Draft

LOCAL AGENCY		CONSULTANT	
Municipality	Illinois Department of Transportation		Name: Reynolds, Smith, and Hills, Inc.
Township			Address: 525 Dunham Road, Suite 20
County: Lake County – Division of Transportation	**Preliminary Engineering Services Agreement For Non-Motor Fuel Tax Funds**		City: St. Charles
Section			State: IL

THIS AGREEMENT is made and entered into this 25th day of October, 2013 between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Non-Motor Fuel Tax Funds, allotted to the LA ~~by the State of Illinois~~, under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT", will be used entirely ~~or in part~~ to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

Section Description

Name Wadsworth Road @ Lewis Avenue Intersection Improvements

Route _____ Length _____ Mi. 4400.00 FT (Structure No. _____)

Termini Approximately 1100' along all quadrants of the subject intersection.

Description:
Phase 1 studies for intersection improvements.

Agreement Provisions

The Engineer Agrees,

1. To perform or be responsible for the performance of the following engineering services for the LA, in connection with the proposed improvements herein before described, and checked below:
   - a. ☒ Make such detailed surveys as are necessary for the preparation of detailed roadway plans
   - b. ☐ Make stream and flood plain hydraulic surveys and gather high water data, and flood histories for the preparation of detailed bridge plans.
   - c. ☒ Make or cause to be made such soil surveys or subsurface investigations including borings and soil profiles and analyses thereof as may be required to furnish sufficient data for the design of the proposed improvement. Such investigations are to be made in accordance with the current requirements of the DEPARTMENT.
   - d. ☒ Make or cause to be made such traffic studies and counts and special intersection studies as may be required to furnish sufficient data for the design of the proposed improvement.
   - e. ☒ Prepare Army Corps of Engineers Permit, **Lake County Stormwater Management Commission Permit**, Department of Natural Resources-Office of Water Resources Permit, Bridge waterway sketch, and/or Channel Change sketch, Utility plan and locations, and Railroad Crossing work agreements.
   - f. ☐ Prepare Preliminary Bridge design and Hydraulic Report, (including economic analysis of bridge or culvert types) and high water effects on roadway overflows and bridge approaches.
   - g. ☐ Make complete general and detailed plans, special provisions, proposals and estimates of cost and furnish the LA with **one (1) copy of each document in both hardcopy and electronic format**. Additional copies of any or all documents, if required, shall be furnished to the LA by the ENGINEER at the ENGINEER's actual cost for reproduction.
   - h. ☒ Furnish the LA with survey and drafts in **duplicate** of all necessary right-of-way dedications, construction easement and borrow pit and channel change agreements including prints of the corresponding plats and staking as required.
   - i. ☐ Assist the LA in the tabulation and interpretation of the contractors' proposals

j. ☒ Prepare the necessary environmental documents in accordance with the procedures adopted by the DEPARTMENT's Bureau of Local Roads & Streets.

k. ☒ Prepare the Project Development Report when required by the DEPARTMENT.

l. ☒ **Services as included and/or defined in the attached Scope of Services.**

2. That all reports, plans, plats and special provisions to be furnished by the ENGINEER pursuant to the AGREEMENT, will be in accordance with current standard specifications and policies **of the LA** ~~of the DEPARTMENT~~. It is being understood that all such reports, plats, plans and drafts shall, before being finally accepted, be subject to approval by the LA ~~and the DEPARTMENT~~.

3. To attend conferences at any reasonable time when requested to do so by representatives of the LA ~~or the Department~~.

4. In the event ENGINEER'S plans or surveys are found to be in error during construction of the SECTION and revisions of the plans or survey corrections are necessary, the ENGINEER agrees that the ENGINEER will perform such work without expense to the LA, even though final payment has been received by the ENGINEER. The ENGINEER shall give immediate attention to these changes so there will be a minimum delay to the CONTRACTOR.

5. That basic survey notes and sketches, charts, computations and other data prepared or obtained by the ENGINEER pursuant to this AGREEMENT will be made available, upon request, to the LA ~~or the DEPARTMENT~~ without cost and without restriction or limitations as to their use.

6. That all plans and other documents furnished by the ENGINEER pursuant to this AGREEMENT will be endorsed by the ENGINEER and will show the ENGINEER's professional seal where such is required by law.

The LA Agrees,

1. To pay the ENGINEER as compensation for all services rendered in accordance with this AGREEMENT according to the following method indicated by a check mark:

   a. ☐ A sum of money equal to _____ percent of the awarded contract cost of the proposed improvement as approved by the DEPARTMENT.

   b. ☐ A sum of money equal to the percent of the awarded contract cost for the proposed improvement as approved by the DEPARTMENT based on the following schedule:

Schedule for Percentages Based on Awarded Contract Cost

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

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

2. To pay for all services rendered in accordance with this AGREEMENT at the actual cost of performing such work plus 14 percent to cover profit, overhead and readiness to serve - "actual cost" being defined as material cost plus payrolls, insurance, social security and retirement deductions. Traveling and other out-of-pocket expenses will be reimbursed to the ENGINEER at the ENGINEER's actual cost. Subject to the approval of the LA, the ENGINEER may sublet all or part of the services provided in section 1 of the ENGINEER AGREES. If the ENGINEER sublets all or part of this work, the LA will pay the cost to the ENGINEER plus an additional service charge of up to five (5) percent.

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

The Total Not-to-Exceed Contract Amount shall be $361,957.36

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

   a. Upon completion of detailed plans, special provisions, proposals and estimate of cost - being the work required by section 1 of the ENGINEER AGREES - to the satisfaction of the LA ~~and their approval by the DEPARTMENT~~, 90 percent of the total fee due under this AGREEMENT based on the approved estimate of cost.

   b. Upon award of the contract for the improvement by the LA ~~and its approval by the DEPARTMENT~~, 100 percent of the total fee due under the AGREEMENT based on the awarded contract cost, less any amounts paid under "a" above.

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

4. That, should the improvement be abandoned at any time after the ENGINEER has performed any part of the services provided for in sections 1 and 3 of the ENGINEER AGREES and prior to the completion of such services, the LA shall reimburse the ENGINEER for the ENGINEER's actual costs plus 14 percent incurred up to the time the ENGINEER is notified in writing of such abandonment -"actual cost" being defined as in paragraph 2 of the LA AGREES.

5. That, should the LA require changes in any of the detailed plans, specifications or estimates except for those required pursuant to paragraph 4 of the ENGINEER AGREES, ~~after they have been approved by the DEPARTMENT~~, the LA will pay the ENGINEER for such changes on the basis of actual cost plus 14 percent to cover profit, overhead and readiness to serve -"actual cost" being defined as in paragraph 2 of the LA AGREES. It is understood that "changes" as used in this paragraph shall in no way relieve the ENGINEER of the ENGINEER's responsibility to prepare a complete and adequate set of plans and specifications.

It is Mutually Agreed,

1. That any difference between the ENGINEER and the LA concerning their interpretation of the provisions of this Agreement shall be referred to a committee of disinterested parties consisting of one member appointed by the ENGINEER, one member appointed by the LA and a third member appointed by the two other members for disposition and that the committee's decision shall be final.

2. This AGREEMENT may be terminated by the LA upon giving notice in writing to the ENGINEER at the ENGINEER's last known post office address. Upon such termination, the ENGINEER shall cause to be delivered to the LA all surveys, permits, agreements, preliminary bridge design & hydraulic report, drawings, specifications, partial and completed estimates and data, if any from traffic studies and soil survey and subsurface investigations with the understanding that all such material becomes the property of the LA. The ENGINEER shall be paid for any services completed and any services partially completed in accordance with section 4 of the LA AGREES.

3. That if the contract for construction has not been awarded one year after the acceptance of the plans by the LA ~~and their approval by the DEPARTMENT~~, the LA will pay the ENGINEER the balance of the engineering fee due to make 100 percent of the total fees due under this AGREEMENT, based on the estimate of cost as prepared by the ENGINEER and approved by the LA ~~and the DEPARTMENT~~.

4. That the ENGINEER warrants that the ENGINEER has not employed or retained any company or person, other than a bona fide employee working solely for the ENGINEER, to solicit or secure this contract, and that the ENGINEER's has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the ENGINEER, any fee, commission, percentage, brokerage fee, gifts or any other consideration, contingent upon or resulting from the award or making of this contract. For Breach or violation of this warranty the LA shall have the right to annul this contract without liability.

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

Executed by the LA:

County of Lake of the
(~~Municipality/Township~~/County)

ATTEST:

State of Illinois, acting by and through its

By _____

County Board

Lake County Clerk

By _____

(Seal)

Title Chairman of the County Board

RECOMMENDED FOR EXECUTION

_____

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

Executed by the ENGINEER:

Reynolds, Smith and Hills, Inc.
Engineering Firm
525 Dunham Road, Suite 20
Street Address
St. Charles, Illinois 60174
City, State

ATTEST:

By Melanie L Nuhol

By Preston W. Keefe

Title Asst Corp Secretary

Title PRESTON W. KEEFE VICE PRESIDENT

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

RS&H
IMPROVING YOUR WORLD

PHASE I ENGINEERING SERVICES

Wadsworth Road @ Lewis Avenue Phase 1

Prepared for

LAKE COUNTY DIVISION OF TRANSPORTATION

Scope of Services
Anticipated Project Schedule

October 25, 2013

SCOPE OF ENGINEERING SERVICES
WADSWORTH ROAD AT LEWIS AVENUE
LAKE COUNTY DIVISION OF TRANSPORTATION

Project Overview

Wadsworth Road at Lewis Avenue is a signal controlled intersection located in the City of Waukegan and the Village of Beach Park. Wadsworth Road is generally a two-lane undivided arterial street; whereas Lewis Avenue is a four-lane arterial street. There are left turn lanes at each leg of the intersection; no right turn lanes exist at the intersection. The project area is generally an urban environment, with a mixture of residential, commercial, and aviation land uses. The southwest quadrant houses the Waukegan Regional Airport and impacts to the FAA controlled ROW on the southwest and northwest quadrant will need to be closely analyzed and coordinated. The northeast and southeast quadrants consist of a gas station and strip mall respectively. There is a school and an associated school zone immediately east of the intersection.

There are no sidewalks or pedestrian facilities present at the intersection. Street lighting is provided in the form of a single light located atop an existing signal pole. Parkways are variously composed of dirt, grass, or gravel; there are no dedicated parking locations along the route. There is an existing storm sewer system and culvert crossings at and adjacent to the intersection. Trees and landscaping are sporadic, there are numerous utilities including utility poles near the roadway. The posted speed limit is 45 mph with the exception of the east leg which is posted at 35 mph.

The intent of the project is to investigate and address the capacity of the intersection to accommodate future traffic demands while ensuring a safe and efficient traffic flow. This will likely entail widening of the roadway, addition of channelization at the intersection, pedestrian facilities, signal modernization, and other elements that may be identified through the planning and public involvement process. A list of tasks anticipated to be accomplished during the project is as follows:

Task 1 – Collection, Compilation, Review and Evaluation of Data Base

Upon receipt of the notice to proceed, RS&H will attend a Project Initiation Meeting with the Lake County Division of Transportation. A project schedule will be developed and agreed upon by both parties. Next, RS&H will obtain, compile and review readily available pertinent information related to the existing facility. The type of information necessary will include but not be limited to:

a. Utility companies and available mapping
b. Zoning maps
c. Land use
d. Social and economic data
e. Community Services
    - School districts
    - School bus routes
    - Police & Fire Districts
    - Water/sewer service areas
    - Hospitals

f. Bicycle & pedestrian facilities
g. Crash Data from Lake County, and local agencies
h. Traffic Counts from Lake County
i. Soils and groundwater data
j. Lake County GIS data
k. Right of Way information

Local agencies and institutions will be contacted for input, including the City of Waukegan, the Village of Beach Park, as well as the Waukegan Port District. Additional data will be collected from the County and local agencies including existing and ongoing adjacent projects. In addition staff will visit the site as necessary to:

a. Identify issues
b. Take photographs of the project route; prepare a photo log
c. Observe, verify and document existing conditions such as apparent drainage patterns and traffic operations, both qualitatively and quantitatively

Task 2 – Project Coordination & Meetings

Prepare exhibits for and attend coordination meetings with the Lake County Division of Transportation as well as local agencies and stakeholders. Project coordination meetings with the Lake County Division of Transportation will take place as needed. RS&H will also conduct coordination meetings with sub-consultants, local agencies, and stakeholders as appropriate.

Task 3 – Surveys

In concert with the Lake County Division of Transportation, the RS&H team will conduct research of the public record and obtain Plats of Subdivision or Plats of Highway defining the R.O.W. or prescriptive easement for the subject roadway and intersecting roadways. Research the public record to obtain record surveys and perform a field reconnaissance to recover monumentation purportedly found or set defining the R.O.W. or roadway easement. Extend a level circuit from the vertical datum (NAVD 88) established for the Project. Gather records from the highway authority on stationing established for previous roadway improvements in the area and compute horizontal ties and a station equation for the Project. Establish base lines from a "best fit" of the R.O.W. monumentation recovered as a basis of horizontal alignment and control.

The survey limits for each leg of the intersection will generally extend 2000' from the centerline of the intersection. Survey information will be gathered to 25-35' beyond in existing ROW in each direction.

Based on the survey limits described above, field survey work to obtain topographic and planimetric data will be in accordance with IDOT requirements and the content requirements outlined below in Items a. through i.

a. The location, elevation, and material composition of street pavements, sidewalk pavements, driveway pavements, curb and gutter sections, and other land surfaces. Roadway cross-sections will be obtained at a 100 foot interval.
b. The location, elevation, and material composition of storm sewer conveyance, sanitary sewer collection, and water distribution systems as measured at structures visible and retrievable from the ground surface (underground exploration is not within the scope of these services).

c. The location, elevation, and material composition (if applicable) of ditches and culverts with shapes and sizes, direction of flow, elevation of inverts or flow lines and other physical properties of those drainage structures visible and retrievable from the ground surface which information will be supplemented by public records and plans (underground exploration is not within the scope of these services).

d. The location and elevation at the base of utility poles, street lights, ground boxes, pedestals, and transformers with notation as to the identity of the utility company and other planimetric features when visible and retrievable from the ground surface (underground exploration is not within the scope of these services).

e. The location, elevation at base and diameter of individual or isolated trees 4 inches or greater in diameter as measured 3 feet above the base. For tree lines or groupings in more heavily wooded areas, only the tree line perimeter will be located.

f. The location (by station), extent, physical description and color of existing pavement striping, pavement markings, roadway signage (with specific type and legend).

g. In accordance with IDOT survey requirements, collect detailed sketches, photographs, topographic and planimetric data for waterway structures along the survey route.

h. Upon request, locate up to 15 borings and pavement cores performed by the Geotechnical Engineer as well as Wetland delineations provided by the Environmental Engineer.

i. Land Acquisitions survey including:
The establishment of approximately 2 section corners with monument records.
The establishment of all property and land lines including private ownership lines, section lines, Right of Way lines and Easement lines not previously established during the phase 1 survey for the area were the 6 proposed parcels are going to take place.
The creation of approximately 3 Plats of Highway containing approximately 6 parcels to be acquired.
The creation of approximately 6 legal descriptions including 6 parcels to be acquired.
Stake and tie all centerline alignments and proposed Right of Way corners.

In accordance with IDOT data format and deliverable standards, compile said topographic and planimetric field survey work along with any information gathered and prepare Composite Topographic and Planimetric Survey Base Sheets as well as digital terrain models in digitized and layered electronic format at an estimated scale of 1 inch = 20 feet with contours interpolated on a one-foot interval, and depicting the R.O.W. limits, as defined by the record plats of dedication and survey documentation. Provide hard copies and digital copies of survey products to the Lake County Division of Transportation in accordance with deliverable requirements.

Task 4 – Environmental Data, Coordination, Inventory and Analysis

The project is generally located in an urban area mixed with commercial, residential, aviation, and retail developments. The potential does exist for involvement with special waste, biological resources, cultural resources, wetlands, and storm water impacts. There are no known 4(f) or section 106 areas located with the project limits.
Work tasks will include:

a. Developing a project location map.
b. Providing the appropriate NWI maps.
c. Preliminary Environmental Site Assessment (PESA) - The environmental consulting staff will conduct field reconnaissance for the study area, noting any land uses with potential

environmental concerns such as soil contamination, wetland disturbance, and other environmental impacts that could result from the planned improvements. Research of appropriate databases such as IDNR will be consulted and requests filed online. A Preliminary Environmental Site Assessment (PESA) will be prepared based on field and online research, Freedom of Information Act (FOIA) requests, compliance and historical database findings.

d. Preliminary Site Investigation - The environmental consulting staff will conduct soil sampling in the proposed right-of way expansion and interpret sampling results for the affected properties. A Preliminary Site Investigation (PSI) will be prepared based on sampling and laboratory findings, including recommendations for remedial action, as warranted. The site testing and sampling will be in compliance with Lake County DOT's "LAKE COUNTY DOT CCDD and UNCONTAMINATED OPERATIONS PRE-QUALIFICAITON FORM" guidelines.
e. Prepare Environmental Survey Request (ESR) - The environmental consultant will prepare the Environmental Survey Request (ESR) on the IDOT online database. All documents and exhibits as provided by the Prime and acquired through research and site reconnaissance will be included.
f. Prepare Categorical Exclusion II Study - The environmental consultant will prepare the NEPA study as a Categorical Exclusion II (CEII). The environmental consultant will provide all necessary data, mapping, and photos for public meetings if necessary.
g. Wetlands Impact Evaluation - There are known wetlands within the project area. Following Lake County protocols, the environmental consultant will examine the affected wetlands to determine potential impacts of the project. All necessary forms, exhibits, and maps will be attached with the final document. Mitigation and avoidance will be included in the report.
h. Prepare cultural resources section of the Project Report.
i. Identify and analyze land use patterns, future land use, and existing & proposed developments within the study limits.
j. Assess existing community features and social/economic factors & conditions to establish a baseline condition. Assess social and economic impacts based on the data collected.
k. Coordination with regulatory agencies.

The project at inception is anticipated to be processed as a Group II Categorical Exclusion. Information resulting from the ESR process will be coordinated with Federal, State and local officials; responding to coordination comments; including identifying impacts and solutions/mitigation of impacts; preparing any required special reports such as 4(f); and preparing the environmental section of the project report documents.

Task 5 – Location Drainage Study and Hydraulic Analysis

Location Drainage Study

Perform a location drainage study of the project location in accordance with the latest IDOT Drainage Manual and the Lake County Stormwater Management Ordinance.

Work elements associated with the Drainage Study are as follows.

a. Detail the existing drainage system including a general location drainage map, identify drainage problems, and identify major drainage features and outfalls.

b. Detail proposed drainage system including identifying the design criteria, sensitive outlet evaluation, stormwater detention analysis, R.O.W. analysis, drainage alternatives, and preparing the proposed drainage plans.
c. Local & Other Agency Coordination.
d. IDNR-OWR Permit.
e. SWPPP
f. NPDES Stormwater Permit
g. Lake County Watershed Development Permit
h. Erosion and sediment control, BMP white paper.
i. Narrative.
j. Study Assembly.
k. Field Reviews.

Task 6 – Geotechnical Investigations and Study

In accordance with the IDOT Geotechnical Manual, the following geotechnical services are anticipated:

a. Perform Borings and pavement cores along the project corridors. Additional borings will be taken at the intersections along the project corridor. Typical boring depth will be 10 feet.
b. Laboratory testing including: moisture content, Atterberg limits, grain size analyses, dry density, unconfined compressive strength, standard Proctor, Illinois Bearing Ratio, and organic content.
c. Provide a Roadway Geotechnical Engineering Report (RGR) in accordance with Chapter 5 of the IDOT Geotechnical Manual.
d. Temporary Traffic Control and coordination.

Task 7 – Alternate Geometric Studies

The intersection will be studied for the purpose of creating a preferred cross section and alignment. Plan studies will include horizontal and vertical alignment and geometrics. The following items are anticipated to be a part of this task:

a. Plotting the existing topography and cross sections and creating base sheets for use in Proposed Plan & Profile Exhibits.
b. Up to three improvement alternatives, plus the "no-build" alternative, will be considered.
c. Alternatives will be sufficiently developed to enable determination of the general level of impacts on such factors as construction limits, right of way acquisition, construction cost, environmental issues, public safety and convenience, bicycle/pedestrian accommodations, and other factors that may be identified by the coordination process.
d. Geometric alternatives will include horizontal alignments, profiles, number of through lanes and auxiliary lanes, and R.O.W. needs.
e. Verify and provide pavement design recommendations.
f. A written evaluation of each alternative considered will be included in the Project Report, along with exhibits such as profile studies, typical sections, and sample cross sections as necessary to illustrate the characteristics and impacts of each design alternative.
g. A matrix will be created to compare the alternatives.
h. A preliminary R.O.W. estimate of costs will be developed for the preferred alternative.

Throughout this process, the proposed geometrics will be coordinated with the Lake County Division of Transportation at periodic meetings. The alternatives will be refined and revised as necessary based on input from these meetings, as well as input from ongoing public/stakeholder involvement.

Task 8 – Crash Analysis (to be included in Project Report)

A crash analysis and study will be performed at the intersection to address any issues related to capacity as well as operational and safety deficiencies.

The following work items are included in this task:

a. Collect data for the most recent five calendar years available from Lake County and local agencies and communities. As the project proceeds additional data for one subsequent year will be added to the study.
b. Crash and skid reduction analysis in accordance with Section 11-2.02(f) of the Bureau of Design and Environment (BDE) Manual will be performed. The study will include the following crash analyses to assist in demonstrating the need for the improvement:

    Spot Map – includes the comparison of calculated project crash rates with the statewide average crash rates.

    High-Crash/Crash Pattern Analyses – Identify high-accident locations, rates and all crash patterns.

    Wet-Pavement Crashes – Identify and analyze any wet pavement crash clusters.

    Time Period – Review of the traffic crash data for the last five years and analyze most recent three of years data for the crash report.

c. Prepare a crash report including discussions on segment accident rates and types, intersection accident rates and types, wet pavement accident rates, and recommended countermeasures.

Task 9 – Traffic Analysis & Intersection Design Studies (to be included in Project Report)

Prepare a traffic analysis and intersection design studies utilizing the existing traffic data as well as the proposed design year projections. The analysis will include developing a traffic model using current traffic data and conduct Level of Service (LOS) analysis using HCM2010 (or most current) methodology for the AM and PM peak periods. Current traffic data will be projected for the 2040 design year. 2040 forecasted traffic will be analyzed for LOS and determination of congestion areas. The traffic analysis results will be utilized to design roadway segments and intersections.

The following items are anticipated to be included in this task item.

a. Review and analyze the existing traffic data and traffic counts.
b. Conduct Peak hour manual counts at the existing intersection. The peak hour manual counts will be performed within the following times: Tuesday thru Thursday – 6am to 9am and 3:30pm to 6:30pm. The data collection will include three vehicle classifications (cars, SU, MU) and will be stored in Petra format at 15 minute intervals. This data will be analyzed to determine peak hours for each intersection

c. Determine the current year Average Annual Daily Traffic (AADT), AM and PM peak Design Hour Volumes (DHV), and truck percentages for all roadway segments and intersection turn movements within the project limits.
d. Perform a traffic model for current year. Determine LOS, queue, and delay for the existing geometry.
e. Project Traffic for the design year with consideration of social, economic, and development trends. This work will also be coordinated with CMAP including requesting CMAP 2040 traffic projections.
f. Create a traffic model for design year (2040). The design year model will be developed using the same format as for the current year, with the appropriate growth rates applied to the origin-destination and traffic flow information. The design year traffic analysis will be used for the design of proposed roadway geometry.
g. Apply the proposed design year traffic model to the various alternatives. Determine back of queue, delay and LOS.
h. Create exhibits from the analysis results to be included in the project report. The reports and exhibits will be based upon the IDOT report formats with the appropriate turn movement diagrams.
i. Upon completion of the above items, an Intersection Design Study (IDS) will be prepared based on the preferred alternative configuration. IDS will conform to the requirements of the BDE Manual, and will utilize the IDOT District 1 standard base sheets. Capacity analyses will be shown on the drawings in IDOT format.

Task 10 – Traffic Maintenance Analysis (to be included in Project Report)

RS&H will provide a traffic management plan for the safe and efficient movement of traffic through the intersection construction corridor.

The traffic Management Plan which will include the following:

a. Make recommendations for cost-effective ways in which to improve LOS during construction conditions and determine LOS under recommended conditions.
b. Development of preliminary recommendations for maintaining traffic. These will include at a minimum:
   Develop any required detour routes to account for emergency response vehicles, construction vehicle routes, school bus routes and any local requirements as presented by Lake County Division of Transportation and local agencies.
   Establishment of time constraints for the different maintenance of traffic sequencing.
   Establishment of temporary traffic signals, signs, pavement marking and channelizing devices.
   Determination of altered speed limits for maintenance of traffic concerns.
   Special considerations for local and special events.
   Detail all these considerations on preliminary MOT drawings, showing traffic diagrams, typical sections, and detour routes.
c. Conduct meetings with Lake County Division of Transportation, local agencies and businesses to outline the proposed MOT Plan. Decisions from these meetings will be incorporated into the final MOT plan.
d. Provide discussion of traffic control plan to safely guide traffic and pedestrians through the work zone with the use of traffic control devices and project coordination.
e. Prepare a transportation operations plan to mitigate work zone impacts through the use of improved transportation operations and management of the transportation system.
f. Narrative of public information plan.

g. Analysis of construction phasing and scheduling alternatives.
h. Documentation of coordination with local officials and businesses.
i. Planning for emergency response and school bus routes.
j. Maintenance of Traffic Typical Sections

All work efforts will be coordinated through Lake County's Project Manager, the City of Waukegan, the Village of Beach Park, and other stakeholders.

Task 11 – Aviation Services

Coordination with the FAA and Waukegan Port District will be provided with the intent of determining the impacts of the roadway improvements to the existing aviation facilities. Impacts will be studied, remediation identified, and recommendations provided so as to aid in the determination of the appropriate roadway alternative. The following items are anticipated to be a part of this task:

a. Collect existing airport plans/as built information.
b. Determine impacts on the airport facility based upon the project alternatives
c. Study alternatives/impacts and provide recommendations for design.
b. Calculate the anticipated construction cost with respect to aviation facility impacts.
c. Provide coordination narrative for inclusion in the project report.

Task 12 – Opinion of Probable Project Cost

a. Provide a Preliminary Opinion of Probable Construction Cost based upon recent bid tabulation data.
b. Include Design, Construction, and Value Engineering as well as ROW Costs.

Task 13 – Public Involvement

The project team will work in concert with the Lake County Division of Transportation to disseminate information and gather feedback from residents, public institutions, commercial development, and other interested stakeholders. The work efforts will be accomplished through preparing exhibits and informational handouts and conducting public meetings and hearings.

We envision the work activities to include:

a. Developing a project problem statement.
b. Prepare Public meeting visual display exhibits, mosaics and handouts.
c. Develop a Purpose and Need Statement.
d. Prepare meeting materials.
e. Attend preparation and rehearsal meetings with Lake County Division of Transportation.
f. Attend three public input meetings. The public input meeting will be held with the following intentions: 1) Intro to project and solicit comments and input, 2) present alternatives, 3) Public Hearing (present preferred alternative).
g. Coordinate and prepare outreach materials and respond to comments.
h. Compile meeting and hearing minutes and responses for inclusion in Project Report.

The project team will attend one public meeting and one public hearing. In addition, small group meetings and workshops will be held with stakeholders in order to identify any issues and possible solutions, if needed.

Task 14 – Project Report

A Preliminary Project Report will be prepared and submitted to the Lake County Division of Transportation for review. The project is anticipated to qualify for a Categorical Exclusion, Group II. The report will document all existing conditions, project need, traffic and crash data, alternative analyses, public involvement, environmental issues, drainage studies, crash analysis, traffic management plan, cost estimates and recommendations for proposed improvements. The report will follow the format and content guidelines specified in Chapter 12 of the IDOT BDE Manual, as applicable. Ten (10) copies of the report, including all appendices, will be provided.

A coordination/review meeting will be held with the Lake County Division of Transportation and the Project Report and exhibits will be revised and updated to include public hearing information including disposition of comments, and the recommended alternative may be revised on the basis of public comment as well as Lake County Division of Transportation review. The revised recommendations will be presented in a Final Project Report and submitted to the Lake County Division of Transportation for review. Upon approval, ten (10) printed copies and five (5) electronic copies on CD will be provided. Final electronic copies will include all deliverables (eg. Survey information, Calculations, Report, BCR, etc.)

Task 15 – Quality Assurance/Quality Control

RS&H will submit a project specific QA/QC plan for approval by the Lake County Division of Transportation. The Plan will define the procedures used to control and insure the quality of the design process from data collection through the submittal of the final PDR. The QA/QC Plan will address the following:

a. Management responsibility.
b. Design standards and documents.
c. QA/QC check sheets.
d. Document control.
e. QA Process control.
f. Quality records and audit procedures.
g. Training.

The project team will follow the procedures outlined in the approved QA/QC Plan. Internal peer reviews will be conducted at reasonable intervals and documented. All major submittals will follow internal technical reviews, and the project manager will review progress with respect to budget and schedule at least monthly to ensure that the project remains on track.

Task 16 – Administration

The RS&H team will undertake all other administrative duties necessary to support the successful completion of the project. This work will include:

a. General Project Management duties including Project Officer oversight.
b. Writing and filing project correspondence including phone memos, meeting minutes, etc.
c. Managing sub-consultants.
d. Monitoring project schedule and budget, and preparing monthly invoices and progress reports for submission to the Lake County Division of Transportation Project Manager.

ASSUMPTIONS

a. Lake County will supply traffic counts and crash data sufficient for use with this project, RS&H will augment the traffic counts as stipulated above.
b. Copies of available existing plans surveys or plats will be made available to the consultant.
c. The project is anticipated to be processed as a Categorical Exclusion II.

EXCLUSIONS

a. Right of Way appraisals and negotiations are not included.
b. The preparation of Construction Plans, Specifications, and Final estimates are not included.
c. Lighting and Traffic signal design are not included in this scope.
d. Construction or bidding phase services are not included in this scope.
e. Watermain or sanitary sewer design.
f. Utility relocation detailed design.
g. Structural design.
h. Permit fees or any proposed electrical service fees.

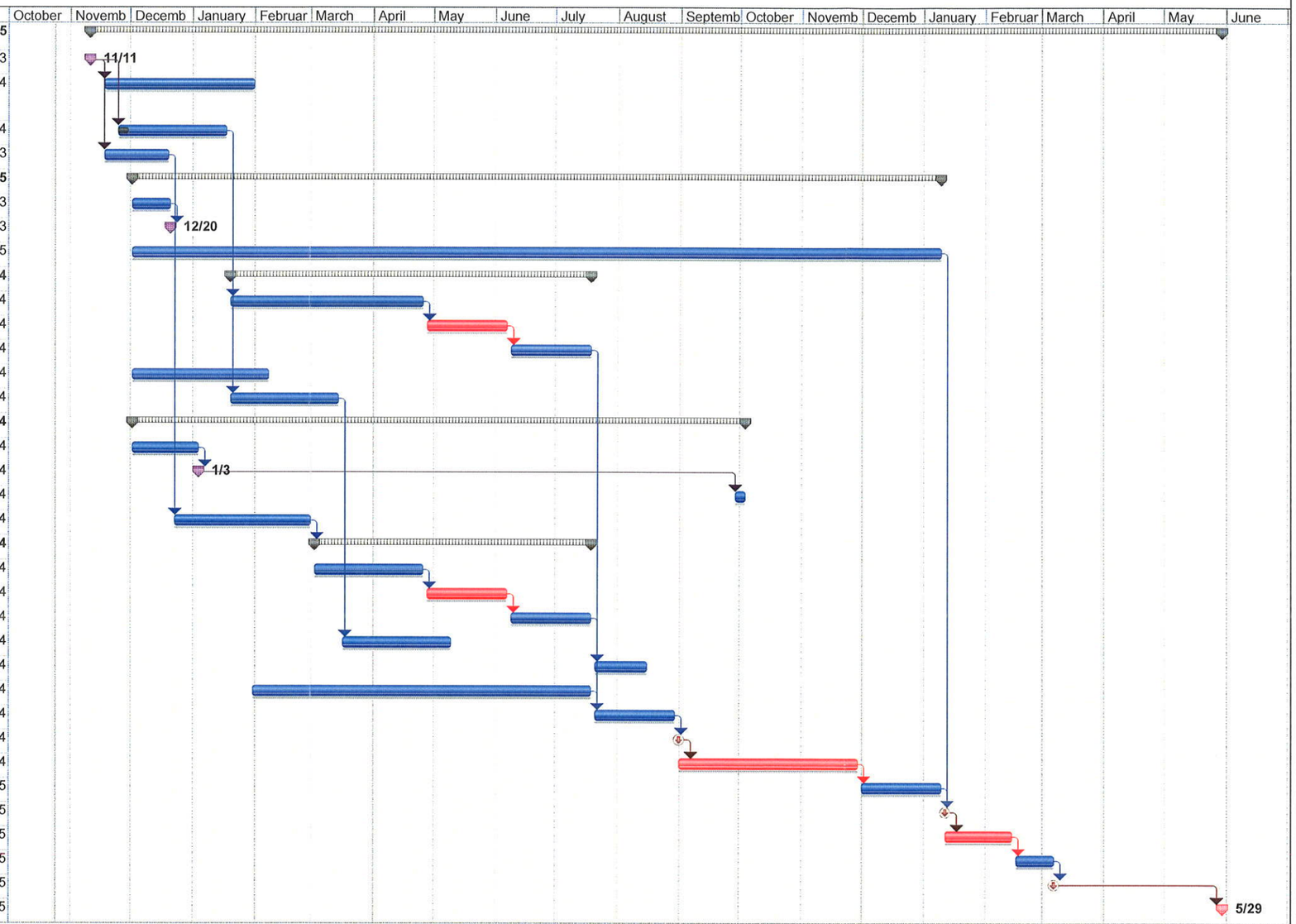
ANTICIPATED PROJECT SCHEDULE

Based upon our understanding of the project, a schedule has been developed with sets for realistic dates of completion of the various project phases through design approval; and has been attached herein. The schedule notes an assumed start date and assumes a normal project progression and timely reviews as shown.

Wadsworth Road @ Lewis Avenue Phase 1

SCHEDULE

ID	Task Name	Duration	Start	Finish
1	**Wadsworth Rd @ Lewis Ave Phase 1 Project**	**405 days**	**Mon 11/11/13**	**Fri 5/29/15**
2	Project Kick Off	0 days	Mon 11/11/13	Mon 11/11/13
3	Initiate Coordination w/Local Agencies, Obtain Ex.Data (Utility, crash data, existing plans, etc)	55 days	Mon 11/18/13	Fri 1/31/14
4	Topographic Survey	40 days	Mon 11/25/13	Fri 1/17/14
5	Traffic Counts	24 days	Mon 11/18/13	Thu 12/19/13
6	**Environmantal Data collection and Analysis**	**290 days**	**Mon 12/2/13**	**Fri 1/9/15**
7	ESR	15 days	Mon 12/2/13	Fri 12/20/13
8	Submit ESR	0 days	Fri 12/20/13	Fri 12/20/13
9	Environmental Studies & Permitting	290 days	Mon 12/2/13	Fri 1/9/15
10	**Drainage Studies**	**130 days**	**Mon 1/20/14**	**Fri 7/18/14**
11	Preliminary Drainage Study	70 days	Mon 1/20/14	Fri 4/25/14
12	Review Drainage Study	30 days	Mon 4/28/14	Fri 6/6/14
13	Final Drainage Study	30 days	Mon 6/9/14	Fri 7/18/14
14	Geotechnical Engineering	50 days	Mon 12/2/13	Fri 2/7/14
15	Alternative Geometric Studies	40 days	Mon 1/20/14	Fri 3/14/14
16	**Crash Analysis**	**220 days**	**Mon 12/2/13**	**Fri 10/3/14**
17	Perform Crash Studies	25 days	Mon 12/2/13	Fri 1/3/14
18	Submit Crash Analysis	0 days	Fri 1/3/14	Fri 1/3/14
19	Obtain 2013 Data & Update Analysis	5 days	Mon 9/29/14	Fri 10/3/14
20	Traffic Analysis	50 days	Mon 12/23/13	Fri 2/28/14
21	**IDS**	**100 days**	**Mon 3/3/14**	**Fri 7/18/14**
22	Prelmiinary IDS	40 days	Mon 3/3/14	Fri 4/25/14
23	IDS Review	30 days	Mon 4/28/14	Fri 6/6/14
24	Final IDS	30 days	Mon 6/9/14	Fri 7/18/14
25	MOT	40 days	Mon 3/17/14	Fri 5/9/14
26	Cost Estimate	20 days	Mon 7/21/14	Fri 8/15/14
27	Public Involvement	121 days	Fri 1/31/14	Fri 7/18/14
28	Draft Project Report	30 days	Mon 7/21/14	Fri 8/29/14
29	Submit Draft Report	0 days	Fri 8/29/14	Fri 8/29/14
30	Report Review	65 days	Mon 9/1/14	Fri 11/28/14
31	Final Report	30 days	Mon 12/1/14	Fri 1/9/15
32	Submit Report	0 days	Fri 1/9/15	Fri 1/9/15
33	Final Report Review	25 days	Mon 1/12/15	Fri 2/13/15
34	Prepare Report for Design Approval	15 days	Mon 2/16/15	Fri 3/6/15
35	Submit Report for Design Approval	0 days	Fri 3/6/15	Fri 3/6/15
36	Design Approval	60 days	Mon 3/9/15	Fri 5/29/15



Project: Lake County Phase I
Date: Thu 10/24/13

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

RS&H
IMPROVING YOUR WORLD

PHASE I ENGINEERING SERVICES

Wadsworth Road @ Lewis Avenue Phase 1

Prepared for

LAKE COUNTY DIVISION OF TRANSPORTATION

Scope, Workhour, and Direct Cost Worksheets

WORKHOURS AND DIRECT COSTS
WADSWORTH ROAD AT LEWIS AVENUE
LAKE COUNTY DIVISION OF TRANSPORTATION

1. Data Collection & Review

a. Data Collection – Local Agencies	16
b. Obtain existing Traffic & Crash Data	4
c. Determine Bus Routes & Emergency Services Routes	4
d. Existing Utilities – Correspondence & Compilation of Mapping information	16
e. Field Trips to Area - 4 trips (2 staff, 6 hours each)	36
f. Photo Log	4
g. Review & Analyze Data	12
WORKHOURS	92
Mileage to Site 3 trips@130miles/round trip - 390 miles @$0.565/mile	$220.35
ESTIMATED DIRECT COSTS	$220.35

2. Project Coordination & Meetings

a. Meetings with Lake County – Up to 3 Meetings (2 staff, 6 hours each)	36
b. Local Agency/FAA Coordination – Up to 2 Meetings (2 staff, 6 hours each	24
c. Monthly Project Coordination – Internal & Sub-consultants as Needed	24
d. Stakeholder Meetings – Up to 2 Meetings (2 staff, 6 hours each + 4 prep. time)	12
TOTAL WORKHOURS	96
Mileage to Lake County DOT 7 trips@90miles/round trip - 630 miles @$0.565/mile	$355.95
ESTIMATED DIRECT COSTS	$355.95

3. Surveys (Environmental Design International, Inc.)

a. Locate Right-of-Way (R.O.W.) Monuments
b. Research Property Ownership along the Project Corridor
c. Establish Horizontal and Vertical Control -Traverse (Includes Ties to State Plane Coordinates)
d. Level Circuit , Establish Project Bench Marks's
e. Alignment (Tie Centerline of Existing R.O.W. to Aerial Traverse)
f. Topographic Survey, include 2500' from intersection
g. Cross-sections
h. Utility Locations (Inverts on All Drainage, Cross Culverts, Drive and Street Culvert Structures)
i. Trees 4" and Greater
j. Follow-up Survey as Needed

k. Base Mapping, Plotting of Existing Topography Including all Utilities and Drainage Elements
l. R.O.W. Plats and Legals (up to 3 Plats for up to 6 Parcels)
m. Creation of The creation of approximately 6 legal descriptions including 6 parcels to be acquired.
n. The Establishment and Monument of approximately 2 section corners
o. Survey Points Shall Use IDOT Line and Point Codes
p. Boring Location
q. Wetland Delineation Survey
r. Coordination 8

WORKHOURS	8
WORKHOURS – SUBCONSULTANT (Services by others)	601
ESTIMATED DIRECT COSTS – SUBCONSULTANT (Services by others)	$51,647.44

4. Environmental Data Collection, Coordination, Inventory & Analysis (Kowalenko Consulting Group, Inc.)

a. Developing a project location map.
b. Providing the appropriate NWI maps.
c. Preliminary Environmental Assessment (PESA) - The environmental consulting staff will conduct field reconnaissance for the study area, noting any land uses with potential environmental concerns such as soil contamination, wetland disturbance, and other environmental impacts that could result from the planned improvements. Research of appropriate databases such as IDNR will be consulted and requests filed online. A Preliminary Environmental Site Assessment (PESA) will be prepared based on field and online research, Freedom of Information Act (FOIA) requests, compliance and historical database findings.
d. Preliminary Site Investigation - The environmental consulting staff will conduct soil sampling in the proposed right-of way expansion and interpret sampling results for the affected properties A Preliminary Site Investigation (PSI) will be prepared based on sampling and laboratory findings, including recommendations for remedial action, as warranted. The site testing and sampling will be in compliance with Lake County DOT's "LAKE COUNTY DOT CCDD and UNCONTAMINATED OPERATIONS PRE-QUALIFICAITON FORM" guidelines.
e. Prepare Environmental Survey Request (ESR) - The environmental consultant will prepare the Environmental Survey Request (ESR) on the IDOT online database. All documents and exhibits as provided by the Prime and acquired through research and site reconnaissance will be included.
f. Prepare Categorical Exclusion II Study - The environmental consultant will prepare the NEPA study as a Categorical Exclusion II (CEII). The environmental consultant will provide all necessary data, mapping, and photos for public meetings if necessary.
g. Wetlands Impact Evaluation - There are known wetlands within the project area Following Lake County protocols, the environmental consultant will examine the affected wetlands to determine potential impacts of the project. All necessary forms, exhibits, and maps will be attached with the final document. Mitigation and avoidance will be included in the report.
h. Prepare cultural resources section of the Project Report.
i. Identify and analyze land use patterns, future land use, and existing & proposed developments within the study limits.
j. Assess existing community features and social/economic factors & conditions to establish a baseline condition. Assess social and economic impacts based on the data collected.
k. Coordination with regulatory agencies.
a. Coordination 8

WORKHOURS	8
WORKHOURS – SUBCONSULTANT (Services by others)	195
ESTIMATED DIRECT COSTS – SUBCONSULTANT (Services by others)	$35,604.93

5. Location Drainage Study & Permitting

a. Existing Drainage System	
1. General Location Drainage Map	16
2. Existing Drainage Plan	24
3. Identified Drainage Problems	8
b. Proposed Drainage System	
1. Design Criteria	12
2. Outlet Evaluation	18
3. Stormwater Detention Analysis	48
4. Right-of-Way Analysis	12
5. Proposed Drainage Plan	80
c. Local & Other Agency Coordination, Field Visits – Included as a Part of Task 2	
d. IDNR-OWR Permit	24
e. SWPPP	12
f. NPDES Stormwater Permit	16
g. Lake County Watershed Development Permit	16
h. Erosion and Sediment Control Data Table	12
i. BMP White Paper	12
j. Narrative	24
k. Study Assembly/print/bind/deliver (5 preliminary/5 final)	12
TOTAL WORKHOURS	346
Printing – 10 sets @ 50 pages/set = 500 pages @ $.015/sheet	$75.00
ESTIMATED DIRECT COSTS	$75.00

6. Geotechnical Investigations & Study (Testing Service Corporation, Inc.)

a. Perform Borings and Pavement Cores based (up to 5 borings,6 cores)	
b. Structural Borings at Anticipated Traffic Control Structures (up to 2, if needed)	
c. Perform Laboratory Testing per the IDOT Geotechnical Manual	
d. Prepare Report including Subgrade and Undercut Recommendations as well as Sub drain Locations per Chapter 5 of the IDOT Geotechnical Manual	
e. Review of Report; Incorporate into Documents and Design	8
WORKHOURS	8
WORKHOURS – SUBCONSULTANT (Services by others – hours not included in direct costs)	22
ESTIMATED DIRECT COSTS – SUBCONSULTANT (Services by others)	$14,666.74

7. Alternate Geometric Studies

a. Plan and Profile Sheets (8 sheets @ 20 scale, 24 hours per sheet)	192
b. Profile & Cross-section Studies (Includes Test Cross-sections in Critical Areas & Final Cross-sections at Every 50' Plus Driveways for the Preferred Alternative)	100

c. Pavement Design	16
d. Typical Sections and Details (4 sheets @ 16 hours/sheet)	64
e. Determine and Plot Proposed ROW and Easement Requirements	24
f. Develop Preliminary ROW Cost Estimate	16
TOTAL WORKHOURS	412

8. Crash Analysis (To be Included in Project Report)

a. Review Accident Data and Tabulate (For 4 years of data)	8
b. Analysis of Data (First 3 years)	24
c. Prepare Accident Exhibits/Narrative	32
d. Recommend Countermeasure if Necessary	8
e. Update Analysis for an Additional Year (Prior to Completion of Final Report)	8
TOTAL WORKHOURS	80

9. Traffic Analysis & Intersection Design Studies (To be Included in Project Report)

a. Review and Analyze existing Traffic Data and Traffic Counts	8
b. Conduct 4 peak hour (2 AM and 2 PM) Turn Movement Traffic Counts, Process Traffic Data.	28
c. Determination of Directional Distribution of Traffic Volumes and DHV.	10
d. Develop Proposed Traffic Projections	8
e. Conduct Traffic Analysis on Existing and Projected Traffic, Determine LOS for Proposed Alternatives	40
f. Prepare Intersection Design Studies (1 locations)	80
TOTAL WORKHOURS	174
Mileage to Site 4 trips@130miles/round trip - 520 miles @$0.565/mile	$293.80

10. Traffic Maintenance Analysis (To be Included in Project Report)

a. Determination of Traffic Maintenance Needs	12
b. Prepare Exhibits	80
c. Narrative for Inclusion into PDR	16
TOTAL WORKHOURS	108

11. Aviation Services

a. Data Collection – FAA and Airport	16
b. Determine Impacts	24
c. Study Alternatives & Provide Recommendations	40
d. Determine Associated Construction Cost	8
e. Narrative for Inclusion into PDR	16
TOTAL WORKHOURS	104

12. Opinion of Probable Project Cost

a. Provide a Preliminary Opinion of Probable Construction Cost Based Upon Preliminary Calculated Quantities and Recent Bid Tabulation Data	32
b. Include Design, Construction, and Value Engineering as well as ROW Costs	4
TOTAL WORKHOURS	36

13. Public Involvement

a. Meeting Preparation – Public Notice, Site Preparation (1 meetings)	24
b. Prepare Public Meeting Visual Display Exhibits, Mosaics, and Handouts (AV presentation not included) Exhibits will include up to 3 display boards, handouts, and printed questionnaires	68
c. Attend up to 3 Public Meetings	48
d. Coordination and Compilation of Meeting Information	8
TOTAL WORKHOURS	148
Mileage to Lake County DOT 3 trips@90miles/round trip - 270 miles @$0.565/mile	$152.55
Printing exhibits– 3 - 24 x 36" panel-boards @ $20.00/board	$60.00
Printing color handouts – 50 handouts @ $0.90/color sheet	$45.00
ESTIMATED DIRECT COSTS	$257.55

14. Project Design Report

a. Preliminary Report	
1. Prepare Outline of Report	4
2. Compile Exhibits, Maps, typical sections, Charts, etc.	40
3. Analyze Alternatives	16
4. Bicycle Checklist and Text	8
5. Author Report, Proof and Edit	80
6. Print, Bind, and Deliver (10 copies)	16
b. Final Report	
1. Incorporate Public Meeting and Agency Coordination Information	24
2. Disposition of Public Comments	12
3. Revision Based upon Preliminary Comments	40
4. Print, Bind, and Deliver Sealed Final PDR (10 copies, 5 CD)	16
TOTAL WORKHOURS	256
Printing – 20 sets @ 200 pages/set = 2000 pages @ $.015/sheet	$300.00
ESTIMATED DIRECT COSTS	$300.00

15. Quality Assurance/Quality Control

TOTAL WORKHOURS	56

16. Administration

TOTAL WORKHOURS 38

ASSUMPTIONS

1. Lake County will supply traffic counts and crash data, RS&H will augment traffic counts as stipulated above.
2. Copies of available existing plans surveys or plats will be made available to the consultant.
3. The project is anticipated to be processed as a Categorical Exclusion II.

EXCLUSIONS

1. Right of Way appraisals and negotiations are not included.
2. The preparation of Construction Plans, Specifications, and Final estimates are not included.
3. Lighting and Traffic signal design are not included in this scope.
4. Construction or bidding phase services are not included in this scope.
5. Watermain or sanitary sewer design.
6. Utility relocation detailed design.
7. Structural design.
8. Permit fees or any proposed electrical service fees.

RS&H

IMPROVING YOUR WORLD

PHASE I ENGINEERING SERVICES

Wadsworth Road @ Lewis Avenue Phase 1

Prepared for

LAKE COUNTY DIVISION OF TRANSPORTATION

CECS – RS&H

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME Reynolds, Smith, and Hills, Inc.
PRIME/SUPPLEMENT Prime

DATE 10/23/13
PTB NO. NA

CONTRACT TERM	18 MONTHS	OVERHEAD RATE	178.83%
START DATE	11/1/2013	COMPLEXITY FACTOR	0
RAISE DATE	4/1/2014	% OF RAISE	3.00%

ESCALATION PER YEAR

11/1/2013 - 4/1/2014	4/2/2014 - 4/1/2015	4/2/2015 - 5/1/2015		
5 / 18	12 / 18	1 / 18		
= 27.78%	68.67%	5.89%		

= 1.0234

The total escalation for this project would be: 2.34%

PAYROLL RATES

FIRM NAME Reynolds, Smith, and Hi DATE 10/23/13
PRIME/SUPPLEMENT Prime
PSB NO. NA

ESCALATION FACTOR 2.34%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE	
Principal	$88.15	$70.00	max 2 categories at $70
Engineer IV	$66.60	$68.16	max 2 categories at $70
Engineer III	$47.46	$48.57	max 60
Engineer II	$36.80	$37.66	max 60
Engineer I	$27.97	$28.62	max 60
Planner V	$74.56	$60.00	max 60
Planner IV	$58.84	$60.00	max 60
Planner III	$42.02	$43.00	max 60
Planner II	$32.96	$33.73	max 60
Planner I	$28.25	$28.91	max 60
Technician IV	$37.53	$38.41	max 60
Technician III	$29.45	$30.14	max 60
Technician II	$26.50	$27.12	max 60
Environmental Specialist	$39.46	$40.38	max 60
Administrative Assistant	$21.15	$21.64	max 60

Subconsultants

FIRM NAME Reynolds, Smith, and Hills, Inc. DATE 10/23/13
PRIME/SUPPLEMENT Prime
PSB NO. NA

NAME	Direct Labor Total	Contribution to Prime Consultant
Environmental Design International	18,825.72	2,259.09
Testing Service Corporation	774.32	92.92
Kowalenko Consulting	9,706.72	1,164.81
		0.00
		0.00
		0.00
		0.00
		0.00
Total	29,306.76	3,516.81

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM Reynolds, Smith, and Hills, Inc. **DATE** 10/23/13

PSB NA **OVERHEAD RATE** 1.7883

PRIME/SUPPLEMENT Prime **COMPLEXITY FACTOR** 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Data Collection & Review	92	3,897.00	6,969.01	220.35	1,441.89				12,528.26	3.46%
	Coordination & Meetings	96	4,572.32	8,176.68	355.95	1,691.76				14,796.70	4.09%
	Survey	8	388.56	694.86		143.77		51,647.44		52,874.62	14.61%
	Environmental	8	388.56	694.86		143.77		35,604.93		36,832.11	10.18%
	Drainage	346	14,457.77	25,854.82		5,349.37	75.00			45,736.96	12.64%
	Geotechnical	8	388.56	694.86		143.77		14,666.75		15,893.93	4.39%
	Geometric Studies	412	15,263.19	27,295.16		5,647.38				48,205.73	13.32%
	Crash Analysis	80	2,907.47	5,199.43		1,075.77				9,182.67	2.54%
	Traffic Analysis/IDS	174	6,369.03	11,389.73	293.80	2,356.54				20,409.10	5.64%
	MOT	108	3,673.21	6,568.80		1,359.09				11,601.10	3.21%
	Aviation Services	104	5,023.90	8,984.23		1,858.84				15,866.97	4.38%
	Estimating	36	1,530.33	2,736.68		566.22				4,833.23	1.34%
	Public Involvement	148	6,485.40	11,597.84	152.55	2,399.60	105.00			20,740.38	5.73%
	PDR	256	9,733.89	17,407.12		3,601.54	300.00			31,042.55	8.58%
	QAQC	56	3,864.72	6,911.28		1,429.95				12,205.94	3.37%
	Administration	38	1,801.69	3,221.96		666.63				5,690.28	1.57%
	Subconsultant DL					3,516.81				3,516.81	0.97%
	TOTALS	1970	80,745.58	144,397.33	1,022.65	33,392.68	480.00	101,919.12	0.00	**361,957.36**	100.00%

DBE 0.00%

DBE

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AVERAGE HOURLY PROJECT RATES

FIRM Reynolds, Smith, and Hills, Inc.
PSB NA
PRIME/SUPPLEMENT Prime

DATE 10/23/13

SHEET 1 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Data Collection & Review			Coordination & Meetings			Survey			Environmental			Drainage		
		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	78	3.96%	2.77	8	8.70%	6.09	8	8.33%	5.83									
Engineer IV	68.16	70	3.55%	2.42													24	6.94%	4.73
Engineer III	48.57	558	28.32%	13.76	32	34.78%	16.89	64	66.67%	32.38	8	100.00%	48.57	8	100.00%	48.57	112	32.37%	15.72
Engineer II	37.66	672	34.11%	12.85	16	17.39%	6.55	24	25.00%	9.42							140	40.46%	15.24
Engineer I	28.62	176	8.93%	2.56	16	17.39%	4.98												
Planner V	60.00	0																	
Planner IV	60.00	20	1.02%	0.61	4	4.35%	2.61												
Planner III	43.00	0																	
Planner II	33.73	0																	
Planner I	28.91	0																	
Technician IV	38.41	0																	
Technician III	30.14	388	19.70%	5.94	16	17.39%	5.24										70	20.23%	6.10
Technician II	27.12	0																	
Environmental Speci	40.38	0																	
Administrative Assist	21.64	8	0.41%	0.09															
		0																	
		0																	
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TOTALS		1970	100%	$40.99	92	100.00%	$42.36	96	100%	$47.63	8	100%	$48.57	8	100%	$48.57	346	100%	$41.79

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AVERAGE HOURLY PROJECT RATES

FIRM Reynolds, Smith, and Hills, Inc.
PSB NA
PRIME/SUPPLEMENT Prime

DATE 10/23/13

SHEET 2 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Geotechnical			Geometric Studies			Crash Analysis			Traffic Analysis/IDS			MOT			Aviation Services		
		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																		
Engineer IV	68.16																16	15.38%	10.49
Engineer III	48.57	8	100.00%	48.57	96	23.30%	11.32	8	10.00%	4.86	32	18.39%	8.93	8	7.41%	3.60	24	23.08%	11.21
Engineer II	37.66				152	36.89%	13.89	48	60.00%	22.60	80	45.98%	17.32	36	33.33%	12.55	48	46.15%	17.38
Engineer I	28.62				44	10.68%	3.06	8	10.00%	2.86	44	25.29%	7.24						
Planner V	60.00																		
Planner IV	60.00																16	15.38%	9.23
Planner III	43.00																		
Planner II	33.73																		
Planner I	28.91																		
Technician IV	38.41																		
Technician III	30.14				120	29.13%	8.78	16	20.00%	6.03	18	10.34%	3.12	64	59.26%	17.86			
Technician II	27.12																		
Environmental Speci	40.38																		
Administrative Assist	21.64																		
TOTALS		8	100%	$48.57	412	100%	$37.05	80	100%	$36.34	174	100%	$36.60	108	100%	$34.01	104	100%	$48.31

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AVERAGE HOURLY PROJECT RATES

FIRM Reynolds, Smith, and Hills, Inc.
PSB NA
PRIME/SUPPLEMENT Prime

DATE 10/23/13

SHEET 3 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Estimating			Public Involvement			PDR			QAQC			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				24	16.22%	11.35	4	1.56%	1.09	26	46.43%	32.50	8	21.05%	14.74			
Engineer IV	68.16										30	53.57%	36.51						
Engineer III	48.57	16	44.44%	21.59	40	27.03%	13.13	80	31.25%	15.18				22	57.89%	28.12			
Engineer II	37.66	20	55.56%	20.92	44	29.73%	11.20	64	25.00%	9.42									
Engineer I	28.62							64	25.00%	7.16									
Planner V	60.00																		
Planner IV	60.00																		
Planner III	43.00																		
Planner II	33.73																		
Planner I	28.91																		
Technician IV	38.41																		
Technician III	30.14				40	27.03%	8.15	44	17.19%	5.18									
Technician II	27.12																		
Environmental Speci	40.38																		
Administrative Assist	21.64													8	21.05%	4.56			
TOTALS		36	100%	$42.51	148	100%	$43.82	256	100%	$38.02	56	100%	$69.01	38	100%	$47.41	0	0%	$0.00

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PHASE I ENGINEERING SERVICES

Wadsworth Road @ Lewis Avenue Phase 1

Prepared for

LAKE COUNTY DIVISION OF TRANSPORTATION

CECS – Subconsultant

Survey – Environmental Design International, Inc.

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME: Environmental Design International, inc.
PRIME/SUPPLEMENT: Prime

DATE: 10/14/13
PTB NO.: NA

CONTRACT TERM	18 MONTHS	OVERHEAD RATE	130.99%
START DATE	11/1/2013	COMPLEXITY FACTOR	0
RAISE DATE	7/1/2014	% OF RAISE	3.00%

ESCALATION PER YEAR

11/1/2013 - 7/1/2014	7/2/2014 - 5/1/2015			
8 / 18	10 / 18			
= 44.44%	57.22%			
= 1.0167				

The total escalation for this project would be: 1.67%

PAYROLL RATES

FIRM NAME	**Environmental Design Ir**	**DATE**	**10/14/13**
PRIME/SUPPLEMENT	**Prime**		
PSB NO.	**NA**		

ESCALATION FACTOR **1.67%**

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
Survey Manager	$48.08	$48.88
PLS	$38.25	$38.89
Crew Chief	$30.00	$30.50
Instrument Person	$22.00	$22.37
CADD Technician	$34.15	$34.72
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
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		$0.00
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		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00

Subconsultants

FIRM NAME Environmental Design International, inc. DATE 10/14/13
PRIME/SUPPLEMENT Prime
PSB NO. NA

NAME	Direct Labor Total	Contribution to Prime Consultant
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
Total	0.00	0.00

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM Environmental Design International, inc. **DATE** 10/14/13

PSB NA **OVERHEAD RATE** 1.3099

PRIME/SUPPLEMENT Prime **COMPLEXITY FACTOR** 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
DBE	Locate ROW Monuments	64	1,885.98	2,470.44	135.00	697.81			5,189.23	5,189.23	10.05%
DBE	Research ROW	38	1,537.69	2,014.22		568.94			4,120.85	4,120.85	7.98%
DBE	Establish Control	76	2,107.63	2,760.79	225.00	779.82			5,873.24	5,873.24	11.37%
DBE	Topographic Survey	265	7,962.74	10,430.39	495.00	2,946.21			21,834.34	21,834.34	42.28%
DBE	Legal Descriptions	14	564.41	739.32		208.83			1,512.57	1,512.57	2.93%
DBE	R.O.W Plats	76	2,862.04	3,748.98		1,058.95			7,669.98	7,669.98	14.85%
DBE	Boring Locations	8	211.47	277.00	45.00	78.24			611.71	611.71	1.18%
DBE	Wetland Delineation	20	561.81	735.91	90.00	207.87			1,595.59	1,595.59	3.09%
DBE	R.O.W. Staking	40	1,131.96	1,482.75	206.40	418.82			3,239.93	3,239.93	6.27%
	Subconsultant DL					0.00				0.00	0.00%
	TOTALS	601	18,825.72	24,659.81	1,196.40	6,965.52	0.00	0.00	51,647.44	**51,647.44**	100.00%

DBE 100.00%

DBE

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AVERAGE HOURLY PROJECT RATES

FIRM Environmental Design International, inc.
PSB NA
PRIME/SUPPLEMENT Prime

DATE 10/14/13

SHEET 1 OF 5

PAYROLL	AVG	TOTAL PROJECT RATES			Locate ROW			Research ROW			Establish Control			Topographic Survey			Legal Descriptions		
CLASSIFICATION	HOURLY RATES	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Survey Manager	48.88	20	3.32%	1.62	2	3.13%	1.53	6	15.79%	7.72	1	1.32%	0.64	5	1.89%	0.92	2	14.29%	6.98
PLS	38.89	118	19.60%	7.62	8	12.50%	4.86	32	84.21%	32.75	4	5.26%	2.05	20	7.55%	2.93	12	85.71%	33.33
Crew Chief	30.50	172	28.57%	8.71	24	37.50%	11.44				36	47.37%	14.45	84	31.70%	9.67			
Instrument Person	22.37	172	28.57%	6.39	24	37.50%	8.39				36	47.37%	10.59	84	31.70%	7.09			
CADD Technician	34.72	120	19.93%	6.92	6	9.38%	3.25							72	27.17%	9.43			
		0																	
		0																	
		0																	
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TOTALS		602	100%	$31.27	64	100.00%	$29.47	38	100%	$40.47	76	101%	$27.73	265	100%	$30.05	14	100%	$40.32

PREPARED BY THE AGREEMENTS UNIT

AVERAGE HOURLY PROJECT RATES

FIRM Environmental Design International, inc.
PSB NA
PRIME/SUPPLEMENT Prime

DATE 10/14/13

SHEET 2 **OF** 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	R.O.W Plats			Boring Locations			Wetland Delineation			R.O.W. Staking								
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Survey Manager	48.88	4	5.26%	2.57															
PLS	38.89	40	52.63%	20.47							2	5.00%	1.94						
Crew Chief	30.50				4	50.00%	15.25	8	40.00%	12.20	16	40.00%	12.20						
Instrument Person	22.37				4	50.00%	11.18	8	40.00%	8.95	16	40.00%	8.95						
CADD Technician	34.72	32	42.11%	14.62				4	20.00%	6.94	6	15.00%	5.21						
TOTALS		76	100%	$37.66	8	100%	$26.43	20	100%	$28.09	40	100%	$28.30	0	0%	$0.00	0	0%	$0.00

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Illinois Department of Transportation

Direct Costs Check Sheet

Firm Name: Environmental Design International, inc PTB/Item No: _____

REQUIRED – DIRECT COSTS WILL ONLY BE ACCEPTED FOR INCLUSION IN CONTRACT WHEN DOCUMENTED ON THIS FORM.
(Indicate only rate and quantities for this specific project.)

Item	Allowable	Contract (1) Rate	Quantity (n/a for work orders)	Total
Per Diem	Up to State Rate Maximum			$0.00
Lodging (Overnight)	Up to State Rate Maximum			$0.00
Lodging (Extended)	Actual Cost (based on IDOT's and firm's policy)			$0.00
Air Fare Coach Rate (with two weeks' notice)	As Approved			$0.00
Vehicles: Mileage	Up to State Rate Maximum			$0.00
Daily Rate (owned or leased)	$45/day	$45.00	24.00	$1,080.00
Overtime	(Premium Portion)			$0.00
Tolls	Actual Cost			$0.00
Digital Photo Processing	Actual Cost			$0.00
Photo Processing	Actual Cost			$0.00
Cell Phones – (traffic systems, survey, phase III only)	$70/month/phone (maximum) – Phase III (max. of three without IDOT approval)			$0.00
Telephone Usage (traffic system monitoring)	Actual Cost			$0.00
2-Way Radio (survey or phase III only)	Actual Cost			$0.00
Overnight Delivery/Postage/Courier Service	Actual Cost			$0.00
Copies of Deliverables/Mylars (in-house)	Actual Cost			$0.00
Copies of Deliverables/Mylars (outside)	Actual Cost			$0.00
Specific Insurance (required for project)	Actual Cost			$0.00
CADD	Actual Cost (max. $15.00/hour)			$0.00
Monuments (permanent)	Actual Cost			$0.00
Advertisements	Actual Cost			$0.00
Web Site	Actual Cost			$0.00
Facility Rental for Public Meetings & Exhibits/Renderings & AV	Actual Cost			$0.00
Transcriptions (specific to project)	Actual Cost			$0.00
Recording Fees	Actual Cost			$0.00
Courthouse Fees	Actual Cost			$0.00
Testing of Soil Samples	Actual Cost			$0.00
Lab Services	Actual Cost			$0.00
Storm Sewer Cleaning and Televising	Actual Cost (requires 2-3 quotes)			$0.00
Traffic Control and Protection	Actual Cost (requires 2-3 quotes)			$0.00
Aerial Photography and Mapping	Actual Cost (requires 2-3 quotes)			$0.00
Utility Exploratory Trenching	Actual Cost (requires 2-3 quotes)			$0.00
Shift Differential	Actual Cost (based on firm's policy)			$0.00
PROJECT Site Travel	Actual Cost (based on IDOT's and firm's policy)			$0.00
	Actual Cost (requires 2-3 quotes)			$0.00
	Actual Cost (requires 2-3 quotes)			$0.00
Scanner Rental	Include 2-3 vendor quotes and explanation for necessity.			$0.00
Tie Caps	Actual Cost	$116.40	1.00	$116.40
TOTAL				$1,196.40

1) Used to determine upper limit of compensation for direct cost. Unless maximum is specified under allowable, bill at actual cost.

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PHASE I ENGINEERING SERVICES

Wadsworth Road @ Lewis Avenue Phase 1

Prepared for

LAKE COUNTY DIVISION OF TRANSPORTATION

CECS – Subconsultant

Geotechnical – Testing Service Corporation, Inc.

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME: Testing Service Corporation
PRIME/SUPPLEMENT: Prime

DATE: 10/14/13
PTB NO.: NA

CONTRACT TERM	18 MONTHS	OVERHEAD RATE	182.99%
START DATE	11/1/2013	COMPLEXITY FACTOR	0
RAISE DATE	6/30/2014	% OF RAISE	0.00%

ESCALATION PER YEAR

11/1/2013 - 6/30/2014	7/1/2014 - 4/30/2015			
8 / 18	10 / 18			
= 44.44%	55.56%			
= 1.0000				

The total escalation for this project would be: 0.00%

PAYROLL RATES

FIRM NAME: Testing Service Corpora DATE: 10/14/13
PRIME/SUPPLEMENT: Prime
PSB NO.: NA

ESCALATION FACTOR: 0.00%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
Layout Crew Chief	$39.88	$39.88
Professional Engineer	$33.44	$33.44
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
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		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00

Subconsultants

FIRM NAME Testing Service Corporation DATE 10/14/13
PRIME/SUPPLEMENT Prime
PSB NO. NA

NAME	Direct Labor Total	Contribution to Prime Consultant
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
Total	0.00	0.00

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM Testing Service Corporation **DATE** 10/14/13

PSB NA **OVERHEAD RATE** 1.8299

PRIME/SUPPLEMENT Prime **COMPLEXITY FACTOR** 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Staking & Utility Clearaance	6	239.28	437.86		88.53				765.67	5.22%
	Preparartion Permit Application	1	33.44	61.19		12.37				107.00	0.73%
	Soils Borings - Portal to Portal		0.00	0.00	4,280.00	0.00				4,280.00	29.18%
	Traffic Control - Drilling		0.00	0.00		0.00	1,805.00			1,805.00	12.31%
	Traffic Control Coring		0.00	0.00		0.00	1,805.00			1,805.00	12.31%
	Laboratory Testing - Boring		0.00	0.00	1,063.00	0.00				1,063.00	7.25%
	Laboratory Testing - Coring		0.00	0.00	162.00	0.00				162.00	1.10%
	Engineering & reporting	15	501.60	917.88		185.59				1,605.07	10.94%
	Bit Wear/ Backfill Holes		0.00	0.00	424.00	0.00				424.00	2.89%
	Permit Cost		0.00	0.00		0.00	750.00			750.00	5.11%
	Coring - Portal to portal		0.00	0.00	1,900.00	0.00				1,900.00	12.95%
	Subconsultant DL					0.00				0.00	0.00%
	TOTALS	22	774.32	1,416.93	7,829.00	286.50	4,360.00	0.00	0.00	**14,666.75**	100.00%

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DF-824-039
REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Testing Service Corporation
PSB NA
PRIME/SUPPLEMENT Prime

DATE 10/14/13
SHEET 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Staking & Utility Clearaand			Preparartion Permit Applica			Soils Borings - Portal to F			Traffic Control - Drilling			Traffic Control Coring		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Layout Crew Chief	39.88	6	30.00%	11.96	8	100.00%	39.88												
Professional Engineer	33.44	14	70.00%	23.41				2	100.00%	33.44									
		0																	
		0																	
		0																	
		0																	
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TOTALS		20	100%	$35.37	8	100.00%	$39.88	2	100%	$33.44	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

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AVERAGE HOURLY PROJECT RATES

FIRM Testing Service Corporation
PSB NA
PRIME/SUPPLEMENT Prime

DATE 10/14/13

SHEET 2 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Laboratory Testing - Boring			Laboratory Testing - Coring			Engineering & reporting			Bit Wear/ Backfill Holes			Permit Cost			Coring - Portal to portal		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Layout Crew Chief	39.88																		
Professional Enginee	33.44							15	100.00%	33.44									
TOTALS		0	0%	$0.00	0	0%	$0.00	15	100%	$33.44	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

PREPARED BY THE AGREEMENTS UNIT

COST ESTIMATE
Wadsworth Road at Lewis Avenue
Intersection Improvements
13-00055-06-WR
Lake County, IL
TSC P.N. 51,766

	ITEM	UNITS	QTY	RATE	COST
STAKING AND UTILITY CLEARANCE					
1.1	Layout Person to Mark Boring Locations, Obtain Surface Elevations and/or Arrange for Clearance of Underground Utilities	Lump Sum	1.0	765.67	$ 765.67
1.2	Permits, Bonds and Other Direct Charges (Estimated)	Cost	1	750.00	$ 750.00
1.3	Preparation of Lake County Permit Application	Lump Sum	1	107.00	$ 107.00
DRILLING AND SAMPLING					
	DRILL RIG WITH 2-MAN CREW (Portal to Portal)				
2.1	Regular Time (Up to 8.0 Hours per Day)	Hour	8.0	340.00	$ 2,720.00
2.2	Overtime (Over 8.0 Hours or Saturday)	Hour	4.0	390.00	$ 1,560.00
OBTAIN PAVEMENT CORES Includes coring with 4 inch diameter barrel, retrieving all pavement materials to maximum depth of 20 inches, taking auger samples of base course/subbase materials and split-spoons of upper subgrade.					
3.1	Core Van and One-Man Crew (Regular Time Portal to Portal)	Hour	8.0	150.00	$ 1,200.00
3.2	Core Van and One-Man Crew (Overtime)	Hour	4.0	175.00	$ 700.00
3.3	Bit Wear - Per Inch of Asphalt Pavement	Inch	60.0	2.50	$ 150.00
3.4	Bit Wear - Per Inch of PCC Pavement	Inch	36.0	4.00	$ 144.00
3.5	Patch Holes with Cold Patch Asphalt or Non-Shrink Grout	Each	13	10.00	$ 130.00
3.6	Materials Technician to Measure and Describe Core Sample in Laboratory	Each	6	15.00	$ 90.00
TRAFFIC CONTROL					
4.1	Single Flagman, Regular Time (Portal to Portal)	Hour	0.0	105.00	$ 0.00
4.2	Single Flagman, Overtime	Hour	0.0	135.00	$ 0.00
4.3	2-Man Flagging Crew, Regular Time (Portal to Portal)	Hour	16.0	210.00	$ 3,360.00
4.4	2-Man Flagging Crew, Overtime	Hour	0.0	270.00	$ 0.00
4.5	TSC Pickup and Arrowboard	Day	2	125.00	$ 250.00

	ITEM	UNITS	QTY	RATE	COST
LABORATORY TESTING					
5.1	Visual Classification and Water Content/Dry Unit Weight Determination of Core Subgrade Sample (CORES ONLY)	Each	6	12.00	$ 72.00
LABORATORY TESTING					
5.1	Examine Samples to Describe by Textural System and Classify Using the Unified Soil Classification System	Each	44	4.00	$ 176.00
5.2	Water Content Determination (Includes Pocket Penetrometer Reading on Cohesive Samples)	Each	40	7.00	$ 280.00
5.3	Unconfined Compressive Strength of Cohesive Soils (or Torvane Shear Strength Measurement)	Each	7	14.00	$ 98.00
5.4	Dry Unit Weight Determination	Each	7	7.00	$ 49.00
5.5	Alterberg Limit Determinations	Each	2	100.00	$ 200.00
5.6	Sieve Analysis with #200 Wash	Each	0	90.00	$ 0.00
5.7	Sieve Analysis with Hydrometer	Each	2	130.00	$ 260.00
5.8	Consolidation Test	Each	0	600.00	$ 0.00
5.9	Modified Proctor Test	Each	0	190.00	$ 0.00
5.10	Loss-On-Ignition (Organic Content)	Each	0	45.00	$ 0.00
ENGINEERING SERVICES					
6.1	Prepare Geotechnical Report with Boring Logs and Location Plan	Lump Sum	1	1,605.07	$ 1,605.07
6.2	Geotechnical Engineer to Perform Special Calculations or Run Slope Stability Analyses	Hour	0.0	120.00	$ 0.00
6.3	Senior Engineer to Consult or Attend Project Meetings	Hour	0.0	160.00	$ 0.00
				ESTIMATED TOTAL:	$ 14,666.74
				RECOMMENDED BUDGET:	$ 14,666.75

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IMPROVING YOUR WORLD

PHASE I ENGINEERING SERVICES

Wadsworth Road @ Lewis Avenue Phase 1

Prepared for

LAKE COUNTY DIVISION OF TRANSPORTATION

CECS – Subconsultants

Environmental – Kowalenko Consulting Group, Inc.

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME: Kowalenko Consulting Group, Inc.
PRIME/SUPPLEMENT:

DATE: 10/23/13
PTB NO.: NA

CONTRACT TERM	12 MONTHS	OVERHEAD RATE	115.00%
START DATE	11/1/2013	COMPLEXITY FACTOR	0
RAISE DATE	3/1/2014	% OF RAISE	3.00%

ESCALATION PER YEAR

11/1/2013 - 3/1/2014	3/2/2014 - 11/1/2014			
4 / 12	8 / 12			
= 33.33%	68.67%			
= 1.0200				

The total escalation for this project would be: 2.00%

DF-824-039
REV 12/04

PAYROLL RATES

FIRM NAME Kowalenko Consulting Group, Inc. DATE 10/23/13
PRIME/SUPPLEMENT
PSB NO. NA

ESCALATION FACTOR 4.29%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE	
Project Director	$67.00	$69.88	2 categories up to 70
Project Manager	$65.44	$68.25	2 categories up to 70
Assistant Project Manager	$59.31	$60.00	60 max
Environmental Scientist/Engineer III	$58.28	$60.00	60 max
Environmental Scientist/Engineer II	$46.01	$47.98	
Environmental Land Use/Transportation Planner III	$54.19	$56.52	
Environmental Land Use/Transportation Planner I	$35.79	$37.33	
Field Technician I	$32.72	$34.12	
Systems/GIS Analyst	$47.04	$49.06	
Systems/GIS Manager	$51.13	$53.32	
Project Support Staff	$32.72	$34.12	

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COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM Kowalenko Consulting Group, Inc. DATE 10/23/13

PSB NA OVERHEAD RATE 1.15

PRIME/SUPPLEMENT COMPLEXITY FACTOR 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Envir. Survey Request	18	853.10	981.07		315.65			2,149.82	2,149.82	6.04%
	Wetland Delineation/Wetland Impact Evaluation	32	1,628.78	1,873.09		602.65			4,104.51	4,104.51	11.53%
	Prelim Site Investigation (PSI)*	53	2,697.66	3,102.31		998.13	150.00	3,600.00	6,798.10	10,548.10	29.63%
	PESA (non-State Routes)	36	1,563.39	1,797.90		578.46	325.00		3,939.75	4,264.75	11.98%
	CE II Report Preparation	56	2,963.79	3,408.36		1,096.60			7,468.75	7,468.75	20.98%
	*Laboratory Analysis:									0.00	0.00%
	VOCs - 15 soil samples @$75 each						1,125.00			1,125.00	3.16%
	SVOCs - 15 soil samples @ $125 each						1,875.00			1,875.00	5.27%
	pH - 3 samples @10.00 each						30.00			30.00	0.08%
	LUST Priority Pollutants - 2 @450 each						900.00			900.00	2.53%
	TAL Metals - 15 @160 each						2,400.00			2,400.00	6.74%
	SPLP Lead - 10 @ $30 each						300.00			300.00	0.84%
	Disposables						100.00			100.00	0.28%
	Transportation: 12 trips x 50 miles @$0.56.5/mile	0	0.00	0.00	339.00					339.00	0.95%
	Subconsultant DL					0.00				0.00	0.00%
	TOTALS	195	9,706.72	11,162.73	339.00	3,591.49	7,205.00	3,600.00	24,460.93	35,604.93	100.00%

DBE 68.70%

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AVERAGE HOURLY PROJECT RATES

FIRM Kowalenko Consulting Group, Inc.
PSB NA
PRIME/SUPPLEMENT

1 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Envir. Survey Request			Wetland Delineation/Wetland Impact Evaluation			Prelim Site Investigation (PSI)			PESA (non-State Routes)			CE II Report Preparation		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Project Director	69.88	7	3.59%	2.51							1	1.89%	1.32	2	3.77%	2.64	4	7.55%	5.27
Project Manager	68.25	30	15.38%	10.50	4	22.22%	15.17	4	12.50%	8.53	8	15.09%	10.30	6	16.67%	11.37	8	14.29%	9.75
Assistant Project Manager	60.00	0																	
Environmental Scientist/Engineer III	60.00	44	22.56%	13.54							16	30.19%	18.11	4	11.11%	6.67	24	42.86%	25.71
Environmental Scientist/Engineer II	47.98	12	6.15%	2.95							12	22.64%	10.86						
Environmental Land Use/Transportation Planner III	56.52	28	14.36%	8.12	4	22.22%	12.56	24	75.00%	42.39									
Environmental Land Use/Transportation Planner I	37.33	4	2.05%	0.77	4	22.22%	8.29												
Field Technician I	34.12	0																	
Systems/GIS Analyst	49.06	0																	
Systems/GIS Manager	53.32	0																	
Project Support Staff	34.12	70	35.90%	12.25	6	33.33%	11.37	4	12.50%	4.27	16	30.19%	10.30	24	66.67%	22.75	20	35.71%	12.19
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TOTALS		195	100%	$50.63	18	100.00%	$47.39	32	100%	$55.18	53	100%	$50.90	36	98%	$43.43	56	100%	$52.92

Lake County - Wadsworth at Lewis intersection
Direct Costs and Services by Others

Lab Anaysis - Soils in proposed ROW	Number of samples	Unit cost	Cost
VOCs	15	75	$ 1,125.00
SVOCs	15	125	$ 1,875.00
TAL Metals	15	160	$ 2,400.00
pH	3	10	$ 30.00
LUST Priority Pollutants	2	450	$ 900.00
SPLP Lead	10	30	$ 300.00
Total Lab Analysis Costs			**$ 6,630.00**
Drilling subcontractor	Days	Daily Rate	Cost
Truck-mounted GeoProbe	2	$ 1,800.00	$ 3,600.00
Equipment Rental (PID)	2	$ 75.00	$ 150.00
Disposables	2	$ 50.00	$ 100.00
Total Field Expenses			**$ 3,850.00**
PESA research: EDR environmental database for project area			**$ 325.00**
Total Outside Expenses			**$ 10,805.00**
In-House Direct Costs: 12 trips x 50 miles @$0.565/mile			**$ 339.00**
Total Project Expenses			**$ 11,144.00**