

## **Agenda**

### **Meeting of the Commissioners of Public Works**

**of the City of Charleston, South Carolina, d.b.a.**



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**Meeting Date: Tuesday, April 30, 2013**

**Meeting Location: 103 St. Philip Street, Charleston, S.C. 29402**

**9:00 a.m.**

**Meeting of the Commissioners of Public Works  
of the City of Charleston, South Carolina  
(Charleston Water System)**

**Mr. Thomas B. Pritchard, Chairman**

April 30, 2013

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- I. **Call to Order – Mr. Pritchard**
  
- II. **Compliance With Public Notice – Mr. Pritchard / Mr. Hill**
  
- III. **Invocation – Mr. Hill**
  
- IV. **Pledge of Allegiance – All present**
  
- V. **Special Presentation – Mr. Hill**

The Mayor's Walled City Task Force members, Ms. Katherine Saunders Pemberton, Manager of Research and Education at the Historic Charleston Foundation and Ms. Martha Zierden, Curator of Historical Archaeology at the Charleston Museum, will provide an update on the Walled City of Charleston and Charleston Water System's involvement in the Mayor's Task Force.

- VI. **Adjourn to Committee Meetings, followed by Commissioners Meeting**

**Meeting of the Commissioners of Public Works  
of the City of Charleston, South Carolina  
(Charleston Water System)**

**Public Contract and Finance Committee**  
Mr. Thomas B. Pritchard, Committee Chairman

April 30, 2013

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**I. Call to Order**

**II. Approval of Minutes of Committee Meeting of March 20, 2013**

**III. Review of Quarterly Financial Data – Ms. Tricia Willcutt**

Ms. Willcutt will present additional detailed data for the Commissioners concerning CWS's financial data in the previous calendar quarter. *(Information Only)*

**IV. Update on Banking Request for Proposals (RFP) – Mr. Ropp**

Mr. Ropp will update the Board on the current status of the RFP for banking services. *(Information Only)*

**V. Adjournment**

**Meeting of the Commissioners of Public Works**  
of the City of Charleston, South Carolina  
(Charleston Water System)

**Administrative, Personnel, and Public Relations Committee**  
Mr. William E. Koopman, Jr., Committee Chairman

April 30, 2013

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**I. Call to Order**

**II. Approval of Minutes of Committee Meeting of March 20, 2013**

**III. Bill Inserts - Ms. Craft – Exhibit A**

**June 2013**

- Charleston Water System's *Water Wise* Customer Newsletter
- South Carolina Aquarium

**IV. Community Outreach – Ms. Craft**

- Habitat for Humanity Community Service Day; April 11, 2013
- Earth Day Festival; April 20, 2013
- National Drinking Water Week Activities; May 5-11, 2013
  - Poster Competition Display
- Wastewater Treatment Process Video

**V. Recent Magazine Articles Featuring Charleston Water System – Mr. Cline**

- Article in *Water Environment and Technology (WET)*
- Report in *American Society of Civil Engineers (ASCE)*

**Meeting of the Commissioners of Public Works  
of the City of Charleston, South Carolina  
(Charleston Water System)**

**Administrative, Personnel, and Public Relations Committee**  
Mr. William E. Koopman, Jr., Committee Chairman

April 30, 2013

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**VI. Update on Taste and Odor (T&O) Season – Mr. Fairey**

Mr. Fairey will update the Board on the new carbon storage and feed system and other improvements that have been made to address T&O concerns in the CWS distribution system.  
*(Information Only)*

**VII. Adjournment**



**INTEROFFICE COMMUNICATION**

April 23, 2013

To: Commissioners and Officers  
From: Jenny Craft, Public Relations Manager  
Re: Bill Inserts

In accordance with Charleston Water System's approval process for bill inserts, the following bill inserts are submitted for your approval:

**June 2013**

- Charleston Water System's *Water Wise* Customer Newsletter
- South Carolina Aquarium

Should you have any questions or concerns, please feel free to contact me prior to or during our Board meeting.

Attachments



# Water Wise

The Quarterly Newsletter of Charleston Water System

Volume 8, Issue 1

June 2013

## Annual Water Quality Report Now Available

Each year, Charleston Water System produces a report summarizing where our water comes from, how it's treated, and whether it met all regulatory requirements for quality (it did!).

The report for calendar year 2012 is now available on our web site at [www.charlestonwater.com/2012report](http://www.charlestonwater.com/2012report).

For questions or to request a paper copy, contact us at (843) 727-6800 or [customerservice@charlestoncpw.com](mailto:customerservice@charlestoncpw.com).

**Want to see how your water is treated and delivered to your home?** Scan the code with your smart phone or visit [www.charlestonwater.com/videos.htm](http://www.charlestonwater.com/videos.htm) to watch a video of the treatment process.



### Quality Facts

Calendar Year 2012

Serving Size: 8 oz.

#### Water Quality Testing

Total # of tests	22,950
Parameters Tested	150
Substances detected	12
% below regulatory limit	100%
<b>Regulatory compliance</b>	<b>100%</b>



**Charleston  
Water System**

## 3 Things to Know About Fire Hydrants

Charleston Water System owns and operates the 8,800-plus hydrants in our service area. Here are some interesting facts about hydrants.

### They're not just for fire protection

Fire hydrants play an important role in maintaining a water system. Our crews use them to flush water mains after maintenance or repairs and to remove mineral deposits that can accumulate inside of older water mains.

### Keep landscaping from hiding hydrants

Fire hydrants must be clearly visible and easily accessible. If a hydrant is located near your property, be sure to keep it clear of bushes and other obstructions. Report hidden hydrants to Charleston Water System at (843) 727-6800 or [customerservice@charlestoncpw.com](mailto:customerservice@charlestoncpw.com).

### A broken hydrant won't cause a geyser

That only happens in the movies. Fire hydrants have a dry barrel and a break-away flange at the base. If hit with enough force, a hydrant will break at the base without damaging the pipe underneath it—or causing a geyser.

### Fire Hydrant Facts

**8,800**

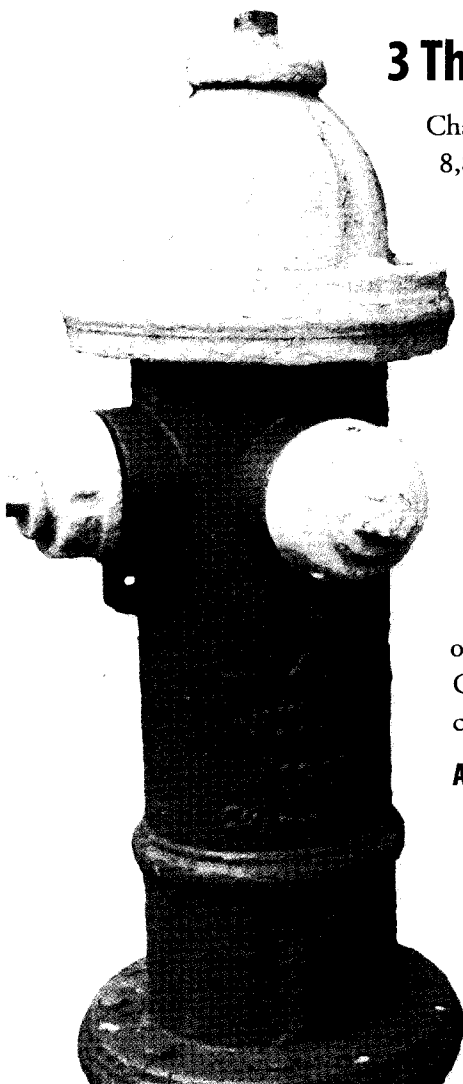
CWS fire hydrants

**\$700**

cost of a fire hydrant

**1,000 gallons/minute**minimum flow rate of most  
CWS hydrants**500 feet**distance between hydrants in  
urban areas**13**fire departments in CWS's  
service area

**Charleston  
Water System**



*Project Profile*

## Meeting Street Water Main Relocation



**Charleston Water System moved two water mains to make room for construction of a new Highway 78 bridge over Meeting Street Extension.**

**This photo shows installation of the casing for the 16-inch water main, which was drilled under the railroad tracks and bridge.**

## It's Hurricane Season

### Are you prepared?

The start of hurricane season is a good time to review your emergency plan.

Here are a few things to consider about water in your planning.

**Emergency kit.** Include at least a three-day supply of water—one gallon per person per day for drinking. Don't forget pets!

**Evacuation plans.** If you evacuate, turn off the water to your home at the main shut-off valve and turn off the electrical circuit breaker to your water heater.

**After a storm.** The storm may disrupt treatment at the water plant or damage water lines, which can make the water unfit to drink. Stay tuned to the media for instructions, and plan to boil water for one minute before using it for cooking or drinking.

For more emergency preparedness tips, visit [www.ready.gov](http://www.ready.gov).

## Water Whys

### I've heard you're not supposed to flush old medications. Is this true?

Yes. Wastewater treatment plants aren't designed to remove pharmaceuticals, so flushing them can introduce these compounds into the water environment.

The Food and Drug Administration (FDA) recommends disposing of expired medications in the trash. To prevent tampering, take the medicine out of its original container and mix with coffee grounds or kitty litter in a plastic bag or other container.

For more information, visit [www.fda.gov](http://www.fda.gov).

## Need a speaker for your school or group?

If your class or group is interested in learning about water, contact us to schedule a speaker. We can customize a presentation to meet your group's needs.

[info@charlestoncpw.com](mailto:info@charlestoncpw.com)  
(843) 727-6856

**Our Mission** is to protect public health and the environment of our service community by providing clean water services of exceptional quality and value.

103 St. Philip Street, Downtown  
6296 Rivers Ave, North Area

(843) 727-6800  
[customerservice@charlestoncpw.com](mailto:customerservice@charlestoncpw.com)

[www.charlestonwater.com](http://www.charlestonwater.com)  
 @ChasWaterSystem

Let's go sea!

South Carolina  
Aquarium

**\$10 off**  
one annual Membership

Call (843) 579-8518 or visit [scaquarium.org](http://scaquarium.org) to join today.

Promo Code: **CPW-13** Coupon must be present at time of purchase. Not valid with any other discount. One coupon per person. Restrictions apply. Expires 9/31/2013.

**Meeting of the Commissioners of Public Works  
of the City of Charleston, South Carolina  
(Charleston Water System)**

**Regulatory and Property Committee  
Mr. David E. Rivers, Committee Chairman  
April 30, 2013**

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**I. Call to Order**

**II. Approval of Minutes of Committee Meeting of March 20, 2013**

**III. Blue House Tract Updates – Mr. Hill, Mr. Cline, Mr. Padgett**

Mr. Hill, Mr. Cline, and Mr. Padgett will provide an updated status on the closing for Parcel 4-A, Blue House Tract. *(Information Only)*

**IV. Hanahan Water Treatment Plant NPDES General Permit #SCG646051 – Mr. Fairey**

Mr. Fairey will inform the Commissioners of the April 5, 2013 request to SC DHEC to amend the existing permit. *(Information Only)*

**V. Adjournment**

**Meeting of the Commissioners of Public Works**  
of the City of Charleston, South Carolina  
**(Charleston Water System)**

**Mr. Thomas B. Pritchard, Chairman**

April 30, 2013

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- I. **Reconvene Commissioners' Meeting after conclusion of Committee Meetings**
  
- II. **Approval of Minutes of Meeting of March 20, 2013**
  
- III. **Citizens Participation/Public Comment**
  
- IV. **Monthly Customer Service Activity and Financial Report – Ms. Ferguson, Mr. Ropp**
  
- V. **CEOs / Staff Reports**
  - A. **May / June Board Meeting Dates – Mr. Hill**

Mr. Hill will inform the Commissioners that the May Board meeting is currently scheduled for Tuesday, May 28, 2013. Due to the Memorial Day Holiday on Monday May 27, 2013, staff recommends that the May meeting be moved to Wednesday, May 29, 2013. The June Board meeting is currently scheduled for Wednesday, June 19, 2013.
  
  - B. **All-Terrain Vehicle Testing in Bushy Park Reservoir – Mr. Fairey**
  
- VI. **Reports of Standing Committees – Ms. Harrison**
  - A. **Public Contract and Finance Committee Meeting of April 30, 2013**
  - B. **Administrative, Personnel and Public Relations Committee Meeting of April 30, 2013**
  - C. **Regulatory and Property Committee Meeting of April 30, 2013**

**Meeting of the Commissioners of Public Works**

of the City of Charleston, South Carolina  
**(Charleston Water System)**  
Chairman

April 30, 2013

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**VII. Major Capital Project Requests – Mr. Cline**

- A. Johns Island Sewer Interceptor Extension Project Phase I Contract Amendment – Exhibit B
- B. Future Drive Water Main Extension Phase 2 Division 1 Construction Contract – Exhibit C

**VIII. Citizens Participation/Public Comment**

**IX. Executive Session**

Mr. Hill may request that the Commissioners move to enter into Executive Session to discuss legal and/or contractual matters.

**X. Adjournment**

**INTEROFFICE COMMUNICATION**

TO: Mark Cline, P.E.  
Capital Projects Officer

FROM: Russell Huggins, P.E.  
Director of Engineering

DATE: April 12, 2013

RE: Johns Island Sewer Interceptor Extension Project – Phase 1  
Contract Amendment

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In the mid-2000's Charleston Water System (CWS) began to see increased development pressure within its Johns Island wastewater service area. To address this growth, the Wastewater Master Plan recommended extending the Johns Island wastewater interceptor system southward from its current terminus near the intersection of River Road and Maybank Highway to provide wastewater service to large, developable tracts of land. At the January 2007 Commissioners Meeting, approval was given to the Engineering firm Horner, Eelman, & Gearhart (HEG), now doing business as Weston & Sampson (W&S), to provide design and construction phase services for the Johns Island Sewer Interceptor Extension Project – Phase 1. Included in the scope of the project is approximately 6100 linear feet of large diameter gravity sewer, approximately 5500 linear feet of force main, and a 4.5 million gallon per day (mgd) regional pump station sized to handle projected build-out flows for the service area.

As design, permitting and easement acquisition for the project progressed towards completion, a significant downturn in the real estate market negatively impacted the rate of growth in the Johns Island service area, resulting in a decision by staff to defer construction of the project until such time as growth necessitated its construction. Recently, CWS has begun to see a renewed interest in development on Johns Island prompting staff to initiate discussion with W&S with regards to preparing final design documents. As a part of that discussion, staff requested W&S re-evaluate the design sizing of the pump station and the associated gravity sewer and force main as a result of lower planned development density within the proposed project service area. The results of the evaluation were significant, enabling a reduction in the size of the pump station from 4.5 mgd to 3.4 mgd, at an estimated construction cost savings of \$1.8 million dollars, as well as a reduction in long term O&M costs that can be expected for a smaller, more efficient pump station.

In response to the opportunity for significant construction cost savings and improved long-term pumping efficiency, staff requested W&S prepare a contract amendment outlining the tasks and associated fees necessary to revise the current plans and to prepare bid document based on the changed service area planning information. Attached for your review is a copy of the Contract Amendment proposal from W&S. The total cost of their amendment is \$109,500.

Therefore, staff requests the Commissioners' approval of a Contract Amendment for W&S in the amount of \$109,500 for the Johns Island Sewer Interceptor Extension Project – Phase 1. The current contract amount, including one previously approved Board amendment and one previously approved staff amendment, is \$491,086. The new contract amount will be \$600,586. Funding is available through the Wastewater Major Capital Improvements Program.

**Attachment**

cc: Andy Fairey, COO  
Baker Mordecai, P.E.  
Linda Hans  
Greg Hider, P.E.

## MEMO

**TO:** Mr. Greg Hider, P.E.  
**FROM:** Robert L. Horner, PE  
**DATE:** April 15, 2013  
**SUBJECT:** Johns Island Sewer Interceptor – Amendment Request  
CWS Project Number 0661-0002 / Ext 3687-633

Over the last few months, at CWS' direction, we have re-evaluated this Project as designed and permitted in 2009. The original station design was based on development projections current in 2006. Recent trends have enabled a reduction in the development projections within the area served by the proposed pump station. This significant flow reduction, along with other ideas improved upon in brainstorming meetings held with CWS's Engineering and Operations groups have resulted in recommendations that will revise the existing pump station design concept to better meet the current and future needs as they are now defined. The revised pump station concept will be easier to construct and will save CWS approximately \$1.8M in initial project construction costs (when compared to the construction costs of the previous, larger and more complicated pump station design).

To implement this revised concept and realize the \$1.8M in construction savings, re-design of the pump station is necessary; thereby requiring an amendment to our existing contract. We propose that the overall contract be increased by \$109,500 (from \$491,086.00 to \$600,086.00). This requested increase amount includes \$17,753 spent to date to develop the revised concept (and charged against the construction administration per your direction) and \$91,747 for the engineering re-design required to prepare plans and specifications (including electrical re-design) for bidding and construction phase services and to modify the existing SCDHEC Construction permits. The existing contract includes services that will be provided during bidding and construction phases as well as periodic inspections.

Please let us know if you need additional information.

TO: Mark Cline, P.E.  
Capital Projects Officer

FROM: Russell L. Huggins, Jr., P.E.  
Director of Engineering

DATE: April 11, 2013

RE: Future Drive 24-inch Water Main Extension Project – Phase 2, Division 1  
Construction Contract

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Master Plans developed to support Charleston Water System's (CWS) Major Capital Improvements Program identified increased utilization of the Northwest Water Storage Facility and transmission main improvements as necessary to meet growing water service and fire protection demands within CWS's northern service area. Recommended transmission main improvements include the 3.96 mile extension of the 24-inch water main along Palmetto Commerce Parkway and the extension of approximately 8000 linear feet of 24-inch water main along planned Future Drive from the Northwest Storage Facility to the Palmetto Commerce Parkway. At the February 2011 Commissioner's Meeting, approval was given to award a construction contract for the Palmetto Commerce Parkway Water Main Extension Project. The project was constructed in conjunction with Charleston County's Palmetto Commerce Parkway Extension Project from Patriot Boulevard to Ashley Phosphate Road. Construction of the water main is complete and the water main is in service. Similarly, in late 2009 Charleston County announced its plan to construct the Future Drive Extension Project in three separate phases identified as Divisions I, II & III. Division I was identified as extending approximately 2800 linear feet of roadway from Highway 78 southward towards the Palmetto Commerce Parkway. Division II was identified as continuing the extension of Future Drive to Northside Drive. The third and final division was identified as connecting Future Drive to the Palmetto Commerce Parkway.

Although funded by Charleston County, the Future Drive Extension Project is being managed by the City of North Charleston (City). To take advantage of survey, design drawings and permitting activities already prepared and approved as a part of the roadway project, and to minimize conflicts and potential impacts with roadway drainage structures and other roadway related infrastructure, CWS partnered with the City to bid construction of the Future Drive 24-inch Water Main Project – Phase 1 as a part of the City's Division I Future Drive Extension Project. Included in the scope was the extension of approximately 2800 linear feet of 24-inch water main along Future Drive from Highway 78 southward towards the Palmetto Commerce Parkway. At the September 2010 Commissioner's Meeting, authorization was given to construct the water main as a part of the City's Division I Future Drive Extension Project. Construction of the water main is complete and the water main is in service.

At the October 2011 Commissioner's Meeting, approval was given to the engineering firm Weston & Sampson (W&S) to provide design and construction phase services for the Future Drive Water Main Extension Project – Phase 2. Included in the scope was the extension of approximately 7000 linear feet of 24-inch water extending from the terminus of the 24-inch water main along Future Drive constructed in Phase 1, to the existing 24-inch water main located along the Palmetto Commerce Parkway, thus completing a looped system.

Subsequent to the initial route alignments provided by the County, changes were made to the routing of Divisions II and III. Division II has now been redefined as the extension of approximately 3375 linear feet of new road way southward towards the Palmetto Commerce Parkway where it will terminate until such time as it is extended eastward as a part of Division III to Northside Drive. While the routing has changed, connection of the 24-inch Future Drive water main to the Palmetto Commerce Parkway remains a priority to meet growing service area demands and to address water quality concerns. To address these priorities, Weston & Sampson continued to work with the City to develop plans and specifications to construct the Future Drive Water Main Extension Project – Phase 2 as a part of the Division II road way project. However, the change in routing required the County to procure new road right-of-way and involved significant permitting, the timing of which was uncertain. Therefore, no indication of when the project might bid was provided.

Recently CWS was made aware of the City's intention to bid the Division II Future Drive Extension Project on May 2, 2013 and to award a construction contract on May 9, 2013. Plans and specifications for the Future Drive 24-inch Water Main Extension Project – Phase 2, Division 1 were provided to the City for inclusion in their bid documents. The proposed water main extension entails approximately 3375 linear feet of 24-inch DIP to be constructed parallel to the road right-of-way of Future Drive Division II. Also included in the project are the necessary valves and fittings to facilitate extension of the 24-inch water main westward to the existing 24-inch water main in Palmetto Commerce Parkway under a separate project, hereafter referred to as Future Drive 24-inch Water Main Extension Project – Phase 2, Division 2, thus completing the loop. Extension of the water main to the Palmetto Commerce Parkway will be through adjoining CWS and North Charleston Sewer District easements. Similar to the extension of the water main, the North Charleston Sewer District is extending sewer from Future Drive to the Palmetto Commerce Parkway in order to provide sewer service to the area. Because of the depth and complexities associated with the construction of deep gravity sewer, it was agreed that construction of the gravity sewer system would precede construction of the Division 2 water main. North Charleston Sewer District has communicated its intentions to bid construction of the gravity sewer in June 2013 with anticipated project duration of 18 months.

At the request of the City, in order to minimize conflicts and potential impacts with roadway drainage structures and other roadway related infrastructure, CWS partnered with the City to bid the Future Drive 24-inch Water Main Extension Project – Phase 2, Division 1 as a part of the City's Northside & Future Drive Division II – Northside Drive Extension Project. Pursuant to the terms and conditions of a Memorandum of Understanding (MOU) by and between the City and CWS, the City shall be responsible for 100% of the cost of all construction items associated with the water main construction to be performed by the contractor. In turn, CWS will reimburse the City for construction items associated with the water main extension, provided such reimbursement is for work approved by CWS. Attached for your view is a construction cost estimate provided by Weston & Sampson in the amount of \$763,377 for the Future Drive 24-inch Water Main Extension Project – Phase 2, Division 1. Inclusive in this cost is a \$100,000 contingency to be used at the discretion of CWS.

Therefore, it is our recommendation that the Commissioners authorize staff to commit funding to reimburse the City of North Charleston for the costs of all construction items associated with the Future Drive 24-inch Water Main Extension Project – Phase 2, Division 1, provided such costs are reviewed and deemed reasonable and acceptable by CWS staff and its Engineer, Weston & Sampson. Funding is available through the Water Major Capital Improvement Program.

Attachment

cc: Andy Fairey  
Linda Hans  
Larry Drolet  
Greg Hider, P.E.

Future Drive Water Main, Phase 2, Division 1  
 Construction Cost Estimate  
 April 5, 2013

**Weston&Sampson**  
 672 Marina Drive, Suite 204  
 Charleston, SC 29492  
 www.westonandsampson.com  
 Office: 843-881-9804

**Description: 24" Water Transmission Main Future Drive, Phase 2**  
**Approximately 3,305 LF Total with one 30" Horizontal Directional Drill**

Item	Description	Qty	Unit	Unit Cost	Total
<b>Water Transmission Main</b>					
1	Mobilization, Bonds & Insurance (Not to Exceed 3% of the Total Project)	1	LS	\$20,000.00	\$20,000.00
2	24" Fastite Joint Ductile Iron Pipe				
a	Material	819	LF	\$85.00	\$69,615.00
b	Labor	819	EA	\$45.00	\$36,855.00
3	24" Restrained Joint Ductile Iron Pipe				
a	Material	1533	LF	\$95.00	\$145,635.00
b	Labor	1533	EA	\$45.00	\$68,985.00
4	24 " Butterfly Valves	2	EA	\$5,000.00	\$10,000.00
5	24" Air Release Valve	3	EA	\$6,000.00	\$18,000.00
6	6" Gate Valve	2	EA	\$1,500.00	\$3,000.00
7	Hydrant	2	EA	\$4,000.00	\$8,000.00
8	Fittings, Bends, Tees	6	Tons	\$200.00	\$1,200.00
9	HDD 30" HDPE	974	LF	\$250.00	\$243,500.00
10	Staking	1	LS	\$8,500.00	\$8,500.00
11	Erosion Control	1	LS	\$10,000.00	\$10,000.00
12	Grassing & Stabilization	1	LS	\$10,000.00	\$10,000.00
13	Chlorination & Dechlorination	1	LS	\$12,000.00	\$12,000.00
14	Record Drawings & Valve Cards	1	LS	\$4,500.00	\$4,500.00
15	Water Main Contingency	1	LS	\$100,000.00	\$100,000.00
				Sales Tax	\$13,587.00
				Subtotal	\$763,377.00
				<b>TOTAL Construction Cost</b>	<b>\$763,377.00</b>