



Stantec Consulting Services Inc.
2080 Wooddale Drive, Suite 100
Woodbury, MN 55125

April 3, 2024
File: 227701551

Attention: Mark Ryan, PE
Water Resources Engineer
Vermillion River Watershed Joint Powers Organization
Dakota County Environmental Resources
4100 220th Street West, Suite 103
Farmington, MN 55024

Dear Mr. Ryan,

**Reference: Byllesby Dam – Water-to-Wire Hydropower Development Project |
Contract Amendment 2**

The purpose of this letter is to request a contract amendment for Stantec to provide additional services at the Byllesby Dam project. We request additional budget of \$337,100 to provide engineering services for the remainder of the project and to extend our contract through project completion (December 31, 2024). The sections below detail the scope of work, approximate hours, and estimated fee for each additional task. Specific tasks may be deleted at the County's discretion, except for Electrical Design, which Stantec has already begun to ensure project progress.

Background

Dakota County executed Contract C0032668 with Wenck Associates (now Stantec) on May 28, 2020 for an amount of \$638,300 and a contract end date of December 31, 2022. Work continued through 2023, so Dakota County approved Contract Amendment 1 in 2023 for \$385,378, which increased the total contract amount to \$1,023,678. Stantec continued to support Dakota County with requested engineering services during 2023 and early 2024, but we reached the approved contract amount in February 2023.

Additional Tasks

Task 1 Project Management, Structural Design, QCIP, and Reimbursables:

- Estimated fee: \$74,000
- Rate: all engineers are at \$200/hour
- Paul Eickenberg, PM and Sr. Geo-Structural Engineer
 - 15 hours per week of on-site project management through the end of June.
 - 5 hours per week of on-site project management through the end of December.
 - 80 hours to prepare final QCIP report to the FERC.

- 40 hours to schedule, coordinate and attend final walkthrough with County staff and contractor(s). Provide County staff with punchlist as a result of the walkthrough.
- 40 hours to track completion of punchlist.
- Todd Shoemaker, Sr. Water Resources Engineer
 - 20 hours for internal technical review.
- Jason Hedien, Vice President and Hydropower Engineer
 - 20 hours to review of the final QCIP report and assist with project completion tasks.

Task 2 Civil Design:

- Estimated fee: \$37,200
- Mark Fesenmaier, Engineer-in-Training (\$155/hour)
 - Prepare civil design plans (approximately 6-7 plan sheets) for the roadway and parking lot areas, north entry bridge, north drainage area, storm sewer drainage, and transformer pad.
 - 80 hours of time to assist with the final report preparation.
- Time for senior civil engineer is covered by Paul Eickenberg under Task 1.

Task 3 Electrical Design:

- Estimated fee: \$79,200
- Contract Amendment 1 included \$16,380 to review the project electrical engineering design. Upon review, County staff determined that the electrical design was not completed by the previous design consultant and subsequently requested Stantec to complete the design. As of March 15, 2024, we have spent \$93,468 in electrical engineering services (\$77,088 more than the revised task contract amount).
- The \$79,200 estimated fee includes previous Stantec fees through March 15, 2024 and additional fees to finish the current design which has included:
 - Single line drawing – revised protection philosophy to align with updated Xcel Energy 69kV relaying application.
 - Primary line relay DC schematic drawing – revised relaying contacts to reflect updated Xcel Energy 69kV relaying application.
 - Breaker DC schematic drawings – revised relaying contacts to reflect updated Xcel Energy 69kV relaying application.

Task 3 Hydro Machinery and Commissioning:

- Estimated fee: \$70,400

- Troy Smereka, Commissioning Lead (\$280/hour)
 - 80 hours to review commissioning plan
 - 40 hours to monitor and guide the commissioning process.
 - We assume that the County will provide Stantec will all commissioning documents necessary for review, rather than Stantec creating any commissioning documents.
- Chuck Oehrlein and Mike Fitzpatrick, Sr. Electrical Engineers (\$200/hour)
 - Four site visits (split between Chuck and Mike) to the site
 - We assume each site visit will be a 10-hour day including drive time, two hours of preparation, and two hours of follow up. (total of 138 hours)
 - We assume that all questions can be answered on site by the local Stantec team with remote assistance from Troy and the commissioning team.
- Time to support the commissioning team and process:
 - Jason Hedien: 24 hours (hydropower team communication as needed)
 - Paul Eickenberg: 24 hours (on-site hydropower team communication as needed)

Task 4 E-TAP Modeling:

- Estimated fee: \$71,400
- Services:
 - Prepare E-TAP report for load flow, short circuit, relay coordination & arc flash for 4.16 kV generating station, as indicated in the operating single line diagram.
 - Develop a single line diagram for 4.16kV generating station having Two (2) 4.16kV generators, two (2) 4.16kV feeders Lump Load and one (1) 7MVA transformer.
 - Model four switching schemes:
 - Four (4) load flow simulation scenarios
 - One (1) Short circuit simulation scenarios
 - One (1) Relay coordination report
 - Four (4) Arc flash study report
 - Prepare a report with executive summary identifying pros and cons and recommendations based on best practices and client needs. Two (2) report submissions will be provided:
 - Report - (IFR) Issued for Review

- Report - Final Issue
- Deliverables:
 - Stantec will submit the following deliverables.
 - Load flow report
 - Short circuit report
 - Relay coordination report
 - Arc flash analysis & labelling
 - ETAP modelling files if requested.
- Assumptions:
 - County shall coordinate acquisition of required fault data (available short circuit and line impedance contribution) from the utility provider.
 - County shall provide nameplate data and test reports for transformer.
 - County shall provide conductor cable data sheets, lengths, and sizes.
 - Load data will be comprised of a combination of motor and steady state loads with loading percentages along with load location as determined by client.
 - The study will be simulated in version 22 of ETAP.
- Additional services excluded from our scope of work but can be completed for an additional fee:
 - An ETAP report for two (2) outgoing 4.16kV feeders & low voltage equipment like transformer & backup generators etc. is excluded from our scope of work. If this is desired, we need the following information:
 - Nameplate data and test reports of two (2) transformers rated 300kV, 4.16kV/480-277kV.
 - Nameplate data and test reports of two (2) transformers rated 75kV, 480/208-120kV.
 - Nameplate data and test reports of Backup power Generator rated 200KW 480/277V.
 - Name plate data & test reports of all single phase/3- Phase panels.
 - Conductor cable data sheets, lengths, and sizes.
 - Preparation of as-built drawings to execute this job if this information is not available.

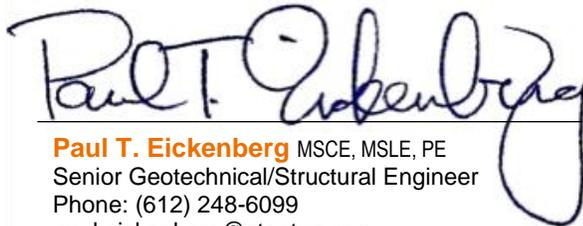
- Schedule:
 - We will complete this task approximately six (6) weeks from the date of receiving all the required data for the study.
 - The IFR version will be issued approximately four weeks from the receipt of all the required data.
 - We assume approximately one week for the County to review the IFR report and issue comments.
 - We will issue the final report approximately one week after the receiving the County comments.

In summary, we request additional budget of \$337,100 to provide the engineering services outlined above and to extend our contract through project completion (October 31, 2024). This will increase the total contract amount to \$1,360,778 and be subject to the terms outlined in the May 28, 2020 contract.

On behalf of the employees of Stantec, thank you for this opportunity to serve you. Should you have any questions or need please do not hesitate to reach out to me.

Regards,

Stantec Consulting Services Inc.



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Shoemaker, Todd

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DN: CN="Shoemaker, Todd",
OU=Internal, OU=users,
OU=stantec, DC=corp, DC=ads
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