

DEPARTMENT: Public Works

By: Michael Edwards

Phone: 966-5356

Public Works Director

RECOMMENDED ACTION AND JUSTIFICATION: (Policy Item: Yes \_\_\_ No X)

Consideration of proposed contract change orders for the Coulterville Storage Pond Liner, Public Works Project #92-19. The Coulterville Advisory Board and Supervisor Balmain have requested that the issue of lining the entire pond be discussed again.

Public Works does not recommend that a change order be issued for lining of the sides of the pond. Public Works' recommendation is to issue a change order in the approximate amount of \$6,800 to cover the repaired cracks in the asphalt pond sides with liner material. The approximate additional cost to fully line the pond with liquid boot material would be \$57,000. The additional expenditure for fully lining the pond with liquid boot does not appreciably reduce pond leakage. The primary leakage has occurred in the unlined bottom of the pond. A much smaller degree of leakage has occurred from the cracks in the asphalt on the sides of the pond, which will be mitigated with the Public Works' recommendation.

**BACKGROUND AND HISTORY OF BOARD ACTIONS:**

On July 11, 1994, the Board adopted the Plans and Specifications for this project. At that time, Public Works presented two options for lining of the pond. The first option was to fully line the pond with a conventional liner material. The second option was to just line the bottom of the pond with the liquid boot type of material. Additionally, Public Works presented the Coulterville Advisory Board's desire to have the liquid boot alternative also include a full lining. The Board agreed with Public Works' recommendations and the project was put out to bid accordingly. On August 23, 1994, the Board awarded the contract based on the liquid boot alternative in the amount of \$43,900. The lowest bid for the conventional liner was \$70,510.

During the 94/95 budget hearings, the Board approved an additional \$30,000 from the County Water Agency funds to cover the additional costs of sludge removal and preparation of the pond for lining.

**LIST ALTERNATIVES AND CONSEQUENCES OF NEGATIVE ACTION:**

1. Approve the recommended change order in the amount of \$6,800 to extend the liquid boot material to just cover the cracks in the side of the pond. This will adequately prevent long-term leakage, in the opinion of the Public Works Department. The additional funding would be from the Water Agency.
2. Approve a change order in the amount of \$57,000 to fully extend the liquid boot to also cover the sides of the pond. This will provide a very slight reduction in additional leakage. Public Works does not recommend this alternative because the cost greatly exceeds the benefit.
3. No action. Public Works will seal the cracks with conventional methods and materials commonly used by the Public Works Department.

**COSTS:**             Not Applicable

A. Budgeted current FY            \$ 130,000

B. Total anticipated costs        \$ 136,800

C. Required additional funding    \$ 6,800

D. Internal transfers                \$ \_\_\_\_\_

**SOURCE:**             4/5th Vote Required

A. Unanticipated revenues        \$ \_\_\_\_\_

B. Reserve for contingencies     \$ \_\_\_\_\_

C. Source description: COUNTY WATER AGENCY

Balance in Reserve Contingencies,  
if approved: \$ \_\_\_\_\_

**SPECIAL INSTRUCTIONS:**  
List the attachments and number  
the pages consecutively:

1. Page from technical specifications approved by the Board
2. Detail sheets from project specifications (2 pages)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**CLERK'S USE ONLY**

Res. No.: 94 - 400                      Ord. No. \_\_\_\_\_

Vote - Ayes: \_\_\_\_\_                      Noes: \_\_\_\_\_

      Absent: \_\_\_\_\_                      Abstained: \_\_\_\_\_

Approved                                       Denied

Minute Order Attached                       No Action Necessary

The foregoing instrument is a correct copy of  
the original on file in this office.

Date: \_\_\_\_\_

ATTEST: MARGIE WILLIAMS, Clerk of the Board  
County of Mariposa, State of California

By: \_\_\_\_\_  
Deputy

**ADMINISTRATIVE OFFICER'S RECOMMENDATION:**

This item on agenda as:

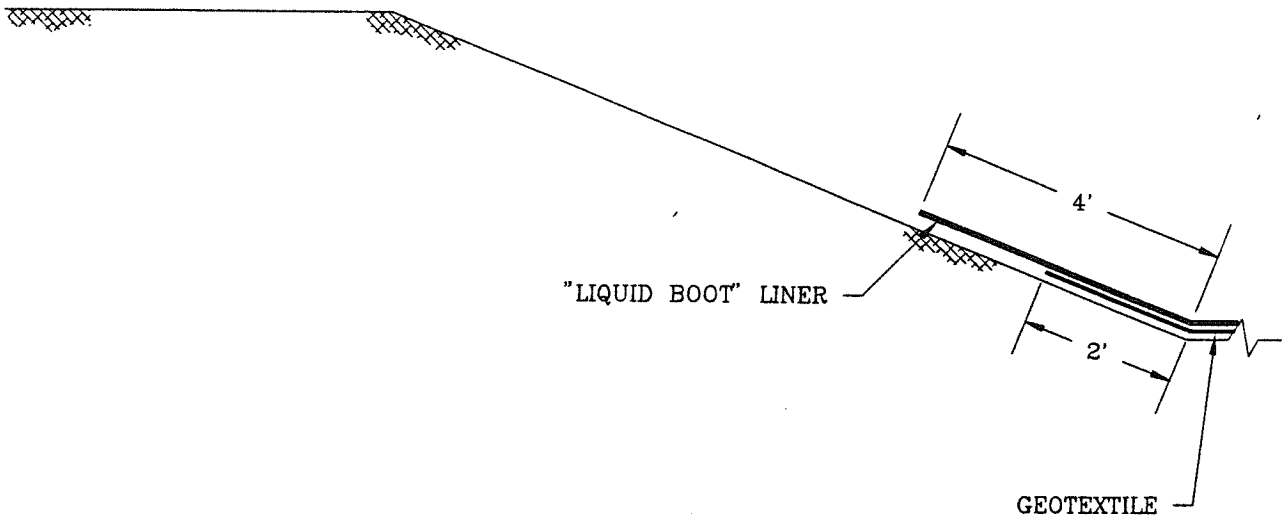
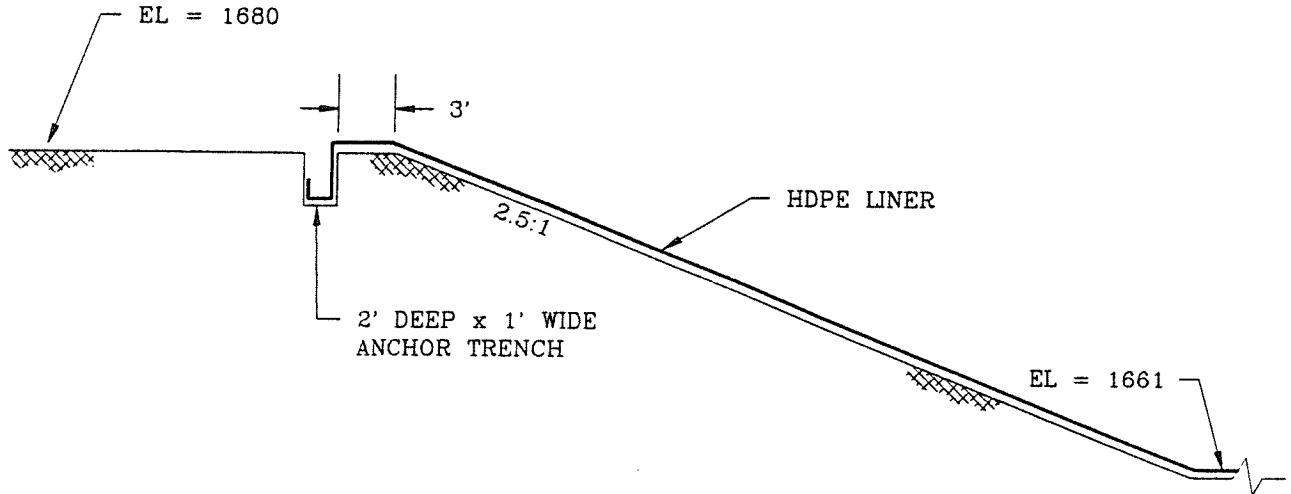
- Recommended
- Not Recommended
- For Policy Determination
- Submitted with Comment
- Returned for Further Action

Comment: \_\_\_\_\_

A.O. Initials: MP

the sand layer, the contractor may also place a layer of non-woven polypropylene filter fabric along the bottom and sides of the pond to a distance of 2 1/2 feet above the bottom of the asphalt lining. This fabric must be permanently secured to the asphalt sides in a manner acceptable to the Engineer.

2. (Alternate 1) Install a 40 mil HDPE liner with an electrical conductive layer on both the sides and bottom of the storage pond. Seams are to be made by the use of a hot wedge welder, in accordance with the Manufacturer's recommendations. Seams shall be tested in accordance with the manufacturer's recommendations, to the satisfaction of the Engineer that no leakage will occur after the pond is refilled. The liner will be anchored along the top of the existing basin by burying in a trench 2' deep by 1' wide, in accordance with the manufacturer's recommendations, as shown on the accompanying detail sketch. After the liner is installed, the trench shall be backfilled with native material, making sure that no sharp rocks or other objects are included in the backfill that will penetrate or tear the liner, to the satisfaction of the Engineer. Make any liner penetration seals of inflow and outflow pipes in accordance with the manufacturer's recommendations.
3. (Alternate 2) After restoration of the basin shape by the County, the contractor shall place a layer of 8 ounce non-woven geotextile with the heat-rolled side facing up, as recommended by the manufacturer of "Liquid Boot" along the bottom of the pond. Use six inch (6") ring shank nails with shiner heads to secure geotextile seams. Geotextile seams shall overlap at least three inches (3") at all seams. Lay geotextile tight at all inside corners. Lay geotextile a minimum of two feet above the bottom of the existing asphalt liner on the sides of the pond, and secure the geotextile permanently to the asphalt with "Liquid Boot" in a manner approved by the Engineer.
4. (Alternate 2) Spray apply "Liquid Boot" onto geotextile to an 80 mil nominal dry thickness (60 mils minimum), in accordance with the manufacturer's instructions, completely covering the geotextile substrate, and to a (slope) distance of two feet above the top of the geotextile, as directed by the Engineer. Keep membrane free of dirt, debris and traffic throughout the construction period. Do not penetrate membrane. Make sure all inlet and outlet piping is properly protected during application and is sealed on the outside, to the satisfaction of the Engineer.



MARIPOSA COUNTY ENGINEERING DEPARTMENT

COULTERVILLE WWTP STORAGE BASIN  
LINER DETAIL

Drawn BG

Sheet 2 of 2

Checked \_\_\_\_\_

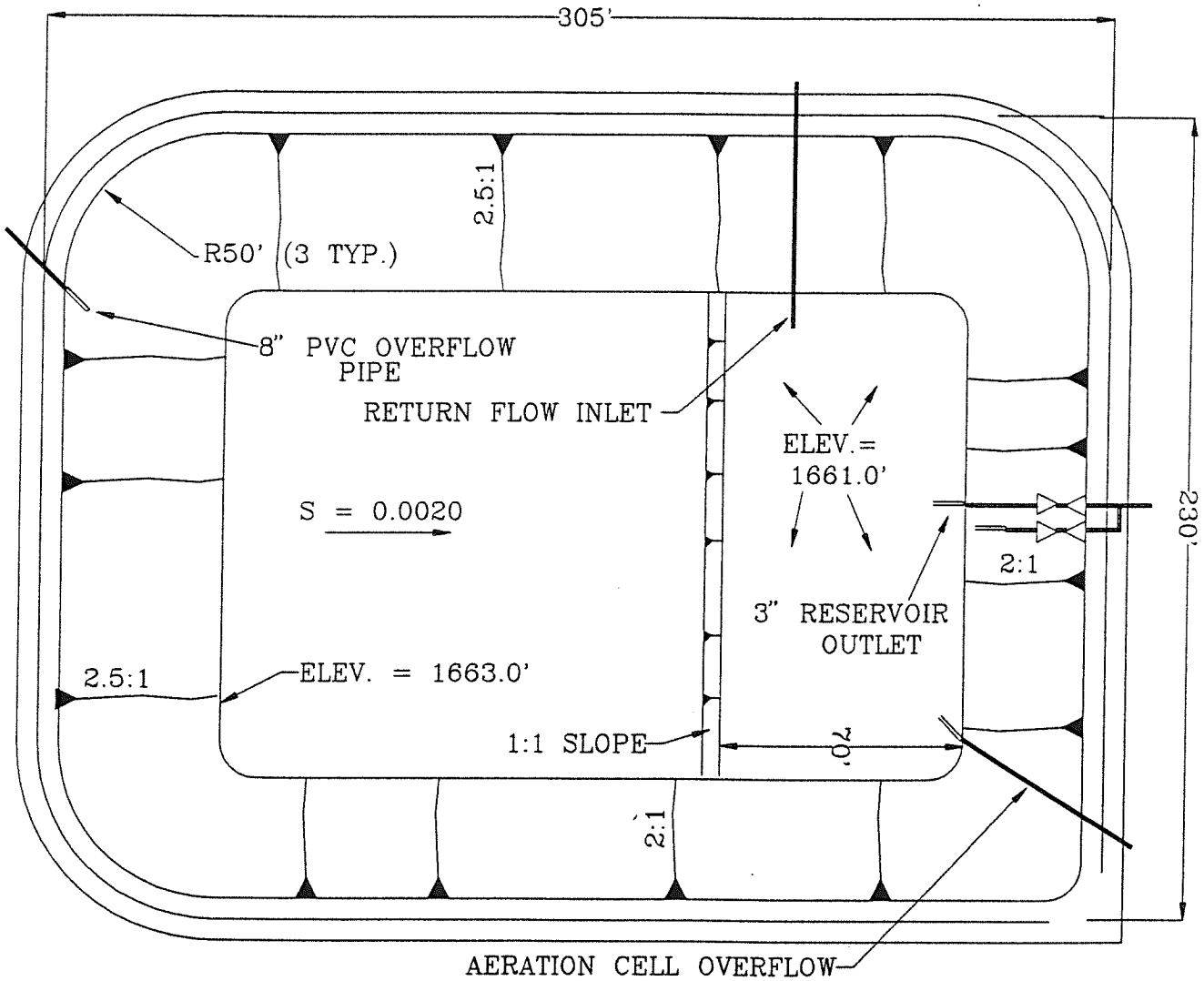
Approved By David L. Tschirner  
Engineer

Date: 6/22/94

Scale = none

Dwg. No. 92-19-2

2-A



MARIPOSA COUNTY ENGINEERING DEPARTMENT

Drawn BG  
 Checked \_\_\_\_\_  
 Date 6/2/94

Sheet 1 of 2

Scale = none

COULTERVILLE WWTP STORAGE BASIN  
 LAYOUT

Approved By David L. Tucker  
 Engineer

Dwg. No. 92-19-1

2-B

MARIPOSA COUNTY BOARD OF SUPERVISORS

MINUTE ORDER

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TO: MIKE EDWARDS, Public Works Director  
FROM: MARGIE WILLIAMS, Clerk of the Board *MW*  
SUBJECT: Proposed Contract Change Orders for the  
Coulterville Storage Pond Liner (PW 92-19)  
Resolution Number 94-400

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THE BOARD OF SUPERVISORS OF MARIPOSA COUNTY, CALIFORNIA,

ADOPTED THIS Order on September 20, 1994

ACTION AND VOTE:

10:24 a.m. Mike Edwards, Public Works Director;

A) Consideration of Proposed Contract Change Orders for the Coulterville Storage Pond Liner, (PW 92-19)  
BOARD ACTION: Discussion was held with Mike Edwards and Dave Tucker/PWD-Engineer, concerning available options: 1) cover the cracks with liquid boot/\$6,800; 2) line entire pond/\$57,000; and 3) extend liner another four feet, for a total of eight feet from the bottom/\$5,000 to \$10,000. Staff advised that the pond was not lined when originally constructed. Input was provided by the following: Joan Tune/member of the Coulterville Service Area Advisory Committee, stated the specifications called for the pond to be lined when it was originally constructed, requested that the pond be repaired and the system made functional to avoid further work in the future, and commented on the warranty for the material. Ann Stewart/member of the Coulterville Service Area Advisory Committee, concurred with Joan Tune's comments and requested that the liner be taken to the old water mark line. Walt McClary/member of Coulterville Service Area Advisory Committee, stated he felt costs could be figured closer than the estimates. Karl Harla stated it is not known what the new water level will be with the changes made to the pond. Joan Tune questioned funding source for the change order. Jordan Colburn/sales representative for the contractor, suggested that adding additional feet to the liner would be a good idea, commented on the condition of the pond upon his inspection, and advised there is a one year warranty on the materials. (M)Parker, (S)Baggett (who passed the gavel), Res. 94-400 adopted approving change order for \$6,800 to seal over the patched cracks. Following further discussion, motion was

MINUTE ORDER  
September 20, 1994  
Page Two

amended, agreeable with maker and second, to include authorization for an additional \$5,000 from District funds to extend the liner/Ayes: Baggett, Balmain, Erickson, Parker; Excused: Taber.

cc: Coulterville Advisory Board  
Water Agency Advisory Board  
Ken Hawkins, Auditor  
Jeffrey G. Green, County Counsel  
File