	88	
D-12	Permit Summary Form	6	
D-13	Compensatory Storage	6	
D-14	Survey Notes	2	
	Sub - total		**180**
E	**Conceptual Roadway Design**		
E-1	Establish Design Criteria	8	
E-2	Perform Roadway Capacity	10	
E-3	Review Accident Reports and conduct safety analysis	12	
E-4	Develop Typical Sections	20	
E-5	Determine Bicycle/Pedestrian Facility Requirements	12	
E-6	Establish Preliminary Horizontal and Vertical Alignments	60	
E-7	Develop Preliminary Pavement Design	20	
E-8	Develop Concept MOT/Staging	32	
	Sub - total		**174**

Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

F	**Preliminary Design Studies**		
F-1	Refine Horizontal and Vertical Alignments per Review Comments	18	
F-2	Determine Reconstruct versus Widening Resurfacing	12	
F-3	Identify Barrier Warrant Analysis	6	
F-4	Preliminary Opinion of Construction Costs	36	
F-5	Utility Conflict Identification	24	
F-6	Finalize MOT/Construction Staging Plan	10	
	Sub - total		**106**
G	**Public Involvement**		
G-1	Public Information Meeting (1 Assumed)	150	
G-2	Project Website	124	
	Sub - total		**274**
H	**Environmental Studies**		
H-1	Coordination and Meetings with Subconsultant	20	
H-2	Review Environmental Reports and Permits	12	
	Sub - total		**32**
I	**Geotechnical Investigations**		
I-1	Coordination and Meetings with Subconsultant	12	
I-2	Provide Sketches to Subconsultant for Boring Layout Plan	4	
I-3	Provide Elevation Information for Boring Logs	12	
I-4	Review and Analyze Soil Surveys for Design Purposes	8	
I-5	Soil Coordination Meetings w/ LCDOT (Hours included under Task M)	0	
	Sub - total		**36**
J	**Draft PDR**		
J-1	Prepare Report Outline	24	
J-2	List of Environmental and Engineering Commitments	4	
J-3	Develop Text Portion of Report	60	
J-4	Assemble Exhibits and Text	44	
	Sub - total		**132**
K	**Final PDR**		
K-1	Incorporate Review Comments from Draft Report	24	
K-2	Incorporate Comments from Public Information Meetings	20	
K-3	Revisions to Text and Exhibits	16	
K-4	Update Preliminary Opinion of Construction Costs	20	
K-5	Address Final Report Review Comments	20	
	Sub - total		**100**
L	**Right of Way Services**		
L-1	Existing ROW Conditions	60	
L-2	Right-of-Way Impact Analysis	30	
L-3	Right-of-Way Plats and Acquisition (Assumed 15 Plats @ 26 Hours/Plat)	390	
L-4	Plat of Highways (Not Included)	0	
	Sub - total		**480**

Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

M	**Meetings and Coordination**		
M-1	Kick-off meeting w/ Lake County (1 Meeting)	6	
M-2	Draft Report Review Meeting (1 Meeting)	6	
M-3	Progress Meetings (Assume 3)	18	
M-4	Coordination Meetings w/ LCDOT regarding Public Info Meeting (2 Meetings)	12	
M-5	Soil Review Meetings w/ LCDOT (2 Meetings)	12	
M-6	Meeting w/ IDOT Bureau of Programming (4 Meetings)	24	
M-7	Meeting w/ Lake County Storm Water Management Commission (2 Meetings)	6	
M-8	Meeting w/ Forest Preserve (1 Meeting)	6	
M-9	Meeting w/ Village of Round Lake (2 Meetings)	12	
M-10	Preparation Time for Meetings (18 Meetings)	36	
M-11	Prepare Meeting Minutes (Total of 18 Meetings)	36	
M-12	Coordination w/ IDOT Programming, LCDOT, Round Lake and Forest Preserve	30	
	Sub - total		**204**
N	**Project Administration**		
N-1	Scope of Work Reviews	6	
N-2	Create and Maintain Progress Schedule	12	
N-3	Budget Control	6	
N-4	Resource Planning	6	
N-5	Project Team Meetings	30	
N-6	Prepare and Maintain Quality Assurance Plan	12	
N-7	Project Quality Assurance and Constructability Reviews	40	
N-8	Prepare Progress Reports	18	
N-9	Project Close Out	40	
	Sub - total		**170**

AVERAGE HOURLY PROJECT RATES

FIRM Crawford, Murphy & Tilly, Inc.
PSB N/A
PRIME/SUPPLEMENT

DATE 03/28/11

SHEET 1 OF 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Data Collection			Field Surveys			Location Drainage Study			Hydraulic Report			Conceptual Roadway Design		
		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	71.97	0																	
Senior Project Engineer	53.51	98	3.57%	1.91															
Project Engineer	42.52	441	16.07%	6.83	6	9.38%	3.99	6	1.57%	0.67	40	9.76%	4.15	20	11.11%	4.72	16	9.20%	3.91
Senior Engineer	33.82	1072	39.07%	13.21	42	65.63%	22.19	6	1.57%	0.53	300	73.17%	24.74	130	72.22%	24.42	120	68.97%	23.32
Senior Technical Manager	38.28	382	13.92%	5.33				40	10.47%	4.01	30	7.32%	2.80	30	16.67%	6.38	20	11.49%	4.40
Engineer	27.99	133	4.85%	1.36	16	25.00%	7.00				40	9.76%	2.73				18	10.34%	2.90
Planner	23.86	0																	
Registered Land Surveyor	38.09	340	12.39%	4.72				60	15.71%	5.98									
Senior Technician	32.97	278	10.13%	3.34				270	70.68%	23.30									
Technician	24.59	0																	
Technical Assistant	18.68	0																	
Clerical	18.17	0																	
TOTALS		2744	100%	$36.70	64	100.00%	$33.17	382	100%	$34.49	410	100%	$34.42	180	100%	$35.53	174	100%	$34.53

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AVERAGE HOURLY PROJECT RATES

FIRM Crawford, Murphy & Tilly, Inc.
PSB N/A
PRIME/SUPPLEMENT

DATE 03/28/11

SHEET 2 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Preliminary Design Studies			Public Involvement			Environmental Studies			Geotechnical Investigations			Draft PDR			Final PDR		
		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	71.97																		
Senior Project Engineer	53.51				34	12.41%	6.64							4	3.03%	1.62			
Project Engineer	42.52	10	9.43%	4.01	75	27.37%	11.64	8	25.00%	10.63	6	16.67%	7.09	20	15.15%	6.44	20	20.00%	8.50
Senior Engineer	33.82	72	67.92%	22.97	54	19.71%	6.66	24	75.00%	25.36	18	50.00%	16.91	76	57.58%	19.47	60	60.00%	20.29
Senior Technical Manager	38.28	10	9.43%	3.61	96	35.04%	13.41				4	11.11%	4.25	22	16.67%	6.38	10	10.00%	3.83
Engineer	27.99	14	13.21%	3.70	15	5.47%	1.53							10	7.58%	2.12	10	10.00%	2.80
Planner	23.86																		
Registered Land Surveyor	38.09																		
Senior Technician	32.97										8	22.22%	7.33						
Technician	24.59																		
Technical Assistant	18.68																		
Clerical	18.17																		
TOTALS		106	100%	$34.29	274	100%	$39.89	32	100%	$35.99	36	100%	$35.57	132	100%	$36.03	100	100%	$35.42

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DF-824-039
REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Crawford, Murphy & Tilly, Inc.
PSB N/A
PRIME/SUPPLEMENT

DATE 03/28/11

SHEET 3 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Right of Way Services			Meetings and Coordination			Project Administration								
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	71.97															
Senior Project Engineer	53.51				40	19.61%	10.49	20	11.76%	6.30						
Project Engineer	42.52	20	4.17%	1.77	64	31.37%	13.34	130	76.47%	32.52						
Senior Engineer	33.82	60	12.50%	4.23	90	44.12%	14.92	20	11.76%	3.98						
Senior Technical Manager	38.28	120	25.00%	9.57												
Engineer	27.99				10	4.90%	1.37									
Planner	23.86															
Registered Land Surveyor	38.09	280	58.33%	22.22												
Senior Technician	32.97															
Technician	24.59															
Technical Assistant	18.68															
Clerical	18.17															
TOTALS		480	100%	$37.79	204	100%	$40.12	170	100%	$42.79	0	0%	$0.00	0	0%	$0.00

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Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Development of Project Hourly Rates (IDOT Method)

Crawford, Murphy, and Tilly, Inc.

Item	2011 Actual Rate	2012 Projected @ 5.0% Increase	2013 Projected @ 5.0% Increase	2014 Projected @ 5.0% Increase	2015 Projected @ 5.0% Increase	2016 Projected @ 5.0% Increase
Average Hourly Rate as a Percent of 2011 Rate	100.0%	105.0%	110.3%	115.8%	121.6%	127.6%
Estimated Months of Contract in Given Year	7	12	0	0	0	0
% of Project Duration	36.84%	63.16%	0.00%	0.00%	0.00%	0.00%
Extension	0.368	0.663	0.000	0.000	0.000	0.000
Weighted Project Hourly Rate Multiplier	**Note: Salary Adjustments are Given on January 1 of Each Year**					1.0316

Project Duration: June 2011 to December 2012= 19 months

Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Computation of Prorated Project Hourly Rates

Crawford, Murphy, and Tilly, Inc.

Classification	Actual 2011 Average Hourly Rate	Weighted Hourly Rate Multiplier	Project Hourly Rates *
Principal	$69.77	1.0316	$71.97
Senior Project Engineer	$51.87	1.0316	$53.51
Project Engineer	$41.22	1.0316	$42.52
Senior Engineer	$32.78	1.0316	$33.82
Senior Technical Manager	$37.11	1.0316	$38.28
Engineer	$27.13	1.0316	$27.99
Planner	$23.13	1.0316	$23.86
Registered Land Surveyor	$36.92	1.0316	$38.09
Senior Technician	$31.96	1.0316	$32.97
Technician	$23.84	1.0316	$24.59
Technical Assistant	$18.11	1.0316	$18.68
Clerical	$17.61	1.0316	$18.17

* Rates to be applied to all project work tasks

Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Estimate of Direct Costs

Crawford, Murphy, and Tilly, Inc.

A	**Data Collection**		
1	Travel: 4 trips x 100 miles x $.51/mile	$204.00	
	Sub - total		**$204.00**
B	**Field Surveys**		
1	Travel: 15 trips x 100 miles x $.51/mile	$765.00	
2	Meals ($5.00 x 15 days x 2 people)	$150.00	
	Sub - total		**$915.00**
C	**Location Drainage Study**		
1	Printing:		
	Pre-Final LDS Report		
	3 Copies @ $50.00/copy	$150.00	
	Final LDS Report		
	3 Copies @ $50.00/copy	$150.00	
	Sub - total		**$300.00**
D	**Hydraulic Report**		
1	No Direct Costs		
	Sub - total		**$0.00**
E	**Conceptual Roadway Design**		
1	No Direct Costs		
	Sub - total		**$0.00**
F	**Preliminary Design Studies**		
1	No Direct Costs		
	Sub - total		**$0.00**

Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Estimate of Direct Costs

G	**Public Involvement**		
1	Printing: Color Comment Sheets 150 Sheets * $1.00	$150.00	
2	Display Boards for First Public Meeting: 10 Boards @ $80.00/Board	$800.00	
3	Travel: 2 trips @ $51.00/trip	$102.00	
4	Postage: Meeting Notification Letters 200 Letters/Meeting * 1 Meetings * $.44/Letter	$88.00	
5	Court Reporter (If Required)	$250.00	
6	Project Theming for Website	$3,000.00	
	Sub - total		**$4,390.00**
H	**Environmental Studies**		
1	No Direct Costs		
	Sub - total		**$0.00**
I	**Geotechnical Investigations**		
1	No Direct Costs		
	Sub - total		**$0.00**
J	**Draft PDR**		
1	Draft Project Development Report 6 sets * $50 / set	$300.00	
	Sub - total		**$300.00**
K	**Final PDR**		
1	Final Project Development Report 6 sets * $50 / set	$300.00	
	Sub - total		**$300.00**

Cedar Lake Road - Phase I Improvement Project
Lake County Division of Transportation

Estimate of Direct Costs

L	**Right of Way Services**		
1	Title Commitments 15 Parcels @ $350/Parcel	$5,250.00	
	Sub - total		**$5,250.00**
M	**Meetings and Coordination**		
1	Travel: 12 trips x 108 miles x $.51/mile Travel: 2 trips x 100 miles x $.51/mile Travel: 4 trips x 56 miles x $.51/mile	$660.96 $102.00 $114.24	
	Sub - total		**$660.96**
N	**Project Administration**		
1	No Direct Costs		
	Sub - total		**$0.00**

ATTACHMENT “A”

Huff & Huff, Inc.

Sub-Consultant Agreement

Scope and Man-hours for Environmental Studies

Huff & Huff, Incorporated
environmental engineers
and consultants

915 Harger Road, Suite 330
Oak Brook, IL 60523
Phone (630) 684-9100
Fax (630) 684-9120
Website: http://huffnhuff.com

March 17, 2011

Mr. Kelly Farley, P.E.
Crawford, Murphy & Tilly, Inc.
550 North Commons Drive
Suite 116
Aurora, Illinois 60504

Re: Environmental Services for Cedar Lake Road
Illinois Route 120 to Nippersink Road
Round Lake, Lake County, Illinois
Proposal No.: T11-028

Dear Mr. Farley:

Huff & Huff, Inc. (H&H) is pleased to submit this proposal to perform various environmental services in conjunction with the proposed roadway improvements to Cedar Lake Road in Round Lake, Lake County, Illinois. This proposal presents our project understanding, the scope of services, and cost for completing the project.

1. PROJECT UNDERSTANDING

The Lake County Division of Transportation (LCDOT) is proposing improvements to Cedar Lake Road from Illinois Route 120 to Nippersink Road in Round Lake, Illinois. H&H has been requested to provide the following services: a Preliminary Environmental Site Assessment (PESA) screening report, wetland delineation and permitting, natural resource agency coordination, development of historic structure photolog, tree survey, noise analysis, and potential Section 4(f) coordination and report development. In addition, LCDOT has indicated in their scoping document that stormwater best management practices will be considered. H&H can utilize its extensive experience in bioswale development to assist CMT in this sustainable stormwater practice.

Cedar Lake Road is an existing two lane road that will be reconstructed. The project length is approximately 3,400 feet and includes intersections with Illinois Route 120 on the south and Nippersink Road on the north. Although this project will be locally funded, this section of Cedar Lake Road is an unmarked state route. Therefore, for the purposes of this proposal, the environmental issues will be addressed utilizing state and federal reporting requirements. If it is determined that the project does not require full NEPA type processing, some of these tasks will be dropped from the scope.

At this time, widening of the roadway will be based on analysis conducted during the Phase 1 Study. As a result, right-of-way acquisition is unknown.

2. PROJECT APPROACH

H&H will provide environmental services for the proposed roadway improvement project. At this time, local funding is being proposed for the entire project. As Cedar Lake Road is an unmarked state route, much of the environmental processing typically utilized for federally funded state projects will be completed for the improvement. As coordination with IDOT proceeds, the need for some of the environmental reporting will be determined at that time; however, because of regulatory requirements, wetlands, threatened and endangered species, and special waste will be required regardless of funding or state processing.

Improvements to the existing drainage features may be a crucial portion of this project. Working with CMT, H&H will investigate sustainable measures that may be feasible to address the existing conditions. This could include sustainable initiatives, such as bioswales or other similar features that will address some of the concerns of the project and provide a greener solution. These initiatives would be presented in concept phase during the engineering design for the project.

This proposal includes wetland delineation services, permitting through Lake County and the Corps of Engineers (COE) if necessary, and potential sustainable concepts for drainage features. "Wetlands" are defined by the COE for jurisdictional purposes as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 323.3(c)). To perform this task, a site visit is required to document wetlands and "Waters of the U.S." located within the project limits. The investigation will be in compliance with the 2008 Wetland Delineation Methodology.

H&H will also initiate coordination with other reviewing agencies to obtain the necessary clearances or sign-offs for the project. H&H will conduct a special waste screening that will meet the standards of the Illinois Department of Transportation Special Waste Procedures for Local Highway Improvements (Memo #66-10) and BLRS Section 20.12 Special Waste. Because of the rural nature of the roadway, it is unlikely that contaminated sites will be encountered within the project limits.

3. SCOPE OF SERVICES

H&H will provide the following scope of services for the proposed roadway improvements in Round Lake, Lake County, Illinois:

Task 1. Wetland Delineation and Report

The following records/documents will be reviewed prior to conducting the field investigation. Soils information will be reviewed to determine the soil types encountered during the delineation procedures. The maps reviewed and to be used include:

- U.S. Geological Survey Topographic Maps
- National Wetlands Inventory Maps
- Lake County Soil Survey
- Lake County ADID Maps
- Lake County Flood Insurance Rate Maps
- Hydric Soils of the United States

In addition to the areas identified on available mapping, the entire area within the proposed project limits will be investigated in the event that unmapped wetlands are present. As the wetland maps are developed to be used as a general planning tool, detailed field investigations are required to ascertain whether or not wetlands are present. All areas exhibiting wetland characteristics within the parcel will be investigated.

On-Site Investigation (Field Inventory)

The on-site investigation will be conducted by our environmental staff experienced in Federal methods for conducting wetland delineations. Our staff will classify and define hydric soils, hydrophytic vegetation, and evidence of hydrology to determine if wetlands are present. The wetland perimeters will be located and flagged for completion of field survey by others.

A wetland delineation of the project site will be conducted that will meet the requirements of Executive Order 11990, "Protection of Wetlands;" Section 404 of the Federal Water Pollution Control Act as amended by the Clean Water Act (Corps of Engineers, Section 404 Permit), the Illinois Environmental Protection Agency (IEPA Section 401 Guidelines) regulations, and the Lake County Watershed Development Ordinance. These regulations pertain to the placement of fill or alterations of drainage within wetlands of any type and apply to privately as well as publicly owned wetlands. The investigation will meet the requirements of these regulations by identifying the type, functions, and approximate boundaries of the involved wetlands.

Wetlands found will be classified according to type using the "Classification of Wetlands and Deep Water Habitats of the United States" by Cowardin. Wetland boundaries will be defined in accordance with the regional supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest region. This includes a soil investigation to determine the presence or absence of hydric soils and an analysis of the dominant plant species. Field observations will be made on any evidence indicating the hydrology of the area and on water sources that are supporting these wetlands. Functions of these wetlands will be evaluated from field observations.

H&H will flag the wetland perimeters. H&H will not conduct the survey of the wetlands but will coordinate with CMT staff to assure accuracy of the wetland boundaries. This will include a meeting in the field with the survey crew, if necessary.

This task will include a meeting with the COE, Lake County Stormwater Management Commission or Lake County Planning Department staff to verify wetland boundaries.

Report

A wetland delineation report will be prepared summarizing the findings of the fieldwork. If no wetlands are present at either site, a summary letter will be prepared in lieu of a report, with necessary documentation of the field investigation.

Specific items to be included are as follows:

a) Map showing the wetland boundaries and project boundaries
b) Aerial Photo with the appropriate limits of delineated wetlands
c) Floristic Quality Assessment

A formal delineation of wetlands is required in accordance with Lake County regulations, prior to permitting any wetland impacts. In Lake County, the wetland delineation report must include a floristic quality assessment. Unavoidable impacts to wetlands and wetland buffers in Lake County will require permits.

Task 2. Wetland Mitigation Strategies

At this time, no on-site mitigation design is included in the scope of services. The development surrounding the site reduces the feasibility of mitigating impacts on site. If impacts to wetlands do occur, H&H will coordinate with local wetland bank operators to determine the availability of wetland bank credits within the watershed. It is recommended that impacts be mitigated at a local wetland bank. Because the project is located in Lake County, mitigation must occur in Lake County and preferably within the watershed of the impact.

Task 3. Jurisdictional Determination Submittal/Boundary Verification/Permitting

If wetlands are located within the project limits permitting may be required. Once the delineations have been completed, a draft jurisdictional determination request will be prepared. As part of the jurisdictional determination process, an on-site field visit may be required. If necessary, H&H staff will accompany Lake County or COE officials to the site after the delineation is completed. Upon submittal of the jurisdictional determination request, it may take three to six months to obtain an official jurisdictional determination from the COE.

Lake County regulates isolated wetlands that are not subject to Section 404 regulations. Therefore, permitting activities may be required through Lake County.

As necessary, H&H will assist CMT and LCDOT in the permitting process. As part of the process, coordination will also include the following agencies through the submittal of the Joint Application:

- US Fish & Wildlife Service (USFWS)
- Illinois Department of Natural Resources (IDNR)
- Illinois Department of Natural Resources/Office of Water Resources (IDNR/OWR)
- Illinois Environmental Protection Agency (IEPA)
- Illinois Historic Preservation Agency (IHPA)

The submittal to the resource agencies will include the wetland delineation report. As mentioned previously, if no wetlands are located within the project limits, then a summary letter will be prepared and this letter will be forwarded to all agencies for their information.

Task 4. Agency Coordination

Coordination with both the USFWS and the IDNR will be conducted. Endangered species review through the IDNR is initiated through the Ecological Compliance Assessment Tool (EcoCAT) found on the IDNR website.

The FWS no longer conducts project by project review upon request; rather, the applicant for a particular project is required to conduct an assessment of their project and determine whether the project will impact federally listed species. To conduct this review, H&H will utilize the FWS website and proceed through the process for Section 7 Consultation and document the findings.

Based on the findings of the coordination with the IDNR and the USFWS, endangered species surveys may be required, which can only be completed during certain portions of the year, depending on the species. The Round Lake Marsh may be suitable habitat for numerous plant species and possibly the Blanding's turtle (*Emydoidea blandingii*). Mussels may also be present within the stream channel. Because of the uncertainty of the types of species possibly present, estimating costs for surveys at this time is not possible. Therefore, if surveys are required by the agencies after coordination, a more suitable cost estimate can be prepared at that time.

Task 5. IHPA Photolog

H&H will prepare the project photolog of all residences along the route. This photolog will focus on all structures within the project limits that are 50 years old or older, or those with unique architectural qualities. This photolog will be forwarded to the IHPA after review by CMT and LCDOT to obtain cultural clearance. The goal of this submittal will be to provide as

much information as possible to this agency so that a Phase 1 Archeological Survey is not required. A Phase I archeological survey could be required by IHPA if portions of the project area are relatively undisturbed. H&H will coordinate with CMT if a certified Phase I archeologist is required for the project.

Task 6. Tree Survey

The need for a formal tree survey will be determined upon early coordination with IDOT and LCDOT. H&H staff will utilize initial survey data from CMT to conduct the tree survey. Station and offset information will be obtained from CMT. H&H will identify the trees to species level and determine health, structure, and origin. H&H will also note whether any trees are of exceptional size and condition. H&H will determine which trees are worth avoidance. In addition, H&H will identify invasive, non-native trees that may enhance the rural setting through their removal. The removal of invasive species can provide a benefit to adjacent forested areas by removing a potential seed source.

H&H will complete tabulation tables with the information gathered from the field survey. Station and offset for the tables will be obtained from the survey. All data collected in the field concerning health, structure, and origin will be tabulated and summarized on the tables. A summary memorandum will be prepared upon completion of the tabulation. Recommendations on trees to be avoided or removed will be included. H&H will also work with CMT and the LCDOT in potential mitigation measures should certain trees be potentially impacted by the proposed project.

Task 7. Sustainable Concepts

H&H will work with CMT in the design phase to develop potential sustainable concepts for this project. As there are existing drainage issues related to the project, H&H will investigate various "green" concepts that may be feasible for this project. As drainage improvements are required, bioswales may be a feasible alternative to conventional drainage swales. Bioswales allow for more infiltration of groundwater and provide a filtering effect through the vegetation and increased infiltration. Preliminary or concept designs will be developed during the Phase 1 Engineering and will be presented to the LCDOT as potential options.

Task 8. Preliminary Environmental Site Assessment (PESA) Screening Report

The Special Waste Screening procedure includes reviewing environmental resource agency databases. Based on the Illinois Department of Transportation *Special Waste Procedures for Local Highway Improvements* (Memo #66-10), *Special Waste Procedures* Memo 66-09.A, and BLRS Section 20-12.03 Special Waste, site analysis is required for sites within defined distances from the corridor. Specific lists reviewed and the screening distances for each are as follows:

- **CERCLIS List** – The Comprehensive Environmental Response Compensation and Liability (CERCLIS) list contains information on potentially hazardous sites and remedial activities. This database is maintained by the U.S. Environmental Protection Agency (U.S. EPA). Sites within one mile of the corridor will be identified.
- **LUST List** – The Leaking Underground Storage Tank (LUST) database identifies underground storage tanks systems that have had an incident reported to the Illinois Emergency Management Agency (IEMA). This list is maintained by the Illinois Environmental Protection Agency. Sites within 1,000 feet of the corridor will be identified.
- **SRP List** – The Site Remediation Program (SRP) database identifies sites that have been entered into Illinois' voluntary cleanup program. These sites generally have been investigated and determined to have impacted soil or groundwater (or both) at the site. This database is maintained by the IEPA. A distance reference is not provided for SRP sites.
- **RCRA List** – The Resource Conservation and Recovery Act (RCRA) database identifies generators, transporter or other handling of hazardous wastes. Identification of a site as a RCRA site does not indicate a release to the environment has occurred. This database is maintained by the U.S. EPA. Sites within the corridor will be identified.
- **UST List** – The underground storage tank (UST) identifies sites with registered USTs. This list is maintained by the Office of the State Fire Marshal. Sites within the corridor will be identified.

Based on the review of the databases identified above, a Special Waste Screening memorandum will be prepared presenting the results. One site visit may be conducted to confirm the location of identified sites. The memorandum will follow the flow chart required by IDOT.

The proposed scope is limited to the review of the above-referenced databases. No soil or groundwater sampling is proposed as part of this scope of services. No meetings have been proposed as part of this scope of services

Task 9. Traffic Noise Analysis

The proposed improvements at Cedar Lake Road may or may not include widening and add lanes. If no additional through lanes of traffic are included in the improvement, a noise analysis will not be required. If added through lanes are proposed, a noise analysis may be required and will need to follow IDOT and FHWA noise policies effective July 1, 2011. H&H is currently preparing the updated noise policy. The need for a formal noise analysis will be determined upon early coordination with IDOT and LCDOT.

There are a few scattered residences along Cedar Lake Road. If required, H&H will prepare the noise analysis for this project using the Federal Highway Administration's TNM Model. This analysis will determine existing and proposed traffic noise levels, and will determine the effectiveness of potential noise abatement.

Data Collection
Peak hourly traffic data for existing and future conditions will be needed for the traffic noise model. The traffic data used should be consistent with the traffic data used to analyze the proposed geometrics. Consideration will be given to the traffic flow characteristics under peak-hour conditions.

Alignment information will need to be provided in electronic format for both the existing and the preferred alternative. Additional roadway profile and surrounding area topographic information will also need to be provided for developing the contour information within TNM.

Receptor Selection
Receptors will be selected to be representative of a group of sensitive receivers with similar noise exposure characteristics. The selection will be consistent with IDOT policies and FHWA guidance, including 23 CFR 772. It is anticipated up to two receptor locations will be selected.

Noise Monitoring
Huff & Huff will conduct field noise monitoring at one of the receptor locations. Noise levels will be measured with a Bruel & Kjaer Type 2236 Sound Meter. This meter is comparable to ANSI S1.4-1983 Type II or better. The noise monitoring information will be used only for comparison to the TNM results. Noise monitoring will be conducted for up to 15 minutes.

Noise Analysis
The currently accepted FHWA model TNM Version 2.5 will be used to generate traffic noise levels for the existing, no action and build alternatives. Noise abatement options, including noise walls and earth berms, will be evaluated for the areas that meet, approach or exceed the FHWA noise abatement criteria. Data inputs for TNM include traffic composition, traffic volume, speed, roadway geometry, and topographical information.

Analysis of Abatement Strategies
Due to the configuration of homes and driveways along the route, it is unlikely that noise abatement will be feasible. If noise levels exceed the NAC, then an abatement analysis will be investigated. There are two primary factors, achievable noise reduction and cost effectiveness, that need to be considered in evaluating abatement strategies. Variations in noise barrier locations, heights, and lengths can be evaluated using TNM. This provides a baseline for comparison of alternative strategies. The goal of the noise abatement evaluation will be to obtain an 8 to 10 dBA traffic noise reduction.

Cost estimates for abatement options will be prepared and submitted with the likely traffic noise abatement strategies and mitigation measures. A comparison of the total costs versus the number of receivers benefited and the reduction in noise levels achieved will be included in the analysis of abatement strategies. These costs will be derived from IDOT unit costs.

Preparation of Traffic Noise Study Report

Methodologies for receiver selection, noise monitoring, and noise predictions will be presented in the *Traffic Noise Study*. The screening results and abatement strategies will be described in terms of noise reduction and cost. The report will be prepared such that it will be sufficiently detailed to support the Phase I evaluation.

Figures will be developed using the available aerial photography depicting the receiver locations and evaluated noise barrier locations. The evaluated noise barriers will be depicted using a color code to identify barriers that meet the feasible and reasonable analysis and those that do not meet the criteria.

Task 10. Section 4(f) Special Lands

The need for a formal Section 4If) coordination and report will be determined upon early coordination with IDOT and LCDOT. During the coordination process with the forest preserve district concerning the bikepath, a determination will be made as to whether the Section 4(f) process will be required.

As the potential impacts to the forest preserve site may be minimal, the Section 4(f) processing, if required, may be through the de minimis reporting. This type of processing is an expedited method for dealing with the Section 4(f) issues.

Task 11. Project Management

H&H will provide progress updates and attend two meetings with LCDOT in additional to coordination with CMT.

Task 12. QA/QC

Time is included for review of the wetland report, sustainable concepts and special waste reports.

4. COST ESTIMATE

This proposal covers the preparation of environmental studies required for the project. Because some of the tasks included in the scope may not be required due to local funding, the costs for these tasks will be considered optional. If these tasks are dropped from the scope, then the costs will be removed from the total.

Compensation for the services provided under this agreement will be cost plus fixed fee, with a not to exceed limit on the contract in accordance with the tasks described in Section 3. The attached CECS form provides the level of effort and associated cost.

5. SCHEDULE

The project will be initiated after the receipt of Notice to Proceed. Based on current regulations, wetland delineations, if necessary, are required to be performed between May and October. Therefore, the formal wetland delineation will be scheduled for Spring 2011. If the formal delineation is completed outside of the growing season, additional field visits would be required and is not included in this scope of services.

It is also recommended that the tree survey be conducted during the growing season. While a dormant season survey can be conducted, more time is required as in many cases, the trees have to be identified through more intensive measures such as leaf scars, bundles scars, bud shape, bark, etc. Therefore if the tree survey must be conducted during the winter, a 25% premium would be required to account for the additional time involved in the tree id without leaves.

6. CONTRACT TERMS

1. CONSULTANT'S SERVICES: The Consultant's (Huff & Huff, Inc.) services shall consist of those tasks described in Section 3.

2. SCHEDULE: The Consultant's work under this Agreement shall begin within two weeks of receipt of written notice to proceed or a signed copy of this Agreement and staking of the sewer alignment.

3. COMPENSATION: The fee basis for the scope of work, as outlined in Section 3, pertains to the specific scope work.

4. DIRECTION: For work performed under this Agreement, Consultant shall take direction from the CLIENT.

5. CHANGES: This Agreement may only be changed by written amendment which specifies the terms being revised and which has been signed by both parties hereto.

6. PROJECT DATA: The Consultant, in coordination with the CLIENT, shall obtain from the appropriate sources all data and information necessary for the proper and complete execution of the Consultant's services.

7. INDEPENDENT CONSULTANT: The Consultant shall be deemed to be an independent contractor in all its operations and activities hereunder. The employees furnished by Consultant to perform the work shall be deemed to be Consultant employees exclusively, and said employees shall be paid by Consultant for all services in this connection. The Consultant shall be responsible for all obligations and reports covering Social Security, Unemployment Insurance, Workmen's Compensation, Income Tax, and other reports and deductions required by an applicable state or Federal law.

8. RIGHTS OF WORK PRODUCT: CLIENT shall have unlimited rights in all drawings, designs, specifications, notes, and other work developed in the performance of this contract, including the right to use same on any other work without additional cost to the CLIENT. The Consultant shall not be liable for any use or reuse of the drawings, designs, specifications, notes and other work for use other than intended under the terms of this Agreement.

9. INDEMNIFICATION: The Consultant hereby agrees to indemnify and hold harmless the CLIENT and any proper owners whose property it is necessary to access in the performance of this work, against any and all liability, loss, damages, demands, or actions or causes of action, which may result from any damages or injuries sustained by a person or entity in connection with or on account of any negligent act or omission of the Consultant or its employees relating to its obligations pursuant to this Agreement.

10. TERMINATION: CLIENT may terminate this Agreement at any time upon ten (10) days written notice for whatsoever reason, provided CLIENT shall pay the Consultant a reasonable fee for work satisfactorily performed prior to the effective date of termination. In no case, however, shall the total amount paid to Consultant exceed the amount set out above.

11. INSURANCE: The Consultant shall maintain insurance as set forth in the prime contract, if attached, or as set forth below.

    a. Worker's Compensation and Employer's Liability Insurance: Worker's Compensation in compliance with applicable State and Federal laws.
    b. Comprehensive General Liability Insurance for Bodily Injury and Property Damage to a combined single limit of $2,000,000 per occurrence/claim or an umbrella of $3,000,000.
    c. Comprehensive Automobile Liability Insurance, including owned, hired, and non-owned automobiles, for Bodily Injury and Property Damage to a combined single limit of $1,000,000 per occurrence/$2,000,000 aggregate.
    d. Professional liability insurance $2,000,000 on a claims made basis.

12. STANDARD OF CARE: Services performed by the Consultant under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions.

13. RETENTION OF RECORDS: Consultant shall maintain complete records of all hours billed and direct costs incurred under this Agreement so as to accurately reflect the services performed and basis for compensation and reimbursement under this Agreement.

14. LEGAL: This Agreement shall be construed and interpreted solely in accordance with the laws of the State of Illinois.

BOTH PARTIES HERETO WARRANT AND REPRESENT that they have full right, power, and authority to execute this Contract.

IN WITNESS THEREOF, the parties hereto have executed this Agreement as of the day and year first specified above.

	CONSULTANT	CLIENT
	HUFF & HUFF, INC.	CRAWFORD, MURPHY AND TILLY
	Linda L Huff	
	Signature	Signature
By:	Linda L. Huff, P.E.	
	Typed Name	Typed Name
	President	
	Officer's Title	Officer's Title
	March 17, 2011	
	Date	Date

Illinois Department of Transportation

Payroll Escalation Table
Fixed Raises

FIRM NAME: Huff & Huff, Inc.
PRIME/SUPPLEMENT: CMT

DATE: 3/17/2011
PTB NO.:

CONTRACT TERM: 24 MONTHS
START DATE: 5/1/2011
RAISE DATE: 1/1/2012

OVERHEAD RATE: 155.00%
COMPLEXITY FACTOR: 0
% OF RAISE: 3.00%

ESCALATION PER YEAR

5/1/2011 - 1/1/2012	1/2/2012 - 1/1/2013	1/2/2013 - 5/1/2013		
8 / 24	12 / 24	4 / 24		
= 33.33%	51.50%	17.68%		

= 1.0252

The total escalation for this project would be: 2.52%

Illinois Department of Transportation

Payroll Rates

FIRM NAME Huff & Huff, Inc. DATE 3/17/2011
PRIME/SUPPLEMENT CMT
PTB NO.

ESCALATION FACTOR 2.52%

CLASSIFICATION	CURRENT RATE	ESCALATED RATE
Principal	$62.37	$63.94
Senior Project Manager	$55.76	$57.16
Senior Engineer III	$41.60	$42.65
Senior Engineer II	$35.42	$36.31
Transportation Planner	$30.76	$31.53
Senior Scientist IV	$41.84	$42.89
Senior Scientist III	$35.86	$36.76
Senior Scientist II	$28.88	$29.61
Senior Scientist I	$24.72	$25.34
Senior Geologist I	$32.68	$33.50
Project Engineer II	$31.68	$32.48
Project Engineer I	$25.52	$26.16
Wetland Scientist III	$0.00	$0.00
Wetland Scientist II	$22.72	$23.29
Wetland Scientist I	$0.00	$0.00
Project Scientist III	$22.68	$23.25
Project Scientist II	$0.00	$0.00
Project Scientist I	$18.76	$19.23
Project Geologist I	$26.78	$27.45
Project Associate	$23.00	$23.58
Senior CADD I	$32.08	$32.89
CADD II	$25.00	$25.63
CADD I	$16.04	$16.44
Admin. Manager I	$29.58	$30.32
Administrative III	$19.32	$19.81
Administrative II	$17.80	$18.25
Administrative I	$11.00	$11.28
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00

Illinois Department of Transportation

Cost Estimate of Consultant Services (CPFF)

Firm	Huff & Huff, Inc.
Route	Cedar Lake Road
Section	
County	Lake
Job No.	
PTB & Item	

Date 3/17/2011

Overhead Rate **155.00%**

Complexity Factor 0

Item	Manhours	Payroll	Overhead & Fringe Benefits	In-House Direct Costs	Fixed Fee	Outside Direct Costs	Services By Others	Total	% of Grand Total
Wetland Delineation/Report	62	1,478.68	2,291.95	68.25	556.64	15.50	0.00	4,411.01	10.47%
Wetland Mitigation Strat	4	93.17	144.41	0.00	34.45	0.00	0.00	272.02	0.65%
Juris Determination/Boundaries/Permitting	80	2,021.35	3,133.09	55.65	755.46	31.00	0.00	5,996.56	14.23%
Agency Coordination	6	139.75	216.61	0.00	51.67	31.00	0.00	439.03	1.04%
IHPA Photolog	6	139.75	216.61	48.45	58.70	15.50	0.00	479.01	1.14%
Tree Survey**	32	745.33	1,155.25	55.65	283.65	0.00	0.00	2,239.88	5.32%
Sustainable Concepts	40	1,378.66	2,136.93	47.60	516.66	0.00	0.00	4,079.85	9.68%
PESA Screening	38	993.43	1,539.82	61.65	376.26	281.00	0.00	3,252.16	7.72%
Traffic Noise**	110	3,754.76	5,819.87	69.45	1,398.39	15.50	0.00	11,057.97	26.24%
Section 4(f) Spec Lands**	68	1,749.73	2,712.08	61.05	655.81	15.50	0.00	5,194.16	12.33%
Project Management	10	420.74	652.15	0.00	155.57	0.00	0.00	1,228.46	2.92%
QA/QC	24	1,195.82	1,853.52	0.00	442.15	0.00	0.00	3,491.49	8.29%
TOTALS	480	14,111.15	21,872.28	467.75	5,285.42	405.00	0.00	42,141.60	100.00%

** Optional Tasks that may be eliminated based on processing

Illinois Department of Transportation

Average Hourly Project Rates

Route: Cedar Lake Road
Section:
County: Lake
Job No.:
PTB/Item:

Consultant: Huff & Huff, Inc.

Date: ########

Sheet 1 OF 1

Payroll Classification	Avg Hourly Rates	Total Project Rates			Wetland Delineation/Report			Wetland Mitigation Strat			Juris Determination/Boundaries			Agency Coordination			IHPA Photolog		
		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	63.94	16	3.33%	2.13															
Senior Project Manager	57.16	0																	
Senior Engineer III	42.65	34	7.08%	3.02															
Senior Engineer II	36.31	0																	
Transportation Planner	31.53	0																	
Senior Scientist IV	42.89	40	8.33%	3.57	2	3.23%	1.38				6	7.50%	3.22						
Senior Scientist III	36.76	0																	
Senior Scientist II	29.61	8	1.67%	0.49							8	10.00%	2.96						
Senior Scientist I	25.34	24	5.00%	1.27															
Senior Geologist I	33.50	0																	
Project Engineer II	32.48	70	14.58%	4.74															
Project Engineer I	26.16	0																	
Wetland Scientist III		0																	
Wetland Scientist II	23.29	222	46.25%	10.77	54	87.10%	20.29	4	100.00%	23.29	64	80.00%	18.63	6	100.00%	23.29	6	100.00%	23.29
Wetland Scientist I		0																	
Project Scientist III	23.25	30	6.25%	1.45															
Project Scientist II		0																	
Project Scientist I	19.23	0																	
Project Geologist I	27.45	0																	
Project Associate	23.58	0																	
Senior CADD I	32.89	16	3.33%	1.10	2	3.23%	1.06												
CADD II	25.63	0																	
CADD I	16.44	2	0.42%	0.07	2	3.23%	0.53												
Admin. Manager I	30.32	4	0.83%	0.25															
Administrative III	19.81	0																	
Administrative II	18.25	14	2.92%	0.53	2	3.23%	0.59				2	2.50%	0.46						
Administrative I	11.28	0																	
		0																	
		0																	
		0																	
TOTALS		480	100%	$29.40	62	100%	$23.85	4	100%	$23.29	80	100%	$25.27	6	100%	$23.29	6	100%	$23.29

Illinois Department of Transportation

Average Hourly Project Rates

Route: Cedar Lake Road
Section:
County: Lake
Job No.:
PTB/Item:

Consultant: Huff & Huff, Inc.

Date: #######

Sheet 2 OF 1

Payroll Classification	Avg Hourly Rates	Tree Survey**			Sustainable Concepts			PESA Screening			Traffic Noise**			Section 4(f) Spec Lands**			Project Management		
		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	63.94				4	10.00%	6.39	2	5.26%	3.37							2	20.00%	12.79
Senior Project Manager	57.16																		
Senior Engineer III	42.65										26	23.64%	10.08						
Senior Engineer II	36.31																		
Transportation Planner	31.53																		
Senior Scientist IV	42.89				12	30.00%	12.87							8	11.76%	5.05	4	40.00%	17.16
Senior Scientist III	36.76																		
Senior Scientist II	29.61																		
Senior Scientist I	25.34				24	60.00%	15.21												
Senior Geologist I	33.50																		
Project Engineer II	32.48										70	63.64%	20.67						
Project Engineer I	26.16																		
Wetland Scientist III																			
Wetland Scientist II	23.29	32	100.00%	23.29										56	82.35%	19.18			
Wetland Scientist I																			
Project Scientist III	23.25							30	78.95%	18.36									
Project Scientist II																			
Project Scientist I	19.23																		
Project Geologist I	27.45																		
Project Associate	23.58																		
Senior CADD I	32.89							4	10.53%	3.46	8	7.27%	2.39	2	2.94%	0.97			
CADD I	16.44																		
Admin. Manager I	30.32																4	40.00%	12.13
Administrative III	19.81																		
Administrative II	18.25							2	5.26%	0.96	6	5.45%	1.00	2	2.94%	0.54			
Administrative I	11.28																		
CADD II	25.63																		
TOTALS		32	100%	$23.29	40	100%	$34.47	38	100%	$26.14	110	100%	$34.13	68	100%	$25.73	10	100%	$42.07

Illinois Department of Transportation

Average Hourly Project Rates

Route	Cedar Lake Road
Section	
County	Lake
Job No.	
PTB/Item	

Consultant: Huff & Huff, Inc.

Date: #######

Sheet 3 OF 1

Payroll Classification	Avg Hourly Rates	QA/QC Hours	QA/QC % Part.	QA/QC Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	63.94	8	33.33%	21.31															
Senior Project Manager	57.16																		
Senior Engineer III	42.65	8	33.33%	14.22															
Senior Engineer II	36.31																		
Transportation Planner	31.53																		
Senior Scientist IV	42.89	8	33.33%	14.30															
Senior Scientist III	36.76																		
Senior Scientist II	29.61																		
Senior Scientist I	25.34																		
Senior Geologist I	33.50																		
Project Engineer II	32.48																		
Project Engineer I	26.16																		
Wetland Scientist III																			
Wetland Scientist II	23.29																		
Wetland Scientist I																			
Project Scientist III	23.25																		
Project Scientist II																			
Project Scientist I	19.23																		
Project Geologist I	27.45																		
Project Associate	23.58																		
Senior CADD I	32.89																		
CADD I	16.44																		
Admin. Manager I	30.32																		
Administrative III	19.81																		
Administrative II	18.25																		
Administrative I	11.28																		
CADD II	25.63																		
TOTALS		24	100%	$49.83	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

SUMMARY OF INHOUSE DIRECT COSTS

Project: CMT Cedar Lake Road

										DIRECT
Wetland Delineation and Report										
Trips - Company	95 miles	x	1	x	$	0.51	=	$		48.45
Tolls			0	x	$	1.00	=	$		-
Reproduction	6 sets	x	80	x	$	0.03	=	$		14.40
Color copies	6 sets	x	5	x	$	0.10	=	$		3.00
Photo sheets	6 sets	x	4	x	$	0.10	=	$		2.40
CAD Plots			0	x	$	4.25	=	$		-
			0	x	$	-	=	$		-
						Task Total		$		68.25
Mitigation Strategies										
Trips - Company	0 miles	x		x	$	0.51	=	$		-
Tolls			0	x	$	1.00	=	$		-
Reproduction	0 sets	x		x	$	0.03	=	$		-
Color copies	0 sets	x		x	$	0.10	=	$		-
Photo sheets	0 sets	x		x	$	0.10	=	$		-
CAD Plots				x	$	4.25	=	$		-
			0	x	$	-	=	$		-
						Task Total		$		-
JD/Boundaries/Permitting										
Trips - Company	95 miles	x	1	x	$	0.51	=	$		48.45
Tolls			0	x	$	1.00	=	$		-
Reproduction	6 sets	x	40	x	$	0.03	=	$		7.20
Color copies	0 sets	x	0	x	$	0.10	=	$		-
Photo sheets	0 sets	x	0	x	$	0.10	=	$		-
CAD Plots			0	x	$	4.25	=	$		-
			0	x	$	-	=	$		-
						Task Total		$		55.65
Agency Coordination										
Trips - Company	0 miles	x	0	x	$	0.51	=	$		-
Tolls			0	x	$	1.00	=	$		-
Reproduction	0 sets	x	0	x	$	0.03	=	$		-
Color copies	0 sets	x	0	x	$	0.10	=	$		-
Photo sheets	0 sets	x	0	x	$	0.10	=	$		-
CAD Plots			0	x	$	4.25	=	$		-
			0	x	$	-	=	$		-
						Task Total		$		-
IHPA Photolog										
Trips - Company	95 miles	x	1	x	$	0.51	=	$		48.45
Tolls			0	x	$	1.00	=	$		-
Reproduction	0 sets	x	0	x	$	0.03	=	$		-
Color copies	0 sets	x	0	x	$	0.10	=	$		-
Photo sheets	0 sets	x	0	x	$	0.10	=	$		-
CAD Plots			0	x	$	4.25	=	$		-
			0	x	$	-	=	$		-
						Task Total		$		48.45

SUMMARY OF INHOUSE DIRECT COSTS

Project: CMT Cedar Lake Road

								DIRECT
Tree Survey								
Trips - Company	95 miles	x	1	x $	0.51	= $		48.45
Tolls			0	x $	1.00	= $		-
Reproduction	4 sets	x	60	x $	0.03	= $		7.20
Color copies	0 sets	x	0	x $	0.10	= $		-
Photo sheets	0 sets	x	0	x $	0.10	= $		-
CAD Plots			0	x $	4.25	= $		-
			0	x $	-	= $		-
					Task Total		**$**	**55.65**
Sustainable Concepts								
Trips - Company	60 miles	x	1	x $	0.51	= $		30.60
Tolls			0	x $	1.00	= $		-
Reproduction	0 sets	x	0	x $	0.03	= $		-
Color copies	0 sets	x	0	x $	0.10	= $		-
Photo sheets	0 sets	x	0	x $	0.10	= $		-
CAD Plots			4	x $	4.25	= $		17.00
			0	x $	-	= $		-
					Task Total		**$**	**47.60**
PESA Screening								
Trips - Company	95 miles	x	1	x $	0.51	= $		48.45
Tolls			0	x $	1.00	= $		-
Reproduction	6 sets	x	50	x $	0.03	= $		9.00
Color copies	6 sets	x	5	x $	0.10	= $		3.00
Photo sheets	6 sets	x	2	x $	0.10	= $		1.20
CAD Plots			0	x $	4.25	= $		-
			0	x $	-	= $		-
					Task Total		**$**	**61.65**
Traffic Noise								
Trips - Company	95 miles	x	1	x $	0.51	= $		48.45
Tolls			0	x $	1.00	= $		-
Reproduction	6 sets	x	100	x $	0.03	= $		18.00
Color copies	6 sets	x	3	x $	0.10	= $		1.80
Photo sheets	6 sets	x	2	x $	0.10	= $		1.20
CAD Plots			0	x $	4.25	= $		-
			0	x $	-	= $		-
					Task Total		**$**	**69.45**
Section 4(f) Special Lands								
Trips - Company	95 miles	x	1	x $	0.51	= $		48.45
Tolls			0	x $	1.00	= $		-
Reproduction	6 sets	x	50	x $	0.03	= $		9.00
Color copies	6 sets	x	3	x $	0.10	= $		1.80
Photo sheets	6 sets	x	3	x $	0.10	= $		1.80
CAD Plots			0	x $	4.25	= $		-
			0	x $	-	= $		-
					Task Total		**$**	**61.05**
Project Management								
Trips - Company	0 miles	x	0	x $	0.51	= $		-
Tolls			0	x $	1.00	= $		-
Reproduction	0 sets	x	0	x $	0.03	= $		-
Color copies	0 sets	x	0	x $	0.10	= $		-
Photo sheets	0 sets	x	0	x $	0.10	= $		-
CAD Plots			0	x $	4.25	= $		-
			0	x $	-	= $		-
					Task Total		**$**	**-**

SUMMARY OF INHOUSE DIRECT COSTS

Project: CMT Cedar Lake Road

							DIRECT
QA/QC							
Trips - Company	0 miles	x	0 x $	0.51	=	$	-
Tolls			0 x $	1.00	=	$	-
Reproduction	0 sets	x	0 x $	0.03	=	$	-
Color copies	0 sets	x	0 x $	0.10	=	$	-
Photo sheets	0 sets	x	0 x $	0.10	=	$	-
CAD Plots			0 x $	4.25	=	$	-
			0 x $	-	=	$	-
				Task Total		**$**	**-**
				GRAND TOTAL		**$**	**467.75**

P:\Proposal-2011\CMT\[CMT Cedar Lake Road DC.xls]Inhouse Direct Costs

SUMMARY OF OUTSIDE DIRECT COSTS

Project: CMT Cedar Lake Road

								OUTSIDE
Wetland Delineation and Report								
Trips - Employee	0 miles	x	0	x $	0.51	= $		-
Tolls - Employee			0	x $	1.00	= $		-
Maps/Aerials			0	x $	25.00	= $		-
Federal Express			1	x $	15.50	= $		15.50
			0	x $	-	= $		-
					Task Total		**$**	**15.50**
Mitigation Strategies								
Trips - Employee	0 miles	x	0	x $	0.51	= $		-
Tolls - Employee			0	x $	1.00	= $		-
Maps/Aerials			0	x $	10.00	= $		-
Federal Express				x $	15.50	= $		-
			0	x $	-	= $		-
					Task Total		**$**	**-**
JD/Boundaries/Permitting								
Trips - Employee	0 miles	x	0	x $	0.51	= $		-
Tolls - Employee			0	x $	1.00	= $		-
Maps/Aerials			0	x $	10.00	= $		-
Federal Express			2	x $	15.50	= $		31.00
			0	x $	-	= $		-
					Task Total		**$**	**31.00**
Agency Coordination								
Trips - Employee	0 miles	x	0	x $	0.51	= $		-
Tolls - Employee			0	x $	1.00	= $		-
Maps/Aerials			0	x $	5.00	= $		-
Federal Express			2	x $	15.50	= $		31.00
			0	x $	-	= $		-
					Task Total		**$**	**31.00**
IHPA Photolog								
Trips - Employee	0 miles	x	0	x $	0.51	= $		-
Tolls - Employee			0	x $	1.00	= $		-
Maps/Aerials			0	x $	5.00	= $		-
Federal Express			1	x $	15.50	= $		15.50
			0	x $	-	= $		-
					Task Total		**$**	**15.50**
Tree Survey								
Trips - Employee	0 miles	x	0	x $	0.51	= $		-
Tolls - Employee			0	x $	1.00	= $		-
Maps/Aerials			0	x $	5.00	= $		-
Federal Express			0	x $	15.50	= $		-
			0	x $	-	= $		-
					Task Total		**$**	**-**

SUMMARY OF OUTSIDE DIRECT COSTS

Project: CMT Cedar Lake Road

							OUTSIDE
Sustainable Concepts							
Trips - Employee	0 miles	x	0	x $	0.51	= $	-
Tolls - Employee			0	x $	1.00	= $	-
Maps/Aerials			0	x $	5.00	= $	-
Federal Express			0	x $	15.50	= $	-
			0	x $	-	= $	-
					Task Total	**$**	**-**
PESA Screening							
Trips - Employee	0 miles	x	0	x $	0.51	= $	-
Tolls - Employee			0	x $	1.00	= $	-
Eco Search			1	x $	250.00	= $	250.00
Federal Express			2	x $	15.50	= $	31.00
			0	x $	-	= $	-
					Task Total	**$**	**281.00**
Traffic Noise							
Trips - Employee	0 miles	x	0	x $	0.51	= $	-
Tolls - Employee			0	x $	1.00	= $	-
Maps/Aerials			0	x $	5.00	= $	-
Federal Express			1	x $	15.50	= $	15.50
			0	x $	-	= $	-
					Task Total	**$**	**15.50**
Section 4(f) Special Lands							
Trips - Employee	0 miles	x	0	x $	0.51	= $	-
Tolls - Employee			0	x $	1.00	= $	-
Maps/Aerials			0	x $	5.00	= $	-
Federal Express			1	x $	15.50	= $	15.50
			0	x $	-	= $	-
					Task Total	**$**	**15.50**
Project Management							
Trips - Employee	0 miles	x	0	x $	0.51	= $	-
Tolls - Employee			0	x $	1.00	= $	-
Maps/Aerials			0	x $	5.00	= $	-
Federal Express			0	x $	15.50	= $	-
			0	x $	-	= $	-
					Task Total	**$**	**-**
QA/QC							
Trips - Employee	0 miles	x	0	x $	0.51	= $	-
Tolls - Employee			0	x $	1.00	= $	-
Maps/Aerials			0	x $	5.00	= $	-
Federal Express			0	x $	15.50	= $	-
			0	x $	-	= $	-
					Task Total	**$**	**-**
Task 13 -							
Trips - Employee	0 miles	x	0	x $	0.51	= $	-
Tolls - Employee			0	x $	1.00	= $	-
Maps/Aerials			0	x $	5.00	= $	-
Federal Express			0	x $	15.50	= $	-
			0	x $	-	= $	-
					Task Total	**$**	**-**
Task 14 -							
Trips - Employee	0 miles	x	0	x $	0.51	= $	-
Tolls - Employee			0	x $	1.00	= $	-

SUMMARY OF OUTSIDE DIRECT COSTS

Project: CMT Cedar Lake Road

							OUTSIDE
Maps/Aerials			0	x	$ 5.00	= $	-
Federal Express			0	x	$ 15.50	= $	-
			0	x	$ -	= $	-
					Task Total	$	-
Task 15 -							
Trips - Employee	0 miles	x	0	x	$ 0.51	= $	-
Tolls - Employee			0	x	$ 1.00	= $	-
Maps/Aerials			0	x	$ 5.00	= $	-
Federal Express			0	x	$ 15.50	= $	-
			0	x	$ -	= $	-
					Task Total	$	-
					GRAND TOTAL	$	405.00

P:\Proposal-2011\CMT\[CMT Cedar Lake Road DC.xls]Outside Direct Costs

ATTACHMENT “B”

Chicago Testing Laboratory, Inc.

Sub-Consultant Agreement

Scope and Man-hours for Geotechnical Investigations and Reports

Chicago Testing Laboratory, Inc.
30W114 Butterfield Road, Warrenville, IL 60555 p 630.393.CTL1 f 630.393.CTL7
18000 South Williams Street, Thornton, IL 60476 p 708.877.1801 f 708.877.6926
1612 Landmeier Road, Unit C, Elk Grove Village, IL 60007 p 847.228.1079 f 847.228.0633
P.O. Box 3395, Joliet, IL 60434 p 815.385.8351 f 815.385.8456
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info@chicagotestinglab.com
Testing • Inspection • Training • Consulting • Research • Geotechnical
Founded 1912

March 16, 2011

Mr. Kelly Farley, P. E.
Crawford, Murphy & Tilly, Inc.
550 North Commons Drive, Suite 116
Aurora, Illinois 60504

Re: Request for Proposal - CTL Proposal No. EG11062
Geotechnical Exploration, Lab Testing and Engineering
Cedar Lake Road (IL 120 to Nippersink)
Lake County, Illinois

Dear Mr. Farley,

Please find the enclosed copy of Chicago Testing Laboratory's unit rate and cost estimate proposal for the requested geotechnical exploration for the Cedar Lake Road between IL 120 and Nippersink in Lake County, Illinois. Also included are a brief summary of our history and performance, and an outline of our capabilities.

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. With almost a century of heritage, and a reputation consistent with 100 years of materials testing and geotechnical expertise, CTL remains "best in class" for construction materials inspection, training, and research. We look forward to being a part of your team, and thank you for your time and consideration.

Sincerely,
CHICAGO TESTING LABORATORY, INC.

Donald K. Sisson
Project Manager/ Geologist

Cedar Lake Road (IL 120 to Nippersink), Lake County, IL

Geotechnical Exploration, Lab Testing and Engineering

CTL Proposal No. EG11062

Chicago Testing Laboratory, Inc.

Founded 1912

Chicago Testing Laboratory, Inc.

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P.O. Box 3395, Joliet, IL 60434 p 815.385.8351 f 815.385.8456

www.chicagotestinglab.com
info@chicagotestinglab.com

Testing • Inspection • Training • Consulting • Research • Geotechnical

SUMMARY OF QUALIFICATIONS

Since 1912, the Chicago Testing Laboratory, Inc. has been a professional engineering consulting firm actively engaged in the research, consulting, testing, and inspection of construction materials. CTL continues to maintain its reputation as a leader in the field of materials testing and inspection, and is used by public agencies and private corporations worldwide for our analysis and testing expertise.

Chicago Testing Laboratory:

- Is a professional engineering consultant in the state of Illinois and Indiana, and is prequalified by the Illinois Department of Transportation and Indiana Department of Transportation.
- Has provided construction and materials expertise on numerous projects in the Chicago metro area.
- Contracts with the Illinois DOT for quality assurance of construction materials and bituminous mix designs.
- Has worked as a sub consultant to numerous prime consultants on Illinois DOT and Illinois State Toll Highway Authority projects, and provides materials inspection for dozens of villages and municipalities.
- Provides construction and materials training to agency, contractor and consultant personnel throughout the United States.

CTL is committed to the principles of quality – from design through the construction of pavement structures. With our independent locations, CTL strives to:

- Ensure customer satisfaction through meaningful process control
- Maintain a high level of Total Quality Management
- Maximize the quality and serviceability of today's construction projects

CTL has four full service laboratories in Illinois – in Elk Grove Village, Thornton, Joliet and Warrenville – all are Illinois DOT-approved. CTL's laboratories are AMRL and ASTM accredited, and staffed with IDOT Certified Technicians. CTL strives for successful completion of each project by providing well-qualified personnel to furnish superior quality.

CTL has also added a fifth location in Indianapolis, Indiana.

CTL teaches and develops construction and materials testing training programs, including the IDOT QC/QA certification training courses. CTL has taught numerous national courses for different state, local, and federal agencies on the proper use of construction materials. Not only are CTL technicians QC/QA certified, but many are also IDOT QC/QA instructors.

CTL research activities have resulted in several ASTM test specifications, including the Abson asphalt recovery test (ASTM D1856) and the Root-Tunnicliff method for evaluating stripping of asphalt mixtures (ASTM D 4867). Numerous other special tests and equipment have been developed in connection with special investigations and research studies for various clients and technical societies.

FIELD/LAB TESTING SERVICES

CTL is completely equipped to test and analyze asphalt, concrete, soils, steel, and other construction materials. CTL's technicians are certified and skilled in all aspects of field construction testing, from soil density to interstate paving inspection. CTL is qualified in performing geotechnical investigation, evaluation, and report writing in the state of Illinois and Indiana, and has successfully completed numerous projects in the past of various scope and scale.

For geotechnical exploration projects similar in scope and magnitude, CTL typically assigns:

- Engineering Technicians - for reconnaissance, boring layout, coring of pavements using standard coring equipment and traffic control measures.
- Project Manager/Sr. Engineering Technicians - for project planning and coordination of traffic control measures. The project manager is the primary contact to the client for all aspects of the project.
- Drilling Services – CTL would typically hire a reputable sub-contractor. CTL has an extensive work history with providers of geotechnical drilling services.

Included unit rates are based on the indicated scope of requested services.

PROJECT OVERVIEW

CTL understands that the objective of this project is to provide field and lab testing and engineering analysis required to help establish the existing condition of the proposed roadway alignment of the indicated roadway. It is our understanding that the proposed project involves the planning of rehabilitation/reconstruction of Cedar Lake Road beginning just north of IL 120 to Nippersink.

The proposed geotechnical field investigation would include the following:

1) Roadway soil borings are typically performed along the length of the existing roadway for the proposed construction. These borings would provide information about the existing sub grade soil and groundwater conditions. A total of 21 roadway borings are suggested based on preliminary research of available USDA Soil Survey data. Borings would be extended to a minimum of 7.5 ft. below the existing ground surface (bgs).

2) Structural soil borings are being considered for the culvert crossing at Squaw Creek. Depending on the design, structural soil borings may be required according to the Geotechnical Manual (IDOT). These borings would be extended to a depth achieving a minimum 65 ton capacity according to IDOT guidelines. A total of 2 structural borings are suggested.

3) Pavement cores are also anticipated. Core measurements and data obtained provide a valuable profile of the existing pavements and subgrade materials. A total of approximately 10 cores are suggested.

Temporary lane closures and flaggers are required for most of the work. All work would take place during normal working days and normal day working hours.

We anticipate a minimum of 1 day to layout boring locations, 2 days to complete the roadway soil borings, 1 day to complete the structural borings and 1 day to complete the pavement cores. Depending on weather, scheduling, utility location/conflict resolution and other unknown factors it may be possible to complete the field work in approximately 2 weeks.

Lab testing required typically includes testing to determine the physical properties of soils encountered and depends largely upon the type and condition of the soils encountered. Moisture Content, Unconfined Compressive Strength, Grain Size Analysis, Liquid/Plastic Limit and Illinois Bearing Ratio Tests are typically included in the lab testing program.

A report would typically be available within 3-4 weeks after completion of the field work.

Estimate

The estimate is based on full time daytime work scheduled on consecutive weekdays. If unforeseen conditions and restrictions, other than those mentioned herein, affect the reasonably regular scheduling of technicians, overtime charges may be incurred. Overtime unit rates would be increased to 1.5 times the standard unit rate for work performed on Monday through Saturday, while Sunday work will be at 2.0 times the standard unit rate. Work performed in excess to an 8 hour shift may also be subject to over time rate.

Travel/ Vehicle unit rate is based on an estimated average 62 miles round trip to and from the project site to CTL, Elk Grove Village at reimbursement rate of $0.555 per mile.

The estimated budget has been prepared using the 'Cost Plus Fixed Fee' spreadsheet provided by IDOT. An outline of Direct Costs and Services by Others has also been prepared. These calculations are enclosed with this proposal for your reference.

Estimated Budget Total = $29,995.09

PREVAILING WAGES

Our unit rates take into consideration the prevailing wage rate set by the IDOL associated with publicly funded projects. Changes in the prevailing wage rates may result in a modification to the listed unit rates and will likely affect the estimated cost.

UNION AFFILIATIONS

Chicago Testing Laboratory, Inc. technicians have chosen to be represented by the IUOE Local 150 materials testers union. The addition of this bargaining agreement is reflected in the pricing and provisions shown in this proposal.

ACCEPTANCE

CTL Proposal No. EG11062

Reference: Geotechnical Exploration, Lab Testing and Engineering
Estimated Budget Total = $29,995.09

Enclosures: -'Payroll Escalation Table..., Payroll Rates..., Cost Plus Fixed Fee Cost Estimate..., Average Hourly Project Rates' (Total 5pp.)
-Breakdown of In-House Direct Costs etc... (2pp.)
-General Conditions (1p.)

Please sign and return this acceptance form as your agreement to proceed with the scope of work as indicated. By signing this form, you agree to remit payment to CTL at the rates listed in the referenced proposal dated March 16, 2011.

Company Name: _____

Contact Name: _____

Address: _____

_____

_____

Telephone Number: _____

Fax Number: _____

Signature: _____

Date: _____

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PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME: Chicago Testing Laboratory, Inc.
PRIME/SUPPLEMENT:

DATE: 03/16/11
PSB NO.:

CONTRACT TERM	12	MONTHS	
START DATE	5/1/2011		
RAISE DATE			
OVERHEAD RATE			230.00%
COMPLEXITY FACTOR			0
% OF RAISE			3.00%

ESCALATION PER YEAR

5/1/2011 - 12/31/2011	1/1/2012 - 4/30/2012			
8 / 12	4 / 12			
= 66.67%	34.33%			
= 1.0100				

The total escalation for this project would be: 1.00%

PAYROLL RATES

FIRM NAME Chicago Testing Laboratory, Inc. DATE 03/16/11
PRIME/SUPPLEMENT
PSB NO.

ESCALATION FACTOR 1.00%

CLASSIFICATION	CURRENT RATE	PROPOSED RATE	CALCULATED RATE	DIFF
Project Manager	$30.00		$30.30	$30.30
Materials Tester II	$32.00		$32.32	$32.32
Project Geologist	$30.00		$30.30	$30.30
Lab Technician	$29.00		$29.29	$29.29
Geotechnical Engineer	$36.00		$36.36	$36.36
Field Secretary	$24.00		$24.24	$24.24
			$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
			$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	$0.00
			$0.00	$0.00

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM Chicago Testing Laboratory, Inc.
PSB
PRIME/SUPPLEMENT

DATE

OVERHEAD RATE 2.3
COMPLEXITY FACTOR 0

Profit =14.5%[DL+R (DL)+OH (DL)+IHDC]

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)
	Planning	8	242.40	557.52	34.41	89.69				924.02
	Layout	16	500.96	1,152.21	68.82	185.36				1,907.34
	Field Work	96	3,098.68	7,126.96	627.92	1,146.51	500.00	8,650.00		21,150.08
	Lab Testing	30	878.70	2,021.01	65.00	325.12				3,289.83
	Engineering	12	436.32	1,003.54	25.00	161.44				1,626.29
	Report	11	290.88	669.02	30.00	107.63				1,097.53

$29,995.09

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DF-824-039
REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Chicago Testing Laboratory, Inc.
PSB
PRIME/SUPPLEMENT

DATE 03/16/11

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Planning			Layout			Field Work			Lab Testing			Engineering		
		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	30.30	11	6.29%	1.90				8	50.00%	15.15	2	2.08%	0.63						
Materials Tester II	32.32	72	41.14%	13.30				8	50.00%	16.16	64	66.67%	21.55						
Project Geologist	30.30	41	23.43%	7.10	8	100.00%	30.30				32	33.33%	10.10						
Lab Technician	29.29	30	17.14%	5.02										30	100.00%	29.29			
Geotechnical Engineer	36.36	13	7.43%	2.70													12	100.00%	36.36
Field Secretary	24.24	8	4.57%	1.11															
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
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TOTALS		175	100%	$31.13	8	100.00%	$30.30	16	100%	$31.31	96	102%	$32.28	30	100%	$29.29	12	100%	$36.36

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DF-824-039
REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Chicago Testing Laboratory, Inc.
PSB
PRIME/SUPPLEMENT

DATE 03/16/11

SHEET 2 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Report 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	30.30	1	9.09%	2.75															
Materials Tester II	32.32																		
Project Geologist	30.30	1	9.09%	2.75															
Lab Technician	29.29																		
Geotechnical Engine	36.36	1	9.09%	3.31															
Field Secretary	24.24	8	72.73%	17.63															
TOTALS		11	100%	$26.44	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

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Chicago Testing Laboratory, Inc.

Cedar Lake Road
Lake County, IL
CTL Proposal EG11062

Chicago Testing Laboratory, Inc.
1612 Landmeier Road, Unit C
Elk Grove Village, IL 60007

Breakdown of **In-House Direct Costs**

3/16/2011

Item	Task Description	Unit Cost	Units	Rate
Planning	Site reconnasaince necessary for planning/ drill rig access etc...			
	-Daily Mileage (per vehicle)	$0.555	62	$34.41
	Total Daily Cost (per vehicle)			$34.41
	Total Vehicle days		1	
	Total cost			**$34.41** ←
Layout	Layout boring and core locations			
	Coordinate Utility Location/ Joint Meet			
	-Daily Mileage (per vehicle)	$0.555	62	$34.41
	Total Daily Cost (per vehicle)			$34.41
	Total Vehicle days		2	
	Total cost			**$68.82** ←
Field Work	Drilling & Traffic Control Personnell - Materials Tester II			
	-Daily Mileage (per vehicle)	$0.555	62	$34.41
	Total Daily Cost (per vehicle)			$34.41
	Total Vehicle days		12	
	Subtotal cost			**$412.92**
	Pavement Cores			
	-Core Equipment (per day)	$ 175.00	1	$ 175.00
	Backfill Boring and Pavement Core holes			
	-Bentonite pellets (per bucket)	$ 15.00	0	$0.00
	-Pavement Patch (per bag)	$ 20.00	2	$40.00
	Subtotal cost			**$215.00**
	Total cost			**$627.92** ←
Lab Testing	Miscellaneous Lab Supplies			
	-Supplies (lump sum)	$65.00	1	$65.00
	Total cost			**$65.00** ←
Engineering	Miscellaneous Supplies/Drafting			
	-Supplies (lump sum)	$25.00	1	$25.00
	Total cost			**$25.00** ←
Report	Miscellaneous Office Supplies/Reporting			
	-Supplies (lump sum)	$30.00	1	$30.00
	Total cost			**$30.00** ←

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Breakdown of **Outside Direct Costs**

3/16/2011

Item	Task Description	Unit Cost	Units	Rate
Field Work				
	-Arrow Board & Sign Rental (per day)	$ 250.00	2	$500.00
	Total cost			**$500.00** ←

Breakdown of **Services By Others**

Item	Task Description	Unit Cost	Units	Rate
Field Work	Drill Rig Mobilization			
	-Mobilization (Lump Sum)	$ 850.00	1	$850.00
	Drilling & Sampling (per rig hour)			
	-(Includes drill crew of 2 operators)	$ 300.00	26	$7,800.00
	Total cost			**$8,650.00** ←

ATTACHMENT “C”

LCDOT Survey Procedures

SURVEY PROCEDURES (Revised 4/21/08)

UNITS-COORDINATES

The CONSULTANT will conduct all surveying, stationing, and preparation of required plans using English units of measure and the U.S. Survey Foot. State Plane Coordinates – Illinois East Zone, NAD 83 shall be obtained for all alignment and survey control points.

HORIZONTAL ALIGNMENT

Unless otherwise specified in the services contract, the CONSULTANT is to provide the horizontal alignment. 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 and benchmarks before establishing the horizontal alignment and stationing. 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 LCDOT's Surveyor can locate them later for construction staking. The CONSULTANT'S SURVEYOR will provide four reference ties to all U.S. Public Land Survey Monuments 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 100-foot intervals 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 will be indicated on the Alignment and Tie sheet.

An Alignment and Tie Sheet shall be provided as part of the final product. The Alignment and Tie sheet shall be signed and sealed by the CONSULTANT'S SURVEYOR. The station, offset and coordinates of the alignment points and survey control points shall be shown. It shall be noted whether the coordinates, stationing and distances are State Plane grid or ground surface. In the case that the information shown is ground surface distances, the State Plane Coordinates still must also be shown for all alignment points and survey control points in order that they can be located with GPS and so that the project can be referenced into our GIS maps. The coordinates may be

shown in a separate table. In either case the grid (combination) factor must also be shown.

VERTICAL ALIGNMENT

Vertical control for the project shall be based on NGVD 29 or NAVD 88 benchmarks. Indicate on the plans which Datum is used. NGVD 29 Lake County Mapping Benchmarks are preferred (http://gis.lakeco.org/maps/). LCDOT's Land Surveyor may also be contacted for benchmarks that may be in the area. The controlling benchmarks and the site benchmarks shall be described on the plans. Site benchmarks are to be located at less than 1000-foot intervals with a minimum of two (2) on each project.

All benchmarks will be located on stable objects. LCDOT prefers these objects to be outside the construction site. Some acceptable benchmark examples are, spikes in poles, bolts on fire hydrant rings, and concrete foundations. LCDOT's surveyor can be contacted for benchmarks that may be in the area.

TOPOGRAPHY

The CONSULTANT shall cut cross sections at 50-foot intervals in urban areas (100-foot intervals in rural areas) and at all points needing clarification. 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 will 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 ROW or construction limits (whichever is greater). Cross sections will extend 30 feet beyond the proposed R.O.W. at entrances 150 feet at minor side roads.

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 ROW. 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 recorded in a MICROSTATION .DGN format. All line work defining different elements shall be completed using LCDOT's CELL and LINE LIBRARIES (see attachment). ASCII files containing all point information as described below shall be included. Backup CD's or diskettes shall be provided.

III. SUMMARY SHEETS showing:

(1) Point number
(2) Point identification by code and description
(3) Station
(4) Distance offset (right or left)
(5) Northing and Easting coordinate values
(6) "Z" elevations

* Four computer printouts shall be provided:

1. List of points referenced by stations.
2. List of points referenced by sequential point numbering.
3. List of points sorted by point identification.
4. "ID" acronym explanation sheets.

An example showing the different printouts is shown on the next page.

(LCDOT'S IDENTIFICATION CODES SHALL BE USED – see attachment)

TYPICAL PRINT-OUT FORM (EAMPLE)

BY POINT NUMBERS

POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DEFINITION CODE (1)	DESCRIPTION PD	MATERIAL CODE (1)
3331	104+23.306	-45.869	10313.993	20392.255	207.495	491.10	10 INCH TREE PINE	0
3332	104+50.475	-49.159	10323.810	20416.938	207.743	668	PAVEMENT EDGE	759
3333	104+69.987	-44.270	10261.604	20452.162	207.126	310	FL W/GRATE	774
3334	103+93.865	+40.590	10297.779	20365.781	207.378	304.15	6 INCH TILE	836

BY STATION

STATION	POINT NUMBER	OFFSET	NORTHING	EASTING	ELEVATION	DEFINITION CODE (1)	DESCRIPTION PD	MATERIAL CODE (1)
103+93.865	3334	+40.590	10297.779	20365.781	207.378	304.15	6 INCH TILE	836
104+23.306	3331	-45.869	10313.993	20392.255	207.495	491.10	10 INCHTREE PINE	0
104+50.475	3332	-49.159	10323.810	20416.938	207.743	668	PAVEMENT EDGE	759
104+69.987	3333	-44.270	10261.604	20452.162	207.126	310	FL W/GRATE	774

BY POINT DESCRIPTION

POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DEFINITION CODE (1)	DESCRIPTION PD	MATERIAL CODE (1)
3331	104+23.306	+40.590	10297.779	20365.781	207.378	304.15	6 INCH TREE PINE	0
3336	104+50.475	-45.869	10313.993	20392.255	207.495	491.10	10 INCHTREE PINE	0
2323	104+69.987	-49.159	10323.810	20416.938	207.743	668	6 INCH TREE OAK	0
2565	103+93.865	-44.270	10261.604	20452.162	207.126	310	5 INCH TREE OAK	0

(1) LCDOT CODES

LCDOT's Land Surveyor:

Steve Heuer, PLS
600 West Winchester Road
Libertyville, IL 60048
(847) 377-7488