CONTRACT #1

143rd Street (IL Rt 7): Will-Cook Road to Wolf Road Reconstruction
Village of Orland Park

Phase II Engineering and Permitting
Scope of Work Narrative

This section will include widening and reconstructing 143rd Street from east of Will-Cook Road to west of Wolf Road in Orland Park, Cook County, Illinois. The project limits do not include the Will-Cook Road and Wolf Road intersections as they are being improved as part of separate projects. The roadway will be widened to 2-12' through lanes in each direction separated by a 16' wide landscaped median/left turn lane. A 10' wide trail will be constructed on the north side of the road. The existing twin-24" culverts between Sta. 47+00 and Sta. 48+00 will be replaced and upsized to triple 6' x 16' three sided culverts. Retaining wall is also proposed in this area to minimize the amount of fill in the floodplain. We understand that highly compressible soils exist east and west of Creek Crossing Drive. A new 8" watermain will be constructed from Creek Crossing Drive to approximately 1,300' to the east to tie into an existing watermain.

Work Task 1 – Phase II Kick-Off Meeting

CBBEL will attend a Phase II Kick-Off meeting with IDOT and the Village. The purpose of the meeting will be to review Phase I and the goals and objectives of the project. The scope and schedule will also be reviewed and refined. CBBEL will prepare and distribute meeting minutes.

Work Task 2 – Topographic Survey

CBBEL will perform a full topographic survey of the project area for use in Phase II Engineering Services.

General Survey limits and approximate lengths are as follows:

143rd (Will-Cook Road to Wolf Road) 5,200'

CBBEL will perform the following survey tasks:

Horizontal Control: Utilizing state plane coordinates, CBBEL will set recoverable primary control utilizing our GPS equipment.

Vertical Control: CBBEL will perform a level circuit throughout the entire length of the project establishing benchmarks and assigning elevations to the horizontal control points.

Existing Right-of-Way: CBBEL will establish the existing right-of-way of the roadways within the project limits based on monumentation found in the field, plats of highways, subdivision plats and any other available information.

Topographic Survey: CBBEL will field locate all pavements, driveways, curb and gutters, pavement markings, signs, manholes, utility vaults, drainage structures, driveway culverts, cross road culverts, etc.

Cross Sections: CBBEL will survey cross sections along the project limits at 100' intervals, at driveways, and at all other grade controlling features.

Utility Survey: All existing storm and sanitary sewers will be surveyed to determine rim and invert elevations and pipe sizes. Above ground facilities and any additional underground utilities including water main, gas, electric, cable, etc. will also be located.

Tree Survey: CBBEL will locate all trees over 6 inches in diameter within the existing right-of-way and ultimately the proposed right-of-way for the project in order to assess potential tree impacts, if any, associated with the project. The located trees will be identified by species and the size and condition determined as appropriate.

Base Mapping: CBBEL will compile all of the above information into one base map representative of existing conditions of the project corridor for use in all engineering work in developing the proposed improvements.

Work Task 3 – Geotechnical Investigation and Recommendations

Based on the planned roadway widening and reconstruction and proposed structures, a pavement coring and soils survey will be prepared in accordance with IDOT guidelines to aid in determining the most cost effective scope of work, and identify any areas of unsuitable soils that must be considered for remediation. To investigate the subsurface soil and groundwater conditions that will form the basis of our recommendations for the roadway widening and reconstruction, two new box culverts, one retaining wall and 8-inch watermain Wang proposes the investigations program summarized in Table 1.

Table 1: Proposed Subsurface Investigation Program

Alignment/Structure	Location		Length ft	Estimated Borings (per IDOT Geot Manual)	Existing Borings	Estimated Additional Borings	Average Boring Depth ft	Total Drilling Footage ft
143rd Street & Trail	Will-Cook	Wolf	5200	35	18	17	18	306
Peat Delineation	Creek Crossing	Campton Ct.	1,200	6	0	6	35	210
Box Culvert	47+00		75	3	0	3	75	225
Box Culvert	48+00		75	3	0	3	75	225
Retaining Wall	47+00	48+00	100	1	0	1	75	75
8-inch Watermain			1,000	0	0	0		0
Total Roadway and Structure Borings				**48**	**18**	**30**		**1041**

The depth of each boring may be adjusted in the field depending on the actual subsurface soils condition encountered. Geotechnical engineering analysis and design procedures will be performed to assess the soil conditions, provide geotechnical parameters for the design and construction of the roadway widening and reconstruction and associated structures.

Wang Engineering will complete this work and prepare a soil profile drawing as required by IDOT.

Work Task 4 – Soil Remediation Design

Due to a deep layer of highly compressible soils in the vicinity of Creek Crossing Drive, a soil remediation system will need to be designed to support the new roadway and utilities. CBBBEL and our

subconsultant Wang Engineering will prepare a Technical Memorandum with different design options and concept level costs for the Village to review.

Work Task 5 – PESA/PSI

Huff & Huff will update the PESA they previously completed. Based on the results of the PESA, they will perform a PSI if required. The PSI will be used to estimate the quantity of special or non-special waste excavation to be included in the contract.

Work Task 6 – Utility Coordination

Upon authorization to proceed, CBBEL will send a location map to all known private utility companies within the project area requesting their atlases or plans of their facilities within the project limits. CBBEL will add this information to the existing conditions plan and send it back to the utility companies for verification. Once potential conflicts are identified, CBBEL will coordinate with the utility companies to either avoid the conflicts of relocate the utility.

CBBEL will coordinate with ComEd (and the Village) and investigate the design and potential costs of relocating their facilities underground along the south side of 143rd Street.

Work Task 7 – Stormwater/Detention/Compensatory Storage Analysis

CBBEL will complete the stormwater management design for the proposed roadway. The design will include the conveyance system for stormwater runoff from the roadway, sizing of the cross road culvert, calculation of stormwater detention requirements, and the calculation of compensatory storage requirements for fill in the floodplain/floodway of Long Run Creek.

The roadway drainage system will be designed according to the standards of the Illinois Department of Transportation (IDOT), will utilize existing outfalls, and maintain existing drainage patterns to the maximum extent practicable. This will also include the sizing of a culvert to carry Long Run Creek under 143rd Street.

The stormwater detention will be calculated to meet the requirements of the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) and the Village of Orland Park (Village). Potential design alternatives to provide the required storage will be provided to the Village for consideration.

The floodway/floodplain fill analysis will determine the amount of fill being placed in the floodway and/or floodplain as part of the proposed roadway project. The analysis will determine the incremental storage requirements for the 0-10 and 10-100 year storm events as required by the Village and the Illinois Department of Natural Resources – Office of Water Resources (IDNR-OWR). Potential design alternatives to provide the required compensatory storage will be provided to the Village for consideration.

CBBEL will also prepare and submit the appropriate applications to the MWRDGC, IDNR-OWR, IDOT, Cook County, etc. as needed to obtain regulatory approval and permits for the construction of the proposed project.

Work Task 8 – Pre-Final Contract Documents and Cost Estimate (75% Submittal)

On the basis of the approved PDR, CBBEL will prepare pre-final contract documents consisting of plans, specifications, estimate of time, status of utilities to be adjusted and an estimate of construction cost. The plans will be prepared in accordance with Village and IDOT design criteria.

The preliminary plans will include the following sheets:

No.	Sheet Title
1	Cover Sheet
1	General Notes ▪ Including Village/IDOT standard notes and additional major notes to clarify project's intent and define incidental items
2	Alignment, Ties and Benchmarks sheet
5	Typical cross sections that are (BBA) ▪ Complete and comprehensive ▪ Extending from ROW to ROW ▪ Clearly describe improvement
2	Summary of Quantities
4	Schedule of Quantities (Earthwork, Drainage, Etc.)
11	Maintenance of Traffic Plans/Typical Sections/Staging Notes (BBA)
3	Existing Conditions and Removal Plans ▪ Existing topography, drainage structures and sewers and other utilities ▪ Items to be removed or adjusted ▪ Existing property lines and street addresses
4	Proposed Roadway Plan and Profiles showing (BBA) ▪ Proposed curb and gutter ▪ Proposed reconstruction limits ▪ Proposed pavement markings
4	Utility Plan and Profile sheets ▪ Any proposed drainage and utility structures and pipe in plan and profile ▪ Existing utilities to remain in place ▪ Proposed watermain and stormsewer ▪ Proposed fiber optic ducts and hand holes
5	Intersection Detail Plans (BBA)
6	Soil Remediation Plans and Details
4	Retaining Wall Plans
6	Box Culvert Plans
5	Landscaping and Erosion Control Plans and Details
4	Soil Profiles
4	Pavement Markings and Signage Plans
4	Construction Details
20	Cross Sections (BBA) ▪ Sufficient in number to approximate cuts and fills (50' intervals plus driveways - 25' in critical areas) ▪ Sufficient in number to verify ROW needs. ▪ Through driveways to determine proposed slopes and identify need for temporary construction easements ▪ Sufficient in number to delineate drainage patterns
95	TOTAL SHEET COUNT

CBBEL will use IDOT standard pay items where applicable. Otherwise, project-specific special provisions will be written as needed. Plans, special provisions based on Village standard special provisions, and the estimate of cost will be submitted to the Village and IDOT for review.

CBBEL will also make any required submittals to IEPA to meet NPDES requirements. A set of pre-final plans will be submitted to utility companies for verification of facilities.

Work Task 9 – Phase I Environmental Updates

CBBEL will coordinate with IDOT to renew/update the environmental clearances obtained in Phase I.

Work Task 10 – Stormwater Pollution Prevention Plan (SWPPP)

CBBEL will prepare a SWPPP for the project in accordance with Part IV of the General NPDES Permit No. ILR10. Please note that completion of this task will require input from the project engineer and signed certification statements from all contractors, subcontractors, and the operator as identified in the SWPPP. As part of the SWPPP preparation CBBEL will assist the project engineer with selecting soil erosion and sediment control (SESC) Best Management Practices (BMPs), and will review and comment on the final SESC plan. CBBEL will submit an electronic copy of the SWPPP to the IEPA. As required by the NPDES Phase II Storm Water Construction General Permit (ILR10), an up-to-date copy of the SWPPP must be maintained on the project site during construction activities.

CBBEL will prepare and submit a NOI to the IEPA for the above mentioned site. This task includes a project notification submittal to Illinois Historical Preservation Agency (IHPA) and the Illinois Department of Natural Resources. Any additional consultation with IHPA or IDNR will be billed on a time and materials basis.

Work Task 11 – Wetland Permitting

CBBEL staff will coordinate and attend a wetland/waters boundary confirmation and jurisdictional determination with the Corps of Engineers Staff. If necessary, CBBEL Environmental Resources Staff will prepare a Joint Permit Application. This information will include the required exhibits, specifications, data and project information. This information will be compiled and assembled for placement in permit application packages to the U.S. Army Corps of Engineers and the Illinois Environmental Protection Agency.

If necessary, based on the proposed site plan and impacts to wetland or buffer, an appropriate conceptual mitigation plan will be prepared. We will meet with the project team during the design of required mitigation to interface the conceptual wetland mitigation plan with other facets of the proposed development. This task will include preparation of the required Maintenance and Monitoring Plan.

Before and during the permit review process, we expect to have meetings with the regulatory agencies, project engineer, and client. We also expect to have to prepare responses to comments received during the review process. We have budgeted for attendance at three meetings and included budget to cover the cost of submittal of two responses to comments. If additional meetings, or responses to comments, are required they will be billed on a time and materials basis.

Work Task 12 – IEPA Permitting

CBBEL will fill out the required IEPA forms and submit them with the watermain plans to obtain the required IEPA permit.

Work Task 13 – Final Contract Documents and Cost Estimate (90% Submittal)

Upon meeting with the Village staff to review their comments on the preliminary submittal, CBBEL will revise and finalize the contract documents and cost estimate. During this task the exact letting date (depending on funding and other issues) will be determined and an estimated construction schedule will be provided. The plans will be submitted to the Village and IDOT for review.

Work Task 14 – Bidding Documents and Final Cost Estimate (100% Submittal)

CBBEL will make the final revisions to the final submittal based on Village and IDOT final review comments. The requested number of copies of plans and specifications will be submitted to IDOT and the Village. A final estimate of cost and estimate of required working days will also be submitted. In addition to printed copies, we will provide the plans, specifications and estimate to the Village in electronic format.

Work Task 15 – Village Coordination/Public Information Meeting

CBBEL will attend coordination meetings with Village staff throughout the design. We have budgeted five (5) meetings with the Village and one Public Information meeting (Open House Format) to provide information and seek input from adjacent property owners.

Work Task 16 – IDOT Coordination

CBBEL will meet with IDOT throughout the design to coordinate and review their comments. We have budgeted four (4) meetings with IDOT.

Work Task 17 – Funding Coordination

CBBEL will work with IDOT and the Southwest Conference of Mayors to maximize state and federal funding for construction. CBBEL will prepare funding applications and coordinate with these agencies to accomplish this.

Work Task 18 – Administration and QA/QC

CBBEL will prepare monthly status reports with our invoices to the Village. CBBEL will perform an internal QA/QC review of the plans, specifications and cost estimates.

COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

DF-824-039
REV 12/04

FIRM Christopher B. Burke Engineering, Ltd. **DATE** 07/18/13
Local Agency Orland Park **OVERHEAD RATE** 154.51%
Section **COMPLEXITY FACTOR** 0
Project 143rd Street
Job No:

Cost Plus Fixed Fee 1 14.50% [DL+R(DL) +OH(DL)+IHDC]

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Phase II Kick-Off Meeting	9	496.22	766.71		183.12				1,446.05	0.26%
	Topographic Survey	250	9,473.60	14,637.66		3,496.13				27,607.39	4.90%
	Geotechnical Investigation	10	516.32	797.77		190.54		67,000.00	67,000.00	68,504.63	12.16%
	Soil Remediation Design	88	4,330.56	6,691.15		1,598.15		25,412.50	25,412.50	38,032.36	6.75%
	PESA/PSI	5	258.16	398.88		95.27		18,949.50		19,701.81	3.50%
	Utility Coordination	44	2,132.48	3,294.89		786.97	600.00			6,814.34	1.21%
	Stormwater Detention Analysis	238	10,577.92	16,343.94		3,903.67				30,825.53	5.47%
	Pre-Final Contract Documents and Cost Estimate (75%)	548	23,481.96	36,281.98		8,665.77	800.00	114,100.00		183,329.71	32.53%
	Phase 1 Environmental Updates	38	1,865.76	2,882.79		688.54				5,437.08	0.96%
	Stormwater Pollution Prevention Plan	32	1,462.40	2,259.55		539.68	400.00			4,661.64	0.83%
	Wetland Permitting	60	2,812.68	4,345.87		1,037.99				8,196.54	1.45%
	IEPA Permitting	7	310.30	479.44		114.51				904.26	0.16%
	Final Contract Documents and Cost Estimate (90%)	290	12,239.52	18,911.28		4,516.87	1,200.00	29,400.00		66,267.67	11.76%
	Bidding Documents and Final Cost Estimate (100%)	154	6,511.60	10,061.07		2,403.04	500.00	17,300.00		36,775.71	6.53%
	Village Coordination/Public Information Meeting	104	4,930.96	7,618.83		1,819.72	800.00	7,594.77		22,764.28	4.04%
	IDOT Coordination	32	1,688.96	2,609.61		623.29		11,150.00		16,071.87	2.85%
	Funding Coordination	34	2,058.56	3,180.68		759.69				5,998.93	1.06%
	Adminstration and QA/QC	44	2,802.32	4,329.86		1,034.17		12,000.00		20,166.35	3.58%
	Subconsultant DL									0.00	
	TOTALS	1987	87,950.28	135,891.98	0.00	32,457.13	4,300.00	302,906.77	92,412.50	**563,506.15**	100.00%

DBE

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Direct Costs - Phase II (Will-Cook Road to Wolf Road) - Contract #1				
		ITEM		COST
1	Field Checks & Meetings			
			Estimated Direct Cost =	$225
		Vehicles (@ $45/trip)	$225	Inside
		Field Checks - 2 Total	$90	
		Meetings 3 Total	$135	
2	Contract Documents			
			Estimated Direct Cost =	$230
		Reproduction	$180	Outside
		100 pages @ $0.20/page (8.5" x 11" b/w)	$20	
		400 sheets @ $0.40/sheet (11" x 17" b/w)	$160	
		Mailing, Courier, Postage	$50	Outside
	QA/QC			
			Estimated Direct Cost =	$110
		Reproduction	$110	Outside
		150 pages @ $0.20/page (8.5" x 11")	$30	
		200 sheets @ $0.40/sheet (11" x 17")	$80	
4	Administration/Management			
			Estimated Direct Cost =	$210
		Reproduction	$60	Outside
		300 pages @ $0.20/page (8.5" x 11" b/w)	$60	
		Mailing, Courier, Postage	$150	Outside
			Total	$ 775
		Assumption: CBBEL is responsible for reproducing and providing contract documents to		
		Village and other Stakeholders		

PAYROLL ESCALATION TABLE
FIXED RAISES

FIRM NAME: Bowman, Barrett & Associates, Inc.
PRIME/SUPPLEMENT: PRIME

DATE: 07/08/13
PTB NO.: Contract #1

CONTRACT TERM: 24 MONTHS
START DATE: 12/31/2013
RAISE DATE: 1/1/2014

OVERHEAD RATE: 132.33%
COMPLEXITY FACTOR:
% OF RAISE: 3.00%

ESCALATION PER YEAR

12/31/2013 - 1/1/2014	1/2/2014 - 1/1/2015	1/2/2015 - 1/1/2016		
0 / 24	12 / 24	12 / 24		
= 0.00%	51.50%	53.05%		
= 1.0455				

The total escalation for this project would be: **4.55%**

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PAYROLL RATES

FIRM NAME Bowman, Barrett & Ass DATE 07/08/13
PRIME/SUPPLEMENT PRIME
PTB NO. Contract #1

ESCALATION FACTOR 4.55%

CLASSIFICATION	CURRENT RATE	CALCULATED RATE
Engineer IX	$90.00	$75.00
Engineer VIII	$76.00	$75.00
Engineer VII	$60.71	$63.47
Engineer VI	$47.06	$49.19
Engineer V	$44.50	$46.52
Engineer IV	$40.19	$42.01
Engineer III	$35.20	$36.80
Engineer I/II	$29.36	$30.69
Surveyor III	$41.25	$43.12
Inspector II	$38.00	$39.73
CADD Technician III	$38.81	$40.58
CADD Technician II	$31.33	$32.76
Arch/Eng Technician II	$39.75	$41.56
Administration	$33.25	$34.76
Accounting	$55.75	$58.28
Marketing	$37.50	$39.20
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00
		$0.00

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AVERAGE HOURLY PROJECT RATES

FIRM Bowman, Barrett & Associates, Inc.
PSB Contract #1
PRIME/SUPPLEMENT PRIME

DATE 07/08/13

SHEET 2 **OF** 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	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
Engineer IX	75.00																		
Engineer VIII	75.00	48	80.00%	60.00															
Engineer VII	63.47																		
Engineer VI	49.19																		
Engineer V	46.52																		
Engineer IV	42.01																		
Engineer III	36.80																		
Engineer I/II	30.69																		
Surveyor III	43.12																		
Inspector II	39.73																		
CADD Technician III	40.58																		
CADD Technician II	32.76																		
Arch/Eng Technician	41.56																		
Administration	34.76																		
Accounting	58.28	12	20.00%	11.66															
Marketing	39.20																		
TOTALS		60	100%	$71.66	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00	0	0%	$0.00

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COST PLUS FIXED FEE
COST ESTIMATE OF CONSULTANT SERVICES

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REV 12/04

FIRM Bowman, Barrett & Associates, Inc. **DATE** 07/08/13

PTB Contract #1 **OVERHEAD RATE** 1.3233

PRIME/SUPPLEMENT PRIME **COMPLEXITY FACTOR** 0

DBE DROP BOX	ITEM	MANHOURS (A)	PAYROLL (B)	OVERHEAD & FRINGE BENF (C)	IN-HOUSE DIRECT COSTS (D)	FIXED FEE (E)	Outside Direct Costs (F)	SERVICES BY OTHERS (G)	DBE TOTAL (H)	TOTAL (B-G)	% OF GRAND TOTAL
	Mtgs., Field Chks., & Coord.	84	4,051.05	5,360.76	225.00	1,498.89				11,135.70	6.08%
	CBBEL Task 8	985	40,419.34	53,486.92		14,955.16	230.00			109,091.41	59.57%
	CBBEL Task 13	232	9,524.89	12,604.29		3,524.21				25,653.39	14.01%
	CBBEL Task 14	158	6,413.98	8,487.62		2,373.17				17,274.77	9.43%
	QA/QC	40	3,000.00	3,969.90		1,110.00	110.00			8,189.90	4.47%
	Administration	60	4,299.41	5,689.40		1,590.78	210.00			11,789.59	6.44%
	Subconsultant DL					0.00				0.00	0.00%
	TOTALS	1559	67,708.67	89,598.89	225.00	25,052.21	550.00	0.00	0.00	**183,134.77**	100.00%

DBE 0.00%

DBE

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AVERAGE HOURLY PROJECT RATES

FIRM Bowman, Barrett & Associates, Inc.
PTB Contract #1
PRIME/SUPPLEMENT PRIME

DATE 07/08/13

SHEET 1 OF 2

PAYROLL CLASSIFICATION	AVG HOURLY RATES	TOTAL PROJECT RATES			Mtgs., Field Chks., & Coord.			CBBEL Task 8			CBBEL Task 13			CBBEL Task 14			QA/QC		
		Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg	Hours	% Part.	Wgtd Avg
Engineer IX	75.00	0																	
Engineer VIII	75.00	98	6.29%	4.71	10	11.90%	8.93										40	100.00%	75.00
Engineer VII	63.47	10	0.64%	0.41	10	11.90%	7.56												
Engineer VI	49.19	132	8.47%	4.17				96	9.75%	4.79	24	10.34%	5.09	12	7.59%	3.74			
Engineer V	46.52	400	25.66%	11.94	32	38.10%	17.72	272	27.61%	12.85	56	24.14%	11.23	40	25.32%	11.78			
Engineer IV	42.01	368	23.60%	9.92				272	27.61%	11.60	56	24.14%	10.14	40	25.32%	10.64			
Engineer III	36.80	314	20.14%	7.41	32	38.10%	14.02	168	17.06%	6.28	72	31.03%	11.42	42	26.58%	9.78			
Engineer I/II	30.69	225	14.43%	4.43				177	17.97%	5.52	24	10.34%	3.17	24	15.19%	4.66			
Surveyor III	43.12	0																	
Inspector II	39.73	0																	
CADD Technician III	40.58	0																	
CADD Technician II	32.76	0																	
Arch/Eng Technician	41.56	0																	
Administration	34.76	0																	
Accounting	58.28	12	0.77%	0.45															
Marketing	39.20	0																	
		0																	
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		0																	
		0																	
		0																	
		0																	
		0																	
		0																	
TOTALS		1559	100%	$43.43	84	100.00%	$48.23	985	100%	$41.03	232	100%	$41.06	158	100%	$40.59	40	100%	$75.00

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143rd Street Improvements **July 8, 2013**
Village of Orland Park
Phase II - Will/Cook Road to Wolf Road (Contract #1)
Workhour Estimate

	TASK/DESCRIPTION	HOURS			
		Sub-Total	Task Total	Client Estimate	Neg. Total
3.	**CBBEL Work Task 13 - Final Contract Documents**		232		
	3.1 Comment Review and Dispositions	40			
	3.2 Updating Plan Items shown in Tasks 2.2 thru 2.6	160			
	3.3 Updating Contract Items shown in Task 2.7	32			
4.	**CBBEL Work Task 14 - Bidding Documents**		158		
	4.1 Comment Review and Dispositions	24			
	4.2 Updating Plan Items shown in Tasks 2.2 thru 2.6	110			
	4.3 Updating Contract Items shown in Task 2.7	24			
5.	**Quality Assurance / Quality Control**		40		
	Sub-Total		1,499		
6.	**Project Management/Administration**		60		
	Total		1,559		

143rd Street Improvements **July 8, 2013**
Village of Orland Park
Phase II - Will/Cook Road to Wolf Road (Contract #1)
Workhour Estimate

	TASK/DESCRIPTION	HOURS			
		Sub-Total	Task Total	Client Estimate	Neg. Total
1.	**Meetings, Field Checks & Coordination**		**84**		
	1.1 Field Checks				
	1 Trip w/ 2 Staff @ 8 hrs	16			
	1.2 Plan-in-Hand Review				
	1 Trip w/ 2 Staff @ 8 hrs	16			
	1.3 Meetings				
	1.3a Team Coordination Meetings - 3 Meetings	36			
	1.4 Additional Coordination	16			
2.	**CBBEL Work Task 8 - Pre-Final Contract Documents**		**985**		
	2.1 Data Review	32			
	2.2 Typical Sections		60		
	2.2.1 Existing 143rd Street - 1 sheet @ 12 hrs	12			
	2.2.2 Proposed 143rd Street - 2 sheets @ 12 hrs	24			
	2.2.3 Cross Streets (Ex./Prop.) - 2 sheets @ 12 hrs	24			
	2.3 Proposed Roadway Plan & Profile		168		
	2.3.1 143rd Street - 4 Sheets @ 22 hrs each	88			
	2.3.2 Intersection & Driveway Details (1" = 20')				
	5 Sheets @ 16 hrs each	80			
	2.4 Maintenance of Traffic		232		
	2.4.1 General Notes & Staging Sequence	16			
	2.4.2 Typical Sections - 1 sheet	24			
	2.4.3 Plan Sheets 4 Sheets x 2 stages @ 20 hrs	160			
	2.4.4 Details Sheet (2 sheets)	32			
	2.6 Cross Sections		365		
	2.6.1 143rd Street - 4,700 ft (50 ft intervals)				
	94 Sections @ 2 hrs each	188			
	2.6.2 Critical Locations (25 ft Intervals)				
	10 Sections @ 2.5 hrs each	25			
	2.6.3 Cross Streets/Driveways (5 Locations)				
	13 Sections @ 2.5 hrs each	33			
	2.6.4 Drainage & Utility Cross Sections				
	10 Sections @ 2.5 hrs each	25			
	2.6.5 Earthwork by Stages				
	94 Sections @ 1 hrs each	94			
	2.7 Quantities and Estimates		128		
	2.7.1 Quantity Computations	64			
	2.7.2 Estimate of Cost	16			
	2.7.3 Estimate of Time	8			
	2.7.4 Special Provisions	40			

Wang Engineering

1145 North Main Street
Lombard, Illinois 60148
Phone (630) 953-9928
www.wangeng.com

July 15, 2013

Mr. Jason G. Souden, PE
Vice President, Head, Civil Design Department
Christopher B. Burke Engineering, Ltd.
9575 W. Higgins Road, Suite 600
Rosemont, IL 60018

Reference: Proposal for Geotechnical Engineering Services
Contract 1 – Phase II Design
143rd Street (IL Route 7) Reconstruction
From Will-Cook Road to Wolf Road
Orland Park, Illinois
Wang No. P130619 – Contract 1

Dear Mr. Souden:

Wang Engineering, Inc. (Wang) is pleased to submit this proposal for geotechnical services to support the Contract 1, Phase II widening and reconstruction of the 143rd Street from east of Will-Cook Road to west of Wolf Road, in Orland Park, Illinois.

Along this alignment, the segment of 143rd Street between Creek Crossing Drive and Compton Court overlies highly compressible peat and organic soils revealed during a previous roadway investigation performed by Midwest Engineering Services (MES). The MES Soil Survey Report dated April 19, 2005, indicates the poor soils extend up to 33 feet below the existing ground surface (bgs). We anticipate Phase II Design will require a ground improvement or modification design.

The following sections describe our proposed scope of geotechnical work, anticipated project schedule, and our cost estimate for these services.

SCOPE OF WORK

Based on information provided by Christopher B. Burke Engineering, Ltd. (CBBEL), Wang understands the 5,200-feet long section of 143rd Street will be widened to two 12-foot wide lanes in each direction separated by a 16-foot wide landscaped median and left turn lanes. A 10-foot wide, multi-use trail is also proposed on the north side of the road. The exiting twin 24-inches culverts between Stations 47+00 and 48+00 will be replaced and upsized to triple 6-foot by 16-foot three-sided structures. A retaining wall is also proposed in this area to minimize the amount of fill in the

floodplain. Moreover, a new 8-inch diameter, 1000-foot long water main will be constructed over poor soils near Creek Crossing Drive to tie into an existing water main.

The soil borings from the previous investigation will be incorporated into the Phase II roadway geotechnical report and design study. In the poor soil area, additional information on the peat and compressible soils will be required to properly assess the ground improvement requirements. To perform this task, we will perform eight additional roadway and six additional peat delineation borings to depths of 18 to 35 feet bgs (424 total feet). These additional borings will meet the guidelines included in the IDOT *Geotechnical Manual* and current IDOT Memoranda.

The investigation of Contract 1 structures will include one retaining wall boring to 75 feet bgs and four culvert borings to 50 feet bgs (375 total feet). These boring depths will ensure they advance sufficiently beyond the poor soils and adequately investigate competent foundations soils below. The total scope of the Contract 1 subsurface investigation is summarized in Table 1.

Table 1: Proposed Subsurface Investigation Program for Contract 1

Alignment/Structure	Location		Length ft	Estimated Borings (per IDOT Geot Manual)	Existing Borings	Estimated Additional Borings	Average Boring Depth ft	Total Drilling Footage ft
143rd Street & Trail	Will-Cook	Wolf	5200	32	18	8	18	144
Peat Delineation	Creek Crossing	Campton Ct.	1,200	8	0	8	35	280
Box Culvert	47+00		75	2	0	2	75	150
Box Culvert	48+00		75	2	0	2	75	150
Retaining Wall	47+00	48+00	100	1	0	1	75	75
8-inch Watermain			1,000	0	0	0		0
Total Roadway and Structure Borings				**45**	**18**	**21**		**799**

The depth of each boring may be adjusted in the field depending on the actual subsurface soils condition encountered. Geotechnical engineering analyses will be performed to assess the soil conditions amd provide geotechnical parameters for Phase II design and construction.

To accomplish these objectives, Wang will complete the following tasks.

Geotechnical Field Investigation — Wang will provide equipment, labor, and associated materials to drill and sample 21 soil borings to depths ranging from 18 to 75 feet bgs (799 total feet). The borings will be advanced with hollow stem augers to maintain an open borehole. Soil samples will be collected with split-barrel samplers in accordance with AASHTO T 206, "*Penetration Test and Split-Barrel Sampling of Soils.*" The soil samples will be transported to our laboratory for index

and advanced geotechnical testing. The borings will be drilled primarily within the wetland area along each side of the roadway, and an ATV-mounted drill rig will be required. Lane closures will be necessary during mobilization and demobilization of the rig.

In addition to the standard penetration testing, we propose advancing Piezometric Cone Penetration Tests (CPTU) according to ASTM D5778 and D7400 along the areas where peat and highly compressible soils will be delineated. The CPTU testing will provide finer delineation between soil strata, in-situ soil strength parameters, information on the degree of soil saturation, potentiometric surfaces in confined aquifers, soil hydraulic conductivity, and consolidation characteristics. These parameters will be used in performing the design of the required soil improvement or modification.

Field Supervision — Prior to drilling, Wang will mark the boring locations in the field and clear utilities through the JULIE on-call system. A field engineer will monitor drilling activities, maintain daily field notes and soil boring logs, as well as receive, classify, and prepare soil samples for laboratory analysis. The field engineer will monitor the groundwater level during drilling and at the completion of drilling operations. Soil samples will be classified according to the IDH Textural Classification System. As-drilled boring locations will be surveyed by Wang using a mapping grade GPS unit; the GPS unit has sub-foot horizontal accuracy.

Laboratory Testing — Upon completion of the drilling phase, the soil samples will be transported to our in-house laboratory. The general soil testing program will include natural moisture content (AASHTO T 265) on each sample, as well as Atterberg limits (AASHTO T 89/90), particle size (AASHTO T 88), and organic content on selected samples. To obtain advanced deformation properties on the foundation soils, the Shelby tube samples will be tested for one- dimensional consolidation (AASHTO T 216).

Engineering Analysis and Recommendations — Wang will prepare a roadway geotechnical report (RGR) for the proposed roadway widening and reconstruction, including recommendations for the water main installation. For the structures, we assume that one retaining wall and two box culverts SGRs will be required. The reports will be prepared according to the requirements included in the IDOT *Geotechnical Manual* and subsequent *All Geotechnical Manual Users* (AGMU) Memoranda. The report will include a detailed description of the project, a description of field and laboratory testing results and procedures, a characterization of the soil and groundwater conditions, soil boring logs, and soil profiles.

We anticipate the portion of roadway to be widened over the poor soil conditions will require ground improvement or modification. Wang will analyze feasible alternatives and complete the design for the most appropriate method. We will perform the required designs to provide the

parameters and recommendations necessary to generate sound cost and construction scheduling estimates along the length of the improvement. In addition, we anticipate analyzing and recommending several concepts for water main support over the poor soils.

SCHEDULING

Wang will start the project expediently upon authorization to proceed. We anticipate that boring layout and utility clearance will require approximately two days of field work and office coordination. We anticipate the drilling and sampling will require 10 to 12 days for completion. The laboratory testing program will be completed within three weeks after the completion of drilling and at that time the date for submittal of the geotechnical report will be coordinated with CBBEL.

COST ESTIMATE

Wang proposes to provide the above tasks on a time and material basis at the hourly rates and direct costs shown on the attached cost estimate. This cost estimate was prepared assuming the following conditions.

- Drilling unit costs are considered prevailing rate under the Prevailing Wage Act (820 ILCS 130/0.01);
- The boring locations within the wetland will require an ATV-mounted drilling rig for access;
- No hazardous materials are encountered;
- No permits are required to work along 143rd Street.

INSURANCE

Attached is a sample of our Certificate of Insurance. Additional insurance beyond those limits is not included in our cost estimate and will be considered a reimbursement item.

Wang Engineering, Inc. appreciates the opportunity to present this proposal and we look forward to working with CBBEL and the Village of Orland Park on this project. If you have questions, or if you require additional information, please contact us at (630) 953-9928.

Sincerely,

Wang Engineering, Inc.

Corina T. Farez, P.E., P.G.
Vice President

Mickey L. Snider, P.E.
Senior Geotechnical Engineer

Wang Engineering

GEOTECHNICAL SERVICES
UNIT PRICES
2013

CONTRACT 1
143rd Street from Will-Cook Road to Wolf Road
Orland Park, Illinois

Date: 07/15/2013
Wang No.: P130619 Contract 1

Task Description	Units	Unit Price	Extended Cost
TRAFFIC CONTROL			
Traffic Control			
Shoulder Closure (1/2 mile)			
Daytime	10.0 No.	$600.00 /Each	$6,000.00
Night time	0.0 No.	$925.00 /Each	$0.00
			$ 6,000.00
FIELD VEHICLES & MILEAGE			
Field Vehicle			
Field Vehicle Mileage (>100 Miles per Day)	0.0 Miles	$0.565 /Mile	$0.00
Field Vehicle Daily (<100 Miles per Day)	12 Days	$45.00 /Day	$540.00
Tolls	0 Tolls	$1.00 /Toll	$0.00
			$ 540.00
REPORT REPRODUCTION			
Report Reproduction			
Copies, Black & White, 8.5" X 11"	250 No	$0.20 /Each	$50.00
Copies, Color, 8.5" X 11"	20 No	$2.50 /Each	$50.00
Copies, Reproduction or Reduction, 24" X 36"	0 No	$10.00 /Each	$0.00
			$ 100.00
ENGINEERING, REPORTING & MANAGEMENT			
Field Activities			
Project Engineer/Project Geologist	15.0 Hours	$91.62 /Hour	$1,374.30
Assistant Engineer/Assistant Geologist	100.0 Hours	$88.19 /Hour	$8,819.00
Data Analyses & Engineering			
Senior Engineer	40.0 Hours	$151.42 /Hour	$6,056.80
Project Engineer/Project Geologist	90.0 Hours	$91.62 /Hour	$8,245.80
Assistant Engineer/Assistant Geologist	50.0 Hours	$88.19 /Hour	$4,409.50
Laboratory Technician	4.0 Hours	$49.53 /Hour	$198.12
Report Preparation			
Senior Engineer	85.0 Hours	$151.42 /Hour	$12,870.70
Project Engineer/Project Geologist	35.0 Hours	$91.62 /Hour	$3,206.70
Assistant Engineer/Assistant Geologist	12.0 Hours	$88.19 /Hour	$1,058.28
Project Management		/Hour	
Principal in Charge	2.0 Hours	$189.79 /Hour	$379.58
Project Manager	20.0 Hours	$151.42 /Hour	$3,028.40
Administrative Assistant	2.0 Hours	$80.00 /Hour	$160.00
QC/QA Review			
QC/QA Reviewer	8.0 Hours	$68.79 /Hour	$550.32
			$50,357.50

SUMMARY

DRILLING, SAMPLING & INSITU TESTING			$32,333.00
LABORATORY TESTING			$3,082.00
TRAFFIC CONTROL			$6,000.00
FIELD VEHICLES & MILEAGE			$540.00
REPORT REPRODUCTION			$100.00
			$ 42,055.00
ENGINEERING, REPORTING & MANAGEMENT			
Principal in Charge	2.0 Hours	$189.79 /Hour	$379.58
Project Manager	20.0 Hours	$151.42 /Hour	$3,028.40
Senior Engineer	125.0 Hours	$151.42 /Hour	$18,927.50
Project Engineer/Project Geologist	140.0 Hours	$91.62 /Hour	$12,826.80
Assistant Engineer/Assistant Geologist	162.0 Hours	$88.19 /Hour	$14,286.78
Laboratory Technician	4.0 Hours	$49.53 /Hour	$198.12
Administrative Assistant	2.0 Hours	$80.00 /Hour	$160.00
QC/QA Reviewer	8.0 Hours	$68.79 /Hour	$550.32
	463.0		**$50,357.50**
		TOTAL	**$ 92,412.50**

1145 N Main Street
Lombard, IL 60148
630 953-9928

Wang Engineering

GEOTECHNICAL SERVICES
UNIT PRICES
2013

AAR AASHTO R18

CONTRACT 1
143rd Street from Will-Cook Road to Wolf Road
Orland Park, Illinois

Date: 07/15/2013
Wang No.: P130619 Contract 1

Task Description	Units	Unit Price	Extended Cost
DRILLING, SAMPLING & INSITU TESTING			
Drilling Coordination	4.0 Hours	$92.00 /Hour	$368.00
Utilities Clearance, Site Access, Permitting	6.0 Hours	$92.00 /Hour	$552.00
Mobilization (ATV-mounted Drill Rig)	2 Each	$1,200.00 /Each	$2,400.00
Drilling Crew Daily Travel & Support Vehicle	10 Days	$150.00 /Day	$1,500.00
Stand-by Hourly Rate - ATV-Mounted Drill Rig (Two-Man Crew & Equipment)	0.0 Hours	$325.00 /Hour	$0.00
Drilling and Sampling			
Structure Borings			
Drilling including split spoon sampling at 2.5-foot intervals to 30 feet and at 5-foot intervals thereafter (SPT, Penetrometer, Rimac, Visual Classification Included)			
Between 0 and 75 Feet			
Normal Working Hours	375.0 Feet	$27.00 /Foot	$10,125.00
Restricted Hours (6 Hours)	0.0 Feet	$33.00 /Foot	$0.00
Night Work	0.0 Feet	$31.00 /Foot	$0.00
Roadway Borings			
Drilling including continuous split spoon sampling to 10 feet (SPT, Penetrometer, Visual Classification Included)			
Continuous Sampling			
Normal Hours	424.0 Feet	$27.50 /Foot	$11,660.00
Restricted Hours (6 Hours)	0.0 Feet	$32.50 /Foot	$0.00
Night Hours	0.0 Feet	$31.50 /Foot	$0.00
Shelby Tube Samples			
Normal Working Hours	4 Samples	$57.00 /Sample	$228.00
Restricted Hours (6 Hours)	0 Samples	$66.00 /Sample	$0.00
Night Work	0 Samples	$62.00 /Sample	$0.00
Specialized Insitu Testing			
Piezometric Cone Penetrometer			
Mobilization (Truck Mounted CPT)	1 Each	$500.00 /Each	$500.00
CPTU	200.0 Feet	$20.00 /Foot	$4,000.00
Seismic Wave Measurement	0 Tests	$150.00 /Test	$0.00
Pore Pressure Dissipation Test	2 Tests	$500.00 /Test	$1,000.00
			$ 32,333.00

LABORATORY TESTING					
Soil Index Tests					
T265	D2216	Water Content	260 Tests	$7.50 /Test	$1,950.00
Particle Size Distribution					
T88	D422	Combined Sieve and Hydrometer	3 Tests	$111.00 /Test	$333.00
--	D1140	Percent Finer than No. 200 Sieve	0 Tests	$46.00 /Test	$0.00
Atterberg Limits					
T89, T90	D4318	Liquid and Plastic Limits	3 Tests	$69.00 /Test	$207.00
T92	D427	Shrinkage Factors	0 Tests	$82.00 /Test	$0.00
Soil Settlement, Swelling, and Collapse Potential					
T216	D2435	One-Dimensional Consolidation	1 Tests	$500.00 /Test	$500.00
Additional Sample Preparation Procedures					
		Removal of Organic Matter	0 Samples	$77.00 /Sample	$0.00
		Extrusion & Preservation of Undisturbed Samples	4 Samples	$23.00 /Sample	$92.00
					$ 3,082.00

1145 N Main Street
Lombard, IL 60148
630 953-9928

DRAFT FOR REVIEW

LAKOTA

June 27, 2013
Revised July 11, 2013

143RD STREET GEOMETRY & STREETSCAPE
VILLAGE OF ORLAND PARK, ILLINOIS

Professional Services Agreement between THE LAKOTA GROUP and CHRISTOPHER B. BURKE ENGINEERING, LTD.

PROJECT APPROACH

The Lakota Group appreciates the opportunity to support the Christopher B. Burke Engineering, Ltd. (CBBEL) Team in the preparation of streetscape designs and construction documents for portions of 143rd Street within the Village of Orland Park, Illinois. It is Lakota's understanding that we will be providing the Team with land planning and landscape architecture services necessary in completing the desired tasks for the Village.

Lakota and CBBEL have successfully collaborated on several other streetscape projects within the Chicagoland Region, and Lakota will bring the same level of thought, creative design, and attention to detail to the 143rd Street project.

PROJECT SCOPE | TASKS

The following are the tasks and deliverables The Lakota Group will provide to assist The Village of Orland Park and Christopher B. Burke Engineering in the preparation of geometric and streetscape improvements for 143rd Street.

CONTRACT 1. PHASE II – WILL/COOK ROAD TO WOLF ROAD

Work Task 1 – Phase II Kick-off Meeting:

1. Attend and participate in kick-off meeting with the Village.

Work Task 8 – Pre-Final Contract Documents and Cost Estimate (75% Submittal):

1. Prepare pre-final contract documents for landscape/streetscape within the defined area.
2. Prepare any necessary specifications for landscape/streetscape with the defined area.
3. Prepare estimate of construction cost for the study area.

Work Task 13 – Final Construction Documents and Cost Estimate (90% Submittal)

1. Participate in review meeting with Village Staff.
2. Based upon input received from Staff, modify construction documents, specifications and estimates of construction.

Work Task 14 – Bidding Documents and Final Construction Estimates (100%) Submittal

1. Based upon final input received from Staff and IDOT, modify construction documents, specifications and estimates of construction.

CONTRACT 2. PHASE I – WOLF ROAD TO BEACON AVENUE

Work Task 6 – Alternate Geometric/Streetscape Concepts – Old Orland/Downtown Area:

1. Attendance and participation with the Village and design team to discuss project goals, timing and materials.
2. Coordinate with CBBEL to receive base materials for the study area.
3. Conduct in-field analysis of existing conditions. Document surrounding land use and character.
4. Meet with Design Team to review and discuss potential alternative concepts for modified intersection of 143rd and Southwest Highway.
5. Develop a range of land use and streetscape enhancement concepts supporting each of the intersection alternatives. Prepare supporting graphics including plans, sections, elevations, photo-simulations, three-dimensional graphics and photographic examples. The goal of the land use plans will be to identify and test the impacts on adjacent properties and redevelopment opportunities created by the intersection alternatives. The streetscape concepts will identify opportunities to enhance the public right-of-way around the modified intersection.
6. Identify potential streetscape and lighting elements, coordinating with Village on any preferred elements from the Old Orland/Downtown area.
7. Meet with Design Team to review, refine and finalize the alternative concepts.
8. Present alternative concepts to one meeting with Village Staff.
9. Develop and refine preferred land use and streetscape enhancement plans. Create graphics suitable for public presentation.

Work Task 13 – Forest Preserve Coordination 4(f) Evaluation:

1. Conduct meeting or conference call with Forest Preserve to identify goals and approach to tree mitigation. Identify if Forest Preserve prefers a mitigation plan or fee-in-lieu of approach. A Forestry Management consultant may be required to help develop a tree survey for the impacted area. In which case, Lakota will provide analysis and input on appropriate mitigation/replacement values.
2. Prepare a tree preservation plan or memorandum summarizing the mitigation approach.

Work Task 14 – Public Involvement/Meetings:

1. Participate in three (3) stakeholder meetings with property owners
2. Present as part of the Team at one (1) Village Committee Meeting
3. Prepare and present at one (1) Public Hearing – Open House Format
4. In addition to the meetings identified above and in preceding Work Tasks, participate in one (1) additional meeting with Village Staff
5. Participate in one (1) meeting with IDOT- District One

CONTRACT 3. PHASE II – WOLF ROAD TO BEACON ROAD

Work Task 1 – Phase II Kick-off Meeting:

1. Attend and participate in kick-off meeting with the Village.

Work Task 7 – Pre-Final Contract Documents and Cost Estimate (75% Submittal):

1. Prepare pre-final contract documents for landscape/streetscape within the defined area.
2. Prepare any necessary specifications for landscape/streetscape with the defined area.
3. Prepare estimate of construction cost for the study area.

Work Task 14 – Final Construction Documents and Cost Estimate (90% Submittal)

1. Participate in review meeting with Village Staff.
2. Based upon input received from Staff, modify construction documents, specifications and estimates of construction.

Work Task 15 – Bidding Documents and Final Construction Estimates (100%) Submittal

1. Based upon final input received from Staff and IDOT, modify construction documents, specifications and estimates of construction.

ESTIMATED TIME OF COMPLETION

Lakota will work closely with CBBEL and Village Staff to refine the project scope, timing and manage the project.

PROJECT TERMS

Professional fees and reimbursable expenses for this assignment are estimated as follows:

Contract 1. Phase II – Will/Cook Road to Wolf Road	$7,800 + 400
Contract 2. Phase I – Wolf Road to Beacon Avenue	$48,000 + 2,200
Contract 3. Phase II – Wolf Road to Beacon Avenue	$16,500 + 1,000
Professional Fee Total:	$72,300
Estimated Project Expenses (5% of fee)	$3,600
Total Project Budget	**$75,900**

Expenses will be billed at 1.1 time's direct expense to cover administration and will include:

- **Travel** (mileage/tolls/parking/cabs/airfare/out-of-region meals & lodging)
- **Delivery** (postage/messenger/express)
- **Copying/Reproduction**
- **Sign Mock-Ups**
- **Long Distance Communication**
- **Renderings/Models** (if requested by client)
- **Miscellaneous | Special Project Supplies** (municipal documents, special reports, data)

The above fee estimates can be adjusted based on clarifications or changes to the work scope made by the Village. The fee includes all the meetings and site visits outlined in the Project Scope | Tasks. It does not include any additional meetings, project reviews, presentations, studies, plans, or designs other than those outlined above. If requested for Village budgeting purposes, the team will provide fee estimates for additional tasks.

Any additional services requested of Lakota will be billed on an hourly rate basis according to current hourly rates.

Lakota Hourly Billing Rates (2013):

• **Principal**	$240
• **Associate Principal**	$210
• **Vice President**	$190
• **Senior Associate**	$170
• **Project Planner/Designer/Manager**	$140
• **Planner/Designer**	$100-120
• **Research/Drafting Staff**	$85

REIMBURSABLE EXPENSES

CBBEL will reimburse The Lakota Group for documented out-of-pocket expenses submitted in writing, including but not limited to transportation, lodging, meals, parking, tolls, copying/reproduction, printing/plotting, postage/express deliveries and others as applicable.

PAYMENT SCHEDULE

Professional fees and expenses will be billed monthly for work completed. Unpaid invoices will bear 1.5% interest per month past 30 days. Either party may terminate this agreement 15 days after written notice. Lakota shall be compensated for all services performed up to this date.

OWNERS RESPONSIBILITIES

The owner shall provide full information about the objectives, schedule, constraints and existing conditions of the Project, and shall establish a budget that includes reasonable contingencies and meets the Project requirements. The Owner shall provide decisions and furnish required information as expeditiously as necessary for the orderly progress of the Project. The Owner shall furnish consulting services not provided by Lakota, but required for the Project, such as surveying, which shall include property boundaries, topography and utilities.

Please indicate acceptance of this agreement by signing one copy and returning it to our office listed below. Lakota will begin work after receiving written authorization to proceed via fax, mail or messenger.

The Lakota Group appreciates the opportunity to provide Christopher B. Burke Engineering with Professional Planning and Design Consulting Services.

Scott Freres, RLA, ASLA
Principal
The Lakota Group
212 W. Kinzie Street, Floor 3
Chicago, Illinois 60654
312.467.5445 / 312.467.5484 (fax)

_____
Name

_____
Title/Christopher B. Burke Engineering, Ltd.

_____
Date

Huff & Huff, Inc.
environmental engineers
and consultants

915 Harger Road, Suite 330
Oak Brook, IL 60523
Phone (630) 684-9100
Fax (630) 684-9120
Website: http://huffnhuff.com

July 11, 2013

Mr. Jason G. Souden, PE
Vice President, Head, Civil Design Department
Christopher B. Burke Engineering, Ltd.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018

Re: Environmental Services (PESA and PSI)
143rd Street Improvements – Will-Cook Road to Wolf Road
Orland Park, Cook County, Illinois
Proposal No.: T13-085

Dear Mr. Souden:

Huff & Huff, Inc. (Consultant) is pleased to submit this proposal to perform a Preliminary Environmental Site Assessment (PESA) and Preliminary Site Investigation (PSI), for the 143rd Street Improvements in Orland Park, Illinois. The project corridor is approximately 5,200 feet in length and includes areas of 143rd Street, extending from Will-Cook Road to Wolf Road. Proposed improvements to 143rd street are associated with adding lanes for both east bound and west bound lanes.

The roadway will be widened to 2-12' through lanes in each direction separated by a 16' wide landscaped median/left turn lane. A 10' wide trail will be constructed on the north side of the road. The existing twin-24" culverts between Sta. 47+00 and Sta. 48+00 will be replaced and upsized to triple 6' x 16' three sided culverts. Retaining wall is also proposed in this area to minimize the amount of fill in the floodplain. A new 8" watermain will be constructed from Creek Crossing Drive to approximately 1,300' to the east to tie into an existing watermain.

A PESA is considered adequate for assessment regarding placement of soil borings for the PSI phase. The known potentially impacted properties (PIPs) of this area will require sampling to identify soil conditions in the ROW. The PSI phase will include collection of soil samples for assessment of appropriate disposal practices and consideration as Clean Construction Demolition Debris (CCDD). Collection of soil samples for landfill permitting is not included as part of this scope as analytical results should remain applicable based on the construction schedule. This proposal presents our project understanding and the scope of services.

1. SCOPE OF SERVICES

Task 1 - Preliminary Environmental Site Assessment (PESA)

Consultant will prepare a PESA for the 143rd Street corridor. The process will follow general protocols associated with ASTM E1527-05, which is a standard environmental site assessment methodology and IDOT procedures. These protocols are consistent with the "Preliminary Site Assessment (PESA)" procedures outlined by the IDOT in BDE #66-10A,the "Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Project", and Bureau of Local Roads Special Waste Procedures.

A. Historical Research

The site's historical land use/ownership record will be developed from standard historical sources in the available reports. Either historical aerial photographs or historical maps, such as Sanborn Fire Insurance Maps, will be reviewed. It is anticipated that select information from the historic PESA will be used.

B. Site Evaluation

Current environmental features and conditions of sites adjacent to the ROW will be evaluated. A site walkover of potential right-of-way areas designated for excavation and/or acquisition will be conducted for first-hand evaluation of current environmental conditions within the project limits. All of the features and conditions listed above will be investigated and, as appropriate, documented in photographs. The land-use and housekeeping practices of adjacent properties also will be evaluated in accordance with ASTM protocols.

C. Database Search

A records review or database search will be conducted to update potential environmental concerns within the study area. It will include a search of standard state and federal environmental record databases in accordance with the specifications of ASTM standards. This search is based on the outline of the study area.

Specifically, Consultant will search each database to identify any potential sources requiring further investigation. As appropriate, Freedom of Information Act (FOIA) requests will be filed with the Illinois Environmental Protection Agency (IEPA) to obtain additional data pertaining to identified sites. A local source, such as the fire department or building department, will be contacted regarding available records and area history.

D. Report Preparation

One report summarizing the results of the evaluation will be prepared. The following information will be included in this report:

a) The project location and description
b) Historical uses of corridor.
c) The area geology and hydrology.

d) The environmental status of sites adjacent to the corridor regarding chemical use and storage, underground and aboveground storage tanks, solid waste, special waste, hazardous waste, wastewater, and PCBs.
e) The environmental records review.
f) An analysis of the site inspection.
g) A summary of the findings regarding any environmental concerns.

Task 2 – Preliminary Site Investigation (PSI)

Consultant will also utilize findings of the PESA prior to completion of the PSI. However, a preliminary search of records and aerial photograph review has identified four properties of interest. Based on available information 8 soil borings are planned to address environmental concerns. Traffic control is anticipated to ensure safety of the drilling personnel and the public given the traffic volumes on 143rd Street. As borings are planned for advancement within the City of Orland Park ROW and the project is being completed for the City, it is anticipated that fees will be waived.

The borings are planned for advancement to depths ranging from approximately 4 to 16 feet bgs, depending on the proposed improvement. Drilling is planned over a one day period. These borings are needed to address soil management issues.

A. Analytical

Boring locations where petroleum products or other volatile organic compounds represent the primary concern, samples will be field screened with a photoionization detector (PID). The sample with the highest PID reading in each boring will be analyzed for:

- **Volatile Organic Compounds** (up to 8 samples) – VOCs are volatile compounds found in gasoline and related to various solvents;

- **Benzene, toluene, ethylbenzene, and total xylenes (BTEX) as well as methyl-tert-butyl-ether (MTBE)** (up to 8 samples) – BTEX / MTBE are volatile compounds found in gasoline;

- **Polynuclear Aromatic Compounds (PNAs) and pH** (up to 8 samples) – PNAs are semi-volatile compounds commonly formed during incomplete combustion of organic compounds. PNAs can be formed by the combustion of wood, coal, and petroleum products. They are also found in less refined, nonvolatile petroleum products and can be used to identify potential for diesel or fuel oil contamination in soil.

Other field screening factors such as visual, or proximity to potential sources of known contamination to determine which samples will be analyzed to identify the presence of:

- **SPLP RCRA Heavy Metals** (up to 12 samples) – Federal environmental regulations identify eight (8) heavy metals as hazardous if present in a *solid waste* at concentrations above varying threshold concentrations. Samples will be analyzed for select RCRA

Metals, some of which may require further SPLP for consideration as CCDD. Metals samples will also be analyzed for pH.

B. PSI Report Preparation and CCDD Determination

A report summarizing the results of the soil sample collection activities and analytical results will be prepared. This proposal also includes time for preparing the PE certification needed for CCDD under the new IEPA regulations.

For these tasks, the scope of work includes time necessary to manage the project, including scheduling and coordination with the prime consultant, drillers, and environmental laboratories.

2. PROJECT COST

The estimated man-hours and project costs are tabulated in the attached tables. It is assumed that the driller can access the boring locations. Traffic control costs have been included in the estimate with the assumption that this service will be required for work within the rights-of-way along 143rd Street. Costs for traffic control are based upon previous estimates of field effort at a cost of $200/hour. It is anticipated that all soil cuttings will be returned to the boring from which it originated. No disposal of waste material is anticipated from proposed soil borings.

3. SCHEDULE

We anticipate that work will begin for the PESA within 10 days of the Notice to Proceed and will be completed within 4 weeks from the start date. The rate of completion of the PSI activities is dependent on traffic control access; however, they are planned for completion within 10 weeks from the start date, assuming traffic safety access is obtained.

Please indicate acceptance of this agreement by returning a signed copy of this agreement or a purchase order incorporating the terms of the agreement. We appreciate the opportunity to work with you and look forward to a successful completion of the project. If you have any questions concerning our proposed scope of services or fees, please contact us.

4. CONTRACT TERMS

1. CONSULTANT'S SERVICES: The Consultant's (Huff & Huff, Inc.) services shall consist of those tasks described in Section 2.

2. SCHEDULE: The Consultant's work under this Agreement shall begin within two weeks of receipt of written notice to proceed or a signed copy of this Agreement.

3. COMPENSATION: The fee basis for the scope of work, as outlined in Section 4, pertains to the specific scope work.

4. DIRECTION: For work performed under this Agreement, Consultant shall take direction from the CLIENT.

5. CHANGES: This Agreement may only be changed by written amendment which specifies the terms being revised and which has been signed by both parties hereto.

6. PROJECT DATA: The Consultant, in coordination with the CLIENT, shall obtain from the appropriate sources all data and information necessary for the proper and complete execution of the Consultant's services.

7. INDEPENDENT CONSULTANT: The Consultant shall be deemed to be an independent contractor in all its operations and activities hereunder. The employees furnished by Consultant to perform the work shall be deemed to be Consultant employees exclusively, and said employees shall be paid by Consultant for all services in this connection. The Consultant shall be responsible for all obligations and reports covering Social Security, Unemployment Insurance, Workmen's Compensation, Income Tax, and other reports and deductions required by an applicable state or Federal law.

8. RIGHTS OF WORK PRODUCT: CLIENT shall have unlimited rights in all drawings, designs, specifications, notes, and other work developed in the performance of this contract, including the right to use same on any other work without additional cost to the CLIENT. The Consultant shall not be liable for any use or reuse of the drawings, designs, specifications, notes and other work for use other than intended under the terms of this Agreement.

9. INDEMNIFICATION: The Consultant hereby agrees to indemnify and hold harmless the CLIENT and any proper owners whose property it is necessary to access in the performance of this work, against any and all liability, loss, damages, demands, or actions or causes of action, which may result from any damages or injuries sustained by a person or entity in connection with or on account of any negligent act or omission of the Consultant or its employees relating to its obligations pursuant to this Agreement.

10. TERMINATION: CLIENT may terminate this Agreement at any time upon ten (10) days written notice for whatsoever reason, provided CLIENT shall pay the Consultant a reasonable fee for work satisfactorily performed prior to the effective date of termination. In no case, however, shall the total amount paid to Consultant exceed the amount set out above.

11. INSURANCE: The Consultant shall maintain insurance as set forth in the prime contract, if attached, or as set forth below.

    a. Worker's Compensation and Employer's Liability Insurance: Worker's Compensation in compliance with applicable State and Federal laws.
    b. Comprehensive General Liability Insurance for Bodily Injury and Property Damage to a combined single limit of $2,000,000 per occurrence/claim or an umbrella of $3,000,000.
    c. Comprehensive Automobile Liability Insurance, including owned, hired, and non-owned automobiles, for Bodily Injury and Property Damage to a combined single limit of $1,000,000 per occurrence/$2,000,000 aggregate.
    d. Professional liability insurance $2,000,000 on a claims made basis.

12. STANDARD OF CARE: Services performed by the Consultant under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions.

13. RETENTION OF RECORDS: Consultant shall maintain complete records of all hours billed and direct costs incurred under this Agreement so as to accurately reflect the services performed and basis for compensation and reimbursement under this Agreement.

14. LEGAL: This Agreement shall be construed and interpreted solely in accordance with the laws of the State of Illinois.

BOTH PARTIES HERETO WARRANT AND REPRESENT that they have full right, power, and authority to execute this Contract.

IN WITNESS THEREOF, the parties hereto have executed this Agreement as of the day and year first specified above.

CONSULTANT	CLIENT
HUFF & HUFF, INC.	CHRISTOPHER B. BURKE ENGINEERING, Ltd.
Linda L Huff	
Signature	Signature
By: Linda L. Huff, P.E.	
Typed Name	Typed Name
President	
Officer's Title	Officer's Title
June 6, 2013	
Date	Date

Illinois Department of Transportation

Cost Estimate of Consultant Services (CPFF)

Firm	Huff & Huff, Inc.
Route	143rd
Section	Will-Cook to Wolf
County	Cook
Job No.	
PTB & Item	

Date 07/16/13

Overhead Rate **137.58%**

Complexity Factor **0**

Item	Manhours	Payroll	Overhead & Fringe Benefits	In-House Direct Costs	Fixed Fee	Outside Direct Costs	Services By Others	Total	% of Grand Total
01 PESA	55	1,728.76	2,378.43	57.85	610.00	400.00	0.00	5,175.03	27.31%
02 PSI	61	1,808.12	2,487.61	54.70	637.16	4,655.20	3,400.00	13,042.79	68.83%
03 QA/QC	6	268.63	369.57	0.00	93.48	0.00	0.00	731.68	3.86%
TOTALS	122	3,805.50	5,235.61	112.55	1,340.64	5,055.20	3,400.00	18,949.50	100.00%

Method of Compensation:

Cost Plus Fixed Fee 1	[X]	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	[ ]	
Lump Sum	[ ]	

Illinois Department of Transportation

Average Hourly Project Rates

Route	143rd
Section	Will-Cook to Wolf
County	Cook
Job No.	
PTB/Item	

Consultant Huff & Huff, Inc.

Date 07/16/13

Sheet 1 OF 1

Payroll Classification	Total Project Rates			01 PESA			02 PSI			03 QA/QC								
	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	8	6.56%	4.37	4	7.27%	4.85	2	3.28%	2.18	2	33.33%	22.21						
Senior Geologist I	24	19.67%	6.66	10	18.18%	6.15	10	16.39%	5.55	4	66.67%	22.56						
Project Engineer I	72	59.02%	16.11	32	58.18%	15.89	40	65.57%	17.90									
Senior CADD I	2	1.64%	0.61	1	1.82%	0.68	1	1.64%	0.61									
CADD II	11	9.02%	2.44	5	9.09%	2.46	6	9.84%	2.67									
Admin. Manager I	1	0.82%	0.27	1	1.82%	0.60												
Administrative IV	4	3.28%	0.73	2	3.64%	0.81	2	3.28%	0.73									
	0																	
	0																	
	0																	
	0																	
TOTALS	122	100%	$31.19	55	100%	$31.43	61	100%	$29.64	6	100%	$44.77	0	0%	$0.00	0	0%	$0.00

SUMMARY OF INHOUSE DIRECT COSTS

Project: CBBEL - 143rd Will-Cook to Wolf

									DIRECT
Task 1 - PESA									
Trips - Company	40 miles	x	1	x	$	0.565	=	$	22.60
Reproduction	3 sets	x	300	x	$	0.03	=	$	27.00
Color copies	3 sets	x	25	x	$	0.11	=	$	8.25
					Task Total			**$**	**57.85**
Task 2 - PSI									
Trips - Company	40 miles	x	1	x	$	0.565	=	$	22.60
Tolls	0 miles	x	6	x	$	0.850	=	$	5.10
Reproduction	3 sets	x	300	x	$	0.03	=	$	27.00
					Task Total			**$**	**54.70**
Task 3 - QA/QC									
					Task Total			**$**	**-**
					GRAND TOTAL			**$**	**112.55**

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SUMMARY OF OUTSIDE DIRECT COSTS

Project: CBBEL - 143rd Will-Cook to Wolf

					OUTSIDE
Task 1 - PESA					
Maps/Aerials	1 x	$ 180.00	=	$	180.00
Federal Express	1 x	$ 20.00	=	$	20.00
Records Search	1 x	$ 200.00	=	$	200.00
		Task Total		**$**	**400.00**
Task 2 - PSI					
5035 Kits	18 x	$ 15.00	=		$270.00
VOCs	8 x	$ 126.00	=		$1,008.00
BTEX	8 x	$ 126.00	=		$1,008.00
PNAs	8 x	$ 105.00	=		$840.00
pH	12 x	$ 8.40	=		$100.80
RCRA	12 x	$ 88.20	=		$1,058.40
SPLP	5 x	$ 70.00	=		$350.00
Federal Express	1 x	$ 20.00	=		$20.00
		Task Total			**$4,655.20**
Task 3 - QA/QC					
		Task Total		**$**	-
		GRAND TOTAL		**$**	**5,055.20**

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SUMMARY OF SERVICES BY OTHERS

Project: CBBEL - 143rd Will-Cook to Wolf

				OUTSIDE
Task 1 - PESA				
	Task Total		**$**	-
Task 2 - PSI				
Driller	1 x	$ 1,800.00	= $	1,800.00
Traffic Control	1 x	$ 1,600.00	= $	1,600.00
	Task Total		**$**	**3,400.00**
Task 3 - QA/QC				
	Task Total		**$**	-
	GRAND TOTAL		**$**	**3,400.00**

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