DRAFT

Municipality	LOCAL AGENCY	Illinois Department of Transportation	CONSULTANT	Name: V3 Companies
Township				Address: 7325 Janes Avenue
County: Lake County – Division of Transportation		**Preliminary Engineering Services Agreement For Motor Fuel Tax Funds**		City: Woodridge
Section: 19-00072-14-WR				State: IL

THIS AGREEMENT is made and entered into this _____ day of _____ , _____ between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. 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 Hainesville Road: Washington Street to Rollins Road

Route V66 Length 1.50 Mi. 8200.00 FT (Structure No. _____)

Termini Rollins Road (northern limits) to Washington Street (southern limits)

Description:
The proposed improvements involve roadway widening and potential bike/sidewalk accommodations. This project will involve Phase I elements (ie: geometric studies/public involvement).

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 and** of the DEPARTMENT. It is being understood that all such reports, plats, plans and drafts shall, before being finally accepted, be subject to approval by the LA and the DEPARTMENT.

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

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

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

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

The LA Agrees,

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

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

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

Schedule for Percentages Based on Awarded Contract Cost

Awarded Cost	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 ** 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. ****See the CECS**

The Total Not-to-Exceed Contract Amount shall be $750,509.00

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

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

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

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

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

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

****See the CECS**

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 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 quintuplicate 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:

By _____

Lake County Clerk

(Seal)

State of Illinois, acting by and through its

County Board

By _____

Title Chair, Lake County Board

RECOMMENDED FOR EXECUTION

_____
Shane E. Schneider, P.E.
Director of Transportation/County Engineer
Lake County

Executed by the ENGINEER:

_____
Engineering Firm

_____
Street Address

ATTEST:

_____
City, State

By _____

Title _____

By _____

Title _____

Approved

_____
Date
Department of Transportation

_____
Regional Engineer

County Engineer
On behalf of IDOT pursuant to Agreement
of Understanding dated May 3, 2018

Note: Five (5) Original Executed Contracts – (2) LCDOT; (2) IDOT District 1, Local Roads; (1) Consultant

ATTACHMENT A

SCOPE OF WORK

Attachment A

Scope of Work

Hainesville Road - Washington Street to Rollins Road
Phase I Engineering Services

Lake County Division of Transportation
Section No. 19-00072-14-WR

PROJECT DESCRIPTION

Phase I elements in accordance with the Illinois Department of Transportation's (IDOT) Bureau of Local Roads & Streets Policies & Procedures, for roadway improvements on Hainesville Road between Washington Street and Rollins Road in various communities and unincorporated Lake County, IL. The proposed improvement will improve the safety, operations and drainage throughout the corridor.

Phase I scope of work will include crash and roadside safety analysis; determination of safety countermeasures such as improving sight lines, sight distance, and geometrics; field survey; wetland delineation; soils investigation; environmental assessments (PESA); alternatives analysis for a 3-lane cross section with non-motorized elements; and public outreach.

1.1. TOPOGRAPHIC SURVEY

The survey shall extend from Washington Street being the south end of the project running north to Rollins Road being the north end of the project (approximately 8,200 linear feet of Hainesville Road). With the exception of Clarendon Drive and Shorewood Lane, the survey limits shall also include approximately 300-400 feet of each sideroad on either side of Hainesville Road, containing an additional 5,200 linear feet – totaling approximately 13,400 linear feet. Longer stretches of Clarendon Drive and Shorewood Lane will be surveyed to evaluate the cul-de-sac alternative and potential non-motorized traffic accommodations, respectively. The survey limits includes the full right-of-way plus 25 feet on either side. See also the Survey Limits depicted on Exhibit 1.

The Topographic Survey services will include the following as outlined in the Lake County Division of Transportation Design Survey Procedures:

a. Record a minimum of two (2) permanent benchmarks over the project site. Elevations shall be referenced to the North American Datum of 1988 (NAVD 88). Site benchmarks shall be established at less than 1000-foot intervals. Description of the source benchmark to which the new benchmarks are tied shall be indicated on the survey.

b. A contour survey with 1'-0" contour intervals shall be prepared from field spot elevations. Spot elevations obtained in the field shall be of sufficient quantity to

generate a contour survey which properly represents the ground surface. Additional elevations shall be indicated on the survey as required to establish accurate profiles (including all changes or breaks in grade) and cross-sections of walks, curbs, gutter, pavement edges, and centerlines.

c. Finished floor or top of foundation elevation(s) of existing buildings within the Survey Area.

d. Spot elevations shall be shown to the nearest 0.01 foot on all "hard surfaces" and utility structures. Spot elevations in unpaved areas such as grass and dirt shall be accurate to the nearest 0.1 foot.

e. Cross-sections along all roadways shall be taken on 50-foot intervals and 25-foot intervals at super-elevated sections of roadway. Full cross-sections shall be taken at all cross streets, alleys, culverts and entrances. Grid intervals/profiles of 50 feet shall be taken in all fields for offsite hydraulic work (drainage ditches, streams, etc.). Additional shots shall be taken at all sudden grade break lines.

f. Pavement types such as concrete, asphaltic concrete, gravel, etc. shall be indicated.

g. Existing improvements, buildings, and surface features shall be located.

h. All trees (6 inches in diameter and greater) within the Survey Area shall be located. The trees shall be identified by species and size.

i. General outlines of landscaping shrubs and bushes shall be shown.

j. Mean elevations of water in retention ponds, lakes, or streams will be shown as depicted at the time the survey field work was conducted. A bathymetric (bottom-of-pond survey) is not included in this scope of services.

k. Hydraulic Cross-Sections: Obtain four (4) hydraulic cross-sections at Round Lake Drain Tributary #1. One cross-section each shall be obtained at the up-stream culvert face and right-of-way line and one cross-section each shall be obtained at the down-stream culvert face and right-of-way line.

l. Top of curb, flow line, and edge of pavement, ADA, sidewalk, bike path, etc. elevations of all roadways and streets within the survey area obtained by non-GPS methods.

m. Roadway striping of all roadways and streets within the survey area.

n. Wetland flags, if present at the original time of survey, shall be located. CLIENT shall provide V3 a sketch showing the approximate shape, location and point range of each wetland before any field work is started. If V3 is delayed or if an additional trip is necessary to locate the wetland flags after the field survey work has been completed, it will be considered an Additional Service.

o. Right-of-way and property lines shall be calculated from existing monumentation in coordination with record maps, plats and deeds.

p. The topographic survey shall incorporate information on existing utility systems adjoining or contained within the survey area which are obtained from city departments or utility companies responding to written or verbal requests for utility records through the Joint Utility Locating Information for Excavators (J.U.L.I.E.) Design Stage/Planning Information process and available for the surveyors use at the time of the survey.

Records or Atlas information that is provided to V3 after completion of the survey can be provided to the CLIENT or engineer.

q. Utilities and improvements shall be shown based on visible field verified structures, in coordination with atlas information provided by utility companies through J.U.L.I.E.'s design stage process, if available.

r. V3's subconsultant, SAM, will provide subsurface utility engineering as identified in their scope and referenced under Item 1.13.

All survey data shall be collected in Illinois State Plane Coordinates – East Zone.

1.2. DATA COLLECTION, REVIEW, & MOSAICS

Pertinent information for the project will be obtained from the LCDOT. This information will include:

a. Any available aerial photography;
b. Any available contour mapping;
c. Any available as-built plans;
d. Any available plats, legals, title commitments from properties along the corridor;
e. Any available traffic counts;
f. Any available accident records for the last 3 years;
g. Any available plans for new developments
h. Any available improvement plans from past projects and/or prior studies related to Hainesville Road
i. Any available utility maps for water, sewer, sanitary, street lighting, and traffic signals;
j. LCDOT current CAD workspace; and
k. LCDOT design details, guidelines, and specifications.

General background data such as FIRM mapping, NWI maps, USGS atlases, soil maps and other information pertinent to the project will also be collected and reviewed.

Field Visits

In order to gain a thorough understanding of the project, the design team will conduct up to three field visits (two V3 team members) to verify and evaluate existing field conditions, and ultimately, in preparations for the preferred alternative to be carried into Phase II. The field visits include:

a. Verification of existing conditions and utilities
b. Existing Sign inventory
c. Verification of preferred alternative & ADA ramp compliance

Mosaics

V3 will provide Aerial photographs for the project area from Nearmap database which was flown in 2019. The County to supplement with aerial photography if this proves to be of insufficient resolution.

Subconsultant for Geotechnical Services

Testing Service Corporation (TSC), will perform 35 soil borings and 8 pavement cores and provide geotechnical studies to determine the suitability of the soils for the construction and provide samples of material for CCDD material disposal. The detailed scope of the boring, coring and testing to be performed are included under Attachment D.

1.3. TRAFFIC ANALYSIS & INTERSECTION DESIGN STUDY (IDS)

Existing Traffic Analysis

V3 will review manual counts performed during the a.m. (7:00 a.m. – 9:00 a.m.) and p.m. (4:00 p.m. – 6:00 p.m.) peak hour turning movement counts at the following intersections:

a. Hainesville Road and Washington Street
b. Hainesville Road and Shorewood Drive (IDS)
c. Hainesville Road and Rollins Road

V3 will review manual counts performed during the 14-hour turning movement counts at the following intersection:

- Hainesville Road and Clarendon Drive

V3 will review manual counts performed during the collection 24-hour daily traffic counts along Hainesville Road at two locations, one north of Shorewood Drive and one south of Shorewood Drive.

Future Traffic Analysis

Year 2050 ADTs will be obtained from CMAP. Traffic will be projected to the year 2050 and analyzed to determine number and type of auxiliary lanes and storage lengths. It is anticipated that no geometric modifications will be required at the intersections of Hainesville Road / Washington Street and Hainesville Road / Rollins Road.

Existing/Future Traffic Exhibits will be prepared to summarize the review of traffic data.

Intersection Design Studies (IDS)

It is anticipated that an IDS will be required at Hainesville Road and Shorewood Drive. An IDS will be prepared upon the selection of the preferred alternative.

1.4. GEOMETRIC DESIGN STUDIES

Crash Analysis & Safety Countermeasures

Crash reports will be reviewed and tabulated (five most recent years) along Hainesville Road. A crash and roadside safety analysis will be performed to identify high crash locations and determine safety countermeasures (such as improving sight lines, sight distance, geometrics, etc.).

Conceptual Roadway Design Evaluations

Geometric design studies will be performed using 3D modeling in PowerGeopak Open Roads to develop conceptual roadway designs. Roadway geometrics will be studied to minimize impacts to right-of-way, access patterns, utilities, side roads, and driveways while meeting LCDOT and IDOT design requirements. Upon an evaluation of the existing conditions, the following roadway design elements will be studied:

a. Typical Sections
b. Horizontal Geometrics (including alignment studies)
c. Vertical Geometrics

Horizontal Geometrics include evaluating a 3 lane urban section throughout the entire corridor. A path/and or sidewalk will be evaluated for both sides of Hainesville Road. North of Shorewood we anticipate profile modifications. South of Shorewood minor profile changes may be required but we do not anticipate major changes to the profile in this area.

Cross sections will be cut every 50 feet, at culvert crossings, and at driveways to further evaluate critical roadway design elements and ROW impacts.

Additionally, this sub-task includes providing one cul-de-sac geometric alternative for Clarendon Drive at Hainesville Road for future discussions with the Village of Round Lake Beach.

Meeting Exhibit Preparations

Under the conceptual design stage, V3 will prepare conceptual ROW impacts corresponding to the 3D modeling studies identified above:

- Existing & Proposed Typical Section Exhibits
- Plan & Profile Exhibits (50-scale)
- Roll-plots (100-scale)

These exhibits will be used for meetings with the County, Villages, and other local stakeholders to discuss the different alternatives and their associated impacts.

Structural Engineering & Coordination

Coordination with V3's structural engineering staff is anticipated to determine costs and general design details for retaining walls. In addition, input from structural engineering staff regarding costs and proposed geometrics for culvert crossings is also anticipated.

Pavement Analysis & Design

As part of the geometric studies, V3 will review the pavement cores conducted by TSC to determine sections of roadway to widen and resurface. Pavement design will be evaluated for areas of full reconstruction.

Traffic Management Plan

One Maintenance of Traffic (MOT) concept will be evaluated, which may include a combination of staged construction and a detour route. Detailed MOT plans will be prepared during Phase II Engineering.

Evaluation Memorandum

V3 will submit a memorandum summarizing the geometric studies in conjunction with the traffic analysis for LCDOT's review and approval prior to preparing a Preliminary Engineering Report (PER). V3 will provide a recommended preferred alternative for the County's review and concurrence.

1.5. WETLAND DELINEATION & PRE-JURISDICTIONAL DETERMINATION

Field Work

V3's Lake County Certified Wetland Specialists will conduct a field investigation during the 2020 Lake County growing season (May 15-October 1) to locate and delineate wetlands in accordance with the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region. The limits of any delineated wetlands/Waters of the U.S. will be staked in the field, and approximate boundaries will be mapped on a recent large-scale aerial photograph, based on our field assessment of the vegetation, soils and hydrology at the site. The limits of any on-site wetland/Waters of the U.S. will be located using a handheld GPS unit during the field investigation portion of the wetland delineation. Professional survey of any wetland/Waters flags will be provided as part of the Topography scope of services.

Wetland Assessment

Since wetlands/Waters of the U.S. are present within the project corridor, wetland assessment is required by the U.S. Army Corps of Engineers, Chicago District (USACE) and Lake County SMC. Wetland assessment involves an evaluation of wetland characteristics, including wildlife habitat quality, water quality functions, and plant community quality. Wetland Assessment also

includes a preliminary jurisdictional determination for isolated or adjacent wetland1. Delineated wetlands will be rated as High Quality Aquatic Resources (HQAR's) in accordance with the USACE and Lake County SMC, if applicable.

Wetland Delineation Technical Report

A wetland report will be provided with the results of our field investigation, including the location and approximate size of wetlands/Waters of the U.S. present, a wetland quality evaluation, a Floristic Quality Assessment (FQA), and the wetland assessment. Floristic inventories and detailed soil classification data for each area investigated will be provided in the report. Areas determined to be wetland within the project corridor will be shown on a recent, large-scale aerial photo exhibit. USACE and Lake County SMC/Village of Round Lake Park wetland permitting and/or mitigation requirements will be addressed in the report. The wetland report also will contain detailed technical documentation suitable for review and approval by the USACE, Lake County SMC, the Village of Round Lake Park, and the Village of Round Lake Beach.

Threatened & Endangered Species Consultation

The USACE Chicago District and Lake County Watershed Development Ordinance (WDO) require threatened & endangered species consultation with the Illinois Department of Natural Resources (IDNR) and the U.S. Fish & Wildlife Service. V3 will complete the following tasks as part of this phase:

a. V3 will prepare and submit the required IDNR EcoCat consultation for State threatened & endangered species for the proposed project area. This consultation will be included in the USACE permit submittal.
b. V3 will prepare the required U.S. Fish & Wildlife Services (USFWS) Section 7 consultation for Federal threatened & endangered species. This consultation will be included in the USACE permit submittal.

USACE/Lake County SMC Preliminary Jurisdictional Determination Submittal

Upon completion of the wetland delineation field work and draft technical report, V3 will prepare and submit all of the required documents to Lake County SMC to facilitate the preliminary jurisdictional determination process for any wetlands/Waters identified within the project corridor (or within 100 feet of the project corridor). This process includes V3 meeting the USACE and Lake County SMC wetland specialists at the site, reviewing the data collected from V3's Lake County Certified wetland specialists, and reviewing and gaining approval of the wetland flags placed on the site.

[1] December 2, 2008, USEPA and Department of the Army Joint Memorandum, Clean Water Act Jurisdiction Following the U. S. Supreme Court Decision in Raponos v. United States and Carabell v. United States.

Wetland Project Meetings/Coordination

V3's wetland specialists are available for meetings with the CLIENT, USACE, Lake County SMC, Village of Round Lake Park, project contractors, and/or other agency personnel, as required. This task includes one pre-application meeting with the USACE and one pre-application meeting with Lake County SMC/Village of Round Lake Park. This task also includes minimal project coordination not requiring a separate agreement.

1.6. TREE SURVEY SUMMARY

V3 environmental staff will identify all tagged trees to the species level. The tag number, diameter, and species will be recorded for each tree. A rating will be assigned to each tree in accordance with the International Society of Arboriculture guidelines, which will consider the size, species, condition, location, and aesthetics of each tree. It is V3's understanding that only those trees with a 6" DBH are required to be inventories. A summary table will be prepared listing tag number, scientific name, common name, diameter (DBH), and rating.

Upon the selected proposed alternative, based on the assessment of the tree and the proposed improvements within the corridor, V3 will identify whether trees within the corridor should be removed, should remain in place, or should be protected for the long-term. A tree removal/preservation plan will be prepared based on the data collected during the tree tabulation phase.

1.7. SPECIAL WASTE ASSESSMENTS

V3 will conduct a special waste screening in accordance with the IDOT Bureau of Local Roads & Streets Policies & Procedures. Based on the current understanding of the proposed project, the special waste screening will include the following.

Preliminary Environmental Site Assessment (PESA)

The initial evaluation of the project indicates a PESA will be required for the project design. V3 will conduct a PESA for the project corridor. The PESA will be completed in accordance with Section 20-12.04 of the IDOT Bureau of Local Roads & Streets Manual, Section 27-3.03(a) of the IDOT Bureau of Design and Environment Manual, and the ISGS Manual for Conducting Preliminary Site Assessments For Illinois Department of Transportation Infrastructure Projects. The PESA will include the following tasks.

a. Provide a general description of the geology, hydrogeology, topography, soils, natural features and hazards relating to the project corridor.
b. Review reasonably ascertainable regulatory information published by federal, state, local, tribal, health, and/or environmental agencies pertaining to the project corridor.
c. Review historical data sources for the project corridor, including aerial photographs, topographic maps, fire insurance maps, city directories, and other readily available data.
d. Conduct a reconnaissance / visual inspection of properties adjacent to the project corridor with a focus on indications of hazardous substances, petroleum products,

polychlorinated biphenyls (PCBs), wells, storage tanks, solid waste disposal pits and sumps, and utilities.

e. Evaluate and identify any Recognized Environmental Concerns (RECs) with or adjacent to project ROW.

f. Prepare a written report of the PESA detailing the findings and conclusions.

1.8. SECTION 4(f) EVALUATION

Depending upon the ROW impacts at Renwick Golf Course and/or the Ukrainian Youth Camping Organization properties, a Section 4(f) evaluation may be required for these two properties. The evaluation and report format will be performed in accordance with Section 26-2 of IDOT's BDE Manual and address the proposed action and alternatives considered, impacts to the Section 4(f) properties, avoidance alternatives and measures to minimize harm. Coordination during the Section 4(f) process will be conducted with the owning agency and documented in separate Section 4(f) reports.

1.9. PUBLIC INFORMATIONAL MEETINGS/COORDINATION

Public meetings in an open house format are anticipated to review the extent of improvements being proposed, the results of agency coordination, and the project schedule. This scope of work includes:

a. Up to two Public Meetings in an open-house format (public informational meeting and presentation of proposed improvements)

b. Only upon a property owner's request, hours included under this scope assumes up to fifteen individual property owner meetings to discuss more specific design concerns

c. With each meeting, V3 will provide the following:
   i. Handout brochures and display exhibits for use during the meetings,
   ii. Documentation of the concerns and comments expressed by those at the meeting,
   iii. Responses to public comments and incorporate a summary of the public involvement process in the PER,
   iv. Up to three V3 project team representatives present at the meetings

d. Compile list of property & business owner addresses

e. Mail Letters

f. Coordination of website exhibits/information to LCDOT

Hours for meetings will also include preparation time prior to meetings and subsequent preparation of meeting minutes.

1.10. HYDRAULIC MODELING & PERMITTING

V3's drainage engineer will assist CBBEL in tasks associated with their hydraulic model and/or permitting. Budget for IDNR-OWR permitting is included as part of the Phase I scope to ensure

enough details are in place to initiate the IDNR-OWR permitting process. It is understood that permits are likely be secured in Phase II.

Subconsultant for Hydraulic Modeling & Permitting

Christopher B. Burke Engineering, LLC (CBBEL) will be performing tasks as described in Item #1.10. Their proposal can be found under Attachment D.

1.11. PRELIMINARY ENGINEERING REPORT

A Preliminary Engineering Report (PER) will be prepared to compile and discuss the environmental information obtained, summary of public involvement and stakeholder coordination, and the various design studies completed to determine the preferred alternative.

The following sections of the report will be prepared and incorporated into the PER:

a. Introduction
b. Existing Conditions
c. Design Criteria
d. Traffic Considerations
e. Proposed Improvements
f. Maintenance of Traffic
g. Public Involvement
h. Engineer's Opinion of Probable Construction Costs (EOPCC)

The following exhibits will be compiled into the project report:

a. Engineer's Opinion of Probable Construction Cost (EOPCC)
b. Location Map
c. Existing and Future Traffic Exhibits
d. Existing and Proposed Typical Sections (11" x 17" exhibit size)
e. Plan and Profile sheets (11" x 17" exhibit size)
f. Intersection Design Study (Hainesville Road and Shorewood Lane)
g. Right-of-way maps (if applicable)

The following appendices will be compiled into the project report:

a. Traffic Capacity Analysis
b. Environmental Coordination
c. Utility Coordination
d. Public Involvement
e. Stormwater (separate cover)
f. Wetland Delineation (separate cover)
g. Special Waste (separate cover)

It is anticipated that two submittals of the PER will be required to the LCDOT (pre-final and final). However, prior to the pre-final PER submittal, conceptual Typical Sections, Plan and Profile sheets will be submitted to the LCDOT for review and comment.

1.12. ROADWAY DRAINAGE DESIGN

Existing Conditions

Prepare Existing Drainage Plans (EDPs) that define: the existing drainage system (storm sewers, ditches, swales, culverts, etc.), off-site areas tributary to the roadway drainage system, and existing outlet locations where storm water runoff exits the right-of-way (ROW). A field visit will be conducted to verify existing conditions and drainage patterns. Any available flooding records or drainage complaints will be collected from Lake County and other adjacent stakeholders to determine if there are currently any drainage issues related to the roadway drainage system that should be addressed in the proposed design. The existing Round Lake Drain Tributary No. 1 floodplain / floodway limits and roadway cross-culvert will also be shown on the EDPs. Existing drainage areas and discharge rates will be calculated at each outlet location. All existing conditions drainage calculations and exhibits will ultimately be included in the Lake County Watershed Development Permit (WDP) submittal.

Proposed Storm Sewer Design

The proposed Hainesville Road cross-section will be a closed system with curb and gutter on each side. Once the proposed roadway profile is established, inlet spacing calculations will be performed to ensure that the appropriate numbers of inlets are available to prevent the spread of water into the drive lanes per IDOT and Lake County design standards. Storm sewer conveyance systems will be designed to convey the 10-year storm event (using recently updated Bulletin 70 rainfall values) and will outlet to the various existing outlet locations along the project corridor. Every effort will be made to maintain existing drainage patterns. Storm sewer velocities between 3 and 10 fps will be maintained. Hydraulic grade line (HGL) calculations will also be performed to ensure that the design HGL does not surcharge the storm sewer system. The appropriate tailwater conditions will be determined at each storm sewer outlet location to be used within the HGL calculations. GEOPAK Drainage software will be used to design the roadway drainage system. Proposed Drainage Plan (PDP) exhibits will be prepared. These exhibits are typically plan and profile sheets which show the outlet locations and the proposed storm sewer system in both plan and profile with the HGL plotted. All proposed conditions drainage calculations and exhibits will be included in the WDP submittal. The proposed storm sewer design will be shown in detail in the final engineering plans which will include: Drainage plan and profile sheets, structure and pipe schedules, utility crossing information, underdrain design if needed, and drainage detail sheets.

Roadway Stormwater Detention:

The required amount of stormwater detention will be calculated at each outlet location per the requirements of the Lake County Watershed Development Ordinance (WDO). Due to ROW

constraints, stormwater detention will likely be provided in oversized storm sewer pipes or other underground chamber systems. These systems will be designed to ensure they fit within the ROW, have sufficient cover, have adequate access points for future maintenance, and the appropriate control structures. Each detention system will be designed with the Lake County allowable 2-year and 100-year release rates of 0.04 cfs/ac & 0.15 cfs/ac. The proposed unrestricted and restricted release rates will be added together at each outlet and compared to the existing discharge rates to ensure that there is no increase in flow rates at each outlet location. The final engineering plans will include all schedules and construction details necessary to construct the detention systems and control structures.

1.13. UTILITY & SUBSURFACE UTILITY ENGINEERING (SUE) LEVEL B COORDINATION

Utility Coordination

The following is included under this task:

a. V3 will prepare letters and exhibits to initiate coordination with utility companies within the project corridor.

b. Design level field locations will be requested prior to topographic survey.

c. V3 will review and identify potential utility conflicts according to the preferred alternative

d. Utility Coordination Field Verification Meetings – up to two (2) field meetings with one V3 project team member present.

Plans will be submitted to private utility companies at the preliminary, pre-final and final level of completion in order to coordinate any required utility adjustments/relocations.

Subconsultant for Subsurface Utility Engineering (SUE) Level B

Survey and Mapping, LLC (SAM) will be performing SUE Level B and includes potholing services, if necessary. Their proposal can be found under Attachment D.

1.14. AGENCY MEETINGS/COORDINATION

PHASE I Meetings anticipated:

a. Up to two (2) LCDOT meetings (with up to two V3 Project Team members present):
   - Project kick-off meeting
   - Meeting to discuss results of Geometric Design Studies Memo (as described under Item #1.4)

b. Up to three (3) meetings with the Local Agencies – Village of Round Lake Beach, Village of Round Lake Park, and the Round Lake Area Park District (up to two V3 Project Team members present):
   - Project kick-off meeting
   - Meeting to discuss results of Geometric Design Studies Memo (as described under Item #1.4)

c. Up to two (2) meetings with the Lake County Stormwater Management Commission (up to two V3 Project Team members present).
d. Up to four (4) additional meetings to discuss design issues, project status, schedule, or meet with other review agencies (up to two V3 Project Team members present).

Hours for meetings will also include preparation time prior to meetings and subsequent preparation of meeting minutes.

1.15. QUALITY ASSURANCE/QUALITY CONTROL

Throughout the duration of the project (/II), V3 will perform in-house quality control reviews to ensure that the plans, special provisions, EOPCC, PER, and other computations or assumptions (which form the basis of the deliverable), are accurate and meet the standards and guidelines for the element or system. These quality control reviews will occur prior to submittal of any deliverable to the LCDOT or other review agency. The designated Project Manager will be responsible for the oversight of the QA/QC procedures and quality control reviews of the documents submitted for the project. Prior to the pre-final and final engineering plan submittals, the V3 Construction Engineering Division will perform a constructability review.

The QA/QC process also involves the preparation and maintenance of project records. The process will assure that records are legible, identifiable and retrievable; protected from damage or loss; and are systematically filed in one location.

1.16. ADMINISTRATION AND MANAGEMENT

The following administrative and management tasks will be performed:

a. Preparation of a project work plan which addresses schedule, deliverables, staffing, communication procedures and invoicing/progress reporting procedures
b. Project administration set-up tasks
c. Internal project team meetings/coordination
d. Contract administration and budget control
e. Invoice and billing reviews
f. Sub-consultant coordination

ATTACHMENT B

V3 CECSFORM
SUMMARY OF V3 MANHOURS
DIRECT COSTS BREAKDOWN

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME	V3 Companies	**DATE**	05/13/20
PRIME/SUPPLEMENT	V3 Companies	**PTB-ITEM#**	0
Prepared By	KRC		

CONTRACT TERM	18	**MONTHS**	**OVERHEAD RATE**	159.00%
START DATE	7/1/2020		**COMPLEXITY FACTOR**	0
RAISE DATE	1/1/2021		**% OF RAISE**	3%
END DATE	12/31/2021			

ESCALATION PER YEAR

year	First date	Last date	Months	% of Contract
0	7/1/2020	1/1/2021	6	33.33%
1	1/2/2021	1/1/2022	12	68.67%

The total escalation = 2.00%

PAYROLL RATES

FIRM NAME V3 Companies **DATE** 05/13/20
PRIME/SUPPLEMENT V3 Companies
PTB-ITEM # 0

ESCALATION FACTOR **2.00%**

Note: Rates should be capped on the AVG 1 tab as necessary

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Director	$70.00	$70.00
Principal	$70.00	$70.00
Senior Project Manager - Trans & Mun	$70.00	$70.00
Senior Project Manager - Constr Eng	$65.90	$67.22
Senior Project Manager - Wetland	$61.86	$63.10
Senior Project Manager - Survey	$58.26	$59.43
Senior Project Manager - Environmental	$54.41	$55.50
Project Manager I - Environmental	$47.70	$48.65
Project Manager I - Survey	$37.76	$38.52
Senior Project Manager	$58.26	$59.43
Senior Project Engineer	$50.40	$51.41
Project Engineer II	$46.89	$47.83
Project Engineer I	$41.88	$42.72
Engineer III	$37.75	$38.51
Engineer II	$35.49	$36.20
Engineer I	$31.49	$32.12
Design Technician III	$42.22	$43.06
Project Scientist II	$40.97	$41.79
Project Scientist I	$35.64	$36.35
Scientist III	$29.19	$29.77
Survey Crew	$36.03	$36.75
Project Surveyor II	$33.85	$34.53
Project Surveyor I	$24.04	$24.52
Project Coordinator	$21.75	$22.19

Subconsultants

FIRM NAME V3 Companies **DATE** 05/13/20
PRIME/SUPPLEMENT V3 Companies
PTB-ITEM # 0

NAME	Direct Labor Total	Contribution to Prime Consultant
TSC		
SAM		
CBBEL Hydraulics		
CBBEL Roadway		
HLR		
Total	**0.00**	**0.00**

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

FIRM V3 Companies **DATE** 05/13/20
PTB-ITEM # 0 **OVERHEAD RATE** 159.00%
PRIME/SUPPLEMENT V3 Companies **COMPLEXITY FACTOR** 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	DIRECT COSTS (D)	FIXED FEE (E)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	1.1 Topographic Survey	1130	45,724	72,702	64,598	16,918		-	199,942	26.64%
	1.2 Data Collection, Review, & Mosaics	90	4,185	6,654	180	1,548	41,300	-	53,867	7.18%
	1.3 Traffic Analysis & IDS	120	4,560	7,251	2,570	1,687		-	16,068	2.14%
	1.4 Geometric Design Studies	660	30,638	48,715		11,336	11,046	-	101,735	13.56%
	1.5 Wetland Delineation/Pre-JD	68	2,356	3,745	240	872		-	7,213	0.96%
	1.6 Tree Survey Summary	103	3,382	5,378	600	1,251		-	10,611	1.41%
	1.7 Special Waste Assessments	75	2,353	3,742	500	871		-	7,466	0.99%
	1.8 Section 4(f) Evaluations	224	11,479	18,252	169	4,247		-	34,147	4.55%
	1.9 Public Informational Meetings/Coord.	216	10,672	16,968	3,060	3,949	8,028	-	42,677	5.69%
	1.10 Hydraulic Modeling/Permitting	24	1,234	1,962		457	54,136	-	57,789	7.70%
	1.11 Preliminary Engineering Report	192	8,085	12,856	1,168	2,992		-	25,101	3.34%
	1.12 Roadway Drainage Design	456	23,175	36,848		8,575		-	68,598	9.14%
	1.13 Utility/SUE Level B Coord.	76	3,404	5,412	145	1,259	57,300	-	67,520	9.00%
	1.14 Agency Meetings/Coordination	108	6,370	10,128	658	2,357	1,451	-	20,964	2.79%
	1.15 Quality Assurance/Quality Control	52	3,513	5,586	292	1,300	1,451	-	12,142	1.62%
	1.16 Administration and Management	120	7,844	12,472		2,902	1,451	-	24,669	3.29%
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
	Subconsultant DL					0			-	
	TOTALS	3714	168,974	268,671	74,180	62,521	176,163	-	750,509	100.00%
			437,645							

DBE 0.00%

AVERAGE HOURLY PROJECT RATES

FIRM V3 Companies
PTB-ITEM# 0
PRIME/SUPPLEMENT V3 Companies

DATE 05/13/20

SHEET 1 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	1.1 Topographic Survey			1.2 Data Collection, Review, & Mo			1.3 Traffic Analysis & IDS			1.4 Geometric Design Studies			1.5 Wetland Delineation/Pre-JD		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Director	70.00															
Principal	70.00															
Senior Project Manager - Trans & Mun	70.00							8	6.67%	4.67	48	7.27%	5.09			
Senior Project Manager - Constr Eng	67.22															
Senior Project Manager - Wetland	63.10													2	2.94%	1.86
Senior Project Manager - Survey	59.43	130	11.50%	6.84												
Senior Project Manager - Environmental	55.50															
Project Manager I - Environmental	48.65															
Project Manager I - Survey	38.52															
Senior Project Manager	59.43															
Senior Project Engineer	51.41				39	43.33%	22.28				308	46.67%	23.99			
Project Engineer II	47.83															
Project Engineer I	42.72				47	52.22%	22.31	38	31.67%	13.53						
Engineer III	38.51										36	5.45%	2.10			
Engineer II	36.20										216	32.73%	11.85			
Engineer I	32.12							74	61.67%	19.81						
Design Technician III	43.06	240	21.24%	9.15	4	4.44%	1.91				52	7.88%	3.39			
Project Scientist II	41.79													22	32.35%	13.52
Project Scientist I	36.35															
Scientist III	29.77													44	64.71%	19.27
Survey Crew	36.75	640	56.64%	20.81												
Project Surveyor II	34.53	120	10.62%	3.67												
Project Surveyor I	24.52															
Project Coordinator	22.19															
TOTALS		1130.0	100.00%	$40.46	90.0	100%	$46.50	120.0	100%	$38.00	660.0	100%	$46.42	68.0	100%	$34.64

AVERAGE HOURLY PROJECT RATES

FIRM V3 Companies
PTB-ITEM# 0
PRIME/SUPPLEMENT V3 Companies

DATE 05/13/20

SHEET 2 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	1.6 Tree Survey Summary			1.7 Special Waste Assessments			1.8 Section 4(f) Evaluations			1.9 Public Informational Meeting			1.10 Hydraulic Modeling/Permitti			1.11 Preliminary Engineering Re		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Director	70.00																		
Principal	70.00																		
Senior Project Manager - Trans & Mun	70.00							16	7.14%	5.00	45	20.83%	14.58						
Senior Project Manager - Constr Eng	67.22																		
Senior Project Manager - Wetland	63.10																		
Senior Project Manager - Survey	59.43																		
Senior Project Manager - Environmental	55.50	4	3.88%	2.16															
Project Manager I - Environmental	48.65																		
Project Manager I - Survey	38.52																		
Senior Project Manager	59.43																		
Senior Project Engineer	51.41							168	75.00%	38.56	99	45.83%	23.56	24	100.00%	51.41	82	42.71%	21.96
Project Engineer II	47.83																		
Project Engineer I	42.72																		
Engineer III	38.51																		
Engineer II	36.20																102	53.13%	19.23
Engineer I	32.12																		
Design Technician III	43.06	16	15.53%	6.69				40	17.86%	7.69	40	18.52%	7.97						
Project Scientist II	41.79				10	13.33%	5.57												
Project Scientist I	36.35																		
Scientist III	29.77	83	80.58%	23.99	65	86.67%	25.80												
Survey Crew	36.75																		
Project Surveyor II	34.53																		
Project Surveyor I	24.52																		
Project Coordinator	22.19										32	14.81%	3.29				8	4.17%	0.92
TOTALS		103.0	100%	$32.84	75.0	100%	$31.38	224.0	100%	$51.25	216.0	100%	$49.41	24.0	100%	$51.41	192.0	100%	$42.11

AVERAGE HOURLY PROJECT RATES

FIRM V3 Companies
PTB-ITEM# 0
PRIME/SUPPLEMENT V3 Companies

DATE 05/13/20

SHEET 3 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	1.12 Roadway Drainage Design			1.13 Utility/SUE Level B Coord.			1.14 Agency Meetings/Coordinat			1.15 Quality Assurance/Quality C			1.16 Administration and Manage					
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Director	70.00																		
Principal	70.00																		
Senior Project Manager - Trans & Mun	70.00				8	10.53%	7.37	44	40.74%	28.52	40	76.92%	53.85	95	79.17%	55.42			
Senior Project Manager - Constr Eng	67.22																		
Senior Project Manager - Wetland	63.10																		
Senior Project Manager - Survey	59.43																		
Senior Project Manager - Environmental	55.50																		
Project Manager I - Environmental	48.65																		
Project Manager I - Survey	38.52																		
Senior Project Manager	59.43										12	23.08%	13.71						
Senior Project Engineer	51.41	424	92.98%	47.80	28	36.84%	18.94	64	59.26%	30.46				19	15.83%	8.14			
Project Engineer II	47.83																		
Project Engineer I	42.72																		
Engineer III	38.51																		
Engineer II	36.20				22	28.95%	10.48							6	5.00%	1.81			
Engineer I	32.12																		
Design Technician III	43.06	32	7.02%	3.02	10	13.16%	5.67												
Project Scientist II	41.79																		
Project Scientist I	36.35																		
Scientist III	29.77																		
Survey Crew	36.75																		
Project Surveyor II	34.53																		
Project Surveyor I	24.52																		
Project Coordinator	22.19				8	10.53%	2.34												
TOTALS		456.0	100%	$50.82	76.0	100%	$44.79	108.0	100%	$58.98	52.0	100%	$67.56	120.0	100%	$65.37	0.0	0%	$0.00

ATTACHMENT B-2
V3 MAN-HOUR SUMMARY FORM

PROJECT: Hainesville Road: Washington St. to Rollins Rd.

		Length
	Hainesville Road (Rollins Road intersection to Washington Street intersection)	*8,200*
	Rollins Road (if proposed path/sidewalk included) Intersection	*0*
*	Clarendon Drive *(T-int--potential cul-de-sac improvements)*	*750*
*	Heather Terrace *(T-int)*	*400*
*	Shorewood Drive	*1,400*
*	E. Lake Ave *(T-int)*	*300*
*	E Cardinal Ln *(T-int)*	*300*
*	E Cedar Dr *(T-int)*	*300*
*	E Maple Ave / Lake Ave	*740*
*	E Indian Trail	*500*
*	N Circle Dr *(T-int)*	*200*
*	N Oak Ave *(T-int)*	*300*
	Washington St (if proposed path/sidewalk included) Intersection	*0*
	Total Estimated Project Length:	*13,390*

* *All side roads surveyed to nearest intersection west and/or east of Hainesville Road. Proposed design is intend to tie in as soon as possible subsequent to widening and/or profile change of Hainesville Road.*

							MANHOUR BREAKDOWN								
	ITEM	QTY	HOURS PER QTY PER PHASE			TOTAL	Proj	Project	Project	Design	CAD	Survey	Survey	Admin	TOTAL
1.1	**TOPOGRAPHIC SURVEY**		PHASE I			HOURS	Director	Manager	Engineer	Engineer	Tech	Field	Tech		V3 Hours
	Field Work														
	Field work (bench circuit, DIPs, beyond ROW)	*1*	*156*			*156*						156			156
	Field work (control, datum, data collection, site PICs)	*1*	*300*			*300*						300			300
	Tree tags & locates	*1*	*112*			*112*						112			112
	Hydraulic Cross sections (4)	*1*	*8*			*8*						8			8
	Section Breakdown RECON	*1*	*40*			*40*						40			40
	Field notes	*1*	*24*			*24*						24			24
	Office Work														
	Job setup/JULIE/manage/process	*1*	*16*			*16*		16							16
	PLS Boundary Analysis & ROW Calc	*1*	*114*			*114*		114							114
	Review & CAD calc of 128 title commitments	*1*	*96*			*96*							96		96
	CAD Import & Drafting	*1*	*264*			*264*					240		24		264
	TOTAL TOPOGRAPHIC SURVEY					**1130**	**0**	**130**	**0**	**0**	**240**	**640**	**120**	**0**	**1130**

							MANHOUR BREAKDOWN								
		QTY	HOURS PER QTY PER PHASE			TOTAL	Proj	Project	Project	Design	CAD	Survey	Survey	Admin	TOTAL
1.2	**DATA COLLECTION, REVIEW, & MOSAICS**		PHASE I	PRE-PHASE II	PHASE II	HOURS	Director	Manager	Engineer	Engineer	Tech	Field	Tech		V3 Hours
	LCDOT Plans (Existing roadway/typs)	*1*	*12*			*12*	0	0	5	7	0	0	0	0	12
	LCDOT Plans (Drainage review)	*1*	*12*			*12*	0	0	5	7	0	0	0	0	12
	LCDOT Plans (Structural review)	*1*	*4*			*4*	0	0	2	2	0	0	0	0	4
	LCDOT Plans (Traffic Signals review)	*1*	*4*			*4*	0	0	2	2	0	0	0	0	4
	Review TSC pavement cores (1 staff @ --entire project duration)	*1*	*6*			*6*	0	0	2	4	0	0	0	0	6
	Field visits (2 V3 reps -- 3 site visits including travel time & documentation)	*6*	*8*			*48*	0	0	24	24	0	0	0	0	48
	Mosaics	*1*	*4*			*4*	0	0	0	0	4	0	0	0	4
	TOTAL DATA COLLECTION & REVIEW					**90**	**0**	**0**	**39**	**47**	**4**	**0**	**0**	**0**	**90**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								
							Proj	Project	Project	Design	CAD	Survey	Survey	Admin	TOTAL
1.3	**TRAFFIC ANALYSIS & INTERSECTION DESIGN STUDY (IDS)**		INITIAL	REVISIONS	PRE-PHASE II	HOURS	Director	Manager	Engineer	Engineer	Tech	Field	Tech		V3 Hours
	Existing/Future Traffic Analyses	*1*	*40*	*12*		*52*	0	4	12	36	0	0	0	0	52
	Preparation of Existing/Future Traffic Exhibits	*1*	*16*	*8*		*24*	0	0	8	16	0	0	0	0	24
	Intersection Design Study at Hainesville Rd. and Shorewood Ln.	*1*	*32*	*12*		*44*	0	4	18	22	0	0	0	0	44
	TOTAL TRAFFIC ANALYSIS					**120**	**0**	**8**	**38**	**74**	**0**	**0**	**0**	**0**	**120**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								
							Proj	Project	Project	Design	CAD	Survey	Survey	Admin	TOTAL
1.4	**GEOMETRIC DESIGN STUDIES**		INITIAL	REVISIONS	PRE-PHASE II	HOURS	Director	Manager	Engineer	Engineer	Tech	Field	Tech		V3 Hours
	Crash Analysis														
	Crash Analysis (memo + figures)	*1*	*12*	*4*		*16*	0	0	4	12	0	0	0	0	16
	Safety Countermeasures / Barrier Warrants	*1*	*12*	*8*		*20*	0	0	4	16	0	0	0	0	20
	Conceptual Roadway Design Evaluations														
	Design Criteria Table	*1*	*4*			*4*	0	0	4	0	0	0	0	0	4
	Initial set-up (GPK, terrain model)	*1*	*8*	*4*		*12*	0	0	4	8	0	0	0	0	12
	3D Modeling Template set-up (3-lane urban with NMT considerations)	*1*	*40*	*24*		*64*	0	0	32	32	0	0	0	0	64
	Horizontal Geom (3-lane urban with NMT considerations)	*1*	*48*	*24*		*72*	0	4	40	28	0	0	0	0	72
	Vertical Geom (3-lane urban with NMT considerations & driveway considerations 70)	*1*	*48*	*24*		*72*	0	4	40	28	0	0	0	0	72
	Conceptual Cross Section Evaluations	*1*	*24*	*48*		*72*	0	8	40	24	0	0	0	0	72
	Side road design considerations (11 intersections totaling approx 5,500 feet)	*1*	*40*	*16*		*56*	0	4	40	12	0	0	0	0	56
	Clarendon Drive Cul-de-sac and/or T-intersection evaluation at Hainesville	*1*	*24*	*16*		*40*	0	4	24	12	0	0	0	0	40
	Structural Engineering & Coordination														
	Culvert Evaluation (existing & proposed conditions)	*1*	*12*	*8*		*20*	0	8	0	12	0	0	0	0	20
	Retaining Wall Type studies	*1*	*8*	*8*		*16*	0	12	0	4	0	0	0	0	16
	Pavement Analysis & Design														
	Pavement Analysis	*1*	*8*	*4*		*12*	0	2	2	8	0	0	0	0	12
	Pavement Design	*1*	*4*	*4*		*8*	0	2	2	4	0	0	0	0	8
	Traffic Management Plans														
	Concept Study - Staged Construction evaluated (memo; plan & typical sections)	*1*	*40*	*16*		*56*	0	0	16	24	16	0	0	0	56
	Concept Study - Detour evaluated	*1*	*16*	*8*		*24*	0	0	8	12	4	0	0	0	24
	Evaluation Memorandum														
	Summary of Crash, Traffic, Geometric Evaluations,& Recommended Pref. Alt.	*1*	*32*	*8*		*40*	0	0	40	0	0	0	0	0	40
	Meeting Exhibit Preparations														
	Typical Sections	*1*	*16*	*12*		*28*	0	0	4	8	16	0	0	0	28
	Plan and Profiles & Strip Maps	*1*	*16*	*12*		*28*	0	0	4	8	16	0	0	0	28
	TOTAL GEOMETRIC DESIGN STUDIES					**660**	**0**	**48**	**308**	**252**	**52**	**0**	**0**	**0**	**660**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								
							Proj	Project	Project	Design	CAD	Scientist	Survey	Admin	TOTAL
1.5	**WETLAND DELINEATION, PERMITTING, & MITIGATION**		PHASE I	PHASE II		HOURS	Director	Manager	Scientist	Engineer	Tech		Tech		V3 Hours
	PHASE I														
	Wetland Delineation & Report	*1*	*36*			*36*		2	12			22			36
	Threatened & Endangered Species Consultation	*1*	*10*			*10*			10			0			10
	USACE/Lake County SMC Pre-JD Submittal	*1*	*18*			*18*						18			18
	Updates to Wetland Delineation	*1*	*4*			*4*						4			4
	TOTAL WETLAND DELINEATION, PERMITTING, & MITIGATION					**68**	**0**	**2**	**22**	**0**	**0**	**44**	**0**	**0**	**68**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.6	TREE SURVEY SUMMARY		PHASE I	PHASE II		HOURS	Proj Director	Project Manager	Project Scientist	Design Engineer	CAD Tech	Scientist	Survey Tech	Admin	V3 Hours
	Tree Identification Fieldwork	*1*	*75*			*75*		4				71			75
	Summary Table Preparation	*1*	*12*			*12*						12			12
	Tree identification exhibits	*1*	*16*			*16*					16				16
	TOTAL TREE SURVEY SUMMARY					**103**	**0**	**4**	**0**	**0**	**16**	**83**	**0**	**0**	**103**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.7	SPECIAL WASTE ASSESSMENTS		PHASE I	PHASE II	PHASE III	HOURS	Proj Director	Project Manager	Project Scientist	Design Engineer	CAD Tech	Scientist	Survey Tech	Admin	V3 Hours
	PHASE I														
	Preliminary Environmental Site Assessment (PESA)	*1*	*75*			*75*			10			65			75
	TOTAL SPECIAL WASTE ASSESSMENTS					**75**	**0**	**0**	**10**	**0**	**0**	**65**	**0**	**0**	**75**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.8	SECTION 4(f) EVALUATIONS		INITIAL	REVISIONS	PRE-PHASE II	HOURS	Proj Director	Project Manager	Project Engineer	Design Engineer	CAD Tech	Survey Field	Survey Tech	Admin	V3 Hours
	Renwood Golf Course														
	Section 4(f) evaluation Report & Exhibits	*1*	*40*	*40*		*80*	0	0	60	20	0	0	0	0	80
	Coordination Meeting (2 w/2 V3 Staff present; incl travel, minutes, etc)	*4*	*8*			*32*	0	8	24	0	0	0	0	0	32
	Ukrainian Youth Camping Organization Section 4(f) Reports/Evaluations														
	Section 4(f) evaluation Report & Exhibits	*1*	*40*	*40*		*80*	0	0	60	20	0	0	0	0	80
	Coordination Meeting (2 w/2 V3 Staff present; incl travel, minutes, etc)	*4*	*8*			*32*	0	8	24	0	0	0	0	0	32
	TOTAL SECTION 4(f) EVALUATIONS					**224**	**0**	**16**	**168**	**40**	**0**	**0**	**0**	**0**	**224**

		QTY	STAFF HOURS			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.9	PUBLIC INFORMATION MEETINGS		PM	PE	DE/ADMIN	HOURS	Proj Director	Project Manager	Project Engineer	Design Engineer	CAD Tech	Survey Field	Survey Tech	Admin	V3 Hours
	Compile mailing addresses; create database; mail-merge documents	*1*			*40*	*40*	0	0	8	0	0	0	0	32	40
	Public Meetings (incl travel time, set-up, & attendance)	*2*	*6*	*16*		*44*	0	15	29	0	0	0	0	0	44
	Exhibit Prep for all meetings (8 hrs per mtg)	*2*		*8*	*16*	*48*	0	0	8	0	40	0	0	0	48
	Summary & Addressing Public Comments (12 hrs per mtg)	*2*		*8*	*4*	*24*	0	0	24	0	0	0	0	0	24
	If necessary; Property Owner Meetings (up to 15; upon their request)	*15*	*2*	*2*		*60*	0	30	30	0	0	0	0	0	60
	TOTAL PUBLIC INVOLVEMENT MEETINGS					**216**	**0**	**45**	**99**	**0**	**40**	**0**	**0**	**32**	**216**

		QTY	STAFF HOURS			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.10	HYDRAULIC MODELING/PERMITTING		PM	PE	DE/ADMIN	HOURS	Proj Director	Project Manager	Project Engineer	Design Engineer	CAD Tech	Survey Field	Survey Tech	Admin	V3 Hours
	V3 Drainage Engineer Coordination w/CBBEL	*1*		*24*		*24*	0	0	24	0	0	0	0	0	24
	TOTAL HYDRAULIC MODELING/PERMITTING					**24**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**24**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.11	PRELIMINARY ENGINEERING REPORT (PER)		INITIAL	REVISIONS	FINAL	HOURS	Proj Director	Project Manager	Project Engineer	Design Engineer	CAD Tech	Survey Field	Survey Tech	Admin	V3 Hours
	Report Contents														
	Introduction	*1*	*2*	*2*	*0*	*4*	0	0	4	0	0	0	0	0	4
	Existing Conditions	*1*	*2*	*2*	*0*	*4*	0	0	4	0	0	0	0	0	4
	Design Criteria	*1*	*4*	*4*	*0*	*8*	0	0	8	0	0	0	0	0	8
	Traffic Summary	*1*	*4*	*2*	*0*	*6*	0	0	6	0	0	0	0	0	6
	Proposed Improvements	*1*	*4*	*2*	*2*	*8*	0	0	8	0	0	0	0	0	8
	Anticipated Maintenance of Traffic	*1*	*6*	*2*	*2*	*10*	0	0	10	0	0	0	0	0	10
	Summary of Public Involvement	*1*	*12*	*8*	*4*	*24*	0	0	16	0	0	0	0	8	24
	Preferred Alternative Cost Estimate														
	Engineer's Opinion of Probable Construction Cost (EOPCC)	*1*	*48*	*16*	*8*	*72*	0	0	16	56	0	0	0	0	72
	PER Exhibits	*1*	*32*	*16*	*8*	*56*	0	0	10	46	0	0	0	0	56
	TOTAL PRELIMINARY ENGINEERING REPORT					**192**	**0**	**0**	**82**	**102**	**0**	**0**	**0**	**8**	**192**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.12	ROADWAY DRAINAGE DESIGN		INITIAL	REVISIONS	PRE-PHASE II	HOURS	Proj Director	Project Manager	Project Engineer	Design Engineer	CAD Tech	Survey Field	Survey Tech	Admin	V3 Hours
	Existing Drainage Outlet Calculations and Exhibits (EDPs)			*40*	*32*	*72*	0	0	56	0	16	0	0	0	72
	Proposed Drainage Outlet Calculations & Exhibits (PDPs)			*40*	*64*	*104*	0	0	88	0	16	0	0	0	104
	Proposed Storm Sewer Design w/Profiles			*60*	*80*	*140*	0	0	140	0	0	0	0	0	140
	Roadway Stormwater Detention			*40*	*40*	*80*	0	0	80	0	0	0	0	0	80
	FloodplainCut/Fill cross-sections			*24*	*36*	*60*	0	0	60	0	0	0	0	0	60
	TOTAL ROADWAY DRAINAGE DESIGN					**456**	**0**	**0**	**424**	**0**	**32**	**0**	**0**	**0**	**456**

		QTY	HOURS PER QTY PER PHASE			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.13	UTILITY & SUE LEVEL B COORDINATION		INITIAL	REVISIONS	PRE-PHASE II	HOURS	Proj Director	Project Manager	Project Engineer	Design Engineer	CAD Tech	Survey Field	Survey Tech	Admin	V3 Hours
	Utility Coordination														
	Letter & Plans to Utility Companies (utility log set-up, submittals, coordination)	*1*	*8*	*16*	*4*	*28*			12	8				8	28
	Identification and potential resolutions to utility conflicts	*1*	*12*	*8*	*4*	*24*		2	8	14					24
	Field Meetings (2)	*1*	*4*	*4*		*8*		4	4						8
	SUE LEVEL B														
	Review and incorporate SUE Level B information into plans	*1*	*8*	*4*	*4*	*16*		2	4		10				16
	TOTAL UTILITY & SUE LEVEL B COORDINATION					**76**	**0**	**8**	**28**	**22**	**10**	**0**	**0**	**8**	**76**

		# of Mtgs	STAFF HOURS			TOTAL	MANHOUR BREAKDOWN								TOTAL
1.14	AGENCY MEETINGS / COORDINATION		PM	PE	DE	HOURS	Proj Director	Project Manager	Project Engineer	Design Engineer	CAD Tech	Survey Field	Survey Tech	Admin	V3 Hours
	PHASE I														
	LCDOT (attendance, travel, minutes, exhibit prep) - kick-off & geometric results	*2*	*8*	*12*		*20*		8	12	0	0	0	0	0	20
	Local Agencies (Village of Round Lake Beach, Village of Round Lake Park, Round Lake Area Park District)	*3*	*12*	*16*		*28*		12	16	0	0	0	0	0	28
	Lake County Stormwater Management Commission (LCSMC)	*2*	*8*	*12*		*20*		8	12	0	0	0	0	0	20
	Others	*4*	*16*	*24*		*40*		16	24	0	0	0	0	0	40
	TOTAL AGENCY MEETINGS / COORDINATION					**108**	**0**	**44**	**64**	**0**	**0**	**0**	**0**	**0**	**108**

							MANHOUR BREAKDOWN								
			HOURS PER PHASE			TOTAL	Proj	Project	Project	Design	CAD	Survey	Survey	Admin	TOTAL
1.15	QA/QC					HOURS	Director	Manager	Engineer	Engineer	Tech	Field	Tech		V3 Hours
	PHASE I		PHASE I												
	Traffic Analysis QA/QC		*12*			*12*	**0**	12	0	0	0	0	0	0	12
	Preliminary Engineering Report QA/QC		*28*			*28*	**0**	28	0	0	0	0	0	0	28
	Roadway Drainage QA/QC		*12*			*12*	**0**	12	0	0	0	0	0	0	12
	TOTAL QA/QC					**52**	**0**	**52**	**0**	**0**	**0**	**0**	**0**	**0**	**52**

							MANHOUR BREAKDOWN								
			STAFF ATTENDANCE			TOTAL	Proj	Project	Project	Design	CAD	Survey	Survey	Admin	TOTAL
1.16	ADMINISTRATION / MANAGEMENT	QTY	PM + PE	DE	Tech	HOURS	Director	Manager	Engineer	Engineer	Tech	Field	Tech		V3 Hours
	CBBEL Roadway & Hydraulic Coordination --> assume 1 hr each mo. (assume 18 mo.)	*1*	*18*			*18*		9	9						18
	# of PH I tasks (assumed 2 hrs for each: incl coord, billing reviews, planning, project schedule)	*14*	*2*			*84*		80	4						84
	Phase I internal status meetings --> 1 hr every 3 mo. (assume 18 mo.)	*6*	*2*	*1*		*18*		6	6	6					18
	TOTAL ADMINISTRATION / MANAGEMENT					**120**	**0**	**95**	**19**	**6**	**0**	**0**	**0**	**0**	**120**

ATTACHMENT B-3
V3 DIRECT COSTS SUMMARY

PROJECT: Hainesville Road: Washington St. to Rollins Rd.

All fees related to permitting are not included under Direct Costs. The fees shall be paid for by the Lake County Division of Transportation

				Travel		Mailers, Exhibits, Copies								
				Miles	Mileage Cost	Postage	Pages (Sheets) per submittal	8.5" X 11" (Black & White)	8.5" X 11" (Color)	11" X 17" (Black & White)	11" X 17" (Color)	22" X 34" (Color Boards)	Other Miscellaneous Expenses	TOTAL DIRECT EXPENSES
	TASK		UNIT COST		$ 0.58	$ 0.50		$ 0.06	$ 0.60	$ 0.20	$ 1.00	$ 75.00		
		QTY	UNIT		Per Mile			Each	Each	Each	Each	6 S.F.		
1.1	**TOPOGRAPHIC SURVEY**													**$ 64,598.00**
	Survey Crew - 10 days at 104 miles (roundtrip from Woodridge)	10	VISIT(S)	104	$ 598.00									$ 598.00
	Title Commitments ($500 per PIN)	128	PINS										$ 64,000.00	$ 64,000.00
				.										
1.2	**DATA COLLECTION, REVIEW, & MOSAICS**													**$ 179.40**
	Field visits at 104 miles (roundtrip from Woodridge)	3	VISIT(S)	104	$ 179.40									$ 179.40
1.3	**TRAFFIC ANALYSIS & INTERSECTION DESIGN STUDY (IDS)**													**$ 2,570.00**
	Traffic Counts	1	EACH										$ 2,570.00	$ 2,570.00
1.5	**WETLAND DELINEATION/PRE-JD MEETINGS**													**$ 239.20**
	Wetland Delineation Field Work (2 days; initial & update)	2	VISIT(S)	104	$ 119.60									$ 119.60
	USACE Pre-JD Field Meeting	1	VISIT(S)	104	$ 59.80									$ 59.80
	Lake County SMC Pre-JD Field Meeting	1	VISIT(S)	104	$ 59.80									$ 59.80
1.6	**TREE SURVEY SUMMARY**													**$ 598.00**
	Arborist - 10 days at 104 miles (roundtrip from Woodridge)	10	VISIT(S)	104	$ 598.00									$ 598.00
1.7	**SPECIAL WASTE ASSESSMENTS**													**$ 500.00**
	PESA Report & FOIA Fees	1	L. SUM										$ 500.00	$ 500.00
1.8	**SECTION 4(f) EVALUATIONS**													**$ 169.20**
	Renwood Golf Course													
	Section 4(f) evaluation Report & Exhibits (2 submittals)	2	EACH				50	$ 4.80			$ 20.00			$ 24.80
	Coordination Meeting w/Renwood Golf Course	1	VISIT(S)	104	$ 59.80									$ 59.80
	Ukrainian Youth Camping Organization Section 4(f) Reports/Evaluations													
	Section 4(f) evaluation Report & Exhibits (2 submittals)	2	EACH				50	$ 4.80			$ 20.00			$ 24.80
	Coordination Meeting w/Ukrainian Youth Camping Organization	1	VISIT(S)	104	$ 59.80									$ 59.80
1.9	**PUBLIC INFORMATION MEETINGS**													**$ 3,059.60**
	Letters & Exhibits to Stakeholders (2mtgs @ 300 Mailers)	600	MAILERS				4		$ 720.00		$ 600.00			$ 1,320.00
	Public Meetings (8 hrs per mtg; incl travel time, set-up, & attendance)	2	VISIT(S)	104	$ 119.60									$ 119.60
	Board Exhibits each meetings (5 per meeting)	2	MEETINGS				6					$ 900.00		$ 900.00
	Handouts & Comment Forms at each meeting	2	MEETINGS				600		$ 720.00					$ 720.00
1.11	**PRELIMINARY ENGINEERING REPORT**													**$ 1,168.00**
	PER Report & Exhibits (2 Submittals to LCDOT & Villages/Township)	8	HARD COPIES				300	$ 48.00	$ 720.00		$ 400.00			$ 1,168.00

ATTACHMENT B-3
V3 DIRECT COSTS SUMMARY

PROJECT: Hainesville Road: Washington St. to Rollins Rd.

All fees related to permitting are not included under Direct Costs. The fees shall be paid for by the Lake County Division of Transportation

				Travel		Mailers, Exhibits, Copies							Other Miscellaneous Expenses	TOTAL DIRECT EXPENSES
				Miles	Mileage Cost	Postage	Pages (Sheets) per submittal	8.5" X 11" (Black & White)	8.5" X 11" (Color)	11" X 17" (Black & White)	11" X 17" (Color)	22" X 34" (Color Boards)		
	TASK		UNIT COST		$ 0.58	$ 0.50		$ 0.06	$ 0.60	$ 0.20	$ 1.00	$ 75.00		
		QTY	UNIT		Per Mile			Each	Each	Each	Each	6 S.F.		
1.13	**UTILITY & SUE LEVEL B COORDINATION**													**$ 145.60**
	Letters & Plans to Utility Companies	10	MAILERS				3		$ 6.00		$ 20.00			$ 26.00
	Field Meetings (2)	2	VISIT(S)	104	$ 119.60									$ 119.60
1.14	**AGENCY MEETINGS / COORDINATION**													**$ 657.80**
	LCDOT (PH I Kick-off, Geom. Alt Status)	2	VISIT(S)	104	$ 119.60									$ 119.60
	Local Agencies	3	VISIT(S)	104	$ 179.40									$ 179.40
	LCSMC	2	VISIT(S)	104	$ 119.60									$ 119.60
	Others (as necessary)	4	VISIT(S)	104	$ 239.20									$ 239.20
1.15	**QA/QC**													**$ 292.00**
	Preliminary Engineering Report Review	2	HARD COPIES				300	$ 12.00	$ 180.00		$ 100.00			$ 292.00

$ 2,630.00	**$ 4,480.00**	**$ 67,070.00**	**$ 74,180.00**
TRAVEL COSTS	**TOTAL MAILERS, EXHIBITS, AND COPIES COST**	**TOTAL OTHER EXPENSES**	**TOTAL DIRECT EXPENSES**

ATTACHMENT C

SURVEY LIMITS AERIAL EXHIBIT

V3 Companies
7325 Janes Avenue
Woodridge, IL 60517
630.724.9200 phone
630.724.9202 fax
www.v3co.com

LAKE COUNTY DIVISION OF TRANSPORTATION

LAKE COUNTY ILLINOIS

SURVEY LIMITS EXHIBIT

ATTACHMENT D

SUBCONSULTANTS

TSC SCOPE AND FEES

QUALITY COUNTS DIRECT COST

CBBEL SCOPE OF SERVICES

CBBEL CECS

SAM SCOPE AND FEES

TESTING SERVICE CORPORATION

Corporate Office

360 South Main Place, Carol Stream, IL 60188-2404
630.462.2600 ● Fax 630.653.2988

February 20, 2020

Mr. Kurt Corrigan, PE
V3 Companies
7325 Janes Avenue
Woodridge, IL 60517

RE: P.N.64,573
Geotechnical Exploration
Hainesville Road Improvements
Washington Street to Rollins Road
Lake County, Illinois

Dear Mr. Corrigan:

Testing Service Corporation (TSC) is pleased to submit this proposal to provide Geotechnical Engineering Services for the above captioned project. Our proposal responds to your email dated February 11, 2020 and a subsequent phone conversation. The objectives of the Geotechnical Study are to explore soil conditions and provide recommendations for culvert foundations, roadway improvements and pavement design in connection with Hainesville Road Improvements.

Boring Program:

As requested thirty-five (35) soil borings and eight (8) pavement cores are to be drilled as part of our Geotechnical Exploration. The pavement cores will be taken at approximate 1000' intervals along alternating sides of the roadway. The roadway borings are to be drilled at approximate 300' intervals along alternating sides of Hainesville Road and are to be extended to 10 feet below existing grade. Two (2) borings are also planned at a culvert crossing to be made 15 feet deep. Five (5) miscellaneous borings (in connection with V3 environmental team) are also included to be made 10 feet deep. Total drilling footage on this basis is estimated to be about 360 lineal feet.

For the purposes of this proposal, we have assumed that the boring locations will be accessible to conventional drilling equipment. In this regard, they should not be located in standing water, within wooded or landscaped areas, or on steeply sloping ground. No provisions have been made for tree/brush clearing or other obstruction removal should borehole access be impeded. Landscape restoration or crop damage (if required) is also not included in the project budget.

TSC will utilize personnel who are trained in layout procedures to stake the borings in the field. Ground surface elevations for each borehole will be determined by GPS using a Trimble R8S GNSS receiver. Utility clearance for the borings will be obtained by contacting JULIE (Joint Utility Locating Information for Excavators). Secondary and /or private underground utility lines will have to be marked by the property owner or their agents; **a private locator can be hired (at an added cost) if necessary.**

The cores of the asphalt or P.C. concrete surface using a 4-inch diameter core barrel. Auger samples will also be obtained of underlying granular base course materials, with continuous macro-core samples to then be taken of the upper soil subgrade to a minimum depth of 3 feet. The core holes will be patched upon completion using a cold mix asphalt or non-shrink concrete grout.

Soil samples will be obtained by standard split-spoon (ASTM D 1586) methods at each structure and/or subgrade boring location in accordance with IDOT procedures. Special circumstances (trees, slopes, power lines, etc.) may dictate use of a small drill rig where soil samples will be obtained by geo-probe methods. Subgrade borings will be sampled continuously in the upper 5 feet and not exceed 2½-foot intervals below this level, unless unforeseen circumstances present themselves. A representative portion of the split-spoon samples will be placed in a glass jar with screw-type lid for transportation to our laboratory. Groundwater observations will also be made during and following completion of drilling operations, with any boreholes in pavement areas to be backfilled immediately and patched at the surface.

TSC will attempt to minimize damage or ground disturbance (rutting, etc.) with the drill rig. However, ground disturbance is inevitable and should be expected if work is performed while the ground is soft.

Assumptions for Permits:

Hainesville Road is under the Lake County jurisdiction and will not require a permit. However, a preconstruction meeting will likely be required before the soil borings are staked and drilled.

Traffic Control:

The borings and cores located along Hainesville Road will most likely require lane closures. This proposal includes a provision for lane closures by a professional traffic control firm. If it is determined that traffic control is not needed you will not be charged for this service.

Please note that our cost estimate for this project is based on the assumption that TSC will be able to perform all borings and cores during weekdays (Monday through Friday) beginning no later than 9:00 AM and ending no sooner than 3:00 PM. A cost supplement to this proposal may be required if the LCDOT or IDOT imposes restricted hours (nights or weekends) to complete any of this work.

No traffic control is anticipated due to the borings being located in grass areas off the existing roadways. However, cones and signs may required.

Laboratory Testing:

The pavement cores will be examined and described by an experienced laboratory materials technician, with measurements taken of individual bituminous layer thicknesses. The subgrade samples obtained from the borings and cores will be examined by experienced laboratory personnel in order to verify field descriptions as well as to visually classify in accordance with the Unified and AASHTO Soil Classification Systems.

Samples retained from the borings will also be examined by laboratory personnel to verify field descriptions and to estimate soil classifications in accordance with the Unified and AASHTO Soil Classification Systems. Laboratory testing will include moisture content determinations, as well as unconfined compressive strength (Qu) on cohesive soils using a proving ring tester, approved by IDOT. Estimate of unconfined compressive strength using a calibrated pocket penetrometer (Qp) will be obtained on cohesive samples when unconfined compressive strength (Qu) is not possible. Representative subgrade samples will be tested for Atterberg limits and grain size analysis in accordance with IDOT procedures. Other tests deemed to be necessary by TSC's Project Engineer may also be recommended for your approval. Our scope of work does not include any tests for Illinois Bearing Ratio (IBR) on representative subgrade samples.

Engineering Report:

Upon completion of drilling and testing, you will receive an engineering report summarizing field and laboratory test data, including a boring location plan and computer generated boring logs. The report will address anticipated soil and groundwater conditions impacting site development, based upon the information obtained from the borings. It will also provide recommendations to guide design and specification preparation pertaining to geotechnical issues relevant to the structure or purpose described in this proposal. These may include the following:

- General earthwork and construction considerations.
- Remedial work and/or treatment of unstable or unsuitable soil types.
- Fill placement and compaction requirements for foundations and pavements.
- Foundation type, capacity and depth/elevation.
- Anticipation and management of groundwater.

The following are **not** a part of or scope of work:

- Illinois Bearing Ratio (IBR).
- Soil profile sheets.

Fees and Scope:

In accordance with the Cost Estimate attached, TSC is proposing a not-to-exceed budget amount of **Forty-One Thousand Three Hundred Dollars ($41,300.00)** to provide the Geotechnical Exploration outlined above. If it is determined that traffic control is not needed you will not be charged for this service.

Our proposal is based on the understanding that: the boring locations are accessible to a conventional truck or All-Terrain Vehicle (ATV) mounted drill; none of the borings will be located in standing water; in wooded or landscaped areas or on steeply sloping ground; and that the work can be performed during standard business hours. Our fee is further subject to this proposal being accepted by you on or before December 31, 2020.

The Illinois Department of Labor (IDOL) has taken the position that Core Drilling/Soil Testing is a covered activity under the Illinois Prevailing Wage Act (IPWA). TSC must be notified if this project is to be funded in part or total by state or local government sources, for which it would be subject to IPWA requirements. The unit prices provided in the attached fee schedule are meant to comply with the IPWA.

Should the study reveal unexpected subsurface conditions requiring a change in the scope of work, you will be contacted before we proceed with additional work. Our invoice would then based on the unit rates given in the attached Cost Estimate or as otherwise agreed upon. While our quoted fee does not include excavation, fill, earthwork, footing or foundation observations during the construction phase, the project budget should include a provision for these services. Plan review, pre-construction meetings and/or other consulting and professional services that are provided subsequent to delivery of TSC's report would be covered by separate invoice.

TSC's geotechnical investigation does not include services required to evaluate the likelihood of the site being contaminated by hazardous materials or other pollutants. Analytical testing which would be required in connection with IEPA Form LPC-663, Uncontaminated Soil Certification is also not included. Should an environmental and/or analytical testing be desired, please contact the undersigned for additional details and/or associated cost.

Closure:

The geotechnical services being performed are subject to TSC's attached General Conditions. Unless stated otherwise, TSC fees include all state and federal taxes and permits that may be required. However, they do not include any license, permit or bond fees that local governments may impose. The local fees, if any, will be added to the invoice. Unless we receive written instructions to the contrary, invoices will be sent to:

Mr. Kurt Corrigan, PE
V3 Companies
7325 Janes Avenue
Woodridge, IL 60517
Phone: 630.729.6226
Email: kcorrigan@v3co.com

If this proposal meets with your approval, please indicate your acceptance by signing one copy and returning it to our Carol Stream, Illinois office. It would be helpful if you could also complete the attached Project Data form indicating who is to receive copies of TSC's report and other related information.

Your consideration of our proposal is appreciated. We look forward to being of service to you on this project.

Respectfully submitted,

TESTING SERVICE CORPORATION

Timothy R. Peceniak, P.E.
Geotechnical Engineer

Kathy Schimick
Customer Relations

TRP:KJS

Enc: Cost Estimate
General Conditions
Project Data Sheet

Approved and accepted for _____ by:

_____
Name

_____
Title Date

COST ESTIMATE

Hainesville Road Improvements
Washington Street to Rollins Road
Lake County, Illinois

	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	Hour	8.0	110.00	$ 880.00
1.2	Private Locator to Mark Private and/or Interior Underground Utility Lines	Cost + 10%	0	850.00	$ 0.00
DRILLING AND SAMPLING (Includes time to work with V3 environmental team, i.e. collecting samples during drilling operations)					
2.1	Drill Mounted on Truck and Two Person Crew (Portal to Portal)	Day	4	3,500.00	$ 14,000.00
OBTAIN PAVEMENT CORES Includes coring with 4 inch diameter barrel, retrieving all pavement materials to maximum depth of 18 inches, taking auger samples of base course/subbase materials and split-spoons of upper subgrade.					
3.1	Core Van and One-Man Crew (Portal to Portal)	Lump Sum	1	1,500.00	$ 1,500.00
3.2	Bit Wear - Per Inch of Asphalt or PCC Pavement	Inch	50	4.00	$ 200.00
3.3	Patch Holes with Cold Patch Asphalt or Non-Shrink Grout	Each	8	10.00	$ 80.00
3.4	Materials Technician to Measure and Describe Core Sample in Laboratory	Each	8	15.00	$ 120.00
TRAFFIC CONTROL (for Soil Borings and Pavement Cores)					
4.1	2-Man Flagging Crew, Regular Time (Portal to Portal)	Hour	40.0	300.00	$ 12,000.00
4.2	2-Man Flagging Crew, Overtime	Hour	5.0	350.00	$ 1,750.00
4.3	TSC Pickup, Arrowboard and/or cones	Day	0	125.00	$ 0.00
LABORATORY TESTING					
5.1	Examine Samples to Describe by Textural System and Classify Using the Unified Soil Classification System	Each	165	4.00	$ 660.00
5.2	Water Content Determination (Includes Pocket Penetrometer Reading on Cohesive Samples)	Each	160	7.00	$ 1,120.00
5.3	Unconfined Compressive Strength of Cohesive Soils (or Torvane Shear Strength Measurement)	Each	100	14.00	$ 1,400.00

5.4	Dry Unit Weight Determination	Each	15	7.00	$ 105.00
5.5	Atterberg Limit Determination	Each	6	100.00	$ 600.00
5.6	Sieve Analysis with #200 Wash	Each	0	90.00	$ 0.00
5.7	Sieve Analysis with Hydrometer	Each	6	130.00	$ 780.00
5.8	Loss-On-Ignition and Wet Combustion (Organic Content)	Each	5	110.00	$ 550.00
ENGINEERING SERVICES					
6.1	Prepare Roadway Geotechnical Report with Boring Logs and Location Plan	Lump Sum	1	5,000.00	$ 5,000.00
6.2	Geotechnical Engineer to Attend Pre-Boring Meeting at Lake County DOT Office	Hour	4.0	140.00	$ 560.00
6.3	Geotechnical Engineer to Perform Special Calculations or Run Slope Stability Analyses	Hour	0.0	140.00	$ 0.00
6.4	Senior Engineer to Consult or Attend Project Meetings	Hour	0.0	190.00	$ 0.00
				ESTIMATED TOTAL:	$ 41,305.00
				RECOMMENDED BUDGET:	$ 41,300.00

ESTIMATE

Quality Counts
DATA THAT DRIVES COMMUNITIES

CHI:IL

BILL TO : V3 Companies
7325 Janes Avenue
Woodridge,IL 60517
(630) 724-9200

CLIENT PROJECT # : ESTIMATE DATE : 3/5/2020 ORDER DATE : 3/5/2020

ORDER No	PROJECT NAME	PAYMENT TERMS	ORDER BY
152091	Round Lake Beach	Net 60 Days	Peter Reinhofer

QTY	DESCRIPTION	RATE	TOTAL
4	**High Volume-Turn Count**	$230.00	$920.00
	2 Location(s) for time period(s): 7:00 AM -- 9:00 AM-(Midweek)		
	-Hainesville Rd -- Washington Ave, Round Lake Park, IL		
	-Hainesville Rd -- Rollins Rd, Round Lake Beach, IL		
	2 Location(s) for time period(s): 4:00 PM -- 6:00 PM-(Midweek)		
	-Hainesville Rd -- Washington Ave, Round Lake Park, IL		
	-Hainesville Rd -- Rollins Rd, Round Lake Beach, IL		
2	**Standard-Turn Count**	$160.00	$320.00
	1 Location(s) for time period(s): 7:00 AM -- 9:00 AM-(Midweek)		
	-Hainesville Rd -- Shorewood Dr, Round Lake Beach, IL		
	1 Location(s) for time period(s): 4:00 PM -- 6:00 PM-(Midweek)		
	-Hainesville Rd -- Shorewood Dr, Round Lake Beach, IL		
1	**Standard-Turn Count**	$820.00	$820.00
	1 Location(s) for time period(s): 6:00 AM -- 8:00 PM-(Midweek)		
	-Hainesville Rd -- Clarendon Dr, Round Lake Beach, IL		
2	**Bi-Directional 1-3 Lanes-Volume**	$155.00	$310.00
	2 Location(s) for time period(s): 1 Days (Volume)		
	-Hainesville Rd North of Shorewood Rd, Round Lake Beach, IL		
	-Hainesville Rd South of Shorewood Rd, Round Lake Beach, IL		
1	Tube Setup Fee - Standard tube setup fee	**$200.00**	$200.00
		TOTAL	$2,570.00

Balances unpaid by end of Payment term (listed above) will be charged 1.5% interest per month

Quality Counts, LLC
7409 SW Tech Center Dr, STE 150
Tigard, OR 97223
(877) 580-2212
qualitycounts.net

SCOPE OF SERVICES
PHASE I – DESIGN ENGINEERING SERVICES

Hainesville Road Reconstruction from Washington Street to Rollins Road
Section No. 19-00072-14-WR

As a sub-consultant to V3, CBBEL will aid with the completion of Phase I services for the study of the Hainesville Road Reconstruction between Washington Street and Rollins Road. CBBEL will be involved with the Geometric Design Studies and Public Information Meetings and Coordination, and Stormwater Modeling and Permitting, Agency Meetings and Coordination, and Quality Assurance/Quality Control.

TASK 1.4 Geometric Design Studies

CBBEL will aid in the development of project alternatives and the screening of each. CBBEL will provide an assessment of the geometric alternatives, including development of a 3-lane typical section, horizontal and vertical geometry, lane configurations, and pedestrian and bicycle facilities. Working with V3, these alternatives will be screened at a high level to determine impacts of each for relative comparison. The alternative analysis will be coordinated with stakeholders and the public for feedback for the determination of the Preferred Improvement which will be carried forward to Phase II detailed design.

TASK 1.9 Public Informational Meetings/Coordination

CBBEL will be involved with the public involvement strategy to help create a Context Sensitive Solutions approach to the project. Identifying all project stakeholders and engagement of those stakeholders will be critical to a successful project. CBBEL will assist in development of a project purpose and need, alternatives screenings, and development of the Preferred Improvement Plan. CBBEL will be available for public coordination and meetings as required.

TASK 1.10 Stormwater Modeling and Permitting

Task 1.10.1 Field Reconnaissance: A Water Resources engineer will complete a site visit to determine the project extents, drainage conditions, and become familiar with the project site.

Task 1.10.2 Stormwater Management Analysis: CBBEL will utilize the site topography and Lake County aerial topography to determine the regional drainage patterns for the roadway project area. Based on the roadway plans and in accordance with the Lake County Watershed Development Ordinance (WDO), a determination of the required detention storage volume will be made for each outlet using the updated Bulletin 70 rainfall. We will determine if the required detention storage can be placed above ground or underground in oversized pipes based on the site constraints including the floodplain and wetland/waters of the US locations. If there are locations where detention is not feasible, we will evaluate providing it at other outlets in accordance with Lake County Stormwater Management Commission (SMC) requirements. We will also provide guidance on meeting the water quality requirements in the WDO.

Task 1.10.3 Hydraulic Modeling for Round Lake Drain Tributary #1: Utilizing the previously prepared unsteady HEC-RAS hydraulic model of the Round Lake Drain Watershed, CBBEL will develop a revised existing conditions Base Flood Elevation for the Zone A regulatory floodplain based on the updated Bulletin 70 rainfall depths and new survey information for waterway and culvert. The 10-year and 100-year flood profiles will be determined for the Zone A floodplain area.

Task 1.10.4 Floodplain Fill/Compensatory Storage: The existing conditions flood profiles will be provided to V3 for input into the project cross-sections to determine the proposed floodplain fill quantities. In accordance with the WDO, the required amount of compensatory storage will be determined above and below the 10-year flood elevation. We will work with V3 to determine the appropriate location for the compensatory storage. This will be an iterative process and we have provided for two iterations. Additional iterations will be billed on a Time and Material basis.

Task 1.10.5 Proposed Conditions Hydraulic Model: The proposed roadway culvert will be input into the existing conditions unsteady HEC-RAS hydraulic model previously developed. The results will be required to verify that IDNR-OWR, LCDOT and WDO are being complied with, including freeboard and upstream/downstream flood profile impacts. We have budgeted for three iterations given the sensitive nature of the upstream golf course and downstream residential properties. Additional iterations will be billed on a Time and Material basis.

Task 1.10.6 IDNR-OWR Floodway Construction Permit (if necessary): The project contains Zone A regulatory floodplain with greater than 1 square mile of tributary area. To qualify for Statewide Permit #12, the roadway profile must not be raised above the existing elevation and written documentation must be provided indicating that the structure is not a source of flood damage. It is anticipated that it may not be possible to meet these requirements, so an individual Part 3700 floodway construction permit from IDNR-OWR would be required. CBBEL will prepare the technical support package for permit application to IDNR-OWR for the culvert replacement project.

Task 1.10.7 Agency Coordination: During the permit review process, follow-up meetings with the regulatory agencies, roadway engineer, and client can be anticipated to finalize required information, submittals and documentation. Because this task is difficult to quantify, it is estimated that 3 meetings will be required and additional meetings will be billed on a Time and Materials basis.

TASK 1.14 Agency Meeting/Coordination

CBBEL will aid with agency coordination and meetings as required. CBBEL will aid in setting up agency meetings.

TASK 1.15 Quality Assurance/Quality Control

CBBEL will aid with QA/QC as needed. Specific items CBBEL will coordinate within the QA/QC process will be an overall geometric design and plan preparation format to ensure the plans meet LCDOT design requirements and guidelines.

TASK 1.16 Administration and Management

CBBEL will manage our staff and provide project administration throughout this project. Daily assignments will be managed and coordinated with V3 as needed to provide efficient completion of our assignment. Monthly billing and will be completed and submitted to V3 in a timely manner for inclusion on their invoices to LCDOT. The invoicing will include appropriate documentation as required by LCDOT.

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME Christopher B. Burke Engineering, Ltd. **DATE** 05/08/20
PRIME/SUPPLEMENT **PTB NO.**

CONTRACT TERM	12	**MONTHS**	**OVERHEAD RATE**	129.05%
START DATE	5/1/2020		**COMPLEXITY FACTOR**	0
RAISE DATE	1/1/2021		**% OF RAISE**	3.00%

ESCALATION PER YEAR

5/1/2020 - 1/1/2021	1/2/2021 - 5/1/2021			
8	4			
12	12			
= 66.67%	34.33%			
= 1.0100				

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

PAYROLL RATES

FIRM NAME Christopher B. Burke Engineering, Ltd. **DATE** 05/08/20
PRIME/SUPPLEMENT

ESCALATION FACTOR **1.00%**

CLASSIFICATION	CURRENT RATE	PROPOSED RATE	CALCULATED RATE
PRINCIPAL	$70.00		$70.00
ENGINEER VI	$70.00		$70.00
ENGINEER V	$66.83		$67.50
ENGINEER IV	$56.24		$56.80
ENGINEER III	$45.95		$46.41
ENGINEER I/II	$34.03		$34.37
SURVEY V	$70.00		$70.00
SURVEY IV	$67.50		$68.18
SURVEY III	$59.50		$60.10
SURVEY II*	$48.50		$48.99
SURVEY I*	$35.83		$36.19
ENGINEERING TECHNICIAN V	$66.08		$66.74
ENGINEERING TECHNICIAN IV	$52.17		$52.69
ENGINEERING TECHNICIAN III	$48.13		$48.61
ENGINEERING TECHNICIAN I/II*	$22.33		$22.55
CAD MANAGER	$63.67		$64.31
ASST. CAD MANAGER	$51.33		$51.84
CAD II *	$47.25		$47.72
GIS SPECIALIST III	$51.00		$51.51
GIS SPECIALIST I/II*	$34.00		$34.34
LANDSCAPE ARCHITECT	$58.00		$58.58
ENVIRONMENTAL RESOURCE SPECIALIST V	$68.50		$69.19
ENVIRONMENTAL RESOURCE SPECIALIST IV	$53.80		$54.34
ENVIRONMENTAL RESOURCE SPECIALIST III	$41.00		$41.41
ENVIRONMENTAL RESOURCE SPECIALIST I/II	$28.00		$28.28
ENVIRONMENTAL RESOURCE TECHNICIAN*	$40.00		$40.40
ADMINISTRATIVE*	$37.19		$37.56
ENGINEERING INTERN	$16.10		$16.26

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM Christopher B. Burke Engineering, Ltd. **DATE** **05/08/20**
Local Agency Lake County **OVERHEAD RATE** **129.05%**
Section Washington to Rollins **COMPLEXITY FACTOR** **0**
Project Hainesville Road
Job No:

Cost Plus Fixed Fee 2 14.50% [DL+R(DL) +1.4(DL)+IHDC]

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
	Task 1.4 Geometric Design Studies	70	4,186.58	5,402.78		1,456.93				11,046.29	14.24%
	Task 1.9 Public Information Meetings/Coordination	50	3,042.50	3,926.34		1,058.79				8,027.63	10.35%
	Task 1.10 Stormwater Modeling and Permitting										
	Task 1.10.1 Field Reconnaissance	8	507.21	654.55		176.51				1,338.27	1.73%
	Task 1.10.2 Stormwater Management Analysis	68	3,018.07	3,894.82		1,050.29				7,963.18	10.27%
	Task 1.10.3 Hydraulic Modeling for Round Lake Drain Tributary #1	72	3,693.92	4,767.01		1,285.48				9,746.41	12.57%
	Task 1.10.4 Floodplain Fill/Compensatory Storage	68	3,160.59	4,078.74		1,099.88				8,339.21	10.75%
	Task 1.10.5 Proposed Conditions Hydraulic Model	72	3,836.44	4,950.93		1,335.08				10,122.45	13.05%
	Task 1.10.6 IDNR-OWR Floodway Construction Permit (if necessa	68	3,376.98	4,358.00		1,175.19	1,000.00			9,910.17	12.78%
	Task 1.10.7 Agency Coordination	36	2,166.32	2,795.64		753.88	1,000.00			6,715.83	8.66%
	Task 1.14 Agency Meetings/Coordination	8	549.99	709.77		191.40				1,451.16	1.87%
	Task 1.15 Quality Assurance/Quality Control	8	549.99	709.77		191.40				1,451.16	1.87%
	Task 1.16 Administration and Management	8	549.99	709.77		191.40				1,451.16	1.87%
	Subconsultant DL									0.00	
	TOTALS	536	28,638.59	36,958.10	0.00	9,966.23	2,000.00	0.00	0.00	**77,562.91**	100.00%

DBE

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AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.
Local Agency Lake County
Section Washington to Rollins
Project Hainesville Road
Job No: 0

DATE 05/08/20

SHEET 1 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Task 1.4 Geometric Design			Task 1.9 Public Informati			Task 1.10.1 Field Reconna			Task 1.10.2 Stormwater Ma			Task 1.10.3 Hydraulic Mod		
		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	0																	
ENGINEER VI	70.00	66	12.31%	8.62	4	5.71%	4.00	2	4.00%	2.80	4	50.00%	35.00	4	5.88%	4.12	4	5.56%	3.89
ENGINEER V	67.50	84	15.67%	10.58	40	57.14%	38.57	32	64.00%	43.20									
ENGINEER IV	56.80	204	38.06%	21.62							4	50.00%	28.40	24	35.29%	20.05	48	66.67%	37.87
ENGINEER III	46.41	42	7.84%	3.64	26	37.14%	17.24	16	32.00%	14.85									
ENGINEER I/II	34.37	140	26.12%	8.98										40	58.82%	20.22	20	27.78%	9.55
SURVEY V	70.00	0																	
SURVEY IV	68.18	0																	
SURVEY III	60.10	0																	
SURVEY II*	48.99	0																	
SURVEY I*	36.19	0																	
ENGINEERING TECHN	66.74	0																	
ENGINEERING TECHN	52.69	0																	
ENGINEERING TECHN	48.61	0																	
ENGINEERING TECHN	22.55	0																	
CAD MANAGER	64.31	0																	
ASST. CAD MANAGER	51.84	0																	
CAD II *	47.72	0																	
GIS SPECIALIST III	51.51	0																	
GIS SPECIALIST I/II*	34.34	0																	
LANDSCAPE ARCHITE	58.58	0																	
ENVIRONMENTAL RES	69.19	0																	
ENVIRONMENTAL RES	54.34	0																	
ENVIRONMENTAL RES	41.41	0																	
ENVIRONMENTAL RES	28.28	0																	
ENVIRONMENTAL RES	40.40	0																	
ADMINISTRATIVE*	37.56	0																	
ENGINEERING INTERN	16.26	0																	
TOTALS		536	100%	$53.43	70	100.00%	$59.81	50	100%	$60.85	8	100%	$63.40	68	100%	$44.38	72	100%	$51.30

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AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.
Local Agency Lake County
Section Washington to Rollins
Project Hainesville Road
Job No: 0

DATE 05/08/20

SHEET 2 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Task 1.10.4 Floodplain Fill/Co			Task 1.10.5 Proposed Conditi			Task 1.10.6 IDNR-OWR Floodv			Task 1.10.7 Agency Coordinat			Task 1.14 Agency Meetings/Co			Task 1.15 Quality Assurance/Q		
		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 VI	70.00	8	11.76%	8.24	8	11.11%	7.78	4	5.88%	4.12	16	44.44%	31.11	4	50.00%	35.00	4	50.00%	35.00
ENGINEER V	67.50													4	50.00%	33.75	4	50.00%	33.75
ENGINEER IV	56.80	24	35.29%	20.05	48	66.67%	37.87	40	58.82%	33.41	16	44.44%	25.25						
ENGINEER III	46.41																		
ENGINEER I/II	34.37	36	52.94%	18.20	16	22.22%	7.64	24	35.29%	12.13	4	11.11%	3.82						
SURVEY V	70.00																		
SURVEY IV	68.18																		
SURVEY III	60.10																		
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GIS SPECIALIST III	51.51																		
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ENVIRONMENTAL F	41.41																		
ENVIRONMENTAL F	28.28																		
ENVIRONMENTAL F	40.40																		
ADMINISTRATIVE*	37.56																		
ENGINEERING INTE	16.26																		
TOTALS		68	100%	$46.48	72	100%	$53.28	68	100%	$49.66	36	100%	$60.18	8	100%	$68.75	8	100%	$68.75

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REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Christopher B. Burke Engineering, Ltd.
Local Agency Lake County
Section Washington to Rollins
Project Hainesville Road
Job No: 0

DATE 05/08/20

SHEET 3 **OF** 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Task 1.16 Administration and 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 VI	70.00	4	50.00%	35.00															
ENGINEER V	67.50	4	50.00%	33.75															
ENGINEER IV	56.80																		
ENGINEER III	46.41																		
ENGINEER I/II	34.37																		
SURVEY V	70.00																		
SURVEY IV	68.18																		
SURVEY III	60.10																		
SURVEY II*	48.99																		
SURVEY I*	36.19																		
ENGINEERING TEC	66.74																		
ENGINEERING TEC	52.69																		
ENGINEERING TEC	48.61																		
ENGINEERING TEC	22.55																		
CAD MANAGER	64.31																		
ASST. CAD MANAG	51.84																		
CAD II *	47.72																		
GIS SPECIALIST III	51.51																		
GIS SPECIALIST I/II	34.34																		
LANDSCAPE ARCH	58.58																		
ENVIRONMENTAL F	69.19																		
ENVIRONMENTAL F	54.34																		
ENVIRONMENTAL F	41.41																		
ENVIRONMENTAL F	28.28																		
ENVIRONMENTAL F	40.40																		
ADMINISTRATIVE*	37.56																		
ENGINEERING INTE	16.26																		
TOTALS		8	100%	$68.75	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

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SAM, LLC
886 Cambridge Drive, Elk Grove Village, IL 60007
Ofc 224.404.1300 Fax 847.264.8907
info@sam.biz www.sam.biz

Via Email: kcorrigan@v3co.com

May 11, 2020

Kurt Corrigan, PE
Senior Project Manager
V3 Companies
7325 Janes Ave
Woodridge, Illinois 60517

RE: Hainesville Road LCDOT Project
Lake County, Illinois
SAM, LLC Proposal No.: 1020054514 Hainesville Rd E Rollins to E Washington St Round Lake Beach IL SUE Study

Mr. Corrigan,

Surveying And Mapping, LLC (SAM) appreciates the opportunity to provide this scope of services and fee estimate for Subsurface Utility Engineering (SUE) services to assist V3 Companies (Client) with the Hainesville Rd E Rollins to E Washington St Round Lake Beach IL SUE Study Project located in Lake County, IL.

After reviewing this scope of work and fee, please do not hesitate to call us with any questions. Once again, thank you for the opportunity to propose on this project. We look forward to continuing our working relationship.

Respectfully,

Surveying And Mapping, LLC (SAM)

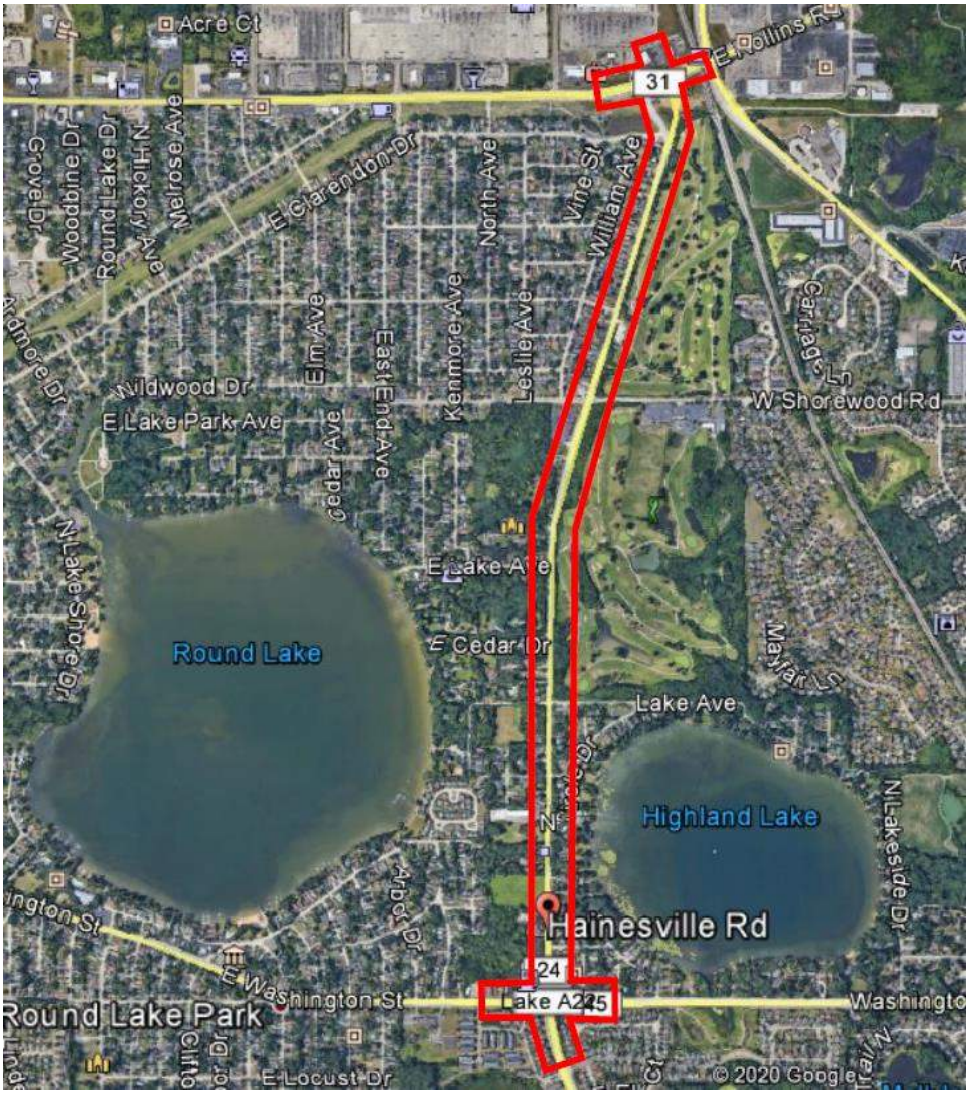
Israel Perez
Project Manager

CC: Brandon W. Espinosa, PLS, Associate
Office Manager

PROJECT OVERVIEW

The proposed SUE investigation for the Hainesville Rd E Rollins to E Washington St Round Lake Beach IL SUE Study project in Lake County, IL as outlined in red on Exhibit A below. The project limits along Hainesville Rd are 150' North of the E Rollins Road intersection centerline, including 400' West and 630' East on E Rollins Rd to just South 580' of the E Washington St intersection centerline, including 250' East and West on E Washington St, right-of-way to right-of-way. The total length of project is approximately 9,000 feet.

EXHIBIT A



ASSUMPTIONS

The following assumptions were made for the preparation of this Scope of Services. If these assumptions do not prove correct, a modification to the scope and budget for this project may be required.

- This proposal and fee is based on the assumption that SAM crews will be able to proceed unimpeded. Down time or additional mobilization or demobilization caused by restricted access, project changes, weather or other factors that are outside of SAM's control may be charged to Client.
- SAM will not perform any work outside of the scope of services herein without written authorization from Client.
- The budget estimate is to provide all services on a one time basis. Subsurface Utility Engineering services provided in connection with re-routes or requested revisions will require a revised scope and fee.
- This proposal assumes that all work areas are sufficiently cleared of vegetation (to a maximum height of 6") such that all areas are traversable on foot for the purpose of performing designating and sweeping. SAM reserves the right to seek additional compensation and/or time for work interruptions due to property clearing issues.
- SAM will utilize the following geophysical equipment on the project:
    a. Radiodetection RD8100
    b. Vivax-Metrotech VM-810
    c. IDS Opera DUO
    d. Tonable rodder
    e. Sonde
    f. Pipehorn 800
- All equipment may not be used, as equipment is selected based upon geophysical application necessary to find a target utility.
- Normal traffic control, for Subsurface Utility Engineering services, is considered standard placement of traffic cones, freestanding warning signage and vehicle-mounted traffic directional sign. Traffic control requiring lane closures, traffic detouring, flagpersons, police, etc., is considered special traffic control. If special traffic control is to be provided by SAM, this service will be subcontracted to an approved subcontractor and billed to the Client at cost.
- Sanitary and Storm Drain systems and aerial connectivity will be excluded from this scope of services.
- Overhead utility investigation and mapping is excluded from this scope of services.
- The subsurface utility engineering service assumes that all project survey control required for performing this service is pre-existing. Establishing project survey control will be provided at a cost pre-approved by the Client.
- The accuracy of subsurface data can be influenced by factors beyond SAM's control such as conductivity of materials and their surroundings, soil moisture content, proximity of other underground utilities or structures, depth of utility, etc. Therefore, only the accuracy of data obtained by actual physical verification (through vacuum excavation or otherwise) can be guaranteed to applicable engineering and/or surveying standards.

- Paint markings placed on the ground by SAM are to be used for design purposes only and not for construction purposes. The use of QL-B information provided does not relieve any contractor or the Client from the duty to comply with applicable utility damage prevention laws and regulations, including, but not limited to, giving notification to utility owners or JULIE before excavation.
- SAM will not be responsible for any omission of utility information that is not obtainable via electromagnetic, radar, or acoustical designating services.
- Non-metallic piping, inactive electric, and/or communication lines may or may not be found by electromagnetic, radar, or acoustical designating practices. SAM does not warrant and/or guarantee that all existing utilities will be found.
- Client will provide SAM with record information and profile drawings of all the utilities within the project site the Client has already collected.
- All work will be performed during daytime hours.
- SAM will be notified, prior to mobilizing to the Project, of any special requirements for access and the performance of the work.
- SAM personnel will have unrestricted access to the work areas on a ten (10) hour per day basis for each day approved to perform work.
- May require weekend work.
- SAM will update the Client on all meeting notices and may request a representative from Client to attend to respond to questions that may be beyond the knowledge of the SAM.
- SAM estimates a maximum of 50,000 linear feet of subsurface utilities within the limits of utility investigation.

SCOPE OF SERVICES

SUBSURFACE UTILITY ENGINEERING (SUE)

SAM will provide all the following Subsurface Utility Engineering (SUE) services to the standard of care applicable in the Subsurface Utility Engineering profession. The services meet the standard guidelines of ASCE C-I 38-02 for "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data."

Quality Level D (QL-D) – Collect existing utility records information (as-builts) from utility providers, municipalities, counties, and other agency suppliers within the area of investigation. Review records for indications of additional available records, duplicate information, and a need for clarifications by utility owners. These utilities could include but are not limited to electrical, telephone, cable TV, fiber optic, gas, petroleum, water, wastewater, steam, and storm drain systems.

SAM will attempt to contact utility providers, counties and other agency suppliers identified through the utility easement information, JULIE, and via vehicle reconnaissance and inventory of utility marker posts along adjacent roadways. The sole purpose of this activity is to collect existing record information of utility systems that may have an impact on this project. Any utility that is found in the field, by use of designating geophysical equipment and is not evident on any collected record information, will be shown in the QL-B utility file as an "unknown" utility as required by ASCE CI 38-02.

Quality Level C (QL-C) – SAM survey crews will provide this service consisting of field surveying to obtain accurate horizontal position of visible utility surface appurtenances of existing subsurface utility systems located within the project limits. SAM management staff will determine when records and features do not agree and resolve discrepancies using professional judgement.

Quality Level B (QL-B) Designating (Horizontal Location of Utilities) – Designating is to indicate, by marking with paint and/or flags, the presence, and approximate horizontal location of subsurface utilities using a suite of geophysical methods including, without limitations, electromagnetic, sonic, acoustical, and radar techniques. SAM will provide the following designating services to aid the Client in the design of site, ROW, construction plans, or project development plans, or for other purposes as agreed to by the parties. SAMwill:

- Provide all equipment, personnel, and supplies required for performing designating services. SAM shall determine which equipment, personnel, and supplies are required for designation.
- Designate the underground utilities, which may consist of but are not limited to water, gas, petroleum pipelines, telephone, fiber optics, cable TV, and electrical utilities within the project area previously described.
- Conduct appropriate investigation of site conditions.
- Mark the utilities on the ground using paint and/or flags.
- Analyze and correlate all of the field-collected information with the collected record information for ensuring continuity of the information collected. Resolve conflicts with Level D, C, and B information.
- The utilities will be marked at maximum 50 foot intervals and at all changes in direction.
- Water lines and other non toneable utilities may be able to be designated using ground penetrating radar and will be marked as Quality Level D in these areas. When the ground penetrating radar is not effective, these utilities will be marked as Quality Level D.
- Marking of hose bib lines, irrigation lines, and other such small non detectable utilities will not be included.
- The designated utilities will be surveyed and included in the deliverable drawings depicting type, owner, and any other attributes ascertainable during the investigation.

The degree of success of a GPR investigation is based entirely on the composition of the soils and the depth and scale of subsurface targets. Electrically resistive soils, such as quartz sands, typically allow for the study of phenomena to depths greater than 15 feet. However, electrically conductive soils, such as clay, moist silt or saline soils, typically preclude the investigation of targets deeper than 3-6 feet. A determination of a maximum attainable depth of investigation requires on-site calibration of the GPR equipment. Subsequently, due to the unknown susceptibility of specific site soils to the passage of radar energy, conclusive results cannot be guaranteed from ground penetrating radar.

DELIVERABLES

A digital MicroStation file, compliant with LCDOT CAD standards depicting the utilities within the area of investigation at their achieved quality levels will be provided. The file will clearly identify all utilities discovered from QL-D and QL- C investigation that could not be designated in the field as QL-B. These utility lines will have a unique line style and symbology in the deliverables. The utilities will be referenced by the type of utility, color coded to American Public Works Association standards, utility company or agency name, address, telephone number and contact person. A signed and sealed plan view drawing will also be provided based upon the utility results outlined above. All electronic project files used, and/or modified by SAM, scanned utility records collected, and utility contact information will be provided for this project.

PRELIMINARY SCHEDULE

SAM will make every effort to meet the client's schedule for this project, pending weather SAM will submit the Quality Level B-D deliverables within 45 days of receipt of our executed agreement and NTP. The areas of investigation and associated deliverables may be phased to meet the needs of Client and progressive deliverables may be produced.

FEE SCHEDULE

SAM will provide these professional services on a **lump sum** basis. We estimate the cost of the scope of work defined above to be:

SUE QL-B	**$ 57,300.00**

STANDARD TERMS AND CONDITIONS

1. Access To Site - Unless otherwise stated, SAM, LLC will have access to the site for activities necessary for the performance of the services. SAM, LLC will take precautions to minimize damage due to these activities, but has not included in the fee the cost of restoration of any resulting damage.

2. Ownership Of Documents - Client acknowledges that all original papers, documents, maps, surveys, digital data and other work product and copies thereof, produced by SAM, LLC pursuant to this Agreement shall remain the property of SAM, LLC, except documents which are to be filed with public agencies. Client further acknowledges that Client's right to utilize the services and work product performed pursuant to this agreement will continue only so long as Client is not in default pursuant to the terms and conditions of this Agreement and Client has performed all obligations under this Agreement.

3. Copyright - The parties agree that all protections of the United States and Texas copyright laws shall be applicable to the work product to the benefit of SAM, LLC, including common law and statutory law, whether or not any copyright for such work product actually is registered, and without regard to whether or not such copyright actually applies to such work product.

4. Invoices - Invoices for fees and all other charges will be submitted monthly for all services rendered as the work progresses, and the net amount shall be due and payable as of the date of the invoice at SAM, LLC's office in Austin, Travis County, Texas.

5. Client's obligation to pay - Client's obligation to pay is solely that of Client, and the acts or omissions of any third party shall not affect that obligation. All sums due and not received shall be construed as past due. To cover the costs of collection, all past-due amounts will incur a late charge of one and one-half percent (1 ½ %) per month until paid. The Client shall pay any attorney's fees or court costs incurred in collecting any past-due amount. In the event that Client fails to pay SAM, LLC within thirty (30) days after invoices are rendered, then Client agrees that SAM, LLC shall have the right to stop or suspend work and consider the non-payment as grounds for a total breach of this Agreement.

6. Termination Of Services - This Agreement may be terminated by either party upon five (5) days' written notice, by mutual consent or in the event of persistent failures of performance of material terms and conditions of this Agreement by the other party through no fault of the terminating party. SAM, LLC shall then be paid for the services completed up to the time of the termination date based upon the attached Rate Schedule.

7. Dispute Resolution - Claims or disputes in connection with the services provided under this agreement between Client and SAM, LLC shall be submitted to non-binding mediation. Client and SAM, LLC agree to include a similar mediation agreement with all contractors, subcontractors, subconsultants, suppliers and fabricators, thereby providing for mediation as the primary method for dispute resolution between all parties.

8. Governing Law - This Agreement shall be construed and enforced in accordance with the laws of Texas.

9. Indemnification - The Client shall, to the fullest extent permitted by law, indemnify and hold harmless SAM, LLC, its officers, directors, employees, agents and subconsultants from and against all damage, liability and cost, including reasonable attorney's fees and defense costs, arising out of or in any way connected with the performance by any of the parties above named of the services under this agreement, excepting only those damages, liabilities or costs attributable to the sole negligence or willful misconduct of SAM, LLC

10. Limitation Of Liability - In recognition of the relative risks, rewards and benefits of the project to both the Client and SAM, LLC, the risks have been allocated such that the Client agrees that, to the fullest extent permitted by law, total liability to the Client for any and all injuries, claims, losses, expenses, damages or claim expenses arising out of this agreement from any cause or causes shall not exceed the total fee paid by the Client to SAM, LLC, excluding any sales tax, for the services rendered. Such causes include, but are not limited to, SAM, LLC's negligence, errors, omissions, strict liability, breach of contract or breach of warranty.

11. Authority - Client affirmatively represents and states that he/she is authorized to enter into this Agreement, either as the owner or an officer of (Company Name), or as Company's duly authorized agent, trustee or receiver for the purpose of entering into this Agreement.

12. Professional Services - All surveying services are regulated under the Texas Board of Professional Land Surveying. The Board can be contacted at 12100 Park 35 Circle, Bldg A, Suite 156 MC 230, Austin, Texas 78753.

13. Use of Work Product - SAM, LLC acknowledges that client is requesting services to be performed under the applicable work order(s) for the purpose of providing such information to other parties including, but not limited to, clients, customers, governmental entities and other interested parties. Client agrees that the work product prepared by SAM, LLC may not be altered in any way except for the addition of page numbers or exhibit captions necessary to incorporate that work product into other documents. SAM, LLC agrees to provide copies of the work product mutually agreed upon by both parties described in the work orders hereof.

Surveying And Mapping, LLC (SAM, LLC) **V3 Companies**

Signature_____Date_____ Signature_____Date_____

Printed Name_____

Title_____

Company Name_____

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