Agenda Item 6P
Approvals:
City Manager
Dept. Head DR
Attorney
Finance

# AGENDA REPORT
## SAN CLEMENTE CITY COUNCIL MEETING
Meeting Date: June 19, 2012

**Department:** Public Works / Engineering Division
**Prepared By:** David Rebensdorf, Assistant City Engineer DR

**Subject:** ***APPROVE CONTRACT CONTINGENCY ADJUSTMENT FOR DOMESTIC WELL NO. 6 REHABILITATION, PROJECT NO. 16522.***

**Summary:** The City has two domestic water wells (Well No.'s 6 and 8) that can supply approximately 600 to 700 acre feet per year or approximately 7% of the City's water demands. Well No. 6 was constructed in 1958 and has been a steady producer for the City at a flow rate of approximately 400 gallons per minute. In 2002, upgrades were made to the well head, pumps, motors and electrical system. Over the past several years, the flow rate in the well steadily declined to a rate of 230 gallons per minute in June 2010.

To analyze the loss in production, water samples were taken and analyzed, a series of pumping tests were conducted and video inspection of the casing was completed. The investigation concluded that biofouling of the well had developed iron deposits, which clogged the louvers, and reducing production. To remove the deposits and purge the formation of iron oxide, both mechanical and chemical cleaning was needed. The mechanical cleaning was completed by Bakersfield Well and Pump Co. in the spring of 2011.

Upon video review of the casing after mechanical cleaning, it was determined the casing was not damaged and could be placed back into service. Geotechnical Consultants, Inc. completed design of the well rehabilitation and General Pump Company was hired to complete the following tasks: mechanical cleaning, chemical treatment, replacement and installation of the pump column and refurbishment of the pump and motor.

Upon completion of the mechanical cleaning, chemical treatment and well development, it became apparent that there is a problem with the casing louvers as sand was being pulled through the casing and well packing. The video inspection showed corrosion in the louvers through increased size of the openings. To find a solution to the problems discussed, Geotechnical Consultants, Inc., General Pump Company and City staff discussed options for additional rehabilitation that include: removing additional debris at the bottom of the well, installation of a stainless steel screen (to close up and secure a number of large holes in the host casing), and swedge patch a hole in the casing approximately 200 feet below the surface.

Geotechnical Consultants, Inc. believes the rehabilitation of the well will extend the life of the facility for approximately 10 years. The repair will reduce the sanding by holding the

rocks and material behind the screen in place. If continued sanding becomes an issue, th pump capacity can be reduced, which will be evaluated during the test pumping. Another solution is to install a variable frequency drive (VFD) to allow the pump to slowly ramp up during start up which will lower the initial pumping rate and minimize additional draw of sand through the casing and screen. The cost for the additional rehabilitation through a negotiated change order by General Pump Company is approximately $120,000. Staff recommends the rehabilitation and addition of another $20,000 for contingency and possible VFD installation if needed. For comparison, the cost for complete well replacement is approximately $1.7 million; approximately $260,000 has been spent thus far on the rehabilitation excluding the additional costs. Geotechnical Consultants is confident that with the proposed well rehabilitation, the City will be able to reestablish a pumping rate of 300 to 400 gallons per minute.

***Recommended Action:*** STAFF RECOMMENDS THAT the City Council:

1. Approve a Supplemental Appropriation of $140,000 from the Water Fund Depreciation Reserve to Account No. 052-466-45300-000-16522; and

2. Approve a $140,000 increase in construction contingency for Domestic Well No. 6 Rehabilitation, Project No. 16522.

***Fiscal Impact:*** Yes. This supplemental appropriation from the Water Fund Depreciation Reserve in the amount of $140,000 will lower FY 2012 ending fund balance from approximately $5,102,414 to $4,962,414.

***Attachments:*** Location Map

***Notification:*** None.

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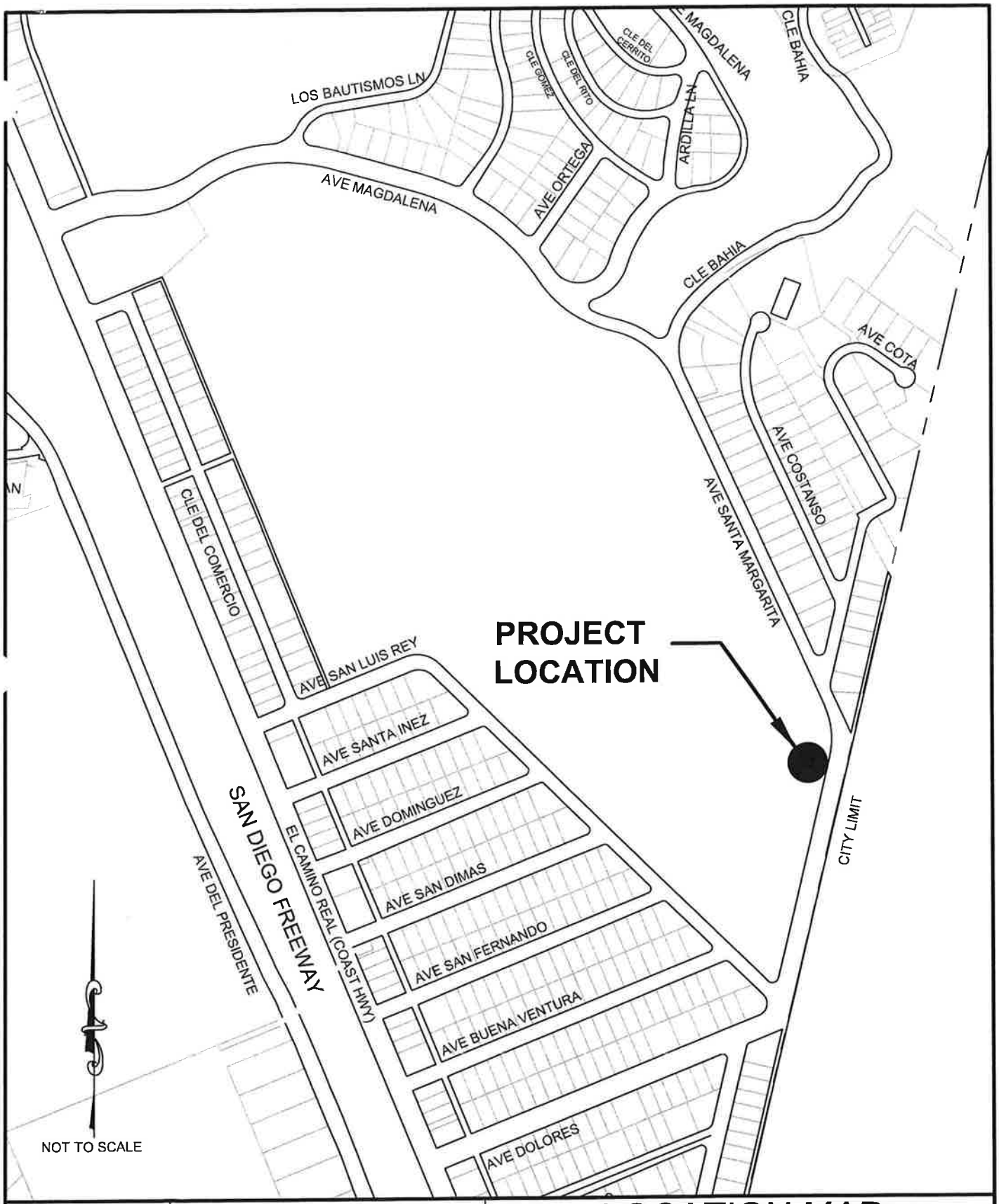


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# LOCATION MAP

## DOMESTIC WELL NO.6 REHABILITATION

**Project No. 16522**

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