



**Request for City Council Committee Action
From the Department of Public Works and Procurement**

Date: October 11, 2005
To: Honorable Sandra Colvin Roy, Chair Transportation & Public Works Committee
Referral to: Honorable Barbara Johnson, Chair Ways & Means Committee
Subject: **Water Treatment Plant Residual Lagoon 8. (O.P. #6364, City Contract C-21391)**

Recommendation:

1. Execute Change Orders No. 1 (+\$23,873.00) and Change Order No. 2 (+\$124,624.30) to amend the contract with Landwehr Construction, Inc. in the net amount of \$148,497.30 for a revised total of \$2,034,222.30 to provide for field modifications and installation of new influent piping.

Previous Directives:

January 14, 2005: City Council passed a Resolution accepting the low responsive bid (OP #6364) of Landwehr Construction, Inc. to furnish and deliver all labor, materials, equipment, and incidentals necessary to construct the water treatment plant residual lagoon.

Prepared by: Gary Warnberg, Director of Procurement



Approved by: Klara A. Fabry, City Engineer, Director of Public Works



Presenters: Shahin Rezania, Ph. D., P.E.
Interim Director, Water Treatment and Distribution 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:

Change orders No. 1 and No. 2 attached.

Lagoon 8 is designed to hold and discharge neutralized waste from the Columbia Heights Membrane Plant (CHMFP).

Change order no. 1 (\$23,873) incorporates field changes necessary to adjust for inaccurate/unknown pipe conditions not reflected on the contract drawings, ensuring adequate base materials for decant structures, and revising manhole design in consideration of worker safety.

Change order no. 2 (\$124,624.30) is for work necessary to bypass old 16-inch drain line that had been intended for use as the influent line to the new lagoon 8. In the course of wet testing, leaks and blockages were discovered that made it necessary to bypass the line and install a new 18-inch HDPE line via directional drilling.

Note: The construction and engineering costs for the Lagoon 8 project are currently estimated at \$2,200,000, inclusive of the proposed change orders. The Sewer Availability Charge (SAC) for residuals from the CHMFP alone would have been \$3,420,000. The annual usage charge for flow from CHMFP to a sewer would have been about \$185,000 per year. The overall life-cycle cost for disposal to a sanitary sewer (20-year Present Value) would have been about \$5,700,000. A similar or larger cost would also be required for the future UF plant at the Fridley water works site (FMFP). The Lagoon has been designed to accept residuals from both CHMFP and FMFP.

**RESIDUAL LAGOON NO. 8
PROJECT**

CHANGE ORDER # 01

DATE OF ISSUANCE	<u>May 5, 2005</u>	EFFECTIVE DATE	_____
OWNER	<u>City of Minneapolis / Minneapolis Water Works</u>		
CONTRACTOR	<u>Landwehr Construction Inc.</u>		
OWNER's Contract No.	<u>C-21391 (Effective Date: 02/11/2005)</u>		
ENGINEER	<u>Black & Veatch Corporation</u>		

Change Order No. 01 confirms agreement of the scope and costs for the following changes to this Construction Contract. These changes will be formally incorporated into the Contract and the effective date will be established with an amendment to be issued by the Owner.

1. Modify the manhole accesses in order to provide a separate access for the manway and the actuator extension stems. The total cost for this additional work shall be \$8,274.00 (no additional time).
2. Install a two foot thick aggregate base and associated filter fabric beneath the concrete foundation of each decant structure. The total cost for this additional work shall be \$6,624.00 (no additional time).
3. Provide modifications to the new 16" drain piping and manhole near Pumping Station No. 3 to accommodate the actual elevations and locations of the required connections to the existing 16" drain piping. The total cost for this additional work shall be \$8,975.00 (no additional time).

Reason for Change Order:

1. This change is a design enhancement to provide greater room and safety for worker entry into the manholes while accommodating an extension stem from each actuator to be placed near the manhole access cover.
2. Due to site observations of the actual excavated soil, review of the associated soil borings, and the unknown composition of the underlying soils, it was determined that an aggregate base should be added below the concrete foundation of each decant structure to provide additional support for unforeseen settlement.
3. Upon excavation of the existing 16" drain piping near Pumping Station No. 3, it was discovered that the elevations and locations of the 16" drain piping varied from those shown on the Contract drawings and the Owner's drawing. Modifications to the piping are required in order to accommodate the actual installed conditions of the existing piping.

CHANGE IN CONTRACT PRICE:
Original Contract Price \$ <u>1,885,725.00</u> With unit price adjustment for petroleum- or asbestos-contaminated soil disposal and removal in the amount of \$23/yd ³ and \$25/yd ³ respectively.
Net Increase (Decrease) from previous approved Change Orders No. <u>-</u> to No. <u>-</u> \$ <u>0.00</u>
Contract Price prior to this Change Order: \$ <u>1,885,725.00</u>
Net Increase (Decrease) of this Change Order: \$ <u>23,873.00</u>
Contract Price with all approved Change Orders: \$ <u>1,909,598.00</u> With unit price adjustment for petroleum- or asbestos-contaminated soil disposal and removal in the amount of \$23/yd ³ and \$25/yd ³ respectively.

CHANGE IN CONTRACT TIMES:
Original Contract Times: Substantial Completion: <u>July 1, 2005</u> Contract Completion: <u>August 1, 2005</u> (days or dates)
Net change from previous Change Orders No. <u>-</u> to No. <u>-</u> <u>0</u> (days)
Contract Times prior to this Change Order: Substantial Completion: <u>July 1, 2005</u> Contract Completion <u>August 1, 2005</u> (days or dates)
Net Increase (Decrease) of this Change Order: <u>0</u> (days)
Contract Times with all approved Change Orders: Substantial Completion <u>July 1, 2005</u> Contract Completion <u>August 1, 2005</u>

The amount of this Change Order is all-inclusive of additional costs and/or time to complete the Work described above; Contractor shall make no further claim for additional payments or time extension based upon the Work covered by these changes.

RECOMMENDED:

APPROVED:

ACCEPTED:

By: _____
Engineer (Authorized Signature)

By: _____
Owner (Authorized Signature)

By: _____
Contractor (Authorized Signature)

Date: _____

Date: _____

Date: _____

Distribution: One Original Each – Owner, Engineer, & Contractor

**RESIDUAL LAGOON NO. 8
PROJECT**

CHANGE ORDER # 02

DATE OF ISSUANCE	<u>September 29, 2005</u>	EFFECTIVE DATE	<u>September 29, 2005</u>
OWNER	<u>City of Minneapolis / Minneapolis Water Works</u>		
CONTRACTOR	<u>Landwehr Construction Inc.</u>		
OWNER's Contract No.	<u>C-21391 (Effective Date: 02/11/2005)</u>		
ENGINEER	<u>Black & Veatch Corporation</u>		

Change Order No. 02 confirms agreement of the scope and costs for the following changes to this Construction Contract. These changes will be formally incorporated into the Contract and the effective date will be established with an amendment to be issued by the Owner.

1. Excavate and backfill an existing piping section directly west of the existing Pumping Station No. 3 to investigate a pipe leak and requirements for repair. The total cost for this additional work shall be \$4,624.30 (no additional time).
2. Install approximately 420 feet of new 18-inch HDPE drain pipe by directional drilling operations. The pipe is to be installed between the Pumping Station No. 3 and the existing lagoon site access drive near the 37th Avenue access gate. This work is detailed in CPR B-6.0. The total cost for this additional work shall be \$120,000.00 (no additional time).

Reason for Change Order:

1. Due to a pipe leak in the existing 16-inch cast iron pipe discovered when the entire 16-inch drain system was tested, Landwehr was instructed to excavate and explore the location of the pipe leak in order to determine the required repairs for the system.
2. A pipe blockage was discovered in the existing 16-inch drain piping between Pumping Station No. 3 and the 37th Avenue gate during testing of the drain system. Due to the congestion of existing utilities in this area and the age of the existing pipe, it was not feasible to bypass the existing pipe blockage. Therefore, the most feasible alternative was to install a new section of piping between Pumping Station No. 3 and the newly installed 20-inch drain north of the 37th Avenue gate.

CHANGE IN CONTRACT PRICE:	
Original Contract Price	
\$ <u>1,885,725.00</u>	
With unit price adjustment for petroleum- or asbestos-contaminated soil disposal and removal in the amount of \$23/yd ³ and \$25/yd ³ respectively.	
Net Increase (Decrease) from previous approved Change Orders	
No. <u>1</u> to No. <u>-</u>	
\$ <u>23,873.00</u>	
Contract Price prior to this Change Order:	
\$ <u>1,909,598.00</u>	
Net Increase (Decrease) of this Change Order:	
\$ <u>124,624.30</u>	
Contract Price with all approved Change Orders:	
\$ <u>2,034,222.30</u>	
With unit price adjustment for petroleum- or asbestos-contaminated soil disposal and removal in the amount of \$23/yd ³ and \$25/yd ³ respectively.	

CHANGE IN CONTRACT TIMES:	
Original Contract Times:	
Substantial Completion:	<u>July 1, 2005</u>
Contract Completion:	<u>August 1, 2005</u> (days or dates)
Net change from previous Change Orders	
No. <u>1</u> to No. <u>-</u>	
<u>0</u>	
(days)	
Contract Times prior to this Change Order:	
Substantial Completion:	<u>July 1, 2005</u>
Contract Completion:	<u>August 1, 2005</u> (days or dates)
Net Increase (Decrease) of this Change Order:	
<u>0</u>	
(days)	
Contract Times with all approved Change Orders:	
Substantial Completion	<u>July 1, 2005</u>
Contract Completion	<u>August 1, 2005</u>

The amount of this Change Order is all-inclusive of additional costs and/or time to complete the Work described above; Contractor shall make no further claim for additional payments or time extension based upon the Work covered by these changes.

RECOMMENDED:

APPROVED:

ACCEPTED:

By: _____
Engineer (Authorized Signature)

By: _____
Owner (Authorized Signature)

By: _____
Contractor (Authorized Signature)

Date: _____

Date: _____

Date: _____

Distribution: One Original Each – Owner, Engineer, & Contractor