



RANCHO MURIETA COMMUNITY SERVICES DISTRICT

15160 Jackson Road, Rancho Murieta, CA 95683

Office - 916-354-3700 * Fax - 916-354-2082

IMPROVEMENTS COMMITTEE

(Directors Randy Jenco and Martin Pohl)

Regular Meeting

February 1, 2022 at 8:00 a.m.

This meeting will be held via ZOOM video conference only. You can join the conference by (1) logging on to <https://us02web.zoom.us/j/86335475776>, entering Meeting ID no. 863 3547 5776, and using the audio on your computer, or (2) dialing into 1-669-900-9128 and entering the meeting code 863 3547 5776. Those wishing to join with audio only can simply call the telephone number above and enter the code. Participants wishing to join the call anonymously have the option of dialing *67 from their phone. Please refer to your telephone service provider for specific instructions. ***PLEASE NOTE – MOBILE DEVICE USERS MAY NEED TO INSTALL AN APP PRIOR TO USE AND MAC AND PC DESKTOP AND LAPTOP USES WILL REQUIRE YOU TO RUN A ZOOM INSTALLER APPLICATION – PLEASE FOLLOW DIRECTIONS AS PROVIDED BY ZOOM. IT IS RECOMMENDED YOU ATTEMPT TO LOGIN AT LEAST 5 MINUTES BEFORE THE START OF THE MEETING.***

AGENDA

1. **Call to Order**
2. **Consider Finding That as a Result of the COVID-19 Emergency: (i) Meeting in Person Would Present Imminent Risks to the Health or Safety of Attendees; and (ii) the Meeting is Authorized to be Held by Teleconference Pursuant to Gov. Code, § 54953, subd. (e)(1)(C).**
3. **Comments from the Public**
4. **Monthly Update**
5. **Update on Emergency Valve Replacement**
6. **Discuss Team to Evaluate Sodium Hypochlorite Design Services RFP**
7. **Director and Staff Comments/Suggestions**
8. **Adjournment**

"In accordance with California Government Code Section 54957.5, any writing or document that is a public record, relates to an open session agenda item and is distributed less than 24 hours prior to a special meeting, will be made available for public inspection in the District offices during normal business hours. If, however, the document is not distributed until the regular meeting to which it relates, then the document or writing will be made available to the public at the location of the meeting."

In compliance with the Americans with Disabilities Act if you are an individual with a disability and you need a disability-related modification or accommodation to participate in this meeting or need assistance to participate in this teleconference meeting, please contact the District Office at 916-354-3700 or awilder@rmcsd.com. Requests must be made as soon as possible.



Note: This agenda is posted pursuant to the provisions of the Government Code commencing at Section 54950. The date of this posting is January 27, 2022. Posting locations are: 1) District Office; 2) Post Office; 3) Rancho Murieta Association; 4) Murieta Village Association.

MEMORANDUM

Date: January 27, 2021
To: Improvements Committee
From: Michael Fritschi, P.E. - Director of Operations
Subject: Monthly Utilities Department Updates

Reserve Updates

Staff have been busy updating the replacement values and useful life of the various components in the water, sewer, storm, admin, and security infrastructure. The next step is to formalize and apply these values out to the respective years and develop a funding strategy to support the Board's target funding levels for each department.

SB170 Funded Projects

Wastewater Facility Disinfection - The District held the first study kick off meeting with West Yost & Associates for the Ultraviolet Disinfection vs Sodium Hypochlorite Lifecycle Analysis. The District is in the process of obtaining and providing the needed data to West Yost for the analysis.

Water Treatment Facility Sodium Hypochlorite Conversion – The District has received (3) RFP responses for the design services related to the upgrade of the water treatment disinfection system from chlorine gas to sodium hypochlorite. A team will be assembled to review and rate the RFP responses in order to provide a recommendation for acceptance at the next Board Meeting.

Granlees Intake Safety Project – No Update

Laguna Joaquin

The District met with RMA and representatives from SOLitude on the 26th of January to discuss options for midge prevention at Laguna Joaquin. It became evident after discussions with the SOLitude biologist that based on the food source of the midges likely being the planktonic algae, that algae prevention would likely be the best way forward. Algae prevention would include an algicide combined with a blue dye to prevent growth of the midge food supply. The RMA will be getting a prescription and quote from SOLitude to try this approach along with a quote to apply Methoprene to control the midge larva directly.

System Vulnerability & Imminent Infrastructure Rehabilitation

During the process of infrastructure review, staff will bring forth information regarding the current state of components of the system infrastructure that increases the risk and vulnerability of system. These items have a higher probability and/or consequence of failure.

Water Distribution System – *An 8-inch valve located at De La Cruz and De La Pena Circle has failed. The valve stem sprung a leak on November 25th and staff had to respond to the water leak and have isolated the valve and reduced the leakage. Staff have contacted local contractors to get quotes to replace the valve. The valve is buried approximately 18 ft. M3 construction was selected by the District to perform the valve replacement on a time and materials basis with an initial estimate of \$41,938. The Board approved the emergency contract work in the amount of \$50,000.*

Update: The project has been completed, albeit it came in at \$83,784.55 due to unforeseen conditions on the deep underground work. See the attached Valve Replacement Memo.

Wastewater Tertiary Wetwell Feed Pumps – *The tertiary feed pumps pump stored wastewater to the District tertiary facility for tertiary treatment. The pump glands have had minor “bandage” repairs throughout the last 10-15 years. While there is no imminent failure projected this year, it is only a matter of time before failure occurs. Staff are arranging for the pumps to be pulled and laid out for inspection and rehabilitation while the tertiary facility is offline for the winter. The District will collect bids to refurbish the pumps.*

Update: The Board has approved the replacement of the Tertiary pump rehabilitation and Kirby Pump has been awarded the contract to perform the work.

Membranes (Plant 1) -*Some of the Plant 1 membranes are requiring extensive repairs. This has caused significant after-hours required response by operations staff to repair the membranes and keep Plant 1 in operation. It is likely that the membranes are approaching the end of their useful life (7-10 years). According to the manufacturer, the repairs are not UV-curing properly due to the buildup of potassium permanganate staining on the membrane covers blocking the UV-curing process. Plant staff will be increasing the chemical membrane cleaning regiment in an effort to prevent the staining.*

The increase in chemical membrane cleaning has been effective in keeping the transmembrane pressure (TMP) down and Log Removal Value (LRV) up (more efficient operation). As previously mentioned, the back-pulse pumps will be pulled and re-coated to prevent the coating chips (shards) from further shearing membranes. Plant staff will still need to deal with the manganese or potassium permanganate that is causing the staining on the cover, which inhibits UV curing repair. The manganese is typically a summer problem. Plant staff will also need to get with the manufacturer to update the cost of membrane replacement for future capital improvements budgeting as the membranes, while still performing well are getting to the end of their useful life.

Update: The District received a quote from GE for \$766,296 to replace all 5 modules at the plant and perform necessary refurbishment. This gives the District an idea of the full replacement cost moving forward for planning purposes.

Site Development Update

Riverview: Retaining wall construction has commenced on the Phase 1A section of the project.

Retreats: The north portion of the project grading is still shut down for the winter. Water main and water service installation has occurred on Via Robia and the developer is preparing for installation of hydrants.

Taco Bell: The grease interceptor, sewer lines and water lines have been installed.

Circle K/Shell: No updates.

MEMORANDUM

Date: January 26, 2021
To: Improvements Committee
From: Michael Fritschi, P.E. - Director of Operations
Subject: 8-inch De La Cruz Valve Replacement Project Status

Emergency Summary:

The valve project was completed last week, and the leak was verified and identified to be at the valve bonnet location. The bonnet had separated due to rust around the cover bolts allowing expansion and the resulting leakage. It was also found that the nearby concrete storm drain had a damaged area that became a receptor for the water leaking from the valve. It was also evident that significant fine soil material had been evacuated through the storm drain and that the soil was very saturated which made excavation very difficult and caused some sloughing of material under the street.

The final cost was reviewed from the project and due to unforeseen excavation circumstances, the job nearly doubled in price from the Board approved (at the December 15, 2021 Board Meeting) \$50,000 to the \$83,784.55 invoice. The majority of the price increase was due to the additional labor, equipment, and materials, associated with what had become a difficult excavation.

Discussion:

The increase between the initial estimate and the final invoice was discussed with the Contractor. The ground was unstable and saturated (as was witnessed by staff) causing the excavation to be slowed significantly to prevent damaging the road and to proceed safely. While side sloughing was minimized, this difficult (and deep) excavation effectively doubled the required labor efforts (largest economic impact) and increased additional materials such as asphalt and slurry backfill for the sloughed sections. See M-3 Construction Memo (attached).

While the District would not deviate from the repair if the initial estimate exceedance was provided earlier from the contractor, it will be important moving forward to remind our vendors/contractors to provide a warning when purchase order amounts are in danger of being exceeded. The District will endeavor to communicate better with vendors and contractors to ensure that this expectation is maintained.

Deep underground work is often unpredictable as soil conditions are unseen until excavation. It appears as through the surrounding road was in more jeopardy than originally anticipated. It is staff's opinion that the repair was timely and that the District was correct in completing the project sooner than later. Based on observed conditions, had the District waited too long to complete the project, there is a real possibility that a sink hole could have developed and caused

damage to the road. The potential damage could have been several times costlier to replace than the valve replacement.

Additional related tasks to consider:

- The District needs to evaluate and repair the nearby storm drain. This will be evaluated by CCTV and repaired from inside the storm drain using a variety of available internal repair methods that would best suit the repair.
- The District will look at updating the GIS data base to get a better idea of the varying depths and location vulnerable infrastructure by including additional infrastructure attributes in the data base.

Next Steps:

At this time, we are declaring an end to this emergency. The next step will be to present this result to the Board and to ratify the expenses which exceeded the declared amount. We are requesting approval from the Improvements Committee to present this at the next Board meeting.

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RE: Contract with RMCS and M3 Construction

Reply Reply All Forward

Tue 1/25/2022 6:24 PM

RM Ray MacClanahan <raym@m3construction.net>
 To: Michael Fritschi
 Cc: Ron Greenfield
 You replied to this message on 1/26/2022 8:12 AM.

Michael,

Here are some points to consider in your evaluation of cost variances on this project:

Please bear in mind that the District requested T&M rates only on this project due to its unknown subsurface conditions. We did include no contingency (best case) time durations on our T&M rate sheet, however those were provided strictly as a courtesy and without contractual significance.

As is known, we encountered saturated unstable soils with water standing several feet above the bottom of our excavation. As a result, the walls of our excavation experienced caving and we had to dewater throughout the work. It is worth noting that had this situation gone unabated, over time it may well have contributed to a major subsidence event in the area, possibly with damage to substructures, due to an undermining of buried utilities through hydraulic erosion.

It is always difficult to convey to anyone without direct knowledge, the severity of impact that saturated unstable soils in a deep excavation have on cost. Beyond obvious direct costs such as dewatering and volumetric increases, there are substantial production penalties in dealing with and working within the more restrictive worker protection measures required. Penalties are compounded by abbreviated production cycles owing to the significant portion at both ends of each shift that must be dedicated to the handling of site safety components and during which no work can proceed; And as the excavation grows, so too must these onerous measures.

We performed this work as safely, diligently and effectively as was possible, yet the combined effect of these factors was a more than doubling of its cost. One week became two... 160 labor hours became 347.

I hope this helps.

Thank you,

Ray MacClanahan
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