



## Request for City Council Committee Action From the Department of Public Works

**Date:** September 12, 2005  
**To:** Honorable Sandra Colvin Roy, Chair Transportation & Public Works Committee  
**Referral to:** Honorable Barbara Johnson, Chair Ways & Means Committee

**Subject:** **Amendment No. 2 to contract with HDR Engineering for Implementation Support Services for Fridley Membrane Filtration Plant**

### Recommendation:

Authorize amendment to the contract with HDR Engineering, Inc., increasing the contract by \$303,516 up to a total contract price of \$ 2,391,331 for scope modifications that includes a third performance testing program and re-bidding of the membrane equipment procurement contracts. Funds are available within the project budget (Water 7400/ 950/ 9515/ C5200024). City Contract No. C-20523.

### Previous Directives:

- On October 24, 2003, the City Council authorized distribution of a Request for Proposals (RFP) for the specialized implementation support services for the design, construction and start up of the Minneapolis Water Works Fridley Membrane Filtration Program.
- On February 27, 2004, the City Council authorized a contract with HDR Engineering, Inc for the Fridley Membrane Filtration Plant Implementation Support Services for an amount not to exceed \$1,477,371.
- On May 14, 2004, the City Council authorized a correction to the contract with HDR Engineering, Inc. by adding \$58,798.00 for "Additional Services" as defined in the Request for Proposals.
- On January 14, 2005, the City Council authorized Amendment No. 1 to the contract with HDR Engineering, Inc., increasing the contract by \$551,646 for scope modifications that included a second performance testing program and re-bidding of the membrane equipment procurement contracts.

**Prepared by:** Dale Folen, Engineering Services, ext. 4908, and Shahin Rezania, Interim Director of Water Treatment and Distribution Services, ext. 2418

**Approved by:**

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Klara A. Fabry, P.E., City Engineer, Director of Public Works

**Presenters:** Dale A. Folen, P.E., Professional Engineer, Engineering Services

### Financial Impact (Check those that apply)

No financial impact - or - Action is within current department budget.

(If checked, go directly to Background/Supporting Information)

Action requires an appropriation increase to the Capital Budget

Action requires an appropriation increase to the Operating Budget

Action provides increased revenue for appropriation increase

Action requires use of contingency or reserves

Other financial impact (Explain):

Request provided to the Budget Office when provided to the Committee Coordinator

## **Background/Supporting Information:**

The City of Minneapolis Capital Improvement Plan includes building a new 95 million-gallon per day (mgd) Water Treatment Plant using ultrafiltration membranes as the treatment technology. This proposed plant, called the Fridley Membrane Filtration Plant (FMFP) will be connected to the existing Fridley Filtration Plant (FFP) which was mostly constructed in 1925.

Previous phases of the project included similar steps of procurement of membrane equipment and construction of the Membrane Filtration Plant at Columbia Heights (CHMFP).

The current phase of work is the procurement of ultrafiltration membrane equipment for FMFP. This phase includes 6 to 9 months of performance testing to evaluate membrane capabilities, operational efficiency, life-cycle costs, and design parameters of each manufacturer's membrane system.

Future phases in the overall plan include design and construction of the FMFP building system, and various improvements of the water pretreatment system. The primary objective of the overall plan is to provide physical removal of pathogenic microorganisms and improve the quality of water delivered to the citizens of Minneapolis.

### **Current Request**

In September 2003, a first step of Performance Testing began, including 4 pilot-scale units from three manufacturers. During that effort, some unexpected circumstances occurred that impaired the integrity of the bidding and testing work, including a foreign object appearing in one of the pilot-scale ultrafiltration units. That performance testing step was cancelled, and a revised set of bidding documents was prepared.

A second step of performance testing began in September 2004. During that effort, equipment from three manufacturers was tested, including two manufacturers from the first step and a manufacturer that had not previously tested at Minneapolis. All three of the manufacturers in the second step failed to achieve the performance criteria specified, partly due to river water variability.

Public Works and its consultants have re-evaluated the performance testing protocol and the results of the previous testing steps, and have developed modifications that will allow more flexibility in operational methods for water variability, while still protecting the City interests of protecting final water quality and avoiding excessive capital and future operational costs.

We have also discussed the testing failures with each previously participating manufacturer, and they have each implemented improvements to their own systems to give them a greater probability of success.

The current recommendation will authorize an extension of the contract with HDR for services to complete the consultant's role in the third performance testing step.

Similar to the second performance testing step, to maintain the integrity of the performance testing program, the scope of the professional services includes having an HDR employee at the pilot-scale testing site during essentially all working hours. The authorized contract amount from Amendment No.1 (second testing step) was not fully used by HDR, so the current requested amount has already been decreased by the remaining budget from the second testing step.

C: Lee Larson, Director, Contract Management