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|---|---|--|--|---|
| Municipality<br>McHenry County Division of Transportation | <b>L<br/>O<br/>C<br/>A<br/>L<br/><br/>A<br/>G<br/>E<br/>N<br/>C<br/>Y</b> |  <b>Illinois Department of Transportation</b><br><br><b>Preliminary/Construction Engineering Services Agreement For Motor Fuel Tax Funds</b> | <b>C<br/>O<br/>N<br/>S<br/>U<br/>L<br/>T<br/>A<br/>N<br/>T</b> | Name<br>BLA dba, Bollinger, Lach & Associates, Inc. |
| Township<br>Algonquin                                     |   |  |  | Address<br>333 Pierce Road, Suite 200               |
| County<br>McHenry   |   |  |  | City<br>Itasca                                      |
| Section<br>05-00308-00-WR                                 |   |  |  | State<br>IL   |

THIS AGREEMENT is made and entered into this 18th day of June, 2013 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 Rakow Road Route FAP336 Length \_\_\_\_\_ KM( 3.1 Miles)(Structure No. \_\_\_\_\_ )

Termini Rakow Road from Ackman Road (FAU 3873) to IL Route 31 (FAU 3887).

#### Description

Supplement 2 – This is a supplement to the Early Start Up and Supplement 1 agreements. This agreement will allow the ENGINEER to complete Phase III (Construction Engineering) services for the Rakow Road Widening and Reconstruction project from Ackman Road to IL Route 31. This supplement is for a Not To Exceed amount of \$142,154.15. See Exhibit 1 for a breakdown of required additional services.

#### 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 improvement herein before described, and checked below:
  - a.  Make such detailed surveys as are necessary for the preparation of detailed roadway plans.
  - b.  Make stream and flood plain hydraulic surveys and gather high water data and flood histories for the preparation of detailed bridge plans.
  - c.  Make or cause to be made such soil surveys or subsurface investigations including borings and soil profiles and analyses thereof as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations are to be made in accordance with the current requirements of the DEPARTMENT.
  - d.  Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
  - e.  Prepare Army Corps of Engineers Permit, Division of Water Resources Permit, Bridge waterway sketch and/or Channel Change sketch, Utility plan and locations and Railroad Crossing work agreements.
  - f.  Prepare Preliminary Bridge Design and Hydraulic Report, (including economic analysis of bridge or culvert types) and high water effects on roadway overflows and bridge approaches.

Note Four copies to be submitted to the Regional Engineer

- 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 easements and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.
- i.  Assist the LA in the receipt and evaluation of proposals and the awarding of the construction contract.
- j.  Furnish or cause to be furnished:
- (1) Proportioning and testing of concrete mixtures in accordance with the "Manual of Instructions for Concrete Proportioning and Testing" issued by the Bureau of Materials and Physical Research, of the DEPARTMENT and promptly submit reports on forms prepared by said Bureau.
  - (2) Proportioning and testing of bituminous mixtures (including extracting test) in accordance with the "Manual of Instructions for Bituminous Proportioning and Testing" issued by the Bureau of Materials and Physical Research, of the DEPARTMENT, and promptly submit reports on forms prepared by said Bureau.
  - (3) All compaction tests as required by the specifications and report promptly the same on forms prepared by the Bureau of Materials and Physical Research.
  - (4) Quality and sieve analyses on local aggregates to see that they comply with the specifications contained in the contract.
  - (5) Inspection of all materials when inspection is not provided at the sources by the Bureau of Materials and Physical Research, of the DEPARTMENT and submit inspection reports to the LA and the DEPARTMENT in accordance with the policies of the said DEPARTMENT.
- k.  Furnish or cause to be furnished
- (1) A resident engineer, inspectors and other technical personnel to perform the following work: (The number of such inspectors and other technical personnel required shall be subject to the approval of the LA.)
    - a. Continuous observation of the work and the contractor's operations for compliance with the plans and specifications as construction proceeds, but the ENGINEER does not guarantee the performance of the contract by the contractor.
    - b. Establishment and setting of lines and grades.
    - c. Maintain a daily record of the contractor's activities throughout construction including sufficient information to permit verification of the nature and cost of changes in plans and authorized extra work.
    - d. Supervision of inspectors, proportioning engineers and other technical personnel and the taking and submitting of material samples.
    - e. Revision of contract drawings to reflect as built conditions.
    - f. Preparation and submission to the LA in the required form and number of copies, all partial and final payment estimates, change orders, records and reports required by the LA and the DEPARTMENT.
  2. That all reports, plans, plats and special provisions to be furnished by the ENGINEER pursuant to this agreement will be in accordance with the current standard specifications and policies of the DEPARTMENT, it being understood that all such reports, plats, plans and drafts shall before being finally accepted, be subject to approval by the LA and the said DEPARTMENT.
  3. To attend conferences at any reasonable time when requested to do so by the LA or representatives of the DEPARTMENT.
  4. In the event plans, surveys or construction staking are found to be in error during the construction of the SECTION and revisions of the plans or survey or construction staking corrections are necessary, the ENGINEER agrees that he will perform such work without expense to the LA, even though final payment has been received by him. He shall give immediate attention to these changes so there will be a minimum delay to the contractor.
  5. The 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. To make such changes in working plans, including all necessary preliminary surveys and investigations, as may be required after the award of the construction contract and during the construction of the improvement.
  7. That all plans and other documents furnished by the ENGINEER pursuant to the AGREEMENT will be endorsed by him

- and will show his professional seal where such is required by law.
8. To submit, upon request by the LA or the DEPARTMENT a list of the personnel and the equipment he/she proposes to use in fulfilling the requirements of this AGREEMENT.

**The LA Agrees,**

1. **See Exhibit 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 percentage of the awarded contract cost for the proposed improvement as approved by the DEPARTMENT based on the following schedule:

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

| Awarded Cost   | Percentage Fees |            |
|----------------|-----------------|------------|
| Under \$50,000 | _____           | (see note) |
|                | _____           | %          |
|                | _____           | %          |
|                | _____           | %          |
|                | _____           | %          |
|                | _____           | %          |

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

C.  **Cost Plus Fixed Fee.**

2. To pay for services stipulated in paragraphs 1b, 1c, 1d, 1e, 1f, 1h, 1j and 1k of THE ENGINEER AGREES at the hourly rates stipulated below for personnel assigned to this SECTION as payment in full to the ENGINEER for the actual time spent in providing these services the hourly rates to include profit, overhead, readiness to serve, insurance, social security and retirement deductions. Traveling and other out-of-pocket expenses will be reimbursed to the ENGINEER at his actual cost. Subject to the approval of the LA, the ENGINEER may sublet all or part of the services provided under paragraphs 1b, 1c, 1d, 1e, 1f, 1j and 1k of THE ENGINEER AGREES. If the ENGINEER sublets all or a part of this work, the LA will pay the cost to the ENGINEER plus a five (5) percent service charge. "Cost to ENGINEER" to be verified by furnishing the LA and the DEPARTMENT copies of invoices from the party doing the work. The classifications of the employees used in the work should be consistent with the employee classifications for the services performed. If the personnel of the firm including the Principal Engineer perform routine services that should normally be performed by lesser-salaried personnel, the wage rate billed for such services shall be commensurate with the work performed.
- (SEE Average Hourly Project Rates Schedule)**

| Grade Classification of Employee | Hourly Rate |
|----------------------------------|-------------|
| Principal Engineer               | _____       |
| Resident Engineer                | _____       |
| Chief of Party                   | _____       |
| Instrument Man                   | _____       |
| Rodmen                           | _____       |
| Inspectors                       | _____       |
| _____                            | _____       |
| _____                            | _____       |
| _____                            | _____       |
| _____                            | _____       |
| _____                            | _____       |

The hourly rates itemized above shall be effective the date the parties, hereunto entering this AGREEMENT, have affixed their hands and seals and shall remain in effect until Dec. 31, 2013. In event the services of the ENGINEER extend beyond Dec.31, 2013, the hourly rates will be adjusted yearly by addendum to this AGREEMENT to compensate for increases or decreases in the salary structure of the ENGINEER that are in effect at that time.

3. That payments due the ENGINEER for services rendered pursuant to this AGREEMENT will be made as soon as practicable after the services have been performed, in accordance with the following schedule:
- 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 based on the above fee schedule and the approved estimate of cost.
  - Upon award of the contract for the improvement by the LA and its approval by the DEPARTMENT, 100 percent of the total fee (excluding any fees paragraphs 1j and 1k of the ENGINEER AGREES), based on the above fee schedule and the awarded contract cost, less any previous payment.
  - Upon completion of the construction of the improvement, 90 percent of the fee due for services stipulated in paragraphs 1j and 1k.
  - Upon completion of all final reports required by the LA and the DEPARTMENT and acceptance of the improvement by the DEPARTMENT, 100 percent of the total fees due under this AGREEMENT, less any amounts previously paid.

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 improvements be abandoned at any time after the ENGINEER has performed any part of the services provided for in paragraphs 1a and 1g, and prior to the completion of such services the LA shall reimburse the ENGINEER for his actual costs plus Fixed fee percent incurred up to the time he is notified in writing of such abandonment "actual cost" being defined as material costs plus actual payrolls, insurance, social security and retirement deductions. Traveling and other out-of-pocket expenses will be reimbursed to the ENGINEER at his actual cost.
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 Fixed fee percent to cover profit, overhead and readiness to serve - "actual cost" being defined as in paragraph 4 above. 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.
6. That should the LA extend completion of the improvement beyond the time limit given in the contract, the LA will pay the ENGINEER, in addition to the fees provided herein, his actual cost incurred beyond such time limit - "actual cost" being defined as in paragraph 4 above.

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**It is Mutually Agreed,**

- That any difference between the ENGINEER and the LA concerning the 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.
- 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 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.
- ~~That if the contract for construction has not been awarded one year after the acceptance of the plans by the LA and their approval by the DEPARTMENT, the LA will pay the ENGINEER the balance of the engineering fee due to make 100 percent of the total fees due under the AGREEMENT, based on the estimate of cost as prepared by the ENGINEER and approved by the LA and the DEPARTMENT.~~
- 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 this AGREEMENT to be executed in quadruplicate counterparts, each of which shall be considered as an original by their duly authorized offices.

Executed by the LA:

McHenry County Division of Transportation of the  
(Municipality/Township/County)

ATTEST:

State of Illinois, acting by and through its

By \_\_\_\_\_,

\_\_\_\_\_ ,

Katherine C. Schultz Clerk

By Tina R. Hill

(Seal)

Title: County Board Chairwoman

Executed by the ENGINEER:

BLA dba, Bollinger, Lach & Associates, Inc.

ATTEST:

By \_\_\_\_\_,

\_\_\_\_\_

Title:

Title: Craig A. Lukowicz, Chief Executive Office

|                              |
|------------------------------|
| <b>Approved</b>              |
| _____                        |
| Date                         |
| Department of Transportation |
| _____                        |
| Regional Engineer            |

## **Exhibit 1 – Rakow Road Phase III Supplement 2:**

Additional services required during the construction phase of the project:

- Working with a Joint Venture Partnership rather than with a single General Contractor. This included oversight and documentation for two separate contractors for many contract line items. Although difficult to quantify, we estimate an extra two hours were spent during each pay estimate cycle for a total of **88 additional hours**.
- Reviewing and reiterating an abundance of electrical issues and history due to the personnel changes of the Project Manager for the Electrical Subcontractor four times during the course of the project. Again, although difficult to quantify, we estimate an additional twenty hours were spent working with the subcontractor upon each change of its Project Manager for a total of **80 additional hours**.
- Providing oversight and documentation of unanticipated night shift operations implemented by the contractors as a way to recover time lost to utility relocations. Thirteen night shifts were utilized during the course of the project. In total, we estimate **540 additional hours** were spent overseeing this work.
- Excessive coordination of utility companies and their contractors to assure the timely completion of the project. Although difficult to quantify, we estimate that, at a minimum, one hour per week was spent on this through much of the project, for a total of **69 additional hours**.
- Surveying and documenting additional undercuts, as compared to plan quantities, due to unsuitable material found along the project. The plans provided a nominal estimated amount of undercuts along the project. During construction, it was determined that 132 separate undercuts were necessary totaling over 8000 cubic yards of excavation and fill material. We estimate the time required at each location to determine the limits, measure dimensions, witness the excavation and placement of acceptable material, and calculate and document each for payment at 4 hours, for a total of **528 additional hours**.
- Coordinating and distributing over eighty-eight designer plan sheet revisions (reviewing the proposed changes, preparing contract quantity changes, and preparing .pdf files of each for distribution) estimated at three hours per sheet for a total of **264 additional hours**. In addition, forty-five additional sheets of revisions were prepared in-house (adding an hour to each for determining and making the revisions) estimated at four hours per sheet for a total of **180 additional hours**.
- Preparing and submitting over one hundred fifty change orders. Each requires a review of the quantities, costs or extra work invoice, obtaining signatures from both McDOT & IDOT, preparing a Field Order for the work after approval, tracking their approval process from submittal to IDOT through final posting for payment, and assuring that all will pass the final filing & audit review. We estimate ten hours of time is needed for each change order. Our experience is that one hundred change orders can be considered “normal” for a project of this size and scope. Allowing time for fifty additional change orders, at ten hours each, results in **500 additional hours**.

In the attached exhibits, please see that we are asking for 1228 additional hours to bring this project to completion. If approved, this supplement will bring us through final closeout of the project’s Phase III requirements.

## PAYROLL ESCALATION TABLE ANNIVERSARY RAISES

FIRM NAME  
PRIME/SUPPLEMENT

Bollinger, Lach & Associates, Inc.  
Supplement 2

DATE 04/30/12  
PTB NO. Rakow Road

CONTRACT TERM 6 MONTHS  
START DATE 3/1/2013  
RAISE DATE 1/1/2014

OVERHEAD RATE 147.05%  
COMPLEXITY FACTOR  
% OF RAISE 4.00%

### ESCALATION PER YEAR

DETERMINE THE MID POINT OF THE AGREEMENT

3

CALCULATE THE ESCALATION FACTOR TO THE MIDPOINT OF THE CONTRACT

1.00%

The total escalation for this project would be: **1.00%**

## PAYROLL RATES

FIRM NAME Bollinger, Lach & Associ DATE 04/30/13  
PRIME/SUPPLEMENT Supplement 2  
PTB NO. Rakow Road

ESCALATION FACTOR 1.00%

| CLASSIFICATION                       | CURRENT RATE | CALCULATED RATE |
|--------------------------------------|--------------|-----------------|
| Director of Construction Engineering | \$ 70.00     | \$70.00         |
| Senior Resident Engr                 | \$ 56.48     | \$57.04         |
| Resident Engineer I                  | \$ 40.89     | \$41.30         |
| Field Engineer I                     | \$ 18.50     | \$18.69         |
| Field Engineer II                    | \$ 37.14     | \$37.51         |
| Office Engineer                      | \$ 40.51     | \$40.92         |
| Materials Coordinator                | \$ 40.30     | \$40.70         |
| Public Info Officer                  | \$ 22.84     | \$23.07         |
| Principal                            | \$ 70.00     | \$70.00         |
| Design Engineer                      | \$ 26.44     | \$26.70         |
| Survey Project Manager               | \$39.18      | \$39.57         |



# Subconsultants

FIRM NAME Bollinger, Lach & Associates, Inc.  
PRIME/SUPPLEMENT Supplement 2  
PSB NO. Rakow Road

DATE 04/30/13

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

|               |  |      |
|---------------|--|------|
| STATE Testing |  | 0.00 |
| SEC Group     |  | 0.00 |
| Trans/Lan     |  | 0.00 |

**Total** 0.00 0.00



**Rakow Road from Ackman Road to IL 31**  
**McHenry County Division of Transportation**  
**Bollinger, Lach & Associates, Inc.**  
**Direct Costs**

| <b>DIRECT COSTS</b>         | Days                        | Total | Days |                   |
|-----------------------------|-----------------------------|-------|------|-------------------|
| Vehicle Costs               | \$45.00 /Day                | 115   | Days | \$5,175.00        |
| Phone/Radio                 | 2 \$ 70.00 /Mo              | 3     | Mo   | \$ 420.00         |
| Web Site Domain Acquisition |                             |       |      |                   |
| Brochure Printing           |                             |       |      |                   |
|                             | Premium Portion of Overtime |       |      |                   |
|                             | <b>TOTAL DIRECT COSTS</b>   |       |      | <b>\$5,595.00</b> |

