Municipality	LOCAL AGENCY	Illinois Department of Transportation	CONSULTANT	Name
				Crawford, Murphy and Tilly, Inc.
Township				Address
				550 N. Commons Drive, Suite 116
County Lake County – Division of Transportation		**Preliminary Engineering Services Agreement For Non-Motor Fuel Tax Funds**		City Aurora
Section 08-00148-02-FP				State IL.

THIS AGREEMENT is made and entered into this 22nd day of April, 2009 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 Lake Avenue Improvements

Route C.H. 68 Length 8235.00 Mi. 1.56 FT (Structure No. 049-3025)
(Structure No. 049-3026)

Termini 8235' on Lake Avenue (Il. Rte. 173 to Wisconsin State Line)

Description:
This project is classified as a resurfacing project with some reconstruction. Bridge deck replacement is also included.

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

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

The Total Not-to-Exceed Contract Amount shall be $293,114.24

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

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

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

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

4. That, should the improvement be abandoned at any time after the ENGINEER has performed any part of the services provided for in sections 1 and 3 of the ENGINEER AGREES and prior to the completion of such services, the LA shall reimburse the ENGINEER for the ENGINEER's actual costs plus 14.5 percent incurred up to the time the ENGINEER is notified in writing of such abandonment -"actual cost" being defined as in paragraph 2 of the LA AGREES.

5. That, should the LA require changes in any of the detailed plans, specifications or estimates except for those required pursuant to paragraph 4 of the ENGINEER AGREES, ~~after they have been approved by the DEPARTMENT~~, the LA will pay the ENGINEER for such changes on the basis of actual cost plus 14.5percent to cover profit, overhead and readiness to serve -"actual cost" being defined as in paragraph 2 of the LA AGREES. It is understood that "changes" as used in this paragraph shall in no way relieve the ENGINEER of the ENGINEER's responsibility to prepare a complete and adequate set of plans and specifications.

It is Mutually Agreed,

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

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

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

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

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

Executed by the LA:

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

ATTEST:

State of Illinois, acting by and through its

By _____

County Board

Lake County Clerk

By _____

(Seal)

Title Chairman of the County Board

RECOMMENDED FOR EXECUTION

_____

Martin G. Buehler, P.E.
Director of Transportation/County Engineer
Lake County

Executed by the ENGINEER:

Crawford, Murphy and Tilly, Inc.
Engineering Firm
550 North Commons Drive, Suite 116
Street Address
Aurora, Il., 60504
City, State

ATTEST:

By _____

By _____

Title _____

Title _____

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

Exhibit A - Preliminary Engineering

Route: Lake Avenue
Local Agency: Lake County
Section: 08-00148-02-FP
Project:
Job No.:

*Firm's approved rates on file with IDOT'S Bureau of Accounting and Auditing:

Overhead Rate (OH) 1.5482 %
Complexity Factor '® 0.00
Calendar Days 365

Method of Compensation:

Cost Plus Fixed Fee 1	☐ 14.5%[DL + R(DL) + OH(DL) + IHDC]
Cost Plus Fixed Fee 2	☐ 14.5%[DL + R(DL) + 1.4(DL) + IHDC]
Cost Plus Fixed Fee 3	☐ 14.5%[(2.3 + R)DL + IHDC]
Specific Rate	☒ {14.5%[DL + R(DL)+OH(DL)]} + (Services by others *0.05)
Lump Sum	☐

Cost Estimate of Consultant's Services in Dollars

	Element of Work	Man-Hours	Payroll Rate	Payroll Costs (DL)	Overhead*	Services by others	In-House Direct Costs (IHDC)	Profit	Outside Direct Costs	Total	% of Grand Total
1	Data Collection and Bridge Inspection	34.0	$32.58	$1,107.73	$1,714.98	$0.00	$66.12	$409.29	$0.00	$3,298.12	1.13%
2	Field Surveys and ROW Plats	320.0	$33.06	$10,580.39	$16,380.55	$0.00	$944.00	$3,909.34	$0.00	$31,814.28	10.85%
3	Preliminary Design Study	76.0	$32.93	$2,502.37	$3,874.17	$0.00	$0.00	$924.60	$0.00	$7,301.13	2.49%
4	Drainage Study and Permits	98.0	$31.98	$3,134.06	$4,852.15	$0.00	$0.00	$1,158.00	$0.00	$9,144.21	3.12%
5	Wetlands and Endangered Species	10.0	$34.27	$342.65	$530.50	$8,000.00	$0.00	$526.61	$0.00	$9,399.75	3.21%
6	Plans, Quantities, Specifications, and Estimate of Cost	1710.0	$33.36	$57,043.58	$88,314.88	$0.00	$1,425.00	$21,076.98	$0.00	$167,860.44	57.27%
7	Meetings and Coordination	110.0	$35.45	$3,899.89	$6,037.81	$0.00	$165.00	$1,440.97	$0.00	$11,543.66	3.94%
8	Soil Investigation & Geotechnical Report	14.0	$34.22	$479.02	$741.61	$20,000.00	$0.00	$1,176.99	$0.00	$22,397.62	7.64%
9	Existing Storm Sewer Televising	6.0	$32.10	$192.57	$298.14	$12,400.00	$0.00	$691.15	$0.00	$13,581.86	4.63%
10	Bidding Assistance/Evaluation	32.0	$31.27	$1,000.62	$1,549.16	$0.00	$66.12	$369.72	$0.00	$2,985.62	1.02%
11	Project Administration	118.0	$40.05	$4,725.50	$7,316.02	$0.00	$0.00	$1,746.02	$0.00	$13,787.54	4.70%
Totals		2528.0	$33.63	$85,008.37	$131,609.97	$40,400.00	$2,666.24	$33,429.66	$0.00	$293,114.24	100.00%

Lake Avenue Improvements
Lake County Division of Transportation

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

Summary of Man Hours

	Item	CMT Total Hours
A	Data Collection and Bridge Inspection	34.0
B	Field Surveys and ROW Plats	320.0
C	Preliminary Design Study	76.0
D	Drainage Study and Permits	98.0
E	Wetlands and Endangered Species	10.0
F	Plans, Quantities, Specifications, and Estimate of Cost	1,710.0
G	Meetings and Coordination	110.0
H	Soil Investigation & Geotechnical Report	14.0
I	Existing Storm Sewer Televising	6.0
J	Bidding Assistance/Evaluation	32.0
K	Project Administration	118.0
	Totals	2,528.0

	Item A: Data Collection and Bridge Inspection	Hours	
A-1	Data Collection	16	
A-2	Project Site Visit	8	
A-3	Photo Log	4	
A-4	Review existing bridge report prepared by HLR	6	
	Sub - total		**34**

	Item B: Field Surveys and ROW Plats		
B-1	Office set-up and coordination	2	
B-2	Obtain permits for survey access (if required)	2	
B-3	Preliminary field work/set control: (2 day @ 12hrs/day * 2 people)	40	
B-4	Bridge and elevation survey	12	
B-5	Topographic survey and cross sections (100ft. Centers and driveways/access):	100	
B-6	Drainage surveys (rims, inverts, and outlet elevation)	10	
B-7	Survey wetland delineation	4	
B-8	Stake right-of-way	28	
B-9	Download and Plot Survey Data	4	
B-10	Plan in hand review of existing conditions	8	
B-11	Pick-up surveys	18	
B-12	Survey marked utilities	4	
B-13	Prepare ROW plats and legal descriptions (assume 2 Plats @ 24 hrs/plat)	48	
B-14	Prepare Plats of Highway and legal descriptions for entire section of project	40	
	Sub - total		**320**

	Item C: Preliminary Design Study		
C-1	Establish project design criteria and standards	2	
C-2	Establish initial project limits	2	
C-3	Develop horizontal and vertical alignment geometrics	8	
C-4	Incorporate responses to environmental issues into the project design	2	
C-5	Develop and evaluate typical section	4	
C-6	Identify driveway and access issues	4	
C-7	Develop and evaluate pavement design	4	
C-8	Determine right-of-way or easement needs	4	
C-9	Develop concept maintenance of traffic	8	
C-10	Develop preliminary plan/profile drawings	8	
C-11	Identify any barrier warrant analysis locations	4	
C-12	Initiate coordination with utilities/identify any conflicts	8	
C-13	Identify and develop pedestrian/bike access needs	2	
C-14	Develop preliminary cost estimate	8	
C-15	Update bridge report originally prepared by HLR	8	
	Sub - total		**76**

Lake Avenue Improvements
Lake County Division of Transportation

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

Item D:	**Drainage Study and Permits**			
D-1	Existing drainage system		24	
D-2	Proposed drainage system		40	
D-3	Floodplain Encroachment Evaluation		4	
D-4	Permits		30	
	Sub - total			98
Item E:	**Wetlands and Endangered Species**			
E-1	Subconsultant coordination and meetings (assume 2 meetings)		6	
E-2	Review environmental reports and permits		4	
	Sub - total			10
Item F:	**Plans, Quantities, Specifications, and Estimate of Cost**			
F-1	Plan Sheet Preparation	No. Sheets	Hours/Sheet	Total
	Cover Sheet	1	8	8
	General Notes/Index	1	10	10
	Summary of Quantities	1	24	24
	Alignment, Ties and Benchmarks	1	16	16
	Typical Sections (assume Pavement marking and seeding limits included)	1	20	20
	Detour Plan	1	18	18
	Maintenance of Traffic Notes	1	10	10
	Maintenance of Traffic Typical Sections	1	16	16
	Maintenance of Traffic Sheets (assume 2 stages)	9	18	162
	Removal, Plan & Profile and Drainag & Utility Sheet (scale: 1"=20'@ 14 sheets)	14	24	336
	Storm Water Pollution Prevention Plan (SWPPP) (scale: 1" = 100')	3	14	42
	General Plan and Elevation	1	48	48
	Structural Notes and Bill of Material	1	46	46
	Stage Construction Details	1	40	40
	Temporary Concrete Barrier	1	16	16
	Deck Elevations	2	46	92
	Approach Pavement Elevations	2	40	80
	Superstructure	2	48	96
	Bridge Railing Details	1	40	40
	Bar Splicer Assembly Details	1	16	16
	Framing Plan and Elevation	1	46	46
	Framing Details and Tables	1	46	46
	Bearing Details	1	46	46
	Anchor Bolt Details	1	16	16
	Concrete Removal, Abutments	1	46	46
	Abutment Details	1	46	46
	Boring Logs	1	8	8
	Construction Detail Sheets	2	14	28
	Cross-Section Sheets (35 x-sections @ 3 x-sect./sheet)	11	12	132
	Highway Standards	1	4	4
	Total Sheet Count Estimate:	67		
	Contract Documents			
	Special Provisions		40	
	Quantity Calculations		90	
	Estimate of Cost		14	
	Estimate of Time		12	
	Sub - total			1710

Lake Avenue Improvements
Lake County Division of Transportation

Man Hour Estimate for Consulting Services (Total Project)

Crawford, Murphy, and Tilly, Inc.

Item G:	**Meetings and Coordination**		
G-1	Kick-off meeting with Lake County (1 Meeting)	6	
G-2	Preliminary Preview Meeting (1 Meeting)	6	
G-3	Pre-final Plans Review Meeting (1 Meeting)	6	
G-4	Meeting with IDOT (1 Meeting)	6	
G-5	Meeting with LCSMC (1 Meeting)	6	
G-6	Coordination with IDOT	12	
G-7	Coordination with Lake County DOT	16	
G-8	Coordination with Antioch Township and Kenosha County	6	
G-9	Coordination with utility companies	16	
G-10	Prepare time prior to Meetings (total of 5 meetings)	15	
G-11	Prepare Meeting Minutes (total of 5 meetings)	15	
G-12	Assume no meetings with adjacent residents and business owners	0	
	Sub - total		**110**
Item H:	**Soil Investigation & Geotechnical Report**		
H-1	Subconsultant coordination and (1) meetings	6	
H-2	Provide sketches to subconsultant for boring layout program	2	
H-3	Provide elevation information for boring logs	2	
H-4	Review and analyze available soils surveys for roadway pavement design	4	
H-5	CTLI will provide a PDF copy of final report	0	
	Sub - total		**14**
Item I:	Existing Storm Sewer Televising		
I-1	Subconsultant coordination and meetings	2	
I-2	Review and analyze televised taped of existing storm sewer	4	
I-3	Provide a DVD/Tape of existing storm sewer	0	
	Sub - total		**6**
Item J:	Bidding Assistance/Evaluation		
J-1	Bidding Assistance	16	
J-2	Attend Pre-Construction Meeting	6	
J-3	Review Shop Drawings (assume 3 shop drawings)	10	
	Sub - total		**32**
Item K:	Project Administration		
K-1	Project administrative set-up	8	
K-2	Prepare and maintain Quality Assurance Plan	6	
K-3	Resource Planning and internal kick-off meeting	8	
K-4	Scope of Work reviews	8	
K-5	Create and maintain Project Scheduling	12	
K-6	Monthly progress reports	20	
K-7	Budget control	8	
K-8	Internal project team meetings	18	
K-9	Project Quality Assurance and constructability reviews	20	
K-10	Project close out	10	
	Sub - total		**118**

Lake Avenue Improvements
Lake County Division of Transportation

Estimate of Direct Costs

Crawford, Murphy, and Tilly, Inc.

Item A:	**Data Collection and Bridge Inspection**		
1	Travel: 2 trip @ $33.06/trip 57 Miles * $.58/mile	$66.12	
	Sub - total		**$66.12**
Item B:	**Field Surveys and ROW Plats**		
1	Travel: 8 trips @ $33.06/trip	$264.00	
2	Meals ($5.00x8daysx2people)	$80.00	
3	Instrument Rental ($100/day*6 days)	$600.00	
	Sub - total		**$944.00**
Item C:	**Preliminary Design Study**		
	No direct costs expected for this task	$0.00	
	Sub - total		**$0.00**
Item D:	**Drainage Study and Permits**		
	No direct costs expected for this task	$0.00	
	Sub - total		**$0.00**
Item E:	**Wetlands and Endangered Species**		
	No direct costs expected for this task	$0.00	
	Sub - total		**$0.00**
Item F:	**Plans, Quantities, Specifications, and Estimate of Cost**		
1	Print 9 full size sets @ $100/set	$900.00	
2	Print 15 half size sets @ $25/set	$375.00	
3	Misc. printing and supplies	$150.00	
	Sub - total		**$1,425.00**
Item G:	**Meetings and Coordination**		
1	Assume (5) meetings @ $33.06/trip	$165.00	
	Sub - total		**$165.00**
Item H:	**Soil Investigation & Geotechnical Report**		
	No direct costs expected for this task	$0.00	
	Sub - total		**$0.00**
Item I:	**Existing Storm Sewer Televising**		
	No direct costs expected for this task	$0.00	
	Sub - total		**$0.00**
Item J:	**Bidding Assistance/Evaluation**		
	Assume (2) meetings @ $33.06/trip	$66.12	
	Sub - total		**$66.12**
Item K:	**Project Administration**		
	No direct costs expected for this task	$0.00	
	Sub - total		**$0.00**
	total =		$2,666.24

REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Crawford, Murphy & Tilly, Inc.
PSB
PRIME/SUPPLEMENT

DATE 04/15/09

SHEET 1 OF 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Data Collection and Bridge Inspection			Field Surveys and ROW Plats			Preliminary Design Study			Drainage Study and Permits			Wetlands and Endangered Species		
		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	66.59	0																	
Senior Project Engineer	53.79	0																	
Project Engineer	41.92	277	11.75%	4.92	6	17.65%	7.40												
Senior Engineer	33.13	456	19.34%	6.41	16	47.06%	15.59	6	1.88%	0.62	6	7.89%	3.31	12	12.24%	5.13	4	40.00%	16.77
Senior Technical Manager	38.68	511	21.67%	8.38							16	21.05%	8.97	30	30.61%	10.14	2	20.00%	6.63
Engineer	27.18	800	33.93%	9.22	12	35.29%	9.59				22	28.95%	11.20	10	10.20%	3.95			
Planner	22.25	0									32	42.11%	11.45	46	46.94%	12.76	4	40.00%	10.87
Registered Land Surveyor	36.37	96	4.07%	1.48				96	30.00%	10.91									
Senior Technician	31.61	218	9.25%	2.92				218	68.13%	21.53									
Technician	23.18	0																	
Technical Assistant	18.15	0																	
Clerical	18.85	0																	
TOTALS		2358	100%	$33.34	34	100.00%	$32.58	320	100%	$33.06	76	100%	$32.93	98	100%	$31.98	10	100%	$34.27

PREPARED BY THE AGREEMENTS UNIT

Printed 4/22/2009 10:20 AM

REV 12/04

AVERAGE HOURLY PROJECT RATES

FIRM Crawford, Murphy & Tilly, Inc.
PSB
PRIME/SUPPLEMENT

DATE 04/15/09

SHEET 2 OF 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	Plans, Quantities, Specifications, an			Meetings and Coordination			Soil Investigation & Geotechnical Report			Existing Storm Sewer Televising			Bidding Assistance/Evaluation			Project Administration		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Principal	66.59																		
Senior Project Engineer	53.79																		
Project Engineer	41.92	205	11.99%	5.02	44	40.00%	16.77	2	14.29%	5.99	2	33.33%	13.97				14	11.86%	6.38
Senior Engineer	33.13	342	20.00%	6.63	44	40.00%	13.25										60	50.85%	21.31
Senior Technical Manager	38.68	479	28.01%	10.83				6	42.86%	16.58				22	68.75%	22.77	44	37.29%	12.35
Engineer	27.18	684	40.00%	10.87	22	20.00%	5.44	6	42.86%	11.65	4	66.67%	18.12	10	31.25%	8.50			
Planner	22.25																		
Registered Land Surveyor	36.37																		
Senior Technician	31.61																		
Technician	23.18																		
Technical Assistant	18.15																		
Clerical	18.85																		
TOTALS		1710	100%	$33.36	110	100%	$35.45	14	100%	$34.22	6	100%	$32.10	32	100%	$31.27	118	100%	$40.05

PREPARED BY THE AGREEMENTS UNIT

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Lake Avenue Improvements
Lake County Division of Transportation

Development of Project Hourly Rates (IDOT Method)

Crawford, Murphy, and Tilly, Inc.

Item	2009 Actual Rate	2010 Projected @ 5.0% Increase	2011 Projected @ 5.0% Increase	2012 Projected @ 5.0% Increase	2013 Projected @ 5.0% Increase	2014 Projected @ 5.0% Increase
Average Hourly Rate as a Percent of 2009 Rate	100.0%	105.0%	110.3%	115.8%	121.6%	127.6%
Estimated Months of Contract in Given Year	7	5	0	0	0	0
% of Project Duration	58.33%	41.67%	0.00%	0.00%	0.00%	0.00%
Extension	0.583	0.438	0.000	0.000	0.000	0.000
Weighted Project Hourly Rate Multiplier	**Note: Salary Adjustments are Given on January 1 of Each Year**					1.0208

Project Duration: June 1, 2009 to May 31, 2010= 12 months

Lake Avenue Improvements
Lake County Division of Transportation

Computation of Prorated Project Hourly Rates

Crawford, Murphy, and Tilly, Inc.

Classification	Actual 2009 Average Hourly Rate	Weighted Hourly Rate Multiplier	Project Hourly Rates *
Principal	$65.23	1.0208	$66.59
Senior Project Engineer	$52.69	1.0208	$53.79
Project Engineer	$41.06	1.0208	$41.92
Senior Engineer	$32.45	1.0208	$33.13
Senior Technical Manager	$37.89	1.0208	$38.68
Engineer	$26.63	1.0208	$27.18
Planner	$21.80	1.0208	$22.25
Registered Land Surveyor	$35.63	1.0208	$36.37
Senior Technician	$30.96	1.0208	$31.61
Technician	$22.71	1.0208	$23.18
Technical Assistant	$17.78	1.0208	$18.15
Clerical	$18.47	1.0208	$18.85

* Rates to be applied to all project work tasks

Lake County Division of Transportation
Phase II Engineering for
Lake Avenue Improvements
From Il. Rte. 173 to Wisconsin State Line
Scope of Services for Phase II Engineering

I. PHASE II ENGINEERING

A. Data Collection and Bridge Inspection

1. Obtain, Review, and analyze inventory data:
   a. Existing utility information (electric, natural gas, gas pipelines, transmission lines, telecommunication, cable TV, water, sewer).
   b. Available roadway plans / record drawings (to be obtained from Lake County DOT).
   d. Survey ground control.
   e. Obtain/Review accident data. (to be obtained from Lake County DOT)
   f. Verify existing traffic data (ADT) through coordination with CMAP.
   g. Available ROW and easement information and documents (provided by Lake County DOT)
   h. Property ownership / Tax maps
   i. Soil Conservation Service maps
   j. U.S.G.S. maps
   k. NWI maps.

2. Project Site Visits
3. Photographs of existing conditions / create photo log.
4. Review existing bridge report prepared by HLR

B. Field Surveys and ROW Plats (Field survey: assume 2 man crew using GPS and robotics)

1. Office set-up and coordination (State Plane)
   a. Obtain and review locations of Vertical and Horizontal control points (to be provided by Lake County)
   b. Schedule and coordinate field survey activities
2. Obtain permits for survey access (if required)
3. Preliminary field work/set control
   a. Run traverse between control points to verify closure, and to set intermediate control points
   b. Run level circuit between bench marks to verify closure, horizontal control points, and set temporary bench marks
4. Bridge and elevation surveys
5. Topographic survey and cross sections
   a. Topographic surveys (Survey shall be taken 20' beyond right-of-way. The limits of survey is Lake Avenue (approximately 8,235 feet)
   b. Cross section (100ft. centers and driveways/access)
6. Drainage surveys (Type, size, condition and invert of existing storm sewers, structures and culverts.)
7. Survey wetland delineation
8. Stake right-of-way

9. Download and Plot Survey Data
    a. Download of survey data
    b. Create existing conditions plan view
    c. Create existing Digital Terrain Model (DTM) (Contours)
    d. Generate existing condition cross sections
    e. Generate existing centerline profile.

10. Plan in hand review of existing conditions
11. Pick-up surveys
12. Survey marked utilities
13. Prepare Right-of-Way Plats and Legal Descriptions (Assume 2 Plats)
    a. Tract Search (assume 2 parcels)
    b. Plat Preparation
    c. Prepare Legal Description
14. Prepare Plat of Highway and Legal Descriptions (entire section of project)
    a. Tract Search
    b. Plat Preparation
    c. Prepare Legal Description

C. Preliminary Design Studies

1. Establish project design criteria and standards
2. Establish initial project limits
3. Develop horizontal and vertical alignment geometrics
4. Develop and evaluate typical section
6. Identify driveway and access issues
7. Develop and evaluate pavement design
8. Determine right-of-way or easement needs
9. Develop concept maintenance of traffic
10. Develop preliminary plan/profile drawings
11. Identify any barrier warrant analysis locations
12. Initiate coordination with utilities/identify any conflicts
13. Develop preliminary cost estimate
15. Update bridge report originally prepared by HLR

D. Drainage Study and Permits

1. Existing Drainage System
    a. Identify Drainage Problems
        1.) Research, obtain, and document the location and description of any identified drainage problems.
        2.) Define factors leading to non-maintenance drainage problems, if any, and determine responsibility for corrective measures.
    b. Identify Base Floodplains
    c. Identify Major Drainage Features:
        1.) Major Culvert Crossings
        2.) Identify existing drainage outlets and outlet treatments
        3.) Identify wetland areas

2. Proposed Drainage System [It is assumed that no Hydraulics Report will be required.]

a. Establish design criteria for proposed drainage north of Wilmot Road
   1.) Develop Concept Drainage Plan-(trunk line pipe sizes, layout and outlet locations)

b. Outlet Evaluation
   1.) Qualitatively evaluate whether each existing outlet is suitable for continued use, sensitive, or unsuitable.
   2.) Document location and source of unsuitable or sensitive outlets
   3.) Perform quantitative evaluation of unsuitable or sensitive outlets.
      a.) Determine if there is an increase in runoff as a result of proposed improvements.
      b.) Analyze existing outlet with proposed flow to determine potential impacts.
      c.) Analyze capacity of existing system.
      d.) Analyze depressional storage areas, ponds, and wetlands to determine potential increases in water surface elevation or impacts of increased volume runoff.
   4.) Develop feasible, cost effective recommendations in accordance with Lake County and IDOT policies, practices, and procedures.

c. Summary Drainage Alternatives

d. Develop Proposed Drainage Plans
   1.) Identify locations of ditch re-grading
   2.) Identify locations where sheet flow is proposed
   3.) Identify existing storm sewers to be maintained
   4.) Design of proposed storm sewers
   5.) Provide plan and profile of proposed trunk line sewers
   6.) Plot Hydraulic Grade Line

3. Floodplain Encroachment Evaluation
   1.) Confirm no floodplain encroachment.

4. Permits (assume no work within IDOT right-of-way and no IDOT Access Permit)
   a. Lake County Watershed Development Permit Application (LCSMC)
   b. NPDES Stormwater Permit Application (IEPA)
   c. Borrow/Use Areas (IDOT)
   d. Cultural Resources (IDOT) (prepared by Huff & Huff)
   e. Endangered Species (IDOC) (prepared by Huff & Huff)

E. Wetlands and Endangered Species: Scope is submitted as Attachment B and will be performed by Huff & Huff, Inc.

1. Subconsultant coordination and meetings (assume 2 meetings)
2. Review environmental reports and permits. Huff & Huff, Inc will provide a PDF copy of final report.

F. Plans, Quantities, Specifications, and Estimate of Cost

1. Refer to the Manhour Estimate for a complete detail of the anticipated project sheets.

G. Meetings and Coordination (assume 2 people per meeting @ 3 hours per meeting)

1. Kick-off meeting with Lake County (1 Meeting)
2. Preliminary Preview Meeting (1 Meeting)
3. Pre-final Plans Review Meeting (1 Meeting)
4. Meeting with IDOT Local Roads personnel to discuss signal installation at the intersection of IL. Rte 173 and Lake Avenue (1 Meeting)
5. Meeting with Lake County Stormwater Management Commission (1 Meetings)
6. Coordination with IDOT District One Local Roads
7. Coordination with Lake County DOT
8. Coordination with Antioch Township and Kenosha County
9. Coordination with utility companies
10. Preparation time prior to meetings (total of 7 meetings)
11. Prepare Meeting Minutes (total of 7 meetings)
12. Assume no meetings with adjacent residents and business owners

H. Soil Investigation & Geotechnical Report: Geotechnical Scope is submitted as Attachment C and will be performed by Chicago Testing Laboratory, Inc.

1. Subconsultant coordination and meetings (assume 1 meeting)
2 Provide sketches to subconsultant for boring layout program
3. Provide elevation information for boring logs
4. Review and analyze available soils surveys for roadway pavement design
5. CTLI will provide a PDF copy of final report.

I. Existing Storm sewer televising Scope is submitted as Attachment D and will be performed by Sheridan Plumbing & Sewer, Inc.

1. Subconsultant coordination and meeting (assume 1 meeting)
2. Review and analyze televised tape of existing storm sewer
3. A DVD/Tape of existing storm sewer will be provided

J. Bidding Assistance/ Evaluation

1. Bidding Assistance
2. Attend Pre-construction Meeting
3. Review Shop Drawings (assume 3 shop drawings)

K. Project Administration

1. Project administrative set-up
2. Prepare and maintain Quality Assurance Plan
3. Resource Planning and internal kick-off meeting
4. Scope of Work reviews
5. Create and maintain Project scheduling
6. Monthly progress reports (1 Report/Month *12 Months = 12 Reports)
7. Budget control

8. Internal project team meetings
9. Project Quality Assurance and constructability reviews
10. Project close out

Scope of Work Assumptions:

1. Verification of existing Average Daily Traffic (ADT) will be coordinated with Chicago Metropolitan Agency for Planning (CMAP). Traffic counts are not included in the Scope of Work.

2. Attendance at the Pre-construction Meeting is included in the Phase II engineering services. Three (3) shop drawing reviews are included in the Phase II engineering services. (RFI's) and construction meetings will be included in the Phase III Engineering Services.

3. No impact to the floodplain is anticipated for this project. Calculations for compensatory storage and related permitting is not anticipated or included in this Scope of Services.

4. A hydraulic report is not anticipated for this project. However, the results obtained from Item D. will be tabulated and submitted to the County for review.

5. A Bridge Condition Report (BCR) is not anticipated or included in this Scope of Services.

6. Type, Size, and Location Sheet (TSL) is not anticipated.

7. Topographic survey and cross sections assumptions:
   a. 8235' of project length
   b. Assume 5 days of survey (2 people)

8. Televising existing storm sewer @ $2.50/ft for 5,000 ft of storm sewer. (subconsultant work)

9. Geotechnical Investigation:
   a. No structural borings
   b. Lake Avenue from Il. Rte. 173 to Wilmot Road: 300' spacing for pavement cores, no borings.
   c. Lake Avenue from Wilmot Road to Wisc. State Line: 300' spacing for pavement cores and borings

10. Proposed bridge improvements include superstructure replacement and approach slabs construction. The bridge substructure will be maintained to carry the proposed superstructure system with minor modifications to the abutment seat. No substructure widening or strengthening is anticipated or included in this Scope of Services.

11. The existing drainage system along Lake Avenue from IL. Rte 173 to Wilmot Road is assumed to be in compliance with LCDOT design criteria.

12. No detention is anticipated for this project.

13. The only right-of-way acquisition that is anticipated is for two (2) parcels near the reverse curve at the state line.

14. It is anticipated a detour route will include Il. Rte 173. Therefore, coordination is assumed with IDOT but no separate meeting to discuss the detour plan is anticipated.

15. Assume the Notice to Proceed is June 1, 2009.

16. Assume Project Letting is May, 2010.