



CITY of NOVI CITY COUNCIL

Agenda Item H
November 28, 2011

SUBJECT: Approval of Change Order No. 1 to V.I.L. Construction, Inc. for the Meadowbrook Lake Dam Renovations project in the amount of \$77,284

SUBMITTING DEPARTMENT: Department of Public Services, Engineering Division *BTC*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$ 77,284
AMOUNT BUDGETED	\$310,000
APPROPRIATION REQUIRED	\$ 77,284 (to be included in 2nd quarter budget amendment)
LINE ITEM NUMBER	210-211.00-865.685

BACKGROUND INFORMATION:

The construction contract for this project was awarded to V.I.L. Construction at the July 11, 2011 City Council meeting in the amount of \$400,261. The project will address the dam's non-conformance issues by increasing the spillway capacity to prevent dam failure, provide streambank stabilization improvements downstream of the dam and make other improvements to the site to facilitate maintenance of the dam by the City.

As with other large projects involving existing structures and underground excavation, there were several issues unforeseen until the project was under construction that require additional scope be added to the project. In working with the residents and the Meadowbrook Lake Subdivision Association, there were other scope changes made to accommodate resident concerns. These scope changes are included in Change Order No. 1, attached, in the amount of \$77,284. The attached memo from Aaron Staup provides additional details regarding the specific items included in the change order and also provides an update on the status of the project.

It is anticipated that the contractor will complete most of the major work items this year, with the final restoration to be completed in spring 2012.

RECOMMENDED ACTION: Approval of Change Order No. 1 to V.I.L. Construction, Inc. for the Meadowbrook Lake Dam Renovations project in the amount of \$77,284.

	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt				
Council Member Casey				
Council Member Fischer				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Wrobel				



MEMORANDUM

TO: BRIAN COBURN, P.E.; ENGINEERING MANAGER ^{BC}
FROM: AARON STAUP, CONSTRUCTION ENGINEERING COORDINATOR ^{AS}
SUBJECT: MEADOWBROOK LAKE DAM PROGRESS
DATE: NOVEMBER 17, 2011

The Meadowbrook Lake Project was initiated in 2007 to make improvements to Meadowbrook Lake Dam that would address the dam's nonconformance issues and implement recommendations from a 2005 study to address downstream streambank erosion issues. The primary improvement needed involves increasing spillway capacity to prevent dam failure. The project will also improve the primary spillway, provide streambank stabilization and other improvements downstream of the dam, and provide an upgraded pedestrian path designed to allow vehicular access to the dam for continued City maintenance.

Staff worked with the Meadowbrook Lake Subdivision Association and affected property owners over the past few years to address their concerns about the project and acquire the easements necessary for project construction. Once the easements were acquired, the design was finalized and a revised MDEQ permit for the project obtained. While the City has never been the actual owner of the dam, the City has historically maintained it because of the impact that its failure would have on the public. Moving forward, the easements obtained will designate the City as the entity responsible for the dam, and will allow the City access and rights as necessary to properly maintain the dam and protect downstream properties.

The construction contract was awarded to V.I.L. Construction, Inc. in July 2011. The contractor commenced work after the Labor Day weekend to allow the residents full use of the park for the majority of the summer.

Construction Progress

The project got off to a great start. City staff, URS and the contractor, V.I.L. Construction, Inc. met with each of the affected residents and the Association president to walk through the intricacies of construction and address any individual questions. We also held other meetings directly with the Wrights on the east side of the project to address tree clearing required for work on the dam embankment.

The residents have been appreciative of the meetings and information they have received, and we continue to correspond and coordinate with the residents, through the Association President, as often as possible. The residents seem satisfied with the work that has been completed to date, along with the level of communication and the progress of the work.

The following photos provide additional information regarding the progress on the project.



The earthen embankment for the dam was re-graded (east side shown here) to improve the safety of the dam to decrease the chance of overtopping the embankment and causing failure of the dam. A majority of the on-site subgrade clay soils were sufficient to construct the proposed berm to meet MDEQ specifications.



The rough grading of the secondary spillway is under way. The construction includes a buried concrete control structure at the edge of the lake to control the lake level at the overflow spillway, set to pass high frequency 2-year storms. This is to allow smaller storm events to bypass the primary dam structure and increase the capacity of the dam to meet DEQ requirements for a 100-year storm.



Rip rap was installed along the stream banks of the river channel to better prevent stream bank erosion.



The two existing flap-gates under the primary spillway were replaced with two new mechanical slide gates. When submerged, the flap-gates were nearly impossible to open without damaging them in the process. The new slide gates can be operated from above the water with a mechanical control device. The water level of the lake was lowered and the spillway flow was diverted to accomplish this major task.

Change Order Summary

The work to complete the Meadowbrook Lake Dam project involved rehabilitation of facilities without as-built records and with excavation that often exposes conditions and facilities that were not anticipated as part of the project design. As such, the contractor, engineering consultant (URS) and the City determined some additional work was required to ensure a quality finished product that will meet the expectations of the City and residents. Each of the six (6) additional work items is broken out below resulting in a total cost of \$77,284 as reflected in Change Order No. 1.

Bulletin No. 1 – To increase the useful life of the pathway, which will also be used for maintenance vehicle access to the dam, the City requested that the concrete pathway cross-section thickness be increased from 4-inches to 6-inches at an increased cost of \$13,073.

Bulletin No. 2 – The plans for the original construction of the dam indicated the existing walls to be 12-inches thick, which was carried over to the current design plans. However, when excavated and exposed in the field and measurements taken, the wing walls were actually 15-inches and the spillway walls at 18-inches resulting in an increased cost of \$2,583.

Bulletin No. 3 – The contract drawings indicated that the Middle Rouge River downstream of the spillway had a concrete bottom with concrete walls. After dewatering the river, it became apparent that there was no concrete bottom in the channel. URS and the City recommend removing the existing sediment from the bottom of the channel and replacing it with geotextile material and rip-rap to resist scour effect from the river at a cost increase of \$27,378.

Bulletin No. 4 – Upon excavation of the emergency overflow swale, a 4-inch footing drain and a 4-inch sump pump serving the adjacent property was exposed. The presence of the lines was stated by the property owner during the design phase, however the exact locations and sizes were unknown; therefore, it was not included in the original bid. Additional piping was installed to collect and divert this drainage away from the area at an increased cost of \$8,200.

Bulletin No. 5 – As with Bulletin No. 3 above, the concrete channel immediately downstream of the existing dam also had a soft bottom. The recommendation here was to also excavate the existing sediment from the bottom and replace with geotextile and rip-rap to protect from scour at an increased cost of \$24,500.

Bulletin No. 6 – During the placement of the earthen berm on the east side, the adjacent residents were concerned about the loss of some bushes and trees, as shown on the design plans. A small stone wall was constructed to preserve some existing cottonwoods and one 4 ½-inch caliper maple will be installed to replace the trees that were removed per the plan to enhance the screening from the public park at an increased cost of \$1,550.

Schedule

The overall project is behind schedule from its original completion date. This is due to the various inclement weather events (September was the fourth wettest month on record), subcontractor coordination issues, equipment problems, unforeseen conditions, and added work given to the contractor.

Now that the most critical portions of the work are complete (dam gate replacement, dam embankment construction, secondary spillway excavation, and rip rap installation), the contractor can begin final grading the project area; pouring the new sidewalk; installing the overflow spillway pavers; and restoration of the site. Because we are very late in the construction season, final restoration - to include grass growth - will not be satisfactorily completed until next spring.

The residents have been informed of this proposed schedule. Although they would like to have the park back for the winter, they appear to understand the complexity of the project and are willing to work with the City and contractor toward the successful completion of the project.



CITY OF NOVI

26300 Delwal Drive
 Novi, Michigan 48375
 Tel: (248) 347-0454
 Fax: (248) 735-5659

APPLICATION FOR PROGRESS PAYMENT

PROJECT: Meadowbrook Lake- Dam Renovations **NOVI PROJECT NO.:** **PAYMENT NO.:** 1
OWNER: City of Novi **ENGINEER:** URS Corporation **CONTRACTOR:** V.I.L Construction, Inc.
 45175 W. Ten Mile Road
 Novi, Michigan 48375

CONTRACT AMOUNT **COMPLETION DATE** **DATES OF ESTIMATE**
ORIGINAL: \$ 400,261.00 **ORIGINAL:** November 5, 2011- Slide gate January 4, 2011 **FROM:** September 6, 2011
REVISED: \$ 477,544.50 **REVISED:** **TO:** October 31, 2011

SECTION 1. COST OF COMPLETED WORK TO DATE

Item No.	Description of Item	Unit	CONTRACT ITEMS (Original)			CONTRACT ITEMS (Revised)			THIS PERIOD			TOTAL TO DATE		
			Quantity	Cost/Unit	Total Amt	Quantity	Cost/Unit	Total Amt	Quantity	Amount	%	Quantity	Amount	%
0	Constr. Inspection "Crew Day"	EA	40	\$ 615.00	\$ 24,600.00	45	\$ 615.00	\$ 27,675.00	23.25	\$ 14,298.75	52%	23	\$ 14,298.75	52%
1	General Conditions/Permits	LS	1	\$ 65,000.00	\$ 65,000.00	1	\$ 65,000.00	\$ 65,000.00	1	\$ 65,000.00	100%	1	\$ 65,000.00	100%
2	Mobilization	LS	1	\$ 30,000.00	\$ 30,000.00	1	\$ 30,000.00	\$ 30,000.00	1	\$ 30,000.00	100%	1	\$ 30,000.00	100%
3	Soil Erosion Control Measures	LS	1	\$ 11,000.00	\$ 11,000.00	1	\$ 11,000.00	\$ 11,000.00	0.75	\$ 8,250.00	75%	1	\$ 8,250.00	75%
4	Tree, Brush Removal Including Stumps	LS	1	\$ 5,000.00	\$ 5,000.00	1	\$ 5,000.00	\$ 5,000.00	1	\$ 5,000.00	100%	1	\$ 5,000.00	100%
5	Tree Relocation	EA	4	\$ 250.00	\$ 1,000.00	4	\$ 250.00	\$ 1,000.00	2	\$ 500.00	50%	2	\$ 500.00	50%
6	Electrical Demolition	LS	1	\$ 1,000.00	\$ 1,000.00	1	\$ 1,000.00	\$ 1,000.00	1	\$ 1,000.00	100%	1	\$ 1,000.00	100%
7	Asphalt Removal	SF	4800	\$ 0.70	\$ 3,360.00	4800	\$ 0.70	\$ 3,360.00						
8	Concrete Removal	SF	837	\$ 8.00	\$ 6,696.00	837	\$ 8.00	\$ 6,696.00	837	\$ 6,696.00	100%	837	\$ 6,696.00	100%
9	By-Pass Pumping & Flow Diversion	LS	1	\$ 12,500.00	\$ 12,500.00	1	\$ 12,500.00	\$ 12,500.00	0.75	\$ 9,375.00	75%	1	\$ 9,375.00	75%
10	Flap Gate Removal	EA	2	\$ 3,500.00	\$ 7,000.00	2	\$ 3,500.00	\$ 7,000.00						
11	Spillway Swale Excavation	CY	150	\$ 30.00	\$ 4,500.00	150	\$ 30.00	\$ 4,500.00	150	\$ 4,500.00	100%	150	\$ 4,500.00	100%
12	Retaining Wall Modifications	LF	120	\$ 105.00	\$ 12,600.00	120	\$ 105.00	\$ 12,600.00	120	\$ 12,600.00	100%	120	\$ 12,600.00	100%
13	Hand Rails	LF	195	\$ 140.00	\$ 27,300.00	195	\$ 140.00	\$ 27,300.00						
14	Fence	LF	12	\$ 25.00	\$ 300.00	12	\$ 25.00	\$ 300.00						
15	Dam Embankment	CY	450	\$ 28.00	\$ 12,600.00	450	\$ 28.00	\$ 12,600.00	405	\$ 11,340.00	90%	405	\$ 11,340.00	90%
16	Emergency Spillway Control Structure	LS	1	\$ 25,500.00	\$ 25,500.00	1	\$ 25,500.00	\$ 25,500.00	1	\$ 25,500.00	100%	1	\$ 25,500.00	100%
17	Concrete Block Matting	SF	620	\$ 15.00	\$ 9,300.00	620	\$ 15.00	\$ 9,300.00						
18	Bank Stabilization (Rip-Rap)	SY	217	\$ 180.00	\$ 39,060.00	217	\$ 180.00	\$ 39,060.00	217	\$ 39,060.00	100%	217	\$ 39,060.00	100%
19	Irrigation Pump & Piping Modifications	LS	1	\$ 4,000.00	\$ 4,000.00	1	\$ 4,000.00	\$ 4,000.00						
20	Slide Gate	EA	2	\$ 19,000.00	\$ 38,000.00	2	\$ 19,000.00	\$ 38,000.00						
21	6" Under Drain	LF	300	\$ 14.00	\$ 4,200.00	300	\$ 14.00	\$ 4,200.00						
22	6" PVC SCH 40	LF	12	\$ 25.00	\$ 300.00	12	\$ 25.00	\$ 300.00						
23	Concrete Pathway	SF	5229	\$ 5.00	\$ 26,145.00	5229	\$ 5.00	\$ 26,145.00						
24	Grass Pavers	SY	375	\$ 60.00	\$ 22,500.00	375	\$ 60.00	\$ 22,500.00						

TOTAL THIS SHEET \$ 368,861.00 \$ 368,861.00 \$ 218,821.00 \$ 218,821.00 59%



CITY OF NOVI

26300 Delwal Drive
 Novi, Michigan 48375
 Tel: (248) 347-0454
 Fax: (248) 735-5659

APPLICATION FOR PROGRESS PAYMENT

PROJECT: Meadowbrook Lake- Dam Renovations

NOVI PROJECT NO.:

PAYMENT NO.:

1

SECTION 1. COST OF COMPLETED WORK TO DATE

Item No.	Description of Item	Unit	CONTRACT ITEMS (Original)			CONTRACT ITEMS (Revised)			THIS PERIOD			TOTAL TO DATE		
			Quantity	Cost/Unit	Total Amt	Quantity	Cost/Unit	Total Amt	Quantity	Amount	%	Quantity	Amount	%
25	Electrical New Work	LS	1	\$ 8,000.00	\$ 8,000.00	1	\$ 8,000.00	\$ 8,000.00						
26	Remove/Reset Bench	EA	2	\$ 200.00	\$ 400.00	2	\$ 200.00	\$ 400.00						
27	Site Restoration	Acre	2	\$ 11,500.00	\$ 23,000.00	2	\$ 11,500.00	\$ 23,000.00						
28	Bulletin No. 1	LS	1			1	\$ 13,072.50	\$ 13,072.50						
29	Bulletin No. 2	LS	1			1	\$ 2,583.00	\$ 2,583.00	1	\$ 2,583.00	100%	1	\$ 2,583.00	100%
30	Bulletin No. 3	LS	1			1	\$ 27,378.00	\$ 27,378.00	1	\$ 27,378.00	100%	1	\$ 27,378.00	100%
31	Bulletin No. 4	LS	1			1	\$ 8,200.00	\$ 8,200.00						
32	Bulletin No. 5	LS	1			1	\$ 24,500.00	\$ 24,500.00						
33	Bulletin No. 6	LS	1			1	\$ 1,550.00	\$ 1,550.00						
34														
35														
36														
37														
38														
39														
40														
41														
42														
43														
44														
45														
46														
47														
48														
49														
50														
51														
52														
53														
54														
55														
56														
57														
58														
59														
TOTAL FROM THIS SHEET				\$ 31,400.00		\$ 108,683.50		\$ 29,961.00		\$ 29,961.00			\$ 29,961.00	
TOTAL FROM OTHER SHEET				\$ 368,861.00		\$ 368,861.00		\$ 218,821.00		\$ 218,821.00			\$ 218,821.00	
SUBTOTAL				\$ 400,261.00		\$ 477,544.50		\$ 248,782.00		\$ 248,782.00			\$ 248,782.00	52%



CITY OF NOVI

26300 Delwal Drive
Novi, Michigan 48375
Tel: (248) 347-0454
Fax: (248) 735-5659

Section 2.

APPLICATION FOR PROGRESS PAYMENT

PROJECT: Meadowbrook Lake- Dam Renovations NOVI PROJECT NO.: PAYMENT NO.: 1

Original Contract Amount: \$ 400,261.00
Change Orders: \$ 77,283.50
Adjusted Contract Amount to Date: \$ 477,544.50
Total Cost of Work Performed to Date: \$ 248,782.00
MINUS Retainage: 10% \$ 24,878.20
MINUS Inspection "Crew Days": To Date 23.25 \$ -
This Pay 23.25
Net Amt. Earned of Contract and Extra Work to Date: \$ 223,903.80
PLUS Value of Materials Stored at Close of Period: \$ -
Subtotal: \$ 223,903.80
MINUS Amount of Previous Payment: \$ -

CHANGE ORDERS

Table with 3 columns: No., Date, Amount. Row 1: 1, November 2, 2011, \$ 77,283.50

TOTAL: \$ 77,283.50

BALANCE DUE THIS PAYMENT: \$ 223,903.80

Table with 2 columns: Description, Value. Rows: Inspection "Crew Days" Allowed per Contract: 45; Inspection "Crew Days" Used to Date: 23; Inspection "Crew Days" Remaining: 22



CITY OF NOVI

26300 Delwal Drive
Novi, Michigan 48375
Tel: (248) 347-0454
Fax: (248) 735-5659

Section 3.

APPLICATION FOR PROGRESS PAYMENT

PROJECT: Meadowbrook Lake- Dam Renovation:

NOVI PROJECT NO.:

PAYMENT NO.:

1

The undersigned CONTRACTOR certifies that: (1) Any previous progress payments received from OWNER on amount of Work done under the Contract referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with Work covered by prior Applications for Payment; (2) title to all Work, materials, and equipment incorporated in said Work of otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all liens, claims, security interest, and encumbrances (except such as are covered by Bond acceptable to OWNER indemnifying OWNER against any such lien, claim security interest, or encumbrance); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not defective as that term is defined in the Contract Documents.

V.I.L. CONSTRUCTION, INC.
Contractor Company

Date: Nov. 17, 2011

[Signature]
Contractor Authorized Signature

By: Dominic Vani
Print Name

URS Corporation
Consultant Firm

Date: 11/16/2011

[Signature]
Consultant Authorized Signature

By: Navid Mehran
Print Name

Payment of the above AMOUNT DUE THIS APPLICATION is recommended.

CITY OF NOVI
[Signature]

By: Aaron J. Staup, Construction Engineering Coordinator

Dated: 11/17/11

[Signature]

By: Brian Coburn, Senior Civil Engineer

Dated: 11/17/11



WORK CHANGE DIRECTIVE No. 1

Project: Meadowbrook Lake - Dam Renovations

Owner: City of Novi
26300 Delwal Drive
Novi, Michigan 48375
(248) 735-5632

Engineer: URS Corporation
27777 Franklin Road, Suite 2000
Southfield, MI 48034

Contractor: V.I.L Construction
6670 Sims Drive
Sterling Heights, MI 48313

Drafted Date: November 2, 2011

Reasoning: Bulletin No. 1 - Owner request of increasing the concrete section for the pathway from 4" thick to 6" thick. Bulletin No. 2 - Dam wing wall actual measured width was found larger than shown on drawings the new measurement is an increase in the quantity unit price of 20.5%. Bulletin No. 3 - Design drawings show concrete bottom for the Middle Rouge River. From the pump around and lowering the water level it was found that channel bottom is natural ground the majority is sediment. Cross section was modified to remove 1.5' of sediment from the bottom of channel and replace with Rip Rap. Bulletin No. 4 - yard drain found along the swale 2ft below the invert of current design swale. Drain to be routed to Middle Rouge River. Bulletin No. 5 Remove and Replace Middle Rouge River channel invert with Rip Rap. Bulletin No. 6 - Owner requested adding a 4 1/2" sunset maple, a rock wall, and hand placement of berm at east end of project.

Existing Contract Items

Item No.	Item Description	Unit	Unit Price	Quantity	Contract Price	
					Add	Deduct
Bulletin No. 1	Increase in Concrete Quantities	CF	\$15.00	871.5	\$13,072.50	
Bulletin No. 2	Additional quantity for wing wall Modification	LF	\$105.00	24.6	\$2,583.00	
Bulletin No. 3						
1	Excavation	CY	\$30.00	75	\$2,250.00	
2	Rip Rap	SY	\$180.00	139.6	\$25,128.00	
Bulletin No. 4						
1	6" perforated drain W/geo wrap and Pea stone	LF	\$35.00	100	\$3,500.00	
2	6" Sch. 40 PVC	LF	\$25.00	160	\$4,000.00	
3	Connection W/tee and 4" transition ferro	EA	\$350.00	2	\$700.00	
4	Crew Days	EA	\$615.00	2		
Subtotals					\$51,233.50	\$0.00
Total					\$51,233.50	

New Contract Items

Item No.	Item Description	Unit	Unit Price	Quantity	Contract Price	
					Add	Deduct
Bulletin No. 5						
1	Excavation at contract price	CY	\$30.00	90	\$2,700.00	
2	1.5 ft deep rip rap	SY	\$110.00	180	\$19,800.00	
3	Water Control	LS	\$2,000.00	1	\$2,000.00	
4	Crew Days	EA	\$615.00	3		
Bulletin No. 6						
1	4 3/4" Sunset Maple	EA	\$900.00	1	\$900.00	
	Rock Wall and Grading	EA	\$650.00	1	\$650.00	
Subtotals					\$26,050.00	\$0.00
Total					\$26,050.00	

Estimated Increase/Decrease in Contract Price	\$77,283.50
Original Contract Amount	
Sum of Previous Approved Change Orders	
Estimated Revised Contract Amount	\$77,283.50

*Final approved amounts in Contract Price must be formalized by way of a Change Order; especially any that exceed the Original Contract Price or 10% of the Contract Price, in sum.

Accepted By: [Signature] Date: Nov. 17, 2011
 General Contractor

Prepared By: [Signature] Date: 16-Nov-11
 Consulting Engineer

Recommended By: [Signature] Date: 11/17/11
 Aaron J. Staup, Construction Engineer

Approved By: [Signature] Date: 11/17/11
 Brian Coburn, P.E., City Engineer



CHANGE ORDER No. 1

Project: Meadowbrook Lake - Dam Renovations

Owner: City of Novi
26300 Delwal Drive
Novi, Michigan 48375
(248) 735-5632

Engineer: URS Corporation
27777 Franklin Road, Suite 2000
Southfield, MI 48034

Contractor: V.I.L. Construction
6670 Sims Drive
Sterling Heights, MI 48313

Drafted Date: November 2, 2011

Description/Reasoning: **Bulletin No. 1** - Owner request of increasing the concrete section for the pathway from 4" thick to 6" thick. **Bulletin No. 2** - Dam wing wall actual measured width was found larger than shown on drawings the new measurement is an increase in the quantity unit price of 20.5%. **Bulletin No. 3** - Design drawings show concrete bottom for the Middle Rouge River. From the pump around and lowering the water level it was found that channel bottom is natural ground the majority is sediment. Cross section was modified to remove 1.5' of sediment from the bottom of channel and replace with Rip Rap. **Bulletin No. 4** - Yard drain found along the swale 2ft below the invert of current design swale. Drain to be routed to Middle Rouge River. **Bulletin No. 5** - Remove and Replace Middle Rouge River channel invert with Rip Rap. **Bulletin No. 6** - Owner requested adding a 4 1/2" sunset maple, a rock wall, and hand placement of berm at east end of project.

To the Contractor: You are hereby directed to comply with the changes to the contract documents. This change order reflects work completed or anticipated. Documentation supporting these changes are on file with the City of Novi's Engineer. Current project plans and specifications will be adhered to unless specifically changed by this change order document.

THE CONTRACT AMOUNT SHALL BE CHANGED BY THE SUM OF:	\$77,283.50
ORIGINAL CONTRACT AMOUNT:	\$400,261.00
SUM OF PREVIOUS APPROVED CHANGE ORDERS:	\$0.00
REVISED CONTRACT AMOUNT:	\$477,544.50

THE CHANGES ADDRESSED BY THIS CHANGE ORDER HEREBY INCREASE THE CONTRACT TIME BY: 5 Crew Day(s) to Substantial or Final Completion

Where applicable, attach the corresponding number of Work Change Directive to this Change Order.

Accepted By: [Signature] Date: 11/17/11
General Contractor

Prepared By: [Signature] Date: 16-Nov-11
Consulting Engineer

Recommended By: [Signature] Date: 11/17/11
Aaron J. Staup, Construction Engineer

Approved By: [Signature] Date: 11/17/11
Brian Coburn, P.E., City Engineer