



BOLTON & MENK, INC.[®]

Consulting Engineers & Surveyors

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June 15, 2012

Jon Olson, P.E., Division Manager
Anoka County Public Services Division
2100 3rd Avenue, Suite 700
Anoka, MN 55303-5024

Re: Proposal for Outlet Diversion - Anoka County Ditch 56

Dear Mr. Olson:

Bolton & Menk, Inc. is pleased to submit our Proposal to Anoka County for the proposed Outlet Diversion of County Ditch 56. Our firm has been providing professional engineering and surveying services throughout Minnesota for over 60 years. During that time, we have grown to a firm of over 265 employees with a wide range of relevant water resource engineering expertise and have considerable experience and expertise with projects involving Minnesota Drainage Statute 103E. We are fully committed to providing Anoka County with high quality and cost-effective services. We have sufficient resources and capacity to meet the County's needs.

Our Project Team includes Bruce Firkins, Vice-President and Principal-In-Charge. Bruce has 38 years of experience and has been involved in numerous projects involving Statute 103E. Kevin Bittner will serve as the Project Manager, coordinating the efforts of the Project Team and leading the staff and Board communications and all project meetings and hearings. Kevin is a Principal in the firm and manages the Ramsey office of Bolton & Menk. He has over 25 years of experience as a civil engineer and has previous experience with the Army Corps of Engineers working on a variety of watershed studies and flood control projects. As a consultant, Kevin was the Project Manager of a mile-long open ditch project initiated and constructed under Statute 103E and was involved in another petitioned drainage study under 103E. Kevin's office is located in the COR of the City of Ramsey and can provide timely and cost effective service on this project.

Jared Voge, another Principal in our firm, will monitor client satisfaction with our service and provide reviews of construction plans and specifications in accordance with our Quality Control/Quality Assurance Policies.

As you review this proposal, we are confident you will find that Bolton & Menk, Inc. is highly qualified to provide water resource services to Anoka County. We are uniquely qualified because of our extensive engineering experience and expertise in drainage projects involving Minnesota drainage statutes.

Thank you for this opportunity to submit our proposal. Please feel free to call Kevin directly at 763-433-2851 if you need additional information or have any questions. We look forward to serving Anoka County with this outlet diversion project.

Sincerely,

BOLTON & MENK, INC.

Kevin F. Bittner, P.E.
Principal Engineer/Ramsey Office Manager

Jared A. Voge, P.E.
Principal Engineer



PROJECT UNDERSTANDING

Anoka County Ditch 56 was constructed in 1912 for a cost of \$4,561.52. The ditch drains a total area of nearly 1,600 acres and a benefitting area of 723 acres. The outlet for the main ditch is just west of the DNR boat launch on the north side of Coon Lake. A portion of the ditch runs adjacent to Thielen Boulevard NE, roughly 800 feet south of County Road 22. Directly east of Thielen Boulevard in this same vicinity is the westerly end of a man-made boat channel that provides access to Coon Lake and a number of adjacent residential properties.

The man-made channel is approximately 2,200 feet in length from Thielen Boulevard to the main body of Coon Lake. Because there is limited flow in this channel, the water becomes stagnant during the summer months. In order to improve the water quality conditions, the Coon Lake Improvement Association along with the County of Anoka desires to investigate the feasibility of diverting all or a portion of the flow in Ditch 56 to the man-made lake channel.

PROPOSED WORK PLAN AND APPROACH

The proposed work plan would fulfill the requirements described in the RFP and is described in general as follows:

Phase 1 – Provide an engineering report consistent with Minnesota Statutes 103E.227 for Impounding, Rerouting, and Diverting Drainage System Waters.

- Task 1-a Obtain the bottom elevations of the boat channel to determine existing depth, capacity and potential flushing rates for the channel.
- Task 1-b Develop a hydrologic model for the Ditch 56 watershed. The model will be used to determine existing runoff from the watershed for various storm events and evaluate diversion scenarios of all or portions of the flow into the boat channel. The model will also be used to determine the potential impacts to the existing Ditch 56 channel and freeboard and whether existing beneficiaries will be impacted in any way.
- Task 1-c Evaluate the impacts to the boat channel and whether the diverted flow will have water quality benefits.
- Task 1-d Develop a preliminary design and cost estimate for the diversion infrastructure.
- Task 1-e Make a determination if the project will have an overall public benefit.
- Task 1-f Prepare an Engineering Report consistent with the requirements of 103E and upon completion present the report to the Anoka County Board at a regularly scheduled meeting.
- Task 1-g Prepare a Notice of Public Hearing as required by 103E.
- Task 1-h Present the report to the public and the County Board (acting as the Drainage Authority) at a public hearing called for that purpose.
- Task 1-i Prepare a summary of the proceedings and provide a recommendation on the next phase of implementation and present this summary to the Public Works Committee and the County Board.



Phase 2 – Provide final design services for the selected improvements and prepare all necessary permit applications with the WMO, Anoka Conservation District, Board of Soil and Water Conservation, Corps of Engineers and Minnesota DNR.

- Task 2-a Obtain soil borings in the vicinity of the project area to determine soil conditions that will be encountered and allow for preparation of soil corrections if needed.
- Task 2-b Prepare plans and specifications for the proposed improvements and submit hard copies of the plans at the 75% and 95% completion stage for review by Anoka County staff. The plan will contain a staging and traffic control plan that will provide for access by residents that utilize Thielen Boulevard as the singular access to their properties.
- Task 2-c Update the project cost estimate at the 75% and 100% complete plan stage.
- Task 2-d Review the design with the Anoka County Board and the Coon Lake Improvement Association and obtain comments (3 meetings assumed).
- Task 2-e Based on comments obtained during the review processes, make adjustments and modifications in the plan and proceed to 100% completion of the documents.
- Task 2-f Deliver a complete set of plans and specifications in electronic format (pdf format assumed) on disk to the County.
- Task 2-g Prepare and submit the necessary permit applications on behalf of the County and respond to questions and comments from the regulating agencies.

Phase 3 – Provide construction services during the construction of the project.

- Task 3-a Respond to questions during the bidding phase and prepare and issue addendums that may be needed.
- Task 3-b Assist with the opening and tabulation of bids.
- Task 3-c Prepare a bid award recommendation to the County Board.
- Task 3-d Provide construction staking of the improvements.
- Task 3-e Provide a Resident Project Representative to observe and document conformance of construction with plans and specifications and maintain construction documentation including diaries, testing results and contract payment items.
- Task 3-f Provide material testing services in order to document compliance with specification requirements.
- Task 3-g Prepare partial and final contractor pay estimates.
- Task 3-h Prepare and submit documentation that the project was completed in conformance with the plans and specifications.
- Task 3-i Prepare and submit record drawings of the completed work.



PROJECT SCHEDULE

Assuming that Bolton & Menk obtains an authorization to proceed at the June 26th County Board meeting, we provide the following schedule:

Significant Tasks	Schedule
Task 1-f Present Engineering Report to County Board	July 24 , 2012
Task 1-h Public Hearing Presentation & Ordering of Improvement	August 22 (est.), 2012
Task 2-a through 2-g Final Design Phase Services	September 2012
Task 3-b Bid Opening & Tabulation	October 17, 2012
Task 3-c through 3-l Construction Phase Services	November 2012

RELEVANT PROJECT EXPERIENCE

CHAPTER 103E URBAN PUBLIC DRAINAGE PROJECTS

CD 62 Flood Mitigation, City of Marshall, Minnesota

The City of Marshall has been subject to persistent surface flooding due to inadequate storm sewer and surface ditch outlets. Bolton & Menk, Inc. was employed to review the existing drainage facilities within the affected watershed and investigate alternatives for drainage relief. A comprehensive study of the system, covering the east one-third of Marshall, was performed and included analysis of existing piping and ditches and integration of surface detention to mitigate existing flooding conditions. An integral part of the project was coordination of flood relief for Marshall with downstream County ditch system outlets. Bolton & Menk provided detailed design, public drainage system administration along with providing construction contract administration services.

CITY OF FAIRMONT and MARTIN COUNTY

Review of various 103E Systems lying within City; Project coordination, reports and engineering services for transfer of several public drainage systems under Chapter 103E.812 to City from County.

CITY OF AUSTIN and MOWER COUNTY

Judicial Ditch No. 4 Redetermination of Benefits and Damages; Engineer's Advisory Report and Mapping (parcel base map and parcel numbers) for 1,985 acre watershed including both rural and urban (in Austin) properties. Assistance with public ditch transfer/abandonment of portions of J.D. No. 4 affected by city development.

CITY OF MARSHALL and LYON COUNTY

Ditch No. 62 Improvement in and downstream City of Marshall; Flood Relief Study, Public Drainage Proceedings, Design and Construction Services; Included FEMA flood relief funding; Major urban storm sewer improvement with regional storm water detention facility to mitigate downstream flooding on rural public ditch.

RENVILLE COUNTY and CITY OF OLIVIA

Ditch No. 66 Main Ditch Realignment and Tile Improvements; Diversion of large rural drainage watershed around City of Olivia to alleviate urban flooding

CITY OF REDWOOD FALLS and REDWOOD COUNTY

Abandonment and transfer of public tile ditch in conjunction with new subdivision development.

Outlet Diversion Anoka County Ditch 56

Anoka County, Minnesota



GENERAL 103E PUBLIC DRAINAGE PROJECTS

CHIPPEWA COUNTY

County Ditch No. 36, Branch 3 Improvement; Replacement of two tile branches; Construction fall of 2012

FARIBAULT COUNTY

Joint County Ditch No. 7 Improvement; replacement of Main tile, 2012

Ditch No. 26 Improvement; replacement of Branch A tile; 2012; Construction fall of 2012

Ditch No. 26 Improvement; parallel tile line

WATONWAN COUNTY

Judicial Ditch No. 35, Branch 2 Replacement

MURRAY COUNTY

Judicial Ditch No. 3; Replacement of Three Tile Branches; Construction Anticipated in 2013

County Ditch No. 82; Replacement of Main Tile; Construction anticipated in 2013

Judicial Ditch No. 13; Open Ditch and Tile Improvements

Ditch No. 27; Main Ditch Improvements

JACKSON COUNTY

Judicial Ditch No. 22 Improvement; Supplemental new tile main and branch replacement; Construction fall 2012

Judicial Ditch No. 31 Improvement; New open ditch and replace two tile branches; Anticipated 2013 construction

Consolidated Ditch No. 1; Open Ditch Extension and Drain Tile Improvement

Judicial Ditch No. 2; Pump Station

REDWOOD COUNTY

Ditch No. 95; Tile Improvements

Ditch No. 72; Tile Improvements

Ditch No. 69; Main Tile Improvements

COTTONWOOD COUNTY

Judicial Ditch No. 2; Main Tile and Branch Improvements

Judicial Ditch No. 9; Open Ditch and Tile Improvements

MARTIN COUNTY

Judicial Ditch 47; One Mile of Open Ditch, Trunk Highway Crossing, Main Gasline Crossing

Judicial Ditch No. 34; Open Ditch and Pump Station Improvement

Outlet Diversion Anoka County Ditch 56

Anoka County, Minnesota



Judicial Ditch No. 28; Open Ditch Improvement

Judicial Ditch No. 39; Drain Tile Improvements

Ditch No. 29 Repair Proceedings; Comprehensive Outlet Alternatives Analysis Study

JACKSON and MARTIN COUNTY

Judicial Ditch No. 15; Open Ditch Improvement; replace existing tile with open ditch

BROWN COUNTY

Ditch No. 25; Parallel Main Tile Improvements

MARTIN and FARIBAULT COUNTY

Joint Ditch 204; Branch A-38 Open Ditch and Drain Tile Improvement; replace existing tile with open ditch

YELLOW MEDICINE COUNTY

County Ditch No. 9, Branch R Improvement; Replacement of two tile branches; Construction anticipated in 2013

Judicial Ditch No. 24 Lateral; Adding a lateral to the existing system; Construction scheduled for fall 2012

KEY PERSONNEL

A concise summary of qualifications for key project team members is presented in the following paragraphs. Detailed resumes for the key project team members are available upon request.

PRINCIPAL-IN-CHARGE

Bruce D. Firkins, P.E., L.S. is Vice President and Manager of the Civil Division of Bolton & Menk, Inc. and has served as project engineer and land surveyor since 1974. Mr. Firkins has served numerous communities as city engineer and has been involved in a wide range of engineering improvements, planning and studies. He directs the firm's work for the City of Minneapolis, including project management of various trail and right-of-way acquisition projects. His municipal engineering experience includes service as MSA city engineer and interim public utilities director for the City of Fairmont. He has managed public projects of varying complexity involving new construction and reconstruction of urban and rural streets, sanitary sewer collection and treatment systems, water supply distribution and treatment facilities, municipal drainage systems, airports, parks, lake dredge disposal sites and other municipal infrastructure improvements.

Mr. Firkins has served as project and design engineer for more than 150 various county, municipal and private drainage systems. His involvement on these projects has included planning, design, report preparation, public participation/involvement process, contract administration and expert witness testimony. These projects have included storm sewer, open channels, storm water pumping stations, detention basins, site development controls and general storm water management. He has provided engineering counsel to several County Boards on the design and operation of public, county and judicial drainage systems and has been a presenter at various conference and seminars regarding storm water management.



PRINCIPAL PROJECT MANAGER

Kevin F. Bittner, P.E. is a Principal Engineer and Project Manager in the firm's Ramsey Office. Mr. Bittner has more than 27 years of engineering experience and has been responsible for the management, planning, design, and construction of various public works projects. Mr. Bittner has been a Consultant City Engineer for numerous communities and prior to joining the firm in 1998, was the City Engineer for Waseca, Assistant City Engineer for Austin, and a Project Engineer for the Corps of Engineers in St. Paul.

Mr. Bittner's experience includes the design and management of various public works projects including public drainage, street, storm sewer, sanitary sewer, water distribution, water supply, industrial rail, airports, subdivisions and site development projects. He has worked with various types of project funding sources, including Municipal and County State-Aid, Mn/DOT Cooperative Agreements, Mn/DOT Aeronautics, FAA, USDA Rural Development, DEED, PFA and local funds. His experience with the Corps of Engineers included extensive work on FEMA Flood Insurance Studies, various hydraulics studies, and design of major flood control projects.

WATER RESOURCES PROJECT MANAGER

William R. Douglass, P.E. is the Manager of the Water Resources Group at Bolton & Menk, Inc., joining the firm in 1983. He specializes in hydrologic and storm water design and management services. These services have included site planning and layout, hydrologic analysis for storm water management including infiltration practices, rain gardens, low impact development, and retention/detention basin design. His hydrologic expertise has been instrumental in comprehensive storm water analyses as part of Storm Water Master Plans (SWMPs) for several NPDES Phase II communities. Mr. Douglass has hydrologic experience designing public and private improvements in numerous communities and jurisdictions throughout Central and Southern Minnesota and Northern Iowa.

Mr. Douglass has worked directly with the state agencies on several storm water steering committees including the NPDES Phase II secondary cities criteria for Municipally Separate Storm Sewer Systems (MS4s) and is regularly invited to attend the stakeholder's meetings for establishing the Minnesota River and Lake Peppin Total Maximum Daily Load (TMDL) allocations. He also has experience in working with the Minnesota Wetlands Conservation Act, serving as the LGU agent for more than 15 communities.

MODELING ENGINEER

Timothy J. Olson, P.E., CFM is a Project Engineer for the Water Resources Group of Bolton & Menk, Inc. He joined the firm in the spring of 2006. He has worked on the design and development of Comprehensive Storm Water Management Plans, hydrologic and hydraulic studies, and hydrologic plan reviews. His responsibilities include identification and discussion of NPDES Phase I & II requirements, hydrologic and hydraulic modeling, and identification of alternatives for proposed improvements. He has also prepared a multitude of Stormwater Pollution Prevention Plans (SWPPP) and submitted associated NPDES Phase II Construction Stormwater Permits.

Mr. Olson has extended experience in storm water modeling using the Autodesk Storm and Sanitary Analysis (SSA), StormCAD and HydroCAD software. He is a Certified Floodplain Manager (CFM) and has extensive related experience in HEC-RAS modeling and in interfacing HEC-RAS with GIS using HECGeoRAS, which are FEMA approved stream flow modeling programs. Mr. Olson also has extended experience using P8 Water Quality Modeling, ArcSWAT, Culvert Master, Flow Master, EPA SWMM, XP SWMM, and SewerCAD. He also has design experience using Autodesk AutoCAD products and Eagle Point. His GIS experience coupled with his watershed modeling experience makes him a valuable team member for all Bolton & Menk storm water management planning.



DESIGN ENGINEER

Jason Cook, P.E. is a Project Engineer with Bolton & Menk, Inc. For the past seven years, Mr. Cook has worked as a design engineer and construction observer with engineering design and construction phase experience. Mr. Cook's experience includes a variety of engineering tasks including preparation of Preliminary Engineering Reports, preparation of Plans and Specifications and preparation of cost estimates. On-site construction duties typically include observing the contractor to assure that the improvements are being constructed in general conformance with the plans and specifications. Other responsibilities include maintaining a daily diary, measurement of completed quantities, preparing pay estimates, tracking project schedules, coordination of construction staking and materials testing, and maintaining day-to-day communication with the client, contractor and property owners affected by the project.

WORK-HOUR BREAKDOWN AND COST ESTIMATE

Based on the scope of work described above, Bolton & Menk, Inc. proposes to complete the specified work on an hourly basis for a not-to-exceed fee of **\$34,600**. In addition, geotechnical investigations and construction testing would be subcontracted to American Engineering Testing (AET) for an additional fee, not-to-exceed **\$5,000**. The final scope of AET's work will depend on the project developed through the Phase I analysis.

The attached spreadsheet details our work-hour breakdown by task. No expenses will be charged. Any services requested by the County that are not included in the scope of services will be considered additional services and billed on an hourly basis at our regular hourly rates. The County will be notified and approval requested for additional services prior to the work beginning.

TASK-HOUR BREAKDOWN

CLIENT: ANOKA COUNTY								
PROJECT: DITCH 56 DIVERSION								
Task Description	Principal In-Charge	Project Manager	Water Resource Eng	Design Engineer	Clerical	Land Surveyor	Survey Crew	Civil Tech
PHASE 1								
Task 1-a		1				2	8	
Task 1-b		1	20					
Task 1-c		1	8					
Task 1-d	1	1	4	8				
Task 1-e	1	2	2					
Task 1-f	2	4	20					
Task 1-g	1	2			1			
Task 1-h		4	4					
Task 1-i	1	2						
PHASE 2								
Task 2-a		1		1				
Task 2-b		20	4	40	4			40
Task 2-c		1		2				
Task 2-d		6						
Task 2-e		4		10				10
Task 2-f		1						2
Task 2-g	1	2		6				
PHASE 3								
Task 3-a		2		2	2			
Task 3-b		2			2			
Task 3-c	1	1			1			
Task 3-d						2	6	
Task 3-e								60
Task 3-f								4
Task 3-g		4			2			2
Task 3-h		2			1			
Task 3-i		2						4
TOTALS	8	66	62	69	13	4	14	122