


|  |   |   |  |   |
|--|---|---|--|---|
| Municipality                                       | <b>L<br/>O<br/>C<br/>A<br/>L<br/><br/>A<br/>G<br/>E<br/>N<br/>C<br/>Y</b> |  <b>Illinois Department of Transportation</b> | <b>C<br/>O<br/>N<br/>S<br/>U<br/>L<br/>T<br/>A<br/>N<br/>T</b> | Name<br>TranSystems                           |
| Township   |   |   |  | Address<br>1051 Perimeter Drive<br>Suite 1025 |
| County<br>Lake County – Division of Transportation |   | Preliminary Engineering Services Agreement<br>For<br>Non-Motor Fuel Tax Funds   |  | City<br>Schaumburg                            |
| Section<br>00-00083-07-RS                          |   |   |  | State<br>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 Old McHenry Road

Route CH32-V77 Length 0.76 Mi. 4000.00 FT (Structure No. \_\_\_\_\_ )

Termini at Robert Parker Coffin Road

**Description:**

Old McHenry Road at Robert Parker Coffin Road - Phase 1 Preliminary Engineering through downtown Long Grove.

**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  
Under \$50,000

Percentage Fees

(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. Travelling 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.

**The Total Not-to-Exceed Contract Amount shall be \$589861.76**

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 \_\_\_ 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 \_\_\_ 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

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

Executed by the ENGINEER:

TransSystems

Engineering Firm

1051 Perimeter Drive Suite 1025

Street Address

Schaumburg IL

City, State

ATTEST:

By \_\_\_\_\_

By \_\_\_\_\_

Title Assistant Vice President

Title Vice President

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

**EXHIBIT A**

**SCOPE OF SERVICES**

## EXHIBIT A - PROJECT SCOPE OF SERVICES

Old McHenry Road  
Downtown Long Grove  
Section No. 00-00083-07-RS

The project consists of a Federally Funded Phase 1 Preliminary Engineering for the reconstruction of Old McHenry Road through downtown Long Grove including a roundabout or traffic signal at the existing four-way stop controlled Robert Parker Coffin Road intersection. The roadway improvements were detailed in the LCDOT Project Scoping Report dated October 1, 2002. The scoping report detailed reconstruction limits from Station 12+00 to Station 35+00. This scope includes survey from Illinois Route 53 (Station 0+00) to Station 40+00. The roundabout intersection was initially studied by the Village of Long Grove. A review of the roundabout geometrics determined concept geometry for the intersection. A traffic signal has not been previously studied.

The scope of work consists of coordination, survey, environmental studies, drainage studies, traffic studies, geotechnical studies, design studies, aesthetic studies, public involvement, project development report, and plats. Structural studies, environmental permitting, and contract plans are not included in the scope of work as they will be included in the future Phase 2 Design Engineering scope of work.

### 1. Coordination

- a. Meet and coordinate with LCDOT (12 meetings anticipated).
- b. Meet and coordinate with IDOT (three meetings anticipated).
- c. Attend FHWA/IDOT coordination meetings (three meetings anticipated).
- d. Meet and coordinate with the Lake County Stormwater Management Commission (two meetings anticipated).
- e. Meet and coordinate with the Village of Long Grove (six meetings anticipated). The Village may invite the business advisory group to attend in conjunction with the village meetings.
- f. Coordinate with utility companies regarding utility locations
  - i. Determine which utilities and facilities are present in the project area.
  - ii. Secure preliminary utility location information from utilities.
  - iii. Begin utility coordination process (two meetings anticipated).
- g. Submit State and Sub-State (CMAP) Clearinghouse review forms.
- h. LCDOT will submit Job Number form to IDOT Bureau of Local Roads and Streets.

### 2. Survey

- a. Conduct full topographic survey according to attached LCDOT Survey Procedures. Limits of survey on Old McHenry Road are from north of Illinois Route 53 intersection to 1900 feet northwest of Robert Parker Coffin Road for a total length of 4000 feet. Limits of survey on Robert Parker Coffin Road are 350 feet on either side of Old McHenry Road for a total length of 700 feet.
  - i. Establish horizontal and vertical controls.
  - ii. Establish existing centerline alignment with control points and four point ties.
  - iii. Stake existing centerline at 100-foot stations.
  - iv. Full topography. Topography will extend to 10 feet beyond existing right-of-way and include building corners, entrances, and walks to the entrances within the downtown segment.
  - v. Cross sections at 50-foot increments. Cross section limits will extend to 10 feet beyond existing right-of-way and 30 feet at entrance walks and drives.
  - vi. Drainage survey.
  - vii. Tree survey.
  - viii. Sign survey.
  - ix. Soil boring locations.
- b. Proposed centerline staking will be included in Phase 2 scope of work.

## EXHIBIT A - PROJECT SCOPE OF SERVICES

Old McHenry Road

Downtown Long Grove

Section No. 00-00083-07-RS

- c. Download topographic survey and cross sections into Geopak and MicroStation for use in design. Plot survey at 1"=20' plan, 1"=2' vertical profile, 1"=5' horizontal cross section, and 1"=5' vertical cross section.

### 3. Environmental Studies

- a. Wetland delineation for the project is not included. According to the Lake County Wetland Inventory, the nearest wetland is more than 200 feet from the existing right-of-way.
- b. Prepare Special Waste Screening.
- c. If Special Waste Screening recommends a Preliminary Environmental Site Assessment (PESA) be performed, prepare PESA report for risk assessment of special waste. If required, PSI will be included in Phase 2 scope of work.
- d. Conduct tree survey.
  - i. Document the species, health, structure, origin, and location of all trees greater than or equal to 4 inches DBH (diameter at breast height or 4.5 feet above ground surface) and all landscaped/ornamental trees or trees planted for environmental mitigation and habitat preservation/enhancement regardless of DBH.
  - ii. Trees will not be tagged with metal tags and nails. Trees will be marked with high visibility ribbon to be removed once survey is complete.
  - iii. Prepare tree survey memo.
- e. Perform a full photographic survey of the project area.
- f. Prepare Environmental Survey Request Form and Exhibits and coordinate through IDOT to obtain biological and cultural resources sign-off for the project.
  - i. The National Register of Historic Places does not contain any properties within the Village of Long Grove.
  - ii. The National Historic Landmarks in Illinois does not contain any properties within the Village of Long Grove.
  - iii. Submit photographs of all buildings within the project limits for cultural resource sign-off.
  - iv. It is anticipated that some buildings will require additional documentation on impacts to the property. Submit plan and profile at each building location for determination of no adverse impacts.
  - v. It is anticipated that no historical impacts will be encountered as a result of the cultural resource results. Section 106 and 4(f) coordination for historical impacts is not anticipated.
  - vi. The Village notes a Long Grove Historic District. Coordinate with Village on locations of local historical significance. It is anticipated that no historical research will be required.
- g. It is anticipated that no proposed right-of-way is needed from Buffalo Creek Park. It is anticipated that without impacts to Buffalo Creek Park that Section 4(f) coordination is not required.
- h. A noise analysis will not be conducted. The proposed improvements do not include additional travel lanes or significant widening of the roadway.
- i. LCSMC Watershed Development Ordinance (WDO) Permit
  - i. Modifying a watercourse draining 20 or more acres is not anticipated.
  - ii. Compensatory storage fill in floodplain is not anticipated.
  - iii. Detention for added impervious area greater than 1.5 acres is not anticipated.
  - iv. Wetland mitigation is not anticipated.
  - v. Identify water quality requirements and location for stormwater treatment structures.
- j. Identify permit needs required in Phase 2. The following permits may be included in the Phase 2 scope of work:
  - i. ACOE Section 404 permit / IEPA 401 certification is not anticipated.

## EXHIBIT A - PROJECT SCOPE OF SERVICES

Old McHenry Road

Downtown Long Grove

Section No. 00-00083-07-RS

- ii. IDNR OWR Joint permit is not anticipated.
- iii. Agricultural Resources permit is not anticipated.
- iv. IDOT Borrow / Use Areas permit.
- v. NPDES Stormwater permit.
- k. All associated permit fees will be paid directly by LCDOT.
- l. Review impacts on adjacent properties and identify alternative designs to minimize impacts.
- m. Summarize environmental study and present finding to IDOT for Categorical Exclusion.
- n. Prepare a COSIM air quality pre-screen for one receptor site. After pre-screen results, prepare COSIM worksheet for one receptor site.

### 4. Drainage Studies

- a. Identify existing drainage systems, drainage boundaries, existing drainage problems, and outfall constraints.
- b. Prepare a General Location Drainage Map.
- c. Investigate identified drainage problems.
- d. No regulatory or depressional floodplains are anticipated.
- e. No modification of water courses draining greater than 20 or more acres are anticipated.
- f. Additional impervious areas are anticipated to be below the threshold for LCSMC detention requirements. Minimal detention in pipe may be required to not increase the runoff at each outfall.
  - i. Calculate added impervious and determine minimal detention required to maintain existing outflows.
- g. Preliminary water quality
  - i. Determine if water quality ditches can be used or if stormwater treatment structures are required.
  - ii. Identify right-of-way necessary to meet water quality requirements.
- h. Preliminary drainage concept design
  - i. Identify preferred drainage alternative of storm sewers or ditches.
  - ii. Develop preliminary layout and sizing for the proposed storm sewers and /or ditches.
  - iii. Identify right-of-way necessary to meet preliminary drainage layout.

### 5. Traffic Studies

- a. Obtain traffic count data and existing ADT data from LCDOT.
- b. Conduct manual peak hour (two hour AM and two hour PM) traffic counts at the intersection of Old McHenry Road at Robert Parker Coffin Road.
- c. Conduct tube counts for ADT along Old McHenry Road and Robert Parker Coffin Road.
- d. Prepare projected 2030 traffic volumes based on a review of the existing traffic data, traffic counts, and projected traffic growth.
- e. Obtain concurrence from LCDOT and CMAP on projected 2030 ADT.
- f. Determine projected peak hour traffic at the intersection of Old McHenry Road at Robert Parker Coffin Road.
- g. Conduct traffic signal warrant analysis.
- h. Conduct capacity analysis for the intersection of Old McHenry Road at Robert Parker Coffin Road. It is anticipated that a capacity analysis will be required for each alternative for IDOT / FHWA approval.
  - i. Stop controlled intersection
  - ii. Roundabout intersection
  - iii. Signalized intersection



## EXHIBIT A - PROJECT SCOPE OF SERVICES

Old McHenry Road

Downtown Long Grove

Section No. 00-00083-07-RS

- i. Prepare Intersection Design Study for two alternatives at the intersection of Old McHenry Road at Robert Parker Coffin Road.
  - i. Roundabout intersection
  - ii. Signalized intersection
- j. Complete VISSIM traffic simulation for use at the public meeting.
  - i. Simulate stop controlled intersection.
  - ii. Simulate roundabout intersection.
  - iii. Simulate signalized intersection.
  - iv. Prepare simulation video for use at the public meeting.
- k. Obtain crash data from LCDOT.
- l. Conduct crash analysis for the most recent three-year available data for Old McHenry Road and the intersection of Old McHenry Road at Robert Parker Coffin Road.
- m. Preliminary Maintenance of Traffic
  - i. Analyze the alternatives of constructing under traffic and the need for a detour along Old McHenry Road and Robert Parker Coffin Road.
  - ii. Determine construction time constraints related to Downtown Long Grove.

### 6. Geotechnical Studies

- a. Meet and coordinate with LCDOT to discuss boring locations (1 meeting anticipated).
- b. Conduct pavement and soils investigations to identify pavement condition, soils stability, and subgrade conditions.
  - i. 4 pavement cores will be conducted. Three on Old McHenry Road and one on Robert Parker Coffin Road.
  - ii. Soil borings will be conducted at 300-foot spacing, seven along Old McHenry Road and two along Robert Parker Coffin Road.
  - iii. If required, structure borings for retaining walls will be included in the Phase 2 scope of work.
- c. Prepare a soils investigation report with soil borings and logs with recommendations meeting IDOT and LCDOT guidelines.
- d. Meet and coordinate with LCDOT to discuss soils report recommendations (1 meeting anticipated).
- e. Prepare a preliminary pavement design based on soils report recommendations and LCDOT standards to determine an estimated thickness of the proposed pavement.

### 7. Design Studies

- a. Obtain existing roadway plans, existing plat of survey, and right-of-way data from LCDOT.
- b. Determine existing centerline location based on LCDOT data and 1942 plat of survey.
- c. Determine existing right-of-way based on LCDOT data, 1942 plat of survey, and Lake County tax parcel maps.
- d. Review existing roadway geometrics to determine needed improvements.
- e. Based on the scoping report, LCDOT standards, and IDOT BLRS standards, determine design criteria for the typical section and horizontal and vertical geometrics.
- f. Prepare proposed typical section and submit to LCDOT for approval.
- g. Geometrics at roundabout intersection
  - i. Use proposed concept roundabout geometrics developed in the review of the Village feasibility study.
  - ii. Refine proposed roundabout geometrics based on existing topographic survey.

## EXHIBIT A - PROJECT SCOPE OF SERVICES

Old McHenry Road

Downtown Long Grove

Section No. 00-00083-07-RS

- iii. Determine proposed roadway alignments on Old McHenry Road and Robert Parker Coffin Road to meet preferred geometrics and proposed Old McHenry Road geometrics for roundabout intersection.
  - iv. Prepare a preliminary proposed roadway profile for roundabout intersection to meet design speed and drainage requirements.
  - v. Cross Section Analysis for roundabout intersection.
    1. Prepare proposed cross sections for preliminary alignment and profile for roundabout intersection.
    2. Identify right-of-way needs and alternatives for roundabout intersection to minimize impacts, including sidewalk access.
  - h. Geometrics at signalized intersection
    - i. Develop proposed concept geometrics for signalized intersection.
    - ii. Prepare proposed geometrics for signalized intersection based on existing topographic survey.
    - iii. Determine proposed roadway alignments on Old McHenry Road and Robert Parker Coffin Road to meet preferred geometrics and proposed Old McHenry Road geometrics for signalized intersection.
    - iv. Prepare a preliminary proposed roadway profile for signalized intersection to meet design speed and drainage requirements.
    - v. Cross Section Analysis for signalized intersection.
      1. Prepare proposed cross sections for preliminary alignment and profile for signalized intersection.
      2. Identify right-of-way needs and alternatives for signalized intersection to minimize impacts, including sidewalk access.
  - i. Determine preferred intersection alternative after coordination with the County, Village, and IDOT.
8. Aesthetic Studies
- a. Determine sidewalk needs.
  - b. Preliminary Aesthetics based on discussions with Village.
    - i. Identify preliminary roadway aesthetic concepts.
    - ii. Identify preliminary landscaping concepts.
    - iii. Identify preliminary streetscape concepts based on existing Village streetscape concepts.
    - iv. Identify preliminary lighting requirements based on County and Village standards.
9. Public Involvement
- a. Detail and coordinate the following Public Involvement Strategy:
    - i. Public Information Meeting
    - ii. Project Newsletter
    - iii. Community Advisory Group (CAG) Meeting - Introduction, Existing Conditions, and Problem Identification
    - iv. CAG Meeting - Design Criteria and Alternative Identification
    - v. Project Newsletter
    - vi. CAG Meeting - Alternative Analysis
    - vii. Public Meeting
    - viii. CAG Meeting - Preferred Alternative
    - ix. Public Hearing
    - x. Project Newsletter
    - xi. Project website is not included in the scope of work.

## EXHIBIT A - PROJECT SCOPE OF SERVICES

Old McHenry Road

Downtown Long Grove

Section No. 00-00083-07-RS

- b. Public Information Meeting Open House
    - i. Conduct one Dry-Run Public Meeting with LCDOT.
    - ii. Attend one Public Information Meeting to introduce project.
    - iii. LCDOT to coordinate site use near Downtown Long Grove.
    - iv. Prepare and publish public meeting notice.
    - v. Prepare and distribute public meeting invitation.
    - vi. Prepare public meeting brochure, sign-in sheets, and comment forms.
    - vii. Prepare public meeting exhibits.
    - viii. Prepare educational materials on project.
    - ix. Collect, compile, and respond to public meeting comments.
    - x. Determine members of CAG.
  - c. Public Meeting Open House
    - i. Conduct one Dry-Run Public Meeting with LCDOT.
    - ii. Attend one Public Meeting to present preferred intersection alternatives.
    - iii. LCDOT to coordinate site use near Downtown Long Grove.
    - iv. Prepare and publish public meeting notice.
    - v. Prepare and distribute public meeting invitation.
    - vi. Prepare public meeting brochure, sign-in sheets, and comment forms.
    - vii. Prepare public meeting exhibits.
    - viii. Prepare educational materials and video on alternatives.
    - ix. Collect, compile, and respond to public meeting comments.
  - d. Public Hearing Open House
    - i. Conduct one Dry-Run Public Hearing with LCDOT.
    - ii. Attend one Public Hearing to present preferred improvement.
    - iii. LCDOT to coordinate site use near Downtown Long Grove.
    - iv. Prepare and publish public meeting notice.
    - v. Prepare and distribute public meeting invitation.
    - vi. Prepare public meeting brochure, sign-in sheets, and comment forms.
    - vii. Prepare public meeting exhibits.
    - viii. Prepare educational materials and video on alternatives.
    - ix. Collect, compile, and respond to public meeting comments.
  - e. CAG Meetings (4 meetings anticipated)
    - i. Conduct Dry-Run CAG Meeting with LCDOT.
    - ii. Attend CAG Meeting.
    - iii. Village to coordinate site use near Downtown Long Grove.
    - iv. Prepare and distribute CAG Meeting invitation.
    - v. Prepare CAG Meeting handouts and sign-in sheets.
    - vi. Prepare CAG Meeting exhibits.
    - vii. Prepare CAG Meeting minutes.
  - f. Project Newsletters (3 newsletter anticipated)
  - g. Additional individual property / business owner meetings may be included in Phase 2 scope of work.
10. Project Development Report
- a. Prepare Preferred Improvement Plan.
  - b. Prepare Existing Drainage Plan.
  - c. Prepare Proposed Drainage Plan
    - i. Prepare preliminary drainage plans.

**EXHIBIT A - PROJECT SCOPE OF SERVICES**

Old McHenry Road

Downtown Long Grove

Section No. 00-00083-07-RS

- ii. Identify potential utility conflicts.
- iii. Prepare preliminary water quality concept.
- d. Prepare preliminary typical sections.
- e. Prepare preliminary cost estimate.
- f. Prepare and submit Draft Project Development Report in the format of a Categorical Exclusion 2 (BLR 22110) summarizing the preliminary engineering efforts and decisions.
- g. Based on comments from IDOT and LCDOT, prepare and submit Final Project Development Report for Design Approval.

11. Plats

- a. Determine final right-of-way and easement requirements based on design studies. It is anticipated that four parcels will require right-of-way.
- b. Order title reports for four anticipated parcels.
- c. Stake proposed right-of-way.
- d. Prepare individual Plat and Legal Descriptions for four anticipated parcels.
- e. Coordinate with the County on the acquisition of the right-of-way and easements. The County will be responsible for the appraisals, review appraisals, negotiations, and agreements.

**EXHIBIT B**

**COST ESTIMATE OF CONSULTANT SERVICES**



**Payroll Escalation Table  
Fixed Raises**

FIRM NAME TransSystems  
PRIME/SUPPLEMENT

DATE 10/29/10  
PTB NO. \_\_\_\_\_

CONTRACT TERM 24 MONTHS  
START DATE 1/1/2011  
RAISE DATE 4/1/2011

OVERHEAD RATE 162.31%  
COMPLEXITY FACTOR 0  
% OF RAISE 3.00%

**ESCALATION PER YEAR**

|                     |    |    |        |
|---------------------|----|----|--------|
| 1/1/2011 - 4/1/2011 | 3  | 24 | 12.50% |
| 4/2/2011 - 4/1/2012 | 12 | 24 | 51.50% |
| 4/2/2012 - 1/1/2013 | 9  | 24 | 39.78% |
|                     |    |    | 3.78%  |

= 1.0378  
= 12.50%

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











# Average Hourly Project Rates

Route Old McHenry Road  
 Location 00-00083-07-RS  
 County Lake  
 Job No. at Robert Parker Coffin Road  
 Bid Item

Consultant TransSystems

Date 10/29/10

Sheet 2 OF 1

| Payroll Classification           | Avg Hourly Rates | 6-Geotechnical Studies |         | 7-Design Studies |       |         | 8-Aesthetic Studies |       |         | 9-Public Involvement |       |         | 10-Project Report |       |         | 11-Plats |       |         |         |
|----------------------------------|------------------|------------------------|---------|------------------|-------|---------|---------------------|-------|---------|----------------------|-------|---------|-------------------|-------|---------|----------|-------|---------|---------|
|                                  |                  | Hours                  | % Part. | Wgtd Avg         | Hours | % Part. | Wgtd Avg            | Hours | % Part. | Wgtd Avg             | Hours | % Part. | Wgtd Avg          | Hours | % Part. | Wgtd Avg | Hours | % Part. |         |
| Senior Project Manager (Highway) | 70.00            | 12                     | 27.27%  | 17.12            | 64    | 10.13%  | 6.36                | 12    | 9.09%   | 5.71                 | 56    | 3.74%   | 2.62              |       |         |          |       |         |         |
| Project Manager (Highway)        | 62.79            |                        |         |                  |       |         |                     |       |         |                      | 150   | 10.03%  | 6.30              | 48    | 10.08%  | 6.33     | 4     | 12.50%  | 7.85    |
| Project Engineer (Highway)       | 52.94            |                        |         |                  |       |         |                     |       |         |                      | 56    | 3.74%   | 1.98              | 48    | 10.08%  | 5.34     |       |         |         |
| Design Engineer II (Highway)     | 36.72            | 10                     | 22.73%  | 8.35             | 188   | 29.75%  | 10.92               | 40    | 30.30%  | 11.13                | 360   | 24.06%  | 8.84              | 80    | 16.81%  | 6.17     | 8     | 25.00%  | 9.18    |
| Design Engineer I (Highway)      | 31.35            | 22                     | 50.00%  | 15.68            | 380   | 60.13%  | 18.85               | 80    | 60.61%  | 19.00                | 722   | 48.26%  | 15.13             | 160   | 33.61%  | 10.54    | 20    | 62.50%  | 19.60   |
| Inventory Crew Chief             | 32.93            |                        |         |                  |       |         |                     |       |         |                      |       |         |                   |       |         |          |       |         |         |
| ADD Technician III               | 30.89            |                        |         |                  |       |         |                     |       |         |                      | 132   | 8.82%   | 2.73              | 140   | 29.41%  | 9.08     |       |         |         |
| ADD Technician II                | 27.73            |                        |         |                  |       |         |                     |       |         |                      | 20    | 1.34%   | 0.26              |       |         |          |       |         |         |
| ADD Technician I                 | 19.35            |                        |         |                  |       |         |                     |       |         |                      |       |         |                   |       |         |          |       |         |         |
| Field Scientist                  | 39.11            |                        |         |                  |       |         |                     |       |         |                      |       |         |                   |       |         |          |       |         |         |
| Biologist                        | 31.49            |                        |         |                  |       |         |                     |       |         |                      |       |         |                   |       |         |          |       |         |         |
| <b>TOTALS</b>                    |                  | 44                     | 100%    | \$41.15          | 632   | 100%    | \$36.13             | 132   | 100%    | \$35.84              | 1496  | 100%    | \$37.85           | 476   | 100%    | \$37.46  | 32    | 100%    | \$36.62 |

**EXHIBIT C-1**

**SUBCONSULTANT SERVICES**  
**Cardno ENTRIX**



October 29, 2010

Jeffrey R. Hall, P.E.  
Associate  
Assistant Vice President  
TranSystems  
1051 Perimeter Drive, Suite 1025  
Schaumburg, IL 60173-5058

Cardno ENTRIX

1000 Hart Road  
Suite 130  
Barrington, IL 60010  
USA

Phone 847 277 2850  
Toll-free 800 368 7511  
Fax 847 381 6679  
[www.cardno.com](http://www.cardno.com)

[www.cardnoentrix.com](http://www.cardnoentrix.com)

**Subject: Proposal to Provide Environmental Engineering Services  
Old McHenry Road Reconstruction, IL Route 53 to Twin Knolls Drive  
Long Grove, Lake County, Illinois**

Dear Mr. Hall:

Cardno ENTRIX is pleased to present TranSystems with this proposal to perform environmental engineering services for the Phase I Preliminary Engineering of the Old McHenry Road Reconstruction, IL Route 53 to Twin Knolls Drive Project (Old McHenry Road Project) located in the Village of Long Grove, Lake County, Illinois. The proposed Cardno ENTRIX services presented herein include the preparation of a Special Waste Screening (SWS) and a Preliminary Environmental Site Assessment (PESA) in coordination with the Phase I transportation engineering related services. Both the SWS and the PESA are proposed to be completed in accordance with the Illinois Department of Transportation (IDOT) requirements. Cardno ENTRIX presents this proposal in the following sections: project description, scope of work, project team, project schedule, project costs, limitations and reliability, and proposal acceptance.

## PROJECT DESCRIPTION

Cardno ENTRIX understands that the Lake County Division of Transportation (LCDOT) is soliciting proposals for the Old McHenry Road Project, which is a federally funded Phase 1 project to be processed through IDOT Local Roads. Details of the Old McHenry Road Project are presented in the LCDOT Project Scoping Report dated October 1, 2010, which includes the reconstruction of Old McHenry Road through downtown Long Grove and reconstruction of the Old McHenry Road and Robert Parker Coffin Road intersection. The limits of the Old McHenry Road Project presented in this proposal consist of 4,000 linear feet of Old McHenry Road from IL Route 53 (Station 0+00) to Twin Knolls Drive (Station 40+00).

The Phase I Old McHenry Road Project scope of work consists of coordination, survey, environmental studies, drainage studies, traffic studies, geotechnical studies, design studies, aesthetic studies, public involvement, project development report, and plats. Cardno ENTRIX understands that TranSystems is seeking support for the required Phase I environmental studies, including an SWS and a PESA for sites within the subject Project Corridor. This Project Corridor includes all areas within the proposed Old McHenry Road right-of-way (ROW) between IL Route 53 and Twin Knolls Drive.

## **SCOPE OF WORK**

TranSystems has requested that Cardno ENTRIX present the environmental studies support scope of work in two tasks: Task 1 - Special Waste Screening (SWS); and Task 2 – Preliminary Environmental Site Assessment (PESA) (Optional). Based on the Special Waste Procedures for Local Highway Improvements criteria outlined by IDOT Bureau of Local Roads and Streets (BLR&S), an SWS must be conducted to determine the environmental condition of all sites within and adjacent to the Project Corridor prior to construction. Findings presented in the subject SWS are intended to identify the need for a subsequent PESA as part of the Phase I process. If a PESA is necessary and authorized, Cardno-ENTRIX will complete the PESA process in accordance with BLR&S guidance, as well as the All Appropriate Inquiries (AAI) guidance and the appropriate portions of the Illinois State Geological Survey and IDOT supported "A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects".

### **Task 1 - Special Waste Screening (SWS)**

Cardno ENTRIX proposes to conduct an SWS as part of Task 1. The purpose of the SWS is to determine the potential involvement of the Old McHenry Road Project with special waste and other regulated substances, and to determine if further action is necessary. The results of the SWS will be used to complete the Environmental Survey Request (ESR) form and will determine if a subsequent PESA is necessary.

The procedures proposed to conduct the SWS follow the methodology outlined by the BLR&S, and include a database review, land use determination, project involvement, and known current conditions. Special waste databases will be reviewed for special wastes and regulated substances within the Project Corridor and the appropriate BLR&S boundaries. The special waste databases that will be accessed as part of this task include: the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS); the Leaking Underground Storage Tank (LUST) Incident Tracking; the Underground Storage Tank (UST); and the Resource Conservation and Recovery Act (RCRA) Information. Potential special waste sites identified in the database review, in addition to information collected regarding land use, project involvement, and known current conditions, will be identified as areas of concern (AOC) and will determine if a PESA will be required. If the SWS findings identify no AOCs within the Project Corridor and the BLR&S boundaries, Cardno ENTRIX will propose a No Further Assessment for the Old McHenry Road Project.

### **Task 2: Preliminary Environmental Site Assessment (PESA) (Optional)**

If the SWS identifies AOCs within the Project Corridor and the specified BLR&S boundaries, Cardno ENTRIX proposes to conduct a PESA as part of Task 2. This PESA consists of four (4) work items that are necessary to identify recognized environmental conditions (RECs) and/or historical RECs. As part of the PESA, Cardno ENTRIX proposes to identify RECs that may exist from current or past uses of properties in or adjacent to the AOCs presented in the SWS. Cardno ENTRIX assumes that current owners of AOC properties will be available and cooperative in providing full disclosure about any known environmental matters/concerns about the AOCs or adjacent properties.

#### **Records Review**

As part of Task 2, Cardno ENTRIX first proposes to conduct a Records Review. This review is intended to collect detailed information relevant to the AOCs and adjacent sites for the purpose of identifying recognized environmental conditions (RECs) and/or historical RECs in connection with the Project Corridor. Records will be obtained from reasonably ascertainable and standard sources, including:

- Federal Agency databases (NPL Site List, RCRA CORRACTS, and non-CORRACTS TSD Lists);
- State Agency databases (State-sponsored Priority Sites List, Registered USTs, and Leaking USTs Lists);

- Local Agency records (landfill and solid waste disposal sites, public wells, registered USTs, zoning maps);
- Aerial photographs;
- Fire insurance maps;
- Records of Environmental Liens; and
- Title Records (if warranted).

### Site Reconnaissance

Cardno ENTRIX proposes to conduct a Site Reconnaissance as part of Task 2. The Site Reconnaissance will include a complete inspection of the AOCs and the site features. Although the site inspection will focus on the AOC sites identified in the SWS, adjacent properties and the surrounding area will be assessed with respect to RECs and/or historical RECs that could possibly affect the AOC sites. Photographic documentation of the AOC sites and any observed RECs will be provided and included in the PESA Report. Cardno ENTRIX assumes that either the owner or an owner's representative knowledgeable of the history and workings of the AOC sites and structures will accompany Cardno ENTRIX to the sites for the Site Reconnaissance.

### Interviews

Cardno ENTRIX proposes to conduct Interviews as part of Task 2. These Interviews will be conducted with owners of the AOC sites identified in the SWS to confirm or refute the information obtained from the Records Review. At a minimum, a key manager or individual with good knowledge of the uses and physical characteristics of the property should be interviewed. Owners or occupants may provide information that would be identified as a REC that is not available in the records (e.g. historical "unrecorded" waste disposal practices conducted on-site or at neighboring facilities). Cardno ENTRIX assumes that the owner or owner's representative will satisfy this objective.

Cardno ENTRIX will work with the designated individual(s) to coordinate the personal interviews while on-site for the Site Reconnaissance component of this task. If personal interviews are not possible, Cardno ENTRIX will conduct the interview over the phone or submit requests in writing. Regardless of the method used, the following information, if applicable, will be requested prior to the interview:

- Environmental Audit Reports;
- Environmental Site Assessment Reports;
- Environmental Permits;
- Local geological conditions;
- Current and historic waste disposal practices;
- Drinking water test results;
- Septic system maintenance records; and
- Any other applicable aspects or information.

Local government officials who are responsible for USTs and/or hazardous material storage and waste disposal will be contacted. The questions asked of the local officials are aimed at gaining a better insight into the current and past uses of the AOC sites and adjacent properties. Owners of properties not identified in the SWS will not be contacted under this scope of work.

### PESA Report

Cardno ENTRIX proposes to prepare a comprehensive PESA Report as the final work item under Task 2. This PESA Report will summarize the information obtained from the three (3) preceding work items of Task 2, disclose all information regarding RECs and historical RECs, and provide opinions and recommendations regarding the RECs and historical RECs. The PESA Report will contain all information gathered during the investigation and will designate all potential AOCs identified in the SWS with a PESA Risk Findings designation in accordance with the BLR&S methodology. Cardno ENTRIX will prepare and submit a draft PESA Report to TranSystems for review. Cardno ENTRIX will incorporate TranSystems' comments and submit a final PESA Report to TranSystems for use and distribution.

### **PROJECT TEAM**

Cardno ENTRIX proposes to manage this project out of the Barrington, Illinois office with personnel who have significant experience in conducting environmental site assessments and environmental sampling. Mr. Barry Stuedemann, P.E., PWS will serve as Project Manager and Mr. Brandon Kinter, P.E. will serve as Staff Engineer. Cardno ENTRIX has many qualified environmental professionals available to support this effort, including Cardno ERI staff, that will assist Mr. Stuedemann and Mr. Kinter in completing the proposed tasks outlined in this scope of work.

### **PROJECT SCHEDULE**

Cardno ENTRIX will proceed with the scope of work presented in this proposal immediately upon authorization from TranSystems. Cardno ENTRIX, however, will only proceed for the specific tasks authorized by TranSystems. The schedule to complete these tasks are influenced by responses to requests for information through the Freedom of Information Act (FOIA). Information requested through the FOIA process, however, is often not received within a reasonable time frame. If FOIA information is not available at the time when the report is scheduled for submittal, Cardno ENTRIX will contact TranSystems to coordinate an appropriate submittal level and date. Cardno ENTRIX anticipates that the SWS can be completed in approximately four to six weeks after authorization to proceed with Task 1. After the completion of the SWS and if necessary, Cardno ENTRIX anticipates that the PESA can be completed in approximately four to six weeks after authorization to proceed with Task 2.

### **PROJECT COSTS**

Cardno ENTRIX estimates the cost to complete **Task 1** and **Task 2** outlined in this proposal to be a maximum "not-to-exceed" fee of **\$3,723** and **\$4,800** respectively. An itemization of these costs is presented in Table 1, Cost Estimate for Consulting Services. Cardno ENTRIX will not proceed with any task without written authorization from TranSystems. Cardno ENTRIX will bill TranSystems on a time and material basis in accordance with an established Client Agreement between ENTRIX and TranSystems, and will not exceed the estimated costs presented in this proposal without written authorization from TranSystems.

### **LIMITATIONS AND RELIABILITY**

This proposal is provided at the request of TranSystems on behalf of the IDOT. Cardno ENTRIX will utilize methods and procedures consistent with good commercial or customary practices designed to conform to acceptable industry standards referenced in the IDOT Phase 1 SWS and PESA guidance materials, which reference ASTM E-1527-05 standards. Cardno ENTRIX understands this guidance to include reference to the adopted AAI Rule (40 CFR 312).

The Cardno ENTRIX SWS and PESA are limited to the information available at the time services are rendered. This limitation includes visual observations made on the day of inspection, review of readily available and relevant

Jeffrey R. Hall, P.E.  
TranSystems  
October 29, 2010



data/reports, and statements made and information provided by the client, his agents, land-owners or tenants of subject property and adjacent properties, outside parties, and regulatory agencies. An SWS and PESA are limited and non-exhaustive surveys that are intended to evaluate whether the readily available information about a property and/or adjacent properties indicates that the historic or current use of the site and/or adjacent sites: has resulted in releases or threatened releases of hazardous materials; or are potentially responsible for recognized environmental conditions which could negatively impact the value of the property and future liability and financial exposure of future property owners.

#### **PROPOSAL ACCEPTANCE**

Cardno ENTRIX appreciates this opportunity to present SWS and PESA services to TranSystems. To execute the services outlined in this proposal, please contact me at our office 847-277-2850 to begin the Client Agreement and Task Order process. The completion of these documents will indicate your acceptance of this proposal and will serve as our authorization to proceed. If you have any questions, please do not hesitate to contact me to discuss.

Sincerely,

A handwritten signature in black ink, appearing to read 'Baron H. Stuedemann', with a long horizontal flourish extending to the right.

Baron H. Stuedemann, P.E., PWS  
Senior Consultant / Wetlands Specialist  
for Cardno ENTRIX  
Direct Line: 847-277-2866  
Email: [baron.stuedemann@cardno.com](mailto:baron.stuedemann@cardno.com)



**TABLE 1**  
**Cost Estimate for Consulting Services**

**ENVIRONMENTAL ENGINEERING SERVICES**  
**OLD McHENRY ROAD RECONSTRUCTION, IL ROUTE 53 TO TWIN KNOLLS DRIVE**

Prepared for TranSystems  
 Prepared by Cardno ENTRIX

October 29, 2010

| OLD McHENRY ROAD PROJECT<br>ENVIRONMENTAL ENGINEERING SERVICES<br>WORK ITEM DESCRIPTION | PROJECT<br>MANAGER | STAFF<br>ENGINEER | ADMIN.<br>ASSISTANT | TOTAL<br>HOURS | TOTAL<br>LABOR<br>COSTS | TOTAL<br>DIRECT<br>COSTS* | NOT-TO-<br>EXCEED<br>COSTS |
|---|--------------------|-------------------|---------------------|----------------|-------------------------|---------------------------|----------------------------|
| Task 1 - Special Waste Screening (SWS)  | 4                  | 28                | 8                   | 40             | \$3,223                 | \$500                     | \$3,723                    |
| Task 2 - Preliminary Environmental Site Assessment (PESA)                               | 4                  | 36                | 8                   | 48             | \$3,800                 | \$1,000                   | \$4,800                    |
| <b>TOTAL:</b>   | <b>8</b>           | <b>64</b>         | <b>16</b>           | <b>88</b>      | <b>\$7,024</b>          | <b>\$1,500</b>            | <b>\$8,524</b>             |

\* EDR = \$700; Mileage = \$200; Deliveries = \$400; Copies = \$200

**EXHIBIT C-2**

**SUBCONSULTANT SERVICES**  
**Regina Webster & Associates**

# Scope of Work Proposal

October 28, 2010

Mr. Jeffrey Hall, PE  
TranSystems  
1051 Perimeter Drive, Suite 1025  
Schaumburg, IL 60173

Subject: Proposal, Data Collection for Long Grove, Illinois

Dear Mr. Hall:

Regina Webster & Associates (RWA) is pleased to submit this proposal for professional traffic engineering services for data collection at one location in Long Grove, Illinois.

## Proposed Scope of Work

RWA will collect 24-hour machine counts at the intersection of Old McHenry Road with Robert Parker Coffin Road located in Long Grove, Illinois.

The machines will be installed on a Tuesday or Wednesday and will record 24 hours of data by direction for each of the four legs of the intersection. Volumes and classification data will be provided by direction for each location. Three types of vehicles will be classified: 4-tire vehicles, Single Unit Vehicles, and Multi-Unit Vehicles.

Project deliverable is summary of the data in 15-minute intervals.

## Fee Proposal

RWA proposes to provide the services described above for a stipulated fee of \$1,400. The compensation includes labor and direct expenses.

Payment to RWA shall be made within 30 days after receipt of the invoice. This proposal shall be governed by and construed in accordance with the laws of the State of Illinois. Please indicate your acceptance of this proposal by signing the document in the space provided below, and then returning one copy for our files.



Regina Webster &  
Associates, Inc.  
8619 W. Bryn Mawr  
Avenue, Suite 602  
Chicago, Illinois 60631  
773 283-2600 phone  
773 283-2602 fax  
[www.RWAengineers.com](http://www.RWAengineers.com)

We appreciate the opportunity to present our services for this project. Should you have any questions or require any additional information, please do not hesitate to contact us.



Respectfully submitted,

**Regina Webster & Associates, Inc.**

Julian Gnatenco, P.E.  
Chief Engineer

## PROPOSAL FOR DATA COLLECTION, LONG GROVE, ILLINOIS

PROPOSAL ACCEPTED

---

NAME

---

TITLE

---

DATE

Regina Webster &  
Associates, Inc.  
8619 W. Bryn Mawr  
Avenue, Suite 602  
Chicago, Illinois 60631  
773 283-2600 phone  
773 283-2602 fax  
[www.RWAengineers.com](http://www.RWAengineers.com)

**EXHIBIT C-3**

**SUBCONSULTANT SERVICES  
O'Brien & Associates**

**O'BRIEN & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**

1235 E. DAVIS ST/ARLINGTON HTS, IL 60005  
[847] 398-1441 • FAX [847] 398-2376



October 27, 2010

TranSystems Corporation  
1051 Perimeter Drive  
Suite 1025  
Schaumburg, IL 60173-5058

Attn: Mr. Jeffery Hall, P.E.

Proposal No. P-10-195

Re: Geotechnical Engineering Services, Phase 1, Old McHenry Road/Robert Coffin Road, Long Grove, Illinois

Dear Mr. Hall:

In accordance with your request we are pleased to submit our proposal for the performance of a pavement investigation. We understand that improvements may consist of pavement widening, pavement resurfacing, drainage improvements and a possible roundabout at the intersection of Old McHenry Road and Robert Coffin Road. The project includes approximately 2,300' of Old McHenry Road and 300' of Robert Coffin Road.

We propose that this investigation will consist of a total of nine (9) soil borings extending to a depth of 10.0'. Seven (7) of the borings will be on Old McHenry Road and two (2) on Robert Coffin Road. The borings will be located at 300' intervals and alternating sides for the new pavement improvements. Enclosed is a location diagram showing approximate boring locations.

In addition, a total of four (4) pavement cores will be performed with three (3) on Old McHenry Road and one (1) on Robert Coffin Road. The cores will be spaced at representative locations. The core holes will be cored with a 4" diameter core barrel and be hand augered to a depth of 24" or the subgrade to determine existing pavement type and thickness.

Upon completion, the boring holes backfilled and the core holes will be patched to match existing grade. We have assumed that signs, cones can be used for traffic control. This proposal also includes a pre-drilling and post report meeting time for the Principal Engineer.

Along with these borings, laboratory tests of subgrade soils, will be performed on the samples recovered and an engineering report will be prepared under the direction of a Registered Professional Engineer. Below is the detailed information that will be included in the subsurface investigation report.

- a. Soil conditions
- b. Ground water elevations
- c. Site preparation recommendations
- d. Pavement construction recommendations

- e. Lateral support and excavation recommendations
- f. Copies of boring logs, test results, soil profile and location diagram
- g. Recommendations relative to any unusual design or construction techniques which may be required due to subsurface conditions

On the basis of this scope of work and the unit charges indicated on the enclosed cost estimate the total cost of this investigation will be \$15,355.36.

Any additional work will be performed at the appropriate unit charges or hourly rates indicated on the cost estimate of services. All work will be performed in accordance with the attached Terms and Conditions.

We appreciate the opportunity of being of service to you on this project and look forward to hearing from you when work is ready to begin. If there are any questions regarding the information submitted herein, please do not hesitate to contact us.

Very truly yours,

O'BRIEN & ASSOCIATES, INC.



Jim Wandell  
Project Manager



Dixon O'Brien, P.E.  
Vice-President  
JW/DOB/ckb  
enc.

ACCEPTED FOR TRANSYSTEMS CORPORATION

BY \_\_\_\_\_

DATE \_\_\_\_\_





**AVERAGE HOURLY PROJECT RATES**

**FIRM**  
**PTB**  
**PRIME/SUPPLEMENT**

**O'Brien & Associates, Inc.**  
**TransSystems Corp**

**DATE** 10/27/10

| PAYROLL CLASSIFICATION | AVG HOURLY RATES |        | TOTAL PROJECT RATES |        |          | Coordination/ Meetings/ Layouts/ Utilities |        |         | Boring Logs/ Profiles/ Lab |        |         | Field Engineer |         |         | Analysis/ Review/ Report |        |         | Administrative |        |         |
|------------------------|------------------|--------|---------------------|--------|----------|--|--------|---------|----------------------------|--------|---------|----------------|---------|---------|--------------------------|--------|---------|----------------|--------|---------|
|                        | Hours            | %      | Hours               | Part.  | Wgtd Avg | Hours                                      | %      | Part.   | Hours                      | %      | Part.   | Hours          | %       | Part.   | Hours                    | %      | Part.   | Hours          | %      | Part.   |
| Principal              | 1                | 1.32%  | 1                   | 1.32%  | 0.92     | 8  | 44.44% | 29.33   | 2                          | 9.09%  | 6.00    |                |         |         |                          |        |         | 1              | 50.00% | 35.00   |
| Principal Engineer     | 14               | 18.42% | 14                  | 18.42% | 12.16    |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
| Sr. Geotechnical Engr  | 0                |        | 0                   |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
| Project Manager        | 13               | 17.11% | 13                  | 17.11% | 6.94     | 10   | 55.56% | 22.53   | 2                          | 9.09%  | 3.69    |                |         |         |                          |        |         |                |        |         |
| Engineering Geologist  | 28               | 36.84% | 28                  | 36.84% | 11.05    |  |        |         | 18                         | 81.82% | 24.55   |                |         |         |                          |        |         |                |        |         |
| Laboratory Manager     |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
| Secretary              | 4                | 5.26%  | 4                   | 5.26%  | 1.19     |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
| Field Engineer         | 16               | 21.05% | 16                  | 21.05% | 8.54     |  |        |         |                            |        |         | 16             | 100.00% | 40.55   | 3                        | 16.67% | 3.00    | 1              | 50.00% | 11.30   |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
|                        |                  |        |                     |        |          |  |        |         |                            |        |         |                |         |         |                          |        |         |                |        |         |
| <b>TOTALS</b>          | 76               | 100%   | 76                  | 100%   | \$40.79  | 18   | 100%   | \$51.86 | 22                         | 100%   | \$34.23 | 16             | 100%    | \$40.55 | 18                       | 100%   | \$36.59 | 2              | 100%   | \$46.30 |

Firm Name: O'Brien & Assoc., Inc.

Prime: TranSystems

October 27, 2010

Project: Old McHenry Road and Robert Coffin Road

Location: Long Grove, IL

Scope: 4 pavement cores, 9 soil borings to 10', profiles  
Traffic Control with signs, cones

**DRILLING**

|                              |          | Unit Cost     | Cost        |
|------------------------------|----------|---------------|-------------|
| Drill/Core Rig and Crew      | 16.0 hrs | \$ 320.00 /hr | \$ 5,120.00 |
| Drill/Core Rig and Crew (OT) | -        | \$ 450.00 /hr | \$ -        |
| Core Patch                   | 4.0 ea   | \$ 5.00 /ea   | \$ 20.00    |
| Backfill Materials           | 90.0 ft  | \$ 2.00 /ft   | \$ 180.00   |

|          |             |
|----------|-------------|
| Subtotal | \$ 5,320.00 |
|----------|-------------|

**ASSOCIATED DRILLING COSTS**

|                              |             |              |           |
|------------------------------|-------------|--------------|-----------|
| Traffic Control Signs, Cones | 2.0 days    | \$75.00 /day | \$ 150.00 |
| Flagman (2)                  | - hrs       | \$85.00 /hr  | \$ -      |
| Support Vehicle              | 5.0 days    | \$55.00 /day | \$ 275.00 |
| Bit Wear (PCC)               | - inches    | \$6.00 /in   | \$ -      |
| Bit Wear (ACC)               | 20.0 inches | \$4.00 /in   | \$ 80.00  |
| Core Photographs             | 4.0 each    | \$10.00 /ea  | \$ 40.00  |

|          |           |
|----------|-----------|
| Subtotal | \$ 545.00 |
|----------|-----------|

|                       |                    |
|-----------------------|--------------------|
| <b>DRILLING TOTAL</b> | <b>\$ 5,865.00</b> |
|-----------------------|--------------------|

**LABORATORY TESTING**

|                                 |         |              |           |
|---------------------------------|---------|--------------|-----------|
| Moisture Content                | 50.0 ea | \$5.00 /ea   | \$ 250.00 |
| Unconfined (Rimac)/Density      | - ea    | \$15.00 /ea  | \$ -      |
| Hand Penetrometer               | - ea    | \$3.00 /ea   | \$ -      |
| Proctor/CBR (Using ASTM D-1557) | - ea    | \$600.00 /ea | \$ -      |
| Combined Analysis (ASTM C-422)  | 4.0 ea  | \$100.00 /ea | \$ 400.00 |
| Atterberg Limits (ASTM D-4318)  | 4.0 ea  | \$60.00 /ea  | \$ 240.00 |
| Organic Content                 | 2.0 ea  | \$50.00 /ea  | \$ 100.00 |
| Consolidation Test (D2435)      | - ea    | \$600.00 /ea | \$ -      |

|                      |                  |
|----------------------|------------------|
| <b>TESTING TOTAL</b> | <b>\$ 990.00</b> |
|----------------------|------------------|

# PAYROLL ESCALATION TABLE ANNIVERSARY RAISES

FIRM NAME  
PRIME/SUPPLEMENT

O'Brien & Associates, Inc.  
TranSystems Corp

DATE  
PTB NO.

10/27/10

CONTRACT TERM  
START DATE  
RAISE DATE

                     MONTHS

ANNIVERSARY

OVERHEAD RATE  
COMPLEXITY FACTOR  
% OF RAISE

138.40%

0.00%

## ESCALATION PER YEAR

DETERMINE THE MID POINT OF THE AGREEMENT

0

CALCULATE THE ESCALATION FACTOR TO THE MIDPOINT OF THE CONTRACT

0.00%

The total escalation for this project would be: 0.00%

## PAYROLL RATES

FIRM NAME O'Brien & Associates, Inc. DATE 10/27/10  
PRIME/SUPPLEMENT TranSystems Corp  
PTB NO. \_\_\_\_\_

ESCALATION FACTOR 0.00%

| CLASSIFICATION        | CURRENT RATE | CALCULATED RATE |
|-----------------------|--------------|-----------------|
| Principal             | \$70.00      | \$70.00         |
| Principal Engineer    | \$66.00      | \$66.00         |
| Sr. Geotechnical Engr | \$57.20      | \$57.20         |
| Project Manager       | \$40.55      | \$40.55         |
| Engineering Geologist | \$30.00      | \$30.00         |
| Laboratory Manager    | \$26.00      | \$26.00         |
| Secretary             | \$22.60      | \$22.60         |
| Field Engineer        | \$40.55      | \$40.55         |

**GENERAL CONDITIONS  
O'BRIEN & ASSOCIATES, INC.**

**SECTION 1: SCOPE OF WORK:** O'BRIEN & ASSOCIATES, INC. (OBA) shall perform the services defined in the contract and shall invoice the client for those services at the fee schedule rates. Any cost estimates stated in this contract shall not be considered as a firm figure unless otherwise specifically stated in this contract. If unexpected site conditions are discovered, the scope of work may change even as the work is in progress. OBA will provide these additional services at the contract fee schedule rate.

Rates for work beyond the scope of this contract and not covered by the contract fee schedule can be provided. OBA can perform additional work with prior authorization, and will provide confirmation of fees. All costs incurred because of delays in authorizing the additional work will be billed to the client. Fee schedules are valid for one year following the date of the contract unless otherwise noted. Initiation of services by OBA pursuant to this proposal will incorporate these terms and conditions.

**SECTION 2: ACCESS TO SITES, PERMITS AND APPROVALS:** Unless otherwise agreed, the client will furnish OBA with right-of-access to the site in order to conduct the planned exploration. All work will be performed using non-union work crews. Additional costs and management fees associated with the use of union personnel is not included in this proposal. If the use of union personnel is required by the client or project conditions, client agrees to pay for any additional charges, surcharges, and fees.

While OBA will take all reasonable precautions to minimize any damage to the property, it is understood by the client that in the normal course of work some damage may occur, the restoration of which is not part of this agreement. Unless otherwise agreed, the client will secure all necessary approvals, permits, licenses and consents necessary to the performance of the services hereunder.

**SECTION 3: SOIL BORING AND TEST LOCATIONS:** The accuracy and proximity of provided survey control will affect the accuracy of in-situ test location and elevation determinations. Unless otherwise noted, the accuracy of test locations and elevations will commensurate only with pacing and approximate measurements or estimates. If greater accuracy is required, the services of a professional surveyor should be obtained.

The client will furnish OBA with a diagram indicating the location of the site. Boring and test locations may also be indicated on the diagram. OBA reserves the right to deviate a reasonable distance from the boring and test locations unless this right is specifically revoked by the client in writing at the time the diagram is supplied. OBA reserves the right to terminate this contract if conditions preventing drilling at the specified locations are encountered which were not made known to OBA prior to the date of this contract.

**SECTION 4: UTILITIES:** In the performance of its work, OBA will take all reasonable precautions to avoid damage or injury to subterranean structures or utilities. The client agrees to hold OBA harmless and indemnify OBA for any claims, payments or other liability, including costs and attorney fees, incurred by OBA for any damages to subterranean structures or utilities which are not called to OBA's attention and correctly shown on the plans furnished to OBA.

**SECTION 5: UNANTICIPATED HAZARDOUS MATERIALS:** It shall be the duty of the owner, the client, or their representative to advise OBA of any known or suspected hazardous substances which are or may be related to the services provided; such hazardous substances include but are not limited to products, materials, by-products, wastes or samples of the foregoing which OBA may be provided or obtain while performing its services or which hazardous substances exist or may exist on or near any premises upon which work is to be performed by OBA employees, agents or subcontractors.

**SECTION 6: DISPOSAL OF HAZARDOUS MATERIALS:** OBA does not create, generate or at any time own or take possession or ownership of or arrange for transport, disposal or treatment of hazardous materials as a result of its exploration services. All hazardous materials, including but not limited to samples, drilling fluids, decontamination fluids, development fluids, soil cuttings and tailings, and used disposable protective gear and equipment, are the property of the client, and responsibility for proper transportation and disposal is the client's unless prior contractual arrangements are made. All laboratory and field equipment that cannot readily and adequately be cleansed of its hazardous contaminants shall become the property and responsibility of the client. The client shall purchase all such equipment and it shall be turned over to the client for proper disposal unless prior alternate contractual arrangement are made.

**SECTION 7: REPORTS AND INVOICES:** OBA will furnish two copies of the report to the client. Additional copies will be furnished at the rate specified in the fee schedule. OBA will submit invoices to the client monthly and a final bill upon completion of services. Payment is due upon presentation of invoice and is past due thirty (30) days from the invoice date. Client agrees to pay a finance charge of one and one-half percent (1-1/2%) per month, but not exceeding the maximum rate allowed by law, on past due accounts. Client also agrees to pay all costs and expenses, including reasonable attorney fees incurred by OBA relating to collection procedures on overdue accounts. Failure of client to abide by the provisions of this section will be considered ground for termination of this agreement by OBA.

**SECTION 8: OWNERSHIP OF DOCUMENTS:** All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by OBA as instruments of service, shall remain the property of OBA unless there are other contractual agreements.

**SECTION 9: CONFIDENTIALITY:** OBA shall hold confidential all business or technical information obtained from the client or his affiliates or generated in the performance of services under this agreement and identified in writing by the client as "confidential". OBA shall not disclose such information without the client's consent except to the extent required for: 1) Performance of services under this agreement; 2) Compliance with professional or ethical standards of conduct for preservation of public safety, health, and welfare; 3) Compliance with any court order or other governmental directive and/or; 4) Protection of OBA against claims or liabilities arising from performance of services under this agreement. OBA's obligation hereunder shall not apply to information in the public domain or lawfully acquired on a non-confidential basis from others.

**SECTION 10: STANDARD OF CARE:** Services performed by OBA under this Agreement will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. No other warranty, expressed or implied, is made or intended by the proposal for consulting services or by furnishing oral or written reports of the findings made. The client recognizes that subsurface conditions may vary from those encountered at the location where borings, surveys, tests or explorations are made by OBA and that the data, interpretations and recommendations of OBA are based solely upon the data available to OBA. OBA will be responsible for those data, interpretations and recommendations, but shall not be responsible for the interpretations by others of the information developed.

**SECTION 11: SAFETY:** OBA has adopted safety policy procedures for its personnel when providing services at known or suspected hazardous waste sites. OBA personnel will adhere to these procedures as site conditions require. A copy of the "Safety Policy Procedures for Environmental/Hazardous Waste Projects" is on file with the corporate safety officer and is available for review. OBA is not responsible or liable for injuries or damage incurred by third parties who are not employees of OBA.

It is understood that OBA will not be responsible for job or site safety of the project. Job and site safety will be the sole responsibility of the contractor unless contracted to others.

**SECTION 12: SUBPOENAS:** The client is responsible, after notification, for payment of time charges and expenses resulting from the required response by OBA to subpoenas issued by any party other than OBA in conjunction with work performed under this contract. Charges are based on fee schedules in effect at the time the subpoena is served.

**SECTION 13: LIMITATION OF LIABILITY:** The client agrees to limit OBA's liability to the owner and all construction contractors and subcontractors on the project arising from OBA's professional acts, errors or omissions, or omissions or breach of contract or other cause of action, such that the total aggregate liability of OBA to all those named shall not exceed \$50,000 or OBA's total fee for the services rendered on this project, whichever is greater, and client hereby releases OBA from any liability above such amount. The client further agrees to require of the contractor and his subcontractors an identical limitation of OBA's liability for damages suffered by the contractor or the subcontractor arising from OBA's performance of services. Neither the contractor nor any of his subcontractors assumes any liability for damages to others which may arise on account of OBA's professional acts, errors or omissions.

**SECTION 14: INSURANCE:** OBA carries worker's compensation and employer's liability insurance and has coverage under public liability and property damage insurance policies. Certificates for all such policies of insurance will be provided to client upon request. Within the limits and conditions of such insurance, OBA agrees to indemnify and save client harmless from and against any loss, damage, injury or liability arising from any negligent acts of OBA, its employees, agents, subcontractors and their employees and agents. OBA shall not be responsible for any loss, damage or liability beyond the amounts, limits and conditions of such insurance. OBA shall not be responsible for any loss, damage or liability arising from any acts by a client, its agents, staff consultants employed by others, or other third parties who are not employees of OBA.

**SECTION 15: INDEMNITY:** The client acknowledges that OBA has neither created nor contributed to the creation or existence of any hazardous, radioactive, toxic, irritant, pollutant, or otherwise dangerous substances or conditions at the site. Accordingly, except as expressly provided in this contract, the Client waives any claim against OBA and agrees to indemnify and save OBA, its agents, and employees harmless from any claim, liability or defense cost, including but not limited to attorney fees and other incidental costs, for injury or loss sustained by any party from such exposures allegedly arising out of or related to OBA's performance of services hereunder. Client and OBA agree that they will not be liable to each other, under any circumstances, for special, consequential or punitive damages arising out of or related to this Contract.

**SECTION 16: TESTING AND OBSERVATION SERVICES:** If OBA is retained by Client to provide a site representative for the purpose of testing or observing specific portions of the work or other field activities as set forth in the proposal, then this section applies. For the specified assignment, OBA will report test results, observations and professional opinions to Client.

The presence of OBA field representatives will be for the purpose of providing field testing and observation. Our work does not include supervision or direction of the actual work of the Contractor, his employees or agents. The Contractor for this project should be so advised. The Contractor should also be informed that neither the presence of our field representative nor the testing and observation by our firm shall excuse him in any way for defects discovered in his work.

The term, "observation", implies that we would observe the progress of the work we have agreed to be involved with and perform tests from which to develop an opinion as to whether the work essentially complies with the job requirements.

With any manufactured product there are statistical variations in its uniformity and the accuracy of tests used to measure its qualities. As compared with other manufactured products, field construction usually has wider fluctuations in both product and test results. Thus, even with very careful testing and observation, it cannot be said that all parts of the product comply with the job requirement. Our proposal is for the scope of services requested by our Client. The degree of certainty for compliance with project specifications is much greater with full time observation than it is with intermittent observation.

**SECTION 17: SAMPLES:** OBA will retain all soil and rock samples that are transported to OBA laboratories for 60 days after submission of the report. Further storage or transfer of samples can be made at client expense upon written request.

**SECTION 18: SEVERABILITY:** If any of the provisions contained in this Agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired.

**SECTION 19: TERMINATION:** This Agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. Termination due to union work stoppages, picketing or other labor actions shall invoke liquidated damages in the amount of \$5,000 or 25% of our total cost estimate, whichever is greater, to be paid to OBA by the client. In addition, in the event of termination, OBA shall be paid for services performed prior to the termination notice date plus reasonable termination expenses. Expenses of termination or suspension shall include all direct costs of OBA required to complete analyses and records necessary to complete its files and may also include a report on the services performed to the date of notice of termination or suspension.

**SECTION 20: ASSIGNS:** Neither the client nor OBA may delegate, assign, subwrite or transfer its duties or interest in this agreement without the written consent of the other party.

**SECTION 21: PRECEDENCE:** These Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding OBA's services.

**SECTION 22: UNIONIZATION/PREVAILING WAGE:** If during the course of this contract, OBA experiences an escalation in technician wage and/or benefit costs as a result of any collective bargaining obligation, then OBA's unit prices will be automatically increased to a level commensurate with the new pay and benefit package and additional charges will be adjusted and billed for all prior services invoiced.

If Client and OBA are unable to agree on compensation to cover our increased costs as a result of unionization, we reserve the right to cancel this contract on three (3) days written notice. Client shall then pay all outstanding invoices and subsequent invoices for work performed, but not invoiced as of the date of cancellation, and Client waives any claim of any kind whatsoever against OBA as a result of cancellation, and releases OBA from any further obligation under this contract.

If the work performed by OBA is subject to prevailing wage criteria that may be imposed by federal or state law, or by union demands, then OBA's unit prices will be automatically increased to a level commensurate with new pay and benefit package and additional charges will be adjusted and billed for all prior services invoiced.

**EXHIBIT C-4**

**SUBCONSULTANT SERVICES**  
**Jorgensen & Associates**



**JORGENSEN & ASSOCIATES, INC.**  
**CONSTRUCTION and LAND SURVEYORS**

Est. 1990

October 27, 2010

Mr. Jeffrey R. Hall, P.E.  
TranSystems Corporation  
1051 Perimeter Drive  
Suite 1025  
Schaumburg, Illinois 60173-5058

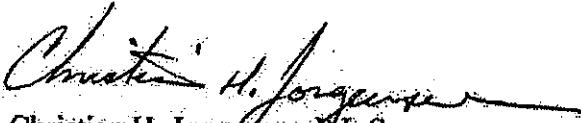
Re: Village of Long Grove - Old McHenry Road at Robert Parker Coffin Road Survey  
Proposal

Dear Mr. Hall:

Enclosed, please find our proposal to prepare a statutory plat of highways and legal descriptions for the referenced project.

I would like to thank you for considering Jorgensen & Associates for this project. We look forward to continuing our working relationship with your firm. Should you have any questions, comments or require any further information concerning our proposal, please feel free to call me at (847)356-3371.

Respectfully submitted,  
Jorgensen & Associates, Inc.

  
Christian H. Jorgensen, P.L.S.  
President

CHJ/pt

Enclosures

E:\TranSystem\Old McHenry Rd\LTR



Route: Old McHenry Road  
Section: @ Robert Parker Coffin Road  
County: Lake  
Job No.:

Exhibit "A"

Hourly Rate Range - Consultant's Regular Staff

| <u>Classification</u>  | <u>From</u> | <u>To</u> |
|--|-------------|-----------|
| Principal, Manager, P.L.S.   | 38.00       | 40.00     |
| Supervisor, Project Surveyor   | 37.00       | 39.00     |
| Cadd Supervisor, Survey Party<br>Chief   | 21.00       | 26.00     |
| Instrument Operator, Cadd Operator,<br>assignable Clerical and Secretarial Labor | 14.00       | 19.00     |

Route: Old McHenry Road  
Section: @ Robert Parker Coffin Road  
County: Lake  
Job No.:

Exhibit "B"

Payroll Burden & Fringe Costs

|   | <u>% of Direct<br/>Productive<br/>Payroll</u> |
|---|---|
| Federal Insurance Contributions Act _____                 | 10.90%  |
| State Unemployment Compensation _____                     | 0.24%   |
| Federal Unemployment Compensation _____                   | 0.20%   |
| Workmen's Compensation Insurance _____                    | 0.94%   |
| Paid Holidays, Vacation, Sick Leave, Personal Leave _____ | 9.24%   |
| Bonus _____   | 3.58%   |
| Pension _____   | 0.54%   |
| Group Insurance _____                                     | 24.68%  |
| Total Payroll Burden & Fringe Costs                       | 50.32%  |

Route: Old McHenry Road  
Section: @ Robert Parker Coffin Road  
County: Lake  
Job No.:

Exhibit "C"

Overhead and Indirect Costs

|                                       | <u>% of Direct<br/>Productive<br/>Payroll</u> |
|---------------------------------------|---|
| Business Insurance _____              | 4.19%   |
| Depreciation _____                    | 8.09%   |
| Indirect wages and salaries _____     | 29.66%  |
| Reproductive and printing costs _____ | 0.06%   |
| Office Supplies _____                 | 1.93%   |
| Computer Costs _____                  | 0.16%   |
| Professional Fees _____               | 1.01%   |
| Telephone _____                       | 1.27%   |
| Fees, license & dues _____            | 1.14%   |
| Repairs and maintenance _____         | 0.37%   |
| Business space rent _____             | 3.60%   |
| Facilities - capital _____            | 1.17%   |
| Recruiting _____                      | 0.27%   |
| Survey Supplies _____                 | 3.08%   |
| Automobile/travel expense _____       | 0.43%   |
| Equipment Rental _____                | 0.67%   |
| Miscellaneous Expense _____           | 1.07%   |
| State Income Tax _____                | 0.58%   |
| Postage _____                         | <u>0.24%</u>                                  |
| Total Overhead                        | 58.99%  |

Route: Old McHenry Road  
Section: @ Robert Parker Coffin Road  
County: Lake  
Job No.:

**Exhibit "D"**

**Classification Types & Rates**

Sheet 1 of 2

- A. Principal/Officer
- B. Supervisor, P.L.S.
- C. Survey Party Chief
- D. Instrument Operator
- E. Cadd Supervisor
- F. Secretarial

**Classification Rates used for Calculation of Fee**

|                                     |                 |
|-------------------------------------|-----------------|
| <b>A. Principal/Officer .....</b>   | <b>\$ 40.00</b> |
| <b>B. Supervisor, P.L.S. ....</b>   | <b>\$ 39.00</b> |
| <b>C. Survey Party Chief .....</b>  | <b>\$ 21.50</b> |
| <b>D. Instrument Operator .....</b> | <b>\$ 18.25</b> |
| <b>E. Cadd Supervisor .....</b>     | <b>\$ 25.50</b> |
| <b>F. Secretarial .....</b>         | <b>\$ 16.50</b> |

Route: Old McHenry Road  
Section: @ Robert Parker Coffin Road  
County: Lake  
Job No.:

**Exhibit "D"**

Average Hourly Rate Calculation

Sheet 2 of 2

|                     |                               |   |                 |
|---------------------|-------------------------------|---|-----------------|
| Principal/Officer   | 2 hours @ \$40.00/hour        | = | \$ 80.00        |
| Supervisor, P.L.S.  | 67 hours @ \$39.00/hour       | = | \$ 2,613.00     |
| Survey Party Chief  | 85 hours @ \$21.50/hour       | = | \$ 1,827.50     |
| Instrument Operator | 85 hours @ \$18.25/hour       | = | \$ 1,551.25     |
| Cadd Supervisor     | 86 hours @ \$25.50/hour       | = | \$ 2,193.00     |
| Secretarial         | <u>4 hours @ \$16.50/hour</u> | = | <u>\$ 66.00</u> |
|                     | 329 hours                     |   | \$ 8,330.75     |

Average Hourly Rate =  $\frac{\$8,330.75}{329} = \$25.32/\text{hour}$

Route: Old McHenry Road  
 Section: @ Robert Parker Coffin Road  
 Project: Lake  
 County: Lake  
 Job No.:

COST ESTIMATE OF CONSULTANT'S SERVICES

Consultant: Jorgensen & Associates, Inc.  
 Date: October 27, 2010  
 No. of Parcels: 4

| Item   | Number of Man Hours (A) | Payroll (B)       | Overhead & Fringe Benefits (C) | In-house Direct Costs (D) | Sub-Total (E)      | Profit (F)        | Services By Others | Total              | Percent of Grand Total |
|--|-------------------------|-------------------|--------------------------------|---------------------------|--------------------|-------------------|--------------------|--------------------|------------------------|
| 1) Pre-Survey Phase                                  | 5                       | \$118.50          | \$129.53                       | \$75.00                   | \$323.03           | \$50.39           | \$1,280.00         | \$1,653.43         | 7.54%                  |
| 2) Survey Reconnaissance                             | 16                      | \$318.00          | \$347.61                       | \$25.00                   | \$690.61           | \$109.68          | N/A                | \$800.28           | 3.65%                  |
| 3) Project Survey Plan                               | 1                       | \$25.50           | \$27.87                        | \$0.00                    | \$53.37            | \$8.50            | N/A                | \$61.88            | 0.28%                  |
| 4) First Submittal Plat of Highways and Descriptions | 70                      | \$1,866.00        | \$2,039.72                     | \$20.00                   | \$3,925.72         | \$625.21          | N/A                | \$4,550.94         | 20.75%                 |
| 5) Survey (Field)                                    | 154                     | \$3,060.75        | \$3,345.71                     | \$200.00                  | \$6,606.46         | \$1,049.76        | N/A                | \$7,656.22         | 34.91%                 |
| 6) Survey (Office)                                   | 48                      | \$1,750.50        | \$1,913.47                     | \$0.00                    | \$3,663.97         | \$583.79          | N/A                | \$4,247.76         | 19.37%                 |
| 7) Final Submittal Plat of Highways and Descriptions | 12                      | \$292.50          | \$319.73                       | \$30.00                   | \$642.23           | \$101.90          | N/A                | \$744.13           | 3.39%                  |
| 8) Coordination Meetings                             | 2                       | \$80.00           | \$87.45                        | \$30.00                   | \$197.45           | \$31.03           | N/A                | \$228.48           | 1.04%                  |
| 9) QC/QA   | 21                      | \$819.00          | \$895.25                       | \$0.00                    | \$1,714.25         | \$273.14          | N/A                | \$1,987.39         | 9.06%                  |
| <b>TOTALS</b>  | <b>329</b>              | <b>\$8,330.75</b> | <b>\$9,106.34</b>              | <b>\$380.00</b>           | <b>\$17,817.09</b> | <b>\$2,833.41</b> | <b>\$1,280.00</b>  | <b>\$21,930.50</b> | <b>100.00%</b>         |

Route: Old McHenry Road  
 Section: @ Robert Parker Coffin Road  
 County: Lake  
 Job No.:

**Manhour Breakdown  
 Land Acquisition Estimate**

Length of Project

|                          |          |   |
|--------------------------|----------|---|
| Old McHenry Road         | =        | $\pm 2,300' = \pm 0.436$ mile                   |
| Robert Parker Coffin Rd. | =        | $\pm 1,000' = \pm 0.189$ mile                   |
| <b>Total Length</b>      | <b>=</b> | <b><math>\pm 3,300' = \pm 0.625</math> mile</b> |

4 Parcels: 4 Fee Simple

1. Pre-Survey Phase  
 Research available records

- |    |                   |   |             |
|----|-------------------|---|-------------|
| a. | Title Co.         | ) |             |
|    |                   | ) |             |
| b. | Recorder's Office | ) |             |
|    |                   | ) |             |
| c. | I.D.O.T.          | ) | 4 MH        |
|    |                   | ) |             |
| d. | Utilities         | ) |             |
|    |                   | ) |             |
| e. | Private Surveyors | ) |             |
|    |                   | ) |             |
| f. | Land Owners       | ) | <u>1 MH</u> |

Sub-total Item # 1                      5 MH

2. Reconnaissance Survey                      2 Men                      16 MH

3. Project Survey Plan

- a. Alignment info )
- b. Existing R.O.W. info )
- c. Land line data )
- d. Subdivision data ) 1 MH

Sub-total Item #3 1 MH

4. First Submittal Plat of Highways & Descriptions

- a. Ownership info )
- b. Total holding boundaries )
- c. Total holding area listing ) 2 MH
- d. Private survey info )
- e. Deed calculated closures )
- f. Layout and drafting ± 4 sheets 64 hours x 1 man = 64 MH
- g. Legal descriptions 4 descriptions 4 MH

Sub-total Item #4 70 MH



|    |   |  |               |
|----|---|--|---------------|
| 5. | Survey (Field)  |  |               |
| a. | Measure existing R.O.W. & property lines<br>40 hours x 2 men =  |  | 80 MH         |
| b. | Monument center line alignments & recovery ties<br>Old McHenry Road      5 hrs. x 2 men =<br>Robert Parker Coffin Rd.    2 hrs. x 2 men = |  | 10 MH<br>4 MH |
| c. | Monument & tie proposed R.O.W.<br>20 hours x 2 men =  |  | 40 MH         |
| d. | Appraisal topography<br>10 hours x 2 men =  |  | <u>20 MH</u>  |

Sub-total Item #5      154 MH

|    |   |  |             |
|----|---|--|-------------|
| 6. | Survey (Office)   |  |             |
| a. | Compute traverse<br>6 hours x 1 man =                               |  | 6 MH        |
| b. | Compute existing R.O.W. & property boundaries<br>36 hours x 1 man = |  | 36 MH       |
| c. | Compile appraisal topography<br>3 hours x 1 man =                   |  | 3 MH        |
| d. | Compute center line alignments<br>1 hour x 1 man =                  |  | 1 MH        |
| e. | Compute proposed R.O.W. lines<br>2 hours x 1 man =                  |  | <u>2 MH</u> |

Sub-total Item #6      48 MH

|    |  |             |
|----|--|-------------|
| 7. | Final Submittal Plat of Highways & Descriptions              |             |
| a. | Final drafting ± 4 sheets<br>8 hours x 1 man =               | 8 MH        |
| b. | Final descriptions 4 descriptions                            | 1 MH        |
| c. | Assembly of final papers                                     | <u>3 MH</u> |
|    | Sub-total Item #7  | 12 MH       |
| 8. | Coordination Meetings  |             |
|    | 1 meeting @ 2 hours =  | 2 MH        |
| 9. | QC/QA  |             |
| a. | Check preliminary plats<br>4 sheets                          | 14 MH       |
| b. | Check preliminary legal descriptions<br>4 legal descriptions | 2 MH        |
| c. | Check final plats<br>4 sheets                                | 4 MH        |
| c. | Check final legal descriptions<br>4 legal descriptions       | <u>1 MH</u> |
|    | Total All Items  | 329 MH      |

(4)

Route: Old McHenry Road  
 Section: @ Robert Parker Coffin Road  
 County: Lake  
 Job No.:

### Manhour Breakdown By Item

| <u>Item</u>        | <u>Classification</u> | <u>Manhours</u> |
|--------------------|-----------------------|-----------------|
| 1) Pre-Survey      | Cadd Supervisor       | 4               |
|                    | Secretarial           | 1               |
| 2) Survey          | Survey Party Chief    | 8               |
| Reconnaissance     | Instrument Operator   | 8               |
| 3) Project Survey  | Cadd Supervisor       | 1               |
| Plan               |                       |                 |
| 4) First Submittal | Supervisor, P.L.S.    | 6               |
| Plat of Highways & | Cadd Supervisor       | 64              |
| Descriptions       |                       |                 |
| 5) Survey (Field)  | Survey Party Chief    | 77              |
|                    | Instrument Operator   | 77              |
| 6) Survey (Office) | Supervisor, P.L.S.    | 39              |
|                    | Cadd Supervisor       | 9               |
| 7) Final Submittal | Supervisor, P.L.S.    | 1               |
| Plat of Highways & | Cadd Supervisor       | 8               |
| Descriptions       | Secretarial           | 3               |
| 8) Coordination    | Principal/Officer     | 2               |
| Meetings           |                       |                 |
| 9) QC/QA           | Surveyor, P.L.S.      | 21              |

Route: Old McHenry Road  
Section: @ Robert Parker Coffin Road  
County: Lake  
Job No.:

**Breakdown of  
In House Direct Costs**

Item

1. Pre-Survey Phase

a. Trips to Recorder's Office - 1 ea.  
± 30 miles/trip x 1 trip = ± 30 miles  
± 30 miles @ \$0.50/mile = \$ 15.00

b. Miscellaneous Records from Recorder's  
Office \$ 60.00

Sub-total Item #1 \$ 75.00

2. Survey Reconnaissance

a. Trips to project site - 1 ea.  
± 50 miles/trip x 1 trip = ± 50 miles  
± 50 miles @ \$0.50/mile = \$ 25.00

4. First Submittal Plat of Highways & Descriptions

a. Plat of Highways Mylars  
4 sheets @ \$5.00/sheet = \$ 20.00

5. Survey (Field)

a. Trips to project site - 8 ea.  
± 50 miles/trip x 8 trips = ± 400 miles  
± 400 miles @ \$0.50/mile = \$ 200.00

7. Final Submittal Plat of Highways & Descriptions

a. Deliver Final Papers to District One office

± 60 miles/trip x 1 trip = ± 60 miles

± 60 miles @ \$0.50/mile =

\$ 30.00

8. Coordination Meetings

a. Meetings at client's office - 1 ea.

± 60 miles/trip x 1 trip = ± 60 miles

± 60 miles @ \$0.50/mile =

\$ 30.00

Total All Items

\$ 380.00

Route: Old McHenry Road  
Section: @ Robert Parker Coffin Road  
County: Lake  
Job No.:

**Breakdown of  
Services By Others**

**Item**

**1. Pre-Survey Phase**

|  |             |
|--|-------------|
| a. Commitment for Title Insurance Letters<br>4 Letters @ \$320.00 each = | \$ 1,280.00 |
|--|-------------|

**EXHIBIT D**

**SURVEY PROCEDURES**

# **SURVEY PROCEDURES** (Revised 4/21/08)

## **UNITS-COORDINATES**

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

## **HORIZONTAL ALIGNMENT**

Unless otherwise specified in the services contract, the CONSULTANT is to provide the horizontal alignment. The CONSULTANT'S SURVEYOR will try to re-establish the original horizontal alignment as shown on the recorded R.O.W. plats. The CONSULTANT shall contact LCDOT's Land Surveyor to obtain R.O.W. plats and field notes and benchmarks before establishing the horizontal alignment and stationing. Notify LCDOT's Surveyor immediately if the alignment cannot be reproduced or if in the CONSULTANT'S opinion the existing alignment information is in error.

The CONSULTANT'S SURVEYOR, prior to construction, shall stake the PCs, Pls, PTs, and POTs so that LCDOT's Surveyor can locate them later for construction staking. The CONSULTANT'S SURVEYOR will provide four reference ties to all U.S. Public Land Survey Monuments located within the construction limits. The reference points should be located outside of the anticipated construction limits if practical, so that they can be used after construction to replace the monuments. The CONSULTANT shall record Monument Records for all Section and Quarter Section corners set or found within the construction limits.

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

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



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

### **VERTICAL ALIGNMENT**

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

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

### **TOPOGRAPHY**

The CONSULTANT shall cut cross sections at 50-foot intervals in urban areas (100-foot intervals in rural areas) and at all points needing clarification. The cross section interval should be defined in the engineering services contract.

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

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

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

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

The collected survey data for the existing topography shall have a minimum of 3<sup>rd</sup> Order Accuracy horizontally with readings to the nearest 0.1 feet for vertical on gravel or ground and readings to the nearest 0.01 feet for vertical on all other surfaces.

## **RAILROAD INSURANCE**

The CONSULTANT will comply with the railroad's requirements when conducting a survey on the railroad's ROW. Usually this includes obtaining a permit, paying a fee, obtaining Railroad Protective Liability Insurance, notification of a flagman to be present near the rails during the survey operations and any other requirements of the railroad. The CONSULTANT is responsible for all of the foregoing requirements.

## **DELIVERABLES**

- I. Copies from the CONSULTANT'S field books, showing benchmarks, level circuits, & structure details, such as size and inverts etc.
- II. Base Drawing at 1:1. All the topographic information shall be plotted electronically. The data shall be recorded in a MICROSTATION .DGN format. All line work defining different elements shall be completed using LCDOT's CELL and LINE LIBRARIES (see attachment). ASCII files containing all point information as described below shall be included. Backup CD's or diskettes shall be provided.
- III. SUMMARY SHEETS showing:
  - (1) Point number
  - (2) Point identification by code and description
  - (3) Station
  - (4) Distance offset (right or left)
  - (5) Northing and Easting coordinate values
  - (6) "Z" elevations

\* Four computer printouts shall be provided:

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

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

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

| TYPICAL PRINT-OUT FORM (EXAMPLE) |              |         |           |           |           |                     |                   |                   |
|----------------------------------|--------------|---------|-----------|-----------|-----------|---------------------|-------------------|-------------------|
| BY POINT NUMBERS                 |              |         |           |           |           |                     |                   |                   |
| POINT NUMBER                     | STATION      | OFFSET  | NORTHING  | EASTING   | ELEVATION | DEFINITION CODE (1) | DESCRIPTION PD    | MATERIAL CODE (1) |
| 3331                             | 104+23.306   | -45.869 | 10313.993 | 20392.255 | 207.495   | 491.10              | 10 INCH TREE PINE | 0                 |
| 3332                             | 104+50.475   | -49.159 | 10323.810 | 20416.938 | 207.743   | 668                 | PAVEMENT EDGE     | 759               |
| 3333                             | 104+69.987   | -44.270 | 10261.604 | 20452.162 | 207.126   | 310                 | FL W/GRATE        | 774               |
| 3334                             | 103+93.865   | +40.590 | 10297.779 | 20365.781 | 207.378   | 304.15              | 6 INCH TILE       | 836               |
| BY STATION                       |              |         |           |           |           |                     |                   |                   |
| STATION                          | POINT NUMBER | OFFSET  | NORTHING  | EASTING   | ELEVATION | DEFINITION CODE (1) | DESCRIPTION PD    | MATERIAL CODE (1) |
| 103+93.865                       | 3334         | +40.590 | 10297.779 | 20365.781 | 207.378   | 304.15              | 6 INCH TILE       | 836               |
| 104+23.306                       | 3331         | -45.869 | 10313.993 | 20392.255 | 207.495   | 491.10              | 10 INCH TREE PINE | 0                 |
| 104+50.475                       | 3332         | -49.159 | 10323.810 | 20416.938 | 207.743   | 668                 | PAVEMENT EDGE     | 759               |
| 104+69.987                       | 3333         | -44.270 | 10261.604 | 20452.162 | 207.126   | 310                 | FL W/GRATE        | 774               |
| BY POINT DESCRIPTION             |              |         |           |           |           |                     |                   |                   |
| POINT NUMBER                     | STATION      | OFFSET  | NORTHING  | EASTING   | ELEVATION | DEFINITION CODE (1) | DESCRIPTION PD    | MATERIAL CODE (1) |
| 3331                             | 104+23.306   | +40.590 | 10297.779 | 20365.781 | 207.378   | 304.15              | 6 INCH TREE PINE  | 0                 |
| 3336                             | 104+50.475   | -45.869 | 10313.993 | 20392.255 | 207.495   | 491.10              | 10 INCH TREE PINE | 0                 |
| 2323                             | 104+69.987   | -49.159 | 10323.810 | 20416.938 | 207.743   | 668                 | 6 INCH TREE OAK   | 0                 |
| 2565                             | 103+93.865   | -44.270 | 10261.604 | 20452.162 | 207.126   | 310                 | 5 INCH TREE OAK   | 0                 |

(1) LCDOT CODES

LCDOT's Land Surveyor:

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

