



## Agenda Item: 3

**Date:** November 10, 2009

**Subject:** Annual Renewal of Master Service Agreements for Main Replacement Projects

**Staff Contact:** John Valdes, Capital Improvement Program Manager  
Dave Jones, Associate Engineer

### **Recommended Board Action:**

Approve the fourth year of a five year Master Service Contract (2007 through 2011) and 2010 unit cost schedules with Ahlstrom Construction, Inc. and GM Construction and Developers, Inc., respectively, for the installation of water main lines and service lines as part of the Water Main Replacement Program, and authorize the General Manager to execute any subsequent task orders on behalf of the District.

### **Background:**

In April 2007, the Board of Directors authorized the General Manager to execute a five year Master Service Contract with Ahlstrom Construction, Inc. for the water main installation component and GM Construction and Developers, Inc. for the service line installation component for the Water Main Replacement Program. Service agreements in fiscal year 2006 with Ahlstrom Construction for main line installation and with GM Construction for service line installation proved successful for the District and were the pilot program for the five year master service contract. The District had historically recognized cost savings of approximately 10 to 20% when compared to projects awarded by the traditional bid process.

In past years, staff has written separate staff reports and requested separate Board action on the Master Service Contract renewals for water main installation and service line installation for the Water Main Replacement Program. However, this year the two have been combined into a single staff report and action item. The reason for combining them is that the two contracts are dependent on one another. Contractor pricing for the water main installation service contract is dependant on the service line installation service contract, and vice versa.

### **Discussion:**

The Master Service Contract approach has proven to be a success for the District's Water Main Replacement Program. District staff recommends the continued use of this approach. The advantages to using the service contract approach with both Ahlstrom Construction and GM Construction include:

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- Since its inception, cost savings of 10 to 20% have been realized using the service contract approach in combination with the District purchase of materials.
- Using the service contract approach saves administration and engineering costs associated with bidding and awarding contracts using a traditional design-bid-build approach. This is an estimated savings of 5% to 8% of the total project cost.
- The quality of work is high because the service contractors have considerable experience in their respective areas of work, and crews have demonstrated expertise and know the District's standards and requirements.
- Both Ahlstrom and GM Construction specialize in this type of construction work. Installing water mains and service lines in existing streets and for older homes is considerably more complicated than installing utilities in a new subdivision.
- Both contractors understand and respond well to the District's policy of maintaining a high degree of customer care. Customer complaints are very low in number and are responded to quickly by both contractors. In fact, positive comments received back from the District's customers far outnumber any complaints, which is significant given the nature of the work.
- There have been few warranty issues on projects completed in CY's 2006 through 2009 by both Ahlstrom and GM Construction and those that arose have typically been resolved in a matter of hours. This is unusual and speaks to the quality of the installed product.
- Since inception there has not been a single contractor initiated change order on any of the previous task orders for the main replacement projects under the Master Service Contract with either Ahlstrom or GM Construction. In addition, Ahlstrom has completed out of scope tasks without asking for any compensation from the District (see Exhibit A attached to this report). Staff firmly believes this would not be the case with traditional contract delivery methods.
- County inspection costs are lower because the County inspectors are comfortable with the District's chosen contractors. Less oversight is required by both County and District staff.
- The District has been able to manage the construction of the Master Service Contract projects without the services of an outside construction manager.
- Both Ahlstrom and GM Construction work well with each other. Therefore, District staff time in coordination of the two service contracts is minimized and there have been no issues, claims of delay, time extensions, or rework paid for by the District as a result of the present arrangement. Again, this is unusual in projects which require considerable coordination between two contractors occupying the same limits of work.

- Being relatively small firms, the District's projects are the highest priority for Ahlstrom Construction and GM Construction, and their attention is not diverted by working for multiple owners on multiple projects.

As part of the Master Service Agreement, the unit cost items of the Master Service Contract are reviewed and negotiated annually with Ahlstrom and GM Construction. Following below are specifics related to the unit prices negotiated for 2010 with both contractors.

- Service Contract with Ahlstrom Construction - Several unit line items have changed for 2010. The pavement task in line items 1 through 6 has been removed and is now represented in the new pavement restoration line items 8 and 9. This change was done to allow better financial management of the projects by the District. The proposed changes for 2010 are shown in Exhibit B attached to this report, titled "2010 Unit Cost Schedule." The unit prices for 2009 and 2010 are shown adjacent to each other for easy comparison. The Scope of Work for each line item is also included in Exhibit B.

Ahlstrom Construction has proposed to hold or lower costs for 2010 even though their costs for labor and materials have risen. The cost for main installation has been reduced by approximately 5% for 2010.

- Service Contract with GM Construction - The proposed changes for 2010 are shown in Exhibit C attached to this report, titled "2010 Unit Cost Schedule." The unit prices for 2009 and 2010 are shown adjacent to each other for easy comparison. A new line item (Line 10, Cross-overs) has been added to the cost schedule. The cross over task was in line items 2, 3, &4 in 2009. By removing this portion from the scope of work for the in-tract service line connection and defining it as a separate line item it will be more efficient for the District to financially manage the project. The Scope of Work for each line item is also included in Exhibit C.

For CY 2010, proposed unit item costs have decreased approximately 4% across the board as compared to CY 2009. These decreases are shown in Exhibit C. These decreases are due to the economic climate of the region. Proposed prevailing wage rates for 2010 are expected to increase by approximately 8%. However, the Contractor proposes no increases in 2010. GM Construction continues to provide excellent customer care and has completed many out of scope tasks from existing in-tract service line repairs to minor sprinkler system repairs at no cost to the District or the customer.

Staff has also reviewed recent bids and project costs on similar water main project costs contracted by other Sacramento area water purveyors. The City of Folsom, City of Sacramento and Fruitridge Vista Water District have shared recent water main replacement costs with the District. It is very difficult to compare costs to Fruitridge Vista's main replacement costs due to inconsistencies in the scope of work between the contracts. However, some comparisons can be made with the City of Folsom and City of Sacramento projects.

In 2009, the City of Folsom completed a water main replacement project similar to the current water main projects under construction in the District although the Folsom project also included a sizeable amount of sewer work. However, a comparison can be made between the water main installation line item costs. The City of Folsom completed their main line installation at a total cost of approximately \$177.50 per linear foot of water main installed. Ahlstrom Construction's quoted cost for 2010 is approximately \$163.70 per foot of water main installed or 9 percent less.

The City of Sacramento also recently completed a water main replacement project that is very similar to the type of construction in the District. With the City project, existing water mains are located in rear alleyways and the new mains are being installed in the street at the front of the homes. The City's South Land Park – Phase 3 project consists of the installation of 4,000 feet of 8-inch water main and 1,500 feet of 12-inch main (or 5,500 feet total). The low bidder on the City's project (Florez Paving) submitted a bid of \$1,304,705. The City has estimated the total cost of construction (which also includes a change order contingency and construction management services) at \$1,477,499. On a per mile of main line installed basis, this works out to approximately \$1,418,000 per mile. This project was completed between April and September, 2009, on time, but slightly over budget.

Even with the project similarities, it is difficult to do a line by line cost comparison between the City's project and District projects completed in 2009 using the Master Service Contract approach because the scope of work in some unit cost bid items is somewhat different. Also, even with a unit price based bid form, contractors will shift money from one line item to another for cash flow purposes during the construction period. Therefore, it is easier to compare the cost of these projects on an overall or total cost (per mile) basis.

Based on our analysis, the main differences between the City of Sacramento's project and our service contract projects are as follows:

- Pipe Type – The City's project uses PVC pipe while the District uses ductile iron (DI) pipe for the water mains. For 8-inch pipe, PVC pipe currently costs \$2.45 per foot less than 8" DI pipe. However, there are other differences that are difficult to quantify. PVC pipe is lighter and easier to handle and install, requiring lighter equipment to transport and handle at the job site. A contractor installing this type of pipe is typically able to install more pipe in a single day than a contractor installing the heavier DI pipe.
- Trench Backfill – The City's project assumes that the native material excavated for pipe installation is then placed right back into the trench as backfill. However, for the District's water main installation, imported aggregate base is used to backfill the trench above the pipe zone as required by the County of Sacramento. This is much more expensive not only because of the cost of the imported material but also because the excavated native material must be loaded into a truck and then trucked offsite and disposed of. Using native material for backfill also speeds up the contractor's production because the native material is simply pushed back into the trench. The District's requirement for off-haul and disposal of trench materials with import of aggregate base is

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dictated by the District’s desire for reduced risk of rework required in areas where the trenchline “sags.”

A comparison has been made showing the total cost of construction for two District main replacement projects constructed in 2009 using the Master Service Contract approach and the City of Sacramento’s estimated cost (based on actual bids) for their South Land Park – Phase 3 project.

Main Replacement Project Name	Construction Completion Date	Total Construction Cost/Mile (\$/mile)
SSWD - Bohemian Village #2 – Phase 3 (Minor Residential Streets)	July 2009	\$1,234,712/mile
SSWD - Terry Lynn Acres (Major Streets with increased traffic control and night work required)	November 2009	\$1,463,610/mile
City of Sacramento – South Land Park - Phase 3 (Minor Streets)	Pending Start of Construction	\$1,418,399/mile

District staff is currently managing the Water Main Replacement Program per the Board’s direction using the service contract approach in combination with District purchase of materials. However, because the amount of planned water main construction work in 2010 is more than can be covered under the service contracts, staff does plan on bidding at least one major project in 2010 using the traditional design-bid-build process. In 2010, District staff plans to competitively bid the Park Hills Main Replacement Project. This project consists of the planned installation of 10,500 feet of 8-inch, and 12-inch water mains and approximately 200 new service lines (almost all of which are residential). This is approximately 25 percent of all replacement water mains planned for construction in 2010. Based on this project’s bid results, staff will evaluate implementation options in 2011. Options could include bidding all project work, combining traditional bidding with the service contract approach, or possibly entering into service contracts with additional contractors.

An additional option the Board could consider for 2010 would be to not renew the service contracts and bid out all main replacement work.

This past year has again been very slow for the construction industry in the Sacramento area and throughout the state and nation. In addition, the residential and commercial real estate markets continue to struggle which has resulted in some construction firms being out of work and looking

for work in non-traditional areas. Some contractors are bidding work with minimal profit margins in order to retain their existing work force.

In the current construction climate, lower bid prices could possibly be realized by using the traditional design-bid-build process for all of the water main replacement projects. However, there are also significant risks. The low bidder could be inexperienced with this type of construction which could lead to underbidding the work and significant change orders during construction. The quality of the construction work could suffer and this could lead to increased inspection costs on the part of District staff and County of Sacramento's inspectors. And finally, some contractors may underestimate the customer coordination requirements that are inherent with this type of construction. Cost savings potentially recognized by bidding may be negated by the end of construction and may ultimately increase costs to the District.

In addition to direct construction costs, administrative and engineering costs for design and construction management increase when using a traditional design-bid-build approach. The plans and specifications have to be completed to a higher degree of complexity during design. There are added costs during the bidding period due to answering contractor questions, issuing addendums, administering insurance and bonding requirements, etc. There is a longer lead time required to complete the design and go through the traditional bidding process which will affect project schedules by 2-3 months. In addition, savings realized with District purchased materials with the present service-order contract approach would not be realized.

For all of the above reasons, staff recommends continuing the current contracting method and renewing the service contracts with both Ahlstrom Construction and GM Construction.

**Fiscal Impact:**

A total of \$11.5 million is proposed in the District's 2010 capital improvement program (CIP) budget for main replacement projects.

**Strategic Plan Alignment:**

Facilities and Operations – 2.A. The District will utilize appropriate planning tools, identify financial resources necessary, and prioritize system requirements to protect and maintain District assets and attain water resource objectives.

These main replacement projects align with this goal through the planned replacement of worn out water mains with new mains which will improve water system reliability.

**EXHIBIT A**

**AHLSTROM CONSTRUCTION CO., INC.**

GENERAL ENGINEERING CONTRACTORS  
3166 FITZGERALD ROAD  
RANCHO CORDOVA, CALIFORNIA 95742  
(916) 635-3190 • FAX (916) 635-0215  
License No. 364860

November 1, 2009

Sacramento Suburban Water District  
3701 Marconi Avenue Suite 100  
Sacramento, CA 95821

Attn: David Jones

Dear Dave:

Per your request for this information, the following cost increases were incurred by us in 2009 at no increase in cost to the district.

Wage Increase:	\$25,000.00
Pave Rubicon Well Site:	6,000.00
Trenches Deeper Than 5 Feet: 1700' @ \$30.00 =	51,000.00
Night Paving Premium:	7,000.00

Also, due to the current economic conditions, we have decided to cut our pipe installation items, Items 1 thru 6, for the 2010 contract by 5%.

We trust this information is satisfactory for your use.

Ahlstrom Construction Co., Inc.



William R. Zotovich  
Estimator

**EXHIBIT B****2010  
UNIT COST SCHEDULE  
Main Line Installation Component**

	<b>Item</b>	<b>Unit of Payment *</b>	<b>Unit Cost 2009*</b>	<b>Change in Cost</b>	<b>Unit Cost 2010</b>
1	6" DIP Water Main (residential)	lf	\$100.00	(5%)*	\$80.00
2	8" DIP Water Main (residential)	lf	\$100.00	(5%)*	80/00
3	12" DIP Water Main (residential)	lf	\$118.00	(5%)*	97.00
4	8" DIP Water Main (major street)	lf	\$132.00	(5%)*	110.00
5	12" DIP Water Main (major street)	lf	\$154.00	(5%)*	130.00
6	16" DIP Water Main (major street)	lf	\$182.00	(5%)*	154.00
7	Deepen trench	lf	\$30.00		30.00
8	Pavement restoration (6")	lf	n/a	New item	26.00
9	Pavement restoration (4")	lf	n/a	New item	16.00
10	4" Gate Valve	ea	\$500.00		500.00
11	6" Gate Valve	ea	\$500.00		500.00
12	8" Gate Valve	ea	\$500.00		500.00
13	10" Gate Valve	ea.	n/a		500.00
14	12" Butterfly Valve	ea	\$600.00		600.00
15	16" Butterfly Valve	Ea	n/a		600.00
16	Connection for FDC (up to 8")	ea.	n/a		2,000.00

17	Fire Hydrant Assembly	ea	\$2,200.00		2,200.00
18	Replace dry barrel with wet barrel fire hyd.	ea.	n/a		1,500.00
19	Connect to existing main for new hydrant or FDC	ea	n/a		2,800.00
20	2" Blow Off Assembly	ea	\$500.00		500.00
21	Main line tie-ins (normal conditions)	ea	\$4,000.00		4,000.00
22	Main line tie-ins (difficult conditions)	ea	\$7,000.00		7,000.00
23	Shift Differential (Night Work)	Per shift	\$4,000.00		4,000.00
24	Abandonment of existing system	LS	\$7,500.00		7,500.00
25	3 man crew utility work	Hr. (24 hrs max,)	200.00		200.00
26	Pot hole for utility conflicts	Per crew day	\$4,500.00		
27	Night Paving Work Differential	Per night shift	n/a	New item	5,500.00
28	Specialty Items				

**Note: There has been no increase in costs since Jan. 2008**

**\*Cost reduction recognizes \$16.00/ lf for deletion of pavement restoration from these line items now found in line items 8 and 9**

SCOPE OF WORK FOR UNIT ITEMS LISTED ABOVE:

**Item 1 thru Item 3. DIP Water Main:**

Provide all labor, equipment, materials,(except SSWD provided materials), and appurtenances necessary to install DIP water main pipe including but not limited to saddle and corp. stop installation, sawcutting, pavement removal and disposal, spoils disposal, traffic control and encroachment permit & Storm Water Pollution Prevention Plan requirements, excavation, bedding, backfilling, compacting, disinfection and pressure testing, temporary pavement and pavement markings, tracer wire, poly pipe

