



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 Bill Gere)

Special Meeting

July 8, 2026, at 8:00 a.m.

All persons present at District meetings will place their cellular devices in silent and/or vibrate mode (no ringing of any kind). During meetings, these devices will be used only for emergency purposes and, if used, the party called/calling will exit the meeting room for conversation. Other electronic and internet enabled devices are to be used in the "silent" mode. Under no circumstances will recording devices or problems associated with them be permitted to interrupt or delay District meetings.

AGENDA

1. Call to Order

2. Comments from the Public

If you wish to speak during Comments from the Public or would like to comment regarding an item appearing on the meeting agenda, please complete a public comment card and submit to the Board Secretary prior to Public Comments.

3. Improvements Staff Report

- A. **Discussion Item** RMCC Club Storm Drain Issues
- B. **Discussion Item** RMCC South #1 Fairway Sinkhole
- C. **Discussion Item** Domenichelli and Associates Task Order Request for Stormwater Quality Standards Preparation RM-064 \$19,092
- D. **Discussion Item** Manganese Flair-Up Causes and Solutions
- E. **Discussion Item** Retrofit Water Treatment Plant 1
- F. **Discussion Item** Update on MEC Culvert Repair Progress

4. Director and Staff Comments/Suggestions

5. 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 dfleet@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. Posting location is District Office. The date and time of this posting is July 2, 2026, at 4:00 p.m.

MEMORANDUM

Date: July 08, 2026

To: Improvements Committee

From: Travis Bohannon, Chief Plant Operator

Subject: Monthly Improvements Committee Updates

A. RMCC Storm Drain Issues

There are several storm drain issues affecting the golf course.

B. RMCC South #1 Fairway Sinkhole

A sinkhole has developed on the South Course No. 1 Fairway. This repair should not be the responsibility of the District. I have copies of the original Cal-Trans plans indicating that when the storm drain pipe was installed on Hwy 16, the area where the pipe has now failed was originally designed as an open drainage channel.

C. Domenichelli and Associates Task Order RM-064 \$19,092

Task Order RM-064 is for Preparation of Stormwater Quality Standards. Staff recommends forwarding the task order to the Board for approval.

D. Manganese Flair Up Cause and Solutions

On 6/19/26, the District had a manganese flair up in the water. Discussion is requested regarding measures to prevent similar occurrences in the future. I have received a proposal from a chemical engineer to evaluate the District's water treatment process, provide recommendations, and assist with implementing improvements. Staff recommends forwarding this proposal to the Board for approval.

E. Retrofit Water Treatment Plant 1 discussion

I would like to open discussion about the future viability of Water Plant 1.

F. Update on MEC Culvert Repair Project

M3 started the project on 7/1/26, with a completion date of 7/31/26. I should be giving a completion update at next month's meeting.

From: [Corey Carskaddon](#)
To: [Travis Bohannon](#)
Cc: [James Colas](#)
Subject: RMCC failed culverts list for the improvements committee meeting
Date: Wednesday, June 24, 2026 10:32:02 AM
Attachments: [Outlook-ksmex1n1.png](#)
[Outlook-wpm5ose1.png](#)

Hello Travis,

Here is the current list of RMCC culvert failures that I am aware of.

North 17 - 234' section of 16" CMP - **Not in district GIS or As-Builts**
through rough to overland drain then to a
300' section of 20" CMP - **Not in district GIS**

North 8 - 216' section of 16"x25" squashed CMP - **Not in district GIS**

North 3 - two 137' parallel sections of 27" CMP - in District GIS
106' section of 20"x35" squashed CMP - **Not in district GIS**

South 1 - 375' section of 20" CMP to river - **Not in district GIS, not in district MS4 permit,
not in Caltrans GIS or As-Builts**

Cheers,

Corey Carskaddon
Utility Supervisor
Rancho Murieta CSD



15160 Jackson Road
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Rancho Murieta, CA 95683
Office (916) 354-3700 * FAX 916-354-2082
www.rmcsd.com

CalRecycle  **Before printing, please think Green**

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5-935(2)

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	CAL.			1	18

INDEX OF SHEETS

Sheet No. 1 Title Sheet

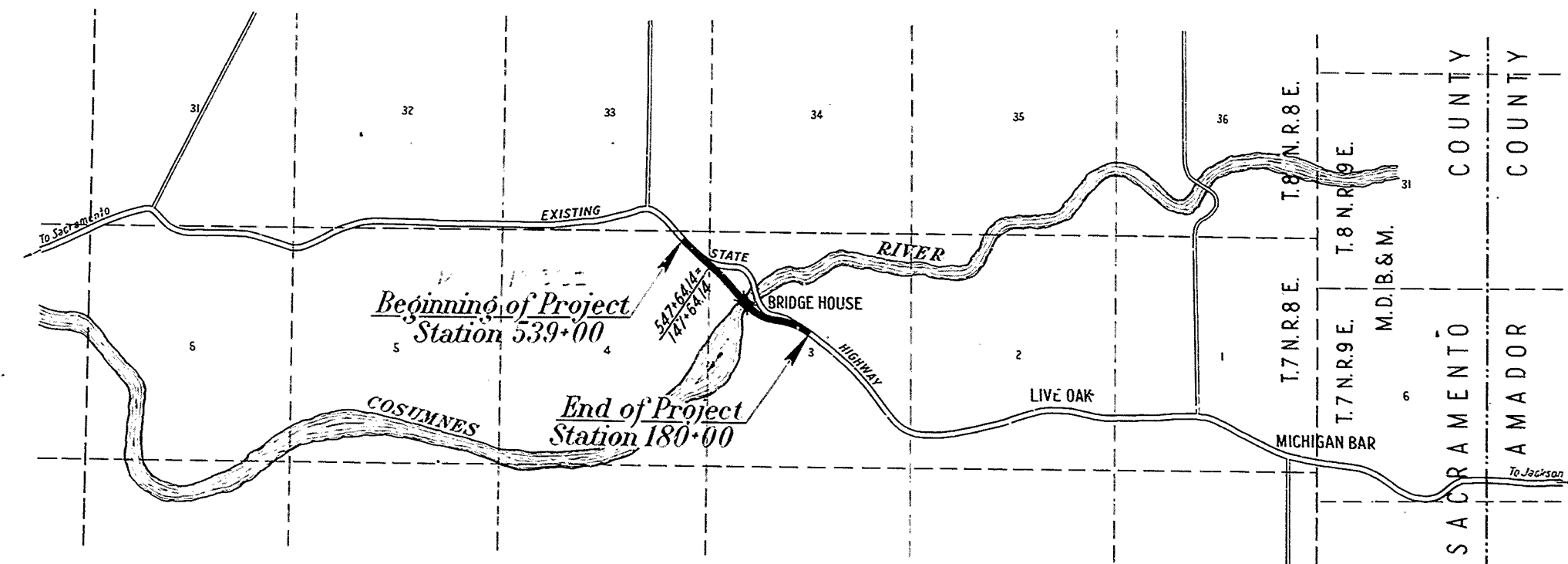
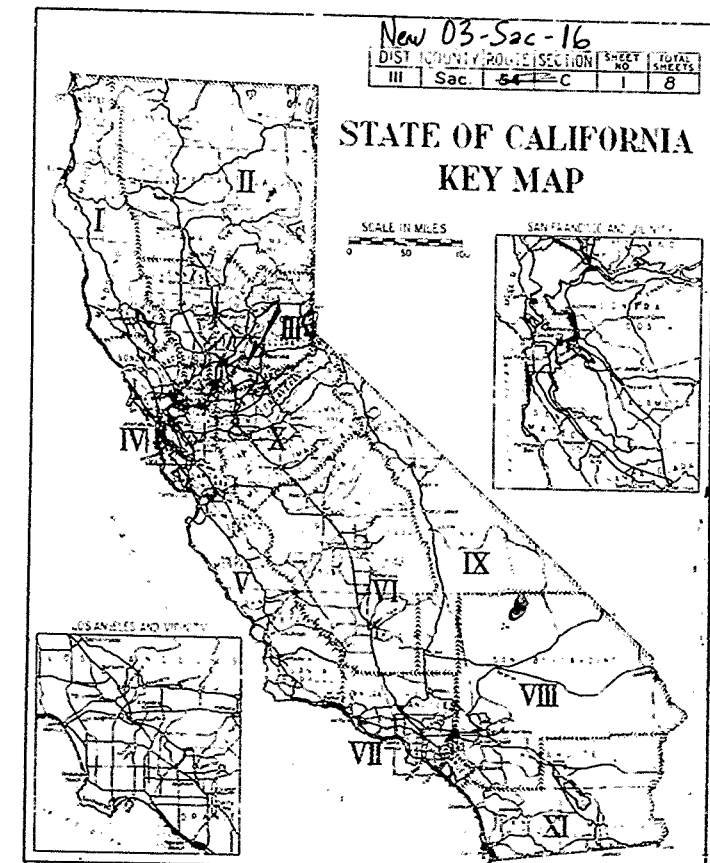
"	"	2	Typical Cross Section of Improvement
"	"	3-4	Plan and Profile
"	"	5-6	Construction Details
"	"	7-8	Standard Structures
"	"	1-10	Bridge Plans
"	"	1-25	Cross Sections
"	"	1 of 1	Mass Diagram

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PLAN AND PROFILE OF
STATE HIGHWAY
In Sacramento County, across Cosumnes River

Scales { Plan: 1 in. = 100 Ft.
Profile: Hor. 1 in. = 100 Ft. Vert. 1 in. = 10 Ft.

(being the detail plans of a portion of the route for the State highway adopted by the California Highway Commission) May 17, 1950.



CONVENTIONAL SIGNS

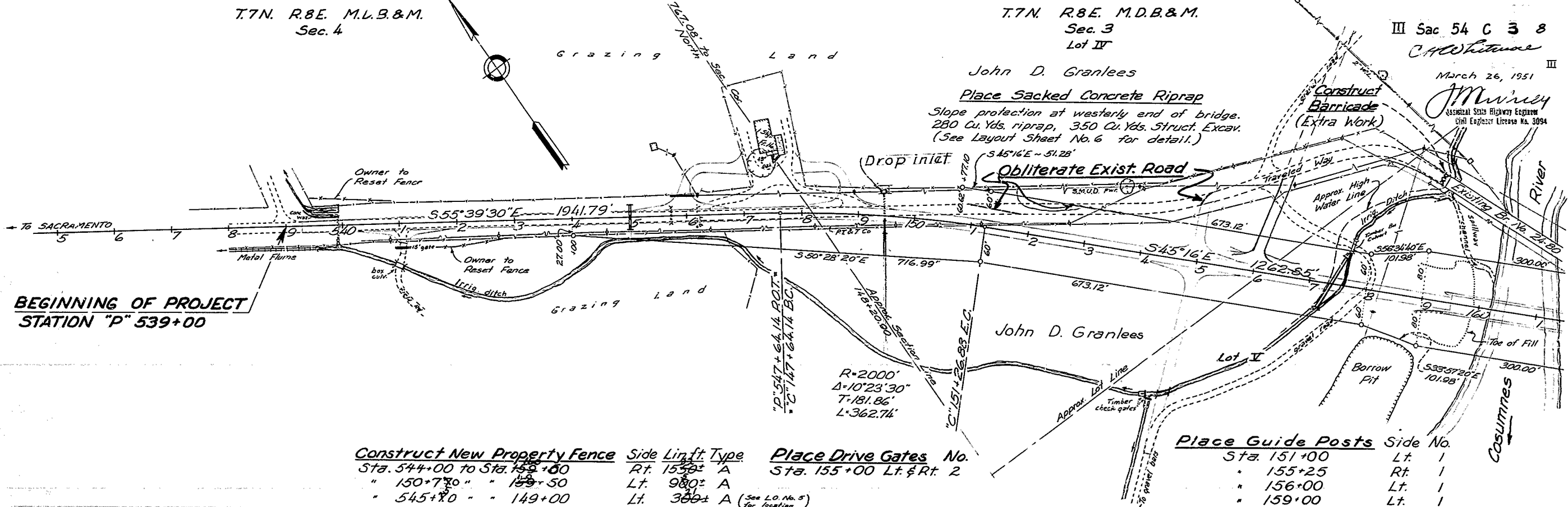
County Line	Bank or Retaining Wall
City or Town Limits	Levee
Township Line	Culverts
Section Line	Drop Inlet
Grant Line	Trolley Pole
Fence	Power Pole
Guard Rail	Power Tower
Unfenced Property	Telegraph or Telephone Pole
Right of Way Line	
Base or Survey Line	
Traveled Way	
Railway Tracks	Marsh

Length of Project 4099.63 feet = 0.776 miles

AS BUILT PLANS
Contract No. 52-14TC3
Date Complete 1
Document No. 30000502

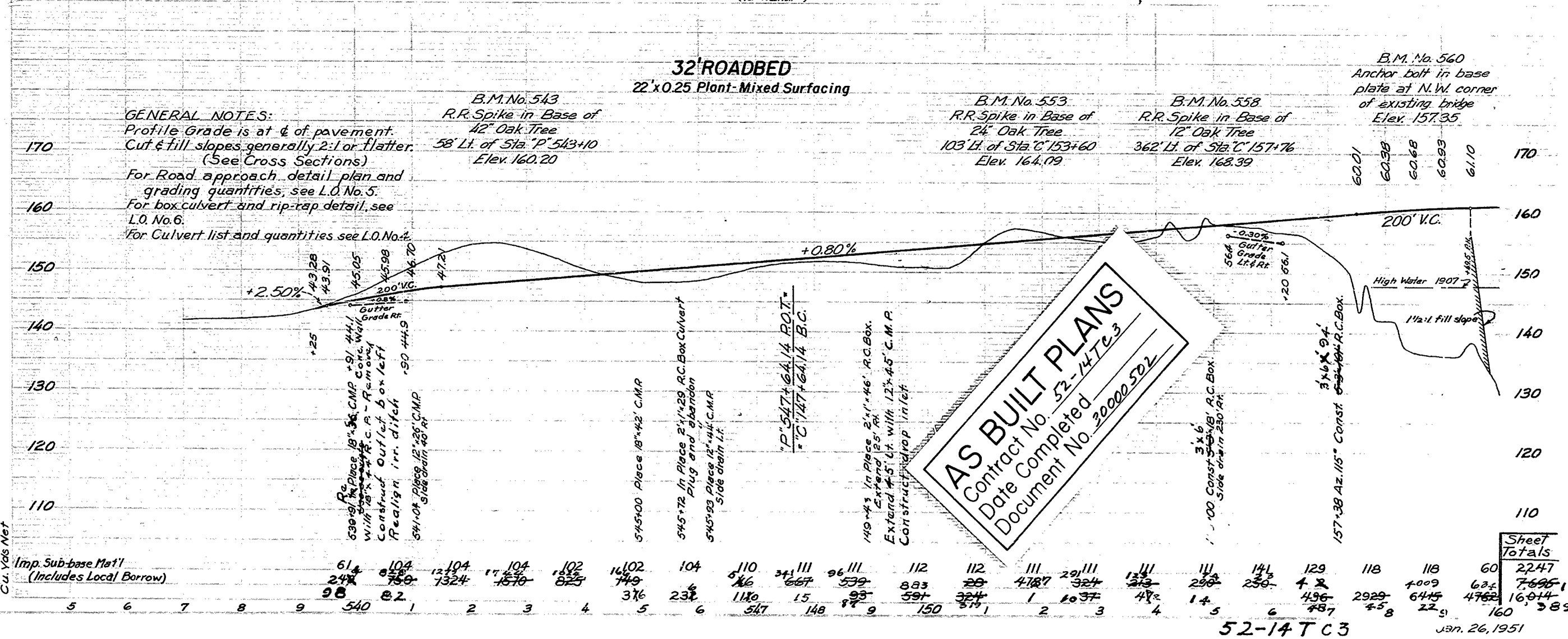
52-14TC3

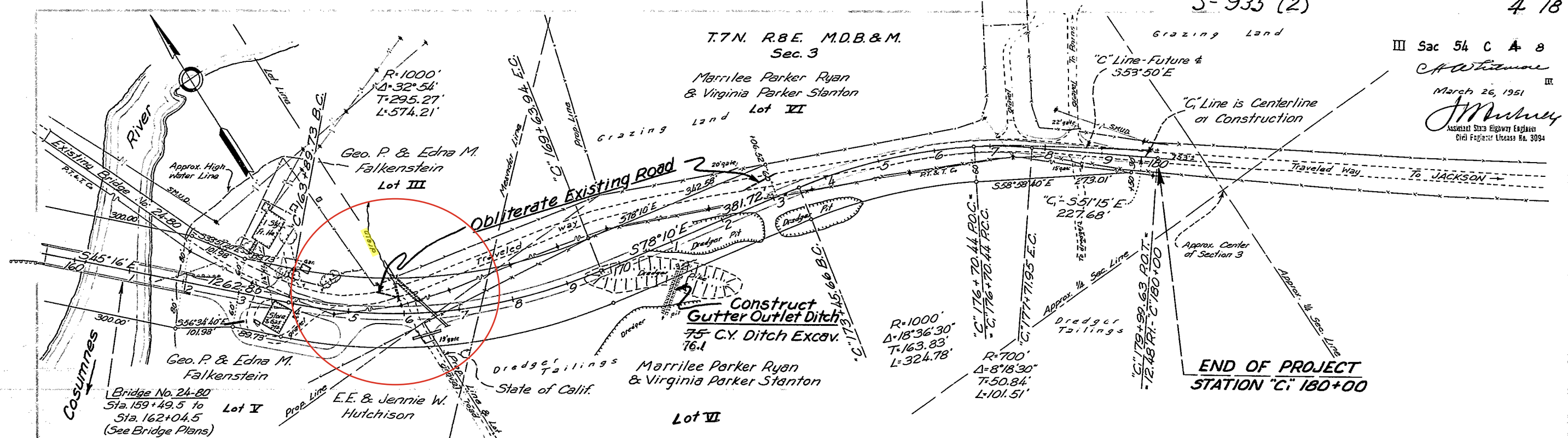
March 23, 1951
C. Whitman District Engineer
Approval Recommended
J. N. [Signature] Assistant State Highway Engineer
Approved March 26, 1951
State Highway Engineer
Civil Engineer License 2084
C. H. Purcell Director of Public Works



Construct New Property Fence	Side	Lin. ft.	Type	Place Drive Gates	No.
Sta. 544+00 to Sta. 559+00	Rt.	1550±	A	Sta. 155+00 Lt. & Rt.	2
" 150+750 " " 159+50	Lt.	980±	A		
" 545+00 " " 149+00	Lt.	380±	A		

(See L.O. No. 5 for location)



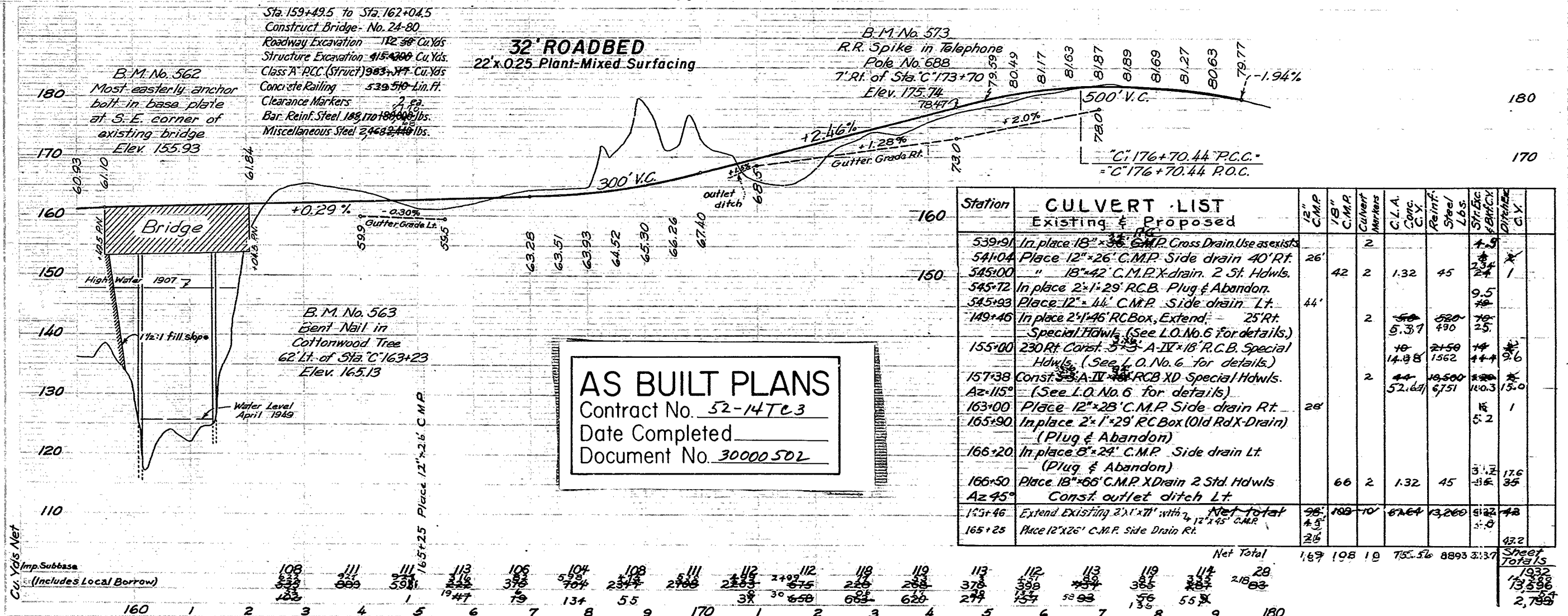


Install Metal Plate Guard Railing
West End of Bridge 50 Lin. ft. on Rt.
East " " " 50 " " " Lt.

Construct New Property Fence
Sta. 162+35 to Sta. 173+06
" 165+55 " " 179+50

Side	Lin. ft.	Type	Place Drive Gates	No.
Lt.	162+35	B	Sta. 163+75	1
Rt.	163+75	B	" 166+50	1

Place Guide Posts	Side	No.
Sta. 165+50 & 167+50	Rt.	2
" 173+00 & 178+00	Lt.	6





DOMENICHELLI AND ASSOCIATES, INC.

CIVIL ENGINEERING

Amelia Wilder
General Manager
Rancho Murieta Community Services District (RMCS D)
PO Box 1050
Rancho Murieta, CA 95683

June 17, 2026

Subject: Task Order Request for Stormwater Quality Standards Preparation RM-064

Dear Amelia,

Per our Master Services Agreement executed 10-08-24, between Rancho Murieta Community Services District and Domenicelli & Associates Inc, we are requesting authorization to proceed on the following Task Order.

This letter represents our estimated scope and budget for the preparation of District Standards for the design of Stormwater Quality systems in compliance with California State MS4 guidelines for Small Communities. Currently the District has no standards or guidelines to design stormwater quality features for new developments to comply with E.12 of Order WQ 2013-0001-DWQ adopted in 2013. Recent requests from development design engineers for such standards have prompted the need for a more formal approach to guide engineers. D&A has significant experience in the design of stormwater quality features in Sacramento County and in smaller foothill communities throughout the region that conform with State of California guidelines. From this experience we intend to provide a short guide technical memorandum that can be adopted by the District Board. The memorandum will include the following:

- A summary of the need for the new standards
- A list of new acceptable Best Management Practices (BMPs) for post construction mitigation.
- A recommendation to adopt the State Phase II Low Impact Development (LID) sizing tool and provide a reference guide for LID calculations for elements not provided in the State Phase II LID sizing tool.
- A reference guide for Hydromodification calculations.

The following is a detailed scope of services to complete the Task Order as described above.

Scope of Services:

Task 1- Research and Compile Appropriate California Stormwater Quality Standards

- a. D&A will use the Sacramento Region Stormwater Quality Design Manual (County Manual) to choose post construction (permanent) BMPs that best fit for compliance in the Rancho Murieta Community.
- b. We will also research and choose portions of the County Manual to include (by reference) how to calculate LID credits and how to choose project features for meeting Hydromodification requirements.



DOMENICHELLI AND ASSOCIATES, INC.

CIVIL ENGINEERING

Task 2- Develop Guidance Technical Memo

- D&A will prepare a draft Guidance Memorandum for presentation to District staff and Improvements Committee.
- After receiving written comments from the District, we will complete the final memorandum that can be included in the District Standards by a resolution from the Board of Directors.

Task 3- Conduct Training for District Staff and Developer Engineers

D&A will meet with District Staff and Developer's engineers as needed during completion of the final memorandum. This will allow feedback from those who will be designing and those that will be maintaining the permanent stormwater quality features.

Deliverables: 1) Draft & Final Technical Memo 2) Presentation for Improvements Committee.

Project Fees

Rancho Murieta Community Services District Stormwater Quality Standards							Fee Estimate June 17, 2026	
Tasks	Labor				Total Hours	Total Labor Costs	ODCs	Total Fee
	QA/QC	Project Manager 1	Project Engineer 1	Staff Engineer 2				
	Joe D	Brian H	Matt D	TBD				
	\$218	\$202	\$166	\$130				
Task 1: Research & Compile Standards								
1a. Research and Compile BMPs	2	2	6	16	26	\$3,916		\$3,916
1b. Research and Compile LID and Hydro-mod	2	2	6	8	18	\$2,876		\$2,876
Subtotal Task 1:	4	4	12	24	44	\$6,792	\$0	\$6,792
Task 2: Develop Guidance Memo								
2.a Draft Memorandum and Present to District	8	2	16	12	38	\$6,364	\$50	\$6,414
2.b Final Standard for District Resolution	6	1	6	16	29	\$4,586	\$100	\$4,686
Subtotal Task 2:	14	3	22	28	67	\$10,950	\$150	\$11,100
Task 3: Meet and Train Staff and Developer Engineers								
3a. One Meeting for District Staff & Dev. Engineers	2		4		6	\$1,100	\$100	\$1,200
Subtotal Task 2:	2	0	4	0	6	\$1,100	\$100	\$1,200
TOTAL	20	7	38	52	117	\$18,842	\$250	\$19,092

Please give me a call if you have any questions.

Sincerely,

Joe Domenichelli
Domenichelli & Associates, Inc.

Authorization to Proceed by,

Rancho Murieta CSD

Date

Manganese in the District's Water Supply

Date: July 8, 2026

To: Improvements Committee

From: Travis Bohannon, Chief Plant Operator

Subject: Manganese Treatment Challenges and Recommendations

Background

Manganese is a naturally occurring mineral found in our lakes through the weathering and erosion of surrounding rocks and soils. Its concentration in the water column is influenced by seasonal biological and chemical processes.

During the summer and winter months, lakes stratify into distinct layers. The lower layer becomes isolated from atmospheric oxygen, creating conditions that allow dissolved manganese to accumulate near the lake bottom. As seasonal temperatures change, the lake undergoes turnover, causing the water column to mix. During this process, high concentrations of dissolved manganese are brought to the surface and into the District's raw water intake, where they enter the water treatment plant.

Historical Operations

When I joined the District in December 2009, the District operated two conventional surface water treatment plants:

- **Water Treatment Plant 1:** 1.5 MGD conventional treatment plant
- **Water Treatment Plant 2:** 2.0 MGD conventional treatment plant

At that time, manganese was not considered a significant operational issue because the conventional treatment process effectively removed dissolved manganese before it reached the distribution system.

Operators routinely fed potassium permanganate into the flash mixer to address taste and odor issues and to oxidize dissolved manganese. Because the conventional treatment process provided several hours of detention time through the flocculation and sedimentation basins, the potassium permanganate had sufficient time to react with dissolved manganese, converting it into insoluble manganese particles that settled out before filtration.

During my early years with the District, manganese sampling was conducted monthly and consistently produced acceptable results. Consequently, manganese treatment was not viewed as a significant operational concern.

Conventional Treatment Process

A conventional water treatment plant consists of several treatment stages:

- Coagulation
- Flocculation
- Sedimentation
- Filtration
- Disinfection

Raw water first enters the flash mixer, where chemicals such as coagulants and potassium permanganate are added. Potassium permanganate serves two primary purposes:

- Oxidation of taste and odor compounds
- Oxidation of dissolved manganese

The oxidation process requires adequate contact time between the potassium permanganate and dissolved manganese. As water slowly moves through the flocculation and sedimentation basins, the dissolved manganese is converted into insoluble particles that settle out before reaching the filters.

This lengthy treatment process allowed the District's conventional plants to effectively remove manganese before the water entered the distribution system.

Conversion to Membrane Treatment

In 2015, Water Treatment Plant 1 was upgraded from a 1.5 MGD conventional treatment plant to a 4.0 MGD membrane filtration facility.

Unlike conventional treatment, membrane filtration provides very little contact time between potassium permanganate addition and membrane filtration. Depending on plant flow, the available contact time is typically only five to seven minutes at the plant's design capacity.

The effectiveness of potassium permanganate depends on several factors, including:

- pH
- Water temperature
- Dissolved oxygen concentration
- Manganese concentration
- Available contact time

Higher plant flows further reduce available contact time, limiting the effectiveness of manganese oxidation before the water reaches the membranes.

Because membrane filtration does not remove dissolved manganese without adequate pretreatment, the oxidation reaction is often incomplete, allowing dissolved manganese to pass through the membranes and enter the finished water.

2019 Manganese Event

In 2019, the District experienced extremely elevated manganese concentrations entering the treatment plant from Lake Chesbro.

Because the membrane treatment process was unable to fully oxidize and remove the dissolved manganese, manganese entered the distribution system, resulting in widespread brown water complaints that persisted for approximately two weeks.

This event demonstrated that membrane filtration alone is not sufficient to address elevated dissolved manganese concentrations without adequate pretreatment.

Current Situation

Seasonal lake turnover is a natural process that will continue to occur each year. As a result, elevated dissolved manganese concentrations should be expected on a recurring basis.

Additionally, the State Water Resources Control Board is in the process of reclassifying manganese from a secondary drinking water contaminant to a

primary drinking water contaminant. This change will significantly increase the importance of reliably controlling manganese in the District's treated water.

Without improvements to the treatment process, manganese events are likely to continue and may become more difficult to manage as regulatory requirements become more stringent.

Recommendation

To better understand available treatment options, I have contacted a chemical engineer with expertise in water treatment. The engineer has been asked to submit a proposed scope of work to perform a comprehensive evaluation of the District's water treatment facilities, source water, and operational practices.

The study would evaluate current treatment limitations, review lake conditions and manganese occurrence, and provide recommendations for improving manganese removal and long-term regulatory compliance.

Staff Recommendation

Staff recommends forwarding this item to the Board for informational purposes and to consider receiving a proposal for an engineering evaluation. Proactively evaluating treatment alternatives now will help the District prepare for future regulatory changes, reduce the likelihood of future manganese-related water quality events, and ensure continued delivery of safe, high-quality drinking water to our customers.