

## Memorandum

To: Programs, Projects, and Operations Subcommittee

Subject: Urban Drainageway Program – Millard Park (Sarpy County SID #162)

Date: July 2, 2009 **Revised – July 7, 2009**

From: Gerry Bowen

In April, the Board approved a cost share request from the Sarpy County SID #162 (Millard Park) located southwest of 156<sup>th</sup> & Harrison. The five year project was approved under the Urban Drainageway Program and was intended to stabilize Mission Creek within the subdivision. The SID proposed to use gabions to stabilize the creek bank, as well as several grade control structures in the channel. Phase 1 of the project, scheduled for installation in 2009, involves control of erosion that threatens an SID trail. The cost estimate for Phase 1 was \$105,500, with the resultant cost share estimated to be \$63,300 (60% of \$105,500). This amount was placed in the District's draft FY 2010 Budget.

However, following a geotechnical investigation, it was determined that the soil conditions along the creek could not support the use of gabions. Instead, an anchored sheet pile wall (see attached letter) was recommended as the preferred solution to best protect the trail and stabilize this portion of the creek. The estimated cost (attached) of this alternative is \$329,100, making the cost share amount \$197,460. The SID has requested additional funds to cover this revised solution.

Further, the SID's consultant believes that this additional cost may also affect future phases of the project. They are now estimating a total project cost of approximately \$2 million, up from the \$600,840 estimate that was submitted with the application. This exceeds the \$1.5 million ceiling for projects under the Urban Drainageway Program Guidelines. The SID intends to reevaluate the project to meet the guidelines of the program and still address the stabilization needs of the drainageway.

Therefore, the SID would like to install the Phase 1 improvements to protect the trail in 2009. The SID will prepare a new stabilization plan that is more feasible, economical, and sustainable. The revised plan will be submitted for your consideration when completed, but at least by the next budgeting cycle in 2010.

- **It is recommended that the Subcommittee recommend to the Board that the District approve the request of Sarpy County SID #162 for an increase in the cost-share amount for Phase 1 of the project from \$63,300 to \$197,460, subject to inclusion of such additional amount in the NRD's FY 2010 Budget.**



July 2, 2009

Mr. Gerry Bowen  
Papio- Missouri Natural Resources District  
8901 South 154<sup>th</sup> Street  
Omaha, NE 68138

RE: Urban Drainageway Program Application Revision  
Mission Creek Channel Improvements  
SID No. 162 – Millard Park

Dear Mr. Bowen,

With reference to Phase I in the proposed Mission Creek Channel Improvements, HGM Associates Inc. had provided an initial cost estimate with the application of \$105,528.00. This estimate was based upon utilizing a gabion wall design. Since submitting the application we have had a geotechnical investigation performed for the site and during final design have determined that an anchored sheet pile retaining wall would be the optimal design. Due to this change our final cost estimate has been revised to \$329,066.67, which includes engineering and permitting fees. In view of this, and on behalf of Sanitary and Improvement District No. 162, Millard Park, of Sarpy County, Nebraska, we are requesting a reevaluation of the Natural Resources District's funding level for this project.

Key factors included in this significant increase in cost include space constraints, a desire not to encroach on the channel and geotechnical evaluation of the site. Furthermore, as design was being completed more length had to be added to the wall to correct damage from the spring rains, and our cost analysis became more detailed.

The Phase I project needs to be completed this year because the progression of the bank erosion is coming close to impacting the paved trail. We would like to move forward and request funding on the project for this year and complete a more detailed study through the complete channel area to determine proper improvements and their cost for the subsequent phases which will be submitted for funding next year.

This revision of costs in no way detracts from the commitment of SID No. 162 to the Papio-Missouri Natural Resource District in good faith that the proposed channel improvements to Mission Creek within SID No. 162 will be carried out to their intent and completed in full. After this emergency repair is completed SID No. 162 will confer and reapply to the Papio- Missouri NRD for approval and funding for the rest of the channel. SID No. 162 is committed to coming up with and implementing a comprehensive solution to the issues along Mission Creek.

Sincerely,



William J. Glismann, P.E.  
Senior Project Manager

**hgm**

A TRADITION OF EXCELLENCE  
A COMMITMENT TO CREATIVE SOLUTIONS

**SANITARY & IMPROVEMENT DISTRICT NO. 162  
MILLARD PARK  
MISSION CREEK CHANNEL IMPROVEMENTS  
HGM PROJECT NO. 70299**

**REVISED PRELIMINARY OPINION OF PROBABLE PROJECT COSTS  
June 29, 2009**

Based upon our detailed cost estimates for the Phase/Priority 1 wall for which we have completed the final design, and assuming that similar locations and soils will hold true for the other locations along Mission Creek, we will be utilizing a LF cost of \$1,300, which will take into account all construction costs, at current estimates and pricing.

Wall Costs are 1,300 LF

No.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	TOTAL COST
1	Mobilization	1	LS	\$10,000.00	\$10,000.00
2	General Clearing and Grubbing	1	LS	\$5,000.00	\$5,000.00
3	18" Area Inlet	1	EA	\$2,000.00	\$2,000.00
4	15" HDPE Pipe	50	LF	\$40.00	\$2,000.00
5	22.5° HDPE Elbow Joint	1	EA	\$250.00	\$250.00
6	6" Perforated HDPE Pipe	138	LF	\$30.00	\$4,140.00
7	6" HDPE Tee and Riser	1	EA	\$500.00	\$500.00
8	Construct Concrete Pipe Collar at Wall Face	1	EA	\$500.00	\$500.00
9	Remove and Replace 6" PCC Trail	168	SF	\$8.00	\$1,344.00
10	Erosion Control Blanket	175	SY	\$3.00	\$525.00
11	Split Rail Cedar Fence	100	LF	\$10.00	\$1,000.00
12	Earthwork (Embankment)	350	CY	\$38.00	\$13,300.00
13	Seeding	275	SY	\$10.00	\$2,750.00
14	Steel Sheet Pile (PZ22)	4125	SF	\$30.00	\$123,750.00
15	Screw Anchor Tie-Backs (see special provisions)	1	LS	\$28,000.00	\$28,000.00
16	Screw Anchor Installation Obstruction Labor Time	1	HR	\$1.00	\$1.00
17	Structural Steel	5970	LB	\$3.00	\$17,910.00
18	Concrete Coping	140	LF	\$55.00	\$7,700.00
19	Reinforcing Steel	1326	LB	\$0.85	\$1,127.10
<b>Priority #1 Subtotal</b>					<b>\$221,797.10</b>
Contingencies (15%)					\$33,269.57
<b>Priority #1 Total Construction Cost</b>					<b>\$255,066.67</b>
<b>ESTIMATED ENGINEERING, LEGAL, PUBLICATION AND TESTING FEES</b>					<b>\$74,000.00</b>
<b>Total Cost</b>					<b>\$329,066.67</b>



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**hgm**  
 ASSOCIATES INC  
 GEOMETRIC AND CHIEF SURVEYORS  
 Council Bluffs, Iowa

DATE	REVISION

PROJECT: MISSION CREEK CHANNEL IMPROVEMENTS  
 SHEET: 910, 102 - MIDLAND PARK  
 DRAWN: Concept Drawing

PROJECT NO: 70497  
 SHEET: 1

