

Municipality	LOCAL AGENCY	 Illinois Department of Transportation	CONSULTANT	Name Bollinger, Lach & Associates
Township				Address 333 Pierce Road, Suite 200
County Lake County Division of Transportation		City Itasca		
Section 15-00118-12-CH		State IL		
		Preliminary Engineering Services Agreement For Non-Motor Fuel Tax Funds		

THIS AGREEMENT is made and entered into this _____ day of _____, _____ between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Motor Fuel Tax Funds, allotted to the LA by the State of Illinois under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT", will be used entirely or in part to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Section Description

Name Miller Road at US-12

Route _____ Length 0.60 Mi. 3200.00 FT (Structure No. _____)

Termini Approx. 1000' east and west of intersection center, Miller Road; potential additions to US-12 (~600' each leg)

Description:

The improvement of the intersection of Miller Road and US-12 located in Lake Zurich and Ela Township in Lake County, IL.

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 LA 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, 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 five (5) copies of the plans, special provisions, proposals and estimates. Additional copies of any or all documents, if required, shall be furnished to the LA by the ENGINEER at his actual cost for reproduction.
 - h. ☒ Furnish the LA with survey and drafts in quadruplicate of all necessary right-of-way dedications, construction easement and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.

DRAFT

- 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 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 and drafts shall, before being finally accepted, be subject to approval by the LA ~~and the DEPARTMENT~~.
 3. To attend conferences at any reasonable time when requested to do so by representatives of the LA ~~or the Department~~.
 4. In the event plans or surveys are found to be in error during construction of the SECTION and revisions of the plans or survey corrections are necessary, the ENGINEER agrees that he will perform such work without expense to the LA, even though final payment has been received by 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 performed as stipulated in paragraphs 1a, 1g, 1i, 2, 3, 5 and 6 in accordance with one of the following methods indicated by a check mark:
 - a. ☐ A sum of money equal to _____ percent of the awarded contract cost of the proposed improvement as approved by the DEPARTMENT.
 - b. ☐ A sum of money equal to the percent of the awarded contract cost for the proposed improvement as approved by the DEPARTMENT based on the following schedule:

Schedule for Percentages Based on Awarded Contract Cost

Awarded Cost
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 services in accordance with this AGREEMENT at actual cost of performing such work plus * percent to cover profit, overhead and readiness to serve - "actual cost" being defined as material cost plus payrolls, insurance, social security and retirement deductions. Traveling and other out-of-pocket expenses will be reimbursed to the ENGINEER at THE ENGINEER'S actual cost. Subject to the approval of the LA, the ENGINEER may sublet all or part of the services provided in section 1 of the AGREEMENT. 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. (Refer to CECS).

The Total-Not-To-Exceed Contract Amount shall be \$292,165.67.

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

- ~~a. Upon completion of detailed plans, special provisions, proposals and estimate of cost - being the work required by paragraphs 1a through 1g under THE ENGINEER AGREES - to the satisfaction of the LA and their approval by the DEPARTMENT, 90 percent of the total fee due under this AGREEMENT based on the approved estimate of cost.~~
- ~~b. Upon award of the contract for the improvement by the LA and its approval by the DEPARTMENT, 100 percent of the total fee due under the AGREEMENT based on the awarded contract cost, less any amounts paid under "a" above.~~

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

4. That, should the improvement be abandoned at any time after the ENGINEER has performed any part of the services provided for in paragraphs 1a, through 1h and prior to the completion of such services, the LA shall reimburse the ENGINEER for his actual costs plus 198 percent incurred up to the time he is notified in writing of such abandonment -"actual cost" being defined as in paragraph 2 of THE LA AGREES.
5. That, should the LA require changes in any of the detailed plans, specifications or estimates except for those required pursuant to paragraph 4 of THE ENGINEER AGREES, ~~after they have been approved by the DEPARTMENT~~, the LA will pay the ENGINEER for such changes on the basis of actual cost plus 198 percent to cover profit, overhead and readiness to serve -"actual cost" being defined as in paragraph 2 of THE LA AGREES. It is understood that "changes" as used in this paragraph shall in no way relieve the ENGINEER of his responsibility to prepare a complete and adequate set of plans and specifications.

It is Mutually Agreed,

1. That any difference between the ENGINEER and the LA concerning their interpretation of the provisions of this Agreement shall be referred to a committee of disinterested parties consisting of one member appointed by the ENGINEER, one member appointed by the LA and a third member appointed by the two other members for disposition and that the committee's decision shall be final.
2. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at his last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all surveys, permits, agreements, preliminary bridge design & hydraulic report, drawings, specifications, partial and completed estimates and data, if any from traffic studies and soil survey and subsurface investigations with the understanding that all such material becomes the property of the LA. The ENGINEER shall be paid for any services completed and any services partially completed in accordance with Section 4 of THE LA AGREES.
3. That if the contract for construction has not been awarded one year after the acceptance of the plans by the LA ~~approval by the DEPARTMENT~~, the LA will pay the ENGINEER the balance of the engineering fee due to make 100 percent of the total fees due under this AGREEMENT, based on the estimate of cost as prepared by the ENGINEER and approved by the LA ~~and the DEPARTMENT~~.
4. That the ENGINEER warrants that he/she has not employed or retained any company or person, other than a bona fide employee working solely for the ENGINEER, to solicit or secure this contract, and that he/she has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the ENGINEER, any fee, commission, percentage, brokerage fee, gifts or any other consideration, contingent upon or resulting from the award or making of this contract. For Breach or violation of this warranty the LA shall have the right to annul this contract without liability.

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

Executed by the LA:

ATTEST: County of Lake of the
(Municipality/Township/County)
State of Illinois, acting by and through its
County Board
By Lake County Clerk
(Seal) By
Title Chairman of the County Board

RECOMMENDED FOR EXECUTION

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

Executed by the ENGINEER:

Bollinger, Lach & Associates, Inc.

333 Pierce Road, Suite 200

Itasca, IL 60143

ATTEST:

By
Title vice President

By
Title President/CEO

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



Bollinger, Lach & Assoc., Inc.
5/25/2016

15-00118-12-CH
Miller Road at US-12
Lake County Division of Transportation
Lake County, IL

PROJECT SCOPE DESCRIPTION

Bollinger, Lach & Associates (BLA) proposes to complete Phase II Engineering Design activities with preliminary design elements for the intersection improvements at Miller Road and US-12 in Lake Zurich/Ela Township, IL for the Lake County Division of Transportation (LCDOT).

Preliminary design elements shall include the geometric, environmental, and design studies required to develop a preliminary engineering plan meeting the requirements of the LCDOT and the Illinois Department of Transportation Permit. Following approval of preliminary design elements, detailed engineering plans, specifications, and estimates will be prepared and all permits secured for a project letting.

Bollinger, Lach & Associates' written scope of services also includes the written scope of services of all subconsultants to Bollinger, Lach & Associates contained herein and after.

Preliminary Engineering Design Activities

Data Collection: BLA will contact the JULIE One-Call system to obtain existing utility atlases for private "dry" facilities (gas main, telephone, cable, fiber optic, overhead/underground electric, etc.) in the area. Those utilities which do not have an auto-respond system shall be contacted by mail or via email to obtain the necessary atlases. BLA will also obtain zoning maps, school and park district maps and plans, existing traffic signal plans, and develop a photo log of the site.

Topographic Survey – **Weaver Consultants**: BLA will obtain a complete above and below ground topographic survey of the project limits. This shall consist of topographic survey, ROW to ROW + 10' from the center of the intersection at Miller Road and US-12 as follows:

- North Leg – 1000'
- West Leg – 1000'
- East Leg – 1000'
- South Leg – 1300' (100' past Rugby Road)

Additional topographic locations will consist of:

- Samantha Lane – Miller Road ROW + 200' West
- Manor Park – Existing Detention Basin Survey

. This shall consist of obtaining all existing features within the project corridor including (but



Bollinger, Lach & Assoc., Inc.

5/25/2016

not limited to) pavement cross sectional elevations, driveway aprons, visible above-ground “dry” utilities (electric, telephone, etc.), and detailed measure downs of public facilities (sanitary, water, storm) along with top of casting elevations (rim grade, flange elevations, etc.).

Project right-of-way and property lines will be prepared from computing existing right-of-way and property lines through field located monuments and plat research.

Preliminary Environmental Site Investigation (PESA) & Preliminary Site Investigation (PSI) – Huff & Huff: (see attached)

Geotechnical Investigation – Rubino Engineering: (see attached)

Sewer Televising – American Underground: (see attached)

Wetland Delineation & Environmental Coordination: BLA will perform a wetland delineation of the project site using methodology outlined in the Regional Supplement of 2010 Corps of Engineers Wetland Delineation Manual. The delineation will be completed based on conditions found during the field visit, soil maps, Lake County Wetland Map, National Wetlands Inventory and the U.S. Army Corps of Engineers (USACE) Routine On-Site new Data Forms. BLA will coordinate with IDNR with the Natural Resources Review Consultation based on the Illinois Natural Heritage Database (INHD). Also during the site visit, the wetlands' generalized quality ratings, according to Swink and Wilhelm (1994), plant community quality will be assessed and the limits of the wetland will be flagged. Finally, during the site visit, wildlife and plant community qualities will be assessed.

The results of the field investigation will be summarized in a letter report. The wetlands floristic inventory, index values and quality rating will be included along with exhibits depicting wetland boundaries, project boundary, National Wetland Inventory, Soil Survey, Flood Insurance Rate Map, Lake County Wetland Map, NRCS wetland mapping, floodplain, USGS topography, site photographs and their locations and the U.S. Army Corps of Engineers (USACE) Routine On-Site New Data Forms. This information will be compiled in a format, which can be used as part of a COE Joint Application package. The delineation will be field surveyed and the survey will be used as our base wetland boundary map.

An investigation of the project site will be completed to determine the limits of the wetlands present and flagged. The wetland delineation will be completed based on the methodology established by the USACE/Lake County Regulations. Also during the site visit, wildlife and plant community qualities will be assessed. The limits of the wetland community will be field staked/flagged so that they can be located in relation to the project coordinate system. The limits of the wetland delineation are shown in an exhibit below. The survey of wetland flags will be included in this investigation.

An Illinois Department of Natural Resources (IDNR) ECOCAT consultation shall be filed to determine the presence of any threatened or endangered species.

A consultation letter shall also be sent to the Illinois Historic Preservation Agency (IHPA) for



presence of any state historical properties.

We will identify, locate and tag all native species trees greater than or equal to 6" diameter at breast height (DBH) that will be potentially impacted by the Rand Road and Miller Road Project, Village of Lake Zurich, Lake County, Illinois. A complete tree inventory will be performed listing tag number, station, offset, size, common name, scientific name, health, structure and comments regarding the quality of the identified trees. Nomenclature used for common and scientific names follows Swink and Wilhem (1994) Plants of the Chicago Region and U.S. Fish and Wildlife Service (1996) National List of Vascular Plant Species that Occur in Wetlands.

During the survey, each tree will be evaluated and assigned a number rating based on a scale rating from 1 – 5. The following discusses the rating scale in the Condition/Form column of the Tree Inventory Report. These ratings are established and based on general observations at the time of the inventory. A rating of 1 (excellent) will have the highest value in terms of protection or preservation. A rating of 5 (poor) will have the lowest value and quality.

For example:

- A. (1 = excellent condition) A rating of 1 would be given to a tree that is excellent in appearance, condition and form, having a well-developed root system, balanced branching and healthy.
- B. (2 = above average) A rating of 2 would be given to a tree that has little to no damage, fairly straight, sound, good shape and form, and is good in overall physical quality.
- C. (3 = typical condition) A rating of 3 would be given to a tree that is average in condition, form, physical state, appearance, and health.
- D. (4 = poor condition) A rating of 4 would be given to a tree that has some deadwood, minor sweep or lean, distorted shape, trunk or bark damage, multi-stems, poor physical quality.
- E. (5 = worst condition) A rating of 5 would be given to a tree with a lot of deadwood, bad sweep or lean, diseased or damaged by insect pests and larvae, lightning damage, split, or other physical damage.

Crash Study: Crash data and diagrams have already been provided by the LCDOT as part of the project scoping report. A memorandum summarizing the identifiable findings and proposed countermeasures will be prepared and submitted to the County for review and concurrence of our assessment.

Traffic Analyses: As the primary scope of work consists of providing safety and capacity improvements to an existing signalized intersection, a traffic analysis shall be conducted using the data provided in the project scoping report as well as obtaining and generating 2040 traffic volumes. A letter will be obtained from CMAP consisting of 2040 traffic projections.



Bollinger, Lach & Assoc., Inc.

5/25/2016

Movement counts dated 6/8/2011 were provided in the project scoping report. BLA will perform 12 hour traffic data collection in order to confirm and update these values. Traffic counts will be conducted at the following locations:

- Miller Road at US-12
- Miller Road at Walgreens entrance
- US-12 at Samantha Lane

From this data, traffic counts will be adjusted for 2040 traffic data obtained from CMAP. This will then be run through modeling software (HCS or Synchro) in order to study the intersection capacity and number of auxiliary lanes proposed at the intersection.

Alternate Geometric Studies: This shall include development of horizontal and vertical alignments (vertical largely anticipated to remain the same as in the existing condition) for the proposed intersection. The main focus of this task shall consist of determining the best alignment which satisfies the intersection capacity and safety requirements while providing the least impact to the surrounding properties and environment. We shall evaluate a minimum of three (3) proposed geometric configurations along Miller Road:

- Widening about the Center of the existing alignment
- Widening to the North of the existing alignment
- Widening to the South of the existing alignment

This activity shall consist of preliminary cross section evaluation which considers proposed land acquisition, environmental impacts, potential utility relocations, and other factors such as traffic staging. These will be presented to the LCDOT for review and a preferred alignment configuration proposed for preparation of an Intersection Design Study.

BLA will also investigate the possibility of adding a dedicated left turn lane south of Miller on US-12, just north of Rugby Road, at Samantha Lane in an effort to cut down or eliminate the number of U-turn movements at the Miller Road and US-12 intersection. This shall consist of development of geometric alternates with AutoTurn movements to facilitate northbound-to-westbound movements.

Coordination with the Village of Lake Zurich regarding addition of non-motorized improvements to the existing intersection will occur as part of this task. Sidewalk is present on the east leg of Miller Road with no pedestrian accommodations for crossings over Miller Road or US-12. Should the Village wish to provide and cost participate in improvements, this would be incorporated into the plans.

The scoping report proposes widening and resurfacing of existing pavement. A pavement design will be conducted to confirm the pavement thicknesses proposed for widening as included in the scoping report.

Intersection Design Study: An intersection design study (IDS) will be required for approval by IDOT for future signal permit work. This shall consist of following the procedures outlined in



Bollinger, Lach & Assoc., Inc.

5/25/2016

BDE Manual Chapter 14 and shall include intersection geometry, signalized capacity design analysis, elements controlling design, and traffic data tables completely filled out. Detailed geometry including length of storage bays and tapers will be identified as well as AutoTurn vehicle turning movement, position of existing and/or relocated traffic signal equipment and potentially red-light camera appurtenances. Should non-motorized transportation improvements be implemented, these will be depicted as well on the IDS. These documents will be submitted to the LCDOT for review and upon approval, submitted to IDOT.

Drainage Study: This task will include an evaluation of the existing drainage conditions and the proposed drainage for the improvement. As proposed widening will impact floodplain, an Abbreviated Location Drainage Study will be prepared. This shall consist of:

- Existing Drainage Plan (EDP)
 - Topographic Survey combined with 2-Foot Contour Atlases to Determine Drainage Patterns in and around the corridor;
 - Watershed Divide Evaluation;
 - Identifications of Floodplain(s);
 - Identification of Drainage Outlets;
 - Development of EDP Plan & Profile Sheets.
- Proposed Drainage Plan (PDP)
 - Design Criteria Generation;
 - Drainage Alternatives for Problematic Areas Identified through the EDP Study;
 - Proposed Replacement of Storm Sewer.
 - Address Project Compliance through the Lake County WDO.
 - Develop PDP Plan & Profile Sheets.

Detention is not anticipated to be required. However, compensatory storage will be required as a result of floodplain fill in the 0-10 year floodplain which encroaches and extends over the pavement surface on the east leg of Miller Road. These calculations will be prepared as part of a project hydraulic report which will be required for permitting efforts.

BLA will attend a pre-application meeting with the LCDOT and the LCSMC to determine the necessary permitting requirements for the project.

Plat of Highways Preparation – **Weaver Consultants** (see attached): This task will include providing Plat(s) of Highway for any potential land acquisition requirements. It is not known the exact number of parcels that will be affected at this time so we are assuming up to ten (10) parcels will be impacted as a result of the proposed widening. This task shall consist of following all State & County requirements for land acquisition, title research, and setting of right-of-way monuments should permanent right-of-way be required.

Detailed Engineering Plan Preparation

Title Sheet: BLA will prepare the title sheet according to the Lake County Division of Transportation standards as directed by the Lake County Division of Transportation (LCDOT). Mylar will be submitted to the Lake County Engineer.



Typical Sections: The typical section sheets will be prepared which will include existing and proposed typical sections along with the mixture requirement chart and notes and the applicable legend items.

Alignment, Ties and Benchmarks: The sheet will include complete alignment with curve data, ties with northing and easting, and benchmarks for the roadway per the alignment determined in preliminary design.

Notes, Index and Standards: The sheet will include a list of applicable highway standards; general notes list of commitments and index of all plan sheets.

Summary of Quantities: BLA will prepare the sheets including construction and funding code breakdowns, the quantity calculations/take off for each pay items and preparation of quantity book for delivery to LCDOT.

Schedule of Quantities: These sheets will have all pay items except lump sum and estimated items scheduled according to plan location per LCDOT plan preparation requirements and will help locate quantities including earthwork schedule.

Maintenance of Traffic: Maintenance of traffic plans will be prepared for proposed traffic staging while the intersection is being widened. The various MOT stage typical sections sheet, MOT general notes, Sequence of operations and MOT sign legend sheets will be provided. We anticipate a minimum of three stages for purposes of the Miller Road and US-12 intersection modernization.

Plan and Profile: The roadway plans will have a top plan view showing the existing topography and proposed roadway geometry and the bottom view will show the profile.

Drainage and Utilities: The plans will be similar to the roadway plan layout and will have all existing and proposed drainage along with all existing utilities.

Estimate of Time: An estimate of time shall be prepared for the prefinal and final submittals. It is anticipated that this project will be built during one construction season.

Estimate of Cost: Detailed estimates of cost will be prepared and provided at the preliminary, prefinal, and final submittals. The forms will be prepared and updated per each submittal.

Pavement Marking & Signing Plans: The plan will illustrate the striping and signing plans for the project and depict all existing and proposed signs to be installed/adjusted as well as any reflective pavement markers which will need to be installed or replaced.

Erosion Control Plans: BLA will prepare permanent and temporary erosion control plans for the roadway during the multiple stages of construction and the compensatory storage area. BLA will prepare the detail sheets for the McHenry-Lake Soil Water Conservation District permit and the NPDES-SWPPP permit. Special attention will be paid to the wetland discharge points in the



development of the best management practices.

Grading Plan: BLA will prepare the grading plan to provide the final grading contours for the detention basins and compensatory storage areas, bike trail rendering, retaining wall locations, and at all the corners of the intersection. This will be required for the USACE Joint Application 404 permit.

Traffic Signal Plans: BLA will prepare and provide the traffic signal plans at the intersection of Miller Road and US-12. This shall consist of temporary signal sheets, temporary cable sheets, proposed signal sheets, proposed cable sheets, street name sign sheets, temporary interconnect sheets, interconnect schematic sheet and one summary of signal quantity sheets. Scope will also include coordination with IDOT's signal department for review & obtaining all interconnect information pertaining to that system.

Traffic signal plans will include additional fiber and schematic diagrams in the plan set. These sheets will be provided from the LCDOT PASSAGE consultant.

Landscape Restoration Plan: BLA will prepare restoration plans which depict areas of proposed seeding as part of the impacts resulting from the improvement as well as tree replacement. Formal landscaping designs are not anticipated to be part of this scope of work.

Cross Sections: The cross section sheets will have cross section every 50 feet and it will show the existing and proposed roadway, entrances/accesses, culvert crossings at low points, utilities, trees, light poles, ROW, driveways, cut and fill, etc. We will also prepare the cross sections for the compensatory storage area.

Permits:

- USACOE Joint Permit Application Preparation and Submittal for Individual Permit: The required exhibits, specifications, data and project information will be compiled and assembled in a permit application submittal package to the USACOE and to the IEPA for Section 404 of the Clean Water Act compliance. We will coordinate development of documents with the Lake County DOT and submit them for your review in draft form. This task may require meeting with the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Illinois Department of Natural Resources, Lake County and potentially other federal, state and local agencies to coordinate permitting activities. BLA will prepare the Threatened and Endangered Species Consultation Act as required in Section 7 of the USACOE Permitting Process in compliance with the U.S. Fish and Wildlife Service. We will also prepare and submit an IDNR Threatened and Endangered Species Agency Action Report. BLA assumes that the LCDOT will pay in a Wetland Banking for any wetland mitigation. BLA will request a pre-application meeting for the permit and meet with them.
- IEPA 401 Water Quality Certification: The required exhibits, specifications, data and project information will be compiled and assembled in a permit application submittal package to the IEPA to obtain the required 401 Water Quality Certification
- Lake County Stormwater Management Commission Permit Application Preparation and Submittal: The required exhibits, specifications, data and project information will be



Bollinger, Lach & Assoc., Inc.

5/25/2016

compiled and assembled in a permit application submittal package to the Lake County SMC for the floodplain impacts, detention, storm sewer design, water quality, erosion control, wetland and threatened and endangered species items.

- FEMA - Letter of Map Revision (LOMR) Permitting: It is anticipated that the LOMR and/or CLOMR will not be required.
- IEPA - Stormwater Pollution Prevention Plan (SWPPP): BLA will prepare the SWPPP form BDE 2342 and erosion control and sediment control plan measures for the proposed phase II improvements as it has been required to be prepared to comply with the provisions of the NPDES Permit Number ILR10, by IEPA for the storm water discharges from construction activities in a project with greater than 1 acre disturbances.
- IDOT Permit: As IDOT is not a partner in this proposed project, the plans will be submitted to IDOT for a permit. This permit shall require preparation of the permit application package as well as addressing received comments.
- IEPA LPC-663 – Huff & Huff shall prepare and execute the IEPA LPC-663 forms for Clean Construction Demolition Debris to be included in the contract specifications and bid documents, or prepare and execute the LPC-662 forms if appropriate.

Specifications & Special Provisions: BLA will prepare all applicable specifications and special provisions for construction of the project. We will also include all applicable IDOT/LCDOT specifications and check sheets required to facilitate a local letting.

Utility Coordination: BLA will review the permits, check against the drainage facilities, prepare the conflict list, and coordinate with the utilities on their issues with the improvements through the LCDOT. BLA will make submittals to all impacted utility companies with the proposed impacts at the pre-final and final milestone dates. If it appears significant utilities are present and unavoidable, early coordination will occur to facilitate relocation efforts.

Coordination/Deliverables: Coordination with the local agencies will go through LCDOT. Deliverables to the LCDOT will consist of the Word, Excel, MicroStation and PDF files that comprise the Soils/Geotechnical Report, final plans, specifications and estimates prepared for this project.

Public Involvement: BLA anticipates one Open House style public meeting for the proposed project. Work shall include:

- Coordination of meeting location;
- Preparation of notification letters & newspaper advertisements;
- Preparation of meeting brochure and handouts;
- Preparation of meeting exhibits;
- Attendance at the meeting;
- Meeting minutes summary as well as responding to comments received.

Public opposition to the improvements is not anticipated, therefore only one meeting is proposed.

Agency Involvement & Meetings: We are proposing the following meetings (16) and agency involvement:



Bollinger, Lach & Assoc., Inc.
5/25/2016

- BLA & LCDOT
 - Kickoff Meeting (1)
 - Coordination Meetings throughout project (3)
- Lake County SMC Pre-Application Meeting (1)
- Village of Lake Zurich (2)
- Village of Lake Zurich Parks & Recreation Department (1)
- IDOT Signal Department (1)
- IDOT Bureau of Programming (Geometrics, Traffic) (2)
- USACE Meeting (1)
- Property Owner Meetings (2)
- Private Utility Company Meetings (2)

Administration & Management: This item includes project setup, invoicing, and in-house coordination of the project.

Project Deliverables: BLA will provide all above listed items as well as the following per the LCDOT's "Electronic Bid Package Format and Submittal" (attached):

- PDF file of the entire plan set, combined into a single file with appropriate naming designation per the attachment.
- Scanned copy of the cover sheet with the County Engineer's signature and licensed P.E. signature.
- Compiled .pdf file of the final contract book along with individual documents in .PDF format with appropriate naming designation per the attachment.
- Soils report, electronic format, with naming designation per the attachment.
- DVD of all final project digital files (Excel, Word, Microstation .DGN files, etc.).

Not-Included Scope of Work Items

The following items are not included in the project scope of work but can be added at the County's request under supplemental proposal:

- Structural Engineering Design (retaining walls, junction chambers, box culverts, etc.);
- Detailed Landscaping Elements;
- Land Acquisition Services and/or Appraisals & Negotiations;
- Lighting Design or Photometric Calculations;
- Significant Environmental Concerns relating to Threatened or Endangered Species or Historic Preservation Office Coordination.
- Wet or Dry Utility Relocation Plans
- Intersection or Approach Lighting Design
- Noise Study
- Air Quality Study
- Preparation of Intergovernmental Agreement(s)
 - *BLA will prepare exhibits to assist with these as required*

ELECTRONIC BID PACKAGE FORMAT AND SUBMITTAL

To facilitate posting projects to the LCDOT web site, consultants shall provide electronic copies of the bid documents as follows:

1. A .pdf file of each individual plan sheet.
 - a. Each individual sheet file shall be printed to a .pdf file. Only sheets that require signatures and/or seals may be scanned. All plan sheets shall be printed to scale as full size - 22" x 34" (ANSI D). This facilitates the printing of half-size (11" x 17") sheets to scale.
 - b. The files shall be named as:
 - i. **A-ZZZZZ\$Sheet_XXXX_Title.pdf**
 - ii. A-ZZZZZ is the LCDOT CPMS Pin # assigned to the project. The "XXXX" in the file name shall be a sequential 4 digit number beginning at 0001. The numbers shall include all preceding 0's. The 0's are necessary to align the individual files in order on the web site.
 - iii. For example the cover sheet of the project (PIN # B-00300) would be B-00300\$Sheet_0001_Cover_Sheet.pdf.
2. A .pdf file of the entire plan set.
 - a. The individual plan sheets shall be combined into a single file.
 - b. The file shall be named: **A-ZZZZZ\$Full_Plan_Set.pdf**.
 - c. A scanned copy of the cover sheet with County Engineer's signature will be added by LCDOT.
3. A compiled .pdf file of the final contract book (specifications).
 - a. The file shall be compiled from individual documents (word processing, spreadsheets, design standards/details, etc.) printed to .pdf files and individual files already in .pdf format. Only documents that cannot be transmitted electronically or that require signatures and/or seals may be scanned.
 - b. The file shall be named: **A-ZZZZZ\$Contract_Specifications.pdf**.
 - c. A scanned copy of the cover page with County Engineer's signature will be added by LCDOT.
4. If a soils report for the project has been prepared, the consultant shall include a .pdf file named: **A-ZZZZZ\$Soils_Report.pdf**.

~~The consultant shall provide the above files on a CD. LCDOT does not have an ftp site. If the consultant has an ftp site arrangements may be made to transfer the files.~~



May 25, 2016

Dan Bruckelmeyer, P.E.
Vice President
Project Manager
Bollinger, Lach & Associates, Inc.
333 Pierce Road, Suite 200
Itasca, IL 60143

Re: Land Surveying Services Proposal
Miller Road and Route 12, Lake Zurich, IL

Dear Mr. Bruckelmeyer,

Thank you for this opportunity to submit a proposal to you for providing professional land surveying services as outlined herein.

For purposes of the Agreement, **Bollinger, Lach & Associates, Inc.** will be identified as the "CLIENT", and **Weaver Consultants Group, Inc.** will be identified as "WCG" or "Surveyor".

Pursuant to your request, Weaver Consultants Group North Central, LLC (The Surveyor) proposes to provide you with the survey services of the aforementioned roadways in Lake Zurich, Illinois as detailed here within. Weaver understands this to be 4,000 feet of right-of-way as depicted in Exhibit A (attached). We will perform this work based upon a fixed fee basis as indicated in this agreement.

We will undertake this work on the following basis:

SECTION 1 – SCOPE OF SERVICES

Topographic Survey \$15,800

- WCG will conduct a complete and detailed topographical survey. The survey limits will be 1,000 feet west and east along the right of way of Miller Road and 1,000 feet north and 1,300 feet south along the right of way of Route 12 from the intersections of said roads and 200 feet west along the right of way of Samantha Road from the intersection with Route 12. The limits will encompass the right of way and 10 feet beyond.
- WCG will conduct a complete and detailed topographical of the area around the detention basin at the southeast corner of Route 12 and Miller Road.

- A supplemental site visit to locate borings and wetland flags after original topographic work completed is included in this proposal to be scheduled by client.
- The Topographic Survey will be completed in accordance with the LCDOT Design Survey procedures.
- Said topographic survey will be delivered to the client in Adobe Acrobat and an appropriate digital format.

Right-of-way Research \$2,000.

- In order to define the rights of way of Route 12 and Miller Road, WCG will:
 1. Utilize maps and documents provided by contacting the Illinois Department of Transportation.
 2. Utilize maps and documents provided by contacting the Lake County Department of Transportation.
 3. Search the Lake County Recorder's online portal for deeds and surveys of the properties adjoining Route 12 and Miller Road.

***Note:** WCG will make a best effort attempt to define the Route 12 and Miller Road rights of way using the aforementioned sources however, WCG cannot guarantee that the limits we define are conclusively the entire rights of way of these roads. In the event that WCG cannot define said rights of way we will advise the client accordingly and suggest a title search be performed on the adjacent properties in order to define the limits of the right of way.*

Title Commitment Work \$5,000.

- Title work for ten parcels estimated at \$500 per parcel per our conversation.

Stake Centerline Alignment \$1,400.

- WCG will monument and station the ends of the centerline alignment of Route 12 and Miller Roads within the surveyed areas and any points of curvature or angle points.

Plat of Highways \$8,500.

- WCG will draw a Plat of Highways of the subject area utilizing Illinois Department of Transportation conventions.

Monumentation of Parcels \$2,700.

- WCG will monument parcels following construction disturbance is complete in the subject area at the direction of the engineer.

This represents a one-time execution of the above-described services based on the information received at the time of authorization to proceed. Any additional re-executions of said services based upon circumstances outside of the quality of our work product or change of scope as defined herein, will be done at an additional cost based on the Hourly Fee Schedule contained herein.

SECTION 2 - PERFORMANCE

Within two weeks of authorization to proceed and receipt of an executed copy of this agreement as well as the receipt of the above mentioned documents, the SURVEYOR shall begin an on the ground survey of the premises. Based on our understanding and available information, the completed Topographic Survey will be completed 45 days after receipt of the executed agreement.

In addition to the above professional fee, reimbursable expenses including blueprints, sepias, mylars, purchased documents (maps, photos, etc.) overnight mail services, messenger services, and other miscellaneous reimbursable expenses will be billed separate and beyond the professional fee, at cost plus 15% for handling.

Mr. Dan Bruckelmeyer
May 25, 2016
Page 4

Weaver Consultants Group, Inc. will consider your signing and returning one (1) original of the "Proposal Acceptance Sheet" (attached hereto) as our authorization to proceed, based upon your development schedule. Thank you again for the opportunity to submit our proposal on this matter.

Very Truly Yours
Weaver Consultants Group, North Central, LLC



Kurt K. Aper, P.L.S.
Senior Project Manager

Attachments: Acceptance Sheet
Fee Schedule
Terms and Conditions

EXHIBIT A: Survey Area



DESIGN SURVEY PROCEDURES (Revised 12/4/14)

HORIZONTAL ALIGNMENT

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

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

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

ALIGNMENT & TIE SHEET

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

VERTICAL ALIGNMENT

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

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

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

TOPOGRAPHY

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

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

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

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

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

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

RAILROAD INSURANCE

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

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

DELIVERABLES

- I. Copies from the CONSULTANT'S field books, showing benchmarks, level circuits, & structure details, such as size and inverts etc.
- II. Base Drawing at 1:1. All the topographic information shall be plotted electronically. The data shall be in Illinois State Plane Coordinates – East Zone and be recorded in a MICROSTATION .DGN format. All CAD work shall be according to LCDOT CAD Standards. ASCII files, gpk files, and/or InRoads files containing all point information as described below shall be included. A filename “ID” acronym explanation sheet shall be provided. Backup CDs shall be provided.
- III. Point Information:
 - (1) Point number
 - (2) Northing and Easting coordinate values
 - (3) "Z" elevations
 - (4) Point identification by code
 - (5) Notes



PLAT OF HIGHWAYS & LEGAL DESCRIPTION CHECKLIST

REVISED 5/29/2015

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

	<u>Initials</u> <u>or N/A</u>	<u>Date</u>
1. Plat of Highways sheet size is 22" x 34".	_____	_____
2. A project cover sheet is required.	_____	_____
3. All lettering should be 1/10 th inch or greater.	_____	_____
4. Complete the project box in the lower right-hand corner.	_____	_____
5. Show survey company name, address and/or logo (if applicable) above the title box.	_____	_____
6. Show North Arrow, up or to the right and appropriate scale bar on each page.	_____	_____
7. Coordinates for all projects should be based on Illinois State Plane Coordinate System, East zone, NAD83 (Adjustment). The referenced NGS monumentation should be noted on the plat.	_____	_____
8. Plat will include the following notes:	_____	_____
• Bearings and distances shown hereon reference the Illinois State Plane Coordinate System, East Zone, North American Datum of 1983 (adjustment year) "grid". NOTE: added "grid" for those who look at the plats, such as appraisers, and are not aware that state plane and grid are synonymous and it ties into the next statement.		
• All measured and calculated distances are "grid" not "ground". To obtain ground distances, divide grid distances shown by the combination factor of 0.000001.		
• Areas shown on this plat are "ground".		
9. Label the Section, Township, Range, Principal meridian and County at the top of each applicable sheet.	_____	_____
10. Label all subdivisions, (incl. recording date and document number), blocks, and lots on the plat of highways.	_____	_____
11. All known recording dates and document numbers (subdivision, right-of-way, deed, etc.) will be included in the legal descriptions.	_____	_____
12. Show all section/quarter section corners and ties on the Plat of Highway. These should relate to the ties on the corresponding monument records. Label the monument recording date and document number.	_____	_____
13. Show necessary land lines with proper line types (section lines, lot lines, property lines, etc.)	_____	_____
14. Indicate and label the following lines (use the proper line types):	_____	_____
• Existing and proposed right-of-way lines (use the proper line types)		
• Existing and proposed access control lines		
• Existing roadway easements lines and proposed IDPT easement lines		
15. Show width of existing right-of way at least once per sheet.	_____	_____

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

31. Show and label all private improvements in the proposed/existing Right-of-Way and proposed easement lines in the parcel. This includes fences, signs, light standards, private utilities, canopies, driveways, parking lots, etc. _____
32. Show all fuel pump islands with perpendicular ties to the proposed right-of-way or proposed easements. _____
33. Show all encroachments within the existing right of way. (This would include parking areas) _____
34. Label the route and street name designation once per sheet. _____
35. Label the project's beginning and ending stations _____
36. Show the proposed centerline and label with IDOT stationing for State highways and LCDOT stationing for County highways, including all station equations. _____
37. Label the station and offset at the following points: _____
 - All proposed take and easement corners. _____
 - Intersection of all property lines with the proposed right-of-way lines and easement lines. _____
38. The station of the intersection of the proposed centerline with all Section and Quarter Section lines should be shown. _____
39. The bearing and distance of all section and quarter section lines measured for the project shall be shown. _____
40. Show all found monumentation with reference to true corner location. (Note: Following the completion of construction, all property corner monumentation found where new R.O.W. was not acquired shall be verified to still be in place. Any property corner monumentation destroyed during construction is to be replaced in the previously located positions. This will be coordinated with the Resident Engineer). _____
41. Show all set monumentation. (Note: Monumentation for proposed R.O.W. is to be placed after completion of construction in areas that may be disturbed during construction, e.g., temporary construction easements. The consultant will be notified by the Resident Engineer). _____
42. List in tabular form the state plane coordinates for: _____
 - All centerline control points
 - P.C., P.I., P.T.
 - Station equations
 - Project begin and project end points
 - Proposed right of way monuments
 - All found monumentation
 - All section/quarter section corners utilized.
 - Header for coordinate table text box.

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

Items 43 and 44 shall be completed after initial approval.

43. Monument Record Documents should be prepared and recorded for Section/Quarter Section corners utilized for which no Monument Record exists. New Monument Records should be prepared and recorded for those documents which show ties within the proposed right-of-way. _____
44. Submit one complete set of signed and sealed mylars, a MicroStation file (.dgn), a .pdf file of the signed Plat of Highways, and the legal descriptions in Microsoft Word format and in a .pdf file. _____



A Subsidiary of GZA



GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION
MANAGEMENT

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

March 23, 2016

Mr. Dan Bruckelmeyer, P.E.
Vice President – Project Manager
Bollinger, Lach & Associates, Inc.
333 Pierce Road, Suite 200
Itasca, IL 60143

**Re: Phase II Environmental Services – PESA and PSI
Intersection Improvement Miller Road and US Route 12 – Lake Zurich, Lake County, IL.
Proposal No.: 81.PT000015.17**

Dear Mr. Bruckelmeyer:

Huff & Huff, Inc., a subsidiary of GZA GeoEnvironmental, Inc. (Consultant) is pleased to submit this proposal to Bollinger, Lach & Associates, Inc. (Client) to provide Phase I environmental services in conjunction with the proposed intersection improvement project at Miller Road and US Route 12, located in the Village of Lake Zurich, Lake County, Illinois. This proposal presents our project understanding based on information provided by Client including our proposed the scope of services and associated fee.

1. PROJECT UNDERSTANDING

We understand the project limits along Miller Road extend both east and west of US Route 12, for a currently undetermined distance (assume to be approximately 500 feet in each direction). The proposed improvement is to provide exclusive left turn lanes on Miller Road and revise the signal phasing to provide protected left turns with final configuration to be determined during the design process.

Consultant has been requested to provide environmental services including a Preliminary Environmental Site Assessment (PESA) and Preliminary Site Investigation (PSI). Consultant performs PESAs for local roads while IDOT completes PESAs for state right of way portions of the project; however, Consultant will complete the PESA for the local roads portions. In addition, combined with the PSI activities, Consultant recommends including preparation of LPC-Form documentation for consideration of final disposition of spoils at a Clean Construction and Demolition Debris (CCDD) facility.

2. SCOPE OF SERVICES

Task 1 – Preliminary Environmental Site Assessment (PESA)

The process will follow general protocols contained within:

- A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation (IDOT) Highway Projects (Erdmann et al., 2012)
- ASTM International (ASTM) standard 1527-13



- The IDOTs Bureau of Design and Environment (BDE) Procedure Memorandum Number 10-07, *Special Waste Procedures*. This memo was incorporated into Chapter 27-3 of the IDOT BDE Manual in June 2012.
- IDOT Bureau of Local Roads and Streets (BLRS) Manual, Chapter 20-12, Special Waste, July 2013.
- Public Act 96-1416
- Clean Construction or Demolition Debris Fill Operations (CCDD) and Uncontaminated Soil Fill Operations: Amendments to 35 Illinois Administrative Code 1100. Effective on August 27, 2012.

A. Historical Research

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

B. Site Evaluation

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

C. Records Review

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

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

D. Report Preparation

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

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



Task 2 – Preliminary Site Investigation (PSI)

Consultant has used its knowledge of the project area to determine the preliminary scope identified below, based on an understanding of the documented Leaking Underground Storage Tank (LUST) site at the SW corner of the intersection. Currently, we understand that impacted soils and/or groundwater exist in the right-of-way to the north and east of the LSUT site.

A. Soil Borings and Sampling

It is anticipated that a single day of field effort will be required with up to 10 borings completed, assumed with the aid of traffic control services. The borings will be advanced and soil samples collected for laboratory analysis to address sites identified as PIPs for soil disposal considerations, specifically at locations identified for proposed excavation. The depths of the soil borings will be dependent upon design details to account for depths of proposed disturbance. Consultant will determine depths of planned borings prior to mobilization consistent with project plans as provided by Client, in conjunction with PESA findings. Currently it is estimated that borings will be advanced to approximately 12 feet below ground surface.

B. Analytical

Laboratory analysis of soil samples is proposed to be consistent with constituents of concern (COCs) as determined from the PESA as presented below.

Boring locations where petroleum products or other volatile organic compounds represent the primary concern, samples will be field screened with a photoionization detector (PID). The sample with the highest PID reading in each boring will be analyzed for:

- **Volatile Organic Compounds** (up to 2 samples) – VOCs are volatile compounds found in gasoline and related to various solvents;
- **Benzene, toluene, ethylbenzene, and total xylenes (BTEX) as well as methyl-tert-butyl-ether (MTBE)** (up to 6 samples) – BTEX / MTBE are volatile compounds found in gasoline;
- **Polynuclear Aromatic Compounds (PNAs) and pH** (up to 8 samples) – PNAs are semi-volatile compounds commonly formed during incomplete combustion of organic compounds. PNAs can be formed by the combustion of wood, coal, and petroleum products. They are also found in less refined, nonvolatile petroleum products and can be used to identify potential for diesel or fuel oil contamination in soil.

Other field screening factors such as visual, or proximity to potential sources of known contamination to determine which samples will be analyzed to identify the presence of:

- **RCRA Metals, total and SPLP methods** (up to 4 samples) – Federal environmental regulations identify eight (8) heavy metals as hazardous if present in a *solid waste* at concentrations above varying threshold concentrations. Samples will be analyzed for select RCRA Metals, some of which may require further SPLP for consideration as CCDD (2 samples).

In addition, up to sixteen (16) soil samples will be analyzed for soil pH.



C. PSI Report Preparation

A report summarizing the results of the soil sample collection activities and analytical results will be prepared, including results of the updated database search for a PESA update. This document will present information pertinent for the bidding documents regarding conditions of soils tested, handling and final disposition considerations.

D. CCDD (LPC-Form) Documentation

The soil sample results will be compared to the Maximum Allowable Concentrations (MACs) associated with CCDD facility acceptance, including the soil pH range of 6.25 to 9.0. If results achieve the MAC values, Consultant will prepare the LPC-663 document that will be signed/stamped by the Consultant. This proposal assumes the potential for requiring a separate form for each area to account for this currently unknown situation.

Any locations that do not achieve the MACs (including soil pH range) will be identified as exclusion zones, not acceptable for CCDD facility disposal.

Task 3 – QA/QC

Time under this task includes QA/QC time for the PESA report as described above.

Task 4 – Project Management

Time under this task includes project administration and management activities that include cost and schedule tracking, coordination with Client on authorized activities, document production and other in-house management activities.

3. PROJECT COSTS

Costs have not been requested at this time and will be provided to Client upon request.

4. LEVEL OF EFFORT AND SCHEDULE

PESA work will commence within 10 business days of project approval, with a target completion date of six weeks from the date of approval. This schedule can be adjusted to accommodate the schedule of the project owner to ensure milestones are met and/or coordination with geotechnical sampling efforts.

5. TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

© 2008 by GZA GeoEnvironmental, Inc.

Bolinger, Lach & Associates, Inc.:

Proposal No 81.PT00015.17:

Site: Miller Road @ US Route 12 Intersection Improvements, Lake Zurich, IL

These Terms and Conditions, together with Consultant's Proposal, make up the Agreement between with Bolinger, Lach & Associates, Inc. named above.

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



2. Standard of Care. H&H will perform the services with the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services at the same time under similar conditions in the same or similar locality. **NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTY OF MARKETABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE OR INTENDED BY H&H'S PROPOSAL OR BY ANY OF H&H'S ORAL OR WRITTEN REPORTS.**

3. Payment.

- a. Except as otherwise stated in the Proposal, you will compensate H&H for the services at the rates set forth in the applicable Proposal, amendment or change order; reimburse its expenses, which will include a communication fee calculated as a percentage of labor invoiced; and pay any sales or similar taxes thereon.
- b. Any retainer specified in H&H's Proposal shall be due prior to the start of services and will be applied to the final invoice for services.
- c. H&H will submit invoices periodically, and payment will be due within 20 days from invoice date. Overdue payments will bear interest at 1½ percent per month or, if lower, the maximum lawful rate. H&H may terminate its services upon 10 days' written notice anytime your payment is overdue on this or any other project and you will pay for all services through termination, plus termination costs. You will reimburse H&H's costs of collecting overdue invoices, including reasonable attorneys' fees.

4. Your Responsibilities.

- a. Except as otherwise agreed, you will secure the approvals, permits, licenses and consents necessary for performance of the services. If you are the owner or operator of the Site, you will provide H&H with all documents, plans, information concerning underground structures (including but not limited to utilities, conduits, pipes, and tanks), information related to hazardous materials or other environmental or geotechnical conditions at the site and other information that may be pertinent to the services or, if you are not the owner or operator of the Site, you agree to make reasonable efforts to obtain these same documents and provide them to H&H. Unless otherwise indicated in writing, H&H will be entitled to rely on documents and information you provide.
- b. If you use the services of a construction contractor at the Site, you agree to use best and reasonable efforts to include in your agreement(s) with the construction contractor provisions obligating the latter:
 - (i) to indemnify, defend and hold harmless, to the fullest extent permitted by law, you and H&H, its officers, employees and principals, for or on account of any claims, liabilities, costs and expenses, including attorneys' fees, arising out of or relating to the design or implementation of construction means, methods, procedures, techniques, and sequences of construction, including safety precautions or programs, of the contractor, or any of its subcontractors or any engineer engaged by it;
 - (ii) to name you and H&H as additional insureds under general liability and builder's risk insurance coverages maintained by the contractor, or any of its subcontractors; and
 - (iii) to require that all of its subcontractors agree and be bound to the obligations set forth in (i) and (ii) above.
- c. In the event that you are unable to secure such provisions in the agreement(s) with the construction contractor, you shall promptly notify H&H and H&H shall have the opportunity to negotiate with you reasonable substitute risk allocation and insurance indemnities and protections.

5. Right of Entry. You grant H&H and its subcontractor(s) permission to enter the site to perform the services. If you do not own the site, you represent and warrant that the owner has granted permission for H&H to enter the site and perform the services; you will provide reasonable verification on request; and you will indemnify H&H for any claims by the site owner related to alleged trespass by H&H or its subcontractors.

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



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

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

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

10. Changed Conditions.

- a. You recognize the uncertainties relating to the furnishing of professional services, which often require a phased or exploratory approach, with the need for additional services becoming apparent during the initial services. You also recognize that actual conditions encountered may vary significantly from those anticipated, that laws and regulations are subject to change, and that the requirements of regulatory authorities are often unpredictable.
- b. If changed or unanticipated conditions or delays make additional services necessary or result in additional costs or time for performance, H&H will notify you and the parties will negotiate appropriate changes to the scope of services, compensation and schedule.
- c. If no agreement can be reached, H&H will be entitled to terminate its services and to be equitably compensated for the services already performed. H&H will not be responsible for delays or failures to perform due to weather, labor disputes, intervention by or inability to get approvals from public authorities, acts or omissions on your part or any other causes beyond H&H's reasonable control, and you will compensate H&H for any resulting increase in its costs.

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

12. Electronic Media. In accepting and utilizing any drawings, reports and data on any form of electronic media generated by H&H, you covenant and agree that all such electronic files are instruments of service of H&H, who shall be deemed the author, and shall retain all common law, statutory law and other rights, including copyrights. In the event of a conflict between the signed documents prepared by H&H and electronic files, the signed documents shall govern. You agree not to reuse these electronic files, in whole or in part, for any purpose or project other than the project that is the subject of this Agreement. Any transfer of these



electronic files to others or reuse or modifications to such files by you without the prior written consent of H&H will be at the user's sole risk and without any liability to H&H.

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

14. Insurance. During performance of the services, H&H will maintain workers compensation, commercial general liability, automobile liability, and professional liability insurance. H&H will furnish you certificates of such insurance on request.

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

16. Limitation of Remedies.

- a. To the fullest extent permitted by law and notwithstanding anything else in this Agreement to the contrary, the aggregate liability of H&H and its affiliates and subcontractors and their employees, officers, directors and agents (collectively referred to in this paragraph as "H&H") for all claims arising out of this Agreement or the services is limited to \$50,000 or, if greater, 10% of the compensation received by H&H under this Agreement.
- b. You may elect to increase the limit of liability by paying an additional fee, such fee to be negotiated prior to the execution of this Agreement.
- c. Any claim will be deemed waived unless received by H&H within one year of substantial completion of the services.
- d. H&H will not be liable for lost profits, loss of use of property, delays, or other special, indirect, incidental, consequential, punitive, exemplary or multiple damages.
- e. H&H will not be liable to you or the site owner for injuries or deaths suffered by H&H's or its subcontractors' employees.
- f. You will look solely to H&H for your remedy for any claim arising out of or relating to this Agreement, including any claim arising out of or relating to alleged negligence or errors or omissions of any H&H principal, officer, employee or agent.

17. Disputes.

- a. All disputes between you and H&H shall be subject to non-binding mediation.
- b. Either party may demand mediation by serving a written notice stating the essential nature of the dispute, the amount of time or money claimed, and requiring that the matter be mediated within forty-five (45) days of service of notice.
- c. The mediation shall be administered by the American Arbitration Association in accordance with its most recent Construction Mediation Rules, or by such other person or organization as the parties may agree upon.
- d. No action or suit may be commenced unless mediation has occurred but did not resolve the dispute, or unless a statute of limitation period would expire if suit were not filed prior to such forty-five (45) days after service of notice.

18. Miscellaneous.

- a. Illinois law shall govern this Agreement.
- b. The above terms and conditions regarding Limitation of Remedies and Indemnification shall survive the completion of the services under this Agreement and the termination of the contract for any cause.
- c. Any amendment to these Terms and Conditions must be in writing and signed by both parties.



- d. Having received these Terms and Conditions, your oral authorization to commence services, your actions, or your use of the Report or Work Product constitutes your acceptance of them.
- e. This Agreement supersedes any contract terms, purchase orders or other documents issued by you.
- f. Neither party may assign or transfer this Agreement or any rights or duties hereunder without the written consent of the other party.
- g. Your failure or the failure of your successors or assigns to receive payment or reimbursement from any other party for any reason whatsoever shall not absolve you, your successors or assigns of any obligation to pay any sum to H&H under this agreement.
- h. These Terms and Conditions shall govern over any inconsistent terms in H&H's Proposal.
- i. The provisions of this Agreement are severable; if any provision is unenforceable it shall be appropriately limited and given effect to the extent it is enforceable.
- j. The covenants and agreements contained in this Agreement shall apply to, inure to the benefit of and be binding upon the parties hereto and upon their respective successors and assigns.

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

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

CONSULTANT
HUFF & HUFF, INC.

CLIENT
BOLINGER, LACH & ASSOCIATES, INC.

Signature

Signature

Linda L. Huff, P.E.

Typed Name

Typed Name

Principal

Officer's Title

Officer's Title

March 24, 2016

Date

Date



Payroll Escalation Table
Fixed Raises

FIRM NAME Huff & Huff, Inc.
PRIME/SUPPLEMENT Bolinger, Lach & Associates

DATE 3/24/2016
PTB NO. _____

CONTRACT TERM 12 MONTHS
START DATE 5/1/2016
RAISE DATE 3/1/2017

OVERHEAD RATE 171.26%
COMPLEXITY FACTOR 0
% OF RAISE 3.00%

ESCALATION PER YEAR

5/1/2016 - 3/1/2017

3/2/2017 - 5/1/2017

10
12

2
12

= 83.33%
= 1.0050

17.17%

The total escalation for this project would be:

0.50%



Payroll Rates

FIRM NAME	Huff & Huff, Inc.
PRIME/SUPPLEMENT	<u>Bolinger, Lach & Associates</u>
PTB NO.	

DATE 3/24/2016

ESCALATION FACTOR **0.50%**

[illegible]



Illinois Department of Transportation

Cost Estimate of Consultant Services (CPFF)

Firm Huff & Huff, Inc.
Route Miller Road
Section US Route 12 Intersection
County Lake
Job No.
PTB & Item

Date 3/24/2016

Overhead Rate 171.26%

Complexity Factor 0

Item	Manhours	Payroll	Overhead & Fringe Benefits	In-House Direct Costs	Fixed Fee	Outside Direct Costs	Services By Others	Total	% of Grand Total
PESA	45.5	1,482.15	2,538.34	69.30	593.02	360.00	4,400.00	9,442.81	48.82%
PSI/CCDD	58	1,874.72	3,210.64	120.75	754.89	2,756.00	0.00	8,716.99	45.06%
QA/QC	4	220.42	377.49	0.00	86.70	0.00	0.00	684.61	3.54%
Project Management	4	160.84	275.45	0.00	63.26	0.00	0.00	499.56	2.58%
TOTALS	111.5	3,738.13	6,401.92	190.05	1,497.87	3,116.00	4,400.00	19,343.97	100.00%

Method of Compensation:

- ☒ 14.5%[DL + R(DL) + OH(DL) + IHDC]
☐ 14.5%[DL + R(DL) + 1.4(DL) + IHDC]
☐ 14.5%[(2.3 + R)DL + IHDC]
☐ Specific Rate
☐ Lump Sum

Average Hourly Project Rates

Route Miller Road
Section US Route 12 Intersection
County Lake
Job No.
PTB/Item

Consultant Huff & Huff, Inc.

Date 3/24/2016

Sheet 1 **OF** 1

Payroll Classification	Avg Hourly Rates	Total Project Rates			PESA			PSI/CCDD			QA/QC			Project Management					
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	70.00	2	1.79%	1.26							2	50.00%	35.00						
Senior Geotechnical Cons.	58.37	0																	
Senior Consultant	58.24	0																	
Senior Geologist PM	48.86	0																	
Geologist PM	30.79	0																	
Senior Engineering PM	46.64	0																	
Engineering PM	38.51	0																	
Assistant PM Engineer II	37.27	0																	
Assistant PM Engineer I	31.82	86	77.13%	24.54	36	79.12%	25.17	50	86.21%	27.43									
Engineer 1	29.71	0																	
Senior Scientist PM	40.21	11	9.87%	3.97	2	4.40%	1.77	3	5.17%	2.08	2	50.00%	20.11	4	100.00%	40.21			
Scientist PM I	40.02	0																	
Assistant PM Scientist	25.64	0																	
Senior Technical Scientist	34.17	0																	
Environmental Scientist E1	23.86	0																	
Senior Planning PM	45.27	0																	
Planning PM	32.80	0																	
Senior Technical Specialist	43.09	3	2.69%	1.16	2	4.40%	1.89	1	1.72%	0.74									
Senior CADD Specialist	31.36	7	6.28%	1.97	4	8.79%	2.76	3	5.17%	1.62									
Administrative Managers	37.31	0.5	0.45%	0.17	0.5	1.10%	0.41												
Sr. Administrative Assistant	26.01	2	1.79%	0.47	1	2.20%	0.57	1	1.72%	0.45									
Administrative Assistant	21.27	0																	
Senior PM II (on call)	57.98	0																	
Senior PM I (on call)	39.08	0																	
Engineering Intern	18.09	0																	
Intern	15.58	0																	
		0																	
		0																	
		0																	
		0																	
TOTALS		111.5	100%	\$33.53	45.5	100%	\$32.57	58	100%	\$32.32	4	100%	\$55.11	4	100%	\$40.21	0	0%	\$0.00

HUFF & HUFF, INC.

SUMMARY OF INHOUSE DIRECT COSTS

Project: BLA Miller Rd PESA PSI

DIRECT

Task 1 - PESA

Trips - Company	80 miles	x	1	x	\$	0.54	=	\$	43.20
Tolls			4	x	\$	1.50	=	\$	6.00
Reproduction	3 sets	x	150	x	\$	0.03	=	\$	13.50
Color copies	3 sets	x	10	x	\$	0.11	=	\$	3.30
Photo sheets	3 sets	x	10	x	\$	0.11	=	\$	3.30
			0	x	\$	-	=	\$	-
Task Total									\$ 69.30

Task 2 - PSI

Trips - Company	80 miles	x	2	x	\$	0.54	=	\$	86.40
Tolls			8	x	\$	1.50	=	\$	12.00
Reproduction	3 sets	x	175	x	\$	0.03	=	\$	15.75
Color copies	3 sets	x	10	x	\$	0.11	=	\$	3.30
Photo sheets	3 sets	x	10	x	\$	0.11	=	\$	3.30
			0	x	\$	-	=	\$	-
Task Total									\$ 120.75

Task 3 - QA/QC

0	x	\$	-	=	\$	-
Task Total						\$ -

Task 4 - Project Management

0	x	\$	-	=	\$	-
Task Total						\$ -

GRAND TOTAL \$ 190.05

HUFF & HUFF, INC.

SUMMARY OF OUTSIDE DIRECT COSTS

Project: BLA Miller Rd PESA PSI

				<u>OUTSIDE</u>			
Task 1 - PESA							
Maps/Aerials				1	x	\$	90.00 = \$ 90.00
Federal Express				1	x	\$	20.00 = \$ 20.00
Records Search				1	x	\$	250.00 = \$ 250.00
<hr/>				0	x	\$	- = \$ -
				Task Total		\$	360.00
Task 2 - PSI							
Federal Express				1	x	\$	20.00 = \$ 20.00
Field Kit	1 day	x		1	x	\$	30.00 = \$ 30.00
PID	1 day	x		1	x	\$	100.00 = \$ 100.00
pH meter	1 day	x		1	x	\$	10.00 = \$ 10.00
VOCs (w/5035)	1 ea	x		2	x	\$	138.00 = \$ 276.00
BTEX/MTBE (w/5035)	1 ea	x		6	x	\$	95.00 = \$ 570.00
PNAs	1 ea	x		8	x	\$	105.00 = \$ 840.00
RCRA total	1 ea	x		4	x	\$	65.00 = \$ 260.00
RCRA SPLP/TCLP	1 ea	x		2	x	\$	165.00 = \$ 330.00
pH	1 ea	x		16	x	\$	20.00 = \$ 320.00
<hr/>				0	x	\$	- = \$ -
				Task Total		\$	2,756.00
Task 3 - QA/QC							
<hr/>				0	x	\$	- = \$ -
				Task Total		\$	-
Task 4 - Project Management							
<hr/>				0	x	\$	- = \$ -
				Task Total		\$	-
				GRAND TOTAL		\$	3,116.00

HUFF & HUFF, INC.
SUMMARY OF SERVICES BY OTHERS
Project: BLA Miller Rd PESA PSI

				<u>OUTSIDE</u>
<i>Task 1 - PESA</i>				
Driller (day)	1	x	\$ 2,200.00	= \$ 2,200.00
Traffic Control (day)	1	x	\$ 2,200.00	= \$ 2,200.00
	0	x	\$ -	= \$ -
			Task Total	\$ 4,400.00
<i>Task 2 - PSI</i>				
	0	x	\$ -	= \$ -
			Task Total	\$ -
<i>Task 3 - QA/QC</i>				
	0	x	\$ -	= \$ -
			Task Total	\$ -
<i>Task 4 - Project Management</i>				
	0	x	\$ -	= \$ -
			Task Total	\$ -
<hr/>				
GRAND TOTAL				\$ 4,400.00

\\Gzachicago\finance\PROPOSALS\Proposal-FY2017\BLA\[81.PT00015.17 BLA Miller Rd IDOT CECS CPFF BLR.xls]C

April 4, 2016

To: **Dan Bruckelmeyer, P.E.**
Vice President
Project Manager
Bollinger, Lach & Associates, Inc.
333 Pierce Road, Suite 200
Itasca, IL 60143
630-438-6400
630-438-6444 Fax

Re: Proposal - Geotechnical Exploration
Proposed Miller Road @ US-12
Ela Township
Lake County, Illinois

Proposal No. Q16.153g

Via email: DBruckelmeyer@bollingerlach.com

Dear Mr. Bruckelmeyer,

Rubino Engineering, Inc. (Rubino) is pleased to submit the following proposal to provide geotechnical engineering services for the above referenced project. Rubino received a request for proposal from you via email on March 29, 2016.

PROJECT UNDERSTANDING

Rubino understands that the Lake County Division of Transportation is planning to improve Miller Road at US-12 by widening Miller Road to accommodate left turn lanes.



Information received:

- RFP Email
- Page 6 of BLA proposal to LCDOT
- Scope by Huff and Huff dated March 24, 2016

Should any of the information on which this proposal has been based, including as described above, be inconsistent with the planned construction, Rubino requests to be contacted immediately in order to make any necessary changes to this proposal and scope of work.

SCOPE OF SERVICES

The following sections outline the scope of services developed based on the information provided by the client and the information listed above in order to provide a geotechnical

exploration the planned project. The exploration will be performed in general accordance with both the requested proposal information and Rubino's current understanding of the project.

Site Access and Traffic Control

Based on current site topography, surface conditions, and project discussions, Rubino anticipates that the proposed boring locations will be accessible to truck-mounted drilling equipment and will not require an all-terrain vehicle (ATV). If an ATV is needed, an additional charge will apply.

Traffic control will consist of cones, Approach signage, and flaggers. Rubino anticipates that the drill rig will require partial / full lane closure.

Pavement Cores

To obtain data to evaluate subsurface conditions within the proposed development/construction areas, Rubino proposes to drill soil test borings as specified below.

NUMBER OF CORES	SUBBASE STONE THICKNESS	IDOT PERMIT NEEDED?	LOCATION
2	YES	NO	One on either side of Miller Road
2	YES	YES	One on either side of Rand Road

Boring Depths

To obtain data to evaluate subsurface conditions within the proposed development/construction areas, Rubino proposes to drill soil test borings as specified below.

NUMBER OF BORINGS	DEPTH (FEET BEG*)	LOCATION
6	12.5 feet	3 borings on each side of US 12

*BEG = below existing grade

Rubino recommends that the borings be located and surveyed for elevation by others prior to drilling. If the borings cannot be surveyed, Rubino will locate the borings in the field by measuring distances from known, fixed site features.

Soil Sampling

Soil sampling will include split-barrel samples (ASTM D 1586) or thin-walled tube samples on cohesive soils (ASTM D 1587) at 2 ½ - foot intervals to a depth of 10 feet and 5 - foot intervals thereafter.

If unsuitable bearing soils are encountered within the borings as proposed herein, the borings will be extended an additional 5 feet to attempt to end the borings in suitable soils. If unsuitable soils persist at the end of an additional 5 feet the client will be contacted prior to demobilizing.

Unsuitable soils will be defined by field personnel using the following criteria:

- Cohesive soils with an N value less than or equal to 6.
- Granular soils with an N-value less than 10.
- Black cohesive or silty soil with visible signs of organic matter and / or organic odor and low blow counts as described above.

Completion of Borings

Upon completion of drilling, the borings will be backfilled with soil cuttings and capped with **asphalt cold patch**. Some damage to ground surface may result from the drilling operations near the work areas and along ingress/egress pathways. Rubino will attempt to minimize such damage, but no restoration other than backfilling the soil test borings is included.

It should be noted that over time, some settlement may occur in the bore hole. If Rubino is requested to return to the site for the purpose of filling any bore holes that may have settled, additional time and material charges may apply.

Laboratory Testing

The soil samples obtained during the field exploration program will be transported to the laboratory for classification and a limited number of laboratory tests. The nature and extent of the laboratory testing program is at the discretion of Rubino Engineering, Inc. and will depend upon the subsurface conditions encountered during drilling.

Laboratory testing will be performed in accordance with ASTM procedures and may include examination of selected samples to evaluate the soils' index properties and relative strength characteristics.

LABORATORY TEST	ESTIMATED QUANTITY	SAMPLE TYPE
Atterberg Limits	6	Split spoon, bulk, or Shelby Tube
Hydrometer	6	Split spoon, bulk, or Shelby Tube
Natural Moisture Content	30	Shelby Tube, Cohesive Samples
Organic Content	6	Split spoon, bulk, or Shelby Tube

GEO REPORT

Upon completion of field and laboratory work, Rubino will prepare a geotechnical engineering report using the collected data. The geo report will include the following:

- *Summary of client-provided project information and report basis*
- *Overview of encountered subsurface conditions*
- *Overview of field and laboratory tests performed including results*
- *Geotechnical recommendations pertaining to:*
 - *Subgrade preparation and stability*
- *Construction considerations, including temporary excavation and construction control of water*

An electronic copy of the report will be provided. The report will be addressed to Bollinger Lach & Associates.

PROJECT SCHEDULE

Rubino proposes to initiate work on this project within 5 working days after receiving written authorization to proceed and we will follow the schedule below in order to complete the project:

Task	Number of Working Days
Utility clearance and rig mobilization	5
Field work including site layout and drilling	3
Laboratory Testing	10
Preparation of the Geotechnical Report	5

Project schedules can be affected by weather conditions and changes in scope. If the report needs to be delivered by a specific day, please notify us as soon as possible. Preliminary verbal recommendations can be made to appropriate parties upon completion of the field investigation and laboratory testing. Rubino will need to receive a signed copy of this proposal intact prior to mobilizing the drill rig.

SPECIAL INSTRUCTIONS

Rubino will coordinate contacting the Utility "One-Call" for public utility clearance prior to the start of drilling activities. It is Rubino's experience that this service does not mark the locations of privately owned utilities. This proposal is based on private utility lines and other subsurface appurtenances being located in the field by others prior to our mobilization.

FEES

Rubino proposes to charge the fee for performance of the outlined scope of services on a cost plus fixed fee basis. Based on the scope of services outlined above, the estimated fee will be:

\$6,643.50 (see attached CECS)

Please see the attached fee schedule for additional unit rates for services requested after issuing the geotechnical report (drawing / spec review, scope or site layout change, etc.).

Scope Limitations

Project services do not include a site evaluation to determine the presence or absence of wetlands, hazardous substances, or toxic materials.

Rock coring is not included in the scope of this exploration, therefore, the character and continuity of refusal materials, if encountered, can be determined only with a more comprehensive scope of services. Therefore, the borings will be advanced to the depths referenced above, or to refusal, whichever is shallower.

Boring, sampling and testing requirements are a function of the subsurface conditions encountered. The proposed lump-sum fee is based on the use of shallow foundations to support the planned construction and the existence of adequate bearing materials being encountered within the proposed boring depths. Should conditions be encountered which require a deepening of borings or additional investigation, Rubino will notify you to discuss modifying the outlined scope of services. Additional work beyond the lump-sum fee will not be performed without your prior authorization.

AUTHORIZATION

If this proposal is acceptable to you, Rubino will perform the work in accordance with the attached General Conditions that are incorporated into and made a part of this proposal. Please sign below as notice to proceed and return one copy of this proposal intact to our office. Rubino will proceed with the work upon receipt of authorization.

Rubino appreciates the opportunity to offer our services for this project and we look forward to working with your company. Please contact Rubino with questions pertaining to this proposal or requests for additional services.

Respectfully submitted,

RUBINO ENGINEERING, INC.



Michelle A. Lipinski, PE
President

**RUBINO ENGINEERING, INC. IS:
AN AASHTO-ACCREDITED LABORATORY
IDOT PREQUALIFIED
IDOT DBE-CERTIFIED (100% WOMAN-OWNED)**

MAL/file

Attachments: Proposal Acceptance and Data Sheet
 Schedule of Services and Fees
 General Conditions

**This is an electronic copy. Hard Copies of this proposal are available upon request.

PROPOSAL ACCEPTANCE:

AGREED TO, THIS _____ DAY OF _____, 2016.
BY (please print): _____
TITLE: _____
COMPANY: _____
SIGNATURE: _____

PROJECT INFORMATION:

1. Project Name: _____
2. Project Location: _____
3. Your Job No: _____ Purchase Order No.: _____
4. Project Manager: _____ Telephone No.: _____
5. Site Contact: _____ Telephone No.: _____
6. Number and Distribution of Reports:

() Copies To: _____ _____ _____ Attn: _____ Email: _____	() Copies To: _____ _____ _____ Attn: _____ Email: _____
() Copies To: _____ _____ _____ Attn: _____ Email: _____	() Copies To: _____ _____ _____ Attn: _____ Email: _____
7. Invoicing Address: _____

Attn: _____
Email: _____
8. Other Pertinent Information Or Previous Subsurface Information Available:

Rubino Engineering, Inc.
2016 Schedule of Geotechnical Services & Fees

ENGINEERING

Professional and Technical Services for site evaluation, field supervision, analysis of test data and engineering recommendations and consultation:

Principal Engineer	Per Hour	\$	150.00
Project Engineer/Manager	Per Hour	\$	100.00
Engineering Field Technician / Field Engineer / Field Geologist	Per Hour	\$	89.00
Secretarial Services	Per Hour	\$	55.00

SUBSURFACE EXPLORATION

Mobilization and moving of truck-mounted drilling equipment and crew	Per Trip	\$	550.00
Mobilization and moving of All-Terrain-Vehicle (ATV) - mounted drilling equipment and crew	Per Trip	\$	660.00
All-Terrain Vehicle (ATV) Usage Surcharge	Per Day	\$	195.00
Boring Layout - Two-man crew (2 hour minimum)	Per Hour	\$	166.00

Soil Sampling using split-barrel sampler (ASTM D-1586) 2.5-foot intervals to 15 feet and 5-foot intervals thereafter, 3-1/4" E.D. HAS:

Depth Range		
Feet	Easy Drilling*	Hard Drilling**
0 - 25	\$24.50	\$27.00
25 - 50	\$26.50	\$29.00
50 - 72	\$30.50	\$31.00
75 - 100	\$32.00	\$33.50

* Less than 50 blows per foot or a Qp of 4 tsf

** 50 blows or more per foot, Qp more than 4 tsf, or strata containing coarse gravel or cobbles

Hourly Rate Drilling (difficult or unusual conditions, hard material, boulders, rubble, etc.)	Per Hour	\$	325.00
Thin Wall Tubes (ASTM D-1587)	Each	\$	50.00

LABORATORY TESTING

Moisture Content Test / Visual Classification	Each	\$	6.00
Atterberg Limits Determination (LL, PL)	Each	\$	85.00
Combined Hydrometer & Sieve Analysis	Each	\$	130.00
Sieve Analysis (washed)	Each	\$	85.00
Unconfined Compression Test, Tube Sample	Each	\$	35.00
Unconfined Compression Test, with Stress-Strain Curve	Each	\$	55.00
Density Determination	Each	\$	15.00
Specific Gravity Determination	Each	\$	65.00
Organic Content Determination Test (wet combustion)	Each	\$	25.00
ASTM D698 - AASHTO T99 (Standard Proctor)	Each	\$	195.00
ASTM D1557 - AASHTO T180 (Modified Proctor)	Each	\$	215.00
One-Dimensional Consolidation Test (ASTM D-2435)	Each	\$	750.00

FEE REMARKS

- 1) All fees and services are provided in accordance with the attached Rubino General Conditions.
- 2) Unit prices/rates are in effect for 12 months from the date of this proposal and are subject to change without notice thereafter.
- 3) Overtime rates are applicable for services performed in excess of 8 hours per day Monday through Friday, before 8:00 AM or after 5:00 PM, and for all hours worked on Saturdays, Sundays and holidays. The overtime rate is 1.5 times the applicable hourly rate.
- 4) All rates are billed on a portal-to-portal basis.
- 5) Standby time due to delays beyond Rubino's control will be charged at the applicable hourly rate.
- 6) Transportation and per diem are charged at the applicable rates.
- 7) Rates involving mileage (including transportation, mobilization, vehicle and trip charges) are subject to change based upon increases in the national average gasoline price.
- 8) A minimum charge of 4 hours applies to field testing and observation services.
- 9) Scheduling or cancellation of field testing and observation services is required no less than the working day prior to the date the services are to be performed. Services cancelled without advance and/or inadequate notice will be assessed a minimum charge of 4 hours.
- 10) For all Rubino services, a project management/engineering review charge will be billed for all reports issued for the scheduling/supervision of personnel and the evaluation/review of data and reports.
- 11) The minimum billing increment for time is a half hour.
- 12) A project set-up charge of a minimum of two hours applies to all projects.
- 13) Professional services rates are exclusive of expert deposition or testimony time.
- 14) Drilling and field service rates are based on OSHA Level D personnel protection.
- 15) For sites where drilling is to occur that are not readily accessible to a truck mounted drill rig, rates for rig mobility, site clearing, crew stand-by time, etc. will be charged as applicable.
- 16) If applicable the prevailing wage fees charged under this agreement will be adjusted if there is any change in the applicable prevailing wage rate established by the Illinois Department of Labor.
- 17) Services and fees not listed on this schedule may be quoted on request.

GENERAL CONDITIONS

1. PARTIES AND SCOPE OF WORK: Rubino Engineering, Inc. shall include said company or its particular division, subsidiary or affiliate performing the work. "Work" means the specific geotechnical, analytical, testing or other service to be performed by Rubino Engineering, Inc. as set forth in Rubino Engineering, Inc.'s proposal, Client's acceptance thereof and these General Conditions. Additional work ordered by Client shall also be subject to these General Conditions. "Client" refers to the person or business entity ordering the work to be done by Rubino Engineering, Inc. If Client is ordering the work on behalf of another, Client represents and warrants that it is the duly authorized agent of said party for the purpose of ordering and directing said work. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the work ordered by the client is adequate and sufficient for Client's intended purpose. Client shall communicate these General Conditions to each and every third party to whom Client transmits any part of Rubino Engineering, Inc.'s work. Rubino Engineering, Inc. shall have no duty or obligation to any third party greater than that set forth in Rubino Engineering, Inc.'s proposal, Client's acceptance thereof and these General Conditions. The ordering of work from Rubino Engineering, Inc., or the reliance on any of Rubino Engineering, Inc.'s work, shall constitute acceptance of the terms of Rubino Engineering, Inc.'s proposal and these General Conditions, regardless of the terms of any subsequently issued document.

2. TESTS AND INSPECTIONS: Client shall cause all tests and inspection of the site, materials and work performed by Rubino Engineering, Inc. or others to be timely and properly performed in accordance with the plans, specifications and contract documents and Rubino Engineering, Inc.'s recommendations. No claims for loss, damage or injury shall be brought against Rubino Engineering, Inc. by Client or any third party unless all tests and inspections have been so performed and unless Rubino Engineering, Inc.'s recommendations have been followed. Client agrees to indemnify, defend and hold RUBINO ENGINEERING, INC., its officers, employees and agents harmless from any and all claims, suits, losses, costs and expenses, including, but not limited to, court costs and reasonable attorney's fees in the event that all such tests and inspections are not so performed or Rubino Engineering, Inc.'s recommendations are not so followed except to the extent that such failure is the result of the negligence, willful or wanton act of omission of Rubino Engineering, Inc., its officers, agents or employees, subject to the limitation contained in paragraph 9.

3. SCHEDULING OF WORK: The services set forth in Rubino Engineering, Inc.'s proposal and Client's acceptance will be accomplished in a timely, workmanlike and professional manner by RUBINO ENGINEERING, INC. personnel at the prices quoted. If Rubino Engineering, Inc. is required to delay commencement of the work or if, upon embarking upon its work, Rubino Engineering, Inc. is required to stop or interrupt the progress of its work as a result of changes in the scope of the work requested by Client, to fulfill the requirements of third parties, interruptions in the progress of construction, or other causes beyond the direct reasonable control of Rubino Engineering, Inc., additional charges will be applicable and payable by Client.

4. ACCESS TO SITE: Client will arrange and provide such access to the site as is necessary for Rubino Engineering, Inc. to perform the work. Rubino Engineering, Inc. shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as the result of its work or the use of its equipment; however, Rubino Engineering, Inc. has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires Rubino Engineering, Inc. to restore the site to its former condition, upon written request Rubino Engineering, Inc. will perform such additional work as is necessary to do so and Client agrees to pay Rubino Engineering, Inc. for the cost.

5. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that it has advised Rubino Engineering, Inc. of any known or suspected hazardous materials, utility lines and pollutants at any site at which Rubino Engineering, Inc. is to do work hereunder, and unless Rubino Engineering, Inc. has assumed in writing the responsibility of locating subsurface objects, structures, lines or conduits. Client agrees to defend, indemnify and save Rubino Engineering, Inc. harmless from all claims, suits, losses costs and expenses, including reasonable attorney's fees as a result of personal injury, death or property damage occurring with respect to Rubino Engineering, Inc.'s performance of its work and resulting to or caused by contact with subsurface of latent objects, structures, lines or conduits where the actual or potential presence and location thereof were not revealed to Rubino Engineering, Inc. by Client.

6. RESPONSIBILITY: Rubino Engineering, Inc.'s work shall not include determining, supervising or implementing the means, methods, techniques, sequences or procedures of construction. Rubino Engineering, Inc. shall not be responsible for evaluating, reporting or affecting job conditions concerning health, safety or welfare. Rubino Engineering, Inc.'s work or failure to perform same shall not in any way excuse any contractor, subcontractor or supplier from performance of its work in accordance with the contract documents. Rubino Engineering, Inc. has no right or duty to stop the contractor's work.

7. SAMPLE DISPOSAL: Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of Rubino Engineering, Inc.'s report.

8. PAYMENT: Client shall be invoiced once each month for work performed during the preceding period. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to for valid cause in writing with said thirty (30) day period at the rate of eighteen (18) percent per annum (or the maximum interest rate permitted under applicable law), until paid. Client agrees to pay Rubino Engineering, Inc.'s cost of collection of all amounts due and unpaid after sixty (60) days, including court costs and reasonable attorney's fees. Rubino Engineering, Inc. shall not be bound by any provision or agreement requiring or providing for arbitration or disputes or controversies arising out of this agreement, any provision wherein Rubino Engineering, Inc. waives any rights to a mechanics' lien, or any provision conditioning Rubino Engineering, Inc.'s right to receive payment for its work upon payment to Client by any third party. These General Conditions are notice, where required, that Rubino Engineering, Inc. shall file a lien whenever necessary to collect past due amounts. Failure to make payment within thirty (30) days of invoice shall constitute a release of Rubino Engineering, Inc. from any and all claims which Client may have, whether in tort, contract or otherwise and whether known or unknown at the time.

9. WARRANTY: RUBINO ENGINEERING, INC.'S SERVICES WILL BE PERFORMED, ITS FINDINGS OBTAINED AND ITS REPORTS PREPARED IN ACCORDANCE WITH ITS PROPOSAL, CLIENT'S ACCEPTANCE THEREOF, THESE GENERAL CONDITIONS AND WITH GENERALLY ACCEPTED PRINCIPLES AND PRACTICES. IN PERFORMING ITS PROFESSIONAL SERVICES, RUBINO ENGINEERING, INC. WILL USE THAT DEGREE OF CARE AND SKILL ORDINARILY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY MEMBERS OF ITS PROFESSION. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR REPRESENTATIONS, EITHER EXPRESSED OR IMPLIED. STATEMENTS MADE IN RUBINO ENGINEERING, INC. REPORTS ARE OPINIONS BASED UPON ENGINEERING JUDGMENT AND ARE NOT TO BE CONSTRUED AS REPRESENTATIONS OF FACT.

SHOULD RUBINO ENGINEERING, INC. OR ANY OF ITS PROFESSIONAL EMPLOYEES BE FOUND TO HAVE BEEN NEGLIGENT IN THE PERFORMANCE OF ITS WORK, OR TO HAVE MADE AND BREACHED ANY EXPRESSED OR IMPLIED WARRANTY, REPRESENTATION OR CONTRACT, CLIENT, ALL PARTIES CLAIMING THROUGH CLIENT AND ALL PARTIES CLAIMING TO HAVE IN ANY WAY RELIED UPON RUBINO ENGINEERING, INC.'S WORK, AGREE THAT THE MAXIMUM AGGREGATE AMOUNT OF THE LIABILITY OF RUBINO ENGINEERING, INC., ITS OFFICERS, EMPLOYEES AND AGENTS SHALL BE LIMITED TO \$25,000.00 OR THE TOTAL AMOUNT OF THE FEE PAID TO RUBINO ENGINEERING, INC. FOR ITS WORK PERFORMED WITH RESPECT TO THE PROJECT, WHICHEVER AMOUNT IS GREATER.

NO ACTION OR CLAIM, WHETHER IN TORT, CONTRACT OR OTHERWISE, MAY BE BROUGHT AGAINST RUBINO ENGINEERING, INC., ARISING FROM OR RELATED TO RUBINO ENGINEERING, INC.'S WORK, MORE THAN TWO (2) YEARS AFTER THE CESSATION OF RUBINO ENGINEERING, INC.'S WORK HEREUNDER.

10. INDEMNITY: Subject to the foregoing limitations, Rubino Engineering, Inc. agrees to indemnify and hold Client harmless from and against any and all claims, suits, costs and expenses including reasonable attorney's fees and court costs arising out of Rubino Engineering, Inc.'s negligence to the extent of RUBINO ENGINEERING, INC.'s negligence. Client shall provide the same protection to the extent of its negligence. In the event that Client or Client's principal shall bring any suit, cause of action, claim or counterclaim against Rubino Engineering, Inc., the party initiating such action shall pay to Rubino Engineering, Inc. the costs and expenses incurred by Rubino Engineering, Inc. to investigate, answer and defend it, including reasonable attorney's and witness fees and court costs to the extent that Rubino Engineering, Inc. shall prevail in such suit.

11. TERMINATION: This Agreement may be terminated by either party upon seven (7) days' prior written notice. In the event of termination, Rubino Engineering, Inc. shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses and for the completion of such services and records as are necessary to place Rubino Engineering, Inc.'s files in order and/or protect its professional reputation.

12. EMPLOYEES/WITNESS FEES: Rubino Engineering, Inc.'s employees shall not be retained as expert witnesses except by separate written agreement. Client agrees to pay Rubino Engineering, Inc.'s legal expenses, administrative costs and fees pursuant to Rubino Engineering, Inc.'s then current fee schedule for Rubino Engineering, Inc. to respond to any subpoena. Client agrees not to hire Rubino Engineering, Inc.'s employees except through Rubino Engineering, Inc. In the event Client hires a Rubino Engineering, Inc. employee, Client shall pay Rubino Engineering, Inc. an amount equal to one-half of the employee's annualized salary, with Rubino Engineering, Inc. waiving other remedies it may have.

13. HAZARDOUS MATERIALS: Nothing contained within this agreement shall be construed or interpreted as requiring Rubino Engineering, Inc. to assume the status of an owner, operator, generator, storer, transporter, treater or disposal facility as those terms appear within RCRA or within any Federal or State statute or regulation governing the generation, transportation, treatment, storage and disposal of pollutants. Client assumes full responsibility for compliance with the provisions of RCRA and any other Federal or State statute or regulation governing the handling, treatment, storage and disposal of pollutants.

14. PROVISIONS SEVERABLE: The parties have entered into this agreement in good faith and it is the specific intent of the parties that the terms of the General Conditions be enforced as written. In the event any of the provisions of these General Conditions should be found to be unenforceable, it shall be stricken and the remaining provisions shall be enforceable.

15. ENTIRE AGREEMENT: This agreement constitutes the entire understanding of the parties, and there are no representations, warranties or undertakings made other than as set forth herein. This agreement may be amended, modified or terminated only in writing, signed by each of the parties hereto.

PAYROLL ESCALATION TABLE FIXED RAISES

FIRM NAME Rubino Engineering, Inc.
PRIME/SUPPLEMENT Bollinger Lach and Associates

DATE 04/04/16
PTB NO. Miller Road at US-12

CONTRACT TERM 12 MONTHS
START DATE 6/1/2016
RAISE DATE 3/1/2017

OVERHEAD RATE 110.00%
COMPLEXITY FACTOR 0
% OF RAISE 3.00%

ESCALATION PER YEAR

6/1/2016 - 3/1/2017

3/2/2017 - 6/1/2017

$\frac{9}{12}$

$\frac{3}{12}$

= 75.00%
= 1.0075

25.75%

The total escalation for this project would be:

0.75%

Subconsultants

FIRM NAME
PRIME/SUPPLEMENT
PSB NO.

Rubino Engineering, Inc.
Bollinger Lach and Associates
Miller Road at US-12

DATE 04/04/16

NAME	Direct Labor Total	Contribution to Prime Consultant
------	--------------------	----------------------------------

0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00

Total	0.00	0.00
-------	------	------

PAYROLL RATES

FIRM NAME	<u>Rubino Engineering, Inc</u>	DATE
PRIME/SUPPLEMENT	<u>Bollinger Lach and Associates</u>	
PSB NO.	<u>Miller Road at US-12</u>	

04/04/16

ESCALATION FACTOR **0.75%**

[illegible]

DF-824-039
REV 12/04

0

DBE 100.00%

Printed 4/4/2016 7:52 AM

AVERAGE HOURLY PROJECT RATES

FIRM Rubino Engineering, Inc.
PSB Miller Road at US-12
PRIME/SUPPLEMENT Bollinger Lach and Associates

DATE 04/04/16

SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Geo			Flagging			Meetings			Permits			Pavement Cores		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Staff Engineer	31.48	12	21.05%	6.63	8	29.63%	9.33							4	100.00%	31.48			
Field Geologist	20.15	8	14.04%	2.83	8	29.63%	5.97												
Professional Engineer	40.69	4	7.02%	2.86	2	7.41%	3.01				2	100.00%	40.69						
Administrative Assistant	16.60	1	1.75%	0.29	1	3.70%	0.61												
Laboratory Tech / Flagger	26.70	16	28.07%	7.49				16	100.00%	26.70									
MT-1 Coring	37.87	8	14.04%	5.32													8	100.00%	37.87
Driller	40.82	8	14.04%	5.73	8	29.63%	12.10												
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
TOTALS		57	100%	\$31.14	27	100.00%	\$31.02	16	100%	\$26.70	2	100%	\$40.69	4	100%	\$31.48	8	100%	\$37.87

Bollinger, Lach & Associates, Inc.
Dan Bruckelmeyer, P.E.
333 Pierce Road, Suite 200
Itasca, IL 60143

April 12, 2016

Re: LCDOT Storm Sewer CCTV Inspection, Miller Road at US Route 12, Lake Zurich, Illinois

(QUOTATION)

We are pleased to submit a quotation for the preparation cleaning & CCTV inspection of the targeted storm sewer lines located along Miller Road at US Route 12, as indicated on your April 12, 2016 e-mail RFP, located within the Village of Lake Zurich, Illinois.

Light Clean & CCTV Inspection: \$3,225.00 To Complete
Heavy Cleaning: \$325.00 Per Hour Upon Prior Authorization

Quoted cost includes all mobilization, equipment and labor charges associated with the completion of the above-identified project. Traffic control, municipal fees, license, permits and deposits are not considered a part of this quotation. Payment for said fees and any unforeseen costs become the responsibility of the client.

A suitable water source (preferably a fire hydrant) must be readily and continuously available to the contractor, to replenish pipe-cleaning equipment as needed.

Upon completing necessary cleaning procedures, each individual line segment shall be recorded in narrated data DVD format, utilizing a color 360-degree pan & tilt type camera. Each provided recording is to be accompanied by a computer-generated report of all observances encountered and recorded through-out the inspection process.

Although no guarantees are implied or suggested, the above quoted client upon authorized signature below hereby agrees to pay to the contractor all amounts due in connection with the above-identified project immediately upon receipt of invoice. Any invoiced amounts not paid within thirty (30) days shall accrue simple interest at a rate of eighteen percent (18%) annually. In the event that any incurred costs relating to efforts to collect any amounts due pursuant to this Quotation, or in the event that any dispute or issue relating to this Quotation or work on the identified project arises, the client shall reimburse and indemnify the contractor for those costs relating to collection efforts or resolution of the dispute or issue, including but not limited to, payment of the contractors attorneys' fees, expenses and court costs in the event that any dispute or issue resolution results in any payment to the contractor or the contractor otherwise prevails.

We appreciate your quotation request and hope that we may have the opportunity to provide service to you.

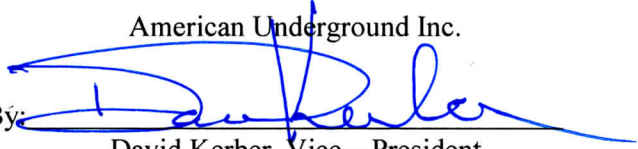
Agreed And Accepted - Date: ____/____/____

By: _____

Authorized Signature

Print
Name: _____

Title: _____

American Underground Inc.
By: 
David Kerber, Vice – President

BLA Manhours			
PROJECT: Miller Road at US-12			
ITEM	# OF SHEETS	MH PER SHEET	TOTAL MH'S
Data Review (Obtain GIS Atlases, Review Existing Data, Etc.)			8
Environmental Engineering			
Wetland Deliniation (Field Reconnaissance)			32
Wetland Deliniation Report			28
Tree Survey & Report			12
		Subtotal	72
Traffic Analysis			
Traffic Counts (Miller @ 12, Miller @ Walgreens, US-12 @ Samantha)			36
Crash Study Update			4
2040 Projections & Movement Count Study			16
HCS/Synchro Modeling Analysis, Existing & 2040			24
		Subtotal	80
Alternate Geometric Studies			
Geometry, Typical Section, Cross Sections			
Widen About Center			40
Widen North			40
Widen South			40
Preferred Alternate Geometry (Horizontal, Vertical)			80
Pedestrian Accomodation Verifcaiton			8
Samantha Lane - Left Turn Lane Addition Geometric Configuration			24
		Subtotal	232
Intersection Design Study			60
Abbreviated Location Drainage Study			
Existing Drainage Study			
Obtain Base Map Floodplain & Calibrate HEC-RAS Model			16
Obtain Contour Mapping / Identify Problems / Outlet Identification			8
Develop Existing Drainage Plan & Profile Exhibits, Tributary Areas			40
Proposed Drainage Study			
Establish Design Criteria			8
Hydraulic Calculations & Sizing Verification			16
Develop Proposed Drainage Plan			60
Hydraulic Modeling, Floodplain HEC-RAS			40
Compensatory Storage Calculations			24
Hydraulic Report & Memorandum			60
		Subtotal	212
		Total, Preliminary Design Activities	664
Detailed Design Plans (Sum Total = 70% / 25% / 5% Preliminary, Prefinal & Final Engineering)			
Title Sheet	1	4	4
Typical Sections (2 existing, 2 proposed, notes, legend, mix-chart)	2	8	16
Alignment Ties & Benchmarks	1	8	8
Notes, Index, and Standards	1	6	6
Summary of Quantities	1	24	24
Schedule of Quantities	6	24	144
Removal Plan (2 panels per sheet @ 600')	2	8	16
Traffic Staging Plans			
Typical Sections/General Notes	2	8	16

Signing Legend	1	8	8
Staging Plans (assume 3 stages, 2 panels per sheet @ 600' @ 2 sheets/stage)	6	8	48
Plan and Profile (10 Scale @ 300' Each Sheet)	9	16	144
Drainage and Utilities Plan (10 scale @ 300' Each Sheet)	9	24	216
Erosion Control Plans (assume 3 stages, 2 panels per sheet @ 600' @ 2 sheets/stage)	6	6	36
Landscape Restoration Plan (Seeding/Tree Replacement/Etc.)	2	8	16
Traffic Signal Plans			
Temporary Signal Plan	1	16	16
Temporary Cable Plan	1	16	16
Proposed Signal Sheet	2	24	48
Proposed Cable Plan	1	24	24
Street Name Sign Sheet	1	8	8
Interconnect Schematic	1	12	12
Traffic Signal Quantity Sheet	1	16	16
Coordination w/IDOT Signal Department		8	8
Intersection Paving/Grading Pan	1	24	24
Cross Sections: 2000' @ 50' Intervals, Driveways, Low Points	20		240
2500/50 = 50 XSEC + 10 Misc. (Driveways, Low Points, Crossings) = 60 @ 3/sheet, 4 hours/Section			
Specifications & Special Provisions, Bid Documents			60
Estimate of Cost (3 submittals @ 8 hrs/ea)			24
Project Details			
-Consultant & LCDOT Details	3	2	6
-IDOT Highway Standards	6	2	12
Pavement Marking & Signing (2000', 2 Panels @ 1000'/Each)	2	8	16
		<u>Subtotal, Detailed Design Plans</u>	<u>1232</u>
Meetings & Public Involvement (See Attached)			<u>140</u>
Permits			<u>80</u>
USACE, MLSWCD, LCSMC, NPDES			
<u>Management, QA/QC (4% of Total)</u>			<u>85</u>
Total	89		2201

PROJECT: Miller Road at US-12 **Meetings & Public Relations Worksheet**

	Staff	Hours	Total Hours
Coordination Meetings (2 hrs/ea)			
BLA - LCDOT Kickoff	2	2	4
BLA - LCSMC Kickoff	2	2	4
BLA - LCDOT Coordination Meetings (3)	2	6	12
BLA - Lake Zurich Coordination Meetings (2)	2	4	8
BLA - Lake Zurich Parks Department Mtg (1)	2	2	4
BLA - IDOT Signal Coordination Meeting	2	2	4
BLA - IDOT Programming Meetings (2)	2	4	8
Utility Coordination Meetings (2)	2	2	4
USACE Meeting	2	2	4
Property Owner Meetings (2)	2	4	8
Minutes of Meeting (16 Meetings @ 2 hrs/ea)			32
Public Meeting (Present Design)			
Compile Mailing List/Draft Mailer	2	6	12
Exhibit Preparation	1	16	16
Attendance at Meeting	3	4	12
Meeting Recap/Responses	1	8	8
	Subtotal		140

PAYROLL ESCALATION TABLE FIXED RAISES

FIRM NAME
PRIME/SUPPLEMENT

Bollinger, Lach & Associates, Inc.
Miller Road at US-12

DATE 05/25/16
PTB NO. _____

CONTRACT TERM 16 MONTHS
START DATE 7/1/2016
RAISE DATE 1/1/2017

OVERHEAD RATE 105.45%
COMPLEXITY FACTOR _____
% OF RAISE 3.00%

ESCALATION PER YEAR

7/1/2016 - 1/1/2017
6 16

1/2/2017 - 11/1/2017
10 16

= 37.50%
= 1.0188

64.38%

The total escalation for this project would be:

1.88%

PAYROLL RATES

Miller Road at US-12

FIRM NAME Bollinger, Lach & Assoc DATE 05/25/16
PRIME/SUPPLEMENT Miller Road at US-12
PSB NO. _____

ESCALATION FACTOR 1.88%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
Principal	\$70.00	\$70.00
Project Manager	\$52.34	\$53.32
Dir. Of Enviro. Svcs.	\$50.48	\$51.43
Project Engineer	\$37.98	\$38.69
Design Engineer	\$29.19	\$29.74
CADD Tech I	\$28.00	\$28.53
Public Info. Officer	\$27.64	\$28.16
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00

Subconsultants

Miller Road at US-12

FIRM NAME Bollinger, Lach & Associates, Inc.

DATE 05/25/16

PRIME/SUPPLEMENT Miller Road at US-12

PSB NO. _____

NAME	Direct Labor Total	Contribution to Prime Consultant
Weaver Consultants	35,400.00	4,248.00
Huff & Huff	19,343.97	2,321.28
Rubino Engineering	6,643.50	797.22
American Underground	3,225.00	387.00
		0.00
		0.00
		0.00
		0.00
Total	64,612.47	7,753.50

COST PLUS FIXED FEE COST ESTIMATE OF CONSULTANT SERVICES

Miller Road at US-12

FIRM

Bollinger, Lach & Associates, Inc.

DATE

DF-824-039

REV 12/04

05/25/16

PSB

OVERHEAD RATE

1.0545

PRIME/SUPPLEMENT

Miller Road at US-12

COMPLEXITY FACTOR

0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Data Review	8	338.80	357.26		125.35				821.41	0.28%
	Environmental Engineering	72	3,702.71	3,904.51		1,370.00				8,977.22	3.07%
	Traffic Analysis	80	2,836.30	2,990.88		1,049.43				6,876.61	2.35%
	Alternate Geo. Studies	232	8,960.24	9,448.58	119.40	3,315.29				21,843.51	7.48%
	Intersection Design Study	60	2,415.74	2,547.40		893.82				5,856.97	2.00%
	Abbreviated LDS	212	8,789.82	9,268.87	75.00	3,252.23				21,385.92	7.32%
	Preliminary PS&E	861	33,171.14	34,978.97	1,470.30	12,273.32				81,893.74	28.03%
	Prefinal PS&E	311	11,934.07	12,584.48	1,708.80	4,415.61				30,642.95	10.49%
	Final PS&E	60	2,284.29	2,408.79	1,708.80	845.19				7,247.07	2.48%
	Permitting	80	3,578.50	3,773.53	100.00	1,324.05				8,776.08	3.00%
	Meetings/Public Involvement	140	5,832.35	6,150.21	1,528.00	2,157.97				15,668.53	5.36%
	Management & QC/QA	85	4,046.07	4,266.58		1,497.05				9,809.70	3.36%
	Weaver Consultants							35,400.00		35,400.00	12.12%
	Huff & Huff							19,343.97		19,343.97	6.62%
	Rubino Engineering							6,643.50		6,643.50	2.27%
	American Underground							3,225.00		3,225.00	1.10%
	Subconsultant DL					7,753.50				7,753.50	2.65%
	TOTALS	2201	87,890.04	92,680.05	6,710.30	40,272.81	0.00	64,612.47	0.00	292,165.67	100.00%

DBE 0.00%

PREPARED BY THE AGREEMENTS UNIT

Printed 5/25/2016 11:33 AM

SHEET **1** **OF** **3**

Printed 5/25/2016 11:33 AM

SHEET 2 OF 3

Printed 5/25/2016 11:33 AM

SHEET 3 OF 3

Printed 5/25/2016 11:33 AM

BLA Direct Costs

PROJECT: Miller Road at US-12

	<u># of Sets</u>	<u>Size</u>	<u># of Sheets</u>	<u>Rate per Sheet</u>	<u>Total</u>
<u>ALTERNATE GEOMETRIC STUDIES</u>					
Coordination Meeting Exhibits	3	22"x34"	3	\$2.60	\$23.40
Vehicle Days (Site Visits)			2	\$48.00	\$96.00
				<u>SubTotal</u>	<u>\$119.40</u>
<u>ABBREVIATED LDS</u>					
Hydraulic Report	2		150	\$0.25	\$75.00
				<u>SubTotal</u>	<u>\$75.00</u>
<u>PRELIMINARY</u>					
Plan Sets (quarter size)	6	11"x17"	75	\$0.25	\$112.50
Special Provisions	6	8.5"x11"	150	\$0.10	\$90.00
Cost Estimate	6	8.5"x11"	3	\$0.10	\$1.80
Utility Plans (ComEd, Nicor, etc.)	6	22"x34"	75	\$2.60	\$1,170.00
Vehicle Days (Site Visits)			2	\$48.00	\$96.00
				<u>SubTotal</u>	<u>\$1,470.30</u>
<u>PREFINAL ENGINEERING</u>					
Plan Sets (quarter size)	6	11"x17"	90	\$0.25	\$135.00
Special Provisions	6	8.5"x11"	200	\$0.10	\$120.00
Cost Estimate	6	8.5"x11"	3	\$0.10	\$1.80
Utility Plans (ComEd, Nicor, etc.)	6	22"x34"	90	\$2.60	\$1,404.00
Vehicle Days (Site Visits)			1	\$48.00	\$48.00
				<u>SubTotal</u>	<u>\$1,708.80</u>
<u>FINAL ENGINEERING</u>					
Plan Sets (quarter size)	6	11"x17"	90	\$0.25	\$135.00
Special Provisions	6	8.5"x11"	200	\$0.10	\$120.00
Cost Estimate	6	8.5"x11"	3	\$0.10	\$1.80
Utility Plans (ComEd, Nicor, etc.)	6	22"x34"	90	\$2.60	\$1,404.00
Vehicle Days (Site Visits)			1	\$48.00	\$48.00
				<u>SubTotal</u>	<u>\$1,708.80</u>
<u>PERMITTING</u>					
Plan Sets (quarter size)	4	11"x17"	90	\$0.25	\$90.00
Permit Applications	4	8.5"x11"	25	\$0.10	\$10.00
				<u>SubTotal</u>	<u>\$100.00</u>
<u>PUBLIC MEETINGS / PUBLIC INVOLVEMENT</u>					
Aerial Plan & Profile Sheets, Board Mounted	4	22"x34	2	\$7.00	\$56.00
Public Meeting Notices (Newspaper)			2	\$300.00	\$600.00
Project Exhibits, Board Mounted	4	22"x34	2	\$7.00	\$56.00
Vehicle Days (Meetings, 16 agency + 1 public meeting)			17	\$48.00	\$816.00
				<u>SubTotal</u>	<u>\$1,528.00</u>
<u>Grand Total</u>					<u>\$6,710.30</u>