

AGENDA
SANTA MARGARITA WATER DISTRICT
ENGINEERING AND OPERATIONS
COMMITTEE MEETING
December 11, 2015

CALL TO ORDER: 8:30 a.m., Conference Room, District Office
26111 Antonio Parkway, Rancho Santa Margarita, California

COMMITTEE CHAIR: Justin McCusker

COMMITTEE MEMBER: Saundra F. Jacobs

1. PUBLIC FORUM

Persons wishing to address the Board of Directors on matters not listed on the Agenda may do so at this time. "Request To Be Heard" forms are available at the entrance to the Conference Room. Comments are limited to three minutes, unless further time is granted by the Presiding Officer. Please submit the form to the Recording Secretary or Committee Chair prior to the beginning of the meeting.

Those wishing to address the Board of Directors on any item listed on the Agenda should submit a "Request To Be Heard" form to the Recording Secretary or Committee Chair before the Presiding Officer announces that agenda item. Your name will be called to speak at that time.

2. ACTION

- 2.1 Consideration and Action on Change Order No. 2 for Construction Services, and Amendments to Consulting Services Contracts for the Esencia Lift Station Facility, Contract C-1771..... **Page 3**

RECOMMENDATION: 1) Approve Change Order No. 2 for Norman A. Olsson Construction, Inc. (OCI) in an amount not to exceed \$300,000. 2) Approve Change Order No. 1 to GMU in an amount not to exceed \$4,700. 3) Approve Change Order No. 1 to Psomas in an amount not to exceed \$65,000.

- 2.2 Consideration and Action on Construction Support Services for Tesoro Zone II and B Water Facilities, Domestic and Reclaimed Water Transmission Main and Coto De Caza Trunk Sewer Relocation, C-1767D **Page 8**

President, Betty H. Olson
Vice President, Charley Wilson
Finance Committee Chair, Charles T. Gibson
Engineering Committee Chair, Justin McCusker
Director, Saundra F. Jacobs
General Manager, Daniel R. Ferons

RECOMMENDATIONS: 1) Authorize an amendment to Michael Baker International, Inc. (MBI) in the amount of \$40,000.00 for additional Plan preparations; 2) Authorize a Geotechnical support services contract to GMU in the amount of \$39,722.00; 3) Authorize an amendment to ARMC for increased Archeological and Paleontological monitoring for \$11,900.00; 4) Authorize a Construction Management services contract to Butier Engineering Inc., in the amount of \$322,136.00.

3. INFORMATION

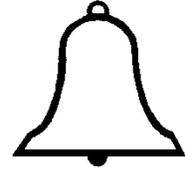
- 3.1. Engineering Update
- 3.2. Operations Update

ITEMS DISTRIBUTED TO THE BOARD LESS THAN 72 HOURS PRIOR TO MEETING

Pursuant to Government Code section 54957.5, non-exempt public records that relate to open session agenda items and are distributed to a majority of the Board less than seventy-two (72) hours prior to the meeting will be available for public inspection in the lobby of the District's business office located at 26111 Antonio Parkway, Rancho Santa Margarita, California 92688, during regular business hours. When practical, these public records will also be made available on the District's Internet Web Site, accessible at <http://www.smwd.com>.

Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, as required by Section 202 of the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Kelly Radvansky Secretary, Board of Directors, at (949) 459-6642 at least 48 hours before the meeting if possible.

Santa Margarita Water District



MEMORANDUM

TO: Board of Directors **DATE:** December 11, 2015

FROM: Don Bunts

SUBJECT: Consideration and Action on Change Order No. 2 for Construction Services, and Amendments to Consulting Services Contracts for the Esencia Lift Station Facility, Contract C-1771

SUMMARY

Issue: Residential water and sewer construction activity within Rancho Mission Viejo's (RMV) Ranch Plan Planning Area 2 (Esencia) has been ongoing since September 2014. Wastewater service for the southernmost Esencia areas near Cow Camp Road require construction of a sewage lift station in order to send wastewater flows to the Chiquita Water Reclamation Plant for treatment. Construction on the lift station project has been ongoing in the field since June 2015, and the Contractor and Consultants have performed extra work for which additional compensation is appropriate.

Recommendation: 1) Approve Change Order No. 2 for Norman A. Olsson Construction, Inc. (OCI) in an amount not to exceed \$300,000. 2) Approve Change Order No. 1 to GMU in an amount not to exceed \$4,700. 3) Approve Change Order No. 1 to Psomas in an amount not to exceed \$65,000.

Fiscal Impact: Construction funding is to be provided from the proceeds of the recently issued County of Orange Community Facilities District Bond (2015-1 Esencia - 489).

Previously Related Action: In October 2015, the District approved Change Order No. 1 for the Esencia Lift Station to OCI in the amount of \$62,820, and was also notified of impending modifications to the inlet sewer and need for enhanced odor control features.

Anticipated Board Action Date: It is anticipated that this item will be brought to the entire Board for consideration on January 22, 2016.

Adherence to Policy:

- This project is consistent with the District's mission
 - "... to collect and treat wastewater to protect the environment and public health."
 - "Provide a high level of service with maximum cost effectiveness."
 - "Plan for the future to guarantee a safe and sufficient water supply and wastewater reclamation service."

- This project is consistent with the District's Purchasing Policy and Procedures. This proposed project is consistent with the District's Purchasing Policy because it: was competitively bid; was identified in the current fiscal year's CIP and is more than \$49,999 and requires Board approval.

DISCUSSION:

Modifications to the Underground Work:

During the design phase of this project, the location of many subterranean pipelines needed to be verified. One of the most significant of these utilities was the 66" South County Pipeline (SCP), as it would be necessary for the new inlet sewer of the Esencia Lift Station to cross it. Since the District did not have a contractor working at the time on or near the site, it was determined that Rancho Mission Viejo (RMV) would perform the potholing (exploratory excavations) with its contractors. RMV completed the potholing efforts and reported the data to the design consultant, Psomas. Psomas utilized that information to design the sewer line profile crossing over the 66" SCP. Plans were then finalized and the project was put out to bid by construction contractors.

Later and during the construction phase of the project, OCI had excavations open near the SCP and it was exposed. At that time OCI determined that the elevation of this line was 2.6' higher than was indicated on the Plans, and that the new sewer line profile was in direct conflict with it. This was verified by the District, and it was determined that the sewer line design would need to be changed by significantly lowering it, and crossing below the SCP. The original design showed the crossing above the SCP. RMV's records for reporting the original potholing data were reviewed, and found to be flawed. RMV had determined the elevation of a concrete encasement above the SCP, but failed to locate the 66" SCP, itself, and then made an incorrect statement on the potholing report regarding the elevation of the SCP.

At this point of realization, most of the subterranean components of the Esencia Lift Station had already been built which included a 20' deep Wet Well structure, an adjacent concrete emergency overflow structure, metering and valve vaults, and numerous piping segments. The number of existing utility interferences limited the options available for redesign of the sewer profile. A major component of the development of the solution was attributed to not demolishing appreciable portions of the work that had already been constructed. After several days of discussion and design detailing, the following solutions were determined:

1. Construct the 8" inlet sewer line crossing under the 66" SCP. Perform this via a tunneling operation commonly referred to as "Bore and Jack" wherein a large steel casing is drilled (bore) and pushed (jacked) under the interfering utility, the SCP in this case. After the casing/sleeve has been inserted into the tunneled hole, then the carrier pipe (8" inlet sewer pipe) is pushed into, and through the sleeve's interior space.
2. Leave the originally installed wet well in place. Use it to replace a smaller manhole structure that was included in the original design, but not yet installed. Construct a second wet well in series with the first wet well located at a deeper elevation to accommodate the proposed lower profile of the 8" inlet sewer. This also increases the overall hydraulic storage capacity in the system by 5,300 gallons as a result.

Another factor contributing to this occurrence is that although the original potholing data provided by RMV was inaccurate, there are also clauses in the OCI Contract which required it to pothole and verify existing piping parameters very early during the project timeline. OCI did not perform these verifications when it should have, and this contributed significantly to the loss of time on the overall project which amounts to approximately seven weeks.

When considering the change order items 1 and 2 described above, some of the identified additional work would have been included in the original project design from the onset had the potholing information been properly reported in the first place. This would have resulted in the additional construction costs associated to the revised sewer depth would have been included with the competitive bids. The time loss at seven weeks, and the additional re-design fees attributed to Psomas for developing the revised sewer profile and second wet well designs would not have occurred if the original potholing was executed and reported properly.

The additional scope of work in the subterranean efforts has also necessitated additional inspections and monitoring by GMU from a geotechnical standpoint. The majority of these costs at \$4,700 would have been in the original budget had the bore and jack and deeper wet well been in the original design.

OCI has constructed all the revised construction work on a time and material basis. It has absorbed the costs of original work removals that were required to implement the new designs for the inlet sewer and second wet well. The original concept of the second wet well was introduced by OCI in response to the conflicts, and the District recognizes this situation. OCI has offered to provide and install the new construction components at cost and not apply any markups for profit in recognition of its deficient participation in the potholing and reporting process at the beginning of the project.

Odor Control Enhancements:

The Esencia Lift Station is located off Cow Camp Road, adjacent to one of two main entrances to the Esencia community. Vehicles will frequently be stopped at the entrance traffic signal and potential odors from the lift station will be more likely detected.

In addition to potential of odors from the normal lift station operation, strong odors from an air/vacuum release facility (air/vac) serving the Ortega Lift Station Force main were noticed during the construction. The vault housing the air/vac assemblies is located adjacent to the Esencia Lift Station and also impacts the Esencia community entrance area.

The original Esencia Lift Station Work included an odor control system, manufactured by Anue Water Technologies, that is designed to inject concentrated oxygen into the Esencia Lift Station Force Main to minimize potential odors downstream. This scope of work and cost is already a part of the lift station project.

The Anue system is expandable to include provisions to dose a mixture of concentrated oxygen and ozone into the wet well. In recognition of the additional odor sources, concepts were developed to install a 4-inch diameter vent from the air/vac vault to the Esencia Wet Well where the potential

odors from both the normal wet well operation and the air/vac facility could be treated. The expansion of the Anue system to treat the air/vac and wet well odors is the subject matter of the current proposed change.

Additional Design Consultant Services:

Psomas has provided additional services at the District's request that are not currently included in the Professional Services Agreement dated April 9, 2014. Additional services have been provided on the following topics:

- Modifications to the Preliminary Design Report
- Additional Preparation of Construction Plans
- Bidding and Construction Support

Staff agrees that the additional services were provided in this regard and has negotiated an appropriate supplemental fee with Psomas in the amount of \$65,000.

Please see the tabulations at the end of this report which summarize the costs for the aforementioned proposed changes for OCI, GMU, and Psomas. The actual cost proposals from the Contractor and Consultants are contained in **Exhibit A** – to be provided at the January 6th Board meeting.

FUNDING

Construction funding for the Esencia Lift Station project is under Project Code D10 as listed in the Improvement District No. 4C portion of the District's Fiscal Year 2015/2016 Capital Improvement Program. The County of Orange recently issued Community Facilities District (CFD) bond funds and a large portion of the bond proceeds were allocated to construct District facilities which support development of the Esencia Planned Community. The table below summarize the funding criteria.

<u>Description</u>	<u>Project Code</u>	<u>Funding Source</u>	<u>Amount</u>
Esencia (PA-2) Lift Station	C00D10	CFD 2015 -1 (489)	\$370,xxx.00

Norman A. Olsson Construction Inc., Change Order No. 2 Summary

Description	Cost
Lower Sewer Inlet line under 66" SCP	\$100,000.00
Construct Second Wet Well Structure	\$100,000.00
Odor Control Enhancements	\$100,000.00
Total Change Order No. 2	\$300,000.00

Norman A. Olsson Construction Inc., Contract Summary

Description	Cost	% Increase
Original Contract Amount	\$2,157,000.00	
Change Order No. 1	\$61,966.00	
Change Order No. 2	\$300,000.00	
Revised Contract Amount	\$2,518,966.00	16.78%

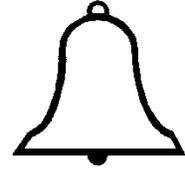
GMU Contract Summary

Description	Cost	% Increase
Original Contract Amount	\$19,930.00	
Change Order No. 1	\$4,700.00	
Revised Contract Amount	\$24,630.00	23.58%

Psomas Contract Summary

Description	Cost	% Increase
Original Contract Amount	\$525,000.00	
Change Order No. 1	\$65,000.00	
Revised Contract Amount	\$590,000.00	12.38%

Santa Margarita Water District



MEMORANDUM

TO: Board of Directors **DATE:** December 11, 2015

FROM: Don Bunts

SUBJECT: Construction Support Services for Tesoro Zone II and B Water Facilities, Domestic and Reclaimed Water Transmission Main and Coto De Caza Trunk Sewer Relocation, C-1767D

SUMMARY

Issue: The District has awarded the Construction Contract to perform the pipeline installation for the Tesoro domestic and recycled water facilities in Chiquita Canyon. The prerequisite mass grading work is nearing completion and will allow the pipelines to be installed that support the community of Esencia. Additional construction support services are needed to facilitate the project.

Recommendations: 1) Authorize an amendment to Michael Baker International, Inc. (MBI) in the amount of \$40,000.00 for additional Plan preparations; 2) Authorize a Geotechnical support services contract to GMU in the amount of \$39,722.00; 3) Authorize an amendment to ARMC for increased Archeological and Paleontological monitoring for \$11,900.00; 4) Authorize a Construction Management services contract to Butier Engineering Inc., in the amount of \$ 322,136.00.

Fiscal Impact: Funding for these services is to be provided from the proceeds of the recently issued County of Orange Community Facilities District Bond (2015-1 Esencia - 489).

Previously Related Action: In mid-2014, the District authorized an engineering services contract to RBF Consulting to design the Tesoro Zone II and B Water Facilities funded by an approved reimbursement agreement with Rancho Mission Viejo (RMV). RBF Consulting has recently been acquired by Michael Baker International, Inc. In December 2015, the District awarded the Transmission Mains construction contract to CCL Construction, Inc.

Anticipated Board Action Date: It is anticipated that this item will be brought to the entire Board for consideration on January 6, 2016.

Adherence to Policy:

- This project is consistent with the District's mission
 - "... to collect and treat wastewater to protect the environment and public health."
 - "Provide a high level of service with maximum cost effectiveness."
 - "Plan for the future to guarantee a safe and sufficient water supply and wastewater reclamation service."
- This project is consistent with the District's Purchasing Policy and Procedures, Section VI.
- This proposed project is consistent with the District's Purchasing Policy because it: was competitively bid, was identified in the current fiscal year's CIP, is more than \$49,999 and requires Board approval (Exhibit 1, a, (1)).

DISCUSSION

MBI has performed additional design work at the request of the District that is in excess of the originally specified scope of work: This additional work is summarized as follows:

- Design of an MSE wall.
- Three additional maintenance manholes for the Storm Drain System.
- Traffic control enhancements for the nearby Middle Chiquita tank access road.

The mass grading project that is prerequisite to this pipeline (transmissions mains) project is still ongoing, but is nearing completion. The grading contractor, McKenna General Engineering (MGE), is behind schedule by approximately six weeks and this has necessitated additional monitoring from an archeological and paleontological standpoint. ARMC has provided such services to this point, but will need additional funds to complete the project due to the MGE delay.

The construction of the pipelines on this project involves substantial earthwork from the standpoint of trenching and backfill of trenches. Although GMU has provided a comprehensive soils investigation prior to the commencement of the construction on the Tesoro Water Facilities projects, a portion of the earth to be disturbed will be in areas where prior test pits have not been excavated. Soils investigations, by their nature, cannot be completely comprehensive and field verifications are typically appropriate and/or required. It is also commonplace that technicians are on site to monitor backfill procedures and to test the soils for compaction. For these reasons, GMU will be providing a technician during construction that will maintain an overview of the soils and foundations encountered, and provide compaction testing as required.

Butier Engineering (BEI) is currently providing construction management services for the mass grading project. This additional assistance has proved beneficial to the District in enabling it to provide the necessary inspection as well as manage more projects that are on concurrent and overlapping schedules. Given the forecast of new District projects over the

next two years, third party construction management assistance for the transmissions mains project will continue to allow the District to maintain schedules. As the District’s scheduling of new projects remains on track, it will also be prudent to use such construction management services for the impending Tesoro Reservoirs project.

As BEI is successfully managing the daily details of the mass grading project, and has developed and maintained the key relationships with our project partners and consultants specific to the lands used by the Tesoro Water Facilities overall projects, it is logical that the District put the additional construction management services on these projects where they have already implemented the learning curve. BEI has agreed to maintain its same billing rate structure, values that were more competitive than the other construction management firms with whom they competed for the mass grading project, for this current project. There is also added efficiency to the District with mass grading and pipeline projects that will overlap by approximately six weeks.

Exhibit A, to be provided at the January 6th Board meeting, will detail the proposals from each consultant. The tabulations provided below are summaries of the cost considerations.

FUNDING

Funding for these services is to be provided from the proceeds of the recently issued County of Orange Community Facilities District Bond (2015-1 Esencia - 489).

Five project codes listed in the Improvement District No. 4C portion (CFD Bond Issue 489) of the District’s Fiscal Year 2015/2016 Capital Improvement Program are proposed to be utilized for funding of these amendments. Project Codes BQ3, BQ2, B99, 1A7 and 3D4 have been established to track construction expenses for grading, DW / RW steel tank reservoirs and DW / RW pipelines, respectively. The table below provides a funding breakdown for the proposed approval of additional services.

Description	Company	Cost	Cost Code
Engineering Design Amendment for Grading	MBI	\$40,000.00	C00BQ3
Archeo/Paleo Support Amendment for Grading	ARMC	\$11,900.00	C00BQ3
Geotechnical Services for Pipelines	GMU	\$20,000.00	C001A7
	GMU	\$19,722.00	C003D4
GMU Total	GMU	\$39,722.00	
Construction Management Services for Pipelines	BEI	\$161,000.00	C001A7
	BEI	\$161,136.00	C003D4
BEI Total	BEI	\$322,136.00	