



City of Granite Falls

885 Prentice Street
Granite Falls, MN 56241-1598
Phone (320) 564-3011 FAX (320) 564-3013
www.granitefalls.com

Office of City Manager

June 16, 2009

2010 CAPITAL BONDING REQUEST – CITY OF GRANITE FALLS, MN Minnesota Statute Section 16A.86.

Please accept the following response relative to the City of Granite Falls 2010 Capital Bonding request, in accordance with Minnesota Statue Section 16A.86, and in response to correspondence dated May 8, 2009 from the State Office of Management and Budget.

I. Project Basics

1. City of Granite Falls
885 Prentice Street
Granite Falls, MN 56241
2. Comprehensive Flood Hazard Mitigation Program
3. N/A
4. The project is located in the City of Granite Falls, in the Counties of Yellow Medicine and Chippewa.
5. The City of Granite Falls will both own and operate the facility.
6. William P. Lavin, City Manager, (320) 564-3011, bill.lavin@granitefalls.com

II. Project Description

7. To date the City of Granite Falls has been successful at obtaining approximately \$14 million of funding to assist with accomplishing those projects as listed in the city's Locally Preferred Plan. Please see attached map and cost breakdown. The 2010 Capital Bonding Request in the amount of \$2.3 million would enable the city of complete Phase II of upgrades to the city's current levee structure which would include raising the level of protection to about the 500 year level. Note that this project was initiated through flood damage reduction funding in 2009. Once completed the levee would be raised approximately 3' to 3.5' for most of its length which extends approximately 7,000'.

In addition funding is also requested to relocate a sanitary lift station above the flood plain elevation thereby mitigating against future floods impacting this area resulting in the sanitary sewer to back up throughout the community. This solution would address public health and safety needs consistent with statewide policy relative to the Flood Hazard Mitigation Grant Program.

Finally the 2010 Capital Bonding request also includes funds for the acquisition, relocation and flood proofing of two commercial properties.

The city's 2012 Capital Bonding Request in the amount of \$1.4 million includes funds for the construction of a permanent pumping station to mitigate against interior flood drainage during future flood events. The proposed location for the pumping station is within both a residential and highway commercial area that experienced flooding during the 1997 and 2001 flood events.

The city's 2014 Capital Bonding Request in the amount of \$1.7 million would provide funds to construct a permanent weir along a portion of a dike which currently functions as a flood protection structure. The significance of this project would address secondary channel flooding along a particular segment of the dike which redirects flood waters into a secondary channel thereby reducing impacts along the main channel throughout the city. The permanent weir would extend a distance of approximately 1,400' to maintain the spill flow that occurs during major flood events.

The Capital Bonding Requests addressed above are consistent with the city's Locally Preferred Plan that has served as a basis for the city's flood mitigation efforts since 2000. These requests are consistent with state established policy to mitigate flood damages through flood proofing and/or flood protection and removal of structures from the flood plain. The city has strived at all times to remain consistent with the Locally Preferred Plan which has always had as its objective to identify, evaluate and prioritize public health, safety and property damage risks and to develop plans for implementation of flood mitigation measures.

III. Project Financing

For 2010

Land Acquisition/ Flood Proofing	Pre-design	Design	Project Management	Construction
\$565,000	\$50,000	\$200,000	\$150,000	\$1,335,000
TOTAL				\$2,300,000

For 2012

Land Acquisition/ Flood Proofing	Pre-design	Design	Project Management	Construction
	\$50,000	\$200,000	\$100,000	\$1,050,000
TOTAL				\$1,400,000

For 2014

Land Acquisition/ Flood Proofing	Pre-design	Design	Project Management	Construction
	\$50,000	\$120,000	\$50,000	\$1,480,000
TOTAL				\$1,700,00

IV. Other Project Information

9. Production Schedule	2010	2012	2014
Construction begins	Apr. 2010	Apr. 2013	Apr. 2015
Construction ends	Oct. 2011	Oct. 2013	Oct. 2015

10. With regard to construction projects of at least \$1.5 m for the 2010 Capital Bonding Request, a project pre-design has already been completed consistent with the city's Locally Preferred Plan as accepted by the Minnesota Department of Natural Resources based upon based upon the 2008 Capital Bonding Request.

For capital bonding years 2012 and 2014 a project pre-design report has not been submitted.

11. N/A

- 12 & 13. Regarding sustainable building guidelines – These guidelines would not be applicable to the Capital Bonding Requests as identified.

14. See attached Resolution of Support from the Granite Falls City Council.

15. William P. Lavin, City Manager
885 Prentice Street
Granite Falls, MN 56241
Phone: 320-564-3011
Fax: 320-564-3013
E-mail: bill.lavin@granitefalls.com



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Office of City Manager

June 16, 2009

TO: Minnesota Management and Budget

FROM: William P. Lavin, City Manager

RE: 2010 Capital Bonding Request – Granite Falls Pedestrian Bridge
Minnesota Statute Section 16A.86

Attachment A

I. Project Basics

1. City of Granite Falls
885 Prentice Street
Granite Falls, MN 56241
2. Granite Falls Pedestrian Bridge
3. Project priority number 2.
4. The project is located in the City of Granite Falls in the Counties of Yellow Medicine and Chippewa.
5. The City of Granite Falls will both own and operate the facility.
6. William P. Lavin, City Manager, (320) 564-3011, bill.lavin@granitefalls.com

II. Project Description

7. The City of Granite Falls plans to rehabilitate the existing "Roebling Suspension Bridge" over the Minnesota River. This bridge will function as a critical connection in the proposed Minnesota River Trail System and is also a vital part of the main street revitalization efforts currently underway in Granite Falls. This project is related to numerous local and state plans. The City of Granite Falls has undergone a complete downtown revitalization planning process due to the extreme flood damage within our community from the Minnesota River.

Since 2002 a local Flood Mitigation Task Force has been meeting to prioritize projects. Rehabilitation of the current pedestrian bridge has been incorporated in the city's redevelopment strategies. The bridge functions as a critical link to crossing the Minnesota River which connects to the downtown area of Granite Falls.

This project will restore a bridge that has been a historical part of the City of Granite Falls since 1888. Although not on the historic registrar it is eligible for listing because the current bridge (constructed in 1935) has significant historical value as it was designed by the John A. Roebling's Sons Company. This company designed many of the country's early suspension bridges including the Brooklyn Bridge and developed the specialized technique of spinning suspension cables which were later used on the Golden Gate Bridge.

In addition to its historical significance the bridge can also serve as the critical crossing of the Minnesota River for the proposed Minnesota River Trail Project. The rehabilitation will including cleaning and painting of the bridge, replacement of concrete bridge docking, repair of structural deficiencies, replacement and upgrading of metal railings, lighting, and repairs and restoration of the bridge vault. (See attached pictures.)

8. N/A

9. N/A

III. Project Financing

Project Name: City of Granite Falls Suspension Bridge

Local Government Submitting request: City of Granite Falls

The project costs below already include inflation.

Sources of Funds In Dollars	Prior Year	For 2010	
State GO Bonds Requested		\$512	
Pending Contributions			
City Funds		\$512	
TOTAL			\$1,024

Granite Falls Walking Bridge ~ 1930's during construction of new bridge.



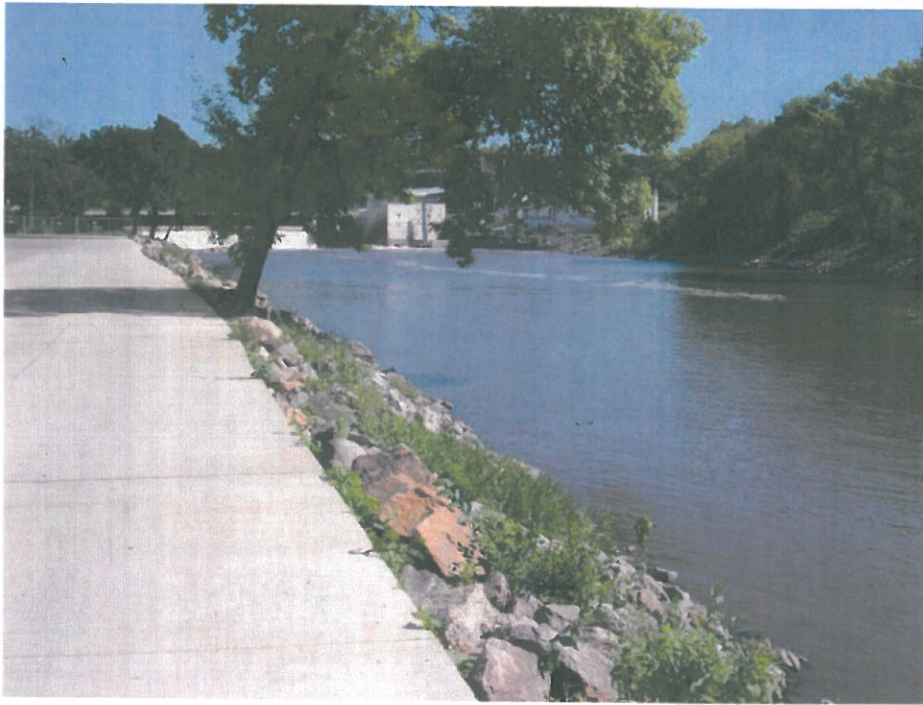
Existing Bridge looking east across Minnesota River. Residential district and recreational areas are shown. Senior apartments are across to the left (within the trees) and the area to the right is primarily open space and is proposed to become a larger green corridor (reference Appendix A - Final Concept Map)



**West side of bridge looking south along alley —commercial district.
Alley is proposed to become more of a green space and a trail
(reference Appendix A - Final Concept Map).**



**West side of bridge looking north along alley —commercial district.
Alley is proposed to become more of a green space and a trail
(reference Appendix A - Final Concept Map).**



**West side of bridge (downtown) and access from bridge to alley.
Also shows bridge vault area to be rehabilitated.**



Frequent elderly users from east side of bridge cross to utilize business district.



Existing Skyline Trail that will connect to state trail corridor coming in from west (across street) and to new connection that will run down to bridge.



Existing park area on east side of bridge. Proposed to become more of a green space and a trail (reference Appendix A - Final Concept Map).



August 29, 2006

Mr. William P. Lavin
City Manager
City of Granite Falls
885 Prentice Street
Granite Falls, MN 56241-1598

Re: Granite Falls Pedestrian Bridge over the Minnesota River
Concept Study for Raising Bridge and Stabilizing Existing Piers

Dear Mr. Lavin:

This report summarizes the results of our investigation into rehabilitating the existing Granite Falls Pedestrian Bridge by raising the existing bridge superstructure and reinforcing the pier foundations.

Stabilize Existing Piers:

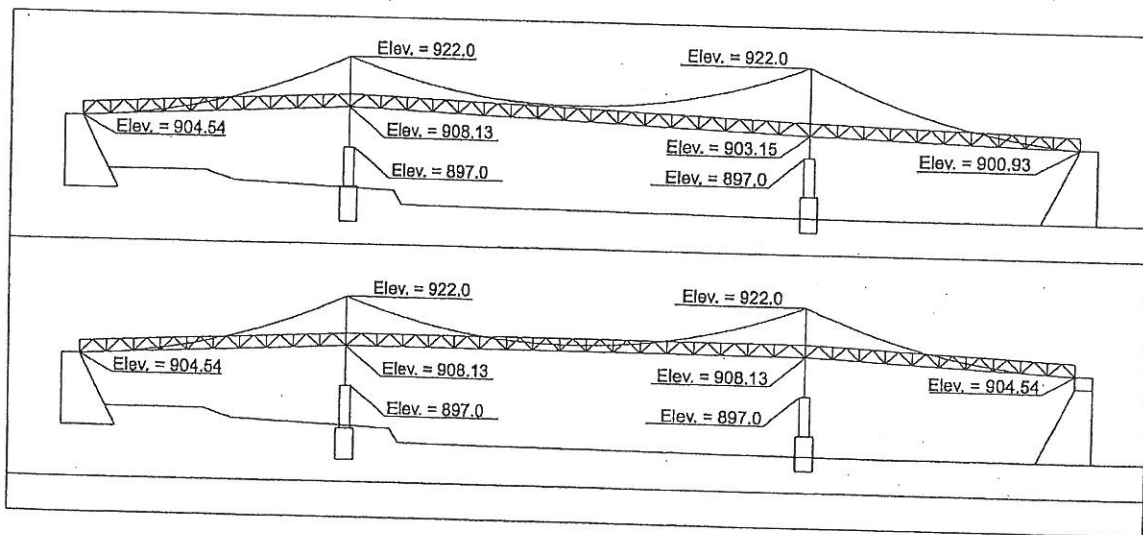
To address the concerns dealing with the stability of the existing bridge piers, we are proposing that a new foundation be constructed to aid in the support of the bridge. The new foundation would be constructed using driven steel piling encased in a reinforced concrete footing. The piling would be driven next to the existing pier foundations and the new concrete footing would encase both the new piling and the existing foundation. This type of foundation would provide support for the bridge through the steel piles which would be driven to bearing on hard soils or bedrock. Soil borings would be necessary at each of the bridge piers to determine the pile type and length needed for this type of foundation system. The new bridge foundation would be located completely below the waterline and would therefore not change the look of the existing bridge.

The new bridge foundation would provide a stable base for the existing bridge, however, it would not change the existing horizontal displacement of the pier columns that is currently visible at both piers. It is our opinion, as well as the consensus opinion of many previous engineers, that any attempt to try to "jack" the existing pier columns back to vertical would have a strong possibility for severely damaging the existing concrete piers. Therefore, we propose that a new solid wall concrete pier stem be constructed that would encase the existing concrete pier columns. This solid wall pier stem would slightly alter the look of the existing piers, however, it would provide a more stable base for the bridge superstructure and would be much more suitable to resist stream flow forces caused by ice and debris. Reconstructing the pier stem would help to prevent future damage to the bridge piers and would result in a longer life span for the existing bridge. A rendering which shows what the future piers may look like is attached to this report.

Raise East End of Bridge Superstructure:

In addition to investigating concerns with the stability of the existing bridge piers, we have also investigated the feasibility of raising the east end of the existing bridge to avoid damage from future flood events. Mn/DOT State Aid rules require that new pedestrian bridges be constructed with a low member elevation 2 ft above the 100 yr tailwater elevation. A detailed hydraulic analysis would have to be done in order to establish the 100-yr tailwater elevation for this site and to ensure that any rehabilitation efforts would meet the State Aid requirements. For the purposes of this report, it has been assumed that raising the east end of the bridge to an elevation equal to that of the west end would meet the State Aid requirements.

Raising the east end of the bridge would be done by reconstructing the anchorage at the east end of the bridge at the same elevation as the anchorage located on the west end of the bridge. This would require raising the existing east abutment and east approach by approximately 3 1/2 ft. Additional retaining walls may be necessary at the east abutment to accomplish this grade raise. After reattaching the suspension cables to the new anchor point, the deck would be jacked upward and new vertical hanger rods that have been pre-cut to the proper length would replace the existing hanger rods in the center and east span. The resulting bridge would be symmetrical about the centerline of the center span. A drawing of the existing bridge and the proposed bridge is shown below. Elevations in the drawings are taken from the plans for the existing bridge and would have to be verified in the field.



A cost estimate for the complete bridge rehabilitation, which includes the work mentioned in this report as well as repainting the existing bridge and other associated work, is attached to this report. Also included in this estimate is an estimate of costs for the engineering work associated with the bridge rehabilitation.

If you have any questions or comments regarding any of the information provided in this report, please don't hesitate to call.

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Kent A. Rohr, P.E.

Date

License No.

WIDSETH SMITH NOLTING & ASSOCIATES
610 FILLMORE STREET
ALEXANDRIA, MINNESOTA 56308

PEDESTRIAN BRIDGE OVER THE MINNESOTA RIVER
GRANITE FALLS, MN

PRELIMINARY CONSTRUCTION COST ESTIMATE				
ITEM DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	AMOUNT
ENGINEERING COST ESTIMATE				
SOIL BORINGS				\$ 63,000.00
SURVEY AND MEASUREMENT OF BRIDGE	LUMP SUM	\$ 9,500.00	1	\$ 9,500.00
HYDRAULIC REPORT AND RISK ASSESSMENT	LUMP SUM	\$ 3,500.00	1	\$ 3,500.00
PROJECT MEMO AND PERMITS	LUMP SUM	\$ 2,500.00	1	\$ 2,500.00
ENGINEERING (PLANS, SPECIAL PROVISIONS, COST EST.)	LUMP SUM	\$ 2,500.00	1	\$ 2,500.00
	LUMP SUM	\$ 45,000.00	1	\$ 45,000.00
STABILIZE EXISTING PIERS				
REMOVE EXISTING RIP-RAP				\$ 151,750.00
CONSTRUCT COFFERDAM AND EXCAVATE AROUND EXISTING FOOTING	EACH	\$ 6,500.00	2	\$ 13,000.00
DELIVER AND DRIVE STEEL H-PILING (H 10x42)	EACH	\$ 18,500.00	2	\$ 37,000.00
CONCRETE FOOTING (1A43 CONCRETE AND REIN. BARS)	LIN. FT.	\$ 50.00	640	\$ 32,000.00
CONCRETE PIER STEM (3Y43 CONCRETE AND REIN. BARS)	CU. YDS.	\$ 650.00	55	\$ 35,750.00
	CU. YDS.	\$ 850.00	40	\$ 34,000.00
RAISE BRIDGE				
REMOVE EXISTING FENCING AND APPURTENANCES				\$ 158,500.00
DETACH EAST ANCHORAGE AND ATTACH TO TEMPORARY ANCHOR	LUMP SUM	\$ 2,500.00	1	\$ 2,500.00
RECONSTRUCT EAST ANCHORAGE AT NEW ELEVATION	LUMP SUM	\$ 10,000.00	1	\$ 10,000.00
RECONSTRUCT EAST ABUTMENT INCLUDING NEW STRAIGHT-BACK WINGWALLS	LUMP SUM	\$ 9,000.00	1	\$ 9,000.00
ATTACH EAST ANCHORAGE TO NEW ANCHOR POINT	LUMP SUM	\$ 22,000.00	1	\$ 22,000.00
RAISE CENTER AND EAST SPAN AND INSTALL NEW VERTICAL HANGERS	LUMP SUM	\$ 5,000.00	1	\$ 5,000.00
STRAIGHTEN STEEL TOWERS AND ADJUST SUSPENSION CABLE GEOMETRY	LUMP SUM	\$ 95,000.00	1	\$ 95,000.00
	LUMP SUM	\$ 15,000.00	1	\$ 15,000.00
CLEAN AND PAINT BRIDGE*				
* INCLUDES ENCAPSULATION, TOXICITY TESTING AND DISPOSAL				\$ 295,500.00
CLEAN AND REPAINT BRIDGE STEEL				
CLEAN, REPAIR AND PAINT METAL RAIL AT WEST END OF BRIDGE	LUMP SUM	\$ 289,000.00	1	\$ 289,000.00
CLEAN, REINFORCE AND PAINT NORTHWEST STEEL ANCHORAGE ASSEMBLY	LUMP SUM	\$ 5,000.00	1	\$ 5,000.00
	LUMP SUM	\$ 1,500.00	1	\$ 1,500.00
REPLACE PRECAST CONCRETE DECK PANELS				
	SQ.FT.	\$ 12.00	2240	\$ 26,880.00
MISCELLANEOUS CONSTRUCTION ITEMS				
RAISE PIER PORTAL BRACES TO MEET HT. REQUIREMENTS				\$ 44,700.00
REPAIR AND REPLACE ANY NECESSARY STEEL ELEMENTS	LUMP SUM	\$ 3,500.00	1	\$ 3,500.00
EXTEND HANDRAILS TO 4'-6" ABOVE BRIDGE DECK	LUMP SUM	\$ 5,000.00	1	\$ 5,000.00
REPLACE METAL RAIL NETTING	SQ.FT.	\$ 15.00	560	\$ 8,400.00
REPAIR CONCRETE AT WEST VAULT	SQ.FT.	\$ 2.50	2520	\$ 6,300.00
SANDBLAST AND RESTORE VAULT TO 1930'S IMAGE	LUMP SUM	\$ 1,500.00	1	\$ 1,500.00
REPLACE METAL SIDING AT WEST ABUTMENT	LUMP SUM	\$ 12,000.00	1	\$ 12,000.00
REPLACE LIGHTS AND CONDUIT SYSTEM	LUMP SUM	\$ 2,000.00	1	\$ 2,000.00
REPLACE ABUTMENT BOLLARDS WITH REMOVABLE UNITS	LUMP SUM	\$ 4,000.00	1	\$ 4,000.00
	EACH	\$ 1,000.00	2	\$ 2,000.00
ENGINEERING COST ESTIMATE				
				\$ 63,000.00
PRELIMINARY CONSTRUCTION COST ESTIMATE				
				\$ 677,330.00
CONSTRUCTION ADMIN, OBSERVATION AND INSPECTION COST ESTIMATE**				
** INCLUDES INSPECTION OF PAINT SYSTEM BY CERTIFIED TESTING AGENCY				\$ 65,000.00
TOTAL PROJECT COST ESTIMATE				
				\$ 805,330.00