


Municipality	<b>L O C A L  A G E N C Y</b>	 <b>Illinois Department of Transportation</b>	<b>C O N S U L T A N T</b>	Name Baxter & Woodman, Inc
Township				Address 8678 Ridgefield Road
County Lake County – Division of Transportation		City Crystal Lake		
Section 17-00095-19-CH		State IL		

**Preliminary Engineering Services Agreement For Non-Motor Fuel Tax Funds**

THIS AGREEMENT is made and entered into this \_\_\_\_\_ day of August, 2019 between the above Local Agency (LA) and Consultant (ENGINEER) and covers certain professional engineering services in connection with the improvement of the above SECTION. Non-Motor Fuel Tax Funds, allotted to the LA ~~by the State of Illinois~~, under the general supervision of the State Department of Transportation, hereinafter called the "DEPARTMENT", will be used entirely ~~or in part~~ to finance ENGINEERING services as described under AGREEMENT PROVISIONS.

**Section Description**

Name Hunt Club Road (CH 29) at Washington Street (CH 45) Intersection Improvements

Route CH 29/45 Length 1.65 Mi. 8700.00 FT (Structure No. \_\_\_\_\_ )

Termini CH 29: 1443 ft south to 4057 ft north of Washington St; CH 45: 1634 ft west to 1566 ft east of Hunt Club Rd

**Description:**

This project will include safety improvements, channelization improvements, access control, and bike path/sidewalk extensions.

**Agreement Provisions**

**The Engineer Agrees,**

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

- j.  Prepare the necessary environmental documents in accordance with the procedures adopted by the DEPARTMENT's Bureau of Local Roads & Streets.
  - k.  Prepare the Project Development Report when required by the DEPARTMENT.
  - l.  **Services as included and/or defined in the attached Scope of Services.**
2. That all reports, plans, plats and special provisions to be furnished by the ENGINEER pursuant to the AGREEMENT, will be in accordance with current standard specifications and policies **of the LA of the DEPARTMENT**. It is being understood that all such reports, plats, plans and drafts shall, before being finally accepted, be subject to approval by the LA ~~and the DEPARTMENT~~.
  3. To attend conferences at any reasonable time when requested to do so by representatives of the LA ~~or the Department~~.
  4. In the event 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 \$847,415.06**

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 160 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 160 percent to cover profit, overhead and readiness to serve - "actual cost" being defined as in paragraph 2 of the LA AGREES. It is understood that "changes" as used in this paragraph shall in no way relieve the ENGINEER of the ENGINEER's responsibility to prepare a complete and adequate set of plans and specifications.

---

---

**It is Mutually Agreed,**

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

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

Executed by the LA:

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

ATTEST:

State of Illinois, acting by and through its

By \_\_\_\_\_

County Board

Lake County

Clerk

(Seal)

By \_\_\_\_\_

Title County Board Chair

RECOMMENDED FOR EXECUTION

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

Executed by the ENGINEER:

Baxter & Woodman, Inc

Engineering Firm

8678 Ridgely Road

Street Address

Crystal Lake, ILLINOIS 60012

City, State

ATTEST:

By Jan E. McGee

Title Project Manager

By John V. Ambrose

Title President/CEO

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

**HUNT CLUB ROAD (CH 29) AT WASHINGTON STREET (CH 45)  
INTERSECTION IMPROVEMENTS  
PHASE II ENGINEERING SERVICES  
LAKE COUNTY DIVISION OF TRANSPORTATION  
SECTION 17-00095-19-CH**

**SCOPE OF SERVICES**

**LOCATION:**

The project is located on Hunt Club Road and Washington Street within the Village of Gurnee. The area for improvements includes the following:

<b><u>Roadway</u></b>	<b><u>Limits</u></b>	<b><u>Length</u></b>
Hunt Club Road	1443 feet south and 5550 feet north of the centerline of Washington Street	6993 FT
Washington Street	1634 feet west and 1566 feet east of the centerline of Hunt Club Road	3,200 FT

**PROJECT UNDERSTANDING:**

This project involves Phase II Engineering for the intersection channelization improvements at Hunt Club Road and Washington Street and the extension of the bicycle /pedestrian accommodations on the west side of Hunt Club Road to Dada Drive. The project will also include the widening of the existing sidewalk/bike path adjacent to Six Flags Great America on the north side of Washington Street from 7,030 feet to 7,280 feet east of the centerline of Hunt Club Road.

**EXISTING CONDITIONS:**

Washington Street is a four lane divided roadway with two 11 ft lanes in each direction and curb & gutter on both sides. There is a 12 ft flush/striped median which provides both east and west bound movements with 400 ft of protected left turn lane storage at the intersection. Washington Street is a minor arterial currently under the jurisdiction of Lake County Division of Transportation (LCDOT). Through its corridor, Washington Street has signalized intersections with Almond Road, White Oak Lane, Hunt Club Road, Cemetery Road, and Tri-State Parkway respectively from west to east. These intersections are spaced approximately 1,850 ft, 2,125 ft, 2,650 ft, and 2,000 ft respectively from west to east. Washington Street provides full access and an exclusive right turn lane to the BP gas station and convenient store driveway on its west leg in addition to a similar situation for PNC bank on the east leg. An existing 10 ft multi-use path is located in the north parkway of Washington Street. However, the bike path discontinues approximately 1,150 ft east of the Washington Street intersection with Hunt Club Road. Drainage issues such as flooding and ponding were frequently observed on the west leg approximately 1,300 ft from the intersection where previously a special manhole with a restrictor was installed and connected to the culvert.

HUNT CLUB ROAD AT WASHINGTON STREET  
LAKE COUNTY DIVISION OF TRANSPORTATION

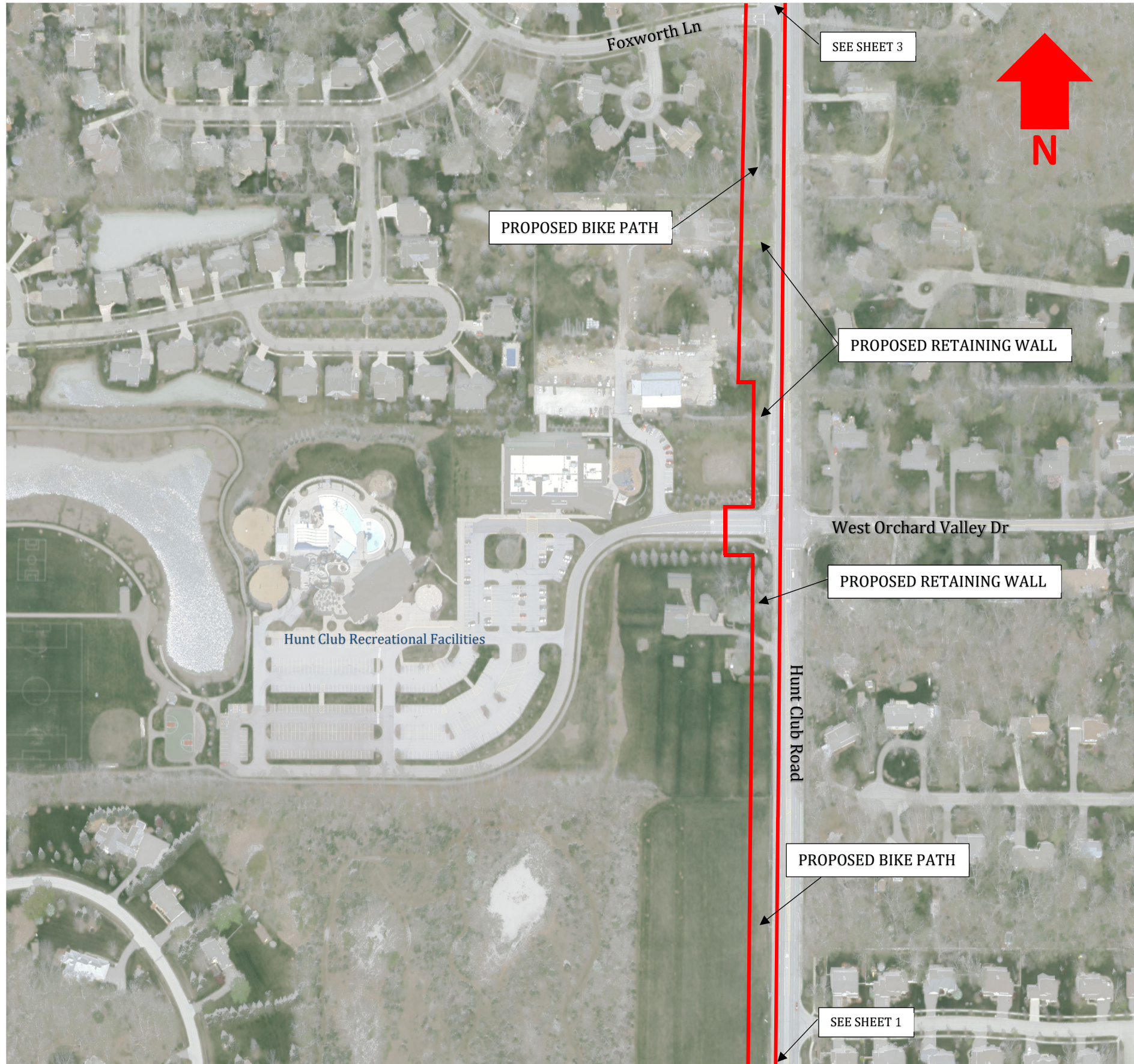
Hunt Club Road is a four lane divided roadway with two 11 ft lanes in each direction and curb & gutter on both sides. An 11 ft flush/striped median provides protected left turn lane storage in both directions of Hunt Club Road at its intersection with Washington Street in addition to an exclusive southbound right turn lane located on the north leg of the intersection. Hunt Club Road is categorized as a minor arterial which is currently under the jurisdiction of LCDOT. It crosses through the project area occupied by commercial and single family home uses. Hunt Club Road also provides access to several apartment buildings and facilities including Lake Land Church, banks, and BP gas station & convenient store. On the south leg, existing sidewalk extends south from Washington Street to Gurnee Glen Road in the west parkway of Hunt Club Road and from Washington Street to PNC bank's driveway in the east parkway of Hunt Club Road. Sidewalk also exists in the west parkway of Hunt Club Road from Washington Street to a point approximately 1300 ft to the north. However, there is an existing gap with no sidewalk between the intersection and approximately 280 ft north in the east parkway of Hunt Club Road and 800 ft of sidewalk exists north of that point along Hunt Club Road. Signalized intersections are located at Orchard Valley Drive and Hunt Club Road approximately 3,275 ft north of Washington Street, Dada Drive and Hunt Club Road approximately 5,550 ft north of Washington Street, and Gages Lake and Hunt Club Road located approximately 4,000 ft south of Washington Street. A three legged intersection is located approximately 1,450 ft south of Washington Street along Hunt Club Road with Wildflower lane. Wildflower lane is currently stop sign controlled.

Existing detention is provided via in-line detention from the 1992 improvements which included the addition of left turn lanes at the intersection. In 2003, Washington Street was widened to two lanes in each direction within the project limits. A wet bottom detention pond is located south of Washington Street approximately 1,950 ft west of the intersection.



**LEGEND**

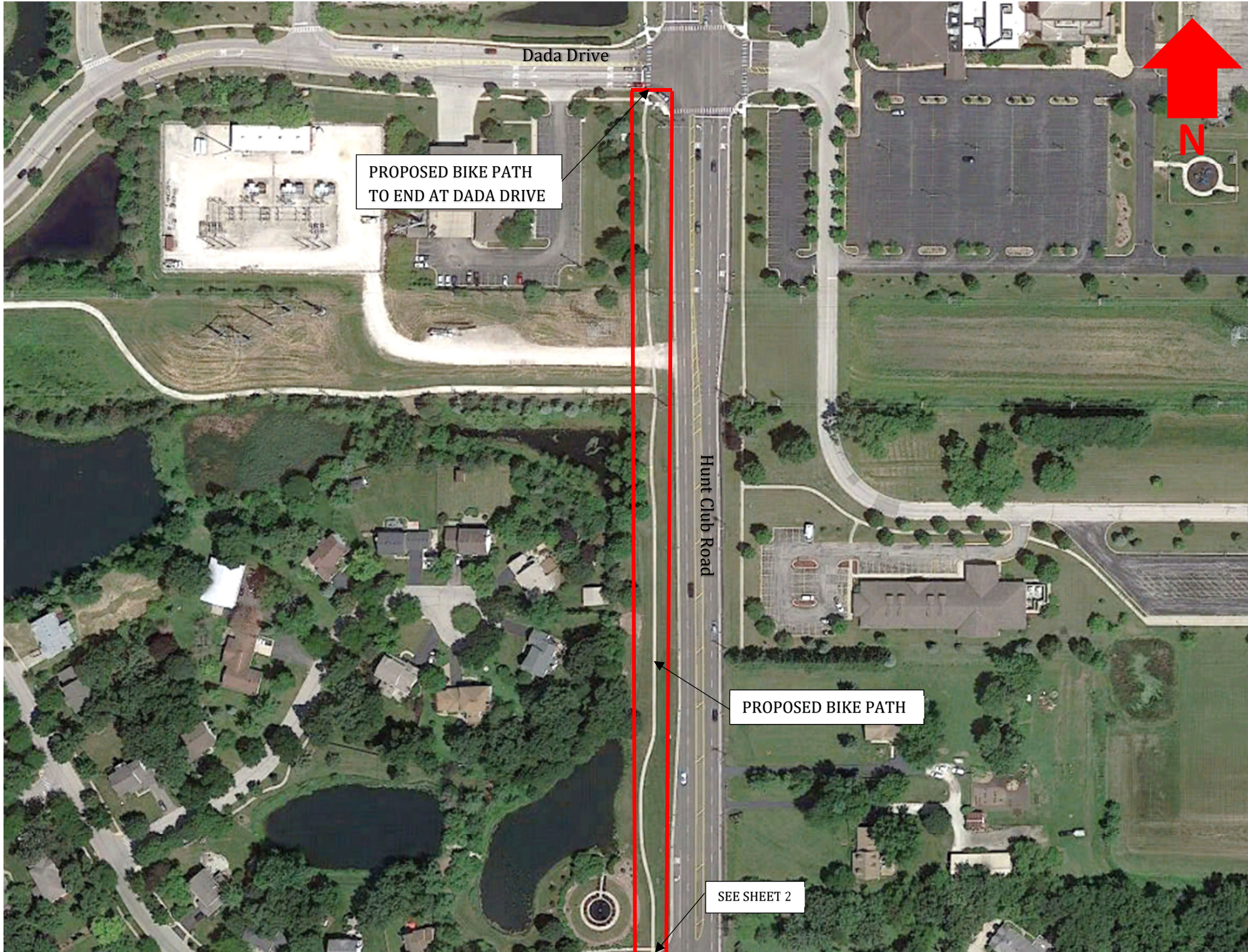
	EXISTING RESIDENTIAL DRAINAGE DETENTION
	PROPOSED DRAINAGE DETENTION POND
	PHASE II PROJECT LIMITS
	ITEMS TO BE EVALUATED DURING PHASE II



**LEGEND**

- EXISTING RESIDENTIAL DRAINAGE DETENTION
- PROPOSED DRAINAGE DETENTION POND
- PHASE II PROJECT LIMITS
- ITEMS TO BE EVALUATED DURING PHASE II





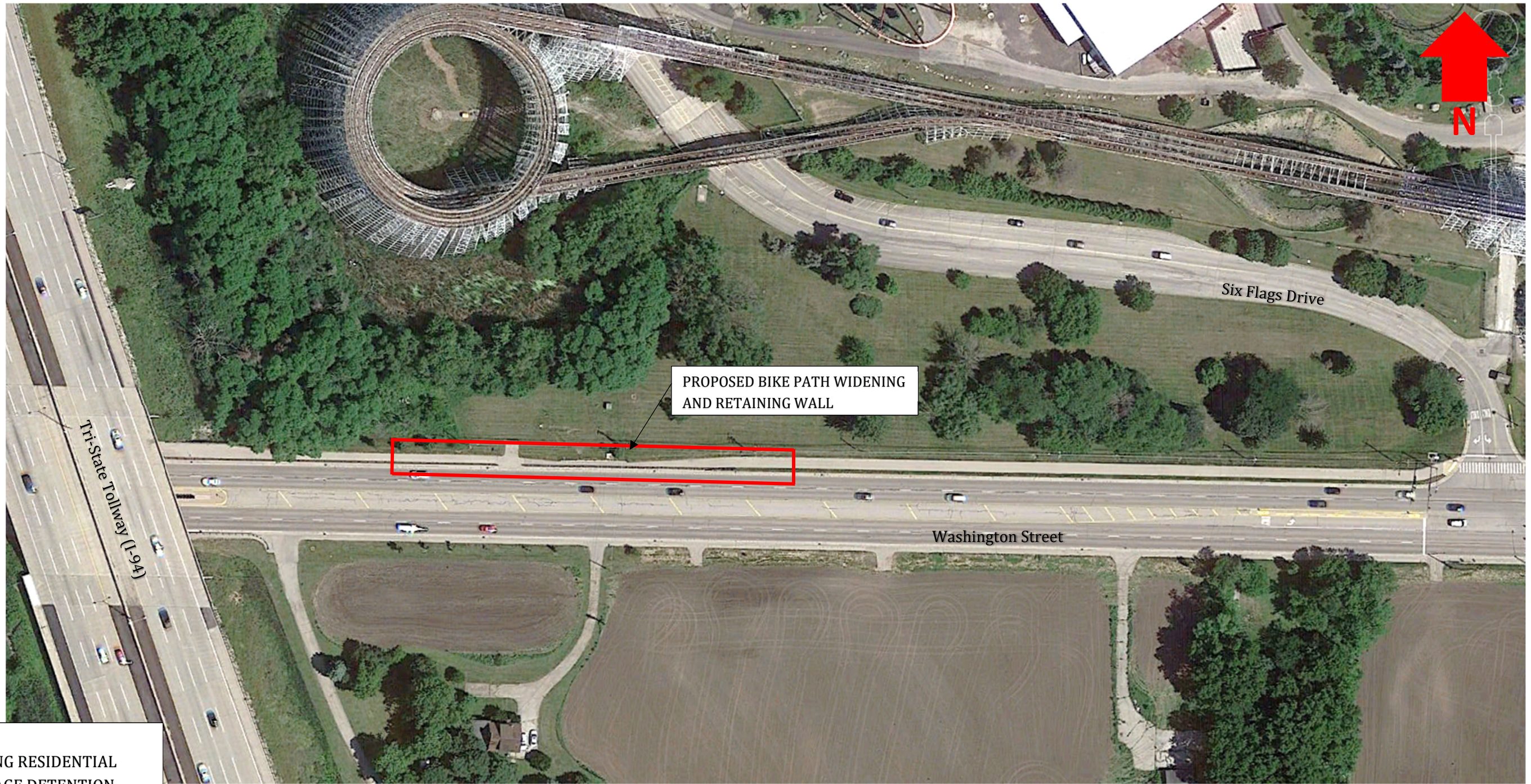
**LEGEND**

- - - EXISTING RESIDENTIAL DRAINAGE DETENTION
- - - PROPOSED DRAINAGE DETENTION POND
- PHASE II PROJECT LIMITS
- ITEMS TO BE EVALUATED DURING PHASE II



**LEGEND**

- - - EXISTING RESIDENTIAL DRAINAGE DETENTION
- - - PROPOSED DRAINAGE DETENTION POND
- PHASE II PROJECT LIMITS
- ITEMS TO BE EVALUATED DURING PHASE II



**LEGEND**

- - - EXISTING RESIDENTIAL DRAINAGE DETENTION
- - - PROPOSED DRAINAGE DETENTION POND
- PHASE II PROJECT LIMITS
- ITEMS TO BE EVALUATED DURING PHASE II

## **SCOPE OF SERVICES:**

### 1. EARLY COORDINATION AND DATA COLLECTION

- *Utility Coordination:* Submit preliminary and final plans to utility companies so conflicts and relocation efforts can be identified. Provide ongoing reviews of permitting and utility relocation efforts as requested by the LCDOT

### 2. SUPPLEMENTAL TOPOGRAPHIC SURVEY

- *Limited Tree Survey:* Conduct a survey of trees exceeding 6" diameter as needed for locations not already included in the Phase I Report. Survey to include size, species, and condition. Provide a summary of findings and anticipated replacement values.

### 3. ENVIRONMENTAL COORDINATION AND PERMITTING

- *EcoCAT and Follow Up Consultation :*
  - The bike path extension on the west side of Hunt Club Road beyond the previously proposed Orchard Valley Drive end point to Dada Drive necessitates an update of the EcoCAT.
- *USACE Regional Permit:*
  - Joint Application
  - USFWS Consultation Memorandum
  - Illinois Historic Preservation Agency Coordination
- *Watershed Development Permit Application:* Lake County Stormwater Management Commission (LCSMC)
- *Preliminary Environmental Site Assessment (PESA) update:*
  - The bike path extension on the west side of Hunt Club Road beyond the previously proposed Orchard Valley Drive end point to Dada Drive necessitates an update of the existing PESA document.
  - Update the Preliminary Environmental Site Assessment (PESA) report in accordance with the Illinois Department of Transportation (IDOT), Chapter 20, 20-12.04 of the Bureau of Local Roads Manual (BLRM). Review historical land use surrounding the project site, environmental data, and environmental occurrences within the minimum search distances contained in published databases.
  - Perform a field visit to review the additional area to be covered by the PESA.

- *Clean Construction or Demolition Debris (CCDD):*
  - Based on the findings of the Environmental Screening and PESA, utilize soil borings and hand augers for testing the potential classification of CCDD. One soil sample will be collected at each soil boring and submitted to a laboratory for analysis for BTEX, PNA, RCRA Metals, SPLP Metals analysis and pH. A field geologist/engineer will field screen soils with a photoionization detector and prepare a field log of the soils encountered and observed during drilling of each soil boring. Additionally, we will check with one local CCDD facility regarding the potential for additional testing requirements.
  - Prepare IEPA LPC-663 soil certification forms for disposal of excavated soils at a CCDD facility as appropriate. If regulated soils are encountered which require management as special waste additional characterization of soils for disposal as non-special waste at a licensed disposal facility will be necessary. A special provision will be prepared to including the names of facilities where the soils have been pre-screened for possible disposal (Min. of 2 facilities; 3 desired).
- *Wetlands:*
  - Update wetland delineation in the project corridor during the growing season (due to the bike path extension on the west side of Hunt Club Road beyond the previously proposed Orchard Valley Drive end point to Dada Drive) including documentation of baseline vegetation, hydrology, and soils information. Update the Wetland Delineation Report and Exhibits that summarize the methodology used, site description, and results of survey.
- *Wetland Banking Agreement:*
  - Assist LCDOT with mitigating wetland impacts through the use of wetland banking. Facilitate preparation and execution of a wetland banking credit purchase agreement; if needed. Wetland banking fees are not included within this agreement and shall be paid for separately LCDOT. It's anticipated minimum effort is needed as LCDOT has purchased credits in the DesPlaines River watershed.

#### 4. PLAN PREPARATION (IN ACCORDANCE WITH LCDOT PLAN PREPARATION GUIDELINES)

- *Title Sheet:* The Title Sheet will be the LCDOT Standard signed and sealed by the CONSULTANT(S).
- *Alignment and Ties:* The alignment and ties sheet will be provided showing all horizontal curve data for the proposed alignments and descriptions of survey benchmarks and control points.
- *General Notes/Index of Sheets/Approved Required Notes/List of State Standards/Commitments:* The General Notes will include LCDOT Standard Notes. The sheet index and list of applicable highway standards and District Details will be included on the General Notes sheet.
- *Summary of Quantities, Schedule of Quantities and Quantity Calculations:* The Summary of Quantities shall include the Pay Item Number, the IDOT Code Number, Quantity, Unit and Item name as it appears on the IDOT Coded Pay Item List. Specialty Items will be noted. Non-

motorized travel accommodations and water main funding split with Village of Gurnee will be identified.

Schedules shall be provided for all pay items except contingency and lump sum pay items.

- *Typical Sections:* Prepare typical sections for the existing and proposed improvements, showing dimensions for roadway surfaces, bases, subbases, subgrade treatments, gutters, curb and gutters, medians, sidewalks, bike paths, ditches, backslopes, and right of way.
- *Maintenance of Traffic and Construction Staging:* Develop a preferred maintenance of traffic and staging plan and submit to the LCDOT for comment and approval. Identify the preferred strategy for maintaining traffic and driveway access. Complete a design of the preferred staging plan which may include a detour or staged construction. Prepare construction staging notes, typical sections, and layout to maintain local traffic flow through the construction zone. Layout sheets will be provided with two window views per sheet at 1:50 scale. Confer with LCDOT staff, emergency services, and public transportation agencies to consider local impacts and concerns.
- *Plan and Profile:* Identify design constraints including clear zone, safety protection requirements, obstructions, drainage limitations, and potential design exceptions. Plan and profile sheets will include improvement limits, stations and offset callouts, define paving limits, label construction limit locations and right of way breaks, utility adjustments, guardrail locations, and wetland locations and impacts. The sheets will also include ditch, inlet, culvert and storm sewer design for the proposed improvements and existing utilities. If space allows, drainage schedules will be included on the individual plan and profile sheets. Separate removal sheets will be prepared for this project with two windows at 1:50 scale.
  - The plan sheets will also include vertical and horizontal curve data. Provide existing/proposed plan and existing/proposed profile at 1:20 horizontal and 1:2 vertical scale.
- *Erosion Control Plans:* Prepare a soil erosion and sediment control plans per stage for the improvements with two window views per sheet at 1:100 scale. Prepare a Storm Water Pollution Prevention Plan.
- *Pavement Marking and Landscaping Plans:* Prepare pavement marking plans with two window views per sheet at 1:100 scale. Include legends and callouts for the type pavement marking, the limits of the pavement marking and taper rates. Tree replacement will be shown on the plans at a mitigation rate of 1:1. Only turf grass is anticipated in the parkway.

- *Structural Plans (Retaining Walls):*
  - Determine the preferred structure type and geometry for proposed retaining walls at four locations:
    - West leg detention pond
    - North leg bike path extension
    - South leg road widening
    - East leg adjacent to Six Flags Great America bike path widening
  - Evaluate feasible and economical wall type alternatives in terms of cost, maintenance, constructability and environmental impacts. Prepare a brief technical memorandum with recommendations to LCDOT for review and approval.
  - Prepare structural plans for the selected wall types, including material specifications, general notes, and plan details as required by the selected type and configuration.
- *Traffic Signal and Interconnect Plans:* Design temporary and permanent traffic signal plans at 1:20 scale, cable plans, and mast arm mounted street name signs. Prepare temporary and permanent traffic signal interconnect plans with two window views per sheet at 1:50 scale and interconnect schematics.

Fiber splicing and cabinet details sheets will be provided by LCDOT upon request for temporary and permanent signals. Plan sheets will then be inserted into the plan set.

- *Street Lighting Plans:* Prepare photometric calculations, general lighting layout, lighting plans, and electrical details conforming to IES and LCDOT standards. The LCDOT will provide the fixture type and lighting standards prior to design. It is anticipated this work is for combination poles at the Washington Street/Hunt Club Road intersection only and no transition lighting will be required. Temporary lighting is anticipated for the temporary signals.
- *Cross Section Design:* Design roadway cross sections at 50-foot intervals and all cross streets, driveways and cross-road culverts utilizing Bentley's MicroStation Select series 4 Corridor Design Program in order to provide sufficient detail to determine ROW, including varying slopes to limit ROW impacts.
  - 1:5V, 1:5H scale
  - Half section on centerline of all driveways,
  - Existing and proposed ROW to be shown
  - Provide centerline, edge of pavement and ditch elevations.
  - Provide cut and fill quantities.
  - Indicate location of unsuitable removal.
  - Show proposed drainage.
  - Any existing/proposed utilities

HUNT CLUB ROAD AT WASHINGTON STREET  
LAKE COUNTY DIVISION OF TRANSPORTATION

- ADA Curb Ramp Details at 1:5 scale to be provided at the following locations listed below where either new ramps will be constructed, existing ramps will be impacted or where existing locations are not current standard. Locations that do not warrant a detectable warning are not considered ADA curb ramps. Details will not be provided for those locations.

MAIN ROUTE	CROSSROAD	QUADRANT	CONTROL TYPE	DETECTABLE WARNING REQ.
Hunt Club	Wildflower Ln	W, NE, SE	STOP SIGN	YES
Hunt Club	34240 Hunt Club Rd	W	NONE	NO
Hunt Club	295 Hunt Club Rd	E	NONE	NO
Hunt Club	Gurnee Glen	SW,NW	STOP SIGN	YES
Hunt Club	PNC Bank Ent.	NE, Island N/S, SE	STOP SIGN	YES
Hunt Club	Washington St	SE,SW,NE,NW	SIGNAL	YES
Hunt Club	Gas Station Ent.	SW, Island N/S, NW	STOP SIGN	YES
Hunt Club	Private Ent.	SE, NE	NONE	NO
Hunt Club	Lakeland Church Ent.	SW, NW	STOP SIGN	YES
Hunt Club	Senior Living Ent.	SE, NE	STOP SIGN	YES
Hunt Club	Sunrise Ent.	SW, NW	STOP SIGN	YES
Hunt Club	35066 Hunt Club Rd	SW, NW	NONE	NO
Hunt Club	Orchard Valley Dr	SE, NE	SIGNAL	YES
Hunt Club	Community Center Ent.	SW, NW	SIGNAL	YES
Hunt Club	Foxworth Lane	SW, NW	STOP SIGN	YES
Hunt Club	ComEd	SW,NW	NONE	NO
Washington St	17112 Washington St	NW, NE	NONE	NO
Washington St	Gas Station Ent.	NW, NE	STOP SIGN	YES
Washington St	6498 Washington St	NW, NE	NONE	NO
Washington St	16962 Washington St	NW, NE	NONE	NO
Washington St	16926 Washington St	NW, NE	NONE	NO
Washington St	16894 Washington St	NW, NE	NONE	NO
Washington St	16862 Washington St	NW, NE	NONE	NO
Washington St	16840 Washington St	NW, NE	NONE	NO
Washington St	16824 Washington St	NW, NE	NONE	NO
Washington St	16796 Washington St	NW, NE	NONE	NO

- *Driveway Details:* No individual driveway details are anticipated for this project.
- *Special Provisions:* Prepare special provisions to specify items not covered by the Standard Specifications for Road and Bridge Construction. Utilize District One Recurring Special Provisions and Bureau of Design and Environment (BDE) Special Provisions. Prepare additional project specific Special Provisions as necessary.



- *Estimate of Cost:* Prepare independent estimate of cost utilizing a spreadsheet format for preliminary, pre-final and final plan submittal. Estimates will also be included for the Inter Governmental Agreement with the Village of Gurnee at the same time as the preliminary, pre final and final submittal. An Exhibit will be prepared showing the Village the cost sharing improvements.
- *Estimate of Time:* Complete BDE 220A form and prepare bar chart. BDE 220A form to be provided at Final Submittal only.

#### 5. MEETINGS

- *Meetings:* The following meetings (6) are anticipated for this project:
  - IDOT (2) (Kickoff and Review)
  - Utility Coordination Meetings (2)
  - LCDOT/Geotechnical Meetings (2 – pre bore & post bore)

The fee for the above meetings has already been included in the Phase I agreement and will not be part of this (Phase II) agreement.

#### Added Meetings:

- ROW Kick-off meeting (1)
- Village meetings (2)
- LCDOT Additional Meetings (2)
- *Project Website:* The design, maintenance and hosting of project website is not included in scope. The ENGINEER will provide project data to the LCDOT upon request.
- *Social Media:* No social media participation is anticipated.

#### 6. GEOTECHNICAL REPORT

- *Pavement Cores and Soil Borings:* Utilize Interra, Inc. to take pavement cores of the surface and base material for determining the composition of the existing pavement material within the project limits. Collect pavement borings on alternating sides of the pavement centerline and obtain topsoil thicknesses at select locations. Take 30' structural borings at each retaining wall location. Provide analysis and recommendations, including subgrade, in a soils report in accordance with LCDOT and IDOT guidelines.
- *See scope prepared by Interra, Inc.*

#### 7. RIGHT OF WAY AND BOUNDARY

- *Appraisals:* Employ a real-estate appraiser certified by the DEPARTMENT to prepare a comparable land sales analysis and appraisals for parcels of land to be acquired for right-of-way, permanent easements, or temporary construction easements.
- *See scope prepared by HDR.*

- *Negotiations:* Employ a negotiator certified by DEPARTMENT to negotiate the sale of parcels of land to be acquired for right-of-way, permanent easements, or temporary construction easements. Provide support to the LCDOT during the ROW acquisition process.
- *See scope prepared by HDR.*

8. QA/QC

- Perform in-house peer and milestone reviews by senior staff during project initiation, conceptual review, preliminary, pre final, and final submittals. Conduct milestone reviews of subconsultants and provide feedback throughout the progress of work.

9. MANAGE PROJECT

- Plan, schedule, and control the activities that must be performed to complete the project including budget, schedule, and scope. Coordinate with LCDOT and project team to ensure the goals of the project are achieved. Prepare and submit monthly invoices, coordinate invoices from sub-consultants, and provide regular updates to the LCDOT.

10. PHASE III COORDINATION

- Attend Pre-Construction meeting. Provide design assistance and support to the LCDOT throughout construction. 40 hours have been allocated for this task.

11. MISCELLANEOUS SHARED USE PATH INVESTIGATION AND DESIGN

- Investigate approximately 250 feet of shared use path along Washington Street east of Interstate 94 and south of Six Flags Great America where the shared path has a reduced clearance width of four feet. Design and Improvements may include utility coordination, structural design and geotechnical investigation.

12. WATERMAIN DESIGN – HUNT CLUB ROAD BETWEEN WILDFLOWER LANE AND WASHINGTON STREET

- Provide watermain design on behalf of the Village of Gurnee between Wildflower Lane and Washington Street in the east parkway of Hunt Club Road. Design will include layout, pay item determination, quantities and special provisions.

HUNT CLUB ROAD (CH 29) AT WASHINGTON STREET (CH 45)  
 LAKE COUNTY DIVISION OF TRANSPORTATION  
 PH II ENGINEERING SERVICES - MANHOUR SUMMARY

	Task Manhours	Total Manhours
<b>1- EARLY COORDINATION AND DATA COLLECTION</b>		
Utility Coordination	48	
<b>Total task manhours</b>		<b>48</b>
<b>2- SUPPLEMENTAL TOPOGRAPHIC SURVEY</b>		
Supplemental Survey		
Survey for path near Dada Drive and path near Great America	40	
Tree Survey Field Work	18	
CADD Processing & Management (SS4 model)	40	
<b>Total task manhours</b>		<b>98</b>
<b>3- ENVIRONMENTAL COORDINATION AND PERMITTING</b>		
EcoCAT and Follow Up Consultation	4	
USACE Regional Permit		
Joint Application	4	
Narrative	32	
Exhibits	48	
USFWS Consultation/Memorandum	16	
Illinois Historic Preservation Agency Coordination	2	
Report Assembly	4	
Watershed Development Permit Application	8	
PESA Update	32	
Special Waste Earthwork Volumes	48	
CCDD Investigation	48	
CCDD Forms	3	
Update Wetland Delineation	10	
Wetland Banking Agreement	2	
<b>Total task manhours</b>		<b>261</b>

HUNT CLUB ROAD (CH 29) AT WASHINGTON STREET (CH 45)  
 LAKE COUNTY DIVISION OF TRANSPORTATION  
 PH II ENGINEERING SERVICES - MANHOUR SUMMARY

	Task Manhours	Total Manhours
<b>4- PLAN PREPARATION</b>		
Title Sheet	8	
Alignment and Ties (4 sheets at 12 hours/sheet)	48	
Notes/Index/Standards (2 sheets)	24	
Summary of Quantities (4 sheets at 15 hours/sheet)	60	
Schedule of Quantities (10 sheets at 12 hours/sheet)	120	
Typical Sections (5 sheets at 16 hours/sheet)	80	
Double Panel Removal Plans (4 sheets - 1"=50' at 18 hours/sheet)	72	
Maintenance of Traffic (Pre-stage, stage 1, stage 2, stage 3)		
Stage Notes (1 sheet)	8	
Typical Sections (8 sheets at 8 hours/sheet)	64	
Double Panel Plan sheets (10 sheets - 1"=50' at 20 hours/sheet)	200	
Plan & Profile (11 sheets - 1"=20' at 32 hours/sheet)	352	
Plan & Profile - Bike Path Only (8 sheets - 1"=20' at 16 hours/sheet)	192	
Drainage & Utilities Plans included in P&P hours (also includes stormCAD)		
Stormwater Detention (3 sheets at 40 hours/sheet)	120	
Erosion Control Plans (Pre-stage, stage 1, stage 2, stage 3)		
Plans (15 Sheets - 1"=100' at 12 hours/sheet)	128	
Detention Locations - (3 sheets at 12 hours/sheet)	36	
Pavement Marking and Landscape Plans		
Double Panel Plans (3 Sheets - 1"=100' at 16 hours/sheet)	48	
Structural Plans		
Wall Type Study Memo	26	
Elevation and Detail sheets (3 Walls)	184	
Intersection Plan Detail Sheet	24	
Traffic Signal Plans (Permanent)		
Traffic Signal General Notes	4	
Traffic Signal Details	8	
Traffic Signal Plan (2 sheets at 16 hours/sheet)	32	
Cable Diagram Plan (1 sheet at 16 hours/sheet)	16	
Mast Arm Mounted Signs and Schedule of Quantities	16	
Traffic Signal Plans (Temporary)		
Analysis of staging and permanent signal locations	4	
Temporary Traffic Signal General Notes	2	
Removal and Temporary Installation Plans - Pre Stage	24	
2 sheets at 12 hours/sheet		
Temporary Installation Plans - Stages 1, 2 and 3	84	
6 sheets at 14 hours/sheet		
Cable Diagram Plan (Pre-Stage, 1, 2 and 3)	28	
2 sheets at 14 hours/sheet		
Interconnect		
Temporary Interconnect Plan		
Double Panel Plans (4 Sheets - 1"=50' at 12 hours/sheet)	48	
Temporary Interconnect Schematic (1 sheet at 12 hours/sheet)	12	
Permanent Interconnect Plan (4 sheet at 12 hours/sheet)		
Double Panel Plans (4 Sheets - 1"=50' at 12 hours/sheet)	48	
Permanent Interconnect Schematic (1 sheet at 12 hours/sheet)	12	
Insertion of LCDOT Details (Cabinet, Fiber Splicing, Fiber Termination)	8	
Lighting (Combo Post Lighting - No approach lighting)		
Lighting Plan (Layout and Detail)	24	
Photometric and Voltage Drop calculations	8	
Cross Sections		
Build 3D Model	280	
Roadway - 142 Sections at 0.5 hrs/section	71	
Bike Path Only - 100 sections at 0.5 hrs/section	50	
Phase II Labeling & Earthwork by Stage	120	
ADA Curb Ramp Details (31 details at 6 hours/detail)	186	
LCDOT Details and IDOT HWY STD inclusion	8	
Special Provisions	40	
Estimate of Cost	16	
Estimate of Time	4	

HUNT CLUB ROAD (CH 29) AT WASHINGTON STREET (CH 45)  
 LAKE COUNTY DIVISION OF TRANSPORTATION  
 PH II ENGINEERING SERVICES - MANHOUR SUMMARY

	Task Manhours	Total Manhours
<b>5- MEETINGS</b>		
Hours accounted for under Phase I Manhours noted in Scope.	0	
Additional Meetings:		
ROW Kick-off Meeting (2 people)	12	
Village of Gurnee Meetings (2 people 2 meetings)	24	
LCDOT Meetings (2 people 2 meetings)	24	
<b>Total task manhours</b>		<b>60</b>
<b>6- GEOTECHNICAL REPORT</b>		
Coordination	8	
<b>Total task manhours</b>		<b>8</b>
<b>7- RIGHT OF WAY AND BOUNDARY</b>		
Coordination	8	
POH hours accounted for in Phase I Manhours		
Additional POH hours (Path near Dada Drive and near Great America)	60	
<b>Total task manhours</b>		<b>68</b>
<b>8- QAQC</b>		
Review of Milestone Submittals	140	
<b>Total task manhours</b>		<b>140</b>
<b>9- MANAGE PROJECT</b>		
Administration - 4 hrs/month at 24 months	96	
<b>Total task manhours</b>		<b>96</b>
<b>10- PHASE III COORDINATION</b>		
Pre-construction Meeting	6	
RFI Responses	48	
<b>Total task manhours</b>		<b>54</b>
<b>11- MISC SHARED USE PATH INVESTIGATION AND DESIGN</b>		
Utility Coordination	16	
Geometrics	16	
Land Acquisition	24	
Structural Design	64	
Plan Sheets	72	
<b>Total task manhours</b>		<b>192</b>
<b>12- WATERMAIN DESIGN - SOUTH LEG</b>		
Watermain Layout	40	
Pay Items and Quantities	16	
Special Provisions	16	
<b>Total task manhours</b>		<b>72</b>
<b>TOTALS</b>	<b>4044</b>	<b>4044</b>

HUNT CLUB ROAD (CH 29) AT WASHINGTON STREET (CH 45)  
 LAKE COUNTY DIVISION OF TRANSPORTATION  
 ENGINEERING SERVICES - EXPENSE SUMMARY

	Travel		Mileage Cost	Postage	Copies (Outside)	Additional Expense
	Miles @\$0.580	Days @\$65				
<b>1- EARLY COORDINATION AND DATA COLLECTION</b>						
<b>2- SUPPLEMENTAL TOPOGRAPHIC SURVEY</b>						
Vehicle Expense (Update Tree Survey) 1 - 53 miles @ \$0.580/mi	53		\$30.74			
Vehicle Expense (Update Wetland Delineation) 1-53 miles @0.580mi	53		\$30.74			
<b>3- ENVIRONMENTAL COORDINATION AND PERMITTING</b>						
Vehicle Expense (4-53 miles @ \$0.580/mi)	212		\$122.96			
Database research and equipment rental						\$800.00
First Environmental Laboratory						\$11,000.00
Permit Submittals				\$100.00		
<b>4- PLAN PREPARATION</b>						
Plan Submittals				\$400.00		
<b>5- MEETINGS</b>						
Vehicle Expense (5-53 miles @ \$0.580/mi)	265		\$153.70			
<b>6- GEOTECHNICAL REPORT</b>						
<b>7- RIGHT OF WAY AND BOUNDARY</b>						
Titles (5 parcels at \$500/parcel)						\$2,500.00
<b>8- QAQC</b>						
<b>9- MANAGE PROJECT</b>						
<b>10- PHASE III COORDINATION</b>						
Vehicle Expense (Pre-construction Meeting) 1 - 50 miles \$0.580/mi	50		\$29.00			
<b>Subtotals</b>	<b>633</b>	<b>miles</b>	<b>\$367.14</b>	<b>\$500.00</b>	<b>\$0.00</b>	<b>\$14,300.00</b>

Total Expenses \$15,167.14

**PAYROLL ESCALATION TABLE  
FIXED RAISES**

FIRM NAME Baxter & Woodman, Inc.  
PRIME/SUPPLEMENT PRIME

DATE 08/16/19  
PTB NO. N/A

CONTRACT TERM 32 MONTHS  
START DATE 10/1/2019  
RAISE DATE 1/1/2020

OVERHEAD RATE 144.71%  
COMPLEXITY FACTOR  
% OF RAISE 3.00%

**ESCALATION PER YEAR**

10/1/2019 - 1/1/2020

1/2/2020 - 1/1/2021

1/2/2021 - 1/1/2022

1/2/2022 - 6/1/2022

3  
32

12  
32

12  
32

5  
32

= 9.38%  
= 1.0486

38.63%

39.78%

17.07%

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

**4.86%**

## Subconsultants

FIRM NAME Baxter & Woodman, Inc. DATE 08/16/19  
 PRIME/SUPPLEMENT PRIME  
 PSB NO. N/A

NAME	Direct Labor Total	Contribution to Prime Consultant
Interra, Inc	7,359.00	735.90
HDR, Inc.	33,978.00	0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
<b>Total</b>	41,337.00	735.90





### AVERAGE HOURLY PROJECT RATES

**FIRM** Baxter & Woodman, Inc.  
**PSB** N/A  
**PRIME/SUPPLEMENT** PRIME

**DATE** 08/16/19

**SHEET** 1 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Early Coordination and Data Collection			Supplemental Topographic Survey			Environmental Coordination/Permitting			Plan Preparation			Meetings		
		Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg
Principal	75.00	0																	
Sr. Engineer IV	68.48	254	6.28%	4.30										120	4.07%	2.79			
Sr. Engineer III	55.93	610	15.08%	8.44							30	11.49%	6.43	220	7.47%	4.18	60	100.00%	55.93
Sr. Engineer II	49.30	280	6.92%	3.41										280	9.50%	4.68			
Sr. Engineer I	43.99	0																	
Engineer III	37.78	1147	28.36%	10.72							60	22.99%	8.69	975	33.08%	12.50			
Engineer II	32.84	0																	
Engineer I	30.59	820	20.28%	6.20	20	41.67%	12.74				100	38.31%	11.72	700	23.75%	7.27			
Sr Geologist I	55.07	24	0.59%	0.33							24	9.20%	5.06						
Engineer Tech V	49.28	0																	
Engineer Tech IV	49.66	904	22.35%	11.10	28	58.33%	28.97	98	100.00%	49.66	42	16.09%	7.99	652	22.12%	10.99			
Engineer Tech III	39.49	0																	
Engineer Tech II	35.34	0																	
Engineer Tech I	27.28	0																	
Admin Support III	28.61	0																	
Admin Support II	19.46	0																	
Admin Support I	35.40	5	0.12%	0.04							5	1.92%	0.68						
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
<b>TOTALS</b>		4044	100%	\$44.54	48	100.00%	\$41.71	98	100%	\$49.66	261	100%	\$40.57	2947	100%	\$42.40	60	100%	\$55.93

### AVERAGE HOURLY PROJECT RATES

FIRM Baxter & Woodman, Inc.  
 PSB N/A  
 PRIME/SUPPLEMENT PRIME

DATE 08/16/19

SHEET 2 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Geotechnical Report			Right-of-Way and Boundary			QA/QC			Manage Project			Phase III Coordination			Misc Shared Use Path		
		Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg
Principal	75.00																		
Sr. Engineer IV	68.48							40	28.57%	19.57	30	31.25%	21.40	8	14.81%	10.15	40	20.83%	14.27
Sr. Engineer III	55.93	8	100.00%	55.93	48	70.59%	39.48	100	71.43%	39.95	66	68.75%	38.45	46	85.19%	47.64	32	16.67%	9.32
Sr. Engineer II	49.30																		
Sr. Engineer I	43.99																		
Engineer III	37.78																80	41.67%	15.74
Engineer II	32.84																		
Engineer I	30.59																		
Sr Geologist I	55.07																		
Engineer Tech V	49.28																		
Engineer Tech IV	49.66				20	29.41%	14.61										40	20.83%	10.35
Engineer Tech III	39.49																		
Engineer Tech II	35.34																		
Engineer Tech I	27.28																		
Admin Support III	28.61																		
Admin Support II	19.46																		
Admin Support I	35.40																		
<b>TOTALS</b>		8	100%	\$55.93	68	100%	\$54.09	140	100%	\$59.52	96	100%	\$59.85	54	100%	\$57.79	192	100%	\$49.68

## AVERAGE HOURLY PROJECT RATES

**FIRM** Baxter & Woodman, Inc.  
**PSB** N/A  
**PRIME/SUPPLEMENT** PRIME

**DATE** 08/16/19  
**SHEET** 3 OF 3

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Watermain Design																	
		Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg	Hours	% Part.	Wgt'd Avg			
Principal	75.00																		
Sr. Engineer IV	68.48	16	22.22%	15.22															
Sr. Engineer III	55.93																		
Sr. Engineer II	49.30																		
Sr. Engineer I	43.99																		
Engineer III	37.78	32	44.44%	16.79															
Engineer II	32.84																		
Engineer I	30.59																		
Sr Geologist I	55.07																		
Engineer Tech V	49.28																		
Engineer Tech IV	49.66	24	33.33%	16.55															
Engineer Tech III	39.49																		
Engineer Tech II	35.34																		
Engineer Tech I	27.28																		
Admin Support III	28.61																		
Admin Support II	19.46																		
Admin Support I	35.40																		
<b>TOTALS</b>		72	100%	\$48.56	0	0%	\$0.00	0	0%	\$0.00	0	0%	\$0.00	0	0%	\$0.00	0	0%	\$0.00

## PAYROLL RATES

<b>FIRM NAME</b>	<u>Baxter &amp; Woodman, Inc.</u>	<u>08/16/19</u>
<b>PRIME/SUPPLEMENT</b>	<u>PRIME</u>	
<b>PSB NO.</b>	<u>N/A</u>	
<b>ESCALATION FACTOR</b>		<b>4.86%</b>

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
Principal	\$76.34	\$75.00
Sr. Engineer IV	\$65.31	\$68.48
Sr. Engineer III	\$53.34	\$55.93
Sr. Engineer II	\$47.02	\$49.30
Sr. Engineer I	\$41.95	\$43.99
Engineer III	\$36.03	\$37.78
Engineer II	\$31.32	\$32.84
Engineer I	\$29.17	\$30.59
Sr Geologist I	\$52.52	\$55.07
Engineer Tech V	\$47.00	\$49.28
Engineer Tech IV	\$47.36	\$49.66
Engineer Tech III	\$37.66	\$39.49
Engineer Tech II	\$33.70	\$35.34
Engineer Tech I	\$26.02	\$27.28
Admin Support III	\$27.28	\$28.61
Admin Support II	\$18.56	\$19.46
Admin Support I	\$33.76	\$35.40
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00



August 14, 2019

Mr. Jim McNally, PE  
Transportation Department Manager  
Baxter & Woodman  
8678 Ridgefield Road  
Crystal Lake, IL 60012

RE: Hunt Club at Washington (HCWS)  
HDR Real Estate Services

Dear Mr. McNally:

HDR Engineering, Inc. (HDR) is pleased for the opportunity to provide Real Estate Services to Baxter & Woodman for the Hunt Club at Washington (HCWS) Improvement Project. These services shall be performed in accordance with the Uniform Relocation and Real Properties Acquisition Policy Act of 1970, as amended (including MAP-21) and State and local laws and regulations. At your request, we have prepared and attached a Scope of Services.

HDR understands that it will contract directly with the sub consultants for preliminary services (i.e., appraisals and title work). Additionally, HDR will provide a Right-of-Way team to manage the sub consultants, which includes ordering their services and performing quality reviews of deliverables. HDR will also perform land acquisition services. Our agents have the experience to ensure the Scope of Services attached is completed in a professional and timely manner.

We look forward to working with you to successfully complete the HCWS Improvement Project. If modifications to the Scope of Services are required or you have any questions, please contact Adam Handy at 773.867.7261 or [adam.handy@hdrinc.com](mailto:adam.handy@hdrinc.com).

Sincerely,

**HDR Engineering, Inc.**

Thomas M. Hein, PE  
Vice President

Adam Handy  
Project Manager

[hdrinc.com](http://hdrinc.com)

9450 W. Bryn Mawr Ave., Suite 400, Rosemont, IL 60018  
773-380-7900

## SCOPE OF SERVICES

### PART 1.0 LAND ACQUISITION SERVICES

HDR's land acquisition services, responsibilities, and deliverables will consist of the following:

- Manage contracted sub consultants, including:
  - ordering and monitoring delivery of appraisal reports
  - ordering and monitoring delivery of title work
- Perform quality reviews of sub consultant deliverables.
- Attend up to or participate in five hours of meetings and conference calls to discuss project related items.
- Perform and maintain project reporting. Reports will be provided on a weekly basis or upon request from Baxter & Woodman.
- Prepare and send introductory letter to land owner with general statement of the project and briefly describe the necessary requirements.
- Review plat of highway and title documents for each parcel prior to negotiation activities.
- Prepare offer packages involving (21) fee takes, (42) temporary easements, and (2) permanent easements.<sup>1</sup>
- Conduct negotiations with land owners. This would include contacting the land owner up to three times before making a determination that the acquisition of the parcel cannot be successfully acquired. Upon request from Baxter & Woodman, HDR can exceed the minimum number of contacts in an attempt to make reasonable efforts to reach a settlement before recommending condemnation proceedings.
- Upon successful negotiations, HDR will submit to Baxter & Woodman the completed parcel file with original signed conveyance documents, the Negotiator's report documenting negotiation activities, and other documentation as required.
- Prepare necessary documentation for administrative settlements.
- If negotiations are not successful, HDR will submit the parcel file along with necessary documentation to Baxter & Woodman with a recommendation to acquire the parcel through condemnation.

### PART 2.0 ADDITIONAL SERVICES

Additional and necessary land acquisition services not listed above can be performed upon request but may require additional fee. Such services may include but not be limited to the following:

- Additional negotiation efforts due to project changes, requests from Baxter & Woodman to negotiate beyond the number of contacts as detailed above or if the project extends beyond the current schedule.
- Order and monitor delivery of appraisal reviews.<sup>2</sup>
- Lender's fees related to processing partial release of mortgages.<sup>3</sup>
- Recording fees.<sup>4</sup>

---

<sup>1</sup> Per data provided by Baxter & Woodman, there are a total of 44 parcels. Many parcels have multiple takes.

<sup>2</sup> Per Baxter & Woodman, state & federal funds not involved on project - appraisal reviews not necessary. If state and or federal funds are used at some point for any phase of the project, then appraisal reviews may be necessary.

<sup>3</sup> Many lender fees require a processing fee to process partial releases. Costs can range from \$50.00 to \$500.00. An additional work order may be required.

<sup>4</sup> If HDR is tasked with recording easement agreements, an additional work order may be required.

- Litigation fees.<sup>5</sup>

### PART 3.0 SUB CONSULTANTS

The proposed sub consultants have provided fees associated with their respective service. HDR understands that it will contract directly with the sub consultants for appraisals and title. HDR will manage the sub consultants and perform quality reviews of their deliverables.

### PART 4.0 PERIOD OF SERVICE

Date of Notice to Proceed through December 31, 2022.

### PART 5.0 OTHER

HDR shall invoice on a monthly basis. Invoices shall include costs associated with each task performed. HDR will submit a Progress Report on a monthly basis with invoicing. The Progress Report will include a description of work accomplished that period as well as work anticipated for the next period for each parcel.

### PART 6.0 COMPENSATION

- Appraisal Reports will be provided by Triple D Valuation Services, Inc.<sup>6</sup>
  - \$2,000.00 for residential, vacant or farm parcels (Non-complex)
  - \$3,000.00 for commercial parcels (Non-complex)
- Appraisal Review will be provided by Woodland Valuation Services, LLC.<sup>7</sup>
  - \$600.00 per appraisal review
- Title Services will be provided by Wheatland Title Guaranty Company.<sup>8</sup>
  - \$525.00 for original title commitment, including a copy of the last deed, or other document showing current title owner
  - \$65.00 for date-down title commitment
- Negotiation Services will be provided by HDR, Inc.
  - \$2,400.00 (Labor & Directs) per parcel for land acquisition services where fee takes, permanent easements and temporary easements are required

---

<sup>5</sup> Rate for each ½ day for pretrial meeting or court appearance for negotiator is \$1,000.00. Rate for each ½ day for appraiser is \$1,000.00.

<sup>6</sup> Complex appraisals not required.

<sup>7</sup> If necessary - see note under Part 2.0 Additional Services.

<sup>8</sup> Title services do not include closings, which can be up to \$750.00 per closing. This may require an additional work order.



### PAYROLL ESCALATION TABLE FIXED RAISES

FIRM NAME HDR Engineering, Inc.  
 PRIME/SUPPLEMENT Prime  
 Prepared By Aniko Shuey

DATE 08/14/19  
 PTB-ITEM#                     

CONTRACT TERM 34 MONTHS  
 START DATE 2/28/2020  
 RAISE DATE 12/27/2020  
 END DATE 12/27/2022

OVERHEAD RATE 155.99%  
 COMPLEXITY FACTOR 0  
 % OF RAISE 3%

#### ESCALATION PER YEAR

year	First date	Last date	Months	% of Contract
0	2/28/2020	12/27/2020	10	29.41%
1	12/28/2020	12/27/2021	12	36.35%
2	12/28/2021	12/27/2022	12	37.44%

---

The total escalation = 3.21%

## PAYROLL RATES

<b>FIRM NAME</b>	<u>HDR Engineering, Inc.</u>	<b>DATE</b>	<u>08/14/19</u>
<b>PRIME/SUPPLEMENT</b>	<u>Prime</u>		
<b>PTB-ITEM #</b>	<u>0</u>		

**ESCALATION FACTOR**                      **3.21%**

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

CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Principal	\$117.10	\$120.86
Project Manager I	\$52.83	\$54.52
Realty Specialist IV	\$58.84	\$60.73
Realty Specialist II	\$41.77	\$43.11
Realty Technician I	\$24.00	\$24.77
Clerical IV	\$39.79	\$41.07



### AVERAGE HOURLY PROJECT RATES

**FIRM** HDR Engineering, Inc.  
**PTB-ITEM#** 0  
**PRIME/SUPPLEMENT** Prime

**DATE** 08/14/19  
**SHEET** 1 OF 1

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Preliminary Work			Land Acquisition			Quality Control			Project Management			Hours	% Part.	Wgtd Avg
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg			
Principal	70.00	4.0	0.52%	0.37	0			0			0			4	7.14%	5.00			
Project Manager I	54.52	95.0	12.40%	6.76	45	100.00%	54.52	0			10	20.00%	10.90	40	71.43%	38.95			
Realty Specialist IV	60.73	40.0	5.22%	3.17	0			0			40	80.00%	48.58	0					
Realty Specialist II	43.11	565.0	73.76%	31.80	0			565	91.87%	39.61	0			0					
Realty Technician I	24.77	50.0	6.53%	1.62	0			50	8.13%	2.01	0			0					
Clerical IV	41.07	12.0	1.57%	0.64	0			0			0			12	21.43%	8.80			
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
<b>TOTALS</b>		766.0	100%	\$44.36	45.0	100.00%	\$54.52	615.0	100%	\$41.62	50.0	100%	\$59.49	56.0	100%	\$52.75	0.0	0%	\$0.00

**COMPANY NAME: HDR Engineering, Inc.**
**PTB NUMBER: Hunt Club at Washington**
**TODAY'S DATE: 8/14/2019**

ITEM	ALLOWABLE	UTILIZE W.O. ONLY	QUANTITY J.S. ONLY	CONTRACT RATE	TOTAL
Per Diem (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum			\$0.00	\$0.00
Lodging (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost (Up to state rate maximum)			\$0.00	\$0.00
Lodging Taxes and Fees (per GOVERNOR'S TRAVEL CONTROL BOARD)	Actual cost			\$0.00	\$0.00
Air Fare	Coach rate, actual cost, requires minimum two weeks' notice, with prior IDOT approval			\$0.00	\$0.00
Vehicle Mileage (per GOVERNOR'S TRAVEL CONTROL BOARD)	Up to state rate maximum		3,000	\$0.580	\$1,740.00
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day			\$65.00	\$0.00
Vehicle Rental	Actual cost (Up to \$55/day)			\$0.00	\$0.00
Tolls	Actual cost		129	\$5.00	\$645.00
Parking	Actual cost			\$0.00	\$0.00
Overtime	Premium portion (Submit supporting documentation)			\$0.00	\$0.00
Shift Differential	Actual cost (Based on firm's policy)			\$0.00	\$0.00
Overnight Delivery/Postage/Courier Service	Actual cost (Submit supporting documentation)		60	\$7.00	\$420.00
Copies of Deliverables/Mylars (In-house)	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Copies of Deliverables/Mylars (Outside)	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Project Specific Insurance	Actual cost			\$0.00	\$0.00
Monuments (Permanent)	Actual cost			\$0.00	\$0.00
Photo Processing	Actual cost			\$0.00	\$0.00
2-Way Radio (Survey or Phase III Only)	Actual cost			\$0.00	\$0.00
Telephone Usage (Traffic System Monitoring Only)	Actual cost			\$0.00	\$0.00
CADD	Actual cost (Max \$15/hour)			\$14.00	\$0.00
Web Site	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Advertisements	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Public Meeting Facility Rental	Actual cost (Submit supporting documentation)			\$0.00	\$0.00
Public Meeting Exhibits/Renderings & Equipment	Actual cost (Submit supporting documentation)			\$500.00	\$0.00
Recording Fees	Actual cost			\$0.00	\$0.00
Transcriptions (specific to project)	Actual cost			\$0.00	\$0.00
Courthouse Fees	Actual cost			\$500.00	\$0.00
Storm Sewer Cleaning and Televising	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Traffic Control and Protection	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Aerial Photography and Mapping	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Utility Exploratory Trenching	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
Testing of Soil Samples*	Actual cost			\$0.00	\$0.00
Lab Services*	Actual cost (Provide breakdown of each cost)			\$0.00	\$0.00
Equipment and/or Specialized Equipment Rental*	Actual cost (Requires 2-3 quotes with IDOT approval)			\$0.00	\$0.00
B/W Prints 8.5x11	Actual cost (each)		1,250	\$0.05	\$56.25
B/W Prints 11x17	Actual cost (each)		150	\$0.09	\$13.50
Color Prints 8.5x11	Actual cost (each)		500	\$0.45	\$225.00
Color Prints 11x17	Actual cost (each)		100	\$0.90	\$90.00
Plotting of Base Sheets at 24 x 36 B/W	Actual cost (each)			\$0.81	\$0.00
Plotting of Base Sheets at 24 x 36 Color	Actual cost (each)			\$5.40	\$0.00
Laminated Foam Board Exhibit	Actual cost (each)			\$9.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
<b>TOTAL DIRECT COST</b>					<b>\$3,189.75</b>

*\*If other allowable costs are needed and not listed, please add in the above spaces provided.*
**LEGEND**

W.O. = Work Order

J.S. = Job Specific

Proposal No. 3537-R3  
8/13/2019

Mr. Jim McNally, PE  
Baxter & Woodman Consulting Engineers  
8678 Ridgefield Rd.  
Crystal Lake, IL 60012

**Cost Estimate**  
**Geotechnical Investigation**  
**Hunt Club Road and Washington Street Improvements**  
**Lake County Division of Transportation**  
**Gurnee, Illinois**

Dear Mr. McNally:

Interra, Inc. (INTERRA) is pleased to submit this cost estimate to perform geotechnical subsurface soil exploration for the above referenced project in Gurnee, Illinois. We understand that the proposed improvements would consist of addition of dual left turn lanes and reconstruction or resurfacing of roadway. The improvements will also include construction of three retaining walls.

**Proposed Scope of Work**

Our scope of work includes locating and drilling thirty-eight (31) borings along Hunt Club Road, and along Washington Street.

- Sixteen (16) borings will be drilled to a depth of 8.0 feet each for the proposed roadway improvements. Where feasible, the roadway borings will be drilled in the proposed widening areas and spaced approximately 300 to 500 feet apart and staggered.
- Two (2) borings will be drilled in the proposed detention basin to a depth of 16 feet each.
- Eight (8) borings will be drilled in the proposed path extension to a depth of 8.0 feet each.

- Seven (7) borings will be drilled for the proposed West Leg Retaining Wall, south of Washington Street, to a depth of 30.0 feet each.
- Two (2) borings will be drilled for the proposed South Leg Retaining Wall, east of Hunt Club Road, to a depth of 30.0 feet each.
- Two (2) borings will be drilled for the proposed North Leg Retaining Wall, near the southwest corner of Hunt Club Road and Orchard Valley Drive, to a depth of 10.0 feet each.
- A total of four (4) pavement cores will be collected. Two cores will be collected from Washington Street and two cores will be collected from Hunt Club Drive.

The borings will be located by our crew. The location of the borings will be adjusted based on field conditions, accessibility and utility conflicts. Traffic control signage and/or flaggers will be utilized during pavement coring and borings, as needed to ensure safety of the crew and traffic.

The borings will be drilled with a truck-mounted drill rig. Soil sampling in the borings will be performed in general accordance with American Society for Testing and Materials (ASTM) standards, D 1586 “Penetration Test and Split Barrel Sampling of Soils”. Observation for groundwater will be made during and immediately after the completion of the drilling. 24-hour water levels will be collected from selected retaining wall boreholes, when feasible. After the completion of the drilling, the boreholes will be backfilled with the soil auger cuttings from the same borehole. Where required, the surface will be patched with asphalt or cement grout to match surrounding elevations.

Laboratory testing includes moisture content tests and unconfined compressive strength tests using a Rimac/pocket penetrometer on all recovered soil samples. Atterberg Limits, Grain Size Analysis, Standard Proctor tests and Illinois Bearing Ratio tests will be performed on bulk samples recovered from the proposed roadway areas. Draft and Final Geotechnical Reports will be provided in general accordance with LCDOT guidelines.

### **Cost Estimate**

The cost to provide the above mentioned services is provided in the attached CECS and Direct

Costs estimate. If the scope of work is increased or decreased, the final invoice amount will be calculated according to the unit rates in the attached CECS and Direct Costs estimate.

### **Schedule**

The fieldwork could be started within a few days of receiving authorization to proceed. We anticipate the fieldwork to be completed in four to six days. Pre-drilling and post-drilling meetings or conference calls will be conducted. The draft geotechnical report will be issued within four weeks of completion of field work. Final geotechnical report will be issued within three weeks after receiving review comments.

INTERRA very much appreciates the opportunity to submit this proposal. Should you at any time require any additional information or clarifications, please do not hesitate to call us.

Very truly yours,

**Interra, Inc.**



Ashok Guntaka, EI  
Project Engineer



Sanjeev Bandi, Ph.D., P.E.  
Project Manager



### PAYROLL ESCALATION TABLE FIXED RAISES

FIRM NAME INTERRA, Inc.  
 PRIME/SUPPLEMENT PRIME  
 Prepared By Ashok Guntaka

DATE 08/13/19  
 PTB-ITEM# 001-Hunt Club & Washingto

CONTRACT TERM 24 MONTHS  
 START DATE 1/1/2020  
 RAISE DATE 1/1/2021  
 END DATE 12/31/2021

OVERHEAD RATE 169.82%  
 COMPLEXITY FACTOR 0  
 % OF RAISE 3%

#### ESCALATION PER YEAR

year	First date	Last date	Months	% of Contract
0	1/1/2020	1/1/2021	12	50.00%
1	1/2/2021	1/1/2022	12	51.50%

---

The total escalation = 1.50%

# PAYROLL RATES

FIRM NAME INTERRA, Inc. DATE 08/13/19  
PRIME/SUPPLEMENT PRIME  
PTB-ITEM # 001-Hunt Club & Washington

ESCALATION FACTOR 1.50%

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

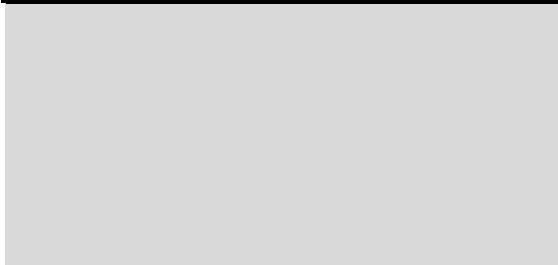
CLASSIFICATION	IDOT PAYROLL RATES ON FILE	CALCULATED RATE
Staff Engineer	\$29.72	\$30.17
Project Engineer	\$44.50	\$45.17
Project Manager	\$63.50	\$64.45
Principal Engineer	\$70.00	\$70.00

## Subconsultants

FIRM NAME INTERRA, Inc.  
PRIME/SUPPLEMENT PRIME  
PTB-ITEM # 001-Hunt Club & Washington

DATE 08/13/19

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



**Total**

**0.00**

**0.00**

## COST PLUS FIXED FEE COST ESTIMATE OF CONSULTANT SERVICES

Bureau of Design and Environment  
Prepared By: Consultant

**FIRM** INTERRA, Inc. **DATE** 08/13/19  
**PTB-ITEM #** 001-Hunt Club & Washington **OVERHEAD RATE** 169.82%  
**PRIME/SUPPLEMENT** PRIME **COMPLEXITY FACTOR** 0

DBE DROP BOX	ITEM	MANHOURS	PAYROLL	OVERHEAD & FRINGE BENF (C)	DIRECT COSTS (D)	FIXED FEE (E)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
		(A)	(B)	(C)	(D)	(E)	(G)	(H)	(B-G)	
DBE	Geotechnical Field	97	3,394	5,764	39,900	1,256		50,314	50,314	68.55%
DBE	Geotechnical Report	84	3,965	6,733	10,922	1,467		23,087	23,087	31.45%
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
			-	-		-		-	-	
	<b>Subconsultant DL</b>					0			-	
	<b>TOTALS</b>	181	7,359	12,497	50,822	2,723	-	73,401	73,401	100.00%

19,856

**DBE 100.00%**

### AVERAGE HOURLY PROJECT RATES

**FIRM**  
**PTB-ITEM#**  
**PRIME/SUPPLEMENT**

INTERRA, Inc.  
001-Hunt Club & Washington  
PRIME

**DATE** 08/13/19

**SHEET** 1 OF 5

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJ. RATES			Geotechnical Field			Geotechnical Report											
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Staff Engineer	30.17	116.0	64.09%	19.33	84	86.60%	26.12	32	38.10%	11.49									
Project Engineer	45.17	24.0	13.26%	5.99	0			24	28.57%	12.91									
Project Manager	64.45	17.0	9.39%	6.05	9	9.28%	5.98	8	9.52%	6.14									
Principal Engineer	70.00	24.0	13.26%	9.28	4	4.12%	2.89	20	23.81%	16.67									
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
		0.0																	
<b>TOTALS</b>		181.0	100%	\$40.66	97.0	100.00%	\$34.99	84.0	100%	\$47.20	0.0	0%	\$0.00	0.0	0%	\$0.00	0.0	0%	\$0.00



**COMPANY NAME:** INTERRA, Inc.  
**PTB NUMBER:** 001-Hunt Club & Washington  
**TODAY'S DATE:** 8/13/2019

ITEM	ALLOWABLE	UTILIZE W.O. ONLY	QUANTITY J.S. ONLY	CONTRACT RATE	TOTAL
Drilling and Pavement Coring	Actual Cost		6.50	\$4,600.00	\$29,900.00
Traffic Control and Protection	Actual Cost		4	\$2,500.00	\$10,000.00
				\$0.00	\$0.00
Vehicle Owned or Leased	\$32.50/half day (4 hours or less) or \$65/full day		10	\$65.00	\$650.00
Lab - Moisture Content	Actual Cost		234	\$18.00	\$4,212.00
Lab - Illinois Bearing Ratio	Actual Cost		4	\$725.00	\$2,900.00
Lab - Attgerberg Limits	Actual Cost		4	\$140.00	\$560.00
Lab - Grainsize Analysis	Actual Cost		4	\$190.00	\$760.00
Lab - Organic Content	Actual Cost		0	\$150.00	\$0.00
Lab - Standard Proctor	Actual Cost		4	\$190.00	\$760.00
Lab - Unconfined Compressive Strength	Actual Cost		12	\$90.00	\$1,080.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
				\$0.00	\$0.00
<b>TOTAL DIRECT COST</b>					<b>\$50,822.00</b>

\*If other allowable costs are needed and not listed, please add in the above spaces provided.

**LEGEND**  
W.O. = Work Order  
J.S. = Job Specific

**Hunt Club Road & Washington Street Improvements**  
 DRAFT Borehole and Pavement Core Distribution Plan  
 Prepared by INTERRA, 8/8/2019 for  
 Baxter & Woodman Consulting Engineers and  
 Lake County Division of Transportation

**North Leg Retaining Wall**  
 Hunt Club & Orchard Valley Drive  
 2 borings @ 10 feet.

**Hunt Club Road**  
 8 Borings @ average 8 feet; spaced approximately 300' apart; staggered on either side of existing road, within the proposed widening areas.  
 2 pavement cores spaced approximately evenly

**Washington St.**  
 8 Borings @ average 8 feet; spaced approximately 300' apart; staggered on either side of existing road, within the proposed widening areas.  
 2 pavement cores spaced approximately evenly

**West Leg Retaining Wall**  
 7 borings @ 30 feet.

**South Leg Retaining Wall**  
 2 borings @ 30 feet.

**Notes:**  
 All locations will be finalized after pre-drilling meeting.  
**Detention Pond: 2 Borings @ 16 feet each**  
**Shared Use Path: 8 Borings @ 8 feet each**

