

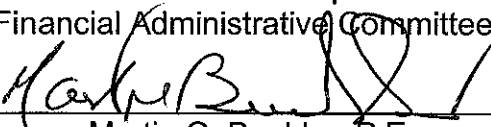
Quentin Road Resurfacing: Rte 22 to Old McHenry Road  
LCDOT Change Order No. 1

**TO:** Public Works and Transportation Committee  
Financial Administrative Committee

**Committee Action Meeting Date**

**DATE:1/11/2012**

**DATE:1/11/2012**

**FROM:**   
Martin G. Buehler, P.E.  
County Engineer

**SUBJECT:** Change Order No.1  
Section No. 10-00090-14-RS

Joint Committee action item approving Change Order No. 1 consisting of an increase of \$29,276.00 for additions to the Quentin Road Resurfacing project, Engineering Services, designated as Section No.10-00090-14-RS.

- Quentin Road Resurfacing project, Engineering Services: LCDOT Change Order No. 1
- Change Orders need to be approved by the standing committees for cumulative net increases over 10%.
- The Quentin Road Resurfacing project is under contract with Civiltech Engineering Inc., in the amount of \$107,148.00.
- Additional engineering services are being requested for several revisions to the original scope of work as detailed in the attached Supplement No1.

Summary:

Original awarded contract:	\$107,148.00
Change Order No.1:	\$29,276.00
Sum of all changes:	\$29,276.00

ILLINOIS DEPARTMENT OF TRANSPORTATION

Request for Approval  
of Change in Consultant Contract

Date: 12/29/2011

Local Agency: LAKE COUNTY

Request: No. 1

Name: Quentin Road Resurfacing, IL Rte 22  
to Old McHenry Road

To: Lake County Division of Transportation

Section:

Consultant: Civiltech Inc.

I recommend that an addition be made to the above consultant contract.

The estimated work is listed below

Original contract amount for services described:	\$107,148.00
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Sum of all previous contract change orders:	
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Item #	Description	Additions	Deductions
1	The design of the retaining wall located between Old Barn Lane and West Ravine Road. In addition, the added resurfacing of 1000 feet along Old McHenry Road, west of Quentin Road.	\$29,276.00	
2			
3			
TOTALS		\$29,276.00	\$0.00
NET CHANGE		\$29,276.00	\$0.00

Net ADDITION change to date \$29,276.00 which is 27.32 % of the original contract amount for services described

State fully the nature and reason for change:

Please see attached.

Revised contract amount for services described:	\$136,424.00
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When the net increase or decrease in the cost of the contract is \$10,000 or more, or the time of completion is increased or decreased by 30 days or more, one of the following statements shall be checked.

The undersigned determined that the circumstances which necessitated this change were not reasonably foreseeable at the time the contract was signed.

The undersigned determined that the circumstances which necessitated this change were not within the contemplation of the contract as signed.

The undersigned determined that this change is in the best interest of the local agency and is authorized by law.

Project Engineer Michael J. Burke Date 12/29/11

Engineer of Design Michael D. Zmator Date 12/29/11  
*rmc*

Approved Mark H. Buehler Date 1/4/12  
County Engineer



November 17, 2011

Mr. Michael J. Burke, P.E.  
Design Engineer  
Lake County Division of Transportation  
600 Winchester Road  
Libertyville, IL 60048

**Re:** Quentin Road Resurfacing  
IL Rte 22 to Old McHenry Road  
Section No. 10-00090-14-RS  
Supplemental Engineering Services

Dear Mr. Burke:

Preliminary design activities and further coordination with the County related to the Quentin Road Resurfacing project have resulted in the need to provide additional services. These services will result in our expenditure of supplemental engineering beyond the original scope of work.

The original contract dated February 18, 2011 was for an amount of \$107,148.00.

At the Lake County Division of Transportation's direction, we are providing a Supplemental Engineering Services breakdown that includes the supplemental fees related to the items described in Exhibit A. The supplemental engineering contract amount is \$29,276.00 which results in a revised total contract amount for \$136,424.00.

If there are any questions, please don't hesitate to contact me.

Very truly yours,

Reid T. Magner, P.E.  
Project Manager  
**Civiltech Engineering, Inc.**

**Quentin Road Resurfacing  
Supplemental Engineering Services Proposal  
Lake County, Illinois**

**EXHIBIT A**

**Supplemental Scope of Work**

The supplemental scope of work resulted from the Counties' review of the preliminary plans, guardrail investigation, and slope stability study. The additions to the scope of work include:

1. Additional pavement resurfacing and patching, as necessary, of the Old McHenry Road asphalt pavement from the Quentin Road intersection to a point just east of the Village of Hawthorn Woods municipal complex (approximately 1,450-ft or 0.28 mile).
2. The addition of a sheet piling wall along the eastern edge of pavement of Quentin Road by the cross culvert located north of W Ravine Road and south of W Old Barn Lane as part of the repair strategy for existing guardrail which is deflecting out. This repair strategy includes constructing a sheet wall along the area that has deflected outward to stabilize the road embankment, cutting off the existing guardrail above the buried lower bands leaving them in place, and constructing new guardrail on new posts staggered between the existing post locations.

**Roadway Work** - Additional design work including plan preparation, revisions to and additions of contract drawings, will be required as a result of the additional scope items listed above. The following is a list of the additional roadway design and plan preparation items:

1. Additional Coordination and Data Collection - We will obtain and review available County data including, but not limited to, record data, pavement maintenance information, subdivision plans and plats, existing/proposed record drawings, geotechnical reports, right-of-way data, aerial photography and contour mapping, other existing plans, utility atlases, or other project information that may be useful in design. This information will be incorporated into the project base drawing.
2. Revisions and Additions to the following contract plans:
  - a. Typical Sections (1 revised sheet & 1 additional sheet)
  - b. Maintenance of Traffic Plan (1 revised sheet)
  - c. Removal and Paving Plans (2 revised sheets & 2 additional sheet)
  - d. Summary of Quantities (1 revised sheet)
  - e. Schedules of Quantities (1 revised sheet)
3. Additional Special Provisions, Quantity Calculations, Estimates of Cost & Construction Time - The bid book will be updated based on changes made to the plans, quantities, cost, and estimates of time.

**Structural Work** - Structural design will be required for the addition of the permanent sheet piling wall which is intended to arrest the movement of the roadway embankment outward which is resulting in the deflection in the guardrail. The wall is anticipated to be 100-ft. long and will be designed and detailed in accordance with applicable IDOT standards and AASHTO's 2002 Standard Specifications for Highway Bridges. The addition of one Permanent Sheet Piling Wall drawing to the contract plans is anticipated. Also included is the preparation of any required special provisions for the construction of the permanent sheet piling wall and a construction cost estimate for the wall.

**Fee**

Net Contract Change (+)**\$29,276.00**

- Reference Documents Attached

Phase II Engineering Manhour Calculations  
 Supplemental Professional Engineering Services Proposal  
 Quentin Road Resurfacing (IL Rte 22 to Old McHenry Rd)  
 Lake County Division of Transportation

Task No.	Task	Personnel & Hours										Total Hours	% of Hours	Labor Cost
		DDS \$60.00	PM \$43.00	PE \$34.00	DE \$28.00	TSE \$38.00	SE \$41.00	DT \$35.00	QA/QC \$60.00					
1	Data Collection and Early Coordination	0	1	1	0	0	0	0	0	0	0	4	1.5%	\$ 140.00
2	Survey	0	0	0	0	0	0	0	0	0	0	0	0.0%	\$ -
3	Guardrail Investigation	0	0	0	0	0	0	0	0	0	0	0	0.0%	\$ -
4	Preliminary Design	0	22	10	10	8	32	18	0	0	0	100	36.8%	\$ 3,812.00
5	Pre-Final Design	0	20	21	25	2	15	42	0	0	0	125	48.0%	\$ 4,435.00
6	Final Design	0	8	8	7	0	4	6	0	0	0	33	12.1%	\$ 1,186.00
7	Project Administration, Coordination and Permits	0	5	2	2	0	0	1	0	0	0	10	3.7%	\$ 374.00
8	Bidding Assistance and Pre-Construction Meeting Attendance	0	0	0	0	0	0	0	0	0	0	0	0.0%	\$ -
	Total Cost													
	Multiplier*	2.93												
	Direct Costs and Sub Consultant Expense (See attached calculation)													
	*Multiplier													
	1 (Direct Labor)+OH + 0.145*(1+OH)													
	IDOT Approved OH Rate = 155.73%													
	<b>Total Engineering Cost:</b>											<b>272</b>	<b>100.0%</b>	<b>\$ 29,276</b>

Note:  
 DDS (Director of Design Services), PM (Project Manager), PE (Project Engineer), DE (Design Engineer), TSE (Traffic Signal Engineer), DT (Design Technician), QA/QC (Quality Assurance/Quality Control)

**Phase II Engineering Manhour Calculations  
Supplemental Professional Engineering Services Proposal  
Quentin Road Resurfacing (IL Rte 22 to Old McHenry Rd)  
Lake County Division of Transportation**

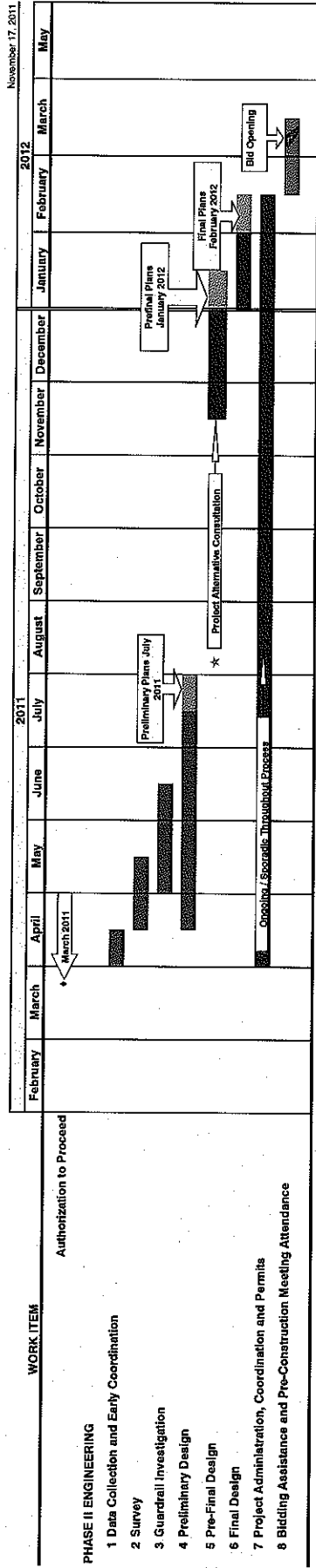
	Personnel & Hours								Total	% of Hours
	DDS	PM	PE	DE	TSE	SE	DT	QA/QC		
<b>1. Data Collection and Early Coordination</b>										
a. Initial Meeting with County									0	0.0%
b. Obtain/Update and Review Record Data		1	1	1			1		4	0.0%
c. Preliminary Utility Company Coordination									0	0.0%
<b>Sub-total Item 1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0.0%</b>
<b>2. Survey</b>										
a. Topographic Survey (Coordination Only)									0	0.0%
b. Field Survey									0	0.0%
c. Soils Survey (Coordination Only)									0	0.0%
<b>Sub-total Item 2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>
<b>3. Guardrail Investigation</b>										
a. Structural Evaluation									0	0.0%
<b>Sub-total Item 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>
<b>4. Preliminary Design</b>										
a. Plan Base Sheet Preparation									6	6.0%
b. Preliminary Plans (65%)		1	1	1			3		6	6.0%
Cover Sheet and Index of Sheets (1 sheet)									0	0.0%
General Notes and List of State and Local Standards (1 sheet)									0	0.0%
Typical Sections (5 sheets)		2	1	1			1		5	5.0%
Traffic Control Sheets (4 sheets)		2	1	1			1		5	5.0%
Pavement Removal and Utility Adjustment Sheets (8 sheets) 1"=20'		2	1	1	2		3		9	9.0%
Resurfacing Plan Sheets (8 sheets) 1"=20'		4	1	1	6		8		20	20.0%
Butt Joint and Transition Details (1 sheet)			1	1			2		4	4.0%
Permanent Sheet Piling Plan (1 sheet) 1"=20'		8	4	4			29		45	45.0%
c. Preliminary Design Review Meeting		3					3		6	6.0%
<b>Sub-total Item 4</b>	<b>0</b>	<b>22</b>	<b>10</b>	<b>10</b>	<b>8</b>	<b>32</b>	<b>18</b>	<b>0</b>	<b>100</b>	<b>100.0%</b>
<b>5. Pre-Final Design</b>										
a. Pre-Final Plans (90%)									0	0.0%
Cover Sheet and Index of Sheets (1 sheet)									0	0.0%
General Notes and List of State and Local Standards (1 sheet)									0	0.0%
Summary of Quantities (2 sheets)		1	1	2			2		6	4.8%
Schedule of Quantities (6 sheets)		1	1	2			2		6	4.8%
Typical Sections (5 sheets)		1	2	3			4		10	8.0%
Traffic Control Sheets (4 sheets)		1	2	3			4		10	8.0%
Pavement Removal and Utility Adjustment Sheets (8 sheets) 1"=20'		2	4	4	1		12		23	18.4%
Resurfacing Plan Sheets (8 sheets) 1"=20'		4	4	4	1		12		25	20.0%
Butt Joint and Transition Details (1 sheet)		1	1	1			1		4	3.2%
Permanent Sheet Piling Plan (1 sheet) 1"=20'		4	2	2			12		20	16.0%
LCDDOT Details (13 sheets)									0	0.0%
IDOT Details (11 sheets)									0	0.0%
b. Pre-Final Special Provisions and Bid Book		1							1	0.8%
c. Pre-Final Quantity Calculations		1	3	3			5		12	9.6%
d. Pre-Final Estimates of Cost and Construction Time			1	1					2	1.6%
e. Pre-Final QC/QA Review									0	0.0%
f. Pre-Final Project Review Meeting		3					3		6	4.8%
<b>Sub-total Item 5</b>	<b>0</b>	<b>20</b>	<b>21</b>	<b>25</b>	<b>2</b>	<b>15</b>	<b>42</b>	<b>0</b>	<b>125</b>	<b>100.0%</b>
<b>6. Final Design</b>										
a. Final Plans (100%)		4	2	2			4	3	15	45.5%
b. Final Special Provisions and Bid Book		2	2	1					5	15.2%
c. Final Quantity Calculations, Estimates of Cost and Time, QA/QC		2	4	4			3		13	39.4%
<b>Sub-total Item 6</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>33</b>	<b>100.0%</b>
<b>7. Project Administration, Coordination and Permits</b>										
a. Project Administration		4	1	1					6	60.0%
b. Project Submittals		1	1	1			1		4	40.0%
c. Utility Company Coordination									0	0.0%
d. Lake County Stormwater Permitting and Documentation (Not Required)									0	0.0%
e. Wetland or Floodplain Permitting (Not Required)									0	0.0%
f. NPDES Permitting and Documentation (Not required)									0	0.0%
<b>Sub-total Item 7</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>100.0%</b>
<b>8. Bidding Assistance and Pre-Construction Meeting Attendance</b>										
<b>Sub-total Item 8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>
<b>Total Hours:</b>	<b>0</b>	<b>56</b>	<b>42</b>	<b>45</b>	<b>10</b>	<b>51</b>	<b>68</b>	<b>0</b>	<b>272</b>	<b>0.0%</b>
<b>% of Hours:</b>	<b>0.0%</b>	<b>20.6%</b>	<b>15.4%</b>	<b>16.5%</b>	<b>3.7%</b>	<b>18.8%</b>	<b>25.0%</b>	<b>0.0%</b>	<b>100.0%</b>	

**Phase II Engineering Manhour Calculations  
Supplemental Professional Engineering Services Proposal**

**Quentin Road Resurfacing (IL Rte 22 to Old McHenry Rd)  
Lake County Division of Transportation**

Item No.	DIRECT COSTS Description	Cost
<b>Item 1</b>	<b>Printing</b>	
	<b>Preliminary Plans</b>	
	County 2 sets X 3 sheets/set X \$0.60/sheet (22"x34")	\$ 3.60
	County 2 sets X 3 sheets/set X \$0.80/sheet (11"x17")	\$ 4.80
	<b>Pre-Final Plans</b>	
	County 2 sets X 3 sheets/set X \$0.60/sheet (22"x34")	\$ 3.60
	County 2 sets X 3 sheets/set X \$0.80/sheet (11"x17")	\$ 19.20
	Utility Co. 8 sets X 3 sheets/set X \$0.60/sheet (22"x34")	\$ 14.40
	<b>Pre-Final Specification Books</b>	
	0 books X \$40/book	\$ -
	<b>Final Plans</b>	
	County 2 sets X 3 sheets/set X \$0.60/sheet (22"x34")	\$ 3.60
	County 2 sets X 3 sheets/set X \$0.80/sheet (11"x17")	\$ 4.80
	Utility Co. 8 sets X 3 sheets/set X \$0.60/sheet (22"x34")	\$ 14.40
	Mylar Plots sets X 3 sheets/set X \$7.50/sheet	\$ 22.50
	<b>Final Specification Books</b>	
	0 books X \$40/book	\$ -
	<b>Total Item 1</b>	<b>\$ 90.90</b>
<b>Item 2</b>	<b>Shipping</b>	
	0 overnight shipping items X \$20/each	
	<b>Total Item 2</b>	<b>\$ -</b>
<b>Item 3</b>	<b>Vehicle Expense</b>	
	Mileage (1 Site Visit)	
	<b>Total Item 3</b>	<b>\$ 40.00</b>
<b>Item 4</b>	<b>Survey - (By Subconsultants Working Directly For Civiltech)</b>	
	Quentin Road Alignment and Ties - Jorgensen & Associates, Inc.	
	<b>Total Item 4</b>	<b>\$ -</b>
<b>Item 5</b>	<b>Soils - (By Subconsultant Working Directly For Civiltech)</b>	
	Quentin Road Guardrail Area - Midland Standard Engineering & Testing, Inc.	
	<b>Total Item 5</b>	<b>\$ -</b>
<b>TOTAL DIRECT EXPENSES:</b>		<b>\$ 130.90</b>

Professional Engineering Services Schedule  
 Quentin Road Resurfacing (IL Rte. 22 to Old McHenry Rd)  
 Lake County Division of Transportation



- ↑ Indicates Project Milestone
- Indicates Consultant Work Time
- Indicates Agency Controlled Item
- Advertisement and Bidding Phase
- \* Guardrail Investigation and Slope Stability Study