Municipality	LOCAL AGENCY	Illinois Department of Transportation	CONSULTANT	Name: Crawford, Murphy and Tilly, Inc.
Township				Address: 550 N. Commons Drive, Suite 116
County: Lake County – Division of Transportation		**Preliminary Engineering Services Agreement For Non-Motor Fuel Tax Funds**		City: Aurora
Section: 02-00065-01-FP				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. Non-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 0.50 Mi. 2660.00 FT (Structure No. _____)

Termini Nippersink Road to Hart Road

Description:
Phase I Project to evaluate the potential for realigning existing Cedar Lake Road through downtown Round Lake. Objective is to eliminate multiple alignment turns resulting in a more fluid, efficient alignment

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
   - 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, **Lake County Stormwater Management Commission 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.
   - 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 **one (1) copy of each document in both hardcopy and electronic format**. Additional copies of any or all documents, if required, shall be furnished to the LA by the ENGINEER at the ENGINEER's actual cost for reproduction.
   - h. ☐ Furnish the LA with survey and drafts in **duplicate** 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.
   - 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. ☒ **Services as included and/or defined in the attached Scope of Services**.

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** ~~of the 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 the ENGINEER will perform such work without expense to the LA, even though final payment has been received by the ENGINEER. The ENGINEER 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 the ENGINEER and will show the ENGINEER's professional seal where such is required by law.

The LA Agrees,

1. To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT according to the following method 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 all services rendered in accordance with this AGREEMENT at the actual cost of performing such work plus _*_ 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 the ENGINEER's actual cost. Subject to the approval of the LA, the ENGINEER may sublet all or part of the services provided in section 1 of the ENGINEER AGREES. If the ENGINEER sublets all or part of this work, the LA will pay the cost to the ENGINEER plus an additional service charge of up to five (5) percent.

   "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. ***See the CECS**

The Total Not-to-Exceed Contract Amount shall be $766445.83

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~~ section 1 of 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 sections 1 and 3 of the ENGINEER AGREES and prior to the completion of such services, the LA shall reimburse the ENGINEER for the ENGINEER's actual costs plus 204 percent incurred up to the time the ENGINEER 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 204 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 the ENGINEER's 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 the ENGINEER's 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 the ENGINEER 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 the ENGINEER's 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 triplicate 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:

State of Illinois, acting by and through its

By _____

County Board

Lake County Clerk

By _____

(Seal)

Title Chairman of the County Board

RECOMMENDED FOR EXECUTION

_____
Paula J. Trigg, P.E.
Director of Transportation/County Engineer
Lake County

Executed by the ENGINEER:

CRAWFORD, MURPHY AND TILLY, INC.
Engineering Firm
550 NORTH COMMONS DRIVE, SUITE 116
Street Address
AURORA, IL 60504
City, State

ATTEST:

By Jeffrey M. Seelig

By Kevin D. Nelson

Title SENIOR ENGINEER

Title Vice President & Senior Manager

Note: Three (3) Original Executed Contracts – (2) LCDOT; (1) Consultant

EXHIBIT “A”

CMT Scope of Services

EXHIBIT "A"

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

ENGINEERING SERVICES

General Project Information

A. This project is anticipated to begin in September 2016 and be completed in August 2018.

B. Roadway limits: Nippersink Road to Hart Road along with multiple (6 total) side street relocations and reconfiguration.

   1. Scope assumes that the south limits of the project will match into existing Cedar Lake Road approximately 1000' south of Nippersink Road.
   2. Scope assumes that the north limits will match into existing Cedar Lake Road approximately 1000' north of Hart Road.

C. Scope includes the removal of the existing Cedar Lake Road railroad crossing, the addition of a new crossing west of the existing crossing and the relocation of existing train station to a location to be determined during the study.

D. The Phase I Scope of Services generally include: Topographical surveys (3-D LiDAR), Location Drainage Study, Alignment Alternative Analysis, Geometric Analysis, Traffic Analysis (Safety and Capacity), Complete Streets Analysis, Environmental Studies, Geotechnical Investigations, Railroad Crossing Analysis and Coordination with Multiple Agencies (ie: Lake County DOT, Lake County Stormwater Management Commission, Metra, Illinois Commerce Commission, Illinois Department of Transportation and the Village of Round Lake).

E. The scope was developed with the understanding that IDOT/FHWA will determine that the project will be processed as a Federally Approved Categorical Exclusions (Formally CE II). If it is determined to be processed as an Environmental Assessment (EA) then additional effort will need to be scoped in a separate agreement.

F. CMT will not prepare Plats of Highways as part of the Phase I. However, CMT will research recorded property records and establish existing R.O.W. conditions. (Plat of highways, legal efforts, property appraisals, review appraisals and negotiations are not included in the project scope.)

Phase I Engineering - Detailed Scope of Services

1. Data Collection

   a. Obtain, Review, and Inventory the following:
      1) Updated existing utility information (electric, natural gas, gas pipelines, transmission lines, telecommunication, cable TV, water, sewer).
      2) Updated existing available roadway plans / record drawings (to be obtained from Lake County and Village of Round Lake)
      3) Review establish survey datum and ground control

4) Obtain/Review 5 years of recent/available crash data (to be provided by the Lake County Sheriff's Department and LCDOT/TARS)
5) Existing ADT traffic data provided by LCDOT, CMAP Traffic projections will be obtained by CMT
6) Soil Conservation Service Maps
7) U.S.G.S. Maps
8) NWI maps
9) Current development plans
10) Obtain School Bus Route Information
11) Railroad/Metra crossing information (as-built, number of trains per day, maximum length of trains, etc.)
12) 24-hour Traffic Counts (includes turn movements and vehicle classification) at the following six intersections:
    a) Existing Cedar Lake Road at Nippersink Road (west)
    b) Existing Cedar Lake Road at Nippersink Road (east)
    c) Nippersink Road at Lincoln Avenue
    d) Nippersink Road at Railroad Avenue/IL 134
    e) Existing Cedar Lake Road at Railroad Avenue/IL 134
    f) Existing Cedar Lake Road at Hart Road

Traffic count scope is submitted as **Attachment "A"** and will be performed by Quality Counts

b. Establish existing R.O.W. line work / Property Ownership / Tax Maps (Title commitments will be included as a direct expense)

c. Project Site Visit by Project Manager and Project Engineer

2. Field Surveys
(In accordance w/ LCDOT 2008 Survey Procedures – **Exhibit "C"**)

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

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

c. Conduct topographic surveys using 3-D LiDAR technology. The survey area is illustrated in **Exhibit "D".**
    1) The survey work associated with the data collection, download and creation of DTM is submitted as **Attachment "B"** and will be performed by American Surveying & Engineering, P.C.

    2) Drainage Surveys (Completed as ASE's work)
        a) Type, size, condition and invert of existing storm sewers, structures and culverts.
        b) Type, size, condition of utility structures.

d. Existing survey in hand field review by Project Engineer

e. Pick-up surveys

3. Location Drainage Study

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

   2) Identify Base Floodplains

   3) Identify Major Drainage Features:
      a) Major Culvert Crossings
      b) Existing Detention Facilities
         i. Obtain and review any available hydraulic information pertaining to existing detention facilities within the project vicinity.
         ii. Perform tasks to identify impacts by the proposed improvements. Verify overflow route is maintained.
         iii. Evaluate alternatives to avoid or minimize impacts to existing facilities.
         iv. If proposed improvement impacts the facility, determine, if any, significant impacts to upstream / downstream properties

      c) Identify existing drainage outlets and outlet treatments
      d) Identify wetland areas as flagged by Huff & Huff.

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

   2) Outlet Evaluation
      a) Qualitatively evaluate whether each existing outlet is suitable for continued use, sensitive, or unsuitable.
      b) Document location and source of unsuitable or sensitive outlets
      c) Perform quantitative evaluation of unsuitable or sensitive outlets.
         i. Determine if there is an increase in runoff as a result of proposed improvements.
         ii. Analyze existing outlet with proposed flow to determine potential impacts.
         iii. Analyze capacity of existing system.
         iv. Analyze depressional storage areas, ponds, and wetlands to determine potential increases in water surface elevation or impacts of increased volume runoff.
      d) Develop feasible, cost effective recommendations in accordance with Lake County and IDOT policies, practices, and procedures.

   3) Storm Water Detention / Retention Analysis
      a) Determine if detention is required for project.
      b) Determine required detention volume if necessary.

c) Develop a concept plan for providing bio-infiltration swales and determine the proposed storage volumes. If bio-infiltration swales are not feasible, standard detention design will be performed as part of this task.
d) Refine concept plan and develop concept size and location drawings bio-infiltration swales.
e) Provide cross section and profile of bio-infiltration swales.

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

5) Summarize Drainage Alternatives

6) Develop Proposed Drainage Plans
a) Identify locations of ditch re-grading
b) Identify locations where sheet flow is proposed
c) Identify existing storm sewers to be maintained
d) Design of proposed storm sewers
e) Provide plan and profile of proposed trunk line sewers
f) Plot Hydraulic Grade Line
g) Proposed Action for major Drainage Features

c. Floodplain Encroachment Evaluation
1) Determine floodplain encroachment and resulting fill volumes.
2) Determine amount and location for compensatory storage.
3) Create exhibit and backup cross-sections.

d. Exhibits
1) General Location Drainage Map
2) Existing Drainage Plan
3) Flood Insurance Rate Map (FIRM) Exhibit
4) Proposed Concept Drainage Plan
5) Existing Typical Sections
6) Proposed Typical Sections

e. Other Anticipated Permits (Permits will be obtained during Phase II)
1) USACE 404 Permit Coordination
2) Lake County Watershed Development Permit Coordination

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

4. Alternative Alignment Analysis

a. Develop an Opportunity and Constraints Map based on the following criteria:
- Topography, streams/physical features
- Environmental constraints
- Economic development potential/special traffic generators
- Service to land use scenarios
- Use of existing roads/R.O.W.
- Impact on existing and future development
- Traffic control/staging at tie-in points
- Cost

b. Develop Alignment Alternatives: This task will include the development of three (3) alignment alternatives for proposed Cedar Lake Road between Nippersink Road and Hart Road. The CMT Team will work with Lake County, the Village of Round Lake, Metra and IDOT to establish a recommended alignment that will be more conducive to the area.

5. Traffic Analysis

   a. Traffic Projections and Assignment to the Roadway Network for the Various Alignment Alternatives

   b. Crash Analysis for Existing and Proposed Roadway Networks (including intersections and segments)

      1) Existing Crash Map
      2) Existing Collision Diagrams
      3) Existing Crash Frequency for Existing Network
      4) Expected Crash Frequency for Existing and Proposed Roadway Network
      5) Summary Table of Expected Crashes for both alternatives/scenarios

   c. Capacity Analysis for Existing and Proposed Roadway Networks (including intersections and segments)

      1) Intersection and Segment Level of Service
      2) Evaluation of various intersection controls (signal vs. roundabout)
      3) Recommendations for number of thru lanes on each segments and the lane configuration at each intersection.
      4) Summary Table to evaluate all alternatives

   d. Coordination with CMAP

6. Intersection Design Studies

   a. Realigned Cedar Lake Road at Hart Road
   b. Realigned Cedar Lake Road at Illinois Route 134
   c. Realigned Cedar Lake Road at Avilon Avenue
   d. Realigned Cedar Lake Road at Nippersink Road

   Perform the following tasks:
   - Prepare IDS base sheets
   - Perform Optimum Phasing Analysis
   - Perform Capacity Analysis (Highway Capacity Software)
   - Determine storage length for required turn lanes
   - Develop preliminary traffic signal layout plan
   - Develop preliminary pavement marking plans
   - Prepare and submit IDS drawings for submittal
   - Address County/IDOT/Village review comments

7. Conceptual Roadway Design (Selected alignment)

   a. Establish project design criteria and standards
   b. Perform roadway capacity to determine roadway geometrics
   c. Revisit and updated roadway typical sections.

d. Determine geometric and location requirements/need for bike path/pedestrian facilities.
e. Establish preliminary horizontal and vertical alignments
f. Develop proposed pavement design based on geotechnical report.
g. Develop conceptual Maintenance of Traffic/Construction Staging Plan
h. Develop conceptual cross-sections every 100'. Cross-section will show proposed geometrics (EOP, BOC, bike paths, sidewalks, etc) in relationship to proposed R.O.W.

8. Conceptual Design of Railroad Improvements
(The evaluation includes cost, public access plan, scheduling of improvements, environmental impact evaluation/reports and right-of-way impact evaluations.)
   a. Evaluation and coordination of vacating existing railroad crossing and evaluation of proposed railroad crossing
   b. Evaluation and coordination of relocated railroad station/platform

9. Preliminary Design Studies

   a. Refine horizontal and vertical geometry based on concept review comments
   b. Identify Barrier Warrant Analysis locations
   c. Prepare preliminary opinion of construction costs
   d. Utility conflict identification and Phase I level utility coordination.
   e. Finalize Maintenance of Traffic/Construction Staging Plan

10. Public Involvement

    CMT will lead the public involvement effort for this project and will include initial project branding, public involvement material production, stakeholder meeting organization/preparation and website development/management in coordination with LCDOT. The following provides the overall scope of work for this task.

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

    Initial project stakeholder coordination meetings will be held with the following:

    - Village of Round Lake
    - Round Lake Fire Protection District
    - IDOT – District One Bureau of Programming
    - School District #116
    - METRA
    - LCSMC
    - Local Business Owner Organizations

    Stakeholder meetings will be used to discuss the proposed project development process (including the planned public involvement activities) and seek support from each stakeholder and provide an opportunity for each stakeholder to provide early project input.

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

opportunity for direct information exchange as part of strategic points within the overall project development process.

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

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

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

Specific work tasks include the following:

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

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

c. SIG Meetings:
Four (4) separate SIG Meetings and/or Workshops are anticipated for the project, however, this will remain flexible based on actual project needs. SIG meetings are intended to be held as informational meetings guided by an audio-visual presentation, and typically followed by a workshop as follows:
1) SIG Meeting 1: Introduction of project team and SIG members. Review the overall project development process and schedule, and review the SIP, including the decision making process and authority (LCDOT, IDOT, and FHWA based on federal project development process) for SIG acceptance. Present traffic data and analysis (including 2040 projections and 2040 No-Action conditions), and crash data and analysis. A workshop will be facilitated for development of the SIG Project Problem Statement.
2) SIG Meeting 2: Present the project Draft Purpose and Need statement incorporating project analysis and SIG input, for SIG acceptance. A workshop will be facilitated to identify project design concerns and opportunities, and the range of potential alternatives for consideration and development by the consultant team as the preliminary concept alternatives.
3) SIG Meeting 3: Present the range of preliminary concept alternatives developed and a comparative analysis with respect to travel performance,

socioeconomic and environmental impacts planning level cost estimates. A workshop will be facilitated to obtain SIG input on the comparative analysis of the range of preliminary concept alternatives, with the objective to narrow the full range of alternatives to the finalist alternatives (anticipated to be three) for presentation at the Public Meeting, along with a disposition of all alternatives considered but dismissed.

4) SIG Meeting 4: Present the results of the Public Meeting, and further comparative analysis of the finalist alternatives. Based on this information, a workshop will be facilitated to obtain SIG input for consideration by LCDOT/IDOT/FHWA in identifying the Preliminary Preferred Alternative.

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

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

d. Public Meeting and Hearing:

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

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

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

11) Prepare individual response letters to uncommon comments or requests for information received at the Public Meeting and Public Hearing.

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

The website will be located on a project specific internet domain acquired by the consultant and linked to the LCDOT project website. The website will incorporate graphics and messaging developed specifically for this (Cedar Lake Road Realignment) project.

Website content will be developed and maintained throughout the Phase 1 project development process (anticipated to be approximately two years) by the consultant. All website content will be reviewed and approved by LCDOT before posting. The website will include at least the following information/capabilities for the project team and stakeholders:

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

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

11. Environmental Studies: Environmental Scope is submitted as **Attachment "C"** and will be performed by Huff & Huff, Inc.

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

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

a. Subconsultant coordination and meetings (assume 1 meeting)
b. Provide sketches to subconsultant for boring layout program
c. Provide elevation information for boring logs
d. Review/analyze available soils surveys for roadway pavement design
e. Two Meetings with LCDOT Staff to Discuss Boring Locations and Results (Hours included under Task 14)

13. Draft Project Development Report

a. Prepare Report Outline
b. List environmental and engineering commitments
c. Develop text portion of report
d. Assemble exhibits, text and submit report

14. Final Project Development Report

    a. Incorporate review comments from Draft Report
    b. Incorporate comments from Public Information Meetings
    c. Revisions to text and exhibits
    d. Update preliminary opinion of construction costs
    e. Address final report review comments (if necessary)

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

    a. Kick-off meeting with LCDOT (1 Meeting)
    b. Draft Report review meeting with LCDOT (1 Meeting)
    c. Progress meetings LCDOT (assume 6 Meetings)
    d. Coordination meetings with LCDOT staff to discuss Public Information meeting (4 Meetings)
    e. Soil Review meetings with LCDOT Staff (1 Meeting)
    f. Meet with IDOT Bureau of Programming (assume 4 meetings)
    g. Meet with FHWA at IDOT District One (assume 4 meetings)
    h. Meet with Lake County Stormwater Management Commission (4 Meetings)
    i. Meet with Village of Round Lake (assume 6 Meetings)
    j. Meet with Village of Round Lake Fire Protection District (assume 2 Meetings)
    k. Meet with School District #116 (assume 4 Meetings)
    l. Meet with METRA regarding rail crossing (assume 6 Meetings)
    m. Meet with local business owner/community organizations (assume 3 Meetings
    n. Preparation time prior to meetings (Total of 46 meetings)
    o. Prepare Meeting Minutes (Total of 46 meetings)
    p. Coordination with IDOT Bureau of Programming, IDOT BLRS, FHWA, School District #116, LCDOT, Village of Round Lake and METRA.

16. Project Administration

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

EXHIBIT “B”

CMT Cost Estimate of Consultant Services (CECS)

"Exhibit B"

Route: Cedar Lake Road Realignment - Phase I Improvement Project

Local Agency: Lake County Division of Transportation

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

Overhead Rate (OH) 164.09%
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	In-House Direct Costs (IHDC)	Profit	Total	% of Grand Total
	Phase I Tasks									
1	Data Collection	134.0	$39.63	$5,309.98	$8,713.14	$8,880.00	$15,216.00	$4,239.67	$42,358.79	5.53%
2	Field Surveys	32.0	$43.60	$1,395.10	$2,289.22	$87,002.75	$0.00	$534.23	$91,221.30	11.90%
3	Location Drainage Study	588.0	$37.79	$22,220.57	$36,461.74	$0.00	$300.00	$8,552.44	$67,534.75	8.81%
4	Alternative Alignment Analysis	52.0	$45.33	$2,357.19	$3,867.91	$0.00	$0.00	$902.64	$7,127.73	0.93%
5	Traffic Analysis	158.0	$36.07	$5,699.07	$9,351.60	$0.00	$0.00	$2,182.35	$17,233.02	2.25%
6	Intersection Design Studies	560.0	$37.78	$21,157.64	$34,717.58	$0.00	$0.00	$8,101.91	$63,977.13	8.35%
7	Conceptual Roadway Design	248.0	$35.87	$8,895.56	$14,596.72	$0.00	$0.00	$3,406.38	$26,898.66	3.51%
8	Conceptual Railroad Improvements	310.0	$41.59	$12,893.61	$21,157.13	$0.00	$0.00	$4,937.36	$38,988.09	5.09%
9	Preliminary Design Studies	96.0	$37.49	$3,598.80	$5,905.27	$0.00	$0.00	$1,378.09	$10,882.17	1.42%
10	Public Involvement	824.0	$42.59	$35,095.11	$57,587.56	$0.00	$4,376.00	$14,073.51	$111,132.18	14.50%
11	Environmental Studies	52.0	$41.40	$2,152.88	$3,532.67	$86,800.50	$0.00	$824.40	$93,310.46	12.17%
12	Geotechnical Investigations	36.0	$36.59	$1,317.14	$2,161.29	$27,941.48	$108.00	$520.03	$32,047.94	4.18%
13	Draft PDR	152.0	$38.02	$5,779.25	$9,483.16	$0.00	$300.00	$2,256.55	$17,818.96	2.32%
14	Final PDR	128.0	$37.46	$4,795.15	$7,868.36	$0.00	$300.00	$1,879.71	$14,843.21	1.94%
15	Meetings and Coordination	602.0	$43.53	$26,205.86	$43,001.20	$0.00	$2,205.36	$10,354.80	$81,767.22	10.67%
16	Project Administration	320.0	$50.95	$16,305.22	$26,755.24	$0.00	$0.00	$6,243.77	$49,304.23	6.43%
Totals		4292.0	$40.82	$175,178.13	$287,449.79	$210,624.73	$22,805.36	$70,387.83	**$766,445.83**	100.00%

Cedar Lake Road Realignment - 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	
1	Data Collection	134.0
2	Field Surveys	32.0
3	Location Drainage Study	588.0
4	Alternative Alignment Analysis	52.0
5	Traffic Analysis	158.0
6	Intersection Design Studies	560.0
7	Conceptual Roadway Design	248.0
8	Conceptual Railroad Improvements	310.0
9	Preliminary Design Studies	96.0
10	Public Involvement	824.0
11	Environmental Studies	52.0
12	Geotechnical Investigations	36.0
13	Draft PDR	152.0
14	Final PDR	128.0
15	Meetings and Coordination	602.0
16	Project Administration	320.0
	Total Project Hours:	**4,292.0**

		Hours	
1	**Data Collection**		
1-a	Data Collection	50	
1-b	Establish existing R.O.W. using Title Commitments	70	
1-c	Project Site Visit	14	
	Sub - total		**134**
2	**Field Surveys**		
2-a	Office Set-up and Coordination	20	
2-b	Preliminary Field Work	4	
2-c	Conduct Topo Surveys	0	
2-d	Survey Field Check by Engineer	8	
2-e	Pick-up Surveys	0	
	Sub - total		**32**
3	**Location Drainage Study**		
3-a	Existing Drainage System	190	
3-b	Proposed Drainage System	260	
3-c	Floodplain Encroachment Evaluation	32	
3-d	Exhibits	50	
3-e	Other Permits	32	
3-f	Water Quality/Best Management Practices	24	
	Sub - total		**588**
4	**Alternative Alignment Analysis**		
4-a	Develop Opportunity/Constraints Map	20	
4-b	Develop Alignment Alternatives	32	
	Sub - total		**52**

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

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

5	**Traffic Analysis**		
5-a	Traffic Projections	32	
5-b	Crash Analysis	40	
5-c	Capacity Analysis	80	
5-d	CMAP Coordination	6	
	Sub - total		**158**
6	**Intersection Design Studies**		
6-a	Prepare IDS for Cedar Lake Road/Hart Road	120	
6-b	Prepare IDS for Cedar Lake Road/Illinois Rt 134	200	
6-c	Prepare IDS for Cedar Lake Road/Avilon Avenue	120	
6-d	Prepare IDS for Cedar Lake Road/Nippersink	120	
	Sub - total		**560**
7	**Conceptual Roadway Design**		
7-a	Establish Design Criteria	8	
7-b	Perform Roadway Capacity	8	
7-c	Develop Typical Sections	12	
7-d	Determine Bicycle/Pedestrian Facility Requirements	12	
7-e	Establish Preliminary Horizontal and Vertical Alignments	60	
7-f	Develop Preliminary Pavement Design	8	
7-g	Develop Concept MOT/Staging	60	
7-h	Develop Conceptual Roadway Cross-sections	80	
	Sub - total		**248**
8	**Conceptual Railroad Improvements**		
8-a	Evaluation/Coordination of Vacating Existing and Proposed Railroad Crossing	110	
8-b	Evaluation/Coordination of Relocated Railroad Station/Platform	200	
	Sub - total		**310**
9	**Preliminary Design Studies**		
9-a	Refine Horizontal and Vertical Alignments per Review Comments	16	
9-b	Identify Barrier Warrant Analysis	6	
9-c	Preliminary Opinion of Construction Costs	40	
9-d	Utility Conflict Identification	24	
9-e	Finalize MOT/Construction Staging Plan	10	
	Sub - total		**96**
10	**Public Involvement**		
10-a	Stakeholder Identification and SIP Development	80	
10-b	Public Information Meeting	134	
10-c	SIG Meetings	160	
10-d	Public Meeting and Hearing	270	
10-e	Project Website and Brand Development	180	
	Sub - total		**824**
11	**Environmental Studies**		
11-a	Coordination and Meetings with Subconsultant	40	
11-b	Review Environmental Reports and Permits	12	
	Sub - total		**52**

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

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

12	**Geotechnical Investigations**		
12-a	Coordination and Meetings with Subconsultant	12	
12-b	Provide Sketches to Subconsultant for Boring Layout Plan	4	
12-c	Provide Elevation Information for Boring Logs	12	
12-d	Review and Analyze Soil Surveys for Design Purposes	8	
12-e	Soil Coordination Meetings w/ LCDOT (Hours included under Task 15)	0	
	Sub - total		**36**
13	**Draft PDR**		
13-a	Prepare Report Outline	24	
13-b	List of Environmental and Engineering Commitments	4	
13-c	Develop Text Portion of Report	80	
13-d	Assemble Exhibits and Text	44	
	Sub - total		**152**
14	**Final PDR**		
14-a	Incorporate Review Comments from Draft Report	24	
14-b	Incorporate Comments from Public Information Meetings	40	
14-c	Revisions to Text and Exhibits	24	
14-d	Update Preliminary Opinion of Construction Costs	20	
14-e	Address Final Report Review Comments	20	
	Sub - total		**128**
15	**Meetings and Coordination**		
15-a	Kick-off meeting w/ Lake County (1 Meeting)	6	
15-b	Draft Report Review Meeting (1 Meeting)	6	
15-c	Progress Meetings (Assume 6)	36	
15-d	Coordination Meetings w/ LCDOT regarding Public Info Meeting (4 Meetings)	24	
15-e	Soil Review Meetings w/ LCDOT (1 Meeting)	6	
15-f	Meeting w/ IDOT Bureau of Programming (4 Meetings)	24	
15-g	Meeting w/ FHWA at IDOT District One (4 Meetings)	24	
15-h	Meeting w/ Lake County Storm Water Management Commission (4 Meetings)	24	
15-i	Meeting w/ Village of Round Lake (6 Meetings)	36	
15-j	Meeting w/ Round Lake Fire Protection District (2 Meetings)	12	
15-k	Meet w/ School District #116 (4 Meetings)	24	
15-l	Meeting w/ METRA regarding rail crossing (6 Meetings)	24	
15-m	Meeting w/ local business owner/community organization (3 Meetings)	18	
15-n	Preparation Time for Meetings (46 Meetings)	69	
15-o	Prepare Meeting Minutes (Total of 46 Meetings)	69	
15-p	Coordination w/ IDOT Programming, LCDOT, Round Lake and METRA	200	
	Sub - total		**602**
16	**Project Administration**		
16-a	Project Setup	30	
16-b	Project Management	210	
16-c	Quality Assurance	80	
	Sub - total		**320**

AVERAGE HOURLY PROJECT RATES

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

DATE 09/06/16

SHEET 1 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Data Collection			Field Surveys			Location Drainage Study			Alternative Alignment Analysis			Traffic Analysis		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00	0	0.00%	0.00															
Senior Project Engr/Mngr	62.05	520	12.12%	7.52							28	4.76%	2.95	4	7.69%	4.77			
Project Engineer	47.52	922	21.48%	10.21	6	4.48%	2.13	4	12.50%	5.94	50	8.50%	4.04	32	61.54%	29.24	36	22.78%	10.83
Senior Engineer	36.78	1538	35.83%	13.18	42	31.34%	11.53				360	61.22%	22.52	16	30.77%	11.32	56	35.44%	13.04
Senior Technical Manager	41.31	264	6.15%	2.54							40	6.80%	2.81						
Engineer	29.23	748	17.43%	5.09	16	11.94%	3.49				110	18.71%	5.47				66	41.77%	12.21
Planner	24.19	0	0.00%	0.00															
Registered Land Surveyor	43.04	98	2.28%	0.98	70	52.24%	22.48	28	87.50%	37.66									
Senior Technician	35.14	82	1.91%	0.67															
Technician II	25.13	0	0.00%	0.00															
Technical I	19.39	0	0.00%	0.00															
Administrative Assistant	22.25	120	2.80%	0.62															
TOTALS		4292	100%	$40.82	134	100.00%	$39.63	32	100%	$43.60	588	100%	$37.79	52	100%	$45.33	158	100%	$36.07

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AVERAGE HOURLY PROJECT RATES

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

DATE 09/06/16

SHEET 2 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Intersection Design Studies			Conceptual Roadway Design			Conceptual Railroad Improvements			Preliminary Design Studies			Public Involvement			Environmental Studies		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00																		
Senior Project Engr/Mngr	62.05				6	2.42%	1.50	40	12.90%	8.01				150	18.20%	11.30	8	15.38%	9.55
Project Engineer	47.52	110	19.64%	9.33	40	16.13%	7.66	80	25.81%	12.26	10	10.42%	4.95	220	26.70%	12.69	12	23.08%	10.97
Senior Engineer	36.78	240	42.86%	15.76	60	24.19%	8.90	140	45.16%	16.61	52	54.17%	19.92	210	25.49%	9.37	20	38.46%	14.15
Senior Technical Manager	41.31	80	14.29%	5.90	22	8.87%	3.66				18	18.75%	7.75	40	4.85%	2.01			
Engineer	29.23	130	23.21%	6.78	120	48.39%	14.14	50	16.13%	4.71	16	16.67%	4.87	74	8.98%	2.62	12	23.08%	6.74
Planner	24.19																		
Registered Land Surveyor	43.04																		
Senior Technician	35.14													70	8.50%	2.99			
Technician II	25.13																		
Technical I	19.39																		
Administrative Assistant	22.25													60	7.28%	1.62			
TOTALS		560	100%	$37.78	248	100%	$35.87	310	100%	$41.59	96	100%	$37.49	824	100%	$42.59	52	100%	$41.40

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AVERAGE HOURLY PROJECT RATES

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

DATE 09/06/16

SHEET 3 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Geotechnical Investigations			Draft PDR			Final PDR			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	70.00															
Senior Project Engr/Mngr	62.05				4	2.63%	1.63				160	26.58%	16.49	120	37.50%	23.27
Project Engineer	47.52	4	11.11%	5.28	20	13.16%	6.25	18	14.06%	6.68	140	23.26%	11.05	140	43.75%	20.79
Senior Engineer	36.78	16	44.44%	16.35	76	50.00%	18.39	80	62.50%	22.99	110	18.27%	6.72	60	18.75%	6.90
Senior Technical Manager	41.31				22	14.47%	5.98	10	7.81%	3.23	32	5.32%	2.20			
Engineer	29.23	4	11.11%	3.25	30	19.74%	5.77	20	15.63%	4.57	100	16.61%	4.85			
Planner	24.19															
Registered Land Surveyor	43.04															
Senior Technician	35.14	12	33.33%	11.71												
Technician II	25.13															
Technical I	19.39															
Administrative Assistant	22.25										60	9.97%	2.22			
TOTALS		36	100%	$36.59	152	100%	$38.02	128	100%	$37.46	602	100%	$43.53	320	100%	$50.95

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

Development of Project Hourly Rates (IDOT Method)

Crawford, Murphy, and Tilly, Inc.

Item	2016 Actual Rate	2017 Projected @ 3.0% Increase	2018 Projected @ 3.0% Increase	2019 Projected @ 3.0% Increase	2020 Projected @ 3.0% Increase	2021 Projected @ 3.0% Increase
Average Hourly Rate as a Percent of 2016 Rate	100.0%	103.0%	106.1%	109.3%	112.6%	115.9%
Estimated Months of Contract in Given Year	3	12	6	0	0	0
% of Project Duration	14.29%	57.14%	28.57%	0.00%	0.00%	0.00%
Extension	0.143	0.589	0.303	0.000	0.000	0.000
Weighted Project Hourly Rate Multiplier	**Note: Salary Adjustments are Given on January 1 of Each Year**					1.0345

Project Duration: October 2016 to June 2018 = 21 months

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

Computation of Prorated Project Hourly Rates

Crawford, Murphy, and Tilly, Inc.

Classification	Actual 2016 Average Hourly Rate	Weighted Hourly Rate Multiplier	Project Hourly Rates *
Principal	$70.00	1.0345	$70.00
Senior Project Engr/Mngr	$59.98	1.0345	$62.05
Project Engineer	$45.93	1.0345	$47.52
Senior Engineer	$35.55	1.0345	$36.78
Senior Technical Manager	$39.93	1.0345	$41.31
Engineer	$28.25	1.0345	$29.23
Planner	$23.38	1.0345	$24.19
Registered Land Surveyor	$41.60	1.0345	$43.04
Senior Technician	$33.97	1.0345	$35.14
Technician II	$24.29	1.0345	$25.13
Technical I	$18.74	1.0345	$19.39
Administrative Assistant	$21.51	1.0345	$22.25

* Rates to be applied to all project work tasks

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

Estimate of Direct Costs

Crawford, Murphy, and Tilly, Inc.

1	**Data Collection**		
a	Travel: 4 trips x 100 miles x $.54/mile	$216.00	
b	Title Commitments: 30 PINs x $500/report	$15,000.00	
	Sub - total		**$15,216.00**
2	**Field Surveys**		
a	No Direct Costs	$0.00	
	Sub - total		**$0.00**
3	**Location Drainage Study**		
a	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**
4	**Alternative Alignment Analysis**		
a	No Direct Costs	$0.00	
	Sub - total		**$0.00**
5	**Traffic Analysis**		
a	No Direct Costs	$0.00	
	Sub - total		**$0.00**

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

Estimate of Direct Costs

6	**Intersection Design Studies**		
a	No Direct Costs	$0.00	
	Sub - total		**$0.00**
7	**Conceptual Roadway Design**		
a	No Direct Costs	$0.00	
	Sub - total		**$0.00**
8	**Conceptual Railroad Improvements**		
a	No Direct Costs	$0.00	
	Sub - total		**$0.00**
9	**Preliminary Design Studies**		
a	No Direct Costs	$0.00	
	Sub - total		**$0.00**
10	**Public Involvement**		
a	Printing: Color Comment Sheets (150/meeting) 450 Sheets * $.50	$225.00	
b	Display Boards for Public Information Meeting: 10 Boards @ $80.00/Board	$800.00	
c	Display Boards for First Public Meeting: 10 Boards @ $80.00/Board	$800.00	
d	Display Boards for Public Hearing: 10 Boards @ $80.00/Board	$800.00	
e	Travel: 7 trips 7 trips x 100 miles x $.54/mile	$378.00	
f	Postage: Meeting Notification Letters 200 Letters/Meeting * 3 Meetings * $.47/Letter	$282.00	
g	Postage: Comment Response Letters 300 Comment Letters * $.47/Letter	$141.00	
h	Court Reporter	$450.00	
i	Website Domain and Server Hosting	$500.00	
	Sub - total		**$4,376.00**
11	**Environmental Studies**		
a	No Direct Costs		
	Sub - total		**$0.00**

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

Estimate of Direct Costs

12	**Geotechnical Investigations**		
a	Travel: 2 trips x 100 miles x $.54/mile	$108.00	
	Sub - total		**$108.00**
13	**Draft PDR**		
a	Draft Project Development Report 6 sets * $50 / set	$300.00	
	Sub - total		**$300.00**
14	**Final PDR**		
a	Final Project Development Report 6 sets * $50 / set	$300.00	
	Sub - total		**$300.00**
15	**Meetings and Coordination**		
a	Travel: 17 trips x 108 miles x $.54/mile	$991.44	
b	Travel: 18 trips x 100 miles x $.54/mile	$972.00	
c	Travel: 8 trips x 56 miles x $.54/mile	$241.92	
	Sub - total		**$2,205.36**
16	**Project Administration**		
a	No Direct Costs	$0.00	
	Sub - total		**$0.00**

ATTACHMENT "A"

Quality Counts, LLC

Sub-Consultant Agreement

Scope and Man-hours for Traffic Counts

Estimate

Estimate Date: 8/18/2016

Order Date: 8/18/2016

Bill To: Crawford, Murphy & Tilly Engineers & Consultants
550 North Commons Drive, Suite 116
Aurora, IL 60504
(630) 907-7059

ORDER NO	ORDER DATE	PROJECT NAME	PAYMENT TERMS	ORDER BY
138851	8/18/2016	Round lake Beach	Net 60 Days	Kelly Farley

QTY	DESCRIPTION		TOTAL
24	1-Person Turn Count	370.00	8880.00
	6 Location(s) for time period(s):12:00 AM -- 6:00 AM (Midweek)		
	- Cedar lake Rd -- Nippersink Rd, Round Lake, IL		
	- Cty V63 -- Hart Rd, Round Lake, IL		
	- Cty V63 -- Railroad Ave, Round Lake, IL		
	- Cty V63 -- W Nippersink Rd, Round Lake, IL		
	- Lincoln Ave -- W Nippersink Rd, Round Lake, IL		
	- Nippersink Ave -- W Nippersink RD, Round Lake, IL		
	6 Location(s) for time period(s):12:00 PM -- 6:00 PM (Midweek)		
	- Cedar lake Rd -- Nippersink Rd, Round Lake, IL		
	- Cty V63 -- Hart Rd, Round Lake, IL		
	- Cty V63 -- Railroad Ave, Round Lake, IL		
	- Cty V63 -- W Nippersink Rd, Round Lake, IL		
	- Lincoln Ave -- W Nippersink Rd, Round Lake, IL		
	- Nippersink Ave -- W Nippersink RD, Round Lake, IL		
	6 Location(s) for time period(s):6:00 AM -- 12:00 PM (Midweek)		
	- Cedar lake Rd -- Nippersink Rd, Round Lake, IL		
	- Cty V63 -- Hart Rd, Round Lake, IL		
	- Cty V63 -- Railroad Ave, Round Lake, IL		
	- Cty V63 -- W Nippersink Rd, Round Lake, IL		
	- Lincoln Ave -- W Nippersink Rd, Round Lake, IL		
	- Nippersink Ave -- W Nippersink RD, Round Lake, IL		
	6 Location(s) for time period(s):6:00 PM -- 12:00 AM (Midweek)		
	- Cedar lake Rd -- Nippersink Rd, Round Lake, IL		
	- Cty V63 -- Hart Rd, Round Lake, IL		
	- Cty V63 -- Railroad Ave, Round Lake, IL		
	- Cty V63 -- W Nippersink Rd, Round Lake, IL		
	- Lincoln Ave -- W Nippersink Rd, Round Lake, IL		
	- Nippersink Ave -- W Nippersink RD, Round Lake, IL		
		TOTAL	**8,880.00**

Balances unpaid by end of Payment Term (listed above) will be charged 1.5% interest per month

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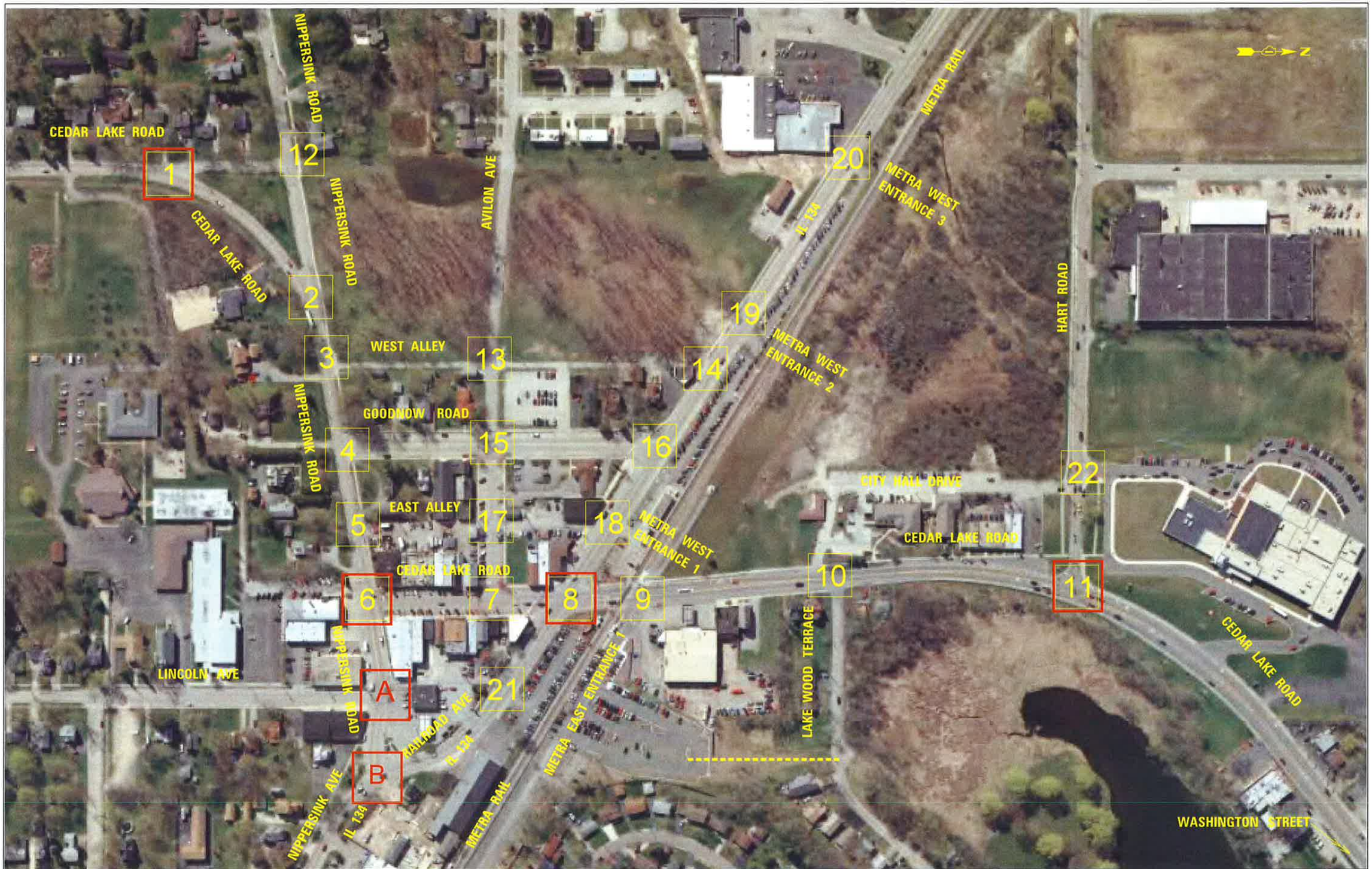

FILE NAME = L:\LAKECO\122408\Draw\Exhibits\Data Collection_Traffic.dgn	USER NAME = Tice 'Charles' Cole	DESIGNED = ___	REVISED =
		DRAWN = ___	REVISED =
	PLOT SCALE = 200.0000 ' / IN.	CHECKED = ___	REVISED =
	PLOT DATE = 5/3/2012	DATE = ___	REVISED =

Proposed 24-hour counts by Quality Counts

CEDAR LAKE ROAD REALIGNMENT
DATA COLLECTION
TRAFFIC – TURNING MOVEMENT COUNT LOCATIONS

SCALE: ___ | SHEET NO. __ OF __ SHEETS | STA. ___ TO STA. ___

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO. ___		
	ILLINOIS	FED. AID PROJECT		

ATTACHMENT "B"

American Surveying & Engineering, P.C.

Sub-Consultant Agreement

Scope and Man-hours for
Surveys and Plat of Highway Preparation

Project:	Round Lake Improvements	***Agent:***	CMT Engineering
Location:	Round Lake, Lake Co., IL	***Owner:***	Lake Co. DOT
Job Number:		***Date:***	May 24, 2016

ASE Proposal No. 211101

SCOPE OF WORK

PROJECT SUMMARY:

Project Description

The project is to provide an existing conditions survey to assist in the design of the Cedar Lake Road Extension from Nippersink Road to Hart Road. The limits and scope requirements were provided by Kelly Farley of CMT. The exhibit included with this proposal indicates the limits of the survey required. The limits include the following roadways:

Project Description (See Enclosed Scope Limits Exhibit) – Limits of the following roadways:

a. Nippersink Rd. for 1100' (Assume 1100 feet)
b. Existing Cedar Lake Rd. for 800' south of Nippersink Rd. (Assume 800 feet)
c. Proposed Cedar Lake Rd. alignment 3000' north of Nippersink Rd. (Assume 2700 feet at 130' wide)
d. Existing Cedar Lake Rd. from Nippersink Road to Hart Rd. (Assume 1200 feet)
e. Goodnow Blvd. from W. Nippersink Rd. to Railroad Ave. (Assume 750 feet)
f. Avalon Ave. for 1050' west of existing Cedar Lake Rd., including 100 feet of Avalon Ct. east of Avalon Ave. (Assume 1150 Feet)
g. IL 134 (Railroad Ave.) for 2000' (including Metra Parking lots along IL 134 up to Metra Railroad) (Assume 2000 feet)
h. Metra Railroad for 2000' (Assume 2000 feet)
i. Hart Rd. for 1000' west of existing Cedar Lake Rd. (Assume 1000 feet)
j. Lakewood Terrace for 500' east of existing Cedar Lake Rd. (Assume 500 feet)
k. Magee Middle School campus roadway adjacent to Hart Rd. and existing Cedar Lake Rd. (between school building and each road) (Assume 2.5 acres)
l. All roadways/accesses and buildings within commercial/village properties at southwest corner of existing Cedar Lake Rd. and Hart Rd. Detailed shots around the Village Hall building will be needed in order to save the building and design around it. (Assume 3 acres)
m. All parking lots & buildings south of IL 134, west of Goodnow Blvd and north of Avalon Ave. (Assume 2 acres)

Assume 11,200 feet of Roadway Surveys (existing and proposed), 2,000 feet of Railroad Surveys, and 7.5 acres of Building Premises Surveys.

Trees within the project limits that are 6" in diameter at breast height (4.5') will also be located.

SURVEY STANDARDS:

1) All survey work will be performed in U.S. Survey Feet, unless otherwise specified.
2) Horizontal and Vertical Data will be based upon the CORS datum.
3) Horizontal control accuracy will meet or exceed NGS Third Order. Vertical control accuracy will meet or exceed NGS Third Order.
4) Relative pavement elevations will be reported to within 0.01 ft or to the amount of deviation found in the surface, whichever is greatest. Ground elevations will be reported to within 0.1 ft accuracy or to the amount of deviation found in the surface, whichever is greatest.

Project:	Round Lake Improvements	***Agent:***	CMT Engineering
Location:	Round Lake, Lake Co., IL	***Owner:***	Lake Co. DOT
Job Number:		***Date:***	May 24, 2016

ASE Proposal No. 211101

SCOPE OF WORK

GENERAL SCOPE ASSUMPTIONS:

1) All work will conform to Lake County Survey Standards.
2) ASE will not determine tree species. Deliverables will include diameter at 4.5' height and determination of deciduous or coniferous.
3) ROW verification will show approximate ROW based upon information and incomprehensive monument locations. Boundary and ROW verification deliverables are not suitable for land acquisition.
4) For underground drainage, sewerage and utility features, reduced field detail sketches will be the final deliverables provided for underground/structural details (no CADD annotations or connections will be given on final deliverables) (Assume 172 structures to be detailed).
5) All survey work will be performed in U.S. survey feet, unless otherwise specified.
6) ASE will coordinate with JULIE to obtain a design level locate, but cannot guarantee the response or accuracy of their locating.
7) Client to provide letter of introduction prior to ASE commencement of field operations.
8) Hazardous sites designated Class "D" or above will not be entered.
9) ASE assumes that there will be no traffic control required for the completion of this scope.
10) ASE will require railroad access permits, flaggers and railroad protective liability insurance to perform work within the Metra Railroad ROW and premises.

THE FOLLOWING TASKS WILL BE PERFORMED BY ASE AS PART OF THIS CONTRACT:

1 ADMINISTRATION

1.1 Meetings/communications with Client
1.2 Technical direction of staff.
1.3 Project management.
1.4 Coordination of rights-of-entry and flagging with Metra.

2 DATA COMPILATION

2.1 Research, as required, plats, plans, drawings and previous survey data provided to ASE by others.
2.2 Compile and index drawings, survey plats and previous survey data. Prepare compiled data for use by field personnel.

3 HORIZONTAL CONTROL

3.1 Search and reconnaissance for record and geodetic control points. Recover and verify previous control points set by agent and/or client including any government survey marks such as USGS, etc. Set and maintain intermediate horizontal control points.
3.2 Traverse/GPS through found monuments to establish primary control. Traverse/GPS through secondary control to densify control.
3.3 Office calculations, adjustment, tabulations of coordinates, and working drawings.

Project:	Round Lake Improvements	***Agent:***	CMT Engineering
Location:	Round Lake, Lake Co., IL	***Owner:***	Lake Co. DOT
Job Number:		***Date:***	May 24, 2016

ASE Proposal No. 211101

SCOPE OF WORK

4 VERTICAL CONTROL

4.1 Search and reconnaissance for record control points. Recover and verify previous control points as required. Recover and verify benchmarks. Set and maintain intermediate vertical control points.
4.2 Digital level through found monuments to establish primary and intermediate control.
4.3 Office calculations, adjustment, tabulations of coordinates, and working drawings.

5 CENTERLINE & ALIGNMENT TIES AND STAKING. ROW VERIFICATION

(Task Omitted From Scope)

6 3-D TOPOGRAPHIC SURVEY

6.1 Scan pavement and other topographic features to include trees and man-made features (Assume 150 scanning setups). NOTE: ASE will not determine tree species. Deliverables will include diameter at 4.5' height and determination of deciduous or coniferous.
6.2 GPS & conventional surveys to locate elevations necessary for creation of DTM, and areas not friendly to scanner/GPS. Locate elevations at 100-foot cross sections in vegetation (Assume 120 sections)
6.3 Detail underground drainage, sewerage and utility features. Reduced field detail sketches will be the final deliverables provided for underground/structural details (no CADD annotations or connections will be given on final deliverables) (Assume 172 structures to be detailed).
6.4 Download, edit and adjust data.
6.5 Register scans (Assume 150).
6.6 Identify and pick topographic points from point cloud.
6.7 Perform CADD. Create deliverables.

7 TRAVEL

7.1 Travel to and from job site.

8 QA/QC

8.1 Review contract documents and survey requirements to verify ASE project QA/QC requirements. Prepare project-specific QA/QC plan.
8.2 Periodic project review to assure compliance with policy and contract documents.
8.3 Final review and report.

Project:	Round Lake Improvements	***Agent:***	CMT Engineering
Location:	Round Lake, Lake Co., IL	***Owner:***	Lake Co. DOT
Job Number:		***Date:***	May 24, 2016

ASE Proposal No. 211101

SCOPE OF WORK

ASE WILL DELIVER TO CLIENT THE FOLLOWING ITEMS AS PART OF THIS WORK:

A. Copies of field notes with reductions made and any details required of drainage, sewerage, and utility facilities.
B. Hard and electronic copies of drawings (Microstation) as noted in above scope of work.
C. Hard and electronic (*.pdf) copies of reports.

DIRECT COST ITEMS:

A. Railroad access permit fees (assume $1,000)
B. Railroad protective liability insurance (Assume $5,000)
C. Railroad flaggers (Assume $2,000)

ITEMS TO BE SUPPLIED BY OTHERS

A. Record plans, including any previous survey information (if available).
B. Any and all pertinent site information including, but not limited to previous horizontal and vertical survey control, survey information, existing aerial photography, Val maps, Right-of-Way plans, centerline alignment, construction plans and plats of highway will be furnished to ASE, at no cost to ASE, prior to commencement of field operations.
C. Permission and access to closed, restricted or locked areas requiring access to complete the survey.

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM American Surveying & Engineering, PC **DATE**

PTB

PRIME/SUPPLEMENT

OVERHEAD RATE 1.3587

COMPLEXITY FACTOR 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE 14.5*(B+C) (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)
DBE	1.0 Administration	38	2,148.86	2,919.66		734.93			5,803.45	5,803.45
DBE	2.0 Data Compilation	12	551.82	749.76		188.73			1,490.31	1,490.31
DBE	3.0 Horizontal Control	55	2,007.65	2,727.79		686.64			5,422.08	5,422.08
DBE	4.0 Vertical Control	63	2,247.29	3,053.39		768.60			6,069.28	6,069.28
DBE	5.0 C/L Alignment & ROV	0.0	0.00	0.00		0.00			0.00	0.00
DBE	6.0 Topographic Survey	543	18,826.35	25,579.36		6,438.83	8,000.00		58,844.54	58,844.54
DBE	7.0 Travel	80	2,396.40	3,255.99		819.60			6,471.99	6,471.99
DBE	8.0 QA/QC	22	1,074.20	1,459.52		367.39			2,901.10	2,901.10
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
DBE	0								0.00	
	Subconsultant DL					0.00				0.00
	TOTALS	813	29,252.57	39,745.47	0.00	10,004.72	8,000.00	0.00	87,002.75	**87,002.75**

PREPARED BY THE AGREEMENTS UNIT

Printed 8/22/2016 9:24 AM

PROJECT: Round Lake Improvements

LOCATION: Round Lake, Lake Co., IL | **PROPOSAL No. : 211101**

CLIENT: CMT Engineering | **DATE: 5/24/2016**

SUMMARY OF TASKS — MANHOURS

TASK	PIC	PM	P S/E 4	P S/E 3	P S/E 2	P S/E 1	CADD	ST3	ST2	ST1	ROW 4	ROW 3	ROW 2	ROW 1	SUE 3	SUE 2	SUE 1	CONTR.	A/C 3	A/C 2	TOTAL
1.0 Administration	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	38
2.0 Data Compilation	0	2	0	6	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	12
3.0 Horizontal Control	0	5	0	10	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	55
4.0 Vertical Control	0	5	0	10	0	0	0	24	24	0	0	0	0	0	0	0	0	0	0	0	63
5.0 C/L Alignment & ROW Ver.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
6.0 Topographic Survey	0	29	0	64	0	0	200	150	100	0	0	0	0	0	0	0	0	0	0	0	543
7.0 Travel	0	0	0	0	0	0	0	40	40	0	0	0	0	0	0	0	0	0	0	0	80
8.0 QA/QC	2	10	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	2	0	22
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hours	2	83	0	90	0	0	206	240	184	0	0	0	0	0	0	0	0	0	8	0	813

AMERICAN
SURVEYING & ENGINEERING, P.C.

Average Hourly Rates
As of 8/15/2016
Statewide Rates

Classification	Name	Rate	Effective Date	Average
Principal in Charge (PIC)				
	Coventine Fidis	70.00	1/16/2006	70.00
Project Manager				
	Coventine Fidis	70.00	1/16/2006	
	Mark M. Wood	68.03	1/4/2016	
	Steven Rienks	65.00	1/4/2016	
	Wayne Mory	69.23	1/4/2016	
	Jay Howell	64.00	1/4/2016	
	Larry Martin	70.00	6/22/2015	
	John Dybas	68.03	1/4/2016	67.76
Project Surveyor/Engineer Grade 4				
	Paul Stanton	65.38	1/4/2016	65.38
Project Surveyor/Engineer Grade 3				
	Shanlong Kuang, Ph.D.	50.51	1/1/2007	
	Thomas Sanderson	60.00	1/4/2016	
	Eric Sladek	51.75	1/4/2016	
	Craig Duy	52.02	1/4/2016	
	Robert Merry	52.88	2/18/2015	
	William McWethy	55.29	1/4/2016	53.74
Project Surveyor/Engineer Grade 2				
	Virginia Thornton	40.00	1/4/2016	
	Robert Saxer	33.00	1/4/2016	36.50
Project Surveyor/Engineer Grade 1				
	Cort Darby	32.00	1/4/2016	
	Robert Bachara	40.00	1/4/2016	36.00
CADD Technicians				
	Craig Hills	34.00	1/4/2016	
	Branndon Elsbree	35.00	1/4/2016	
	Jesse Nocon	35.00	1/4/2016	
	Amanda Johnson	35.50	1/4/2016	
	William Baran	38.00	1/4/2016	35.50
Engineering/Survey Technician Grade 4				
	Thomas Balser	51.00	1/4/2016	
	Karen Mack	50.00	3/17/2015	
	Jack Petersen	55.00	8/14/2015	
	John Urban	49.04	1/4/2016	51.26
Engineering/Survey Technician Grade 3				
	Daryl Edwards	38.00	1/4/2016	
	Thomas Hoyle	34.50	1/4/2016	
	Jeffrey Mummert	34.00	1/4/2016	
	Kristopher McAllister	31.00	1/4/2016	34.38
Engineering/Survey Technician Grade 2				
	Gustavo A. Aguilar	27.50	1/4/2016	
	Gary Brandt	29.25	1/4/2016	
	Lucas McDonald	25.75	1/4/2016	
	Bradly Duffy	23.25	1/4/2016	
	William McDaniel	26.00	1/4/2016	

(Continued)

ASE
Average Hourly Rates
Page 2 of 2
Name/Classification

Engineering/Survey Technician Grade 2 (continued)				
	Lawrence DeManche	23.25	1/4/2016	
	Kelly Cianci	28.85	10/5/2015	
	Roberto Ascencio	20.00	1/4/2016	25.48
Engineering/Survey Technician Grade 1				
	David Ciskowski	21.50	1/4/2016	
	Ismael Lopez	22.00	1/4/2016	
	Jared Mills	15.25	1/4/2016	19.58
Right-of-Way Specialist Grade 4				
	Thomas Balser	51.00	1/4/2016	
	Karen Mack	50.00	3/17/2015	
	Jack Petersen	55.00	8/14/2015	
	John Urban	49.04	1/4/2016	51.26
Right-of-Way Specialist Grade 3				
	Robert Dempsey, Jr.	40.00	1/4/2016	40.00
Right-of-Way Specialist Grade 2				
	Melody McCracken	31.00	1/4/2016	31.00
Right-of-Way Specialist Grade 1				
	Daniel Woessner	17.00	11/30/2015	
	Jennifer Storey	18.00	1/4/2016	17.50
Subsurface Utility Engineer Grade 3				
	Thomas Hoyle	34.50	1/4/2016	
	Daryl Edwards	38.00	1/4/2016	
	Christopher Mason	32.00	1/4/2016	
	George Lamplota	37.70	1/6/2014	
	Virginia Thornton	40.00	1/4/2016	36.44
Subsurface Utility Engineer Grade 2				
	Bradly Duffy	23.25	1/4/2016	
	Roberto Ascenio	20.00	1/4/2016	21.63
Subsurface Utility Engineer Grade 1				
	Ismael Lopez	22.00	1/4/2016	
	Steven Beszhak	22.00	5/2/2016	
	Charles Walker	18.50	1/4/2016	
	Cody Mullen	18.00	2/1/2016	
	William Knickerbocker	18.25	1/4/2016	
	Bradley Rowatt	18.00	2/3/2016	
	Ronald Janusz	20.00	4/11/2016	19.54
Deputy Controller/Administration Manager				
	Julie Habben	21.50	1/4/2016	21.50
Administrative/Clerical 3				
	Lindsey Stutzke-Jones	19.50	1/4/2016	19.50
Administrative/Clerical 2				
	Rosemary Flowers	15.00	1/4/2016	
	Aimee Rogowski	15.00	1/4/2016	15.00
Administrative/Clerical 1				
	Barbara Hatfield	14.42	2/1/2016	14.42

Pay raises are usually given annually except for changes in classification/promotion.

Our Current Overhead Rate approved by IDOT is 166.92%

ATTACHMENT "C"

Huff & Huff, Inc.

Sub-Consultant Agreement

Scope and Man-hours for Environmental Studies

Huff & Huff
incorporated
A Subsidiary of GZA

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

915 Harger Road
Suite 330
Oak Brook, IL 60523
T: 630.684.9100
F: 630.684.9120
www.huffnhuff.com
www.gza.com

May 23, 2016
Revised August 19, 2016

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

Re: Environmental Services for Cedar Lake Road Extension
Nippersink Road to Hart Road
Round Lake, Lake County, Illinois
Proposal No.: 81.PT00040.17

Dear Mr. Farley:

Huff & Huff, Inc. (Consultant) is pleased to submit this proposal to perform various environmental services in conjunction with the proposed roadway extension of 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 to extend Cedar Lake Road around the downtown business district from Nippersink Road to south of the Hart Road/Cedar Lake Road intersection in Round Lake, Illinois. Consultant has been requested to provide the following services: a Preliminary Environmental Site Assessment (PESA), 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.

Cedar Lake Road is an existing two lane road that is proposed to be extended on new alignment to bypass downtown Round Lake and provide improved connectivity of Cedar Lake Road north and south of Illinois Route 134. Currently Cedar Lake Road deviates east at Nippersink Road and extends through downtown Round Lake. The project area is approximately 30 acres and includes intersections with Illinois Route 134 (IL134), Nippersink Road, and Hart Road. 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. As the proposed roadway is on new alignment right-of-way acquisition is anticipated.

2. PROJECT APPROACH

Consultant will provide environmental services for the proposed roadway improvement project. At this time, local funding is being proposed for Phase 1, but the County will seek federal funds for construction. As a result, the environmental processing typically utilized for federally funded state projects will be completed for the improvement. Cedar Lake Road is marked County Highway 28. 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 Crawford, Murphy & Tilley, Inc. (Client), Consultant 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 (USACE) if necessary, and potential sustainable concepts for drainage features. "Wetlands" are defined by the USACE 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 2010 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 Preliminary Environmental Site Assessment 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.

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

A. Off-site Record/Document Review

Based on available mapping as well as current aerial photography, it is anticipated there are wetland/"Waters of the U.S" (WOUS) present within the project limits.

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 sources to be reviewed and 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

B. 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 surveyed in the field using Global Positioning System equipment.

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 (US Army Corps of Engineers, [USACE] Section 404 Permit) and the Illinois Environmental Protection Agency Section 401 Guidelines regulations. These regulations pertain to the placement of fill or alteration 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 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 using the Corps of Engineers Regional Supplement to the USACE Wetlands Delineation Manual (USACE, 2010). 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.

In addition to the wetlands identified by aerial photography, the entire project area will be investigated in the event that unmapped wetlands are present. The NWI map for the project area identifies three wetlands within the project limits.

All wetland and WOUS boundaries will be located using GPS. The WOUS and wetland boundary map will be derived from the GPS survey of these features. Shapefiles for the surveyed areas will be included with the wetland delineation report.

Report

Upon completion of the wetland delineations, a wetland delineation report will be prepared summarizing the findings of the formal delineation upon completion. This report will be used for the basis of permitting. Wetland delineation data sheets will be included in the report, which summarize the findings of the field investigation. A minimum of one wetland and one upland data point is needed for each wetland encountered.

Specific items to be included are as follows:

a) Map showing the wetland/WOUS boundaries and project boundaries
b) USACE data sheets with color photos
c) Written description of wetland functional classification
d) Floristic Quality Index Rating assessment
e) Mitigation options
f) Jurisdictional Summary Table
g) Identification of 303d impaired waterways

A formal delineation of wetlands is required in accordance with the Chicago District USACE regulations, prior to permitting any wetland impacts. In the Chicago District, within Illinois, the wetland delineation report must include a floristic quality assessment. Any impacts to wetlands will require permits. Consultant will provide four bound hard copies of the Wetland

and WOUS Investigation Report and one CD containing a PDF of the report and shape files of the wetland and WOUS boundary.

Task 2 – Jurisdictional Determination Submittal/Boundary Verification

If wetlands are located within the project limits permitting may be required. Once the delineations have been completed, a preliminary jurisdictional determination request will be submitted to the Lake County Stormwater Management Commission (SMC). As part of the jurisdictional determination process, an on-site field visit may be required. If necessary, Consultant will accompany SMC or USACE officials to the site after the delineation is completed.

Lake County regulates isolated wetlands that are not subject to Section 404 regulations. Therefore, permitting activities may be required through Lake County. Fees for the jurisdictional determination are not included in this scope of work and cost estimate.

Task 3 – Wetland Permitting Corps of Engineers

Permits for impacts to jurisdictional "Waters of the U.S." (WOUS) and/or wetlands are issued through the Chicago District, USACE in Lake County. This scope of work includes the tasks necessary to obtain a Regional Permit.

Consultant will complete and submit the Joint Application form and other necessary information to obtain a permit from the USACE for impacts to WOUS and/or wetlands. The USACE will coordinate with the following agencies during the review of the Joint Application as required:

- U.S. Army Corps of Engineers (USACE)
- U.S. Fish & Wildlife Service (FWS)
- 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 Chicago District of the USACE has a regional permit program meant to simplify and expedite specific types of projects. Most regional permits have automatically authorized Section 401 Water Quality Certification (WQC) from the IEPA. It is anticipated that this project will qualify for a regional permit. If the project does not qualify for a regional permit, an individual permit will be required. Individual permits require a public notice period as well as separate WQC from the IEPA. The individual permit process can take significantly more time than the regional permit process. This scope of work assumes the project will qualify under the Regional Permit program. This scope does not include permitting under the Individual Permit.

Within the regional permit program, permits are classified as either Category I or Category II. Category I includes activities with minimal impacts requiring review by the USACE. Category II includes activities with minimal impacts requiring more rigorous review by the USACE and coordination with the resource agencies.

Regional Permit 3 (RP3) authorizes the construction or replacement of public transportation projects, including roads, bridges, runways and taxiways, and railroads. Impacts to WOUS permitted under an RP3 shall not exceed 0.25 acre for any single crossing. For projects that involve multiple crossings of WOUS, the cumulative impact cannot exceed 1.0 acre.

Endangered species review is also required through the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Federal Endangered Species Act if a federal action is undertaken (the USACE issuing a permit). The USFWS no longer conducts project-by-project review upon request; rather, the applicant is required to conduct an assessment and determine if impacts to federally listed species will occur as a result of the proposed project. To conduct this review, applicants are required to conduct the USFWS Section 7 Consultation and document their findings. Consultant will prepare the Section 7 Consultation letter. Threatened or endangered species surveys are not included in this scope. Coordination with the IDNR is initiated through the submittal of the Ecological Compliance Assessment Tool (EcoCAT), requesting information on project threatened or endangered species.

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. 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.

Coordination with the Illinois Historic Preservation Agency (IHPA) is required to determine the presence/absence and potential impacts of the project to cultural or archeological resources. If cultural or archeological resources are identified within the proposed project a Phase I archeological survey could be required by IHPA. Consultant will coordinate with Client to find a qualified firm if a certified Phase I archeologist is required for the project. A cost for such a study is not included in this proposal as the need is undetermined until IHPA responds.

This scope includes a pre-application meeting with the USACE.

Other permits
Costs for the following permits are not included in this proposal. If these permits become necessary, a separate proposal can be submitted.

- Section 401 of the Clean Water Act is automatically granted under most Regional Permits from the USACE. If the project does not meet the guidelines of the Regional Permit Program, separate Section 401 WQC will be required. This proposal assumes the project will qualify for a regional permit.
- *National Pollutant Discharge Elimination System (NPDES) Permitting* - Client will be responsible for preparation of the NPDES permitting, plan preparation, and associated coordination. CONSULTANT will not complete this item; however, as stated above, CONSULTANT will complete the coordination with the IDNR and IHPA (associated with a Section 404 permit), which will need to be submitted by Client during the NPDES permitting process, prior to receiving an NPDES permit.

Task 4 – Lake County Wetland Permitting

Lake County regulates all wetlands including isolated waters of Lake County and buffers to these wetlands. Lake County defines four levels of wetland impacts:

- Category I includes wetland impacts with a cumulative impact area of 0.25 acre or less, without impacts to High Quality Aquatic Resources (HQAR), High Functional Value Wetland (HFVW), or High Quality Habitat Sites (HQHS).
- Category II includes projects that have between 0.25 and 2 acres of wetland impact and do not impact HQAR, HFVW, and/or HQHS.
- Category III includes wetland impacts with a cumulative impact area of 2 acres or greater in size, or that impact HQAR, HQHS, and/or HFVW.

- Category IV includes wetland impacts for the restoration, creation, and enhancement of wetlands provided that there are net gains in aquatic resource function.

Category III permit applications must include documentation of avoidance and minimization on the site. In addition, any permit application that includes an impact to a HQAR, HQHS, or HFVW must include an alternative analysis for wetland avoidance.

Several other agencies are involved in the permitting process through external reviews related to the natural resources of the wetland. The following summarizes additional requirements:

The Consultant will work with the Client to obtain permits as required under the Lake County Watershed Development Ordinance. The Lake County Ordinance requires permits for impacts related to stormwater and wetlands. Consultant will work with Client to obtain the wetland authorizations through the County. Client will obtain the necessary stormwater permits. This scope includes a pre-application meeting with Lake County. Application fees for Lake County permitting are not included in this scope of work.

Task 5 – Wetland Mitigation Strategies

There are currently two options by which mitigation criteria can be met: 1) the use of a wetland bank, or 2) new wetland construction. In most cases, the USACE prefers the use of wetland banks over new wetland construction.

Wetland banking is typically the best way to provide mitigation for wetland impacts. The creation of small isolated mitigated wetlands does not replace the functions of wetlands as well as a large scale wetland bank. In many cases, the regulatory community prefers the use of wetland banks to mitigate impacts. Banking is a viable mitigation option for this project.

At this time, no on-site mitigation design is included in the scope of services. If wetland mitigation is required, wetland banking may or may not be an option for this project. If not, a separate proposal will be prepared for wetland mitigation design. The development surrounding the site reduces the feasibility of mitigating impacts on site. If impacts to wetlands do occur, Consultant 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 6 – 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 Client 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. Consultant will coordinate with Client if a certified Phase I archeologist is required for the project.

Task 7 – Tree Survey

The need for a formal tree survey will be determined upon early coordination with LCDOT. Consultant will utilize initial survey data from client to conduct the tree survey. Station and offset information will be obtained from Client. Consultant

will identify the trees to species level and determine health, structure, and origin. Consultant will also note whether any trees are of exceptional size and condition. H&H will determine which trees are worth avoidance. In addition, Consultant 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.

Consultant 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. Consultant will also work with Client and the LCDOT in potential mitigation measures should certain trees be potentially impacted by the proposed project.

Task 8 – Sustainable Concepts

As stormwater sustainable concepts are being considered for the section of Cedar Lake Road to Nippersink Road, there is the potential for these types of concepts to be moved forward for the proposed extension of Cedar Lake Road. If so, Consultant will work with Client in the design phase to develop potential sustainable concepts for this project. As there are existing drainage issues related to the project, Consultant 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 9 – Preliminary Environmental Site Assessment (PESA)

Since H&H has identified sites of potential concern in the downtown area and areas north of the railroad tracks in the previous PESA completed for Cedar Lake Road from Illinois Route 120 to Nippersink Road, we would therefore suggest that a PESA for the additional proposed project area be completed. H&H will prepare a Preliminary Environmental Site Assessment for areas identified in the Client provided alignments figure *with the exception of Illinois Route 134. IDOT will conduct the PESA for the state route portion.* This will include investigation the potential razing of the existing Metra Station for one of the preferred alternatives. The process will follow general protocols contained within:

- A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation (IDOT) Highway Projects (Erdmann et al., 2012)
- ASTM International (ASTM) standard 1527-13
- The IDOTs Bureau of Design and Environment (BDE) Procedure Memorandum Number 10-07, *Special Waste Procedures*. This memo was incorporated into Chapter 27-3 of the IDOT BDE Manual in June 2012.
- IDOT Bureau of Local Roads and Streets (BLRS) Manual, Chapter 20-12, Special Waste, July 2013.
- Public Act 96-1416
- Clean Construction or Demolition Debris Fill Operations (CCDD) and Uncontaminated Soil Fill Operations: Amendments to 35 Illinois Administrative Code 1100. Effective on August 27, 2012.

A. Historical Research

The site's historical land use/ownership record will be developed from standard historical sources. Historic aerial photographs will be reviewed to identify land use over time and potential areas of environmental concern, such as areas of surface disturbance and outside storage.

B. Site Evaluation

Current environmental features and conditions of sites adjacent to the right-of-way/project area will be evaluated. A site walkover of potential right-of-way/project areas designated for excavation and/or acquisition will be conducted for first-hand evaluation of current environmental conditions within the project limits. All of the features and conditions listed above will be investigated and, as appropriate, documented in photographs. The land-use and housekeeping practices of adjacent properties also will be evaluated in accordance with ASTM protocols.

C. Records Review

A records review will be conducted to determine potential environmental concerns within the study area. It will include a search of standard state and federal environmental record databases in accordance with the specifications of ASTM standards. This search is based on the outline of the study area.

Specifically, Consultant will search each database to identify any potential sources requiring further investigation. As appropriate, Freedom of Information Act (FOIA) requests will be filed with the IEPA to obtain additional data pertaining to identified sites.

D. Report Preparation

One report summarizing the results of the evaluation will be prepared. The following information will be included in this report:

a) The project location and description
b) Historical uses of corridor.
c) The area geology and hydrology.
d) The environmental status of sites adjacent to the corridor regarding chemical use and storage, underground and aboveground storage tanks, solid waste, special waste, and hazardous waste, and PCBs.
e) An analysis of the site inspection.
f) A summary of the findings regarding any environmental concerns. This will include IDOT's per Memo 66-10 and identification of Potentially Impacted Properties (PIPs) per Subpart F, Section 1100, 35 IAC, related to Clean Construction Demolition Debris management.

In addition to the above mentioned tasks, a preliminary asbestos survey will be conducted for the existing Metra station to determine if there are asbestos containing materials in the building that would have to be addressed in Phase 2. Samples will be taken and analyzed and a summary of the results will be prepared. This does not include the removal and disposal of asbestos that may result from the displacement of the Metra station.

Task 10 – Traffic Noise Analysis

The proposed extension of Cedar Lake Road would include new road on new alignment and therefore would require a noise analysis. The noise analysis will follow IDOT and FHWA noise policies effective July 1, 2011. The need for a formal noise analysis will be determined upon early coordination with IDOT and LCDOT.

There are a few scattered residences and businesses near the proposed alignment alternatives for the Cedar Lake Road extension. 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 for each of the four alternatives, and will determine the effectiveness of potential noise abatement for these same alternatives.

Data Collection

Peak hourly traffic data for existing and future conditions will be needed for the traffic noise model. The traffic data provided by the project team 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 by the project team 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 six receptor locations will be selected.

Noise Monitoring

Huff & Huff will conduct field noise monitoring at the receptor locations. Noise levels will be measured with a Bruel & Kjaer Type 2250L Sound Meter. This meter is comparable to ANSI S1.4-1983 Type II or better. The noise monitoring information will be used for validation of the TNM model. Noise monitoring will be conducted for up to 15 minutes at up to three receptor locations.

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, if applicable, 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

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 determine if noise abatement is feasible and reasonable.

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 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 noise barriers will be depicted to identify barriers that meet the feasible and reasonable analysis.

Task 11 – Section 4(f) Special Lands

The need for a formal Section 4(f) coordination and report will be determined upon early coordination with IDOT and LCDOT. During the coordination process with the Round Lake Park District, a determination will be made as to whether the Section 4(f) process will be required.

As the potential impacts to the Round Lake Park District Cedar Valley Park 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 12 – QA/QC, Project Management, and Health & Safety

For this task, time has been allotted for quality assurance/quality control, specifically for review of laboratory analytical information and internal document review. Consultant will provide progress updates and attend two meetings with LCDOT in additional to coordination with Client.

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 2016. 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. CONDITIONS OF ENGAGEMENT

The conditions of engagement are described in the attached Terms and Conditions for Professional Services. H&H's report will be prepared on behalf of and for the exclusive use of Client. Client acknowledges and agrees that the report and the findings in the report shall not, in whole or in part, be disseminated or conveyed to any other party, or used or relied upon by any other party, in whole or in part, except for the specific purpose and to the specific parties alluded to above, without the written consent of H&H. H&H would be pleased to discuss the conditions associated with any additional dissemination, use, or reliance by other parties.

ACCEPTANCE

This agreement may be accepted by signing in the appropriate space below and returning one complete copy to H&H. Issuance of a Purchase Order implicitly acknowledges acceptance of this proposal. This proposal is valid for a period of 30 days from the date of issue.

We appreciate the opportunity to submit this proposal. Please feel free to contact the undersigned at (630) 684-9100 with any questions.

Very truly yours,

Huff & Huff, Inc.

Jim Novak
Associated Principal
Attachments: Terms and Conditions

This Proposal for Services, Schedule of Fees and Terms and Conditions for Professional Services are hereby accepted and executed by a duly authorized signatory, who by execution hereof, warrants that he/she has full authority to act for, in the name, and on behalf of _____.

By: _____ Title: _____

Printed/Typed Name: _____ Date: _____

The Proposal for Services, Schedule of Fees and Terms and Conditions for Professional Services may be executed in two or more counterparts, each of which together shall be deemed an original, but all of which together shall constitute one and the same instrument. In the event that any signature is delivered by facsimile transmission or by an e-mail delivery of a document in ".pdf" format, each such signature shall create a valid and binding obligation of the party executing the document, or on whose behalf each document is executed, with the same force and effect as if each such facsimile or ".pdf" signature were an original thereof.

TERMS AND CONDITIONS
FOR PROFESSIONAL SERVICES
Including Site Investigation, Remediation, Geotechnical, Construction, And Testing

These Terms and Conditions, together with Huff & Huff, Inc.'s (H&H's) Proposal, make up the Agreement between H&H and you, Client, named in the attached proposal.

BEFORE SIGNING THE PROPOSAL, BE SURE YOU READ AND UNDERSTAND THE PARAGRAPHS ENTITLED "INDEMNIFICATION" AND "LIMITATION OF REMEDIES" WHICH DEAL WITH THE ALLOCATION OF RISK BETWEEN YOU AND H&H.

1. Services. H&H will perform the services set forth in its Proposal and any amendments or change orders authorized by you. Any request or direction from you that would require extra work or additional time for performance or would result in an increase in H&H's costs will be the subject of a negotiated amendment or change order.

2. Standard of Care; Warranties.

a. H&H will perform the services with the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services at the same time under similar conditions in the same or similar locality.

b. H&H warrants that its construction services will be of good quality, free of faults and defects and in conformance with the Proposal.

c. **EXCEPT AS SET FORTH IN SUBSECTIONS 2a AND 2b, ABOVE, NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTY OF MARKETABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE OR INTENDED BY H&H'S PROPOSAL OR BY ANY OF H&H'S ORAL OR WRITTEN REPORTS.**

d. H&H assigns to you any manufacturers' warranties of equipment or materials purchased from others, to the extent they are assignable, and your sole recourse will be against the manufacturer. Full risk of loss of materials and equipment will pass to you upon delivery to the Site, and you will be responsible for insuring and otherwise protecting them against theft and damage.

3. Payment.

a. Except as otherwise stated in the Proposal, you will compensate H&H for the services at the rates set forth in the applicable Proposal, amendment or change order; reimburse its expenses, which will include a communication fee calculated as a percentage of labor invoiced; and pay any sales or similar taxes thereon.

b. Any retainer specified in H&H's Proposal shall be due prior to the start of services and will be applied to the final invoice for services.

c. H&H will submit invoices periodically, and payment will be due within 20 days from invoice date. Overdue payments will bear interest at 1½ percent per month or, if lower, the maximum lawful rate. H&H may terminate its services upon 10 days' written notice anytime your payment is overdue on this or any other project and you will pay for all services through termination, plus termination costs. You will reimburse H&H's costs of collecting overdue invoices, including reasonable attorneys' fees.

4. Your Responsibilities.

a. Except as otherwise agreed, you will secure the approvals, permits, licenses and consents necessary for performance of the services. If you are the owner or operator of the Site, you will provide H&H with all documents, plans, information concerning underground structures (including but not limited to utilities, conduits, pipes, and tanks), information related to hazardous materials or other environmental or geotechnical conditions at the Site and other information that may be pertinent to the services or, if you are not the owner or operator of the Site, you agree to make reasonable efforts to obtain these same documents and provide them to H&H. Unless otherwise indicated in writing, H&H will be entitled to rely on documents and information you provide.

b. If you use the services of a construction manager at the Site, you agree to use best and reasonable efforts to include in your agreement(s) with the construction contractor provisions obligating the latter:

(i) to indemnify and hold harmless, to the fullest extent permitted by law, you and H&H, its officers, employees and principals, for or on account of any claims, liabilities, costs and expenses, including attorneys' fees, arising out of or relating to the design or implementation of construction means, methods, procedures, techniques, and sequences of construction, including safety precautions or programs, of the contractor, or any of its subcontractors or any engineer engaged by it;

(ii) to name you and H&H as additional insureds under general liability and builder's risk insurance coverages maintained by the contractor, or any of its subcontractors; and

(iii) to require that all of its subcontractors agree and be bound to the obligations set forth in (i) and (ii) above.

c. In the event that you are unable to secure such provisions in the agreement(s) with the construction contractor, you shall promptly notify H&H and H&H shall have the opportunity to negotiate with you reasonable substitute risk allocation and insurance indemnities and protections.

5. Right of Entry; Site Restoration. You grant H&H and its subcontractor(s) permission to enter the Site to perform the services. If you do not own the Site, you represent and warrant that the owner has granted permission for H&H to enter the Site and perform the services; you will provide reasonable verification on request; and you will indemnify H&H for any claims by the Site owner related to alleged trespass by H&H or its subcontractors. H&H will exercise reasonable care to limit damage to landscaping, paving, systems and structures at the Site that may occur and you agree to compensate H&H for any restoration it is asked to perform, unless otherwise indicated in the Proposal.

6. Underground Facilities. H&H's only responsibility under this Section will be to provide proper notification to the applicable state utility "Call-Before-You-Dig" program. You further agree to assume responsibility for and to defend, indemnify and hold harmless H&H with respect to personal injury and property damages due to H&H's interference with subterranean structures including but not limited to utilities, conduits, pipes, and tanks:

(i) that are not correctly shown on any plans and information you or governmental authorities provide to H&H; or

(ii) that are not correctly marked by the appropriate utility.

7. Reliance. The services, information, and other data furnished by you shall be at your expense, and H&H may rely upon all information and data that you furnish, including the accuracy and completeness thereof. You acknowledge that the quality of the services provided by H&H is directly related to the accuracy and completeness of the information and data that you furnish to H&H. **H&H's REPORTS ARE PREPARED FOR AND MADE AVAILABLE FOR YOUR SOLE USE. YOU ACKNOWLEDGE AND AGREE THAT USE OF OR RELIANCE UPON THE REPORT OR THE FINDINGS IN THE REPORT BY ANY OTHER PARTY, OR FOR ANY OTHER PROJECT OR PURPOSE, SHALL BE AT YOUR OR SUCH OTHER PARTY'S SOLE RISK AND WITHOUT ANY LIABILITY TO H&H.**

8. Lab Tests and Samples. H&H is entitled to rely on the results of laboratory tests using generally accepted methodologies. H&H may dispose of samples in accordance with applicable laws 30 days after submitting test results to you unless you request in writing for them to be returned to you or to be held longer, in which case you will compensate H&H for storage and/or shipping beyond 30 days.

9. H&H Professionals. H&H employees or consultants may act as licensed, certified or registered professionals (including but not limited to Professional Engineers, Licensed Site or Environmental Professionals, or Certified Industrial Hygienists collectively referred to in this section as "H&H Professionals") whose duties may include the rendering of independent professional opinions. You acknowledge that a federal, state or local agency or other third party may audit the services of H&H or other contractor/consultant(s), which audit may require additional services, even though H&H and such H&H Professionals have each performed such services in accordance with the standard of care set forth herein. You agree to compensate H&H for all services performed in response to such an audit, or to meet additional requirements resulting from such an audit, at the rates set forth in the applicable Proposal, amendment or change order.

10. Hazardous Materials; H&H "Not a Generator". Before any hazardous or contaminated materials are removed from the Site, you will sign manifests naming you as the generator of the waste (or, if you are not the generator, you will arrange for the generator to sign). You will select the treatment or disposal facility to which any waste is taken. H&H will not be the generator or owner of, nor will it possess, take title to, or assume legal liability for any hazardous or contaminated materials at or removed from the Site. H&H will not have responsibility for or control of the Site or of operations or activities at the Site other than its own. H&H will not undertake, arrange for or control the handling, treatment, storage, removal, shipment, transportation or disposal of any hazardous or contaminated materials at or removed from the Site, other than any laboratory samples it collects or tests. You agree to defend, indemnify and hold H&H harmless for any costs or liability incurred by H&H in defense of or in payment for any legal actions in which it is alleged that H&H is the owner, generator, treater, storer or disposer of hazardous waste.

11. Limits on H&H's Responsibility. H&H will not be responsible for the acts or omissions of contractors or others at the Site, except for its own subcontractors and employees. H&H will not supervise, direct or assume control over or the authority to stop any contractor's work, nor shall H&H's professional activities nor the presence of H&H or its employees and subcontractors be construed to imply that H&H has authority over or responsibility for the means, methods, techniques, sequences or procedures of construction, for work site health or safety precautions or programs, or for any failure of contractors to comply with contracts, plans, specifications or laws. Any opinions by H&H of probable costs of labor, materials, equipment or services to be furnished by others are strictly estimates and are not a guarantee that actual costs will be consistent with the estimates.

12. Changed Conditions.

a. You recognize the uncertainties related to environmental and geotechnical services, which often require a phased or exploratory approach, with the need for additional services becoming apparent during the initial services. You also recognize that actual conditions encountered may vary significantly from those anticipated, that laws and regulations are subject to change, and that the requirements of regulatory authorities are often unpredictable.

b. If changed or unanticipated conditions or delays make additional services necessary or result in additional costs or time for performance, H&H will notify you and the parties will negotiate appropriate changes to the scope of services, compensation and schedule.

c. If no agreement can be reached, H&H will be entitled to terminate its services and to be equitably compensated for the services already performed. H&H will not be responsible for delays or failures to perform due to weather, labor disputes, intervention by or inability to get approvals from public authorities, acts or omissions on your part, or any other causes beyond H&H's reasonable control, and you will compensate H&H for any resulting increase in its costs.

13. Documents and Information. All documents, data, calculations and work papers prepared or furnished by H&H are instruments of service and will remain H&H's property. Designs, reports, data and other work product delivered to you are for your use only, for the limited purposes disclosed to H&H. Any delayed use, use at another site, use on another project, or use by a third party will be at the user's sole risk, and without any liability to H&H. Any technology, methodology or technical information learned or developed by H&H will remain its property. Provided H&H is not in default under this Agreement, H&H's designs will not be used to complete this project by others, except by written agreement relating to use, liability and compensation.

14. Electronic Media. In accepting and utilizing any drawings, reports and data on any form of electronic media generated by H&H, you covenant and agree that all such electronic files are instruments of service of H&H, who shall be deemed the author and shall retain all common law, statutory law and other rights, including copyrights. In the event of a conflict between the signed documents prepared by H&H and electronic files, the signed documents shall govern. You agree not to reuse these electronic files, in whole or in part, for any purpose or project other than the project that is the subject of this Agreement. Any transfer of these electronic files to others or reuse or modifications to such files by you without the prior written consent of H&H will be at the user's sole risk and without any liability to H&H.

15. Confidentiality; Subpoenas. Information about this Agreement and H&H's services and information you provide to H&H regarding your business and the Site, other than information available to the public and information acquired from third parties, will be maintained in confidence and will not be disclosed to others without your consent, except as H&H reasonably believes is necessary: (a) to perform its services; (b) to comply with professional standards to protect public health, safety and the environment; and (c) to comply with laws and court orders. H&H will make reasonable efforts to give you prior notice of any disclosure under (b) or (c) above. Information available to the public and information acquired from third parties will not be considered confidential. You will reimburse H&H for responding to any subpoena or governmental inquiry or audit related to the services, at the rates set forth in the applicable Proposal, amendment or change order.

16. Insurance. During performance of the services, H&H will maintain workers compensation, commercial general liability, automobile liability, and professional liability/contractor's pollution liability insurance. H&H will furnish you certificates of such insurance on request.

17. Indemnification. You agree to hold harmless, indemnify, and defend H&H and its affiliates and subcontractors and their employees, officers, directors and agents (collectively referred to in this paragraph as "H&H") against all claims, suits, fines and penalties, including mandated cleanup costs and attorneys' fees and other costs of settlement and defense, which claims, suits, fines, penalties or costs arise out of or are related to this Agreement or the services, except to the extent they are caused by H&H's negligence or willful misconduct.

18. Limitation of Remedies.

a. To the fullest extent permitted by law and notwithstanding anything else in this Agreement to the contrary, the aggregate liability of H&H and its affiliates and subcontractors and their employees, officers, directors and agents (collectively referred to in this paragraph as "H&H") for all claims arising out of this Agreement or the services is limited to $50,000 or, if greater, 10% of the compensation received by H&H under this Agreement.

b. You may elect to increase the limit of liability by paying an additional fee, such fee to be negotiated prior to the execution of this Agreement.

c. Any claim will be deemed waived unless received by H&H within one year of substantial completion of the services.

d. H&H will not be liable for lost profits, loss of use of property, delays, or other special, indirect, incidental, consequential, punitive, exemplary, or multiple damages.

e. H&H will not be liable to you or the Site owner for injuries or deaths suffered by H&H's or its subcontractors' employees.

f. You will look solely to H&H for your remedy for any claim arising out of or relating to this Agreement, including any claim arising out of or relating to alleged negligence or errors or omissions of any H&H principal, officer, employee or agent.

19. Disputes.

a. All disputes between you and H&H shall be subject to non-binding mediation.

b. Either party may demand mediation by serving a written notice stating the essential nature of the dispute, the amount of time or money claimed, and requiring that the matter be mediated within forty-five (45) days of service of notice.

c. The mediation shall be administered by the American Arbitration Association in accordance with its most recent Construction Mediation Rules, or by such other person or organization as the parties may agree upon.

d. No action or suit may be commenced unless mediation has occurred but did not resolve the dispute, or unless a statute of limitation period would expire if suit were not filed prior to such forty-five (45) days after service of notice.

20. Miscellaneous.

a. Illinois law shall govern this Agreement.

b. The above terms and conditions regarding Limitation of Remedies and Indemnification shall survive the completion of the services under this Agreement and the termination of the contract for any cause.

c. Any amendment to these Terms and Conditions must be in writing and signed by both parties.

d. Having received these Terms and Conditions, your oral authorization to commence services, your actions, or your use of the Report or Work Product constitutes your acceptance of them.

e. This Agreement supersedes any contract terms, purchase orders or other documents issued by you.

f. Neither party may assign or transfer this Agreement or any rights or duties hereunder without the written consent of the other party.

g. Your failure or the failure of your successors or assigns to receive payment or reimbursement from any other party for any reason whatsoever shall not absolve you, your successors or assigns of any obligation to pay any sum to H&H under this agreement.

h. These Terms and Conditions shall govern over any inconsistent terms in H&H's Proposal.

i. The provisions of this Agreement are severable; if any provision is unenforceable it shall be appropriately limited and given effect to the extent it is enforceable.

j. The covenants and agreements contained in this Agreement shall apply to, inure to the benefit of and be binding upon the parties hereto and upon their respective successors and assigns.

Illinois Department of Transportation

Payroll Escalation Table
Fixed Raises

FIRM NAME	Huff & Huff	**DATE**	8/19/2016
PRIME/SUPPLEMENT	CMT	**PTB NO.**	

CONTRACT TERM	21	**MONTHS**	**OVERHEAD RATE**	171.26%
START DATE	10/15/2016		**COMPLEXITY FACTOR**	0
RAISE DATE	3/1/2017		**% OF RAISE**	3.00%

ESCALATION PER YEAR

10/15/2016 - 3/1/2017	3/2/2017 - 3/1/2018	3/2/2018 - 7/1/2018		
5 / 21	12 / 21	4 / 21		
= 23.81%	58.86%	20.21%		
= 1.0287				

The total escalation for this project would be: **2.87%**

Illinois Department of Transportation

Payroll Rates

FIRM NAME Huff & Huff **DATE** 8/19/2016
PRIME/SUPPLEMENT CMT
PTB NO.

ESCALATION FACTOR 2.87%

CLASSIFICATION	CURRENT RATE	ESCALATED RATE
Principal	$70.00	$70.00
Senior Geotechnical Cons.	$58.08	$59.75
Senior Consultant	$57.95	$59.62
Senior Geologist PM	$48.62	$50.02
Geologist PM	$30.64	$31.52
Senior Engineering PM	$46.41	$47.74
Engineering PM	$38.32	$39.42
Assistant PM Engineer II	$37.08	$38.15
Assistant PM Engineer I	$31.66	$32.57
Engineer 1	$29.56	$30.41
Senior Scientist PM	$40.01	$41.16
Scientist PM I	$39.82	$40.96
Assistant PM Scientist	$25.51	$26.24
Senior Technical Scientist	$34.00	$34.98
Environmental Scientist E1	$23.74	$24.42
Senior Planning PM	$45.04	$46.33
Planning PM	$32.64	$33.58
Senior Technical Specialist	$42.88	$44.11
Senior CADD Specialist	$31.20	$32.10
Administrative Managers	$37.12	$38.19
Sr. Administrative Assistant	$25.88	$26.62
Administrative Assistant	$21.16	$21.77
Senior PM II (on call)	$57.69	$59.35
Senior PM I (on call)	$38.89	$40.01
Engineering Intern	$18.00	$18.52
Intern	$15.50	$15.95
		$0.00
		$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
Route	Cedar Lake Road
Section	
County	Lake
Job No.	
PTB & Item	

Date 8/19/2016

Overhead Rate **171.26%**

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 and Re	53	1,945.99	3,332.70	85.74	777.84	40.00	0.00	6,182.28	7.12%
Jurisdictional Determination	9	355.90	609.52	51.90	147.51	0.00	0.00	1,164.84	1.34%
Wetland Permitting USACE	66	2,503.45	4,287.40	11.52	986.34	40.00	0.00	7,828.71	9.02%
Lake County Wetland Perm	53	2,030.76	3,477.88	10.62	800.29	40.00	0.00	6,359.55	7.33%
Wetland Mitigation Strategie	4	164.64	281.96	0.00	64.76	0.00	0.00	511.36	0.59%
IHPA Photolog	6	246.96	422.94	48.10	104.11	0.00	0.00	822.11	0.95%
Tree Survey	61	1,636.34	2,802.39	244.08	679.01	20.00	0.00	5,381.82	6.20%
Sustainable Concepts	30	1,420.93	2,433.48	0.00	558.89	0.00	0.00	4,413.30	5.08%
PESA	98	3,720.08	6,371.01	275.40	1,503.14	1,690.00	0.00	13,559.62	15.62%
Noise Analysis	173	7,963.13	13,637.65	64.32	3,141.44	40.00	0.00	24,846.54	28.62%
Section 4(f)	88	3,922.93	6,718.40	65.50	1,552.49	40.00	0.00	12,299.32	14.17%
QA/QC Project Mgmt	22	1,104.68	1,891.87	0.00	434.50	0.00	0.00	3,431.05	3.95%
TOTALS	663	27,015.78	46,267.22	857.18	10,750.33	1,910.00	0.00	86,800.50	100.00%

BDE 025 (Rev. 2/06)

Illinois Department of Transportation

Average Hourly Project Rates

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

Consultant Huff & Huff

Date 8/19/2016

Sheet 1 **OF** 1

Payroll Classification	Avg Hourly Rates	Total Project Rates			Wetland Delineation and Repor			Jurisdictional Determination			Wetland Permitting USACE			Lake County Wetland Permitting			Wetland Mitigation Strategies		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00	5	0.75%	0.53															
Senior Geotechnical Cons.	59.75	0																	
Senior Consultant	59.62	20	3.02%	1.80							2	3.03%	1.81	2	3.77%	2.25			
Senior Geologist PM	50.02	3	0.45%	0.23															
Geologist PM	31.52	0																	
Senior Engineering PM	47.74	24	3.62%	1.73															
Engineering PM	39.42	0																	
Assistant PM Engineer II	38.15	0																	
Assistant PM Engineer I	32.57	50	7.54%	2.46															
Engineer 1	30.41	0																	
Senior Scientist PM	41.16	162	24.43%	10.06	30	56.60%	23.30	8	88.89%	36.59	40	60.61%	24.95	36	67.92%	27.96	4	100.00%	41.16
Scientist PM I	40.96	0																	
Assistant PM Scientist	26.24	98	14.78%	3.88	16	30.19%	7.92				16	24.24%	6.36	12	22.64%	5.94			
Senior Technical Scientist	34.98	0																	
Environmental Scientist E1	24.42	0																	
Senior Planning PM	46.33	227	34.24%	15.86															
Planning PM	33.58	0																	
Senior Technical Specialist	44.11	40	6.03%	2.66	6	11.32%	4.99				6	9.09%	4.01	2	3.77%	1.66			
Senior CADD Specialist	32.10	18	2.71%	0.87															
Administrative Managers	38.19	2	0.30%	0.12															
Sr. Administrative Assistant	26.62	14	2.11%	0.56	1	1.89%	0.50	1	11.11%	2.96	2	3.03%	0.81	1	1.89%	0.50			
Administrative Assistant	21.77	0																	
Senior PM II (on call)	59.35	0																	
Senior PM I (on call)	40.01	0																	
Engineering Intern	18.52	0																	
Intern	15.95	0																	
		0																	
		0																	
		0																	
		0																	
TOTALS		663	100%	$40.75	53	100%	$36.72	9	100%	$39.54	66	100%	$37.93	53	100%	$38.32	4	100%	$41.16

Illinois Department of Transportation

Average Hourly Project Rates

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

Consultant Huff & Huff

Date 8/19/2016

Sheet 2 **OF** 1

Payroll Classification	Avg Hourly Rates	IHPA Photolog			Tree Survey			Sustainable Concepts			PESA			Noise Analysis			Section 4(f)		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00							2	6.67%	4.67									
Senior Geotechnical Cons.	59.75																		
Senior Consultant	59.62							6	20.00%	11.92							4	4.55%	2.71
Senior Geologist PM	50.02																		
Geologist PM	31.52																		
Senior Engineering PM	47.74										24	24.49%	11.69						
Engineering PM	39.42																		
Assistant PM Engineer II	38.15																		
Assistant PM Engineer I	32.57										50	51.02%	16.62						
Engineer 1	30.41																		
Senior Scientist PM	41.16	6	100.00%	41.16				16	53.33%	21.95	2	2.04%	0.84				16	18.18%	7.48
Scientist PM I	40.96																		
Assistant PM Scientist	26.24				54	88.52%	23.23												
Senior Technical Scientist	34.98																		
Environmental Scientist E1	24.42																		
Senior Planning PM	46.33													165	95.38%	44.19	60	68.18%	31.59
Planning PM	33.58																		
Senior Technical Specialist	44.11							6	20.00%	8.82	14	14.29%	6.30	6	3.47%	1.53			
Senior CADD Specialist	32.10				6	9.84%	3.16				6	6.12%	1.97				6	6.82%	2.19
Administrative Managers	38.19																		
Sr. Administrative Assistant	26.62				1	1.64%	0.44				2	2.04%	0.54	2	1.16%	0.31	2	2.27%	0.61
Administrative Assistant	21.77																		
Senior PM II (on call)	59.35																		
Senior PM I (on call)	40.01																		
Engineering Intern	18.52																		
Intern	15.95																		
TOTALS		6	100%	$41.16	61	100%	$26.83	30	100%	$47.36	98	100%	$37.96	173	100%	$46.03	88	100%	$44.58

Illinois Department of Transportation

Average Hourly Project Rates

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

Consultant Huff & Huff

Date 8/19/2016

Sheet 3 **OF** 1

Payroll Classification	Avg Hourly Rates	QA/QC Project Mgmt																	
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00	3	13.64%	9.55															
Senior Geotechnical Cons.	59.75																		
Senior Consultant	59.62	6	27.27%	16.26															
Senior Geologist PM	50.02	3	13.64%	6.82															
Geologist PM	31.52																		
Senior Engineering PM	47.74																		
Engineering PM	39.42																		
Assistant PM Engineer II	38.15																		
Assistant PM Engineer I	32.57																		
Engineer 1	30.41																		
Senior Scientist PM	41.16	4	18.18%	7.48															
Scientist PM I	40.96																		
Assistant PM Scientist	26.24																		
Senior Technical Scientist	34.98																		
Environmental Scientist E1	24.42																		
Senior Planning PM	46.33	2	9.09%	4.21															
Planning PM	33.58																		
Senior Technical Specialist	44.11																		
Senior CADD Specialist	32.10																		
Administrative Managers	38.19	2	9.09%	3.47															
Sr. Administrative Assistant	26.62	2	9.09%	2.42															
Administrative Assistant	21.77																		
Senior PM II (on call)	59.35																		
Senior PM I (on call)	40.01																		
Engineering Intern	18.52																		
Intern	15.95																		
TOTALS		22	100%	$50.21	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

HUFF & HUFF, INC.
SUMMARY OF INHOUSE DIRECT COSTS
Project: CMT Cedar Lake Road Extension Nippersink to Hart

									DIRECT
Wetland Delineation									
Trips - Company	85 miles	x	1	x	$	0.54	=	$	45.90
Tolls			4	x	$	1.50	=	$	6.00
Parking			0	x	$	5.00	=	$	-
Reproduction	6 sets	x	100	x	$	0.03	=	$	18.00
Color copies	6 sets	x	12	x	$	0.11	=	$	7.92
Photo sheets	6 sets	x	6	x	$	0.22	=	$	7.92
CAD Plots			0	x	$	1.85	=	$	-
			0	x	$	-	=	$	-
						Task Total		**$**	**85.74**
Jurisdictional Determination									
Trips - Company	85 miles	x	1	x	$	0.54	=	$	45.90
Tolls			4	x	$	1.50	=	$	6.00
			0	x	$	-	=	$	-
						Task Total		**$**	**51.90**
Wetland Permitting USACE									
Reproduction	3 sets	x	40	x	$	0.03	=	$	3.60
Color copies	3 sets	x	12	x	$	0.11	=	$	3.96
Photo sheets	3 sets	x	6	x	$	0.22	=	$	3.96
CAD Plots			0	x	$	1.85	=	$	-
			0	x	$	-	=	$	-
						Task Total		**$**	**11.52**
Lake County Wetland Permitting									
Reproduction	3 sets	x	30	x	$	0.03	=	$	2.70
Color copies	3 sets	x	12	x	$	0.11	=	$	3.96
Photo sheets	3 sets	x	6	x	$	0.22	=	$	3.96
CAD Plots			0	x	$	1.85	=	$	-
			0	x	$	-	=	$	-
						Task Total		**$**	**10.62**
Wetland Mitigation Strategies									
			0	x	$	-	=	$	-
						Task Total		**$**	**-**
IHPA Photolog									
Trips - Company	85 miles	x	1	x	$	0.54	=	$	45.90
Color copies	2 sets	x	10	x	$	0.11	=	$	2.20
			0	x	$	-	=	$	-
						Task Total		**$**	**48.10**
Tree Survey									
Trips - Company	4 miles	x	85	x	$	0.54	=	$	183.60
Tolls			16	x	$	1.50	=	$	24.00
Parking			0	x	$	5.00	=	$	-
Reproduction	6 sets	x	100	x	$	0.03	=	$	18.00
Color copies	6 sets	x	20	x	$	0.11	=	$	13.20
Photo sheets	6 sets	x	4	x	$	0.22	=	$	5.28
CAD Plots			0	x	$	1.85	=	$	-
			0	x	$	-	=	$	-
						Task Total		**$**	**244.08**
Sustainable Concepts									
			0	x	$	-	=	$	-
						Task Total		**$**	**-**
PESA									
Trips - Company	100 miles	x	4	x	$	0.54	=	$	216.00
Tolls			24	x	$	1.50	=	$	36.00
Reproduction	3 sets	x	150	x	$	0.03	=	$	13.50
Color copies	3 sets	x	10	x	$	0.11	=	$	3.30
Photo sheets	3 sets	x	10	x	$	0.22	=	$	6.60
CAD Plots			0	x	$	1.85	=	$	-
			0	x	$	-	=	$	-
						Task Total		**$**	**275.40**
Noise									
Trips - Company	85 miles	x	1	x	$	0.54	=	$	45.90
Tolls			4	x	$	1.50	=	$	6.00
Parking			0	x	$	5.00	=	$	-
Reproduction	3 sets	x	50	x	$	0.03	=	$	4.50
Color copies	3 sets	x	8	x	$	0.11	=	$	2.64
Photo sheets	3 sets	x	8	x	$	0.22	=	$	5.28
CAD Plots			0	x	$	1.85	=	$	-
			0	x	$	-	=	$	-
						Task Total		**$**	**64.32**
Section 4(f)									
Trips - Company	85 miles	x	1	x	$	0.54	=	$	45.90
Tolls			4	x	$	1.50	=	$	6.00
Parking			0	x	$	5.00	=	$	-
Reproduction	4 sets	x	40	x	$	0.03	=	$	4.80
Color copies	4 sets	x	8	x	$	0.11	=	$	3.52
Photo sheets	4 sets	x	6	x	$	0.22	=	$	5.28
CAD Plots			0	x	$	1.85	=	$	-
			0	x	$	-	=	$	-
						Task Total		**$**	**65.50**
Project Management									
			0	x	$	-	=	$	-
						Task Total		**$**	**-**

GRAND TOTAL **$ 857.18**

HUFF & HUFF, INC.
SUMMARY OF OUTSIDE DIRECT COSTS
Project: CMT Cedar Lake Road Extension Nippersink to Hart

					OUTSIDE
Wetland Delineation					
Maps/Aerials	0 x	$ 10.00	=	$	-
Federal Express	2 x	$ 20.00	=	$	40.00
_____	0 x	$ -	=	$	-
		Task Total		**$**	**40.00**
Jurisdictional Determination					
_____	0 x	$ -	=	$	-
		Task Total		**$**	**-**
Wetland Permitting USACE					
Federal Express	2 x	$ 20.00	=	$	40.00
_____	0 x	$ -	=	$	-
		Task Total		**$**	**40.00**
Lake County Wetland Permitting					
Federal Express	2 x	$ 20.00	=	$	40.00
Records Search	0 x	$ 250.00	=	$	-
_____	0 x	$ -	=	$	-
		Task Total		**$**	**40.00**
Wetland Mitigation Strategies					
	0 x	**$**		**$**	
		Task Total		**$**	
IHPA Photolog					
_____	0 x	$ -	=	$	-
		Task Total		**$**	**-**
Tree Survey					
Maps/Aerials	0 x	$ 10.00	=	$	-
Federal Express	1 x	$ 20.00	=	$	20.00
_____	0 x	$ -	=	$	-
		Task Total		**$**	**20.00**
Sustainable Concepts					
_____	0 x	$ -	=	$	-
		Task Total		**$**	**-**
PESA					
Asbestos Analytical	40 x	$ 25.00	=	$	1,000.00
Maps/Aerials	3 x	$ 90.00	=	$	270.00
Federal Express	1 x	$ 20.00	=	$	20.00
Records Search	1 x	$ 250.00	=	$	250.00
Fire Insurance Maps	1 x	$ 150.00	=	$	150.00
		Task Total		**$**	**1,690.00**
Noise					
Federal Express	2 x	$ 20.00	=	$	40.00
_____	0 x	$ -	=	$	-
		Task Total		**$**	**40.00**
Section 4(f)					
Federal Express	2 x	$ 20.00	=	$	40.00
_____	0 x	$ -	=	$	-
		Task Total		**$**	**40.00**
Project Management					
_____	0 x	$ -	=	$	-
		Task Total		**$**	**-**
		GRAND TOTAL		**$**	**1,910.00**

HUFF & HUFF, INC.
SUMMARY OF SERVICES BY OTHERS
Project: CMT Cedar Lake Road Extension Nippersink to Hart

				OUTSIDE
Wetland Delineation				
SUB1	0 x	$ -	=	$ -
SUB2	0 x	$ -	=	$ -
SUB3	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
Jurisdictional Determination				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
Wetland Permitting USACE				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
Lake County Wetland Permitting				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
IHPA Photolog				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
Tree Survey				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
Sustainable Concepts				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
PESA				
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
Noise				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
Section 4(f)				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
Project Management				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
QA/QC				
SUB1	0 x	$ -	=	$ -
_____	0 x	$ -	=	$ -
		Task Total		**$ -**
		GRAND TOTAL		**$ -**

ATTACHMENT “D”

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
1348 Ridge Avenue, Elk Grove Village, IL 60007 p 847.228.1079 f 847.228.0633
P. O. Box 3395, Joliet, IL 60434 p 630.560.4464 f 630.560.4464
Testing • Inspection • Training • Consulting • Research • Geotechnical
www.chicagotestinglab.com
info@chicagotestinglab.com
Founded 1912

August 22, 2016

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. EG12003 R2
Geotechnical Exploration, Lab Testing and Engineering
Cedar Lake Road Realignment (Nippersink Road to Hart Road)
Lake County, Illinois

Dear Mr. Farley,

Please find the enclosed copy of Chicago Testing Laboratory's revised cost estimate proposal for the requested geotechnical exploration and engineering services for the realignment of Cedar Lake Road between Nippersink Road and Hart Road 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 important 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 continuing to be 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 Realignment

(Nippersink Road to Hart Road)

Lake County, IL

Geotechnical Exploration, Lab Testing and Engineering

CTL Proposal No. EG12003 R2

Chicago Testing Laboratory, Inc.

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 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 Absen 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 realignment of Cedar Lake Road beginning just south of Nippersink Road continuing to just north of Hart Road.

The proposed geotechnical field investigation would include the following:

1) Roadway soil borings are typically performed along the length of the proposed and/or existing roadways for the proposed construction. These borings would provide information about the existing sub grade soil and groundwater conditions. A total of 20 roadway borings are suggested based on the possible alignments presented and 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) A total of four (4) soil borings located in proposed detention pond areas were added to this revised scope (R2) of work. These borings would provide information about the potential use of borrow materials as well as groundwater conditions. Borings would typically be extended to a minimum of 10-15 ft. below the existing ground surface (bgs) depending on the size and depth of the proposed detention areas.

3) Structural soil borings for culvert crossings, bridges and/or viaducts have not been included in this proposal. Depending on the design, structural soil borings may be required according to the Geotechnical Manual (IDOT).

4) 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 5 cores are suggested.

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

We anticipate a minimum of 2 days to layout boring and core locations, 4-5 days to complete the soil 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 72 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.

Revised Estimated Budget Total = $27,941.48

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. EG12003 R2

Reference: Geotechnical Exploration, Lab Testing and Engineering
Revised Estimated Budget Total = $27,941.48

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 and attachments dated August 22, 2016.

Company Name: _____

Contact Name: _____

Address: _____

_____

_____

Telephone Number: _____

Fax Number: _____

Signature: _____

Date: _____

Chicago Testing Laboratory, Inc.
30W114 Butterfield Road, Warrenville, IL 60555 p 630.393.CTL1 f 630.393.CTL7
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Testing • Inspection • Training • Consulting • Research • Geotechnical
Founded 1912
www.chicagotestinglab.com
info@chicagotestinglab.com

CHICAGO TESTING LABORATORY, INC.
CIVIL - GEOTECHNICAL - CONSTRUCTION MATERIALS

GENERAL CONDITIONS

TEST BORINGS AND FIELD INVESTIGATIONS
On projects requiring test borings, test pits, or other explorations, we may obtain the services of reputable subcontractors to perform such work.

ACCESS TO SITES
Unless otherwise agreed, the Client will furnish us with right-of-access to the site in order to conduct the planned exploration. We will take responsible precautions to minimize damage to the site due to our operations, but have not included in the fee the cost of restoration of any damage resulting from the operations. If the Client desires, we will restore any damage to the site and add the cost of restoration to the fee.

INSURANCE
We maintain Workman's Compensation Insurance and Employer's Liability Insurance in conformance with state law. In addition, we maintain Comprehensive General Liability Insurance and Automobile Liability Insurance with bodily injury (limit $1,000,000 each occurrence, $1,000,000 aggregate) and property damage (limit $1,000,000 each occurrence, $1,000,000 aggregate).

Within the limits of said insurance, we agree to hold the client harmless from and against loss, damage, injury or liability arising directly from the negligent acts or omissions of ourselves and our employees. If the client placed greater responsibilities upon us or requires further insurance coverage, we if specifically so directed, will take out additional insurance (if procurable) to protect us at the clients' expense. We shall not be responsible for property damage from any cause, including fire and explosion, beyond the amounts and coverage of our insurance.

LIMITATION OF PROFESSIONAL LIABILITY
The Client recognizes the inherent risks connected with construction. In performing our professional services, we will use that degree of care and skill ordinarily exercised, under similar circumstances, by reputable members of our profession practicing in the same or similar locality. No other warranty, express or implied, is made or intended by the proposal for consulting service or by furnishing oral or written reports of the findings made. It is agreed that the Client will limit any and all liability, claim for damages, cost of defense or expenses to be levied against us on account of any design defect, error, omission, or professional negligence to a sum not to exceed $50,000, or the amount of our fees, which ever is less.

INVOICES
Progress invoices will be submitted to the client monthly and a final bill will be submitted upon completion of the services. Invoices will show charges for different personnel and expense classifications. A more detailed separation of charges and data will be provided at clients request, but each invoice is due on presentation and is past due thirty (30) days from invoice date. Client agrees to pay a finance charge of 1 1/2% per month, or the maximum rate allowed by law on past due accounts.

The client’s obligation to pay for the work contracted is in no way dependent upon the client’s ability to obtain financing, zoning, approval of governmental or regulatory agents, or upon the client's successful completion of the project.

WE RESERVE THE RIGHT TO SUSPEND OR TERMINATE WORK OR WITHHOLD REPORTING UPON FAILURE OF THE CLIENT TO PAY INVOICES AS DUE.

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME Chicago Testing Laboratory, Inc.
PRIME/SUPPLEMENT

DATE 08/22/16
PSB NO.

CONTRACT TERM	21 MONTHS	OVERHEAD RATE	230.00%
START DATE	10/1/2016	COMPLEXITY FACTOR	0
RAISE DATE		% OF RAISE	3.00%

ESCALATION PER YEAR

10/1/2016 - 12/31/2016	1/1/2017 - 12/31/2017	1/1/2018 - 6/30/2018		
3 / 21	12 / 21	6 / 21		
= 14.29%	58.86%	30.31%		
= 1.0345				

The total escalation for this project would be: **3.45%**

PAYROLL RATES

FIRM NAME Chicago Testing Laboratory, Inc. **DATE** 08/22/16
PRIME/SUPPLEMENT
PSB NO.

ESCALATION FACTOR 3.45%

CLASSIFICATION	CURRENT RATE	PROPOSED RATE	CALCULATED RATE	DIFF
Project Manager	$31.35		$32.43	$32.43
Materials Tester II	$37.50		$38.80	$38.80
Project Geologist	$31.35		$32.43	$32.43
Lab Technician	$29.75		$30.78	$30.78
Geotechnical Engineer	$48.00		$49.66	$49.66
Field Secretary	$28.50		$29.48	$29.48
			$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
			$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. DATE

PSB

PRIME/SUPPLEMENT

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	9	326.35	750.60	39.96	120.75				1,237.65
	Layout	26	957.78	2,202.89	119.88	354.38				3,634.93
	Field Work	36	1,541.57	3,545.62	709.72	570.38	250.00	8,400.00		15,017.29
	Lab Testing	32	984.88	2,265.24	80.00	364.41				3,694.53
	Engineering	9	446.92	1,027.92	100.00	165.36				1,740.21
	Report	20	693.97	1,596.13	70.00	256.77				2,616.87

$27,941.48
(DLS)

PREPARED BY THE AGREEMENTS UNIT

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DF-824-039
REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Chicago Testing Laboratory, Inc.
PSB
PRIME/SUPPLEMENT

DATE 08/22/16

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.	Wgt Avg
Project Manager	32.43	23	16.43%	5.33	3	33.33%	10.81	8	30.77%	9.98	8	22.22%	7.21						
Materials Tester II	38.80	36	25.71%	9.98				18	69.23%	26.86	18	50.00%	19.40						
Project Geologist	32.43	26	18.57%	6.02	4	44.44%	14.41				18	50.00%	16.22						
Lab Technician	30.78	32	22.86%	7.03										32	100.00%	30.78			
Geotechnical Engineer	49.66	15	10.71%	5.32	2	22.22%	11.04										9	100.00%	49.6
Field Secretary	29.48	8	5.71%	1.68															
		0																	
		0																	
		0																	
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TOTALS		140	100%	$35.37	9	100.00%	$36.26	26	100%	$36.84	36	122%	$42.82	32	100%	$30.78	9	100%	$49.6

DF-824-039
REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Chicago Testing Laboratory, Inc.
PSB
PRIME/SUPPLEMENT

DATE 08/22/16

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	32.43	4	20.00%	6.49															
Materials Tester II	38.80																		
Project Geologist	32.43	4	20.00%	6.49															
Lab Technician	30.78																		
Geotechnical Engine	49.66	4	20.00%	9.93															
Field Secretary	29.48	8	40.00%	11.79															
TOTALS		20	100%	$34.70	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

PREPARED BY THE AGREEMENTS UNIT

Cedar Lake Road Realignment - Nippersink Road to Hart Road
Lake County, IL
CTL Proposal EG12003 R2

Chicago Testing Laboratory, Inc.
30 W 114 Butterfield Road
Warrenville, IL 60031

Breakdown of Estimated ***In-House Direct Costs***

8/22/2016

Item	Task Description	Unit Cost	Units	Rate
Planning	Site reconnaissance necessary for planning/ drill rig access etc...			
	-Daily Mileage (per vehicle)	$0.555	72	$39.96
	Total Daily Cost (per vehicle)			$39.96
	Total Vehicle days		1	
	Total Planning Cost			**$39.96** ←
Layout	Layout boring and core locations Coordinate Utility Location/ Joint Meet			
	-Daily Mileage (per vehicle)	$0.555	72	$39.96
	Total Daily Cost (per vehicle)			$39.96
	Total Vehicle days		3	
	Total Layout Cost			**$119.88** ←
Field Work	Drilling & Traffic Control Personnel			
	-Daily Mileage (per vehicle)	$0.555	72	$39.96
	Total Daily Cost (per vehicle)			$39.96
	Total Vehicle days		7	
	Subtotal cost (Drilling)			**$279.72**
	Pavement Cores			
	-Core Equipment (per day)	$ 250.00	1	$ 250.00
	Backfill Boring and Pavement Core holes			
	-Bentonite pellets (per bucket)	$ 25.00	0	$0.00
	-Patch (pkg - Keyhole method))	$ 60.00	3	$180.00
	Subtotal cost (Pavement Cores)			**$430.00**
	Total cost			**$709.72** ←
Lab Testing	Miscellaneous Lab Supplies			
	-Supplies (lump sum)	$80.00	1	$80.00
	Total Lab Testing Cost			**$80.00** ←
Engineering	Miscellaneous Supplies/Drafting			
	-Supplies (lump sum)	$100.00	1	$100.00
	Total Engineering Cost			**$100.00** ←
Report	Miscellaneous Office Supplies/Reporting			
	-Supplies (lump sum)	$70.00	1	$70.00
	Total Report Cost			**$70.00** ←

(prepared for estimating purposes only)
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Chicago Testing Laboratory, Inc.
30 W 114 Butterfield Road
Warrenville, IL 60031

Breakdown of Estimated ***Outside Direct Costs***

8/22/2016

Item	Task Description	Unit Cost	Units	Rate
Field Work				
	-Arrow Board/Sign Rental (per day)	$ 250.00	1	$250.00
	Total Outside Direct Costs			**$250.00** ←

Breakdown of Estimated ***Cost of Services By Others***

Item	Task Description	Unit Cost	Units	Rate
Field Work	Drill Rig Mobilization			
	-Mobilization (Lump Sum)	$ 600.00	1	$600.00
	Drilling & Sampling (per rig hour)			
	-(Includes drill crew of 2 operators)	$ 260.00	30	$7,800.00
	Total Cost of Services By Others			**$8,400.00** ←

EXHIBIT “C”

LCDOT Survey Procedures

DESIGN SURVEY PROCEDURES (Revised 12/4/14)

HORIZONTAL ALIGNMENT

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

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

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

ALIGNMENT & TIE SHEET

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

VERTICAL ALIGNMENT

The North American Vertical Datum of 1988 (NAVD 88) shall be used for vertical control. Lake County Mapping Benchmarks are available on-line (http://gis.lakeco.org/maps/). NAVD88 benchmarks are available on-line from the National Geodetic Survey. LCDOT's Land Surveyor may also be contacted for benchmarks that may be in the area. The primary benchmarks and site benchmarks shall be listed and described on the Alignment & Tie Sheet. The location of the site

benchmarks shall also be shown on the plan sheets with a symbol. Site benchmarks are to be located at less than 1000-foot intervals with a minimum of two (2) on each project.

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

TOPOGRAPHY

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

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

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

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

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

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

RAILROAD INSURANCE

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

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

DELIVERABLES

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

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

III. Point Information:

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

LakeCounty
Division of Transportation

PLAT OF HIGHWAYS & LEGAL DESCRIPTION CHECKLIST

REVISED 5/29/2015

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

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

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

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

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

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

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

35. Label the project's beginning and ending stations

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

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

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

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

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

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

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

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

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

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

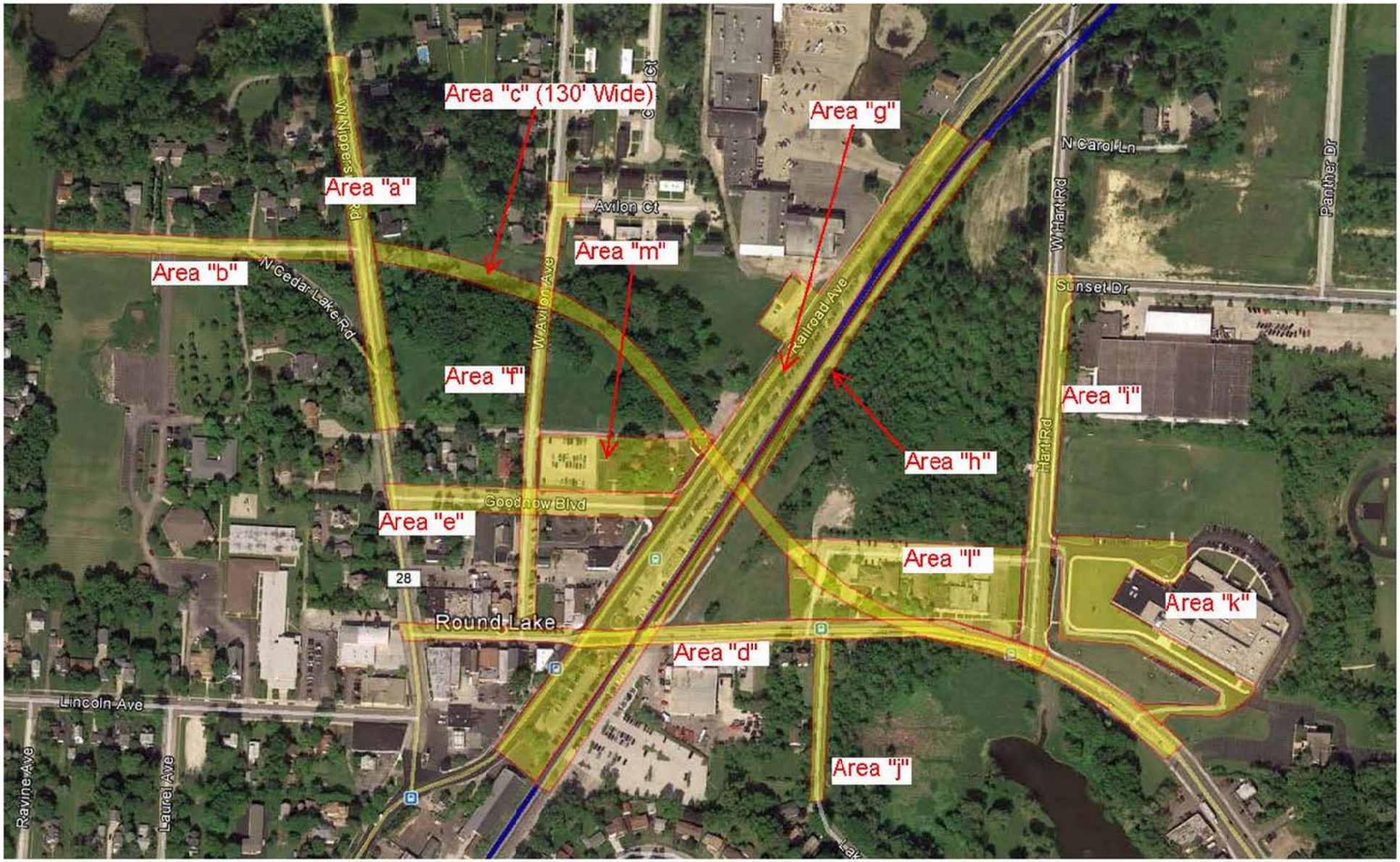
Items 43 and 44 shall be completed after initial approval.

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

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

EXHIBIT “D”

Projected Survey/Project Limits



Limits Exhibit (5-20-2016)