

**Carson City Board of Supervisors  
Agenda Report**

**Date Submitted:** February 3, 2011

**Agenda Date Requested:** February 17, 2011  
**Time Requested:** Consent

**To:** Mayor and Supervisors  
**From:** Purchasing and Contracts

**Subject Title:** Action to Amend Contract No. 0910-203 Engineering Services for the Saw Mill Canyon Pipeline and Water Delivery Project with Black and Veatch to extend the Contract Term, increase the Scope of Work to include Final Tank and Pipeline Design Services, Quarterly Status Reporting to the Environmental Protection Agency and to increase the Contract amount from \$397,841.00 to \$597,670.00 from the Water Fund Account as provided in FY 2010/2011. *(Sandy Scott-Fisher)*

**Staff Summary:** If approved, the Scope of Work of this contract will be to provide Final Tank and Pipeline Design Services and Quarterly Status Reports to the Environmental Protection Agency. This contract for Phase III activities is \$199,829.00.

**Type of Action Requested:** (check one)

Resolution

Ordinance

Formal Action/Motion

Other (Specify)

**Does This Action Require A Business Impact Statement:**  Yes  No

**Recommended Board Action:** I move to Amend Contract No. 0910-203 Engineering Services for the Saw Mill Canyon Pipeline and Water Delivery Project with Black and Veatch to extend the Contract Term, increase the Scope of Work to include Final Tank and Pipeline Design Services, Quarterly Status Reporting to the Environmental Protection Agency and to increase the Contract amount from \$397,841.00 to \$597,670.00 from the Water Fund Account as provided in FY 2010/2011. *(Sandy Scott-Fisher)*

**Explanation for Recommended Board Action:** Staff recommends amending contract 0910-203 with Black and Veatch to provide Final Tank and Pipeline Design Services and Quarterly Status Reports to the Environmental Protection Agency.

**Applicable Statute, Code, Policy, Rule or Regulation:** NRS 625.530

**Fiscal Impact:** Increase in the contract amount by \$199,829.00

**Funding Source:** Water Fund Account 520-3505-435-7803 as provided in FY 2010/2011.

**Prior Board Approval:** Original Contract was approved August 5, 2010 in the amount of \$616,364.00. Amendment No. 1 was approved August 19, 2010 reducing the contract by \$429,564.00. Amendment No. 2 was approved December 15, 2010 increasing the contract by \$211,041.00.

**Alternatives:** Provide other direction.





**Supporting Material:** Contract Amendment No. 3 and Exhibit D

**Prepared By:** Sandy Scott-Fisher, Purchasing and Contracts Coordinator

**Alternatives:** Provide other direction.

**Supporting Material:** Contract Amendment No. 3 and Exhibit D

**Prepared By:** Sandy Scott-Fisher, Purchasing and Contracts Coordinator

**Reviewed By:**   
(Public Works)  
  
(City Manager)  
  
(District Attorney)  
  
(Finance Director)

Date: 2-7-11  
Date: 2/8/11  
Date: 2/7/11  
Date: 2/8/11

**Board Action Taken:**

Motion: \_\_\_\_\_

1) \_\_\_\_\_ Aye/Nay  
2) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Vote Recorded By)

**CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR**  
**Amendment No. 3**  
**Contract No. 0910-203**  
**Engineering Services for the Saw Mill Canyon Pipeline**  
**and Water Delivery Project**

**THIS AMENDMENT** is made and entered into this 17<sup>th</sup> day of February, 2011, by and between the City and County of Carson City, a political subdivision of the State of Nevada, hereinafter referred to as the "**CITY**", and Black and Veatch Corporation, hereinafter referred to as the "**CONSULTANT**", and is made to amend the existing contract known as **CONTRACT # 0910-203**.

**WITNESSETH:**

**WHEREAS**, the **CITY** desires to amend Section 2 **CONTRACT TERM**, Section 4 **SCOPE OF WORK** and Section 5 **CONSIDERATION** of the original contract to include that which is contained herein; and

**WHEREAS**, it is deemed that said amendment is both necessary and in the best interests of the **CITY**.

**NOW, THEREFORE**, in consideration of the aforesaid premises, the parties agree as follow:

**WHEREAS**, this Amendment shall not become effective until and unless approved by the Carson City Board of Supervisors.

1. Amend Paragraph 2.1 **CONTRACT TERM** of **CONTRACT 0910-203** To provide in its entirety as follows:

This contract will be in effect from August 5, 2010, subject to Carson City Board of Supervisors' approval (anticipated to be August 5, 2010) to October 1, 2011, unless sooner terminated by either party as specified in **Section 7 Contract Termination**.

2. Amend Paragraph 4.1 **SCOPE OF WORK** of **CONTRACT 0910-203** to provide in its entirety as follows:

**CONTRACTOR** shall provide and perform the following services as set forth in the **Revised Exhibit A** to Contract Amendment No. 1, **Exhibit B** and **Exhibit C** to Contract Amendment No. 2, **Exhibit D** to this Contract Amendment No. 3 for **CONTRACT 0910-203** attached hereto and incorporated herein by reference for and on behalf of the **CITY** herein referenced as "**Services**."

3. Amend Paragraph 5.1 **CONSIDERATION** of **CONTRACT 0910-203** to provide in its entirety as follows:

**CITY** agrees to pay **CONSULTANT** the **CONTRACT SUM** based upon time and materials for a not to exceed amount of Five Hundred Ninety-Seven Thousand, Six

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Hundred Seventy Dollars and No Cents (\$597,670.00) for Phase 1, 2 and 3, which is an increase to Contract Amendment No. 2 in the amount of One Hundred Ninety-Nine Thousand, Eight Hundred Twenty-Nine Dollars and No Cents (\$199,829.00).

**IT IS ALSO AGREED**, that all unaffected conditions, requirements, and restrictions of the Original Contract document remain in full force and effect for the duration of the Contract term.


**CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR**  
**Amendment No. 3**  
**Contract No. 0910-203**  
**Engineering Services for the Saw Mill Canyon Pipeline**  
**and Water Delivery Project**

**ACKNOWLEDGMENT AND EXECUTION:**

In witness whereof, the parties hereto have caused this Amendment to be signed and intend to be legally bound thereby.

**CARSON CITY**

Purchasing and Contracts Department  
Sandy Scott-Fisher, Purchasing and  
Contracts Coordinator  
201 North Carson Street Suite 3  
Carson City, Nevada 89701  
Telephone: 775-283-7137  
Fax: 775-887-2107  
SScott@carson.org

By:   
Sandy Scott-Fisher

DATED 2/8/11

**CITY'S LEGAL COUNSEL**

Neil A. Rombardo, District Attorney

I have reviewed this Contract and approve  
as to its legal form.

By:   
Deputy District Attorney

DATED 2/7/11

**CITY'S ORIGINATING DEPARTMENT**

**BY:** Andrew Burnham, Director  
Carson City Public Works Department  
3505 Butti Way  
Carson City, NV 89701  
Telephone: 775-887-2355  
Fax: 775-887-2112  
ABurnham@carson.org

By: 

DATED 2-7-11

**CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR**  
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David Carlson, P.E. deposes and says: That he is the **CONTRACTOR** or authorized agent of the **CONTRACTOR**; that he has read the foregoing Amendment; and that he understands the terms, conditions, and requirements thereof.

**CONTRACTOR**

**BY:** David Carlson, P.E.

**TITLE:** Vice President

**FIRM:** Black and Veatch Corporation

**CARSON CITY BUSINESS LICENSE #:** 11-024336

**Address:** 503 North Division Street

**City:** Carson City **State:** Nevada **Zip Code:** 89703

**Telephone:** 775-720-0410 / **Fax #:** 775-293-0494

**E-mail Address:** carslonDJ@bv.com

  
(Signature of **CONTRACTOR**)

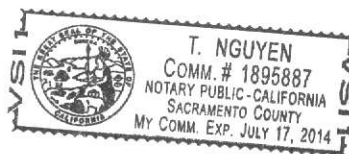
DATED 2-4-11

STATE OF California )  
 ) ss  
County of Sacramento )

Signed and sworn (or affirmed) before me on this 4<sup>th</sup> day of February, 2011, by  
David Carlson

  
(Signature of Notary)

(Notary Stamp)



**CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR**  
**Amendment No. 3**  
**Contract No. 0910-203**  
**Engineering Services for the Saw Mill Canyon Pipeline**  
**and Water Delivery Project**

**CONTRACT ACCEPTANCE AND EXECUTION:**

The Board of Supervisors for Carson City, Nevada at their publicly noticed meeting of February 17, 2011, approved Amendment No. 3 for **CONTRACT No. 0910-203 Engineering Service for the Saw Mill Canyon Pipeline and Water Delivery Project**. Further, the Board of Supervisors authorizes the Mayor of Carson City, Nevada to set his hand to this document and record his signature for the execution of this contract in accordance with the action taken.

**CARSON CITY, NEVADA**

\_\_\_\_\_  
ROBERT L. CROWELL, MAYOR

DATED this 17<sup>th</sup> day of February, 2011.

**ATTEST:**

\_\_\_\_\_  
ALAN GLOVER, CLERK-RECORDER

DATED this 17<sup>th</sup> day of February, 2011.



## SCOPE OF WORK

Saw Mill Canyon Raw Water Pipeline Replacement and Tank Project – Final Design Phase

### **PROJECT UNDERSTANDING**

The Marlette-Hobart Water System (MHWS) includes a series of control structures, water supply pipelines, and tank storage facilities west of Carson City. Water from Marlette Lake is pumped to the Hobart Creek/Hobart Reservoir drainage area via a 12 inch diameter pipeline. Water from Hobart Reservoir discharges into Franktown Creek and is conveyed to the Red House Diversion Structure. The Red House Diversion structure diverts water from the East Slope watershed (conveyed by the East Slope Collection Pipeline) and Franktown Creek into an 18 inch diameter pipeline which conveys this water to a 22,000 gallon capacity steel storage tank at the Tanks. The Tanks provides water to Storey County via a 10 inch diameter pipeline and to Carson City's Quill Water Treatment Plant (WTP) via a 10 inch diameter steel pipeline. Water received at the Quill WTP is treated and sent to the City's distribution system.

Black & Veatch (B&V) prepared the Marlette Hobart System Improvements Technical Memorandum (March 2010) that documented the investigation and provided recommendations to maximize the supply from the State's water rights applicable to the MHWS. This prior work identified a series of improvements needed to provide the increased supply to the City water system.

B&V is currently conducting the preliminary design for the new tank and replacement pipeline from Sawmill Canyon to Tanks. The scope of work presented herein includes the final design for those components.

### **SCOPE OF WORK**

The following tasks provide a detailed description of the work to be performed under this project:

#### **TASK 1 – PROJECT MANAGEMENT**

Under this task B&V will manage the efforts of project team members; review work progress; coordinate Quality Assurance/Quality Control (QA/QC) procedures; and otherwise direct work so as to ensure satisfactory completion of work elements on schedule, within budget, and in conformance with City and State standards. These activities are further explained below.





## SCOPE OF WORK

Saw Mill Canyon Raw Water Pipeline Replacement and Tank Project – Final Design Phase

### **Task 1.1 – Progress Reporting and Filing**

B&V will provide the City with monthly progress reports to apprise key participants of project development and status. Each progress report will contain: a description of project status in terms of both schedule and budget, work completed in the last month, and work planned for the next month. Informal meetings and phone contact will be maintained with City representatives and other team members regarding project status, as necessary, between regular reports. Additionally, B&V will prepare the quarterly status reports for the EPA.

A project file log will be prepared and maintained throughout the project.

### **Task 1.2 – Quality Assurance and Control**

A QA/QC review will be performed using B&V's standard QC plan. B&V will implement the QA/QC plan to check, as a minimum, design methods, calculations, drawings, specifications, cost opinions, and other technical issues associated with the Project. B&V will prepare a Quality Control Inspection Plan checklist to highlight the various inspection requirements during the construction phase of the project.

### **Task 1.3 – Project Coordination Meetings**

Project coordination meetings will be scheduled with the City, State, and other identified key stakeholders. These meetings will provide a platform for issues and concerns to be discussed so that the project may be shaped according to the input of key participants. One (1) project coordination meeting is included (75% review meeting). Meeting will be held in Carson City. B&V will be responsible for maintaining agenda, meeting notes, and attendance record.

### **Task 1 Deliverables**

- Meeting agenda and notes
- Monthly invoices and progress reports
- EPA Quarterly Status Reports

## **TASK 2 – PIPELINE AND TANK FINAL DESIGN**

B&V will prepare bid documents (plans and specifications) for a new 24-inch diameter steel pipeline to be installed parallel to the existing 18 inch diameter pipe and a new tank (preliminarily sized at 500,000 gallons).

### **Task 2.1 – Surveying and Geotechnical Investigation Report Review**

The City has performed a survey of the pipeline alignment and completed a



## SCOPE OF WORK

### Saw Mill Canyon Raw Water Pipeline Replacement and Tank Project – Final Design Phase

geotechnical investigation to obtain the topographical and geological information along the existing pipeline from the Tanks to the Saw Mill Canyon. The City has provided this information to B&V for use in the design under this project. B&V will review the City-provided survey and geotechnical information along the existing pipeline alignment. If any deficiencies are found, B&V will identify the missing information and notify the City of additional information needs.

The City has performed a survey of the new tank site and has provided this information to B&V for use in the evaluation and design under this project. B&V will review the City-provided survey and will notify the City of any additional information needs.

The State will conduct the geotechnical investigations for the new tank site. As of the preparation of this Scope of Services, the geotechnical information for the tank is not available. B&V will review the State provided geotechnical information as it becomes available and will identify any additional information needed and notify the State and City of additional geotechnical information needs. The Final Design of the Tank will be finalized once the new tank site geotechnical information is obtained.

Any additional survey or geotechnical investigation work is not included in the scope of work.

#### **Task 2.2 – Final Design and Construction Contract Documents**

Consultant shall perform the final design and prepare construction contract documents consisting of technical specifications and contract drawings.

Two separate contracts will be developed; one for the pipeline construction and the other for the new tank construction. The pipeline contract is scheduled to be bid and constructed in 2011 and the tank contract is scheduled to be bid and constructed in 2012.

The following project description is used for establishing the budget:

- 4,000 lineal foot of 24-inch diameter steel pipe, with the type of coating and lining and pressure rating to be determined in preliminary design.
- Pipeline appurtenances consisting of air/vacuum release valves and isolation valves installed in below grade traffic-rated concrete vaults.
- Construction of a sand/debris trap for sediment control for a temporary time period until a permanent sediment control structure is installed at Red House. The State has been asked to provide information regarding the size and quantity of debris to design for.



## SCOPE OF WORK

Saw Mill Canyon Raw Water Pipeline Replacement and Tank Project – Final Design Phase

- Site development and tank design for an approximate 500,000 gallon welded steel or prestressed concrete reservoir, with the final size, material, and location confirmed in the preliminary design phase.

All drawings will be completed using AutoCAD 2008. The drawings will be prepared on 22x34-inch sheets and in accordance with City standards. Project technical specifications, special provisions, and contract bid documents will be prepared using Microsoft Word. The technical specifications Divisions 1 through 16 will be prepared using the City's standards with a tailored Special Conditions section. The front-end contract documents will be developed using the State Public Works standards.

Design packages will be submitted for review at the 75 percent complete level. Five (5) sets of half size (11x17-inch) drawings and technical specifications will be provided for review and comment by City and State staff. A one week review period is allocated for the City and State review. B&V shall provide contract drawings to the City for submittal to the permitting agencies, including Nevada Department of Environmental Protection, for obtaining the necessary permits for the project. All permitting fees will be paid directly by Carson City to the permitting agencies. B&V will provide coordination with Nevada State Parks and State Lands and NDEP regarding construction constraints and phasing.

### **Task 2.3 – 100% Design Documents**

The review comments of City and State staff and of Consultant's independent quality control review team will be addressed and appropriate changes made to the design and construction contract documents. Upon completion, the original final drawings will be submitted to the City together with one set of project specifications. The State will perform a peer review of the 100 percent documents. B&V will incorporate agreed upon revisions following this review.

The final construction contract documents will be signed and sealed by registered professional engineers licensed in the State of Nevada. The electronic files (PDFs) of the final drawings and technical specifications shall be provided to the City on CD.

### **Task 2.4 - Opinion of Probable Construction Costs**

An opinion of probable construction cost (OPCC) will be prepared at the 75 percent design level and will be updated at the 100 percent level. An individual OPCC will be prepared for the Pipeline and the Tank Contracts. The OPCC will incorporate the engineer's experience with similar projects and will include an



## SCOPE OF WORK

Saw Mill Canyon Raw Water Pipeline Replacement and Tank Project – Final Design Phase

appropriate contingency for the level of design completed.

### Task 2 Deliverables

- 5 copies of 11x17 drawing sets and specifications for 75 and 100-percent submittals
- Opinion of Probable Construction Cost at 75 and 100-percent submittals
- PDF of final drawings and specifications

## BASIS FOR FEE ESTIMATE

### 1. Drawing List – Pipeline Contract

#### General

1. Cover Sheet, Drawing List, Pipeline Legend
2. Legends and Abbreviations
3. Schematic and Hydraulic Profile

#### Civil

4. 24 inch Pipeline Alignment and Profile 1
5. 24 inch Pipeline Alignment and Profile 2
6. 24 inch Pipeline Alignment and Profile 3
7. 24 inch Pipeline Alignment and Profile 4
8. 24 inch Pipeline Alignment and Profile – Existing Tank Overflow Pipe
9. 24 inch Pipeline Alignment and Profile – New Tank Overflow Pipe
10. Connection Details
11. Control Vault Improvements
12. Miscellaneous Details – 1
13. Miscellaneous Details – 2

#### Structural

14. Sand/Debris Trap Plan, Sections and Details
15. Control Vault Plan, Sections and Details
16. Standard Concrete Details
17. Miscellaneous Details

#### Electrical

18. Tank Electrical Legends and Abbreviations
19. Tank Electrical Site Plan and One Line Diagram

#### Instrumentation and Controls

20. Tank I&C Legends and Abbreviations
21. Tank I&C P&ID, SCADA System Block Diagram, and Details



## SCOPE OF WORK

Saw Mill Canyon Raw Water Pipeline Replacement and Tank Project – Final Design Phase

### 2. Drawing List – Tank Contract

#### General

1. Cover Sheet and Drawing List
2. Legends and Abbreviations

#### Civil/Structural

3. Tank Site, Grading and Paving Plan
4. Tank Yard Piping Plan
5. Tank Access Road and Erosion Control Improvements
6. Tank Connection Pipeline Details
7. Tank Sectional Plan and Roof Plan
8. Tank Sections and Details
9. Tank Retaining Walls
10. Tank Retaining Wall Details
11. Tank Details
12. Miscellaneous Details 1
13. Miscellaneous Details 2

#### Electrical

14. Tank Electrical Legends and Abbreviations
15. Tank Electrical Site Plan and One Line Diagram

#### Instrumentation and Controls

16. Tank I&C Legends and Abbreviations
17. Tank I&C P&ID, SCADA System Block Diagram, and Details

### 3. Project Schedule – Pipeline project

- NTP – March 3, 2011
- 75% Design Submittal to City – April 20, 2011
- 100% Design to City – May 25, 2011
- Peer Review Complete – June 1, 2011
- Bid Advertisement – June 20, 2011
- Receive Bids – June 22, 2011
- NTP for Construction – July 8, 2011
- Construction Complete – October 2011

### 4. Project Schedule – Tank project

- Geotechnical Information received – July 2011
- 75% Design Submittal to City – September 2011
- 100% Design to City – November 2011
- Peer Review Complete – December 2011
- Bid Advertisement – April 2012



## SCOPE OF WORK

Saw Mill Canyon Raw Water Pipeline Replacement and Tank Project – Final Design Phase

- Receive Bids – June 2012
- NTP for Construction – July 2012
- Construction Complete – October 2012

## **EXCLUSIONS**

- Survey and geotechnical investigations
- Physical radio path study
- Bid and construction phase services (to be negotiated at a later date)
- Landscaping
- Property/Right-of-Way acquisition

## **ASSUMPTIONS**

- Pipeline will be installed below grade along the inside cut of the road.
- Solar panels with battery pack will be used for local power at remote sites, including the tank site
- Tank will be either above grade welded steel with concrete ringwall foundation and will be designed in accordance with AWWA D100 or will be prestressed concrete in accordance with AWWA D110.
- State to provide information on the size and quantity of material to design the debris trap for.

Carson City																			
Saw Mill Canyon Pipeline and Tank Project - Phase 2, Final Design																			
Hours and Fee Estimate																			
Project Element & Task Descriptions	Billing Rate	Client Serv. Manager Carson	Project Director Reddick	Senior Socialist/OC Various	Project Manager Erson	Project Engineer Nibrown	Staff Engineer Wallin	Structural Engineer Plank	MEC Engineer Hise	Electrical Engineer Pardo	CAD/Technician Various	Clinical Various	Other	Labor Hours	Labor Cost	Expenses	Subcontract	Fee	
																			2085
<b>TASK 1 - PROJECT MANAGEMENT AND COORDINATION</b>																			
Task 1.1 Progress Reporting and Filing					24									66	\$ 12,434	\$ 500		\$ 12,934	
Task 1.2 Quality Assurance and Control (Hours under individual tasks)												12		36	\$ 5,974			\$ 5,974	
Task 1.3 Project Coordination Meetings (1 total)					8	10								30	\$ 6,460	\$ 500		\$ 6,960	
<b>TASK 2 - PIPELINE AND TANK FINAL DESIGN</b>																			
Task 2.1 Surveying and Geotechnical Investigation Report Review							4							6	\$ 2,900			\$ 2,900	
Task 2.2 Final Design and Construction Contract Documents (75%)							4				2			4	\$ 48,220	\$ 400		\$ 48,620	
Pipeline					20	18	80	4	24	24	80	12		4	\$ 68,663	\$ 400		\$ 69,063	
Tank					2	12	120	40	24	24	120	12		6	\$ 24,007	\$ 400		\$ 24,407	
Task 2.3 100% Design Documents + Peer Review Edits							8							4	\$ 30,626	\$ 400		\$ 31,026	
Pipeline					10	12	40		12	12	32	4		4	\$ 4,194			\$ 4,194	
Tank					2	6	36	20	16	16	40	4		8	\$ 6,284			\$ 6,284	
Task 2.4 Opinion of Probable Construction Costs							2							2					
Pipeline					2	2	4							6					
Tank					2	2	6							12					
<b>TOTAL FEE</b>					<b>72</b>	<b>90</b>	<b>298</b>	<b>68</b>	<b>76</b>	<b>76</b>	<b>274</b>	<b>44</b>	<b>50</b>	<b>1188</b>	<b>\$ 197,729</b>	<b>\$ 2,100</b>	<b>\$ -</b>	<b>\$ 199,829</b>	