



Real People. Real Solutions.

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October 21, 2021

Mr. Bruce Westby, P.E.
City Engineer
City of Ramsey
7550 Sunwood Drive NW
Ramsey, Minnesota 55303

RE: Proposal for Engineering Services – Riverstone South Lift Station & Riverdale Drive Trunk Utilities Project

Dear Mr. Westby:

Bolton & Menk, Inc. appreciates the opportunity to submit this proposal for professional engineering services related to the above referenced project. The project includes construction of a lift station, valve vault, and forcemain within the Riverstone South Development. Additionally, sanitary sewer, watermain, and storm sewer are proposed along the future Riverdale Drive alignment.

SCOPE

A summary of the primary project components is presented below:

Lift Station Site – The site is located within the southeast portion of the Riverstone South development area.

Lift Station - A wet well structure will be installed to capture sanitary sewer flow from the Riverstone South development, along with areas to the east of the lift station site. The future sanitary sewer line to the east is estimated at approximately 30 feet deep. The bottom of the lift station will be approximately 4 to 6 feet lower, or 34 to 36 feet deep.

Valve Vault – The structure will be placed near the lift station.

Forcemain – The proposed forcemain will be installed through the Riverstone South development, ultimately connecting to a trunk gravity sewer main proposed in Riverdale Drive. The estimated length of forcemain is 2,360 feet. Final sizing of the forcemain will be completed as a portion of the project design. We will work with the developer to determine the location and elevation of the forcemain through the development.

Site Improvements – Improvements at the site will include a paved access drive and maintenance pad. We will work with the developer to prepare a site grading plan.

Trunk Watermain – The proposed watermain improvements are derived from the 2040 Comprehensive Plan and include extending a 12” watermain along the Future Riverdale Drive from Llama Street to Bowers Drive.

Trunk Sanitary Sewer – The proposed trunk sanitary sewer improvements will include a connection to the existing 18” sanitary sewer main at Llama Street. The sanitary sewer main will

extend along the future Riverdale Drive alignment to the extent possible, with adequate depth being the limiting factor. The remainder of Riverdale Drive sanitary sewer main will be installed to Bowers Drive and will connect to the sewer main in the Riverstone South Addition.

Storm Water Improvements – The below-ground storm water improvements will be installed to complete the utility portion of the improvements. The design will meet State-Aid drainage calculation requirements. The design will be based upon storm water ponding sites currently being coordinated with developers of the adjacent sites. The storm water ponds will be constructed as a portion of the Riverdale Drive roadway improvements.

A summary of the design alternate is presented below:

- **Trunk Watermain Loop**– The proposed watermain loop improvements are also derived from the 2040 Comprehensive Plan, connecting the Riverdale Drive trunk watermain to the Bunker Lake Boulevard trunk watermain. The work consists of directionally drilling and jacking underneath TH 10 and the Burlington Northern (BN) Railway.

A figure is attached that generally depicts the lift station and trunk utility improvement locations.

WORK PLAN & ASSUMPTIONS

Our Work Plan includes all services required to deliver the project and is based on the best information available and accounts for minor scope revisions as the project moves forward. Our services are anticipated to include:

Task 1: Project Management, Meetings and Procedural

Agency Coordination Meetings (2 Meetings)

Meetings are anticipated as described below:

City of Ramsey (Two Meetings)

Two meetings are anticipated with City of Ramsey staff. These meetings will discuss findings, issues, needs, and schedule to keep the project progressing.

Lower Rum River Watershed Management Organization (Telephone and Email Communications)

We will communicate with representatives of the Lower Rum River Watershed Management Organization to discuss the project scope and determine permitting requirements.

Developer / Developer's Engineer

We will coordinate as needed to allow for seamless integration of the lift station and forcemain with proposed improvements by the developer. We will keep the City apprised of all communications with the developer.

Task 2: Data Collection, Analysis and Review

Topographical Survey

The topographic survey includes the proposed corridor from Llama Street to Bowers Drive. We have also assumed that a survey of a potential ponding area will be required, along with survey of the TH 10 median(s), right turn lane(s) in anticipation of the of the Riverdale Drive Roadway Improvements. We have assumed both existing ground data, along with proposed grading information will be provided to us

by the developer within the proposed development. We will review the information and use it to add to our base drawing for the project.

- Trunk watermain loop area from Riverdale Drive to Bunker Lake Boulevard is included as an alternate.

We will work with the City to complete the Right-of-Way acquisitions as needed.

Geotechnical Exploration

We will work with American Engineering Testing (AET) to complete borings along Riverdale drive and one deep boring in the area of the proposed lift station. The deep soil bring will be used to determine soil types, groundwater elevation and structural capacity of the soils. As a portion of their services, AET will:

- Provide utility clearance,
- Drill one deep boring (exact depth to be determined),
- Drill 4-6 medium depth borings along Riverdale Drive
- Provide laboratory testing services, and
- Provide a geotechnical report.

Trunk watermain loop borings from Riverdale Drive to Bunker Lake Boulevard are included as an alternate.

Task 3: Preliminary Design Alternatives

We will prepare a design layout for review and consideration. Benefits and impacts of the layout developed will be presented for review and consideration. The layout will include access drive, lift station, valve vault, maintenance pad, generator pad, and construction limits.

Pump and Forcemain Sizing

We will complete a pump design and forcemain sizing during the preliminary design phase of the project. Once the pump and forcemain design has been completed, we will proceed to design the lift station wet well and valve vault for the site.

Utility Coordination

We will contact private utility companies whose facilities may be impacted by construction. This will include sending preliminary layout drawings and final construction plans to the utility companies. We will also contact power suppliers to determine requirements for providing service to the site. Coordination with developers and the City related to the storm water pond will also be required.

Preliminary Cost Estimates

The preliminary cost estimates will be completed to verify the construction estimates for the work.

Task 4: Construction Documents, Permitting and Approvals

Construction Plans and Specifications

Bolton & Menk will provide the City of Ramsey with final review construction plans and specifications. Bolton & Menk will incorporate all City of Ramsey comments prior to completing final plans and specifications for bidding.

Lift Station and Trunk Utility Plans

Our team will develop plans based upon the preliminary design. Plans will include approximately 31 sheets:

- Title (1 sheet),
- Legend (1 sheet),
- Estimated Quantities/Standard Plates (1 sheet),
- Tabulations (1 sheet),
- Typical Sections (1 sheet),
- Construction Details (2 sheets),
- Lift Station Details (1 sheet),
- Storm Water Pollution Prevention Plan (3 sheets),
- Erosion and Sediment Control (3 sheets),
- Existing Conditions & Removals (3 sheets),
- Lift Station Plan & Profile (1 sheet),
- Lift Station Grading Plan (1 sheet),
- Lift Station Electrical and Controls (2 sheets),
- Forcemain Plan and Profile (1 sheet),
- Riverdale Drive Plan and Profile – Watermain and Sanitary Sewer (3 sheets),
- Riverdale Drive Plan and Profile – Storm Sewer (3 sheets),
- Collins Drive Plan and Profile – Watermain and Sanitary Sewer (1 sheet),
- Collins Drive Plan and Profile – Storm Sewer (1 sheet), and
- Storm Sewer Leads (1 sheet).

Stormwater Pollution Prevention Plan (SWPPP)

Our team will design a stormwater management plan that adequately manages the runoff from and through the project area.

Plans will be prepared and included in the plan set, as well as submitted to the permitting agencies upon completion of this effort.

Final Cost Estimate

An updated engineer's cost estimate will be prepared upon completion of final design.

Task 5: Bidding Phase Services

The improvements are proposed to be bid via the public bidding process. We will advertise in the appropriate publications and facilitate the bid opening in coordination with the City.

PERMITTING AND APPROVALS

The work associated with the trunk utility improvements will require the following permits:

- Lower Rum River Watershed Management Organization (Stormwater and Erosion Control)
- MPCA (NPDES – Construction Stormwater General Permit)
- MPCA (Sanitary Sewer Extension Permit)
- MDH (Watermain Installation Permit)
- MnDOT utility permit (Design Alternate Watermain Loop)

- BN Railroad permit (Design Alternate Watermain Loop)

SCHEDULE AND COMPENSATION

Project Schedule

We will begin our work immediately after authorization. We will work with the City of Ramsey to advance the schedule to allow for bidding in the winter of 2021/2022. Construction is anticipated to begin in early summer of 2022. Some items such as controls, pumps, and generator have longer lead times, meaning final completion may not occur until the end of 2022.

Compensation

We have prepared an estimate of time and included not-to-exceed fees associated with completing the tasks described in this letter. The estimate is attached to this letter for review and concurrence.

Design Alternate

Fees associated with the design alternate trunk watermain loop are broken out within the attached spreadsheet. Additional work associated with the design alternate include additional topographic survey, geotechnical exploration, construction documents permitting, and approvals.

If there are any questions related to this proposal, please call me at (651) 968-7760.

Sincerely,

Bolton & Menk, Inc.



Kevin P. Kielb, P.E.
Project Manager

ATTACHMENTS

Fee Spreadsheet
Utility Improvements Graphic

Fee Proposal

CLIENT: City of Ramsey **BOLTON & MENK, INC.**
PROJECT: Riverstone South Lift Station & Trunk Utilities

WORK TASK DESCRIPTION	Project Manager	Senior Designer	Designer	Surveyor	Clerical	Total Hours	Cost
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Topographic Survey, Final Design and Bidding

1.0 Topographical Surveying	2	6	0	84	2	94	\$14,880
2.0 Preliminary Design	8	16	40	0	2	66	\$9,340
3.0 Roadway Design	4	65	120	0	0	189	\$26,045
4.0 Utility Design (Lift Station & Forcemain)	4	80	60	0	4	148	\$20,660
5.0 Utility Design (Sanitary Sewer and Watermain)	4	24	80	0	0	108	\$14,820
6.0 Storm Water Management and Storm Sewer Design	8	44	120	0	8	180	\$24,500
7.0 Tables, Details, Estimate and Submittal Materials	6	32	80	0	4	122	\$16,730
8.0 Specifications	2	24	0	0	4	30	\$4,230
9.0 Reviews and Approvals	4	16	32	0	2	54	\$7,504
10.0 Permitting	4	32	40	0	4	80	\$11,060
11.0 Bidding Services	4	12	8	0	4	28	\$3,936
Subtotal Bolton & Menk	50	351	580	84	34	1099	\$153,705

SUBCONSULTANT - American Engineering Testing \$8,500

SUBCONSULTANT - Electrical & Controls \$9,000

TOTAL for Design through Bidding	\$171,205
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Design Alternate - Trunk Watermain Loop

1.0 Topographical Surveying	0	2	0	20	0	22	\$3,490
2.0 Preliminary Design	1	4	8	0	0	13	\$1,831
3.0 Utility Design (Trunk Watermain Loop)	2	4	24	0	2	32	\$4,318
4.0 Tables, Details, Estimate and Submittal Materials	1	2	4	0	0	7	\$1,013
5.0 Specifications	0	2	0	0	0	2	\$290
6.0 Reviews and Approvals	1	2	4	0	2	9	\$1,193
7.0 Permitting	2	8	10	0	4	24	\$3,230
8.0 Bidding Services	0	0	0	0	0	0	\$0
Subtotal Bolton & Menk	7	24	50	20	8	109	\$15,365

SUBCONSULTANT - American Engineering Testing \$1,500

TOTAL for Design through Bidding	\$16,865
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