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|---------------------------|---|---|--|-----------------------------------|
| Municipality | L O C A L A G E N C Y |  Illinois Department of Transportation Preliminary Engineering Services Agreement For Motor Fuel Tax Funds | C O N S U L T A N T | Name Patrick Engineering, Inc. |
| Township | | | | Address 4970 Varsity Drive |
| County Lake County | | | | City Lisle |
| Section 11-00121-11-BR | | | | State Illinois |

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 Washington Street

Route FAU 187 Length 0.43 Mi. 2270.00 FT (Structure No. _____)

Termini Haryan Way to Lake Street

Description:

Construction of a grade separation between Washington Street and the CN/Metra Railroad, including railroad track work, new bridge structure over Washington Street, and pavement widening and reconstruction

Agreement Provisions

The Engineer Agrees,

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

Note: Four copies to be submitted to the Regional Engineer

- i. Assist the LA in the tabulation and interpretation of the contractors' proposals
 - j. Prepare the necessary environmental documents in accordance with the procedures adopted by the DEPARTMENT's Bureau of Local Roads & Streets.
 - k. Prepare the Project Development Report when required by the DEPARTMENT.
- (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 DEPARTMENT. It is being understood that all such reports, plans, 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 him. He shall give immediate attention to these changes so there will be a minimum delay to the Contractor.
- (5) That basic survey notes and sketches, charts, computations and other data prepared or obtained by the Engineer pursuant to this AGREEMENT will be made available, upon request, to the LA or the DEPARTMENT without cost and without restriction or limitations as to their use.
- (6) That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by him and will show his professional seal where such is required by law.

The LA Agrees,

1. To pay the ENGINEER as compensation for all services performed as stipulated in paragraphs 1a, 1g, 1i, 2, 3, 5 and 6 in accordance with one of the following methods indicated by a check mark:
- a. A sum of money equal to _____ percent of the awarded contract cost of the proposed improvement as approved by the DEPARTMENT.
 - b. A sum of money equal to the percent of the awarded contract cost for the proposed improvement as approved by the DEPARTMENT based on the following schedule:

Schedule for Percentages Based on Awarded Contract Cost

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

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

2. To pay for services stipulated in paragraphs 1b, 1c, 1d, 1e, 1f, 1h, 1j & 1k of the ENGINEER AGREES 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 his actual cost. Subject to the approval of the LA, the ENGINEER may sublet all or part of the services provided under the paragraph 1b, 1c, 1d, 1e, 1f, 1h, 1j & 1k. If the ENGINEER sublets all or part of this work, the LA will pay the cost to the ENGINEER plus a five (5) percent service charge.

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

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 or higher as approved by the LA, based on the approved estimate of cost. **The total contract amount shall not exceed \$2,020,454.31**
 - 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 _____ 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 _____ percent to cover profit, overhead and readiness to serve -"actual cost" being defined as in paragraph 2 of THE LA AGREES. It is understood that "changes" as used in this paragraph shall in no way relieve the ENGINEER of his responsibility to prepare a complete and adequate set of plans and specifications.

It is Mutually Agreed,

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

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

Executed by the LA:

Lake County of the
(Municipality/Township/County)

ATTEST:

State of Illinois, acting by and through its

By _____

Clerk

(Seal)

By _____

Title _____

Executed by the ENGINEER:

PATRICK ENGINEERING INC

4970 VARSITY DRIVE

LISLE, IL 60532

ATTEST:

By Janod Celli

Title TRANSPORTATION MANAGER

By Paul M. Spey

Title VICE PRESIDENT

| |
|------------------------------|
| Approved |
| _____ |
| Date |
| Department of Transportation |
| _____ |
| Regional Engineer |

Patrick Engineering

GENERAL

1. The Phase II Plans will follow the recommended scope of work as described in the Phase I Project Development Report (PDR) prepared for this project and approved by the Lake County Division of Transportation (LCDOT) and the Illinois Department of Transportation (IDOT). The scope of work will include the construction of a grade-separation between Washington Street and the CN/Metra Railroad and all associated work.
2. The project will begin in early 2011 and be completed no later than at a time to be determined by LCDOT for submission for the project letting.
3. The project will be designed using the English units system and English size borders and plan sheet paper will be used. Plan sheets will be developed in Microstation format using LCDOT CADD guidelines. Full and quarter size scaleable prints of the plans will be submitted to LCDOT. The plans will also be submitted in PDF format.
4. Calculations will be done by Patrick and Bollinger Lach & Associates (BLA), and submitted to LCDOT, on 8 1/2" x 11" paper, as well as PDF format.
5. The proposed cross section will include an urban cross section with curb & gutter at the outside edges of pavement and an underground storm sewer system. Retaining walls are also anticipated along the south side of the roadway.
6. The limits of the improvement will be as follows:
 - a) Western limit - The western limit will be near Haryan Way.
 - b) Eastern limit – The eastern limit will be just west of the Lake Street at Washington Street intersection.
7. The design will follow the guidelines set forth in the Illinois Department of Transportation's (IDOT's) *Bureau of Local Roads Manual*, the American Association of State Highway and Transportation Officials' (AASHTO's) *A Policy on Geometric Design of Highway and Streets (Green book)*, and LCDOT's Design Guidelines.
8. The project will be designed so as to be eligible for federal funds.
9. The project will involve coordination with:
 - a) LCDOT - plan reviews, resolution of issues
 - b) IDOT – plan reviews
 - c) Village of Grayslake - Improvements within their jurisdictions
 - d) Utility owners
 - e) Lake County Stormwater Management Commission
 - f) U.S. Army Corps of Engineers
 - g) IEPA
 - h) CLCJAWA

- i) Canadian National Railroad (CN)
 - j) Metra
 - k) Illinois Commerce Commission (ICC)
 - l) Lake County Public Works and North Shore Sanitary District – Sanitary sewer relocation
10. The Special Waste Preliminary Environmental Site Assessment (PESA) performed in Phase I indicated a Low Risk finding and there is no evidence of any Recognized Environmental Conditions (RECs) within the project area. Therefore, a Preliminary Site Investigation (PSI) is not required in Phase II.

ROADWAY

1. The roadway improvements will match the limits in the approved PDR. The western limit of the project will be approximate Station 103+00 and the eastern limit is Sta. 124+69.47.
2. The roadway plan & profile drawings will be prepared at a scale of 1"=50'. The drawings will have three (3) windows depicting the existing view, proposed view and a profile. Intersection Details will be prepared at 1"=20'.
3. It is anticipated that the roadway will be reconstructed and the vertical profile will be modified.
4. Patrick has assumed that the mainline Washington Street will be reconstructed to the radius returns of the side streets and improvements along the side streets will be widening and resurfacing.
5. Roadway cross-sections will be developed at 100' intervals. Cross-sections will also be provided at all critical locations, including sidestreets and driveways.
6. Earthwork quantities will be calculated per construction stage.
7. Plan submittals will include Preliminary, Pre-Final, and Final sets.
8. A plan-in-hand field review will be held prior to the submittal at each milestone.
9. Contract Documents will be developed in accordance with the 2007 Standard Specifications consisting of the following:
 - a) Set-up Design Files (Base Sheets)
 - b) Cover Sheet
 - c) Index of Sheets and Highway Standards – Sheet Index and list of applicable IDOT and LCDOT Highway Standards
 - d) General Notes Sheet – Standard general notes and project specific notes will be developed for the contract package. Any commitments from the Phase I Report will be listed.

- e) **Summary of Quantities** – The summary of quantities sheets will be prepared at every submittal. The sheets will include pay item code number, description, unit and total quantity. The quantities will be broken down into separate funding type codes. The pay items shall be double spaced on the sheet.
- f) **Typical Sections** – Sheets will be necessary to show details and dimensions for existing roadway and proposed roadway typical sections. The HMA mixture design requirement chart and pavement design block shall be included in the typical sections (to be performed by BLA).
- g) **Schedule of Quantities** – The schedules will indicate the location of the item by station and quantity at each location for roadway items, roadway removal items, safety related items, and earthwork per stage. All items except for “Lump Sum” and “Each” items will be considered for tabulation.
- h) **Alignment and Ties** – The alignment drawings will be prepared at a scale of 1” = 100’, including benchmarks.
- i) **Removals** – Plan sheets with an existing conditions base at 1” = 50’ will be included showing all items to be removed.
- j) **Roadway Plan and Profiles** – The roadway plan and profile drawings will have separate windows depicting a proposed view and a profile. The proposed view will be prepared at a scale of 1”=50’. The profile view will be at a horizontal scale of 1”=50’ and a vertical scale of 1”=5’.
- k) **Maintenance of Traffic (MOT) Plans** – Detailed plans will be prepared showing the construction staging along Washington Street as well as at the proposed grade separation structure with the CN/Metra Railroad. Horizontal and vertical plan and profile details will be developed for the proposed temporary roadway runaround at the railroad grade separation. In addition, any necessary detour routes for temporary closures at the proposed railroad grade separation will be detailed as part of the MOT plans.
- l) **Drainage and Utility Plans** – The drainage design will be in accordance with the Drainage Report prepared in Phase I. Necessary drainage calculations will be prepared. The drainage & utility sheets will be developed using the plan drawings as a base and will show proposed storm sewers and structures. The plans will consist of two (2) windows depicting a proposed view and a profile. The horizontal scale of both windows will be 1”=50’. The vertical scale of the profile will be 1”=5’. The drainage profile will show the proposed storm sewer and portions of the existing storm sewer to remain and proposed ditch profiles.

- m) **Drainage Schedules** – Schedules will be provided for the proposed storm sewers and drainage structures. Additionally callouts with nominal information will be provided on the drainage plan and profile sheets. Schedules of storm sewer and drainage structure removals will also be prepared if warranted.
- n) **Pavement Marking Plans and Signing Plans** – Final pavement marking and signing plans will be developed at a scale of 1" = 50' with 2 views per sheet with an accompanying schedule. It is assumed that all existing ground mounted guide signs will be replaced by LCDOT forces (design work to be performed by BLA).
- o) **Intersection Details** – Jointing plans will be prepared at all major intersections at a 1"=20' scale and will contain elevations at all edges of pavement, lane lines, and jointing locations (if PCC is utilized on this project).
- p) **Erosion and Sediment Control Plans** – Plans will be developed per stage to identify measures used to provide temporary control systems to prevent erosion and sediment damages to the roadway, drainage system/waterways, and adjacent properties during construction. These plans will be prepared at a scale of 1"=50' and will consist of two proposed views. The items identified on the plans will be consistent with the Storm Water Pollution Prevention Plan (SWPPP) developed for the contract.
- q) **Landscaping Plans** – It is assumed that landscaping will consist of seeding and sodding along areas disturbed by construction, as well as the location of replacement trees where appropriate. The landscaping information will be depicted on the Pavement Marking and Signing Plans (to be performed by BLA).
- r) **Traffic Signal Plans** – BLA will prepare plans for the placement of the conduit for the future interconnect along Washington Street. This contract will only include work between Haryan Way and Lake Street.
- s) **Structural Plans** – Structural Plans will be prepared as described in the following section entitled "Structural".
- t) **Cross-Sections** – Cross-Sections will be provided at a maximum of 50 foot intervals and at driveway locations showing the planned improvements. Cut, fill, and removal and disposal of unsuitable material areas and volumes will be provided for the length of the project.
- u) **District 1 Detail Drawings** – Applicable District One Standard Details will be researched and included in the contract documents.

- v) Contract Details – Project specific details are anticipated as part of this contract.
- 10. Special Provisions – Special provisions will be necessary to provide descriptions of work that are not covered by the Standard Specifications. Also included in this item is review and inclusion of applicable Recurring, BLR&S, or District special provisions, LCDOT special provisions, and any project specific special provisions.
- 11. Estimate of Time – The expected duration of construction time will be determined and provided in tabular format.
- 12. Estimate of Cost – The anticipated cost of construction will be provided for each milestone submittal using the pay items and historical unit prices.
- 13. Quantity Calculation Book – Detailed breakdowns will be provided for every pay item and consolidated for use during construction. This deliverable will be provided at the final submittal.

SURVEY

- 1. All survey work will be tied to previously established control based horizontally on the State Plane Coordinate System and vertically on the Lake County datum. The control set as part of the Phase I work will be checked as well as additional control as required will be set and surveyed.
- 2. Some pick-up survey work will be necessary to obtain additional topographic details during the Phase II design. These areas include off-site locations where detention or compensatory storage is proposed as per the Phase I report, additional areas located near the proposed grade separation bridge structure including the existing Metra station platform and building, and areas near the proposed pump station for this grade separation.
- 3. Drain tile location markers for any drain tiles found by the contractor performing the drain tile investigation will be surveyed.
- 4. The deliverables will include a MicroStation Version 8 DGN file containing all topographic points and planimetric line work.
- 5. All survey work as part of this contract will follow the LCDOT Survey Procedures document (revised 04/21/08).

LIGHTING

1. Patrick will design the underpass lighting for the grade separation of the CN/Metra Railroad. The design will include photometric calculations as well as circuiting and voltage drop calculations. Patrick will coordinate the service for the lighting with Commonwealth Edison and perform a site visit to confirm the location of electric service. No other lighting on the project is anticipated.

TRAFFIC SIGNALS

1. Bollinger Lach and Associates (BLA) will prepare plans for the future system interconnect plans along Washington Street, from Haryan Way to Lake Street. Please refer to the attached scope of work from BLA for further information regarding the scope of work for Traffic Signals.

ENVIRONMENTAL

1. Huff & Huff Inc. will assist Patrick Engineering with wetland permitting, mitigation guidance, and preparation of a restoration and monitoring plan. Please refer to the attached scope of work from Huff & Huff for further information regarding the project approach, scope of services, cost, and schedule.
2. The Preliminary Environmental Site Assessment (PESA) Report for the project area has revealed no evidence of RECs in connection with the Site boundary. However, due to the fact that linear excavation is proposed as part of the project plan as well as the existence of an operating gasoline station adjacent to the Site boundary, the Site has been given a "Low Risk" finding. Per BLR Procedures and due to the "Low Risk" finding, the need for a Preliminary Site Investigation (PSI), given the specific information found in and as of the date of the PESA Report (August 2010), is not recommended. If adverse environmental conditions are encountered during the construction phase, the "Low Risk" finding and the need for a PSI will need to be re-evaluated based on the nature of the encountered conditions. A validation or update of the PESA Report may be necessary if project related activities take place more than 180 days but less than three years from the date of the PESA Report.

STRUCTURAL

Grade Separation at CN/Metra Railroad

1. A new railroad overpass bridge structure is included in the project at the location of the existing at-grade crossing between the CN/Metra Railroad and Washington Street.

2. TS&L drawing and final Plans, Specifications & Estimates (PS&E) will be prepared.
3. For estimating the scope of work associated with the preparation of the final PS&E, it is assumed that the single track bridge will consist of a ballast deck steel beam span approach on the north side of approximately fifty feet and a skewed ninety eight foot ballast deck through plate girder main span over the roadway. The substructure will be cast in place concrete. It is anticipated that steel H piles will be used to support the abutments and pier. Structure drawings will be prepared to show plan, elevation, section, bill of materials, pile data, and reinforcement bending diagrams for the abutment and wingwalls

Retaining Walls

Two retaining walls will be required near the proposed grade separation at the railroad tracks.

1. The total length of the proposed retaining walls is 1240 feet (640' west side and 600' east side of the railroad bridge). The anticipated height of the proposed retaining walls varies from four to nineteen feet.
2. TS&L drawings, preliminary and final Plans, Specifications & Estimates (PS&E) will be prepared. In addition, a structural geotechnical report will be required.
3. For estimating the scope of work associated with the preparation of the final PS&E, a cantilever and/or tied-back soldier pile wall type will be assumed at this location, however, an evaluation of different designs (IRE, MSE, T-type) will be performed. Structure drawings will be prepared to show plan, elevation, section, bill of materials, and reinforcement bending diagrams. Aesthetic treatments will be investigated and incorporated into the proposed design. Manhours have been included for a meeting with LCDOT to discuss formliner, coloring, and any other applicable items as they relate to the aesthetic treatments for this project.

Junction Chambers

1. Depending on the final size and configuration of the oversized storm sewer pipes, junction chambers may be required in some locations. Patrick will budget for designing one junction chamber. Final Structure drawings will be prepared to show plan, elevation, section, bill of materials, and reinforcement bending diagrams.

Shop Drawing Review

Shop drawing review for all structural items listed above includes:

1. Verify general conformity with the design plans and specifications.
2. Check rebar bending diagrams.
3. Review vendor supplied components.

DRAINAGE

General

1. The Drainage Report and Hydraulic Reports prepared in Phase I will be used as the basis of design for the proposed drainage system.
2. As stated in the Survey scope above, when the Phase I engineering was performed, survey data was not available for certain offsite areas where proposed grading for detention and/or compensatory storage is now proposed. Existing grading for these areas was taken from plans for the existing basins. Upon completion of the pickup survey, the proposed grading in these areas may need to be modified. Where discrepancies are found to exist, appropriate adjustments will be made to the drainage plan and calculations.

Field Tile Survey

3. Huddleston McBride Land Drainage Co. will perform a field tile survey of the existing and proposed ROW adjacent to existing agricultural lands. Please refer to the attached scope of work from Huddleston McBride Land Drainage Co. for further information regarding the project approach, scope of services, cost, and schedule.

Cross Road Culverts

4. Patrick will detail the extension of the overflow pipe culvert crossing Washington Street east of Haryan Way.

Stormwater Detention

5. Floodplain compensatory storage will be excavated in the existing detention basin east of Haryan Way on the south side of Washington Street. A grading plan will be developed for this work.
6. It is assumed that disturbed areas within these basins will be restored by seeding with standard IDOT seed mixtures.
7. A detention basin will be proposed in the northwest quadrant of Washington Street and Lake Street that will receive discharge from the proposed pump station. A grading plan will be developed for this work as well as control structure details.

8. It is assumed that this basin will have a wetland bottom and will be seeded using a standard IDOT seed mixture.
9. The balance of required stormwater detention will be provided in oversized storm sewers as detailed in the Drainage Report.
10. Restrictors specified in the Drainage Report will be refined to reflect any revisions that occur during Phase II design that affect storm water runoff. Calculations will be prepared to verify that the 2-year peak discharge for the proposed conditions is not more than for the existing. However, minimum restrictor size will be per the Lake County Watershed Development Ordinance.

Storm Sewers

11. Patrick will perform inlet spacing calculations where new storm sewer is to be constructed.
12. Based on the inlet spacing, the main drain storm sewer design contained in the Drainage Report will be refined as needed. It is also recognized that minor adjustments to the proposed design may be needed to minimize utility conflicts.
13. Drainage structure sizes and types and rim and invert elevations will be specified.
14. Invert elevations and slopes for all proposed storm sewers will be specified.
15. Sufficient and appropriate information for one stormwater treatment structure (e.g. Stormceptor, Vortex, etc.) will be provided. Some elements of these structures may be design-build/manufacturer specific and will therefore, potentially not be specified.
16. Erosion control measures will be detailed at outfalls.

Swales and Ditches

17. Patrick will develop cross-sections for all swales and ditches within the right-of-way. It is assumed that cross-sections will be prepared at intervals of 100 feet.
18. Ditches will be checked for hydraulic capacity.
19. Where needed, Patrick will design ditch linings and other erosion control features within the ditches.

Pump Station Hydraulics

20. Patrick will design a stormwater pump station to drain the underpass at the CN/Metra RR. It is anticipated that the station will be a wet well design with submersible pumps.
21. A performance specification will be prepared for a prefabricated masonry building to house the pump controls.

22. A site/civil plan for the pump station site will be prepared.

Compensatory Storage

23. There are Zone A floodplain that will be impacted by the proposed improvement. It is assumed that the 100-year floodplain elevations used in the Phase I study will be acceptable to SMC for permitting. Additionally as the affected Zone A is considered non-riverine, determination of the 10-year flood elevation will not be required.
24. Based on final roadway cross-sections, the floodplain fill calculations provided in the Drainage Report will be checked and refined as needed.
25. A grading plan will be developed for the floodplain compensatory storage areas as described above in the Stormwater Detention section.

Wetland Hydrology

26. Based on final roadway and drainage system design, the wetland hydrology calculations provided in the Drainage Report will be checked and refined as needed.

Drainage Peer Review

27. BLA will perform a peer review of the above drainage calculations and plans prepared by Patrick prior to major milestone submittals. Patrick Engineering will document the reviews by BLA. BLA will also perform a peer review against LCSMC permit requirements to ensure necessary items identified in the Phase I Drainage Report are accounted for.

PUMP STATION MECHANICAL, ELECTRICAL & PLUMBING (MEP)

Mechanical

1. Patrick will design the Heating/Ventilation within the pump station building to conform to local regulations and requirements.
2. Specify Heating/Ventilation equipment.

Electrical

3. Patrick will design the Electrical Service Entrance to the new pump station building, including coordination with Utility Company. Utility Company service entrance fees are not included in this proposal.
4. Design the power distribution to electrical equipment.

5. Design the pump power and controls. The pump station controller will be compatible with the necessary communications protocol for remote monitoring and control as required by the Lake County.
6. Design a back-up emergency generator to power the pumping station upon loss of normal utility power via an automatic transfer switch.
7. Lighting design for the new building.

Plumbing

8. Patrick will design the discharge piping and valves from the pump discharge (12" dia.) to the force main (20" dia.)
9. Sump pump design.
10. Design a hose bib for housekeeping.

Shop Drawing Review

Shop drawing review for pump station MEP components listed above includes:

11. Verify general conformity with the design plans and specifications.
12. Review vendor supplied components.

PUMP STATION STRUCTURE

1. Patrick will design the structure of the pump station to house and support the mechanical, electrical, and piping systems, including coordination with architectural components. The aesthetics of the pump station will be coordinated with LCDOT during the design process.
2. Structure drawings will be prepared to show plan, elevation, sections, bill of materials, and reinforcement bending diagrams.
3. Standard details for grating, ladders, etc. will be included.

PERMITS

1. A U.S. Army Corps of Engineers Section (USACE) 404 permit will be required for impacts to jurisdictional wetlands (Waters of the US). It is anticipated that this project can be processed under Regional Permits 3, Transportation Projects, and 7, Temporary Impacts.
2. It is understood from correspondence with LCDOT that all wetland mitigation will be provided through wetland banking credits.
3. A Lake County SMC sign-off on the erosion and sediment control plan will be required as part of the USACE approval process.

4. A Village of Grayslake stormwater management permit may be required.
5. A Lake County SMC stormwater management permit will be required.
6. As more than one acre will be disturbed, a Notice of Intent and Storm Water Pollution Prevention Plan (SWPPP) will be prepared and submitted to the IEPA for approval.
7. Permits related to sanitary sewer and water main relocations (see Utilities section for additional information).
8. Permit fees, where applicable, are not included.
9. BLA will provide permitting assistance, review and coordination assistance of the submittals for the ACOE (404 Joint Application), IEPA 401 Water Quality Certification, the Lake County Soil and Water Conservation District, Lake County Stormwater Management Commission, FEMA (CLOMR) submittal and the SWPPP. BLA will also identify the utility conflicts and proposed locations along the corridor and coordinate the relocation of such with the utility companies. BLA will identify areas in which permanent easements may be required for utility relocation (if necessary); coordination with individual property owners related to these potential acquisitions are not included in this scope. Please refer to the attached scope of work from BLA for further information.

UTILITIES

1. Patrick Engineering and Bollinger-Lach will identify potential utility conflicts and notify the affected utility owners of these potential conflicts.
2. **Sanitary Sewer Relocation:**
 - a. Based on the proposed grade separation at the CN railroad and the roadway widening, there will be a need to relocate the Lake County Public Works 21" sanitary sewer that runs along the north side of Washington Street. Patrick will prepare the plans, specifications, quantities, schedules, and details including the evaluation of cross-sections to determine how the sanitary sewer will fit amongst the proposed bridge, roadway, storm sewer improvements, and other existing utilities in the corridor. Patrick will also prepare IEPA, Lake County Public Works, North Shore Sanitary District (if required), and Railroad permits for the relocation of the existing sewer. Patrick assumes that all utility relocations will be incorporated within the existing or proposed ROW and easements for the roadway project. If easements are required as part of the relocations, this can be performed as an additional service.
 - b. Additionally there is sanitary sewer beneath the proposed pavement for the entire length of the project (including at the CN railroad). Depending on

how LCDOT ultimately elects to address this sewer (i.e. allow it to remain beneath pavement or require it to be relocated), the sewer may need to be relocated. Patrick will prepare plans for the relocation as described above.

- c. There is potential for sanitary sewer service lines to be impacted by the proposed improvements. Patrick will include pay items and specifications for adjusting sanitary sewer services.
3. Watermain Relocation (BLA): Based on the proposed improvements, there may be a need to relocate Village of Grayslake and CLCJAWA watermains. Please refer to the attached scope of work from BLA for further information.

GEOTECHNICAL

1. Geotechnical information is available for the proposed widening of Washington Street from the Phase I Soils Report. Geotechnical investigations for the construction of retaining walls will be performed as necessary to supplement the Phase I investigation. A nominal amount of additional effort is included in the Phase II scope for work above the level included in the Phase I contract.
2. A Structural Geotechnical Report will be prepared, with boring logs and analyses, related to the above mentioned structural improvements.
3. Provide concept layout for slurry wall construction around grade separation at CN/Metra Railroad crossing.

ROW NEGOTIATION AND ACQUISITION

Santacruz Associates will perform all necessary services to appraise, negotiate, and acquire the right-of-way required for this project. Please refer to the attached scope of work and manhours from Santacruz Associates for further information.

FIELD TILE INVESTIGATION

A field tile investigation will be performed by Huddleston McBride Land Drainage Company and will include the mapping of all mainline and sub-main collectors near the existing agricultural land on the north side of Washington Street between Haryan Way and Lake Street. Please refer to the attached scope of work and manhours from Huddleston McBride Land Drainage Company.

CONSTRUCTABILITY REVIEW

BLA will perform an independent review of the plans by the construction resident engineering staff to help identify any potential areas that could cause a delay during

construction or require contract extra work during construction. The scope of work for plan constructability review can be located in the attached documents from BLA.

VALUE ENGINEERING

BLA will perform Value Engineering for the project with assistance from Patrick Engineering. The team includes staff from the following disciplines; transportation, construction, environmental, structural and drainage departments. This team along with LCDOT and IDOT (if desired) will review the plans in their current state and conduct a brainstorming event to determine/identify possible items to reduce project costs. BLA and Patrick will then perform conceptual design as necessary and evaluate the potential dollar values associated with each idea and prepare a written report to be submitted to LCDOT and IDOT. Please refer to the attached scope of work from BLA for further information.

MAINTAIN PROJECT WEBSITE

BLA will enhance and update the project website throughout the Phase II project. We anticipate updating the website four (4) times at the kick-off, Preliminary, Pre-Final, and Final Stages. BLA will prepare statements regarding critical items of the project in particular, Utility Coordination efforts, Railroad Coordination efforts, Tree Impact/Replantings and Wetland/Drainage Impact Statements. BLA will coordinate and make recommendations with Patrick Engineering and LCDOT on how to address with comments received through the website regarding project-related concerns.

DELIVERABLES AND COORDINATION

1. Deliverables

a) Preliminary Contract Plans

- i) LCDOT - 1 full size copy, 6 quarter size copies, special provisions, and PDF of all
- ii) IDOT Local Roads - 10 quarter size copies and special provisions
- iii) IDOT Bureau of Bridges & Structures – 1 quarter size copy
- iv) Hainesville, Grayslake, Round Lake Park - 1 quarter size copy each
- v) Utilities – 1 full size copy each

b) Pre-Final Contract Plans

- i) LCDOT - 1 full size copy, 6 quarter size copies, special provisions, and PDF of all
- ii) IDOT Local Roads – 10 quarter size copies and special provisions
- iii) IDOT Bureau of Bridges & Structures – 1 quarter size copy
- iv) Hainesville, Grayslake, Round Lake Park - 1 quarter size copy each

- v) Utilities – 1 full size copy each
- c) Final Contract Plans
 - i) LCDOT - 3 full size copies, 6 quarter size copies, 1 full size mylar set, special provisions, PDF of all, and MicroStation files
 - ii) IDOT Local Roads - 10 quarter size copies and special provisions
 - iii) IDOT Bureau of Bridges & Structures – 1 quarter size copy
 - iv) Hainesville, Grayslake, Round Lake Park - 1 quarter size copy each
 - v) Utilities – 1 full size copy each
- d) Final Quantity Calculations
 - i) LCDOT – 2 copies and PDF
- e) Construction Cost Estimate
- f) Construction Schedule/Estimate of Time
- g) IDOT Bidding/Letting/Award Forms (PDF and Word/Excel)

2. The project will involve coordination with:

- a) LCDOT - Project development and resolution issues. Copies of all correspondence will be submitted to the LCDOT.
- b) IDOT – Plan reviews and specific bureau review of improvements.
- c) Village of Grayslake - Extra work items and resolution of issues within their jurisdiction
- d) Village of Hainesville - Extra work items and resolution of issues within their jurisdiction
- e) Village of Round Lake Park – Extra work items and resolution of issues within their jurisdiction.
- f) U.S. Army Corps of Engineers
- g) Lake County Stormwater Management Commission
- h) Illinois Environmental Protection Agency
- i) Canadian National (CN) Railroad
- j) Metra
- k) Illinois Commerce Commission (ICC)
- l) All utility companies having facilities within the project limits
- m) Lake County Public Works
- n) North Shore Sanitary District

- o) Support for right-of-way negotiation services
- p) LCDOT website updates

POST-DESIGN SERVICES

1. Post-design services for tasks such as responding to inquiries and requests for information during construction and utility relocation reviews are included.
2. Review of shop drawings, as indicated in the Structural section and Pump Station section, above.

| Phase II Contract Plans | | <u>Sheets</u> | <u>Manhours</u> |
|--------------------------------|---|-------------------------------------|---------------------------------------|
| | <u>ITEM</u> | | |
| 1 | Data Review and Value Engineering Study | | |
| | Acquisition of documents/adjacent development plans/information | | 20 |
| | Review of documents/development plans/information exchange | | 40 |
| | Value Engineering Study - Assist BLA with Value Engineering Study | | 80 |
| | | | |
| | | TOTAL DATA REVIEW SHEETS = 0 | TOTAL MH'S = 140 |
| | | | ESTIMATED DIRECT COSTS = \$ 40 |
| | | | |
| | Materials and Reproduction (400 pages x \$0.10/page) | | \$ 40 |
| | | | |
| 2 | Contract Plan Preparation | <u>Sheets</u> | <u>Manhours</u> |
| | Title/Cover Sheet | 1 | 20 |
| | | Subtotal Sheets 1 | Subtotal MH's 20 |
| | Index of Sheets & State Standards | 1 | 20 |
| | | Subtotal Sheets 1 | Subtotal MH's 20 |
| | General Notes | 1 | 20 |
| | | Subtotal Sheets 1 | Subtotal MH's 20 |
| | Summary of Quantities | 8 | 192 |
| | | Subtotal Sheets 8 | Subtotal MH's 192 |
| | Schedule of Quantities (2 Roadway, 2 Earthwork, 2 Drainage) | 6 | 144 |
| | | Subtotal Sheets 6 | Subtotal MH's 144 |
| | Typical Sections | <u>Sheets</u> | <u>Manhours</u> |
| | To be Done by BLA | | 7 |
| | | | |
| | Alignment and Ties | <u>Sheets</u> | <u>Manhours</u> |
| | Alignment Plan 1"=100' (2 views/sheet) | 1 | 24 |
| | Horizontal Alignment Control Points w/ties | 1 | 24 |
| | | Subtotal Sheets 2 | Subtotal MH's 48 |
| | | <u>Length (ft.)</u> | <u>MHs</u> |
| | Create Base Drawings (8 hours/plan sheet x 5 plan shts) | | Subtotal MH's 40 |
| | | | |
| | Plan and Profile Sheets (Scale 1"=50') | <u>Sheets</u> | <u>Manhours</u> |
| | Washington Street (2 mainline + 1 Temporary Roadway Runaround) | 3 | 120 |
| | Haryan Way | 1 | 30 |
| | Quantity Calculations (Included in sheet manhours) | | 0 |
| | Clear Zone Analysis (IDOT Format) | | |
| | | Subtotal Sheets 4 | Subtotal MH's 150 |
| | Suggested Staging of Construction and Traffic Control | | <u>Manhours</u> |
| | Maintenance of Traffic Concept Study | | |
| | Review Phase I MOT Concept | | 30 |
| | | | Subtotal MH's 30 |
| | Maintenance of Traffic Plans (1"=50') | <u>Sheets</u> | <u>Manhours</u> |
| | MOT Discussion | 1 | 24 |
| | Typical Sections | | |

| Phase II Contract Plans | | | |
|--|------------------------|------------|---------------------------|
| Washington Street - Stages 1, 2 & 3 (12 typical) | 6 | 144 | |
| Haryan Way - Stages 1, 2, & 3 (6 typical) | 3 | 72 | |
| Temporary Roadway for Grade Separation - Stages 1, 2 & 3 (6 Typical) | 3 | 72 | |
| <u>Stage 1 Plans (2 views/sheet)</u> | | | |
| Washington Street | 2 | 48 | |
| Haryan Way | 1 | 24 | |
| Temporary Roadway at Grade Separation | 2 | 48 | |
| <u>Stage 1A Plans - Intersection Staging (2 views/sheet)</u> | | | |
| Washington Street | 2 | 48 | |
| Haryan Way | 1 | 24 | |
| Temporary Roadway at Grade Separation | 2 | 48 | |
| <u>Stage 2 Plans (2 views/sheet)</u> | | | |
| Washington Street | 2 | 48 | |
| Haryan Way | 1 | 24 | |
| Temporary Roadway at Grade Separation | 2 | 48 | |
| <u>Stage 2A Plans - Intersection Staging (2 views/sheet)</u> | | | |
| Washington Street | 2 | 48 | |
| Haryan Way | 1 | 24 | |
| Temporary Roadway at Grade Separation | 2 | 48 | |
| <u>Stage 3 Plans (2 views/sheet)</u> | | | |
| Washington Street | 2 | 48 | |
| Haryan Way | 1 | 24 | |
| Temporary Roadway at Grade Separation | 2 | 48 | |
| <u>Stage 3A Plans - Intersection Staging (2 views/sheet)</u> | | | |
| Washington Street | 2 | 48 | |
| Haryan Way | 1 | 24 | |
| Temporary Roadway at Grade Separation | 2 | 48 | |
| Quantity Calculations (Preliminary, Pre-Final & Final Submittals) (4 hrs/sheet) (included in sheet manhours) | | | |
| | Subtotal Sheets | 43 | Subtotal MH's 1032 |
| Erosion and Sediment Control Plans (Scale 1"=50') (2 views/sheet) | | | |
| | Sheets | MHs | |
| Erosion Control General Notes | 1 | 24 | |
| Washington Street (X 2 stages) | 4 | 96 | |
| Haryan Way (X 2 stages) | 2 | 48 | |
| Temporary Roadway Runaround (X 2 stages) | 2 | 48 | |
| Railroad ShooFly (X 2 stages) | 6 | 144 | |
| Erosion Control Details | 2 | 48 | |
| Quantity Calculations (Included in sheet manhours) | | | |
| | Subtotal Sheets | 17 | Subtotal MH's 408 |
| Drainage and Utilities Sheets (Scale 1"=50') | | | |
| | Sheets | MHs | |
| Washington Street | 3 | 120 | |
| Haryan Way | 1 | 40 | |
| Temporary Roadway Runaround | 2 | 80 | |
| Detention Area Grading Plans | 1 | 36 | |
| Floodplain Compensatory Storage Area Grading Plan | 1 | 36 | |
| Pump Station Plan and Elevations | 2 | 88 | |
| Pump Station Site Plan | 1 | 48 | |
| Pump Station MEP | 17 | 272 | |
| Drainage Details | 4 | 128 | |
| Utility Conflict Determination/Mitigation (Prelim & Prefinal Submittals) | | | |
| | | 60 | |
| Quantity Calculations (Included in sheet manhours) | | | |

| Phase II Contract Plans | | Subtotal Sheets | 32 | Subtotal MH's | 908 |
|--|--|------------------------|-----------|----------------------|------------|
| Sanitary Sewer Relocation Sheets (Scale 1"=50') | | Sheets | | MHs | |
| Washington Street | | 3 | | 108 | |
| Sanitary Details | | 2 | | 64 | |
| Quantity Calculations (Included in sheet manhours) | | | | | |
| | | Subtotal Sheets | 5 | Subtotal MH's | 172 |
| Water Main Relocation Sheets (Scale 1"=50') | | Sheets | | MHs | |
| To be Done by BLA | | | 6 | | |
| Drainage Calculations | | | | MHs | |
| Bridge & Culverts | | | | | |
| Review and check one (1) hydraulic report (HR) with two (2) crossings | | | | 8 | |
| Design energy dissipators at one culverts | | | | 8 | |
| Perform hydraulic calculations for miscellaneous culverts | | | | 18 | |
| Design energy dissipation/erosion control at miscellaneous culverts | | | | 12 | |
| Stormwater Detention | | | | | |
| Modify (3) 2-year and 100-year restrictors | | | | 24 | |
| Review and check stage-storage calculations for (1) detention pond | | | | 12 | |
| Refine storage capacity calculations for oversized storm sewers | | | | 20 | |
| Design outlet structures for (1) detention basin | | | | 12 | |
| Storm Sewers | | | | | |
| Perform inlet spacing calculations | | | | 40 | |
| Refine storm sewer calculations per final inlet locations | | | | 18 | |
| Select manhole and catch basin locations and size structures | | | | 14 | |
| Select and size stormwater treatment structures | | | | 20 | |
| Design erosion control at outfalls | | | | 12 | |
| Swales and Ditches | | | | | |
| Design grading for ditches and swales (includes work in cross sections) | | | | 168 | |
| Estimate cumulative discharges along ditches and swales | | | | 12 | |
| Check hydraulic capacity of ditches and swales | | | | 10 | |
| Design erosion control features where required | | | | 10 | |
| Pump Station | | | | | |
| Review and check one (1) pump station hydraulic report (HR) | | | | 20 | |
| Optimize wet well dimensions | | | | 12 | |
| Detail discharge piping | | | | 16 | |
| Detail check and gate valves | | | | 12 | |
| Optimize pump cycle time and schedule | | | | 18 | |
| Prepare system curve | | | | 12 | |
| Pump selection | | | | 24 | |
| Design discharge chamber | | | | 20 | |
| Design grating | | | | 16 | |
| Design sump pump and sump pump discharge line | | | | 32 | |
| Coordination for building design | | | | 72 | |
| Site grading plan | | | | 24 | |
| Coordination for site improvements | | | | 48 | |
| Floodplain Encroachment/Depressional Storage Fill/Wetland Hydrology | | | | | |
| Refine floodplain fill calculations | | | | 8 | |
| Refine design of compensatory storage areas | | | | 12 | |
| Refine depressional storage area fill calculations | | | | 0 | |
| Refine design of depressional area compensatory storage areas | | | | 0 | |

| Phase II Contract Plans | | | | |
|--------------------------------|---|------------------------|----------------------|----------------------|
| | Check and refine wetland hydrology calculations | | | 24 |
| | <u>Pump Station MEP Design</u> | | | |
| | Electrical Service Sizing / Panel Sizing calculations | | | 24 |
| | Mechanical ventilation calculation | | | 20 |
| | | | Subtotal MH's | 832 |
| | Plats of Highway | | | MHs |
| | Check Plats for Consistency with Plans | | | 50 |
| | Revisions to ROW Based on Coordination | | | 40 |
| | | | Subtotal MH's | 90 |
| | Intersection Details (Scale 1" = 20') | Sheets | | MHs |
| | Lowlands Drive | 1 | | 40 |
| | Haryan Way | 1 | | 40 |
| | | Subtotal Sheets | 2 | Subtotal MH's |
| | | | | 80 |
| | Landscaping, Pavement Marking & Signing Plans (Scale 1"=50') (2 views/sheet) | Sheets | | MHs |
| | To be Done by BLA | | 9 | |
| | | | | |
| | Miscellaneous Details | Sheets | | MHs |
| | <u>Modify IDOT Details</u> (Minor modifications - title block info, etc.) | 12 | | 36 |
| | | Subtotal Sheets | 12 | Subtotal MH's |
| | | | | 36 |
| | <u>Consultant Details</u> | | | |
| | Miscellaneous Roadway Details | 4 | | 120 |
| | | Subtotal Sheets | 4 | Subtotal MH's |
| | | | | 120 |
| | Traffic Signal Plans | | | MHs |
| | To be Done by BLA | | 5 | 0 |
| | Review Traffic Signal Plans by Bollinger Lach for Consistency with Plans | | | 10 |
| | Check Traffic Signal Plans by Bollinger Lach (3 submittals) | | | 20 |
| | | | | Subtotal MH's |
| | | | | 30 |
| | Lighting Design | | | MHs |
| | Design Underpass Lighting @ Grade Separation | | | 64 |
| | | | | Subtotal MH's |
| | | | | 64 |
| | Railroad Track Work | Sheets | | MHs |
| | General Notes Sheet | 1 | | 14 |
| | Plan and Profile - ShooFly | 3 | | 112 |
| | Plan and Profile - Final Track | 3 | | 112 |
| | Cross-Sections - ShooFly | 6 | | 196 |
| | Cross-Sections - Final Track | 6 | | 264 |
| | Typical Sections and Details | 2 | | 64 |
| | Coordination and Meetings | 0 | | 216 |
| | Quantities and Cost Estimating | 0 | | 30 |
| | | Subtotal Sheets | 21 | Subtotal MH's |
| | | | | 1008 |
| | Railroad Bridge Structure | Sheets | | MHs |
| | TS&L Drawing for Preliminary Approval | 1 | | 120 |
| | GP&E Sheet | 1 | | 79 |
| | General Notes Sheet | 1 | | 31 |

| Phase II Contract Plans | | | | Subtotal Sheets | 60 | | |
|---|---|-----------|----------------------|-----------------|----|------------------------------------|-------------|
| Standard Drawings | | | | | | | |
| Special Provisions | | | | | | | MHs |
| | Prepare Special Provisions (For Prelim, Prefinal & Final Submittals) | | | | | | 180 |
| | Pump Station Special Provisions (For Prelim, Prefinal & Final Submittals) | | | | | | 60 |
| | | | | | | Subtotal MH's | 240 |
| Estimate of Time | | | | | | | MHs |
| | Prepare BD220 & Bar Chart (For Prelim, Prefinal & Final Submittals) | | | | | | 60 |
| | Prepare Estimate of Cost | | | | | | 60 |
| | | | | | | Subtotal MH's | 120 |
| IDOT Bidding/Letting/Award Forms | | | | | | | MH's |
| | Preparation of Required IDOT Forms | | | | | | 40 |
| | | | | | | Subtotal MH's | 40 |
| TOTAL CONTRACT PLAN PREPARATION SHEETS = 354 | | | | | | TOTAL MH'S = | 9250 |
| | | | | | | ESTIMATED DIRECT COSTS = \$ | 30,445 |
| Materials and Reproduction | | | | | | | |
| Preliminary Submittal | | | | | | | |
| | 200 sheets of specs | X 17 sets | X \$0.10 per sheet = | | | \$ | 340 |
| | 354 plots bond | X 1 set | X \$1.80 per sheet = | | | \$ | 610 |
| | 354 full size copies | X 10 sets | X \$1.80 per sheet = | | | \$ | 6,102 |
| | 354 plot 1/4 size | X 1 set | X \$0.40 per sheet = | | | \$ | 136 |
| | 354 copies 1/4 size | X 17 sets | X \$0.25 per sheet = | | | \$ | 1,441 |
| Pre-Final Submittal | | | | | | | |
| | 200 sheets of specs | X 17 sets | X \$0.10 per sheet = | | | \$ | 340 |
| | 354 plots bond | X 1 set | X \$1.80 per sheet = | | | \$ | 637 |
| | 354 copies full size | X 10 sets | X \$1.80 per sheet = | | | \$ | 6,372 |
| | 354 plot 1/4 size | X 1 set | X \$0.40 per sheet = | | | \$ | 142 |
| | 354 copies 1/4 size | X 17 sets | X \$0.25 per sheet = | | | \$ | 1,505 |
| Final Submittal | | | | | | | |
| | 200 sheets of specs | X 8 sets | X \$0.10 per sheet = | | | \$ | 340 |
| | 354 plots bond | X 1 set | X \$1.80 per sheet = | | | \$ | 637 |
| | 354 copies full size | X 10 sets | X \$1.80 per sheet = | | | \$ | 6,372 |
| | 354 plot 1/4 size | X 1 set | X \$0.40 per sheet = | | | \$ | 142 |
| | 354 copies 1/4 size | X 17 sets | X \$0.25 per sheet = | | | \$ | 1,505 |
| | 354 myfars | X 1 set | X \$6.00 per sheet = | | | \$ | 2,124 |
| Drilling Direct Costs | | | | | | \$ | - |
| Laboratory Services for Geotechnical Work | | | | | | \$ | 1,700 |
| 3 Meetings / Field Checks/Coordination | | | | | | | |
| IDOT/LCDOT Meetings | | | | Meetings | | | MHs |
| | Kickoff Meeting (1 meeting - 4 people (PM, PE, Str, Drainage)) | | | 1 | | | 16 |
| | Prepare Kickoff Meeting Minutes | | | | | | 4 |
| | Preliminary Plan Review Meeting (1 meeting - 3 people (PM, PE, Drainage)) | | | 1 | | | 18 |
| | Prepare Preliminary Plan Review Meeting Minutes | | | | | | 4 |
| | Preliminary Plan Field Review with LCDOT Staff (3 people (PM, PE, Dr)) | | | 1 | | | 18 |
| | Prepare Preliminary Field Review Meeting Minutes | | | | | | 4 |
| | Pre-Final Plan Review Meeting (1 meeting - 3 people (PM, PE, Drainage)) | | | 1 | | | 18 |

| Phase II Contract Plans | | | |
|---|--|--------------------------------------|--------------|
| | Prepare Pre-Final Plan Review Meeting Minutes | | 4 |
| | Pre-Final Plan Field Review with LCDOT Staff (3 people (PM, PE, Drainage)) | 1 | 18 |
| | Prepare Pre-Final Field Review Meeting Minutes | | 4 |
| | Utility Review Meetings (4 meetings - 2 people (PM, PE)) | 4 | 32 |
| | Prepare Utility Review Meeting Minutes | | 16 |
| | Plan-in-Hand Field Review Meeting (1 meeting - 4 people (PM, PE, Dr, Str)) | 1 | 24 |
| | Prepare Final Plan Review Meeting Minutes | | 4 |
| | Progress Meetings w/ TranSystems (24 meetings - 2 people (PM, PE)) | 24 | 192 |
| | Prepare Meeting Minutes | | 96 |
| | Progress Meetings w/ LCDOT (12 meetings - 2 people (PM, PE)) | 12 | 96 |
| | Prepare Meeting Minutes | | 36 |
| | Structural Aesthetic Treatment Meeting w/LCDOT (2 meetings - 2 people) | 2 | 16 |
| | Prepare Meeting Minutes | | 4 |
| | Traffic Signal Review Meetings (1 meetings - 2 people (Sig PM+ PE)) | 1 | 16 |
| | Prepare Meeting Minutes | | 4 |
| Other Meetings | | | |
| | IDOT (2 meetings - 4 people (PM, PE, Dr, Str)) | 2 | 24 |
| | Prepare Meeting Minutes | | 8 |
| | Village of Grayslake (2 meetings - 3 people (PM, PE, Dr)) | 2 | 24 |
| | Prepare Meeting Minutes | | 8 |
| | Grayslake Park District (1 meeting - 2 people (PM, PE)) | 1 | 8 |
| | Prepare Meeting Minutes | | 4 |
| | Lake County SMC (2 meetings - 2 people (PM, PE)) | 2 | 16 |
| | Prepare Meeting Minutes | | 8 |
| | U.S. Army Corps of Engineers (2 meetings - 3 people (PM, PE, Dr)) | 2 | 24 |
| | Prepare Meeting Minutes | | 8 |
| | Lake County Public Works (2 meetings - 3 people (PM, PE, Dr)) | 2 | 24 |
| | Prepare Meeting Minutes | | 8 |
| | North Shore Sanitary District (1 meeting - 3 people (PM, PE, Dr)) | 1 | 12 |
| | Prepare Meeting Minutes | | 4 |
| Field Checks | | Field Checks | |
| | Videotape and photograph site | 1 | 16 |
| | Roadway | 2 | 30 |
| | Structural | 1 | 16 |
| | PESA Recon | 1 | 8 |
| | Drainage | 2 | 32 |
| | MEP | 1 | 24 |
| | Pre-Submittal Field Reviews (PE) | | |
| | Preliminary Submittal | 1 | 16 |
| | Pre-Final Submittal | 1 | 16 |
| | Final Submittal | 1 | 16 |
| Coordination | | | |
| | Subconsultants | | 120 |
| | TranSystems | | 100 |
| | | Total Meetings / Field Checks | 72 |
| TOTAL MEETINGS / FIELD CHECK / COORDINATION MH'S = | | | 1218 |
| ESTIMATED DIRECT COSTS = \$ | | | 3,475 |
| | Photography | | \$ 50 |
| | Materials and Reproduction (500 pages x \$0.10/page) | | \$ 50 |

| Phase II Contract Plans | | | |
|--------------------------------|--|---|------------|
| | Vehicle Usage | | |
| | 75 vehicle days X \$45/day | | \$ 3,375 |
| | | | |
| 4 | Horizontal / Vertical Check | | MHs |
| | Review centerline alignments developed in Phase I | | 20 |
| | Review vertical profiles developed in Phase I | | 20 |
| | | | |
| | | TOTAL HORIZONTAL / VERTICAL CHECK MH'S = | 40 |
| | | ESTIMATED DIRECT COSTS = \$ | 15 |
| | | | |
| | Materials and Reproduction (150 pages x \$0.10/page) | | \$ 15 |
| | | | |
| 5 | Permits | | MHs |
| | Grayslake WDO permit application package | | 32 |
| | Prepare exhibits for Grayslake permit | | 28 |
| | Prepare Lake County SMC WDO permit application package | | 36 |
| | Prepare exhibits for SMC permit | | 32 |
| | Joint Permit application package | | 44 |
| | Prepare exhibits for Joint Permit | | 32 |
| | Prepare Storm Water Pollution Prevention Plan | | 28 |
| | Prepare NOI package for NPDES permit | | 16 |
| | IEPA sanitary sewer permit application package | | 36 |
| | Prepare exhibits for IEPA permit | | 24 |
| | Lake County Public Works sanitary sewer permit application package | | 36 |
| | Prepare exhibits for Lake County Public Works permit | | 24 |
| | North Shore Sanitary District sanitary sewer permit application package | | 36 |
| | Prepare exhibits for North Shore Sanitary District permit | | 24 |
| | Validation of August 2010 PESA Report | | 24 |
| | Monitor permit applications and respond to comments | | 80 |
| | | | |
| | | TOTAL PERMITS MH'S = | 532 |
| | | ESTIMATED DIRECT COSTS = \$ | 946 |
| | | | |
| | Materials and Reproduction | | |
| | 8 packages X 3 copies 8 -1/2 X 11 X 100 pages X \$0.10 per sheet = | | \$ 240 |
| | 7 pkgs X 3 copies 11 X 17 size X 10 sheets X \$0.25 per sheet = | | \$ 53 |
| | 7 pkgs X 3 copies 11 X 17 size X 10 sheets X \$1.80 per sheet = | | \$ 378 |
| | Shipping/Postage | | \$ 275 |
| | | | |
| 6 | Survey | | MHs |
| | Pickup along corridor for railroad shoofly approximately 3,600 feet | | 60 |
| | Pickup at METRA Station, facilities, platform, parking lot, driveway | | 50 |
| | Pickup along temporary diverted Washington Street at RR Crossing, 700 feet | | 20 |
| | Pickup for pump station @ Lake Street Station 51+00 to 52+00, 100' to 200' LT | | 10 |
| | Pickup at Washington Street Station 74+50 to 77+00 about 300 feet south of road. | | 20 |
| | Pickup at Haryan Way and Washington Street for pond slope modification | | 16 |
| | Pickup for driveway entrance at Washington Street Station 120+50 to 122+500 LT | | 10 |
| | Pickup drain tile field markers from field tile survey | | 36 |
| | Mapping and merging data in existing basefile | | 44 |

| Phase II Contract Plans | | | |
|--|---|--|---------------------|
| | | | |
| | | TOTAL SURVEY MH'S = | 266 |
| | | ESTIMATED DIRECT COSTS = \$ | 540 |
| | Vehicle Usage | | |
| | 12 vehicle days X \$45/day | | \$ 540 |
| 7 | QA/QC | | MHs |
| | Roadway QA/QC | | 120 |
| | Railroad QA/QC | | 150 |
| | Structural QA/QC | | 120 |
| | Drainage QA/QC | | 120 |
| | | TOTAL QA/QC MH'S = | 510 |
| | | ESTIMATED DIRECT COSTS = \$ | 100 |
| | Materials and Reproduction (1000 pages x \$0.10/page) | | \$ 100 |
| 8 | Post Contract Coordination | Field Checks | MHs |
| | Answer Questions During Bidding Process | | 50 |
| | Visit Field as Requested by LCDOT | 5 | 40 |
| | Answer Field Questions in Office | | 80 |
| | Structural Shop Drawing Reviews (See attached structural manhours for detailed summary) | | 60 |
| | Pump Station Shop Drawing Reviews | | 30 |
| | | Total Field Checks | 5 |
| | | Subtotal MH's | 210 |
| | | TOTAL POST CONTRACT COORDINATION MH'S = | 210 |
| | | ESTIMATED DIRECT COSTS = \$ | 225 |
| | Vehicle Usage | | |
| | 5 vehicle days X \$45/day | | \$ 225 |
| 9 | Administration and Management | | 400 |
| | | TOTAL ADMIN/MANAGEMENT MH'S = | 400 |
| | | ESTIMATED DIRECT COSTS = \$ | 100 |
| | Materials and Reproduction (1000 pages x \$0.10/page) | | \$ 100 |
| SUMMARY OF WORKHOURS AND DIRECT COSTS | | Workhours | Direct Costs |
| 1 | Data Review and Value Engineering Study | 140 | \$40 |
| 2 | Contract Plan Preparation | 9,250 | \$30,445 |
| 3 | Meetings / Field Checks/Coordination | 1,218 | \$3,475 |
| 4 | Horizontal / Vertical Check | 40 | \$15 |
| 5 | Permits | 532 | \$946 |
| 6 | Survey | 266 | \$540 |

| Phase II Contract Plans | | | | | |
|--------------------------------|--------------------------------------|--|--|---------------|-----------------|
| 7 | QA/QC | | | 510 | \$100 |
| 8 | Post Contract Coordination | | | 210 | \$225 |
| 9 | Administration and Management | | | 400 | \$100 |
| | TOTALS: | | | 12,566 | \$35,886 |

Structural Manhours

PS & E

Summary

| | PLAN SHEETS | DESIGN HOURS | CHECK HOURS | PLAN PREP. HOURS | TOTAL HOURS |
|--|-------------|--------------|-------------|------------------|-------------|
| <u>Culvert Extension</u> | 2 | 14 | 6 | 20 | 40 |
| <u>Retaining Wall near Highland Lake</u> | 11 | 116 | 28 | 106 | 250 |
| <u>Retaining Wall near Railroad Grade Separation</u> | 14 | 238 | 68 | 174 | 480 |
| <u>Retaining Wall Sta. 56+50 to Sta. 61+00</u> | 8 | 64 | 16 | 100 | 180 |
| <u>Shop Drawing Review</u> | | | | | 64 |
| PSE TOTALS | 35 | 432 | 118 | 400 | 1014 |

Culvert Extension

36" Pipe Culvert

| | <u>MANHOURL ESTIMATE</u> | | | | |
|-----------------------------|--------------------------|--------------|-------------|------------------|-------------|
| | PLAN SHEETS | DESIGN HOURS | CHECK HOURS | PLAN PREP. HOURS | TOTAL HOURS |
| 1. Culvert Plan and Details | 1 | 12 | 6 | 18 | 36 |
| 2. Soil Boring Logs | 1 | 2 | 0 | 2 | 4 |
| PSE TOTALS | 2 | 14 | 6 | 20 | 40 |

Retaining Walls

Retaining Wall near Highland Lake

| | <u>MANHOURL ESTIMATE</u> | | | | |
|---|--------------------------|--------------|-------------|------------------|-------------|
| | PLAN SHEETS | DESIGN HOURS | CHECK HOURS | PLAN PREP. HOURS | TOTAL HOURS |
| 1. General Plan and Elevation | 2 | 12 | 4 | 24 | 40 |
| 2. Wall Details | 4 | 32 | 8 | 60 | 100 |
| 3. Wall Section, Bill-of-Materials and Bar Diagrams | 2 | 16 | 4 | 16 | 36 |
| 4. Soil Boring Logs | 3 | 8 | 0 | 4 | 12 |
| 5. Wall Type Study | 0 | 40 | 10 | 0 | 50 |
| 6. Aesthetics | 0 | 8 | 2 | 2 | 12 |
| PSE TOTALS | 11 | 116 | 28 | 106 | 250 |

Retaining Wall near Railroad Grade Separation

| | <u>MANHOURL ESTIMATE</u> | | | | |
|---|--------------------------|--------------|-------------|------------------|-------------|
| | PLAN SHEETS | DESIGN HOURS | CHECK HOURS | PLAN PREP. HOURS | TOTAL HOURS |
| 1. General Plan and Elevation | 2 | 24 | 8 | 24 | 56 |
| 2. Wall Details | 7 | 72 | 20 | 80 | 172 |
| 3. Wall Section, Bill-of-Materials and Bar Diagrams | 2 | 24 | 12 | 24 | 60 |
| 4. Soil Boring Logs | 3 | 6 | 0 | 4 | 10 |
| 5. Type, Size, & Location Plan | | 32 | 8 | 40 | 80 |
| 6. Structural Geotechnical Report | | 32 | 8 | 0 | 40 |
| 7. Wall Type Study | | 40 | 10 | 0 | 50 |
| 8. Aesthetics | | 8 | 2 | 2 | 12 |
| PSE TOTALS | 14 | 238 | 68 | 174 | 480 |

Retaining Wall Sta. 56+50 to Sta. 61+00

| | <u>MANHOURL ESTIMATE</u> | | | | <u>TOTAL HOURS</u> |
|---|--------------------------|-------------------------|------------------------|-----------------------------|------------------------|
| | <u>PLAN SHEETS</u> | <u>DESIGN HOURS</u> | <u>CHECK HOURS</u> | <u>PLAN PREP. HOURS</u> | |
| 1. General Plan and Elevation | 1 | 12 | 4 | 20 | 36 |
| 2. Wall Details | 4 | 32 | 8 | 60 | 100 |
| 3. Wall Section, Bill-of-Materials and Bar Diagrams | 1 | 16 | 4 | 16 | 36 |
| 4. Soil Boring Logs | 2 | 4 | 0 | 4 | 8 |
| PSE TOTALS | 8 | 64 | 16 | 100 | 180 |

Junction Chamber (one)

1 sheet each plus 1 detail sheet

| | <u>MANHOURL ESTIMATE</u> | | | | <u>TOTAL HOURS</u> |
|-------------------|--------------------------|-------------------------|------------------------|-----------------------------|------------------------|
| | <u>PLAN SHEETS</u> | <u>DESIGN HOURS</u> | <u>CHECK HOURS</u> | <u>PLAN PREP. HOURS</u> | |
| PSE TOTALS | | | | | 54 |

Pump Station

| | <u>MANHOURL ESTIMATE</u> | | | | <u>TOTAL HOURS</u> |
|---------------------------------------|--------------------------|-------------------------|------------------------|-----------------------------|------------------------|
| | <u>PLAN SHEETS</u> | <u>DESIGN HOURS</u> | <u>CHECK HOURS</u> | <u>PLAN PREP. HOURS</u> | |
| 1. General Plan and Elevation | 1 | 24 | 6 | 24 | 54 |
| 2. General Notes, Specifications | 1 | 16 | 4 | 16 | 36 |
| 3. Plans, Sections, and Details | 3 | 48 | 10 | 72 | 130 |
| 4. Typical Structural Details | 1 | 16 | 4 | 32 | 52 |
| 5. Architectural Details | 1 | 12 | 4 | 16 | 32 |
| 6. Bill-of-Materials and Bar Diagrams | 1 | 32 | 8 | 40 | 80 |
| PSE TOTALS | 8 | 148 | 36 | 200 | 384 |

**PAYROLL ESCALATION TABLE
FIXED RAISES**

FIRM NAME
PRIME/SUPPLEMENT

PATRICK ENGINEERING, INC.
PRIME

DATE 02/23/11

CONTRACT TERM
START DATE
RAISE DATE

24 MONTHS
2/1/2011
1/1/2012

OVERHEAD RATE 176.02%
COMPLEXITY FACTOR 0
% OF RAISE 5.00%

ESCALATION PER YEAR

2/1/2011 - 1/1/2012

11

24

= 45.83%

= 1.0293

1/2/2012 - 1/1/2013

12

24

= 52.50%

1/2/2013 - 2/1/2013

1

24

= 4.58%

The total escalation for this project would be:

2.93%

Bollinger, Lach & Associates

Phase II
Washington Street (Haryan Way to Lake Street)
Lake County
Section No.: 11-00121-11-BR

PROJECT SCOPE DESCRIPTION

The project scope will consist of assisting Patrick Engineering on the Phase II plans and specifications of the Washington Street corridor expansion at the start of widening improvements from Haryan Way to Lake Street including the grade separation at the railroad tracks in Lake County, Illinois for the LCDOT in the following ways:

Traffic Signal Plans and Interconnect: BLA will prepare plans for the placement of the conduit for the future system interconnect plans along Washington Street, from Lake Street to Haryan Way. BLA is anticipating one temporary interconnect sheet, one proposed interconnect sheet (total 2,600 ft+/- long Interconnect) one interconnect schematic sheet, and two LCDOT details. We will prepare the plans, specifications and quantities per the LCDOT requirements.

Typical Sections: BLA will prepare the typical sections for the roadway improvements. We anticipate 2 existing typical section sheets, 4 proposed typical section sheets and 1 sheet for the Washington Street temporary access road to be used during the bridge construction. The typical sections of the bridge or temporary railroad shoo-fly are not included in this scope.

Drainage Peer Review: The detention, high water grade lines, compensatory storage, inlet spacing, lateral and longitudinal drainage structure design, drainage scuppers for the bridge, down spouts, etc. performed by Patrick Engineering will be reviewed and documented at the preliminary, pre-final and final stages. BLA will QC/QA against LCSCMC permit requirements to ensure necessary items identified in the Phase I Location Drainage Study are accounted for.

Landscaping/Pavement Marking/Signing: BLA will prepare the landscaping, pavement marking and signing sheets for the improvements. We anticipate 7 pages of plans at a 50 scale and 2 additional sheets for details and notes.

Utility and Permit Coordination: BLA will provide permitting assistance, review and coordination assistance of the submittals for the preliminary, pre-final and final plan submittals, the storm water management permits and water and sanitary utility adjustments to the Village of Grayslake, Lake County Public Works, Lake County Stormwater Management Commission, IEPA (for the NPDES permit) and the USACE. BLA will also identify the utility conflicts and proposed locations along the corridor and coordinate the relocation of such with the utility companies. BLA will identify areas in which permanent easements may be required for utility relocation (if necessary); coordination with individual property owners related to these potential acquisitions are not included in this scope. We anticipate submitting plan sets to the companies (such as North Shore Gas, COMED, etc.) at the pre-final and final submittals, attending utility coordination meetings at LCDOT and needing time to coordinate with the companies to answer questions and coordinate around issues/changes, between the submittals.

Potential Watermain Relocation: It is anticipated that there will be a need to relocate the Village of Grayslake watermain that runs along the south side of Washington from Haryan Way to approximately 700' east of the railroad tracks and also the crossing of Washington Street to the north at the railroad tracks, as well as the CLCJAWA watermain on the south side of Washington Street for the project limits. BLA will prepare the plans, specifications, quantities, schedules and details including the evaluation of cross sections to determine how the water mains will fit amongst the proposed roadway, storm sewer improvements and all other existing utilities in the corridor. BLA will also prepare IEPA, LCDOT and Railroad permits for the relocation of the existing water mains, owned and operated by the Village of Grayslake and CLCJAWA. BLA has included time to meet with each of the operating agencies two times regarding materials of construction and desired locations and types of valves and connection points. BLA assumes that all utility relocations will be incorporated within the existing or proposed ROW for the roadway projects. If easements are required as part of the relocations, this can be performed as additional services.

Constructability Review: BLA will perform an independent review of the plans by the construction resident engineering staff to help identify any potential areas that could cause a delay during construction or require contract extra work during construction. The scope of work for plan constructability review will include:

- Site Visit
- Review of the plans for missing pay items.
- Perform a rough check of major plan quantities to ensure the magnitude of the quantity is correct.
- Review construction staging for practicality.
 - Railroad Staging of the shoe fly, Bentonite Walls, retaining walls, utility relocations and ground water pumping potential issues.
 - Sufficient temporary pavement.
 - Identify potential staging variations to allow work to proceed pending resolution of known ROW or utility conflicts.
- Check staging grade differentials at entries and cross streets.
- Review accessibility for bridge work.
- Need for Temporary Sheeting.
- Traffic control signing for side streets.
- Review estimated probable cost for major contract items.
- Prepare a Review Report to provide to Patrick Engineering.

Value Engineering: BLA will perform Value Engineering for the project. The team will include staff from the following disciplines; transportation, construction, environmental, structural and drainage departments. This team along with Patrick Engineering, LCDOT and IDOT (if desired) will review the plans in their current state and conduct a brain storming event to determine/ identify possible items to reduce project costs. BLA will then perform conceptual design as necessary and evaluate the potential dollar values associated with each idea and prepare a written report to be submitted to Patrick Engineering, LCDOT and IDOT.

Maintain Project Website: BLA will enhance and update the project website throughout the Phase II project. We anticipate updating the website 4 times at the kick-off, Preliminary, Pre-Final and Final Stages. BLA will prepare statements regarding critical items of the project in particular, Utility Coordination efforts, Railroad Coordination efforts, Tree Impact/Replantings and Wetland/Drainage Impact Statements. BLA will coordinate and make recommendations with Patrick Engineering and LCDOT on how to address comments received through the website regarding project-related concerns.

Meeting/Field Checks/Coordination: See attached sheet for the detail break down of the items.

BLA Manhours
PROJECT: Washington Street (Haryan Way to Lake Street)

Section: 11-00121-11-BR

| <u>ITEM</u> | <u># OF SHEETS</u> | <u>MH PER SHEET</u> | <u>TOTAL MH'S</u> |
|---|--------------------|---------------------|-------------------|
| Traffic Signals Interconnect Plans | 5 | | 106 |
| LCDOT Coordination with Signal Department | | | 24 |
| Typical Sections | | | |
| Existing | 2 | 8 | 16 |
| Proposed | 5 | 16 | 80 |
| Drainage Peer Review | | | 288 |
| Landscaping/Pavement Marking/Signing | 9 | 28 | 252 |
| Utility and Permit Coordination | | | |
| Village of Grayslake | | | 40 |
| Lake County Public Works | | | 40 |
| Lake County Stormwater Management Commission | | | 90 |
| IEPA - NPDES Permit SWPPP | | | 32 |
| Utility Conflict Identification | | | 148 |
| Utility Coordination | | | 152 |
| Watermain Relocations | | | |
| Plans (For permitting, including cross section evaluations) | | | 150 |
| Specifications | | | 36 |
| Quantities (Scheduling) | | | 40 |
| Permits (LCDOT, IEPA, CLCJAWA, Grayslake, RR) | | | 68 |
| Utility/Agency Meetings (4 mtgs @ 3 hrs @ 2 people) | | | 24 |
| Constructability Review | | | |
| Site Visit | | | 8 |
| Review of the plans for missing pay items. | | | 16 |
| Perform a rough check of major plan quantities to ensure the magnitude of the quantity is correct. | | | 12 |
| Review construction staging for practicality. | | | |
| Railroad Staging of the shoe fly, Bentonite Walls, retaining walls, utility relocations and ground water pumping potential issues | | | 24 |
| Utility Staging | | | 16 |
| Sufficient temporary pavement. | | | 12 |
| Identify potential staging variations to allow work to proceed pending resolution of known ROW or utility conflicts. | | | 12 |
| Check staging grade differentials at entries and cross streets. | | | 12 |
| Review accessibility for bridge work. | | | 16 |
| Need for Temporary Sheeting. | | | 8 |
| Traffic control signing for side streets. | | | 8 |
| Review estimated probable cost for major contract items. | | | 16 |
| Prepare a Review Report to provide to Patrick Engineering. | | | <u>16</u> |
| Sub-Total | 21 | | 1762 |

BLA Manhours

PROJECT: Washington Street (Haryan Way to Lake Street)

Section: 11-00121-11-BR

| <u>ITEM</u> | <u># OF SHEETS</u> | <u>MH PER SHEET</u> | <u>TOTAL MH'S</u> |
|---|------------------------------|---------------------|-------------------|
| Value Engineering | | | |
| Initial Kick off Meeting (6 staff@2 hrs) | | | 12 |
| Review plans and reports (6 staff@16 hrs) | | | 96 |
| Brain Storming Meeting (6 staff@8hrs) | | | 48 |
| Evaluate Alternatives and Calculate Costs (6 staff @20hrs) | | | 120 |
| Admin - Prepare agenda, minutes and report | | | 120 |
| Maintain Project Website (4 updates) | | | 140 |
| Meeting/Field Checks/ Coordination | | | |
| Patrick Meetings (4 mtgs @ 4 hrs @ 2 people) | | | 32 |
| LCDOT Meetings (4 mtgs @ 4 hrs @ 2 people) | | | 32 |
| IDOT Meetings (1 mtgs @ 3 hrs @ 2 people) | | | 6 |
| Utility Coordination Meetings (2 mtgs @ 4 hrs @ 2 people) | | | 16 |
| Field Checks (1 mtgs @ 4 hrs @ 1 person) | | | 4 |
| LCSMC Meetings (2 mtgs @ 3 hrs @ 2 people) | | | 12 |
| Permit Meetings (ACOE, USFW, etc) (2 mtgs @ 3 hrs @ 2 people) | | | 12 |
| Local Agency Meetings (Preliminary and Pre-Final) | | | |
| Village of Grayslake (2 mtgs @ 2 hrs @ 2 people) | | | 8 |
| | Sub-Total Page 2 | 0 | 658 |
| | Sub-Total from Page 1 | 21 | 1762 |
| Administration/ Management | | | <u>97</u> |
| | Total | 21 | 2,517 |

BLA Direct Costs
PROJECT: Washington Street (Haryan Way to Lake Street)
Section: 11-00121-11-BR

| | <u># of Sets</u> | <u>Size</u> | <u># of Sheets</u> | <u>Rate per Sheet</u> | <u>Total</u> |
|--|----------------------|-------------|------------------------|-----------------------|-------------------|
| <u>Utility Coordination</u> | | | | | |
| Preliminary Plan Sets (1 Patrick, 1 LCDOT, 7 Utility Companies) | 9 | 22"x34" | 55 | \$3.00 | \$1,485.00 |
| Pre-final Plan Sets (1 Patrick, 1 LCDOT, 7 Utility Companies) | 9 | 22"x34" | 55 | \$3.00 | \$1,485.00 |
| Final Plan Sets (1 Patrick, 1 LCDOT, 7 Utility Companies) | 9 | Quarter | 200 | \$0.25 | <u>\$450.00</u> |
| | | | | Preliminary Total | <u>\$3,420.00</u> |
| <u>Permit Reports</u> | | | | | |
| SWPPP (1 Patrick, 4 LCDOT) | 5 | Report | 1 | \$80.00 | <u>\$400.00</u> |
| | | | | Final Total | <u>\$400.00</u> |
| <u>Watermain Relocation</u> | | | | | |
| Plans * | 32 | Quarter | 12 | \$0.25 | \$96.00 |
| Specifications * | 32 | 8.5"x11" | 50 | \$0.10 | \$160.00 |
| Permit | 8 | 8.5"x11" | 5 | \$0.10 | <u>\$4.00</u> |
| | | | | Final Total | <u>\$260.00</u> |
| * 2 Village of Grayslake, 2 CLCJAWA, 2 Patrick, 2 LCDOT = 8 @ 3 submittals = 24 + 8 for final permit (IEPA/CNRR) | | | | | |
| ** 4 IEPA, 4 CNRR = 8 | | | | | |
| <u>Constructability Report</u> | | | | | |
| Vehicles | 3 | | | \$48.00 | \$144.00 |
| Report (1 Patrick, 4 LCDOT, 1 IDOT) | 6 | Report | 1 | \$80.00 | <u>\$480.00</u> |
| | | | | Final Total | <u>\$624.00</u> |
| <u>Value Engineering Report</u> | | | | | |
| Vehicles | 10 | | | \$48.00 | \$480.00 |
| Report (1 Patrick, 4 LCDOT, 1 IDOT) | 6 | Report | 1 | \$80.00 | <u>\$480.00</u> |
| | | | | Final Total | <u>\$960.00</u> |
| <u>Maintain Website</u> | | | | | |
| Domain Name Extension | 1 | each | 1 | \$500.00 | <u>\$500.00</u> |
| | | | | Final Total | <u>\$500.00</u> |
| <u>Meetings/Field Checks/ Coordination</u> | | | | | |
| Vehicles | 31 | | | \$48.00 | <u>\$1,488.00</u> |
| | | | | Vehicles Total | <u>\$1,488.00</u> |
| Grand Total | | | | | \$7,652.00 |

AVERAGE HOURLY PROJECT RATES

FIRM
PSB
PRIME/SUPPLEMENT

Bollinger, Lach & Associates, Inc.

DATE 02/18/11

SHEET 2 OF 2

PROJECT: Washington Street (Haryan Way to Lake Street)

| PAYROLL CLASSIFICATION | AVG HOURLY RATES | Watermain Relocations | | | Constructability Review | | | Value Engineering | | | Maintain Project Website | | | Meetings/Field Ck/Coord | | | Administration | | |
|------------------------|------------------|-----------------------|---------|----------|-------------------------|---------|----------|-------------------|---------|----------|--------------------------|---------|----------|-------------------------|---------|----------|----------------|---------|----------|
| | | 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 | 14 | 4.40% | 3.08 | 6 | 3.41% | 2.39 | 26 | 6.57% | 4.60 | | | | | | | | | |
| Director of Construct | 70.00 | | | | 16 | 9.09% | 6.36 | 46 | 11.62% | 8.13 | | | | | | | | | |
| Resident Engineer II | 42.23 | | | | 72 | 40.91% | 17.28 | | | | | | | | | | | | |
| Field Engineer II | 29.33 | | | | 30 | 17.05% | 5.00 | | | | | | | | | | | | |
| Project Manager | 40.71 | 68 | 21.38% | 8.71 | 20 | 11.36% | 4.63 | 108 | 27.27% | 11.10 | 28 | 20.00% | 8.14 | 62 | 50.82% | 20.89 | 87 | 89.69% | 36.51 |
| Project Engineer | 31.87 | 134 | 42.14% | 13.43 | 20 | 11.36% | 3.62 | 92 | 23.23% | 7.40 | 66 | 47.14% | 15.02 | 60 | 49.18% | 15.67 | | | |
| CADD Technician II | 32.31 | 102 | 32.08% | 10.36 | 12 | 6.82% | 2.20 | 32 | 8.08% | 2.61 | | | | | | | | | |
| Marketing Coordinat | 18.64 | | | | | | | | | | 46 | 32.86% | 6.12 | | | | | | |
| Director of Structural | 48.07 | | | | | | | 46 | 11.62% | 5.58 | | | | | | | | | |
| Director of Environm | 43.16 | | | | | | | 46 | 11.62% | 5.01 | | | | | | | | | |
| TOTALS | | 318 | 100% | \$35.58 | 176 | 100% | \$41.48 | 396 | 100% | \$44.44 | 140 | 100% | \$29.29 | 122 | 100% | \$36.36 | 97 | 100% | \$43.73 |

Huff & Huff, Inc.

**SCOPE OF SERVICES
WASHINGTON STREET IMPROVEMENTS – PHASE II
PROJECT T10-171W**

1. INTRODUCTION

It is our understanding that the Lake County Division of Transportation (LCDOT) proposes improvements to Washington Street beginning 1,000 feet west of Hainesville Road and extending 1,000 feet east of Lake Street. The proposed improvements includes Hainesville Road extending north and south of Washington Street for approximately 1,000 feet and Lake Street extending north and south of Washington Street for approximately 1,000 feet. The improvement also includes a segment along the Canadian National Railroad (CNRR) extending approximately 2,000 feet north and south of Washington Street in the Villages of Grayslake, Hainesville, Round Lake Park, and Unincorporated Lake County (T45N, R10E, Sections 21, 22, 23, 26, 27 and 28). Based on wetland delineations completed during July and September 2009 and June 2010, wetlands are present within the proposed project limits.

Huff & Huff, Inc. (H&H) presents this scope of services to perform wetland permitting, mitigation guidance, and maintenance and monitoring for restoration practices for the above-referenced project. This document presents our project approach, the scope of services, cost, and schedule for completing the project.

Specifically, the following areas will be included as part of this Scope of Services and additional information is provided in the following sections.

- Jurisdictional Determination Submittal
- Wetland Permitting
- Restoration and Monitoring Plan
- Meetings
- Quality Assurance/Quality Control

2. PROJECT TASKS

Task 1: Jurisdictional Determination Submittal

A jurisdictional determination (JD) is required to establish the jurisdictional status of onsite wetlands. H&H will prepare a JD submittal and present this to the Client for signature prior to submittal to Lake County Stormwater Management Commission (SMC). The JD determines which wetlands will require permitting through the Chicago District of the Corps of Engineers (COE). Wetlands deemed isolated will not require COE permitting, but may require permitting through the Lake County SMC. For a fee, SMC will determine jurisdiction, although the COE has final authority on the decision.

This scope of work does not include fees associated with the JD request. As part of the JD process, a field visit may be required. If necessary, H&H staff will accompany Lake County SMC and/or the COE to the site for completion of the JD. Time has been included in Task 4 of this scope to conduct

an on-site field visit for the JD.

Task 2: Wetland Permitting

H&H will assist Patrick Engineering, Inc. with wetland permitting for proposed wetland impacts for the Washington Street Improvements project. Permits for impacts to wetlands and associated buffers for LCDOT projects are issued through the COE and the Lake County SMC.

Based on the potential impacts, it is assumed that this project will qualify for the COE Regional Permit Program, if onsite wetlands are deemed jurisdictional. Section 401 Water Quality Certification is automatically granted with most COE Regional Permits. Therefore, coordination with the Illinois Environmental Protection Agency (IEPA) for water quality certification is not anticipated. If the COE determines that the project requires an Individual Permit (IP), a separate cost estimate will be required to account for additional tasks necessary for an IP.

The Section 404 permit process for jurisdictional wetlands is initiated by the submittal of the Joint Application to the COE. The Joint Application Form will require a signature from the LCDOT. This application is submitted to the following agencies:

- U.S. Fish and Wildlife Service (USFWS)
- Illinois Environmental Protection Agency
- Illinois Department of Natural Resources (IDNR)
- Illinois Department of Natural Resources/Office of Water Resources
- Illinois Historic Preservation Agency (IHPA)

The Lake County Watershed Development Ordinance (WDO) permit process is initiated by the submittal of a WDO Permit Application Form signed by a Certified Wetland Specialist to the SMC for impacts to Isolated Wetlands of Lake County (IWLC), for work within a floodplain or floodprone area, for hydrological disturbances greater than 5,000 square feet, or for modification of drainage.

Wetlands should not be impacted until the appropriate permits have been obtained. Based on current guidelines, a sequence of impact assessments must be reviewed prior to the issuance of permits for wetland development. This sequence must take into account the potential for the complete avoidance of wetland impacts. If it can be proved that impacts are unavoidable, then the project must be designed to minimize wetland impacts. Once impacts are minimized to the least amount of impact possible the mitigation of these impacts will be reviewed.

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

The COE has an Interagency Coordination Agreement (ICA) with the SMC to review soil erosion and sediment control (SESC) plans for permit issuance. An applicant is required to provide the SMC with the information necessary to conduct an adequate technical review of the SESC construction plans for the site. The SMC will attend preconstruction meetings, periodically inspect the site during construction, monitor the sites implemented SESC measures and formulate site

inspection reports that are submitted to the COE for review. The COE retains the final decision about soil, water and the other natural resources, and any issues, opinions, findings, or actions resulting from the ICAs. This scope does not include assistance for the erosion control submittal to the SMC.

A Designated Erosion Control Inspector (DECI) is required to review the project for erosion and sedimentation control measures for projects in Lake County. A DECI, hired or employed by the applicant, is required for all development that exceeds 10 acres of hydrologic disturbance or exceeds one acre of hydrologic disturbance and has a Regulatory Floodplain, IWLC or WOUS onsite or on adjoining property. The applicant shall submit the name of the DECI to the SMC at or before the pre-construction meeting or commencement of hydrologic disturbance for the development. The COE and SMC issuance of a permit to impact wetlands will be contingent upon approval of the erosion and sediment control plan by the SMC. This scope does not include field reviews of the soil erosion and sediment control measures for this project.

Endangered species review is required through the USFWS and IDNR. Endangered species coordination is initiated with the IDNR by submitting an Ecological Compliance Assessment Tool (ECOCAT). The USFWS Section 7 (S7) Consultation is initiated by the USFWS S7 Consultation process. The Applicant is required to complete the review by following the online guidance on the USFWS website. H&H conducted the ECOCAT submittal as well as the USFWS S7 Consultation as part of the previous scope from 2008. As IDNR reviews are good for only two years, the ECOCAT will need to be resubmitted. The USFWS S7 Consultation process will be repeated as part of this scope should the permitting agency require an update. This scope does not include endangered species, field surveys. An update of the ECOCAT submittal is included with this scope.

As IHPA is part of the permit process, information will be forwarded to them. A Phase I archeological survey could be required by IHPA if portions of the project area are relatively undisturbed. H&H will coordinate with the Client if a certified Phase I archeologist is required for this project. H&H will conduct coordination with the IHPA for this project as outlined in the previous scope from 2008.

As this project is utilizing state or state pass through funding, it will be subject to the Illinois Wetland Policy Act (IWPA). The IWPA requires mitigation of all wetland impacts, regardless of size. Additionally, the IWPA recognizes all wetlands and is not subject to the limitations on isolated wetlands that is the current policy of the COE. On-site mitigation through the IWPA is recognized as within the same drainage basin and within one-mile of the project site. If on-site mitigation is not feasible, mitigation can be conducted off-site or through mitigation banks, but at a higher mitigation ratio. H&H will coordinate with the IDNR for the IWPA compliance, if required. As part of the permitting process, H&H will coordinate the purchase of mitigation credits, as it is anticipated that impacts will be mitigated through the use of wetland banking. Mitigation design is not included in this task.

This task includes one initial submittal and one re-submittal of permitting information if necessary. This task does not include permitting fees.

Task 3: Restoration and Monitoring Plan

H&H will prepare a restoration and monitoring plan for wetlands and wetland buffer areas that are temporarily impacted during construction. This plan will conform to the standards of the WDO and/or Regional Permit Program 7 (Temporary Construction Activities) dependent upon the type of wetland (IWLC or COE jurisdictional) incurring impacts. The scope of this proposal pertains to temporarily disturbed wetlands and wetland buffers as called out in the permits, plans, and specifications. This document will not include wetland mitigation for permanent impacts.

The goal of the restoration and monitoring plan will be to outline the procedures needed in order to meet the performance standards that are the permitting agency's predetermined goals for guiding and measuring the restoration success. These goals are outlined in the WDO and/or Regional Permit Program 7 (RP7).

The restoration and monitoring plan shall contain a proposed management plan. This plan shall include a description of the anticipated management and monitoring practices to be employed as well as the duration of time anticipated for these practices in order to meet the performance standards in the WDO and/or RP7. This plan shall also include a schedule of all proposed management practices and monitoring goals (i.e., a calendar indicating month and year of activity). In addition, the plan shall identify the entity to assume responsibility for long-term management and monitoring of the restoration of temporarily impacted wetlands and wetland buffers.

The restoration and monitoring plan shall describe the methods and equipment to be used for each proposed management practice (e.g., prescribed burning, control of invasive plant species by herbicide application or hand removal, mow management, etc.). The plan shall also list all permits or certifications/licenses required for the proposed management practices (e.g., IEPA open burn permit, local fire department permits, IDOA herbicide applicators license, etc.).

Task 4: Meetings and Coordination

H&H will attend up to six (6) meetings; two with the COE, two with the SMC, and two with the LCDOT, as necessary. In addition, coordination with the engineer, permitting agencies, and LCDOT is included in this task.

Task 5: Quality Assurance/Quality Control (QA/QC)

Prior to submittal of any and all permits, the submittal of the JD request, and the Restoration and Monitoring Plan, H&H will conduct a complete review of the aforementioned documents.

Task 6: Project Management

This task covers management of the project, scheduling, and coordination with the prime consultant.

3. PROJECT COST

This proposal covers the submittal of the JD, permit preparation, and the creation of the site restoration and monitoring plan. The attached summary provides the level of effort and associated cost. The Consultant will invoice after completion of Task 1. Payment is requested within 30 days of the date of invoice.

4. SCHEDULE

We anticipate that work will begin within ten days of the Notice to Proceed. Please indicate acceptance of this agreement by returning a signed copy of this agreement or a purchase order incorporating the terms of the agreement. We appreciate the opportunity to work with you and look forward to a successful resolution. If you have any questions concerning our proposed scope of services or fees, please contact us.

U:\Proposal 10\Transportation\Patrick Eng\Washington Street Improvements\Washington Street Phase II revised 12-2-10.doc



Illinois Department of Transportation

Route Washington Street
 Section Phase II
 County Lake
 Job No. _____
 PTB/Item _____

Average Hourly Project Rates

Consultant Huff & Huff, Inc.

Date 01/24/11

Sheet 1 OF 1

| Payroll Classification | Total Project Rates | | | 1 JD Submittal | | | 2 Wetland Permitting | | | 3 Restoration & Monitoring Plan Meetings & Coordination | | | 5 QA/QC | | | | | |
|------------------------|---------------------|---------|----------|----------------|---------|----------|----------------------|---------|----------|---|---------|----------|---------|---------|----------|---|------|---------|
| | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | Hours | % Part. | Wgtd Avg | | | |
| Principal | 0 | | | | | | | | | | | | | | | | | |
| Senior Project Manager | 0 | | | | | | | | | | | | | | | | | |
| Senior Engineer III | 0 | | | | | | | | | | | | | | | | | |
| Senior Engineer II | 0 | | | | | | | | | | | | | | | | | |
| Transportation Planner | 0 | | | | | | | | | | | | | | | | | |
| Senior Scientist IV | 0 | | | | | | | | | | | | | | | | | |
| Senior Scientist III | 0 | | | | | | | | | | | | | | | | | |
| Senior Scientist II | 15 | 9.74% | 2.84 | 2 | 18.18% | 5.30 | 2 | 3.85% | 1.12 | 3 | 6.67% | 1.94 | | | | | | |
| Senior Scientist I | 126 | 81.82% | 20.23 | 8 | 72.73% | 17.98 | 40 | 76.92% | 19.02 | 40 | 88.89% | 21.97 | 3 | 100.00% | 29.13 | | | |
| Senior Geologist I | 0 | | | | | | | | | | | | | | | | | |
| Project Engineer II | 0 | | | | | | | | | | | | | | | | | |
| Project Engineer I | 0 | | | | | | | | | | | | | | | | | |
| Wetland Scientist III | 0 | | | | | | | | | | | | | | | | | |
| Wetland Scientist II | 0 | | | | | | | | | | | | | | | | | |
| Wetland Scientist I | 0 | | | | | | | | | | | | | | | | | |
| Project Scientist III | 0 | | | | | | | | | | | | | | | | | |
| Project Scientist II | 0 | | | | | | | | | | | | | | | | | |
| Project Scientist I | 0 | | | | | | | | | | | | | | | | | |
| Project Geologist I | 0 | | | | | | | | | | | | | | | | | |
| Project Associate | 0 | | | | | | | | | | | | | | | | | |
| Senior CADD I | 8 | 5.19% | 1.64 | | | | 8 | 15.38% | 4.84 | | | | | | | | | |
| CADD I | 0 | | | | | | | | | | | | | | | | | |
| Admin. Manager I | 0 | | | | | | | | | | | | | | | | | |
| Administrative III | 0 | | | | | | | | | | | | | | | | | |
| Administrative II | 5 | 3.25% | 0.54 | 1 | 9.09% | 1.50 | 2 | 3.85% | 0.63 | 2 | 4.44% | 0.73 | | | | | | |
| Administrative I | 0 | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | |
| | 0 | | | | | | | | | | | | | | | | | |
| TOTALS | 154 | 100% | \$25.23 | 11 | 100% | \$24.77 | 52 | 100% | \$25.61 | 45 | 100% | \$24.65 | 38 | 100% | \$24.72 | 3 | 100% | \$29.13 |



Payroll Escalation Table
Fixed Raises

FIRM NAME
PRIME/SUPPLEMENT

Huff & Huff, Inc.
Patrick Engineering

CONTRACT TERM
START DATE
RAISE DATE

12 MONTHS
01/01/11
01/01/11

DATE 01/24/11
PTB NO.

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

ESCALATION PER YEAR

01/01/11 - 01/01/11
0 12
12

01/02/11 - 01/01/12
12 12
12

[Empty box]

[Empty box]

[Empty box]

= 1.0300
= 0.00%

103.00%

3.00%

The total escalation for this project would be:



Payroll Rates

FIRM NAME
PRIME/SUPPLEMENT
PTB NO.

Huff & Huff, Inc.
Patrick Engineering

DATE 01/24/11

ESCALATION FACTOR 3.00%

| CLASSIFICATION | CURRENT RATE | ESCALATED RATE |
|------------------------|--------------|----------------|
| Principal | \$61.15 | \$62.98 |
| Senior Project Manager | \$55.00 | \$56.65 |
| Senior Engineer III | \$40.40 | \$41.61 |
| Senior Engineer II | \$35.42 | \$36.48 |
| Transportation Planner | \$28.84 | \$29.71 |
| Senior Scientist IV | \$40.60 | \$41.82 |
| Senior Scientist III | \$35.34 | \$36.40 |
| Senior Scientist II | \$28.28 | \$29.13 |
| Senior Scientist I | \$24.00 | \$24.72 |
| Senior Geologist I | \$31.50 | \$32.45 |
| Project Engineer II | \$30.85 | \$31.78 |
| Project Engineer I | \$24.62 | \$25.36 |
| Wetland Scientist III | \$0.00 | \$0.00 |
| Wetland Scientist II | \$21.64 | \$22.29 |
| Wetland Scientist I | \$0.00 | \$0.00 |
| Project Scientist III | \$21.88 | \$22.54 |
| Project Scientist II | \$0.00 | \$0.00 |
| Project Scientist I | \$18.00 | \$18.54 |
| Project Geologist I | \$26.00 | \$26.78 |
| Project Associate | \$23.00 | \$23.69 |
| Senior CADD I | \$30.56 | \$31.48 |
| CADD I | \$15.75 | \$16.22 |
| Admin. Manager I | \$28.04 | \$28.88 |
| Administrative III | \$18.72 | \$19.28 |
| Administrative II | \$16.00 | \$16.48 |
| Administrative I | \$10.84 | \$11.17 |
| | | \$0.00 |
| | | \$0.00 |
| | | \$0.00 |
| | | \$0.00 |
| | | \$0.00 |
| | | \$0.00 |
| | | \$0.00 |
| | | \$0.00 |
| | | \$0.00 |
| | | \$0.00 |

SUMMARY OF INHOUSE DIRECT COSTS

Project: Patrick - Washington Street Phase II

DIRECT

Task 01 - JD Submittal

| | | | | | | | | | |
|-------------------|--------|---|-----|---|----|------|---|----|-------|
| Reproduction | 4 sets | x | 140 | x | \$ | 0.03 | = | \$ | 16.80 |
| Color copies | 4 sets | x | 27 | x | \$ | 0.10 | = | \$ | 10.80 |
| <hr/> | | | | | | | | | |
| Task Total | | | | | | | | | |
| \$ 27.60 | | | | | | | | | |

Task 02 - Wetland Permitting

| | | | | | | | | | |
|-------------------|--------|---|-----|---|----|------|---|----|-------|
| Reproduction | 4 sets | x | 150 | x | \$ | 0.03 | = | \$ | 18.00 |
| Color copies | 4 sets | x | 40 | x | \$ | 0.10 | = | \$ | 16.00 |
| <hr/> | | | | | | | | | |
| Task Total | | | | | | | | | |
| \$ 34.00 | | | | | | | | | |

Task 03 - Restoration & Monitoring Plan

| | | | | | | | | | |
|-------------------|--------|---|----|---|----|------|---|----|------|
| Reproduction | 4 sets | x | 50 | x | \$ | 0.03 | = | \$ | 6.00 |
| Color copies | 4 sets | x | 10 | x | \$ | 0.10 | = | \$ | 4.00 |
| <hr/> | | | | | | | | | |
| Task Total | | | | | | | | | |
| \$ 10.00 | | | | | | | | | |

Task 04 - Meetings & Coordination

| | | |
|-------------------|-----------|----------|
| Task Total | \$ | - |
|-------------------|-----------|----------|

Task 05 - QA / QC

| | | |
|-------------------|-----------|----------|
| Task Total | \$ | - |
|-------------------|-----------|----------|

Task 06 - Project Management

| | | |
|-------------------|-----------|----------|
| Task Total | \$ | - |
|-------------------|-----------|----------|

| | | |
|--------------------|-----------|--------------|
| GRAND TOTAL | \$ | 71.60 |
|--------------------|-----------|--------------|

SUMMARY OF OUTSIDE DIRECT COSTS

Project: Patrick - Washington Street Phase II

OUTSIDE

Task 01 - JD Submittal

Federal Express

1 x \$ 15.50 = \$ 15.50
Task Total \$ 15.50

Task 02 - Wetland Permitting

Federal Express

2 x \$ 15.50 = \$ 31.00
Task Total \$ 31.00

Task 03 - Restoration & Monitoring Plan

Federal Express

2 x \$ 15.50 = \$ 31.00
Task Total \$ 31.00

Task 04 - Meetings & Coordination

Trips - Employee 78 miles x

4 x \$ 0.50 = \$ 156.00

Trips - Employee 36 miles x

2 x \$ 0.50 = \$ 36.00

Task Total \$ 192.00

Task 05 - QA / QC

Task Total \$ -

Task 06 - Project Management

Task Total \$ -

GRAND TOTAL \$ 269.50

Santacruz Associates Ltd.

Santacruz Associates

Land Acquisition Services for
Patrick Engineering, Inc.
Washington Street from Hainesville Road to Lake Street

SCOPE OF SERVICES

Santacruz Associates Ltd. ("SANTACRUZ") shall perform all necessary services to appraise, negotiate and acquire the right-of-way required for the construction of **Washington Street from Hainesville Road to Lake Street** (the "Project"). Said land acquisition services shall be provided by SANTACRUZ as a subcontractor to **Patrick Engineering, Inc. (Patrick)**, for the benefit of the **County of Lake (Lake County)**. All such services shall be performed in accordance with the policies of **Lake County**, and, where applicable, the **Illinois Department of Transportation (IDOT) Land Acquisition Policies and Procedures Manual** (the "Manual") and the **Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970** as amended (the "Act").

TECHNICAL APPROACH TO THE WORK

SANTACRUZ will act as the **Land Acquisition Program Manager** working with **Lake County** and **Patrick** to complete the land acquisition services, including the coordination of the appraisal, review appraisal, negotiation and land acquisition services, and, as requested, any specialty engineering services and relocation services. SANTACRUZ will review the construction plans for the Project with **Patrick** and **Lake County** to understand the nature and purpose of the project. The coordination of the services under this proposal shall be by **J. Steve Santacruz, President of SANTACRUZ**.

SANTACRUZ agrees to perform the services as set forth herein as well as furnish and deliver to **Lake County** all necessary documents, including recorded conveyance documents and other forms and documents required by **Lake County** to evidence the acquisition of the right-of-way or, in the alternative, the information necessary for **Lake County** to undertake eminent domain proceedings in order to acquire the right-of-way. More specifically, SANTACRUZ will provide the following services:

1. Estimation of right of way costs, as required by IDOT, for purposes of funding agreements for federal or state funds.
2. Appraisal of the right of way parcels, including, when applicable, appraisal of the whole property and any remainder of the property not acquired by **Lake County**.
3. When applicable, coordination of the acquisition of Specialty Engineering Reports ("Specialty Reports") with **Patrick** (as approved by **Lake County**). Specialty Reports review the existing and proposed conditions of the remaining property and estimate costs to cure or repair items left deficient, unusable or in disrepair as result of the acquisition of the right-of-way. Specialty Reports may be requested by the appraiser to assess any damages to the remainder of the property and to complete the appraisal for that parcel.

4. Review of the appraisals of the right of way parcels, and, when applicable, the appraisal of the whole property and any remainder of the property not acquired by Lake County.
5. Negotiation in order to facilitate the acquisition of the right of way parcels. If negotiations fail or are terminated for any other reason (e.g., missing property owner or title exceptions which cannot be removed), SANTACRUZ shall make a recommendation to Lake County to acquire the right-of-way by means of eminent domain proceedings.
6. Preparation of deeds, grants of easements, releases, affidavits, receipts and all other documents necessary to properly acquire the needed parcels and those documents necessary to clear title in accordance with the policies and procedures of Lake County (and IDOT, if applicable).
7. Recordation of deeds and other documents necessary to clear title in accordance with the policies and procedures of Lake County (and IDOT, if applicable).
8. Testimony in court by appraiser and/or review appraiser as an expert witness on behalf of Lake County during eminent domain trials to support the valuations resulting from the acquisition services being provided hereunder.
9. Testimony in court by negotiator as a witness on behalf of Lake County during eminent domain trials to detail the negotiation process and communications with the property owner concerning the right-of-way.
10. Preparation and maintenance of timely, accurate parcel data information as required by Lake County (and IDOT, if applicable).
11. When applicable, submission of all necessary documentation in order to obtain approval of the right-of-way acquisition process by Lake County and, if applicable, certification of the right-of-way acquisition process by IDOT.

SANTACRUZ will post the progress of the negotiation process on a parcel by parcel basis on its password protected Client-only access section of its website. Access will be provided to Patrick and Lake County so that they can obtain regular updates on the status of negotiations for each parcel. The website can be visited at www.Santacruz-Associates.com.

Estimation of Right of Way Costs

During the early planning stages of the Project at the request of Patrick and/or Lake County, SANTACRUZ will coordinate the preparation of the right-of-way cost estimates which are to be used in the funding agreement between Lake County and IDOT. The appraiser shall prepare an estimate based on market information without preparing appraisal reports. Said estimates will take potential damage to the remaining property into consideration. However, neither nor SANTACRUZ can provide any assurances to Patrick or Lake County that these estimates will provide the actual costs of acquisition.

Appraisals and Review Appraisals

SANTACRUZ will subcontract the appraisal and review appraisal work to appraisers which are on IDOT's approved list. The selection of the appraiser and review appraiser shall be subject to reasonable approval by Lake County. All appraisal and review appraisal work shall be in accordance with Chapter 2 of the Manual and the Act.

SANTACRUZ will review the plat of highway and the construction plans with the selected appraisers and review appraisers. Appraisal work shall commence within ten (10) business days from the date Lake County (and IDOT, if necessary) has approved the legals and plats and Lake County provides SANTACRUZ with a copy of the construction plans and with copies of the legal description, plat of highway and title commitment for each parcel of right-of-way to be acquired. SANTACRUZ shall make all reasonable efforts to have all appraisal services completed within the time frame provided by Lake County.

The appraiser shall make a detailed inspection of the properties and make such investigations and studies as are necessary to derive sound conclusions for the preparation of appraisal reports. In addition, the appraiser shall provide the comparable sales relied on by the appraiser to reach its conclusions on the value of the right-of-way parcels. All appraisals will be reviewed by the review appraiser assuring that all items affecting the value of the property are considered in the appraisal. The review appraiser will review the comparable sales as part of the review process. The review appraiser shall make a detailed inspection of the properties and make such investigations and studies as are necessary to derive sound conclusions for the preparation of appraisal reports.

All appraisals shall be prepared using the standardized IDOT forms in accordance with the Manual and the Act. SANTACRUZ shall provide Lake County with a copy of the appraisal prepared for each parcel and, if applicable, the comparable sales book as prepared by the appraiser. The review appraiser will complete the standardized IDOT Right of Way Appraisal Review Certification Form. A copy of said certification will be attached to each appraisal delivered by SANTACRUZ to Lake County.

It is understood by Patrick and Lake County that the appraiser may request a Specialty Engineering Report to estimate the cost to cure damages impacting the remainder of the property. In such cases, such damages require information and cost estimations beyond the expertise of the appraiser. The impacts may include the relocation of business signs, the re-striping of a parking lot, the re-configuration of a gas station, and other such items. At the election of Patrick, such Specialty Engineering Reports may be provided by Patrick or may be provided by SANTACRUZ through a consultant that specializes in producing specialty engineering reports. This proposal assumes no specialty engineering reports shall be required as part of this project. Any specialty engineering reports shall be pursuant to a separate work order issued by Patrick for which SANTACRUZ shall be entitled to additional compensation.

As requested by Patrick or Lake County, SANTACRUZ will furnish and deliver updated or revised appraisals or review appraisals resulting from a revision to the right of way or when necessary for condemnation. This proposal assumes no updated or revised appraisal or review appraisal reports shall be required as part of this project. Any updated or revised appraisal or

review appraisal reports shall be pursuant to a separate work order issued by Patrick for which SANTACRUZ shall be entitled to additional compensation.

If necessary and requested by Patrick or Lake County, the appraiser and/or review appraiser will assist Lake County and its legal counsel in any litigation necessary to acquire a right-of-way parcel through condemnation. SANTACRUZ will assure cooperation of the appraisers in trial preparation and providing testimony at depositions and trial as an expert witness on behalf of Lake County. Any trial preparation or testimony by the appraisers shall be pursuant to a separate work order issued by Patrick for which SANTACRUZ shall be entitled to additional compensation.

SANTACRUZ shall be entitled to the full compensation for any parcel for which appraisal and/or review services are commenced but not completed if a parcel is eliminated by Patrick or Lake County as a result of a redesign of the construction plans and cancellation of the Project.

Commencement and Completion Dates of Negotiation Activities

Unless otherwise instructed, SANTACRUZ will commence negotiation activities on a parcel within ten (10) business days after the plat of highway, legal descriptions, appraisals, and/or review appraisals, as the case maybe, have been approved by Lake County and IDOT (if required). Furthermore, SANTACRUZ shall use all reasonable efforts to complete all negotiation and acquisition activities on or before the deadline established by Lake County and, if applicable, IDOT to meet the letting schedule for the Project.

Negotiation and Acquisition Services

All negotiations and acquisition services shall be provided by SANTACRUZ in accordance with Chapters 3 and 4 of the Manual and the Act and the policies of Lake County and IDOT. SANTACRUZ will make an offer to each property owner in the amount of just compensation established by the appraisal process and approved by Lake County. SANTACRUZ will not have any authority to increase the amounts or include other consideration to be paid to a property owner in acquisition of a parcel unless specifically directed in writing by Lake County.

Upon receipt of a counter offer from a property owner, SANTACRUZ will review the counter offer and any documentation provided by the property owner to support the counter offer. SANTACRUZ will forward the counter offer to the representative(s) of Lake County assigned for the purpose of evaluating counter offers. SANTACRUZ will provide a recommendation concerning the counter offer including any reasons in support of the recommendation. SANTACRUZ will consult with the assigned representative(s) of Lake County with respect to its response to the counter offer. Upon acceptance by Lake County of any counter offer, SANTACRUZ will prepare the necessary documentation to be executed by Lake County to formalize the settlement approved by Lake County. If any counter offer is rejected by Lake County, SANTACRUZ will communicate this to the property owner in writing providing the reason for the rejection of the counter offer. Thereafter, SANTACRUZ will immediately commence further negotiations with the property owner in an effort to reach a settlement.

SANTACRUZ will review the plat of highway and appraisals for each parcel before the start of negotiations with a property owner to understand the valuation determined by the appraisal process and to appreciate the impact to the property resulting from the Project. SANTACRUZ will also inspect the title commitment provided for each parcel to determine the liens and encumbrances that will need to be addressed in order to complete the acquisition process for Lake County. SANTACRUZ will direct any questions to Patrick resulting from its review of the plans, plats, appraisals and title commitments so that SANTACRUZ is prepared for any issues raised by the property owner during negotiations.

To the extent that it has not already been done, before contacting the owner of a parcel, SANTACRUZ will prepare and send an introductory letter to the property owner. SANTACRUZ will also prepare an offer package for presentation to the owner at the first meeting. The offer package shall contain the offer, a copy of the plat of highway with the acquisition areas highlighted and a copy of the legal descriptions of the parcels to be acquired. If, and only after repeated efforts to contact the property owner, SANTACRUZ is unable to make contact with the property owner, SANTACRUZ will send the offer package by certified mail so that a receipt of delivery can be established. SANTACRUZ will contact the property owner to schedule a meeting to review the offer package and the construction plans.

SANTACRUZ will make repeated efforts to contact a property owner and will make all reasonable efforts to reach a settlement before recommending that Lake County commence condemnation proceedings. All contacts and efforts to make contact with the property owner shall be documented by SANTACRUZ.

If, during its discussions with the property owner, errors in the plans are discovered or the property owner requests design changes, SANTACRUZ will immediately notify Patrick and Lake County with this information. At any time during negotiations for situations involving design changes, errors in plans or for any other reason, if requested by Patrick or Lake County, SANTACRUZ will cease negotiations on certain parcels until corrected information or further instruction is provided to SANTACRUZ.

Upon successful negotiations with the property owner, SANTACRUZ will prepare all necessary conveyance documents in order to complete the acquisition and obtain title approval for the property. SANTACRUZ will have all conveyance documents and title clearance documents it deems necessary recorded with the County Recorder's office where the parcel is situated. SANTACRUZ will submit the completed parcel file to Lake County with original conveyance documents, title clearance documents, the Negotiator's Log, copies of all correspondence with the property owner, title commitments, plats, and all other documentation as required by Lake County and, if applicable, IDOT.

In the event that SANTACRUZ, after having made every reasonable effort to contact and negotiate with the owner of a parcel, is unable to obtain a settlement on the approved appraisal amount, SANTACRUZ shall prepare and submit to Lake County a recommendation that Lake County proceed with condemnation in order to acquire the right of way needed from such parcel. SANTACRUZ will prepare and provide to Lake County a file which will include the Negotiator's Log, copies of all correspondence with the property owner, title commitments, plats, and all other documentation concerning such parcel that will be required by Lake County

to proceed with the filing of a condemnation lawsuit against the property owner. In the event that SANTACRUZ submits a parcel to Lake County with the recommendation that acquisition be completed by means of a condemnation action, SANTACRUZ will continue to make additional efforts to acquire the parcel through settlement until the actual filing date of the petition for condemnation.

SANTACRUZ will submit all conveyance documents and title clearance documents to the title company responsible for preparing the title commitments requesting that the documents be recorded and that the title company issue a title policy for all permanent acquisitions (as requested by Lake County or required by IDOT, if applicable).

If necessary and requested by Lake County or Patrick, SANTACRUZ will assist Lake County and its respective legal counsel in any litigation necessary to acquire a right-of-way parcel through condemnation. SANTACRUZ will cooperate in trial preparation and will provide testimony at depositions and trial as a witness on behalf of Lake County to attest to the negotiations being legally conducted in good faith and in accordance with the requirements of Lake County, IDOT, the Act and the Manual. Any trial preparation or testimony by SANTACRUZ shall be pursuant to a separate work order issued by Patrick for which SANTACRUZ shall be entitled to additional compensation.

SANTACRUZ will also complete and coordinate the Project Compliance Checklist required by the IDOT for right-of-way certification of the land acquisition process.

SANTACRUZ shall be entitled to the full compensation for any parcel for which negotiation and acquisition services once assigned by Lake County but not completed if a parcel is eliminated by Patrick or Lake County as a result of a redesign of the construction plans and cancellation of the Project.

Relocation Services

The Project does not involve the acquisition of an entire or a significant portion of a parcel which is improved with a residence or commercial enterprise where the party occupying the property will need to be relocated. Any relocation services provided by SANTACRUZ directly or indirectly through a subcontractor shall be pursuant to a separate work order issued by Patrick or Lake County for which SANTACRUZ shall be entitled to additional compensation.

PRIOR EXPERIENCE

SANTACRUZ specializes in negotiating and acquiring right-of-way for governmental agencies and private entities for use in roadway construction, the development of other public/private projects, and the installation of infrastructure fixtures and equipment. SANTACRUZ has been providing negotiations and land acquisition services for right of way purposes for over ten years. A resume of our company is attached to this Proposal listing references from past and current clients of SANTACRUZ. In addition, a list of our recent projects which include negotiations, acquisitions services and the coordination of appraisal functions, see attached Prior Experience.

COMPENSATION

SANTACRUZ shall be entitled to the compensation as shown on the attached schedule. Our cost proposal, based on eleven (11) projected parcels of right-of-way, is as follows:

| | |
|----------------------------------|---------------------|
| <u>APPRAISALS:</u> | \$28,800.00. |
| <u>REVIEW APPRAISALS:</u> | \$9,600.00. |
| <u>NEGOTIATIONS:</u> | \$23,100.00. |

SANTACRUZ shall invoice Patrick for any fees and charges related to the acquisitions including, without limitation, (i) the cost of the later date title commitments, (ii) the cost of title insurance policies obtained on the parcels to be acquired, (iii) the cost of recording any necessary documents to complete the conveyance and obtain clear title, (iv) lender's fees related to the processing of any partial releases needed to provide clear title, and (v) land trustee processing fees. SANTACRUZ shall include \$500.00 per parcel for these charges. SANTACRUZ shall pay any such fees and charges in excess of the \$500.00 per parcel allowance for which SANTACRUZ shall be entitled to additional compensation in the amount of any such payments pursuant to a separate work order issued by Patrick.

Based on the projected total number of parcels of right-of-way to be acquired for the Project, the land acquisition negotiation services provided herein are offered a cost not to exceed of \$67,000.00 as follows:

| | |
|---------------------------|--------------------|
| Land Acquisition Services | \$61,500.00 |
| Direct Billable Expenses | \$5,500.00 |

CERTIFICATIONS AS BUSINESS ENTERPRISE (BEP), MINORITY BUSINESS ENTERPRISE (MBE) AND DISADVANTAGED BUSINESS ENTERPRISE (DBE)

SANTACRUZ is certified in the Business Enterprise Program with the State of Illinois – Department of Central Management Services. SANTACRUZ is also certified as a Disadvantaged Business Enterprise by the State of Illinois – Department of Transportation and a Minority Business Enterprise by Cook County and the City of Chicago. As SANTACRUZ will supervise 100% of the Negotiation and Acquisition services, Lake County should meet or exceed any minimal BEP/DBE/MBE utilization goals established for the Project.

COMPENSATION FOR SERVICES

Appraisal Services:

| | |
|------------------------------------|---------|
| Waiver Valuations (under \$10,000) | \$1,600 |
| Appraisals (Non-complex) | \$1,900 |
| Appraisals (Complex) | \$2,400 |
| Appraisals (Difficult) | \$3,600 |

Review Appraisal Services:

| | |
|---------------------------------|---------|
| Review Appraisals (Non-complex) | \$650 |
| Review Appraisals (Complex) | \$800 |
| Review Appraisals (Difficult) | \$1,200 |

Negotiation and Acquisition Services:

| | |
|---|---------|
| Negotiation and acquisition services for Right of Way including, without limitation, documentation of conveyance of property interest | \$2,100 |
|---|---------|

Witness Services

| | |
|---|------------|
| Rate for each ½ day in pretrial conference or in court for Negotiator | \$1,000.00 |
| Rate for each ½ day in pretrial conference or in court for Appraiser | \$1,000.00 |
| Hourly rate for consultation not otherwise specifically provided for herein | \$250.00 |

Title Services (if applicable)

| | |
|--|---------------------|
| Later date commitment | \$50.00 |
| + Administrative fee | \$25.00 |
| Title insurance policies | \$75.00 |
| + Additional costs of | \$3.50 per thousand |
| + Administrative fee | \$25.00 |
| Recording of Documents – In addition to actual recording costs | |
| + Administrative fee | \$25.00 |
| Copies of recorded documents – In addition to actual copying costs | |
| + Research fee | \$50.00 |
| + Administrative fee | \$25.00 |

**Huddleston McBride Land
Drainage Company**

PROPOSAL

Adam James, P.E.
Patrick Engineering, Inc.
65 E. Monroe, Suite 3450
Chicago, IL., 60603

DATE : January 12, 2011
INV. # : 11103
TERMS: NET 15 DAYS
PHONE: 312-201-7922
FAX: 312-220-0722

>> **RE: LAND DRAINAGE INVESTIGATION SERVICES PROPOSAL**

LOCATION: Washington Street Improvements, Grayslake, Il.
(sta. 102+70+ to sta. 128+25+-)

> Dear Sir,

Thank you for the opportunity to submit the attached Mainline Drain Tile Investigation Letter of Agreement for your consideration.

Following is a brief summary outlining investigation services which shall be completed in accordance with Lake County Stormwater Commission Ordinance standard specifications for "Existing Agricultural Drain Tile Investigation" procedures for the subject property located at Section No. 21, 22, 27 & 28 of Avon Township, Lake County, Illinois.

This investigation will be limited to the mapping of all mainline and sub-main collectors, and will include local lateral / feeder drain tiles only when encountered at slit trench locations. Huddleston Mcbride Drainage Co. shall not be responsible for crop damage, all excavated investigation trenches will be backfilled and slightly mounded to allow for natural settlement. Some slit trenching will need to occur on the private side of the proposed easement in areas where the proposed easement is limited to size. Typical slit trenching requires a work area of 30' in width.

I. SCOPE OF WORK

FIELD INVESTIGATION PROCEDURES:

Field reconnaissance and record research¹ work will be completed in efforts to identify all areas which are typical to installation of existing drain tile. Existing features such as soils, watertable, topographical elevations, surface channels, depressions, wetlands and natural drainage ingress and egress locations are considered.

Following field review, investigation areas are staked and slit trenched to verify existence of drain tile. All existing drain tiles encountered during the investigation procedure are logged on field mapping and repaired to their original state according to U.S.D.A., Natural Resource Conservation Service construction repair practices. Following specific point locations, drain tile routes are located by surface probing or electronic detection and field staked at 50' intervals including cut stakes for invert elevations where requested. Any existing drain tile not encountered during slit trenching procedure will remain unknown.

¹Huddleston Mcbride Land Drainage Co. has maintained and will access an extensive record system of Lake County Existing Agricultural Drain Tile Historic Mapping Records. This mapping system has been based upon geographic parcel location including record information from Huddleston-Mcbride Land Drainage Co.(1975), Coopridger Farm Drainage Co. (1930), Elbridge F. Ball & Sons. (drainage engr.) Survey notes (1940).. These record files include historic farm parcel notes, active / inactive drainage district maps and documents, conservation resource mapping, agricultural drain tile contractor records, aerial photo delineation, S.C.S./N.R.C.S design notes and soil maps, typical drain tile investigation reports, record construction drawings, and land owner sketch drawings.

RECORD MAPPING AND REPORT:

Record mapping shall be performed according to typical civil engineering mapping standards. It will be the responsibility of the developer to furnish one ACAD (version 2004 or 2011, .dwg) computer data file of the investigation area including mapped topography, easements, right-of-ways, wetland delineation areas and property boundary limits.

All existing drain tile routes will be located on record plans by scaling from existing topographic contour features and air photo identification. Our field staking process will include pipe invert cut stakes at all perimeter locations, strategic interior locations and 50' interval pin flagging along tile routes for electronic survey location by the project engineer if deemed necessary. It will be the responsibility of the project engineer to survey drain tile location staking pertinent to final improvement design.

Final drain tile mapping will be computer drafted on a base map including recent color digital aerial photography, topography and project limits. Mapped information will include the location of all existing drain tile routes and applicable drainage findings encountered during the field investigation process. A field report shall be attached to the plan containing evaluation information including size, flow, system effectiveness, restrictive siltation, pipe invert to ground surface depth, pipe type / quality, system classification and specific field notes.

After completion of the investigation report it will be our responsibility to obtain final existing drain tile investigation mapping and report approval from Lake County Stormwater Commission technical staff and applicable engineering review agencies.

II. COST OF SERVICES:

The complete costs of investigation services including all equipment and manlabor, furnish of repair materials, field staking and mapping will be a lump sum fee as follows:

| | |
|---|--------------------|
| TOTAL COST FOR INVESTIGATION SERVICES..... | \$ 7,830.00 |
|---|--------------------|

III. PAYMENT OF FEES:

An invoice will be presented following the completion of the work and will be due and payable thirty (30) days after the invoice date. Any late payments made will be subject to the interest rate of 1 ½% per month on the entire principal amount of the money owed for the period from the date it becomes due and payable through the period of time in which it is paid.

IV. LIMITS OF LIABILITY:

In the event a breach or a suit for non-payment of fees arises in connection with any services rendered on the part of Huddleston McBride Land Drainage Co., then purchaser will pay all reasonable costs and attorneys fees associated with any action taken to enforce any rights arising under this agreement.

Any breach on the part of either party shall be limited to liability in an amount not to exceed the contract price of services associated with this drain tile investigation proposal.

Should the terms of this letter of agreement meet with your approval, please execute below and return one original.

Thank you for considering our proposal, we look forward to an opportunity to assist you with the development of this parcel.

Respectfully submitted,

HUDDLESTON McBRIDE LAND DRAINAGE CO.

T. L. Huddleston III,

| | | |
|---|----------------------|--|
| ABOVE LETTER OF AGREEMENT ACCEPTED THIS _____ DAY _____ 2011. | | |
| BY: _____ | PRINTED NAME / TITLE | |
| _____ | SIGNATURE | |