

**SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL**

**SACRAMENTO RIVER
FLOOD CONTROL PROJECT**

UNIT NO 115

**EAST LEVEE OF SACRAMENTO RIVER
FROM**

SUTTERVILLE ROAD TO

NORTH BOUNDARY OF RECL. DIST. NO. 744



**CORPS OF ENGINEERS
U. S. ARMY
SACRAMENTO, CALIFORNIA**

February 22, 1993

115

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416-9th Street, Room 455-6
Sacramento, California 95814

Book E

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the Greenhaven-Pocket Phase I work on the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of the construction of approximately two miles of seepage cutoff wall in the Maintenance Area 9 levee between approximately levee miles 0.51 and 2.51.

The work was completed on December 15, 1992, in accordance with Contract Number DACW05-90-C-0117, Specification Number 8848, and Drawing Number 50-4-5826.

The levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. The new work will be added by amendment to the Operation and Maintenance Manual, Supplement Number 115, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Sincerely,

KELLY/ms

Laurence R. Sadoff
Colonel, Corps of Engineers
District Engineer

HELM

WINTON

Copies Furnished:

Department of Water Resources, ATTN: G. Snow, 3201 S Street, DENNIS
Sacramento, California 95816-7017

Department of Water Resources, ATTN: G. Qualley, 1416 Ninth
Street, Sacramento, California 95814 CHILDS

CDR, SPD, ATTN: CESPDCO-O
CDR, USACE, ATTN: DAEN-CECW-OM

SAIA

cc:
Central Valley Sec
PM (Childs)
Prog Dev
F&A Br
Valley Res Ofc

SADOFF

14

LU/K0068

1416 9th Street, Room 455-6
Sacramento, California 95814

RECEIVED

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the Greenhaven-Pocket Phase II work on the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of the construction of approximately ten miles of seepage cutoff slurry wall in the City of Sacramento levee between approximately levee mile 2.1 and Sutterville Road and the Maintenance Area 9 levee between Sutterville Road and approximately 2600 feet south of the Freeport Bridge.

The work was completed on March 30, 1993, in accordance with Contract Number DACW05-91-C-0114, Specification Number 8849, and Drawing Number 50-4-5834.

The levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. The new work will be added by amendment to the Operation and Maintenance Manuals, Supplement Number 115 and 117, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

TAVANA/ms

Sincerely,

KEELY

done

Laurence R. Sadoff
Colonel, Corps of Engineers
District Engineer

HEDM

WINTON

Copies Furnished:

- X Department of Water Resources, ATTN: G. Snow, 3201 S Street, Sacramento, California 95816-7017
- X Department of Water Resources, ATTN: G. Qualley, 1416 Ninth Street, Sacramento, California 95814
- X CDR, SPD, ATTN: CESP-00-0
- X CDR, USACE, ATTN: DAEN-CECW-OM

DENNIS

SATA

KASPRISTIN

- cc:
- X Central Valley Sec
- X PM (Childs)
- X Prog Dev
- X F&A Br
- X Valley Res Ofc
- S.C.*

SADOFF

LU/T0042.L

a. Bank protection work and levee setback at Edwards Break, as shown on Drawing No. 6-4-1286-1 of Exhibit B, was accomplished by hired labor under Job Order No. 134 and completed in January 1937.

b. Rebuilding of levee slope at Edwards Break, as shown on Drawing No. 50-4-1735, was accomplished by hired labor under Job Order No. 576 and completed on 17 November 1939.

c. Enlargement of levee in the vicinity of Richfield Oil Co., as shown on Drawing No. 50-4-1830, was accomplished by hired labor under Job Order No. 643 and completed on 1 June 1941.

d. Levee construction and bank protection work along the left bank of the Sacramento River from Mile 45.3 to 56.0, as shown on Drawings No. 50-4-2907, 50-4-2908 and 50-4-2909, was accomplished under Contract No. DA-04-167-eng-910 by H. Earl Parker, Inc. during the period from 23 February 1953 to 31 December 1953.

e. Bank sloping and stone protection on the left bank of the Sacramento River at Site Mile 53.7 (a portion of Unit No. 19, Sacramento River Bank Protection Project) was accomplished under Contract No. DACW05-71-C-0021 by James L. Ferry and Son during the period from 26 August 1970 to 20 December 1971. Specification No. 3427, Drawing No. 50-4-4378.

f. Selective clearing, bank sloping, stone protection, and recreation facilities, including boat launching ramp and vehicle parking, at Garcia Bend on the left bank of the Sacramento River at Site Mile 49.3 (a portion of Unit No. 21A, Sacramento River Bank Protection Project) were accomplished under Contract No. DACW05-73-C-0031 by James L. Ferry and Son during the period from 26 September 1972 to 7 July 1973. Specification No. 4235, Drawing No. 50-4-4772.

g. Bank sloping, stone protection and selective clearing on the left bank of the Sacramento River at Site Miles 51.2, 52.2 and 55.6 (a portion of Unit 33) was accomplished under Contract No. DACW05-77-C-0101 by Dutra Construction Company, Inc. Construction was completed on 12 October 1980, Specification No. 5269, Drawing No. 50-4-5347.

h. Construction of a slurry cutoff wall in the Maintenance Area 9 levee between approximately levee miles 0.51 and 2.51. Observation wells were placed at various location along the slurry cutoff wall (EXHIBIT A-2). This work was accomplished under Contract No. DACW05-90-C-0117, Specification No. 8848, Drawing No. 50-4-5826.

i. Construction of a slurry cutoff wall in the Maintenance Area 9 levee between approximately levee mile 2.51 and 2600 feet south of the Freeport Bridge. Observation wells were placed at various location along the slurry cutoff wall (EXHIBIT A-3). This work was accomplished under Contract No. DACW05-91-C-0114, Specification No. 8849, Drawing No. 50-4-5834.

SECTION II

2-04. Miscellaneous Facilities.

a. (5) Slurry Cutoff Wall and Observation Wells:

(a) All observation well readings shall be referenced from the top of the PVC riser pipe.

(b) Observation well readings should be collected monthly for at least a one year period and plotted along with the river stage. After the first year of data collection, readings should only be collected during high river stage.

* (c) High water monitoring of the observation wells should begin when the river stage at the "I" Street gage is forecasted to reach an elevation of 25 feet and should continue until the river stage recedes below elevation 25 as conditions permit. Observations should be made as reasonably close to 12-hour intervals as possible.

(d) If any of the following conditions are noted, they should be reported immediately to the Chief, Emergency Management Division (916-557-6919), and the Chief, Geotechnical Branch (916-557-7197), U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814

(1) Visual signs of levee distress, such as cracking, sloughing, settlement, etc.

(2) Seepage emerging at or above the landside levee toe.

(3) Saturation and/or development of boils near the landside toe.

(4) Sudden or rapid rise of water level in the landside observation wells (i.e., ≥ 6 inches in 12 hours)

(e) The data should be tabulated and furnished in report form annually before 1 September of each year to the Chief, Geotechnical Branch, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814.

(f) The General Manager, Reclamation Board, shall be responsible for performing or having performed evaluation of the adequacy of the cutoff wall performance to include comparison with expected or previous years cutoff wall performance. This analysis will be included in the annual data report and will include a statement of the adequacy of cutoff wall performance and any recommendations, such as placement of additional observation wells.

(g) Maintenance of the observation wells shall include determining individual sediment levels annually, by measuring from the top of the PVC riser pipe to the sediment in the slotted interval. Ensure that the well is capped between readings and the cap is vented with a 1/8-inch diameter air hole. No fluids such as antifreeze or preparations designed to lubricate the inside of the riser pipe shall be introduced into any observation well. These types of fluids can damage the water tight joints, promote clogging of the slotted interval, and introduce contaminated into the groundwater. Any well observed with signs of tampering or vandalism should be measured for depth and checked for obstructions.

EXHIBIT B

File No.

Title

50-4-5826

Sacramento Urban Area Levee Reconstruction Project, Greenhaven-Pocket Phase I in 18 sheets

50-4-5834

Sacramento Urban Area Levee Reconstruction Project, Greenhaven-Pocket Phase II in 59 sheets

THE RECLAMATION BOARD
16 Ninth Street, Room 455-6
Sacramento, CA 95814-5594
(916) 653-5434 FAX: (916) 653-5805



FFR 1 5 1994

Colonel John N. Reese
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Colonel Reese:

This is in reference to additions to the supplements of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project for Units ~~115~~ 117, and 124. These additions address the reconstruction work completed as part of the Sacramento Urban Area Levee Reconstruction Project.

The Reclamation Board requests the additions to the Standard Operation and Maintenance Manual for Item C, subparagraph 7, Paragraph 2.04, Miscellaneous Facilities, within Section II be modified. The requirement to begin well observations 48 to 72 hours prior to the river stage being forecasted to reach 20 feet is incompatible with current practice. Reclamation District 1000, local maintaining agency for unit 124, and the City of Sacramento, local maintaining agency for unit 117, commence highwater inspections when the "I" Street gage on the Sacramento River measures approximately 25 feet. The Department of Water Resources' Sacramento Maintenance Yard, local maintaining agency for unit 115, commences highwater inspections when the "I" Street gage measures at least 23 feet and the Sacramento River is forecasted to rise. Therefore, to combine the highwater inspections and observation well readings into a more efficient task, the Board recommends that observation well readings begin once the gage at "I" Street reaches 25 feet and readings shall be taken as close to 12-hour intervals as possible. The Board and local maintaining agencies believe the following draft of Item C is reasonable and within their ability to perform:

(c) Highwater monitoring of the observation wells should begin when the river stage at the I Street gage is forecasted to reach an elevation of 25 feet and should continue until the river stage recedes below elevation 25 as conditions permit. Observations should be made as reasonably close to 12-hour intervals as possible.

3/28/94 - Orig sent to
Certs Vg Section for
Action

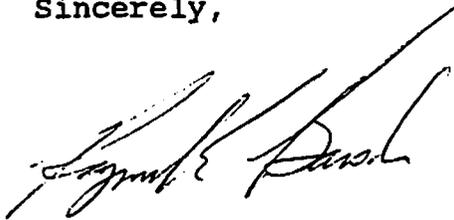
Colonel John N. Reese

FEB 15 1994

Page Two

For further information, please contact me at (916) 653-5434 or have your staff contact Ricardo Pineda at (916) 327-1596 or Victor Pacheco at (916) 327-1532.

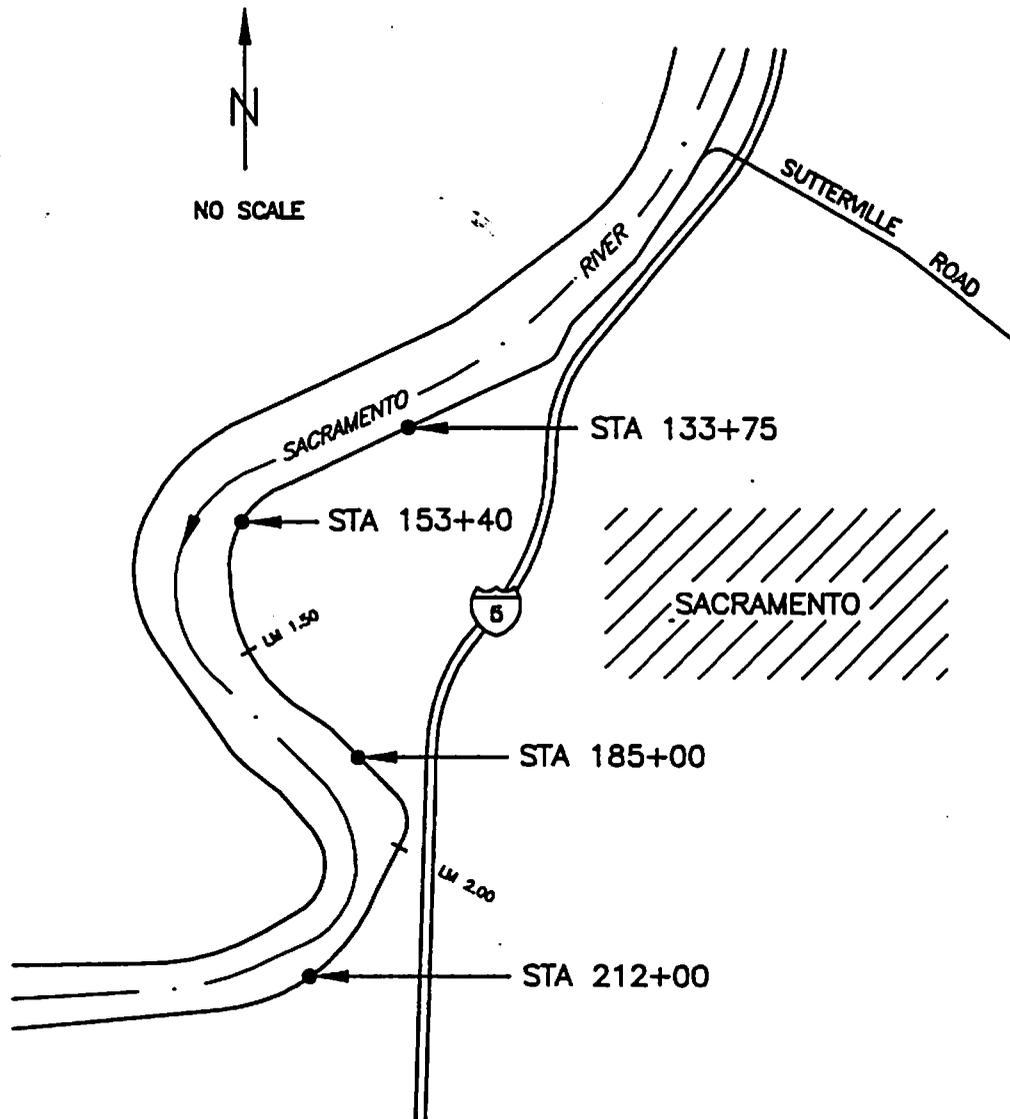
Sincerely,



Raymond E. Barsch
General Manager

cc: Mr. John P. Saia
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Mr. Larry Johnson
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922



LEGEND

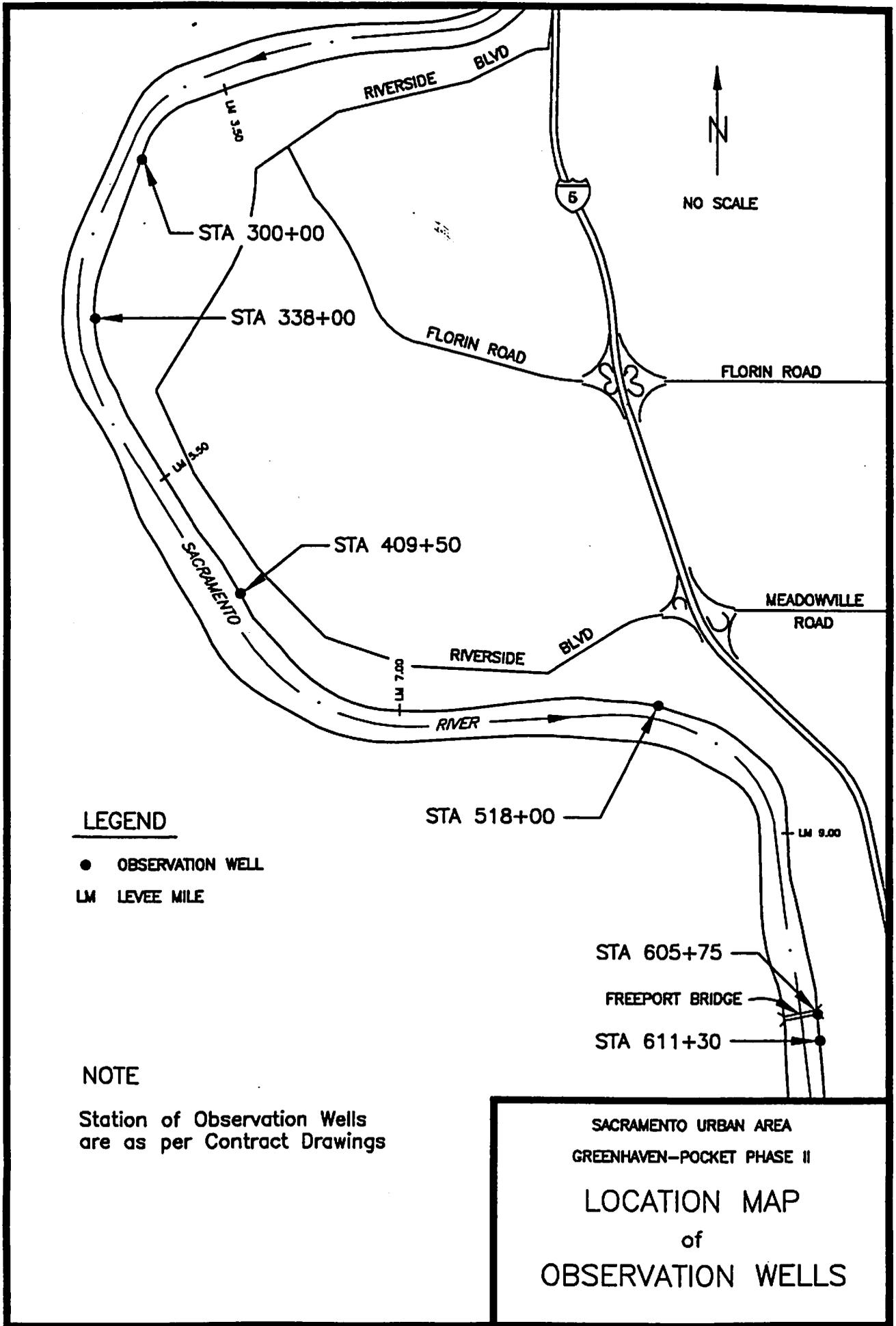
- OBSERVATION WELL
- LM LEVEE MILE

NOTE

Station of Observation Wells
are as per Contract Drawings

SACRAMENTO URBAN AREA
GREENHAVEN-POCKET PHASE I

LOCATION MAP
of
OBSERVATION WELLS



LEGEND

- OBSERVATION WELL
- LM LEVEE MILE

NOTE

Station of Observation Wells are as per Contract Drawings

SACRAMENTO URBAN AREA
 GREENHAVEN-POCKET PHASE II
LOCATION MAP
 of
OBSERVATION WELLS

CORPS OF ENGINEERS
U. S. ARMY

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT

UNIT NO. 115
EAST LEVEE OF SACRAMENTO RIVER
FROM
SUTTERVILLE ROAD TO
NORTH BOUNDARY OF RECLAMATION
DISTRICT NO. 744

Prepared by the Sacramento District
Corps of Engineers, U. S. Army
Sacramento, California
August 1955

**SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT**

UNIT NO. 115

EAST LEVEE OF SACRAMENTO RIVER
FROM
SUTTERVILLE ROAD TO
NORTH BOUNDARY OF RECL. DIST. NO. 744

LOCATION	ADDITION OR REVISION	DATE
1-04 e.	Add contract No. DAW05-71-C-0021	Dec 1971
Exhibit B	Add drawing no. 50-4-4378	Dec 1971
Exhibit F	Add copy of letter of acceptance dated 17 Dec 1970	Dec 1971
1-04	Add subparagraph f.	Dec 1973
2-01	Add subparagraph c.	Dec 1973
2-04	Add subparagraph a(4)(a)	Dec 1973
Exhibit B	Add drawing no. 50-4-4772	Dec 1973
Exhibit F	Add copy of letter of transfer dated 17 Jul 1973	Dec 1973
1-04	Add subparagraph g.	Sep 1983
Exhibit B	Add drawing no. 50-4-5347	Sep 1983
Exhibit F	Add copy of letter of acceptance dated 5 Feb 1981	Sep 1983
1-04	Add subparagraph h.	Aug 1993
1-04	Add subparagraph i.	Aug 1993
2-04	Add subparagraph (7)	Aug 1993
Exhibit A-2	Add location map of observation wells	Aug 1993
Exhibit A-3	Add location map of observation wells	Aug 1993
Exhibit B	Add drawing no. 50-4-5826	Aug 1993
Exhibit B	Add drawing no. 50-4-5834	Aug 1993
Exhibit F	Add copy of letter of transfer dated 22 Feb 1993	Aug 1993
Exhibit F	Add copy of letter of transfer dated 30 Apr 1993	Aug 1993
Exhibit F	Add copy of letter of transfer dated 13 Dec 1951	21 Dec 2010
Exhibit F	Add copy of letter of transfer dated 31 Dec 1953	21 Dec 2010
1-04	Add subparagraph j	21 Dec 2010
Exhibit F	Add copy of letter of transfer dated 3 Feb 1987	21 Dec 2010
1-04	Add subparagraph k	21 Dec 2010
Exhibit F	Add copy of letter of transfer dated 23 Mar 1990	21 Dec 2010
1-04	Add subparagraph l	21 Dec 2010
Exhibit F	Add copy of letter of transfer dated 17 Dec 1993	21 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 27 Dec 1993	21 Dec 2010
Exhibit F	Add copy of letter of transfer dated 20 Nov 1970	2 Feb 2011
Exhibit F	Add copy of letter of transfer dated 26 Jun 1973	2 Feb 2011
Exhibit F	Add copy of letter of acceptance dated 27 Feb 1981	7 Mar 2011

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EXHIBITS

<u>Exhibit</u>	<u>Description</u>
A.	Flood Control Regulations - - - - -Unattached (Contained in Standard Manual)
A-1	Location Map - - - - - -1 Sheet
B	"As Constructed" Drawings - - - - -Unattached
C	Plates of Suggested Flood Fighting Methods - - - - - Unattached (Contained in Standard Manual)
D	Check List No. 1 - Levee Inspection Report - - - - - Unattached (Contained in Standard Manual)
E	Check Lists - Levees, Channels and Structures - - Sheets 1 thru 9
F	Letters of Acceptance by the State Reclamation Board - - - Sheets 1 thru 4
G	Semi-Annual Report Form - - - - - Sheets 1 and 2

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT
UNIT NO. 115

EAST LEVEE OF SACRAMENTO RIVER
FROM
SUTTERVILLE ROAD TO
NORTH BOUNDARY OF RECLAMATION
DISTRICT NO. 744

SECTION I - INTRODUCTION

1-01. Location. - The improvement covered by this manual is Unit No. 115 of the Sacramento River Flood Control Project. The channel and levee of the unit lies along the left bank (east side) of the Sacramento River from the city of Sacramento (Sutterville Road) to the town of Freeport, a distance of about 11.6 miles (river mile 56.1 to 44.5). The improvement is located within Reclamation District No. 535, 673, and 824, in the County of Sacramento and in the general vicinity as shown on the location map, exhibit A-1.

1-02. Project Works. The Project works covered by this manual includes the east levee of the Sacramento River from Sutterville Road to the north boundary of Reclamation District No. 744 and was authorized by the Flood Control Act of 1917, as modified by The Acts of 1928, 1937 and 1941.

1-03. Protection Provided. - The levee of the unit provides direct protection to the city of Sacramento, adjacent agricultural lands and the town of Freeport against high water in the Sacramento River. The grade of the adopted flood plane along this reach varies from 33.2 at Sutterville Road to elevation 28.7 at the north boundary of Reclamation District No. 744 (all elevations are referred to U. S. Corps of Engineers datum). The levee grade of the reach provides a freeboard of 3 feet or more above the flood plane profile. The project design capacity is 110,000 cubic feet per second.

1-04. Construction Data and Contractor. The levee of this unit was originally constructed by local interests, and some portions thereof had subsequently had emergency repair work thereon by the U. S. Corps of Engineers. The construction required to bring the levee to project standards was accomplished under the following contract or job orders:

a. Bank protection work and levee setback at Edwards Break, as shown on Drawing No. 6-4-1286-1 of Exhibit B, was accomplished by hired labor under Job Order No. 134 and completed in January 1937.

b. Rebuilding of levee slope at Edwards Break, as shown on Drawing No. 50-4-1735, was accomplished by hired labor under Job Order No. 576 and completed on 17 November 1939.

c. Enlargement of levee in the vicinity of Richfield Oil Co., as shown on Drawing No. 50-4-1830, was accomplished by hired labor under Job Order No. 643 and completed on 1 June 1941.

d. Levee construction and bank protection work along the left bank of the Sacramento River from Mile 45.3 to 56.0, as shown on Drawings No. 50-4-2907, 50-4-2908 and 50-4-2909, was accomplished under Contract No. DA-04-167-eng-910 by H. Earl Parker, Inc. during the period from 23 February 1953 to 31 December 1953.

e. Bank sloping and stone protection on the left bank of the Sacramento River at Site Mile 53.7 (a portion of Unit No. 19, Sacramento River Bank Protection Project) was accomplished under Contract No. DACW05-71-C-0021 by James L. Ferry and Son during the period from 26 August 1970 to 20 December 1971. Specification No. 3427, Drawing No. 50-4-4378.

f. Selective clearing, bank sloping, stone protection, and recreation facilities, including boat launching ramp and vehicle parking, at Garcia Bend on the left bank of the Sacramento River at Site Mile 49.3 (a portion of Unit No. 21A, Sacramento River Bank Protection Project) were accomplished under Contract No. DACW05-73-C-0031 by James L. Ferry and Son during the period from 26 September 1972 to 7 July 1973. Specification No. 4235, Drawing No. 50-4-4772.

g. Bank sloping, stone protection and selective clearing on the left bank of the Sacramento River at Site Miles 51.2, 52.2 and 55.6 (a portion of Unit 33) was accomplished under Contract No. DACW05-77-C-0101 by Dutra Construction Company, Inc. Construction was completed on 12 October 1980, Specification No. 5269, Drawing No. 50-4-5347.

h. Construction of a slurry cutoff wall in the Maintenance Area 9 levee between approximately levee miles 0.51 and 2.51. Observation wells were placed at various location along the slurry cutoff wall (EXHIBIT A-2). This work was accomplished under Contract No. DACW05-90-C-0117, Specification No. 8848, Drawing No. 50-4-5826.

i. Construction of a slurry cutoff wall in the Maintenance Area 9 levee between approximately levee mile 2.51 and 2600 feet south of the Freeport Bridge. Observation wells were placed at various location along the slurry cutoff wall (EXHIBIT A-3). This work was accomplished under Contract No. DACW05-91-C-0114, Specification No. 8849, Drawing No. 50-4-5834.

j. Emergency repairs to a project levee along the left bank of the Sacramento River in Maintenance Area 9 was completed on 5 November 1986 under Contract No. DACW05-86-C-0112, Drawing No. 50-25-5771.

k. Construction of four 300 feet long and 25 feet deep seepage cutoff wall tests along the left bank of the Sacramento River, from Mile 48 to 49 was completed on 22 January 1990 under Contract No. DACW05-90-0019. Specification No. 8697, Drawing No. 50-10-5844.

l. Excavation, embankment construction, stone protection, clearing and grubbing, and erosion control revegetation at four sites on the left bank of the Sacramento River, downstream of the Garcia Bend Park, between River Miles 48 and 51 was completed on 7 December 1993 under Contract No. DACW05-92-C-0087. Specification No. 9219, Drawing No. 50-04-5862.

1-05. Flood Flows. For purposes of this manual, the term “Flood” or “High water period” shall refer to flows when the water surface in the Sacramento River reaches, or exceeds the reading of 25.0 on the U.S. Weather Bureau recording stage at the “I” Street Bridge.

1-06. Assurances Provided by Local Interests. Assurance of cooperation by local interests is provided by State legislation, as contained in Chapter 3, Part 2, Division 5 of the State Water Code (see paragraph 2-02a of the Standard Manual).

1-07. Acceptance by the State Reclamation Board. Responsibility for operating and maintaining the completed works was officially accepted by the Reclamation Board of the State of California on 2 January 1952 and 20 January 1954, as shown on the attached letters of acceptance, Exhibit F.

1-08. Superintendent. The name and address of the Superintendent appointed by local interests, to be responsible for the continuous inspection, operation, and maintenance of the project works shall be furnished the District Engineer, and in case of any change of Superintendent, the District Engineer shall be so notified.

SECTION II

FEATURES OF THE PROJECT SUBJECT TO FLOOD CONTROL REGULATIONS

2-01. Levee.

a. Description. The levee described in this manual is located along the east side of the Sacramento River and extends as indicated in paragraph 1-02 of this manual. As previously stated, it is a re-construction of work originally built by local interests. For more complete detail of items included in the re-construction of above mentioned levee, refer to the "As Constructed" drawings of Exhibit B.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements see the following:

- (1) Maintenance - paragraph 4-02 of the Standard Manual.
- (2) Check Lists - Exhibit E of this Supplement Manual.
- (3) Operation - paragraph 4-04 of the Standard Manual.
- (4) Special Instructions - paragraph 4-05 of the Standard

c. Environmental Values. Trees preserved on the berm above the bank protection at Site Mile 49.3 during prosecution of contract listed in paragraph 1-04f shall not be removed as a part of normal maintenance as long as they remain healthy.

through the levee as shown on Drawing No. 50-4-2908, and 50-4-2909 of Exhibit B, are listed as follows:

Location (Station)	Diam. Steel Pipe	<u>STRUCTURES AFFECTING LEVEE MAINTENANCE</u>	
		Other Structure Description	Elev. of Pipe Invert at Highest Point
<u>Part "A"</u>			
24 / 14	12"	2-C.M. Cut-off walls. Pump & Motor R. S. 1" conduit thru levee	27.5
38 / 61	10"	2-C.M. Cut-off walls. Pump & Motor R. S. 1" conduit thru levee	25.0
48 / 43.9	14"	2-C.M. Cut-off walls. Pump & Platform R. S.	27.0
67 / 64	10"	1-C.M. Cut-off wall. Pump L. S. Gate Valve L. S.	21.0
91 / 54	12"	Pump L. S.	14.0
121 / 65	14"	2 Concrete Cut-off walls. Pump L. S.	20.3
134 / 19	10"	1-C. M. Cut-off wall. Pump R. S. 1"	30.1
145 / 83.1	10"	1-C. M. Cut-off wall. Pump R. S. Check valve R. S.	30.3
148 / 43.2	10"	2-Concrete Cut-off walls. Pump L. S. Check Valve R. S.	20.5
166 / 18.5	6"	2-Concrete Cut-off walls. Pump L. S. Check Valve R. S.	21.5
174 / 79	8"	1-C.M. Cut-off wall. Pump and Check Valve R. S.	30.5
190 / 70	8"	1-C.M. Cut-off wall. Pump and Check Valve R. S.	30.7
204 / 51.7	12"	2-Concrete Cut-off walls. Pump L. S.	20.6
209 / 28.5	8"	1-C.M. Cut-off wall. Pump and Check Valve R. S.	30.8
233 / 76.5	6"	2-Concrete Cut-off walls. Pump L. S. Check Valve R. S.	21.0

Location (Station)	Diam. Steel Pipe	<u>STRUCTURES AFFECTING LEVEE MAINTENANCE</u>	
		Other Structure Description	Elev. of Pipe Invert at Highest Point
<u>Part "A"</u>			
240 / 84.5	6"	2-Concrete Cut-off walls, Pump L. S., Check Valve R. S.	20.5
246 / 33.2	8"	1-C.M. Cut-off wall, pump and Check Valve R. S.	31.1
		R. D. No. 673 Drainage	
248 / 58	30"	2-Concrete Cut-off walls, Flap gate R. S., gate Valve L. S.	20.0
249 / 00	24"	1-C.M. Cut-off wall, 8" Siphon Breaker R. S., Flap Gate R. S.	31.1
253 / 08	8"	1-C.M. Cut-off wall, Pump R. S., 1" conduit. Check Valve R. S.	31.2
258 / 13	8"	2-Concrete Cut-off walls, Pump L. S., Check Valve R. S.	20.8
272 / 50	8"	1-C.M. Cut-off wall, Pump and Check Valve R. S.	31.3
279 / 89.3	8"	1-C.M. Cut-off wall, Pump and Check Valve R. S.	31.4
283 / 89.8	10"	Pump R. S.	30.0
297 / 75.8	8"	2-Concrete Cut-off, walls, Pump and Gate Valve R. S.	26.7
310 / 60.2	6"	1-C.M. Cut-off wall, Pump R. S.	31.6
320 / 50	8"	1-C.M. Cut-off wall, Pump, R. S.	31.2
341 / 24.4	10"	2-Concrete Cut-off walls, Pump R. S., Check Valve R. S.	24.5
373 / 14	4"	1-C.M. Cut-off wall, Pump R. S., Pipe Capped L. S.	32.2
384 / 88.5	8"	1-C.M. Cut-off wall	32.2

Location (Station)	Diam. Steel Pipe	<u>STRUCTURES AFFECTING LEVEE MAINTENANCE</u>	
		Other Structure Description	Elev. of Pipe Invert at Highest Point
<u>Part "A"</u>			
388 / 50	8"	1-C.M. Cut-off wall, Pump R. S.	32.2
392 / 75	8"	2-Concrete Cut-off walls, Pump L. S.	23.0
424 / 35	6"	2-Concrete Cut-off walls, Pump L. S.	21.0
426 / 72.8	12"	2-Concrete Cut-off walls, Pump L. S.	22.5
<u>Part "B"</u>			
180 / 30	4"	4-Pipes - Richfield Oil Station	39.0
197 / 65	10"	Check Valve R. S.	32.7
218 / 40	14"	Pump, L. S.	33.0
222 / 60	2"	Elect. Conduit to U.S.C.G. Navig. Light	36.0
224 / 50	3/4"	Domestic Water Supply, Valve L. S.	38.0
226 / 50	3/4"	Domestic Water Supply, Valve L. S.	38.0
275 / 40	30"	County Sewer Outfall, Air Valve R. S.	29.5
290 / 90	78"	Reinf. Concrete Pipe - City Sewer Outfall, Slide Gate & Flap Gate R. S.	4.0
303 / 75	8"	Pump R. S.	38.0
Abbreviations are as follows:			

R. S. - Riverside

2-03. Channel.

a. Description. The main channel of the Sacramento River for this unit lies adjacent to the levee as described in paragraph 1-02. The project design capacity of the channel is as listed in paragraph 1-03 of this manual.

The maintenance and operation of the channel of the Sacramento River, within this unit, shall be limited to flood control and the requirements which follow shall be observed only to that extent.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements see the following:

- (1) Maintenance - paragraph 6-02 of the Standard Manual.
- (2) Check Lists - Exhibit E of this Supplement Manual.
- (3) Operation - paragraph 6-04 of the Standard Manual.
- (4) Safety Requirements - paragraph 6-05 of the Standard Manual.

It shall be the duty of the Superintendent to maintain a patrol of the project works during all periods of flood in excess of a reading of 25.0 on the U. S. Weather Bureau recording gage at the "I" Street Bridge, as indicated in paragraph 1-05 of this manual. The Superintendent shall cause readings to be taken at the gage, or at a more convenient temporary staff gage, at intervals of two to four hours during the period when the water surface is above flood-flow stage and record the time of the observations. One copy of the readings shall be forwarded to the District Engineer immediately following the flood, and a second copy transmitted as an inclosure to the semi-annual report in compliance with paragraph 3-06 of the Standard Manual.

2-04. Miscellaneous Facilities.

a. Description. Miscellaneous structures or facilities which were constructed as a part of, or in conjunction with, the protective works, and which might affect their functioning, include the following:

(1) Bridge.

- (a) A highway bridge (barcule) crossing the Sacramento River near Freeport at about station 51 + 55 as shown on drawings of Exhibit B.

(2) Utilities.

- (a) A county outfall sewer at station 275 + 40 as shown on drawings of Exhibit B.

- (b) A city outfall sewer located at station 290 + 90 as shown on drawings of Exhibit B.

(3) Hydrographic Facilities. There are no hydrographic facilities located within this unit – the U.S. Weather Bureau recording gage located on the left bank of the Sacramento River at the foot of “I” Street being upstream this unit.

All miscellaneous facilities listed above are maintained by other Government agencies.

(4) Recreation Facilities.

- (a) A boat launching ramp and access ramp at River Mile 49.3 as shown on drawings of Exhibit B.

(5) Slurry Cutoff Wall and Observation Wells:

(a) All observation well readings shall be referenced from the top of the PVC riser pipe.

(b) Observation well readings should be collected monthly for at least a one year period and plotted along with the river stage. After the first year of data collection, readings should only be collected during high river stage.

(c) High water monitoring of the observation wells should begin when the river stage at the “I” Street gage is forecasted to reach an elevation of 25 feet and should continue until the river stage recedes below elevation 25 as conditions permit. Observations should be made as reasonably close to 12-hour intervals as possible. *

(d) If any of the following conditions are noted, they should be reported immediately to the Chief, Emergency Management Division (916-557-6919), and the Chief, Geotechnical Branch (916-557-7197), U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA, 95814.

- (1) Visual signs of levee distress, such as cracking, sloughing, settlement, etc.
- (2) Seepage emerging at or above the landside levee toe.
- (3) Saturation and/or development of boils near the landside toe.
- (4) Sudden or rapid rise of water level in the landside observation wells (i.e., greater than or equal to 6 inches in 12 hours).

* Revised 4/1/94

(e) The data should be tabulated and furnished in report form annually before 1 September of each year to the Chief, Geotechnical Bran, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814.

(f) The General Manager, Reclamation Board, shall be responsible for performing or having performed evaluation of the adequacy of the cutoff wall performance to include comparison with expected or previous years cutoff wall performance. This analysis will be included in the annual data report and will include a statement of the adequacy of cutoff wall performance and any recommendations, such as placement of additional observation wells.

(g) Maintenance of the observation wells shall include determining individual sediment levels annually, by measuring from the top of the PVC riser pipe to the sediment in the slotted interval. Ensure that the well is capped between readings and the cap is vented with a 1/8-inch diameter air hole. No fluids such as antifreeze or preparations designed to lubricate the inside of the riser pipe shall be introduced into any observation well. These types of can damage the water tight joints, promote clogging of the slotted interval, and introduce contaminated into the groundwater. Any well observed with signs of tampering or vandalism should be measured for depth and checked for obstructions.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements see the following:

- (1) Maintenance – paragraph 7-02 of the Standard Manual.
- (2) Check Lists – paragraph 7-03 of the Standard Manual.
- (3) Operation – paragraph 7-04 of the Standard Manual.

THE RECLAMATION BOARD

16 Ninth Street, Room 455-6
Sacramento, CA 95814-5594
(916) 653-5434 FAX: (916) 653-5805



FFR 1 5 1994

Colonel John N. Reese
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Colonel Reese:

This is in reference to additions to the supplements of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project for Units 115, 117, and 124. These additions address the reconstruction work completed as part of the Sacramento Urban Area Levee Reconstruction Project.

The Reclamation Board requests the additions to the Standard Operation and Maintenance Manual for Item C, subparagraph 7, Paragraph 2.04, Miscellaneous Facilities, within Section II be modified. The requirement to begin well observations 48 to 72 hours prior to the river stage being forecasted to reach 20 feet is incompatible with current practice. Reclamation District 1000, local maintaining agency for unit 124, and the City of Sacramento, local maintaining agency for unit 117, commence highwater inspections when the "I" Street gage on the Sacramento River measures approximately 25 feet. The Department of Water Resources' Sacramento Maintenance Yard, local maintaining agency for unit 115, commences highwater inspections when the "I" Street gage measures at least 23 feet and the Sacramento River is forecasted to rise. Therefore, to combine the highwater inspections and observation well readings into a more efficient task, the Board recommends that observation well readings begin once the gage at "I" Street reaches 25 feet and readings shall be taken as close to 12-hour intervals as possible. The Board and local maintaining agencies believe the following draft of Item C is reasonable and within their ability to perform:

(c) Highwater monitoring of the observation wells should begin when the river stage at the I Street gage is forecasted to reach an elevation of 25 feet and should continue until the river stage recedes below elevation 25 as conditions permit. Observations should be made as reasonably close to 12-hour intervals as possible.

3/28/94 - Orig sent to
Carter by Section for
action

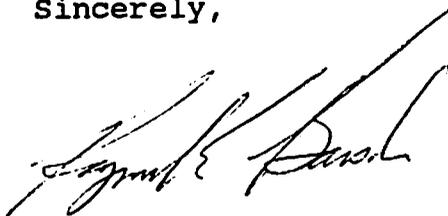
Colonel John N. Reese

FEB 15 1994

Page Two

For further information, please contact me at (916) 653-5434 or have your staff contact Ricardo Pineda at (916) 327-1596 or Victor Pacheco at (916) 327-1532.

Sincerely,



Raymond E. Barsch
General Manager

cc: Mr. John P. Saia
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

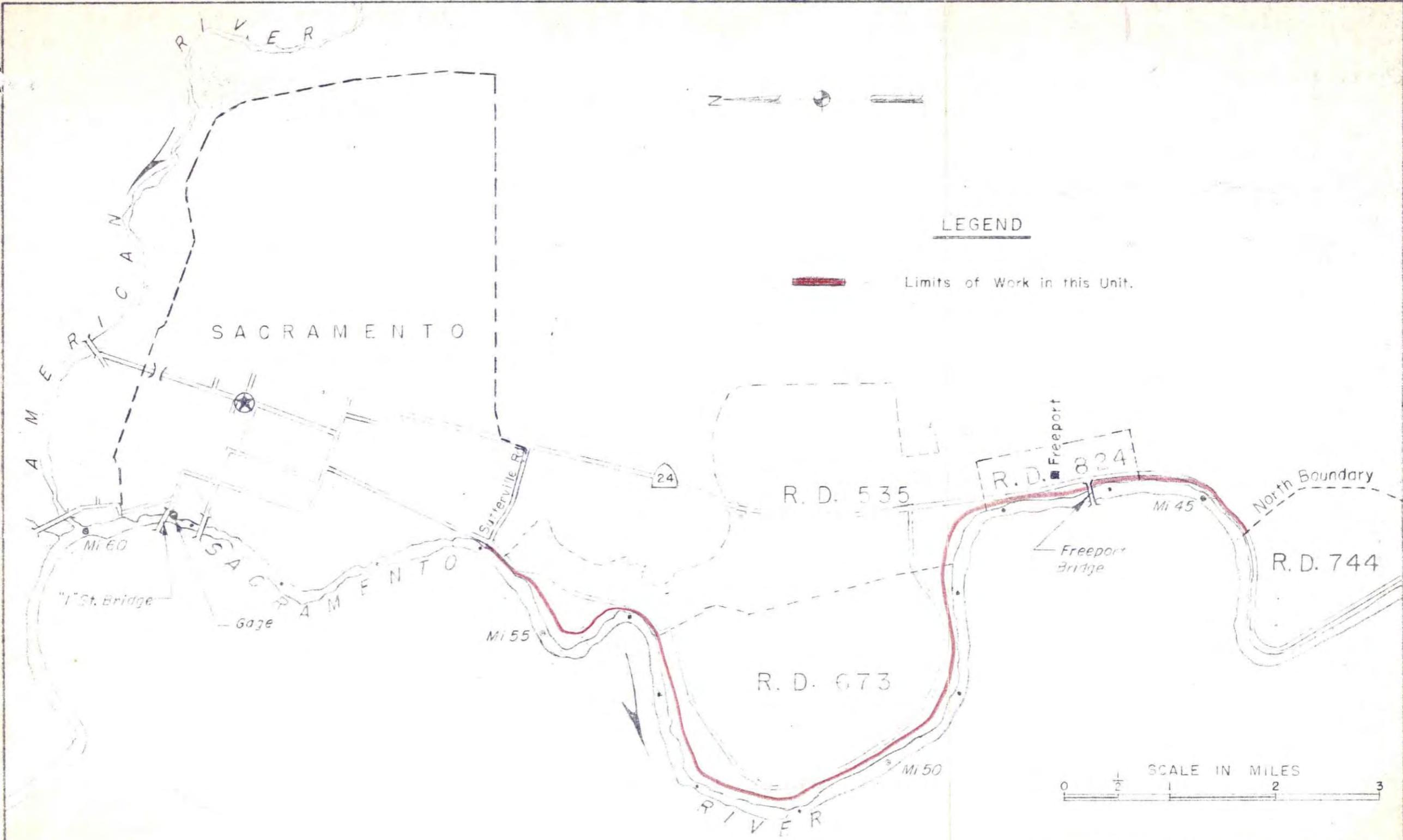
Mr. Larry Johnson
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

SECTION III - REPAIR OF DAMAGE TO PROJECT WORKS AND
METHODS OF COMBATING FLOOD CONDITIONS

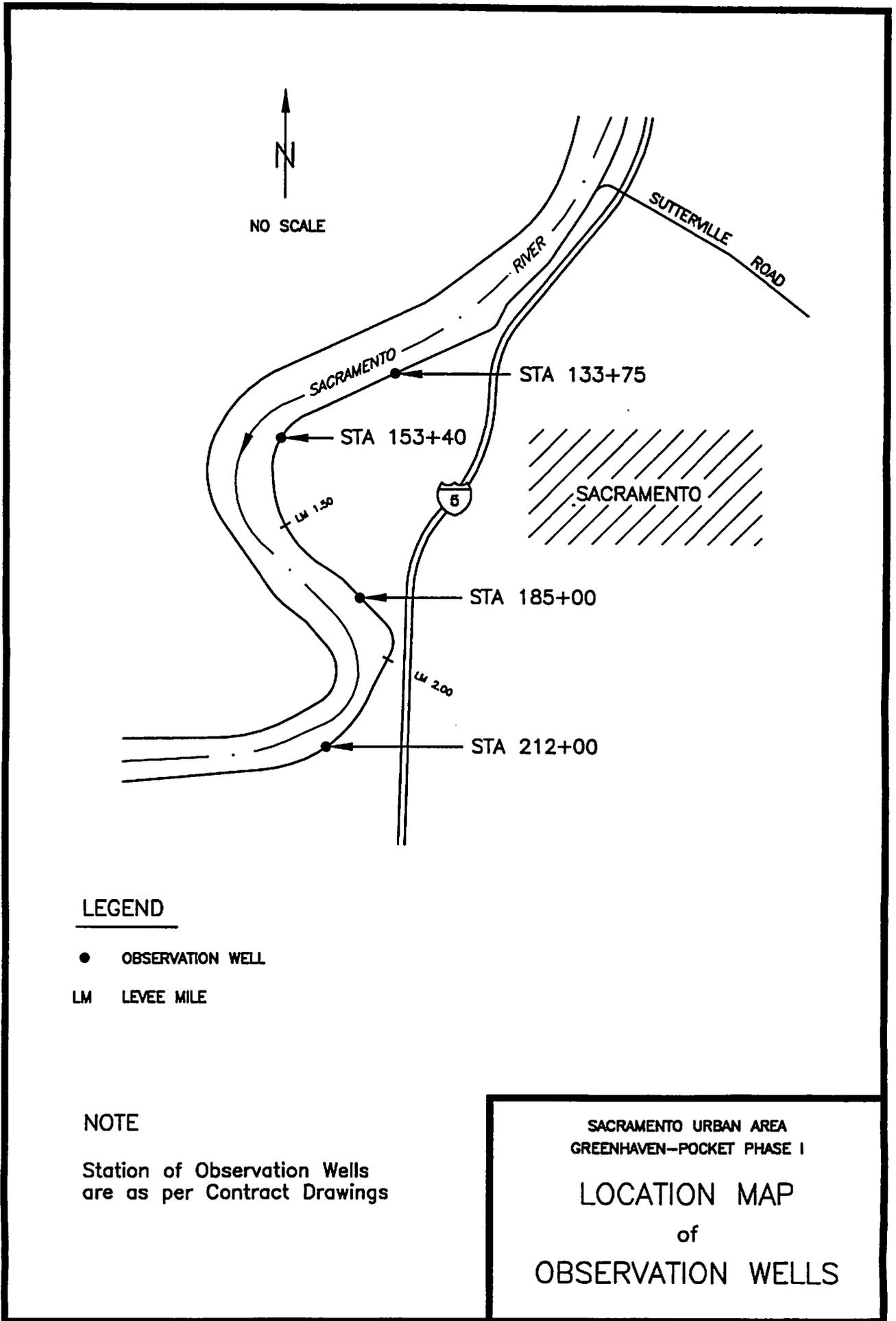
3-01. Repair of Damage. - In the event of serious damage to the project works, whether due to flood conditions or other causes, and which may be beyond the capability of local interests to repair, the Superintendent will contact a representative of the Division of Water Resources, State of California, who coordinates maintenance of project works of the Sacramento River Flood Control Project. The State representative will give assistance or advice, or will determine appropriate action to be taken.

3-02. Applicable Methods. For applicable methods of combating flood conditions, reference is made to Section VIII of the Revised Standard Manual, where the subject is fully covered.

EXHIBIT A
FLOOD CONTROL REGULATIONS
(See Standard Manual)



LOCATION MAP
 UNIT NO. 115
 EAST LEVEE OF SACRAMENTO RIVER
 FROM SUTTERVILLE ROAD TO
 NORTH BOUNDARY OF R.D. NO. 744



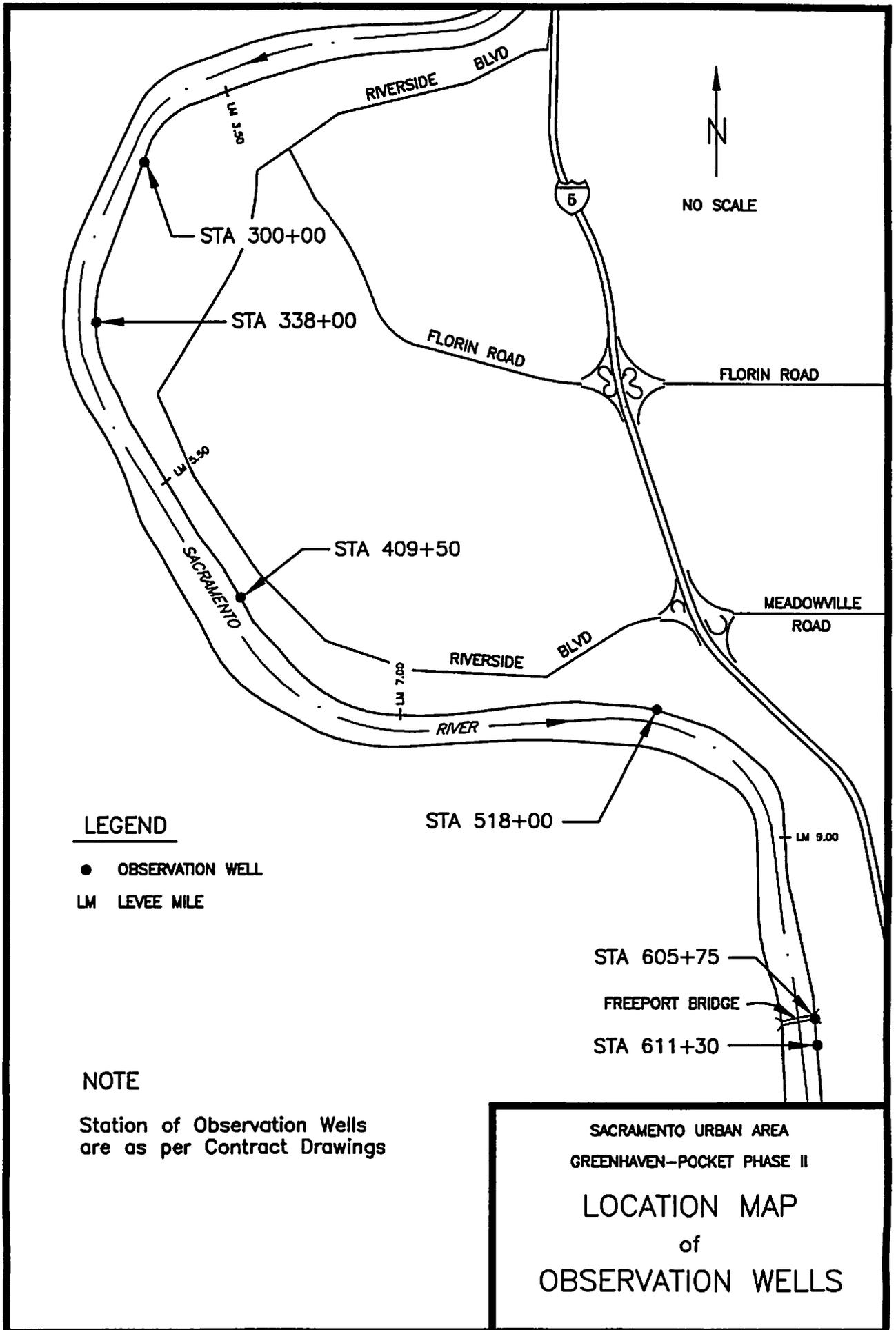


EXHIBIT B

"AS CONSTRUCTED"
DRAWINGS

(See Separate Folder for the following Drawings)

<u>File No.</u>	<u>Title</u>
6-4-1286-1	Bank Protection and Levee Setback at Edward's Break, Mile 55.3E. 1 Sheet
50-4-1735	Levee Construction at Edward's Break, Mile 55.11. 1 Sheet
50-4-1830	Levee Enlargement - Vicinity of Richfield Oil Company. 1 Sheet.
50-4-2907 ✓	Surfacing of Levee Crown - Left Levee Sacramento River, Mile 45.3 to Mile 56.0. 1 Sheet
50-4-2908 ✓	Levee Construction & Bank Protection, Left Bank Levee, Sacramento River, Mile 45.3 to Mile 53.5. Sheets 1 to 11, incl.
50-4-2909 ✓	Surface Levee Crown for Patrol Road Purposes East Levee Sacramento River, Mile 53.5 to Mile 56.0. Sheets 1 and 2.
Additional drawings of cross-sections, structures, and miscellaneous facilities are available in the office of the District Engineer.	
50-4-4378	Bank Protection, Various Locations, Left Bank, Sacramento River between mile 24.7 and 53.7, in 23 sheets
50-4-4772	Bank Protection, Left Bank, Sacramento River at Mile 49.3, in 5 sheets
50-4-5347	Bank Protection, Various Locations, Right and Left Banks, Sacramento River Mile 15.0 to 60.0, in 33 sheets.
50-4-5826	Sacramento Urban Area Levee Reconstruction Project, Greenhaven-Pocket Phase I in 18 sheets
50-4-5834	Sacramento Urban Area Levee Reconstruction Project, Greenhaven-Pocket Phase II in 59 sheets

EXHIBIT C

PLATES OF SUGGESTED FLOOD FIGHTING METHODS

(See Standard Manual)

EXHIBIT D
CHECK LIST NO. 1
LEVEE INSPECTION REPORT
(See Standard Manual)

EXHIBIT E
CHECK LISTS OF LEVEES,
CHANNEL AND STRUCTURES

For definition of "flood" or "high water
period," see paragraph 1-05 of this manual

CHECK LIST NO. 2

UNIT NO. 115

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

Item	Remarks
(a) Location by Station	
(b) Settlement, sloughing, or loss of grade	
(c) Erosion of both slopes of levee	
(d) Condition of roadways, including ramps	
(e) Evidence of seepage	
(f) Condition of farm gates and fencing	
(g) Maintenance measures taken since last inspection	
(h) Comments	

INSTRUCTIONS FOR COMPLETEING SHEET 2, EXHIBIT E
(To be printed on back of sheet 2)

- Item (a) Indicate levee station of observation, obtained by pacing from nearest reference point; indicate right or left bank.
- Item (b) If sufficient settlement of earthwork has taken place to be noticeable by visual observation, indicate amount of settlement in tenths of a foot. If sloughing has caused a change in slope of the embankment sections, determine the new slope. Note areas where erosion or gulying of the section has occurred.
- Item (c) If sufficient erosion or gulying of back face or back toe of levee has taken place to be noticeable by visual inspection, indicate area affected and depth.
- Item (d) Note any natural change in any section of roadway or ramps. Indicate any inadequacy in surface drainage system.
- Item (e) Indicate any evidence of seepage through the embankment section.
- Item (f) Indicate the serviceability of all farm gates across the embankments and roadway, and indicate if repainting is required.
- Item (g) Indicate maintenance measures that have been performed since last inspection and their condition at the time of this inspection.
- Item (h) Record opinion, if any, of contributory causes for conditions observed and also any observations not covered under other columns.

NOTE: One copy of the Inspector's Report is to be mailed to the District Engineer immediately on completion, and one copy is to be attached to and submitted with the Superintendent's semi-annual report.

CHECK LIST NO. 3

CHANNEL AND RIGHT-OF-WAY

UNIT NO. 115

Inspector's Report Sheet No. ____

Inspector _____

Date _____

Superintendent _____

Item	Remarks
(a) Name of channel and location by stations	
(b) Vegetal growth in channel	
(c) Debris and refuse in channel	
(d) New construction within right-of-way	
(e) Extent of aggradation or degradation	
(f) Condition of riprapped section	
(g) Condition of bridges	
(h) Measures taken since last inspection	
(i) Comments	

INSTRUCTIONS FOR COMPLETING SHEET 4, EXHIBIT E
(To be printed on back of sheet 4)

- Item (a) Indicate station of observation obtained by pacing from nearest reference point.
- Item (b) Note nature, extent, and size of vegetal growth within the limits of flood flow channel.
- Item (c) Note nature and extent of debris and refuse that might cause clogging of the conduits of the irrigation intake works, or the bridges over the channel.
- Item (d) Report any construction along the channel or above the channel that has come to the attention of the inspector and that might affect the functioning of the project.
- Item (e) Indicate any change in grade or alignment of the channels, either by deposition of sediment or scour, that is noticeable by visual inspection. Estimate amount and extent.
- Item (f) Indicate any change that has taken place in the riprap such as disintegration of the rock, erosion, or movement of the rock. Note the presence of vegetal growth through the riprap.
- Item (g) Note any damage or settlement of the footings of the bridges. Indicate condition of wooden structures and if repainting is required. Indicate condition of bridge approaches, headwalls, and other appurtenances.
- Item (h) Indicate maintenance measures that have been performed since the last inspection and their condition at time of this inspection.
- Item (i) Record opinion, if any, of contributory causes for conditions observed, also any observations not covered under other columns.

NOTE: One copy of the Inspector's Report is to be mailed to the District Engineer immediately on completion, and one copy is to be attached to and submitted with the Superintendent's semi-annual report.

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES

UNIT NO. 115

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

(a) Location by Station	(b) Bank	(c) Debris or other ob- struction to flow	(d) Damage or settlement of pipe or conduit	(e) Condition of concrete headwall or invert paving	(f) Condition of right- of-way adjacent to structure	(g) Repair measures taken since last inspection	(h) Comments
Part "A" 24/14 38/61 48/43.9 67/64 91/54 121/65 134/19 145/83.1 148/43.2 166/18.5 174/79 190/70 204/51.7	Left Left Left Left Left Left Left Left Left Left Left Left Left						

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES

UNIT NO. 115

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

(g) Location by Station	(a) Bank	(c) Debris or other obstruction to flow	(d) Damage or settlement of pipe or conduit	(e) Condition of concrete headwall or invert paving	(f) Condition of right-of-way adjacent to structure	(g) Repair measures taken since last inspection	(h) Comments
Part "A"							
209/28.5	Left						
233/76.5	Left						
240/84.5	Left						
246/33.2	Left						
248/58	Left						
249/00	Left						
253/08	Left						
258/13	Left						
272/50	Left						
279/89.3	Left						
283/89.8	Left						
297/75.8	Left						
310/60.2	Left						
320/50	Left						
341/24.4	Left						
373/14	Left						

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES

UNIT NO. 115

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

(a) Location by Station	(b) Bank	(c) Debris or other ob- struction to flow	(d) Damage or settlement of pipe or conduit	(e) Condition of concrete headwall or invert paving	(f) Condition of right-of- way adjacent to structure	(g) Repair measures taken since last inspection	(h) Comments
<u>Part "A"</u> 384/88.5 388/50 392/75 424/35 426/72.8	Left Left Left Left Left						
<u>Part "B"</u> 180/30 197/65 218/40 222/60 224/50 226/50 275/40 290/90 303/75	Left Left Left Left Left Left Left Left Left						

INSTRUCTIONS FOR COMPLETING SHEET 6, 7 & 8, EXHIBIT E
(To be printed on back of Sheet 6, 7 & 8)

- (1) Enter station of all structures under Column (a) for check list.
- (2) Inspect inlet, barrel, and outlet for accumulation of sediment, rubbish, and vegetal matter. Note condition under Column (c).
- (3) If any settlement or damage to the pipe, barrel, or invert of the drain has occurred, estimate the location and amount. Note particularly if any backfill has come into the pipe or been disturbed. Record observations under Column (d).
- (4) Inspect the concrete portions of the structures for evidence of settlement, cracks, "pop-outs", spalls, abrasive wear, or other deterioration. Record conditions under Column (e).
- (5) Inspect backfill area adjacent to structure for evidence of erosion caused by overflow of the drainage structure and note conditions in Column (f).
- (6) Under Column (g) indicate physical measures that have been taken to correct conditions reported in last inspection, and their condition at time of this inspection.
- (7) Under Column (h) record opinion, if any, of contributory causes for conditions observed, also any observations not covered under other columns.
- (8) A copy of the Inspector's Report is to be mailed to the District Engineer immediately on completion, and a record copy shall be attached to the Superintendent's semi-annual report.

EXHIBIT F

LETTERS OF ACCEPTANCE
BY STATE RECLAMATION BOARD

C
O
P
Y

THE RECLAMATION BOARD
of the
State of California

May 22, 1952

District Engineer
Sacramento District
Corps of Engineers, U.S. Army
P. O. Box 1739
Sacramento 8, California

Dear Sir:

Reference is made to your letter (1) SPKKO-P 824.3 (Sacramento River F.C.P.) 13 December 1951, (2) your letter SPKKO-P 824.3 (Sacramento River F. C. P.) 19 December 1951, and (3) your letter SPKKA 824.3 (Sacramento River F. C. P.) 13 December 1951, transferring 101 reaches of levee and contiguous banks to the Reclamation Board for flood control operation and maintenance.

On January 2, 1952, the Reclamation Board accepted the transfer of the reaches of levee listed in first tabulation attached and did not accept those reaches of levee and contiguous bank in the second tabulation.

Yours very truly
THE RECLAMATION BOARD

By /s/ A.M. Barton

A.M. BARTON
Chief, Engineer and General Manager

Encl.

EXHIBIT F
Sheet 1 of 4

C
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The Board accepted the transfer from the Corps of Engineers, in letters as listed below, the following reaches of levees and their contiguous waterway banks, where applicable, for flood control operation and maintenance, as complete and meeting the requirements of the Sacramento River Flood Control Project:

<u>Date of Letter</u>	<u>Levee Location</u>	<u>Remarks</u>
* * * *	* * * * *	* * *
13 Dec 1951	d (44) East Levee Sacramento River Mile 44.5 to 45.3	Constructed by Assesement No. 5
* * * *	* * * * *	* * *

NOTE: Only item pertaining to operation and Maintenance Manual No. 115 is included in above copy.

EXHIBIT F

Sheet 2 of 4

C
O
P
Y

THE RECLAMATION BOARD
of the
State of California

District Engineer
Sacramento District
U. S. Corps of Engineers
P. O. Box 1739
Sacramento, California

Dear Sir:

Reference is made to your file SPKKO-P (Sacramento River F.C.P.) under date of 31 Dec 1953, relating to transfer of levee on left bank of Sacramento River from River Mile No. 45.3 to 56.1.

The Reclamation Board at their meeting on January 20, 1954, accepted the river levee and contiguous waterway banks on the left or east bank of the Sacramento River as completed under Specification No. 1704 and Contract No. DA-04-167-eng-910 except for the following contiguous waterway banks in those portions where the waterway bank was not made stable:

1. Set back-River Mile 48.35 to 48.8
2. Set back-River Mile 49.48 to 49.65
3. Set back-River Mile 49.78 to 50.35
4. Set back-River Mile 51.2 to 51.5
5. Set back-River Mile 51.75 to 52.0

The foregoing five locations are where bank conditions required levee set back to provide a stable levee. Waterway banks at these locations have not been proven to be stable. The contract did not include work on these banks. At Locations Nos. 4 and 5 above set back is a location of wing dams with accompanying navigation dolphins. Bank caving occurred at Location No. 4 during progress of the construction requiring acquisition of additional right of way at State expense beyond the plans submitted. Some bank protection was placed at the actual bank cave-in. It was noted on January 19, 1954, during the current vise of the river, that drift was collecting on the dolphins and that the banks were actively working due to deflection of current toward these banks.

The Board, at its meeting on January 20, 1954, also adopted a

EXHIBIT F

Sheet 3 of 4

C
O
P
Y

policy not to accept the contiguous banks where unstable conditions exist and the banks are not the proper height.

Yours very truly
THE RECLAMATION BOARD

A.M. BARTON
Chief Engineer and General Manager

By /s/ Donald D. Lemmon

DONALD D. LEMMON
Assistant Secretary

EXHIBIT F

Sheet 4 of 4

THE RECLAMATION BOARD

1416 Ninth Street, Room 455-6
Sacramento, CA 95814-5594
(916) 653-5434 FAX: (916) 653-5805



DEC 27 1993

Colonel John N. Reese
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Colonel Reese:

This is in reference to the Sacramento Urban Area Levee Reconstruction Project.

At its December 20, 1993 meeting, The Reclamation Board acknowledged completion of the reconstruction work of this public safety project. The completed work consists of the construction of approximately 10 miles of seepage cutoff wall within the east levee of the Sacramento River between Miller Park and Morrison Creek, 6 miles of levee berm and drain along the landside slope of the west levee of the Sacramento River in Reclamation District 900, 6 miles of seepage cutoff wall, and 12 miles of levee berm and drain along the landside slope of the east levee of the Sacramento River in Reclamation District 1000, as well as miscellaneous utility relocations and appurtenant work. In addition, the reconstruction work included removal and restoration of four levee sections along the east levee of the Sacramento River in the Greenhaven/Pocket area. Staff from the Corps and the Board inspected the completed work on December 3, 1993.

Attached are copies of letters to the local maintaining agencies notifying them of contract work completion in their area and of their responsibility to continue to operate and maintain their respective areas in accordance with the local cost-sharing agreement between the Board and agencies dated May 10, 1990, and in accordance with Title 33, Code of Federal Regulations, Part 208 - Flood Control Regulations.

The Board understands that modification of the installed berm section along the east levee of the Sacramento River in Reclamation District 1000 to improve drainage and to improve access for maintenance requirements is scheduled to be completed next year in a follow-up contract for the Cache Creek Settling Basin Enlargement Project. Staff will coordinate activities between the Board, the Corps, and RD 1000 to complete the design, cost estimate, and agreements for this work.

Warts 115, 124

Colonel John N. Reese
DEC 27 1993
Page Two

For further information, please contact me at above address or have your staff contact Ricardo Pineda at (916) 327-1596 or Victor Pacheco at (916) 327-1532.

Sincerely,

Rodney A. Magee
for Raymond E. Barsch
General Manager

Attachments

cc: Mr. John P. Saia
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Mr. Larry Johnson
Planning Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

WAS-S 115, 1024

December 17, 1993

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416-9th Street, Room 455-6
Sacramento, California 95814

mod

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the repair of levee erosion at four different sites on the left bank of the Sacramento River. The location of this work is just downstream of the Garcia Bend Park between approximate River Miles 48 and 51. The repair work consisted of minor clearing and grubbing, excavation, embankment construction, placement of stone protection, and erosion control revegetation of the slopes.

The work was completed on December 7, 1993, in accordance with Contract Number DACW05-92-C-0087, Specification Number 9219, and Drawing Number 50-04-5862. This work is a follow up repair work that was needed following the completion of the Greenhaven-Pocket Phase II Contract, completed on March 30, 1993, and transferred to your Board with a letter dated April 30, 1993.

The repaired portion of the levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. This work will be added by amendment to the Operation and Maintenance Manual, Supplement Numbers 115 and 117, Sacramento River Flood Control Project.

Sincerely,

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: The Reclamation Board State of California 1416-9th Street, Room 455-6 Sacramento, California 95814	4. Article Number 792133
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X Pauline Amoro	
7. Date of Delivery DEC 27 1993	

TAVANA/ms
 of Engineers
 er
 KELLY
 WINTON F
 3201 S Street,
 ey, 1416 Ninth
 DENNIS
 JOHNSON
 CHILDS
 SARA
 Stuffs
 REESE
 LU/T0067

81151117

April 30, 1993

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416-9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the Greenhaven-Pocket Phase II work on the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of the construction of approximately ten miles of seepage cutoff slurry wall in the City of Sacramento levee between approximately levee mile 2.1 and Sutterville Road and the Maintenance Area 9 levee between Sutterville Road and approximately 2600 feet south of the Freeport Bridge.

The work was completed on March 30, 1993, in accordance with Contract Number DACW05-91-C-0114, Specification Number 8849, and Drawing Number 50-4-5834.

The levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. The new work will be added by amendment to the Operation and Maintenance Manuals, Supplement Number 115 and 117, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

TAVANA/ms

Sincerely,

KELLY

Laurence R. Sadoff
Colonel, Corps of Engineers
District Engineer

HELM

Copies Furnished:

WINTON

Department of Water Resources, ATTN: G. Snow, 3201 S Street,
Sacramento, California 95816-7017

DENNIS

Department of Water Resources, ATTN: G. Qualley, 1416 Ninth
Street, Sacramento, California 95814

CDR, SPD, ATTN: CESPDCO-O

SAIA

CDR, USACE, ATTN: DAEN-CECW-OM

cc:

KASPRISIN

>Central Valley Sec

PM (Childs)

Prog Dev

F&A Br

Valley Res Ofc

SADOFF

LU/T0042.LT

EXHIBIT F

February 22, 1993

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416-9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the Greenhaven-Pocket Phase I work on the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of the construction of approximately two miles of seepage cutoff wall in the Maintenance Area 9 levee between approximately levee miles 0.51 and 2.51.

The work was completed on December 15, 1992, in accordance with Contract Number DACW05-90-C-0117, Specification Number 8848, and Drawing Number 50-4-5826.

The levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. The new work will be added by amendment to the Operation and Maintenance Manual, Supplement Number 115, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Sincerely,

KELLY/ms

Laurence R. Sadoff
Colonel, Corps of Engineers
District Engineer

HELM

WINTON

Copies Furnished:

Department of Water Resources, ATTN: G. Snow, 3201 S Street, DENNIS
Sacramento, California 95816-7017

Department of Water Resources, ATTN: G. Qualley, 1416 Ninth
Street, Sacramento, California 95814

CHILDS

CDR, SPD, ATTN: CESPd-CO-O
CDR, USACE, ATTN: DAEN-CECW-OM

SAIA

cc:
Central Valley Sec
PM (Childs)
Prog Dev
F&A Br
Valley Res Ofc

SADOFF

LU/K0068

1A

C

CERTIFIED MAIL RETURN RECEIPT REQUESTED

*Cost
file*

March 23, 1990

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416 - 9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed seepage cutoff wall test sites in the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of construction of four separate seepage cutoff wall tests, with each cut off wall test approximately 300 feet long and 25 feet deep between River Miles 48 to 49.

The work was completed on January 22, 1990, in accordance with Contract Number DACW05-90-C-0019, Specification Number 8697 and Drawing Number 50-10-5844.

The levee shall continue to be maintained in accordance with the assurances which your Board provided for the Sacramento River Flood Control Project. This portion of the work will be added by A. SMITH amendment to the Operation and Maintenance Manual, Supplement Number 115, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Sincerely,

cc:
C-O Div
Fld Cntrl Unit
Central Valley Sec
Prog Dev
F&A Br
Valley Res Ofc

Jack A. Le Cuyer
Colonel, Corps of Engineers
District Engineer

Copies Furnished:

DWR, ATTN: G. Snow
DWR, ATTN: G. Qualley
CDR, SPD, ATTN: CESPCK-CO-O
CDR, USACE, ATTN: DAEN-CECW-OM

(1145)

W3-23
ROMPALA *jj*

PK
KELLY

AS
A. SMITH

H
HEEM

FAST

H
DENNIS

mc
NOLAN *ew*

MASON *✓*

LE CUYER *✓*

PC#SACRIVER *20*



Unit 115

" 601 "



February 3, 1987

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416 - 9th Street, Room 455-0
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed emergency repairs to a project levee under authority of Section 5 of the Flood Control Act of August 18, 1941, as amended (Public Law 99, 84th Congress, 1st Session). The work was completed on November 5, 1986, and consisted of restoring portions of the Sacramento River left bank levee in Maintenance Area 9, in accordance with Contract Number DACW05-86-C-0112 and Drawing Number 50-25-5771. This work shall be maintained in accordance with the assurance which your Board provided for the Sacramento River Flood Control Project. This portion of the work will be added by amendment to the Operation and Maintenance Manual, Supplement Numbers 111 and 115, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Mc 2-3
ROMPALA/th

Mc for
KELLY

[Signature]
A. SMITH

[Signature]
HELM

[Signature]
FAST

[Signature]
DENNIS

[Signature]
MCCOLLUM

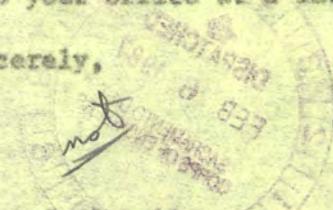
[Signature]
SCHOLL

WANG #6375a

cc:
E.M. (Garrett)
Ops Br
Engr Div (Civ Des Sec D - Pahl)
Valley Res Ofc (Cameron)

Sincerely,

Wayne J. Scholl
Colonel, Corps of Engineers
District Engineer



Copies Furnished:

DWR, ATTN: J. ANGLE
DWR, ATTN: G. SNOW
Commander, South Pacific Division, ATTN: SPDCO-0

Units 111, 115

[Signature]

**DEPARTMENT OF WATER RESOURCES
THE RECLAMATION BOARD**

1416 - 9th Street, Room 335-18
Sacramento, CA 95814
(916) 445-9454



FEB 27 1981

Colonel Paul L. Kavanaugh
District Engineer
Sacramento District
U. S. Army Corps of Engineers
650 Capitol Mall
Sacramento, CA 95814

Dear Sir:

The Reclamation Board at its regular meeting of February 20, 1981 formally accepted the completed flood control work from the District Engineer, for Operation and Maintenance. This work is a portion of Unit No. 33 of the Sacramento River Bank Protection Project, and was transferred to the State of California by your letters of January 19, and February 5, 1981.

The flood control work was constructed in a workmanlike manner and in conformance with File No. 50-4-5347, Specification No. 5269, and Contract No. DACW05-77-C-0101, insofar as could be determined visually, at Sites Miles 36.7, 51.2, 52.2, 55.6 and 56.6 Left Bank, and 56.9 Right Bank, Sacramento River.

Sincerely,


ELDON E. RINEHART
General Manager

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Units 111, 115



*Copies to
[unclear]
[unclear]*



C
O
P
Y

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

C
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REPLY TO
ATTENTION OF

SPKCO-0

5 February 1981

The Reclamation Board
State of California
1416 - 9th Street, Room 335
Sacramento, CA 95814

Gentlemen:

This is in regard to the joint inspection of 5 February 1981 made for the purpose of transferring a portion of the Sacramento River Bank Protection Project (Unit 33), to the State of California for operation and maintenance. The flood control work consists of levee bank sloping and placement of stone protection on the Sacramento River left bank at Site Miles 36.7, 51.2, 52.2, and 55.6. The sites described in the inclosure were completed on 5 February 1981 in accordance with Contract No. DACW05-77-C-0101, Specification No. 5269 and Drawing No. 50-4-5347.

The work was performed under general authority of the Flood Control Act of 1960, 86th Congress, 2nd Session (PL 86-645, 14 July 1960), and Section 2304 (a), Title 10, and now meets the requirements of the Sacramento River Bank Protection Project. Therefore, said work together with the waterway bank contiguous, thereto, is transferred as of 5 February 1981 to the State of California for operation and maintenance.

This portion of the work will be added by amendment to the Operation and Maintenance Manual, Supplements Nos. 111 and 115, Sacramento River Flood Control Project. Copies will be furnished your office at a later date.

Sincerely,

1 Incl
1. Summary Sac Rv Bk
Prot Proj Unit 33

HENRY LEE
Lieutenant Colonel, CE
Acting District Engineer

Copy furnished:
DWR, ATTN: G. Piazza
DWR, ATTN: D. Meixner

EXHIBIT F

Summary of Sacramento River
Bank Protection Project
Portion of Unit 33
Sacramento River
Left Bank

<u>Site Mile</u>	<u>Stone Protection</u>	<u>L.F.</u>
36.7	4+35 to 6+35	200
51.2	17+70 to 23+20	550
52.2	16+00 to 22+75	675
55.6	65+65 to 68+85	320

C
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THE RECLAMATION BOARD
STATE OF CALIFORNIA

C
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Y

Jul 17, 1973

District Engineer
Sacramento District
U.S. Army Corps of Engineers
650 Capitol Mall
Sacramento, CA 95814

Refer to: 4130.60.109A

Dear Sir:

Reference is made to your letter of June 26, 1973, concerning the transfer to the State of California, for operation and maintenance, a portion of the Sacramento River Bank Protection Project, Unit No. 21-A.

The flood control work consisted of selective clearing, levee bank sloping, placement of stone bank protection, the construction of the Garcia Bend Recreation Facilities, and such miscellaneous work as necessary to complete the construction at Site Mile 49.3 Left Bank, Sacramento River.

The work has been completed and was constructed in a workmanlike manner. This work has been constructed in accordance with Drawing No. 50-4-4772, Specification No. 4235, and Contract No. DACW05-73-C-0031, insofar as could be determined visually.

The Reclamation Board at its regular meeting of July 16, 1973, formally accepted from the District Engineer for operation and maintenance, the completed flood control work on the above referenced site.

Sincerely yours,

/s/ A. E. McCollam
A. E. McCOLLAM
Chief Engineer and
General Manager

EXHIBIT F
Sheet 1 of 1

Clark file

SPKCO-0

26 June 1973

The Reclamation Board
State of California
1416 - 9th Street, Room 1335
Sacramento, California 95814

Gentlemen:

The purpose of this letter is to officially transfer a portion of the Sacramento River Bank Protection Project (Unit No. 21A), to the State of California for operation and maintenance. This portion of flood control work consists of placement of approximately 775' of stone protection on the Sacramento River left bank at Site Mile 49.3, and the Garcia Bend Recreation Facility, which includes selective clearing, boat launching ramp and vehicle parking.

The work was completed on 26 June 1973 in accordance with Specification No. 4235, Contract No. DACW05-73-C-0031, Drawing No. 50-4-4772.

The work was performed under the general authority of the Flood Control Act of 1960, 86th Congress, 2nd Session and Section 2304(a), Title 10 and now meets the requirements of the Sacramento River Bank Protection Project. Therefore, said work together with the waterway banks contiguous thereto, is transferred as of 26 June 1973 to the State of California for operation and maintenance.

This portion of the project will be added by amendment to the Operation and Maintenance Manual, Supplement No. 115, Sacramento River Flood Control Project. Copies will be furnished your office at a later date.

Sincerely,

JAMES C. DONOVAN
Colonel, CE
District Engineer

UNW 115

R
ROMPALA/kg
Redac

W
COLEMAN

H
HENSON

M
MCKINSEY
HP
POTAMOS

DONOVAN
D

Copy furnished:

~~DWR~~, ATTN: John Wright & Carl King

~~OCE~~

~~SPD~~

RETURN RECEIPT REQUESTED

CERTIFIED MAIL

C
O
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THE RECLAMATION BOARD
STATE OF CALIFORNIA

C
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Dec 17, 1970

File No. 4130.60.108
Your Contract 71-C-0021

District Engineer
U. S. Army Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

Reference is made to your letter of November 20, 1970, concerning transfer to the State of California of a portion of the Sacramento River Bank Protection Project (Unit No. 19) for maintenance and operation. The transferred sites were as follows:

Sacramento River, Mile 53.7, Left Bank

This work was constructed in conformance with specification No. 3427, Contract No. DACW05-71-C-0021, Drawing No. 50-4-4378 and the work to be done on Sacramento River, Left Bank.

The Reclamation Board at its meeting of December 3, 1970, formally accepted the above-referred to work for operation and maintenance.

Sincerely yours,

/s/ A. E. McCollam
A. E. McCOLLAM
Chief Engineer and General Manager

EXHIBIT F

20 November 1970

The Reclamation Board
State of California
1416 - 9th Street, Room 1335
Sacramento, California 95814

Gentlemen:

Reference is made to the joint inspection of 18 November 1970, made for the purpose of transferring a portion of the Sacramento River Bank Protection Project Work (Unit #19), to the State of California for operation and maintenance. The flood control work consisted of approximately 1200 feet of levee enlargement and placement of about 2000 feet of stone bank protection on the Sacramento River left bank at Site Mile *53.7*. Selective clearing, compatible with adopted levee maintenance standards, was performed on the levee slopes. The work was completed on 18 November 1970 in accordance with Specification No. 3427, Contract No. DACW05-71-C-0021, Drawing No. 50-4-4378.

The work was performed under the general authority of the Flood Control Act of 1960, 86th Congress, 2nd Session and Section 2304(a), Title 10 and now meets the requirements of the Sacramento River Bank Protection Project. Therefore, said work together with the waterway banks contiguous thereto, is transferred as of 18 November 1970 to the State of California for operation and maintenance.

This portion of the project work will be added by amendment to the Operation and Maintenance Manual, Supplement No. 115, Sacramento River Flood Control Project. Copies will be furnished your office at a later date.

Sincerely yours,

W
WAIT/pnp

W
COLEMAN

JAMES H. HIGMAN
Lieutenant Colonel, CE
Acting District Engineer

H
HELSON

H
HART

JH
HIGMAN

Copy furnished:
DWR, ATTN: John Wright
DCE
SPD

Unit 115

cc: Engr Div-LevChan; Engr Div-ProgDev; Valley; F&A(Cordano)

alicia H
dh
TO JACK O 23 NOV 70

SPKKO-P 824.3 (Sac. Riv. F.C.P.)

*Prepared
29 Dec. 1953*

*Mailed
31 Dec. 1953*

The Reclamation Board
State of California
1100 "O" Street
Sacramento, California

Gentlemen:

Reference is made to District Engineer's letter dated 22 October 1953, suggesting a joint inspection of two sections of levee, pertaining to the Sacramento River Flood Control Project, for the purpose of transferring them to the jurisdiction of the State of California for operation and maintenance. Reference is also made to joint inspection made of these two sections of levee on 4 December 1953.

The levee sections referred to above have been completed recently in accordance with Specifications No. 1704 and drawings No. 50-4-2907, 50-4-2908, and 50-4-2909, under Contract No. DA-04-167-eng-910. They are located along the left bank of the Sacramento River between Mile 45.3 and 56.1, form an integral part of the Sacramento River Flood Control Project, and meet with the requirements of the project. Therefore, said levee sections together with the waterway banks contiguous thereto are hereby transferred to the State of California for operation and maintenance. The location of these sections of levee is further described as follows:

<u>Location</u>	<u>Description</u>	<u>River Mile</u>
1.	Left Bank-Sacramento River	From 45.3 to 55.4
2.	Left Bank-Sacramento River	From 55.5 to 56.1

*Unit No. 376
Unit No. 377*

In this connection your attention is invited to the fact that the section of levee from Mile 55.4 to 55.5, joining these two sections, was transferred to the State of California on 13 December 1951, therefore action by the Board, at this time, should include the acceptance of the levee in this reach of the river continuously from Mile 45.3 to 56.1 to cover all three sections.

Note: See Bardale "Resume of Reclamation Board Meeting" dated 20 January 1954, under Paragraph 11.

Units 15+117

*Posted
Letter No. 49*

376 and 377

DeArrieta

12/29/53

SPKKO-P 824.3 (Sac. Riv. F.C.P.)
The Reclamation Board

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations, inclosed herewith, which have been prescribed by the Secretary of the Army pursuant to Section 3 of the Act of Congress, approved 22 June 1936, as amended and supplemented. As provided under Paragraph 208.10 (10) of these regulations, a maintenance manual covering these sections of levee is in process of preparation and will be furnished to you upon completion.

A copy of this letter is being transmitted to the State Engineer.

1 Incl

- 1. Flood Control Regulations

Copy Furnished:

State Engineer
Dept. of Public Works
1120 N Street
Sacramento, California

cc: O.C.E. w/o incl
So. Pac. Div. w/o incl
Engr. Div. w/o incl
Sacto. Proj. Ofc. w/o/ incl
C. DeArrieta (2)

376 and 377

C. de ARRIETA

REGISTERED MAIL
Return Receipt
Requested

Letter No. 13

①

⑬

13 DEC 1951

SPEKA 824.5(Sac.Riv. F.C.P.)

The Reclamation Board
State of California
1100 "O" Street
Sacramento 14, California

Accepted by the Recl. Board:

-  Completed by Contract by C.of E.
-  Const. by Local Interests 203-248-250-285
-  No maint. is required. 204

Not Accepted

 No capable of separate maint.

Gentlemen:

Reference is made to your letter of 2 July 1951 acknowledging that certain reaches of the levees of the Sacramento River Flood Control Project and the waterway bank contiguous to said levee reaches meet the requirements of the project as authorized prior to the Flood Control Act of 1944.

The levee reaches in question are located as follows:

a. Sherman Island levee of Three Mile Slough.

-  (1) State Highway Bridge to Sacramento River.  101
-  (2) From the State Highway Bridge, 1300 feet toward the San Joaquin River.  101
-  (3) From a point 3900 feet toward the San Joaquin River from the State Highway Bridge to a point 6900 feet toward the San Joaquin River from the State Highway Bridge. 101
-  (4) From a point 10,500 feet toward the San Joaquin River from the State Highway Bridge to the San Joaquin River. 101

 b. Plug across Seven Mile Slough near Three Mile Slough.  102

 c. Sherman Island levee of Seven Mile Slough and Three Mile Slough from the Plug across Seven Mile Slough southwesterly to Sacramento River.  102

Items 199 to 295

⑬

SPRKA 824.3 (Sac. Riv. F.C.P.)
The Reclamation Board

d. Easterly levee of the Sacramento River.

Reach
19

- 205 (1) From a point 23,650 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 21,950 feet downstream from Three Mile Slough. 101
- 206 (2) From a point 14,850 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 7,700 feet downstream from Three Mile Slough. 101
- 207 (3) From a point 6,300 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 3,450 feet downstream from Three Mile Slough. 101
- 208 (4) From a point 5,500 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 700 feet downstream from Three Mile Slough. 101
- 209 (5) From a point 500 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to Three Mile Slough. 101
- 210 (6) Three Mile Slough to Mile 10.58. 102
- 211 (7) Mile 10.71 to Mile 13.1. 102
- 212 (8) Mile 13.59 to Mile 14.5 (Junction Point). 102
- 213 (9) Mile 14.5 (Junction Point) to Mile 15.0. 102
- 214 (10) Mile 15.1 to Mile 16.9. 102
- 215 (11) Mile 16.95 to Mile 17.5. Brannan 102
- 216 (12) Mile 17.6 to Mile 18.0. Andrus 103
- 217 (13) Mile 18.15 to Mile 18.5. " 103
- 218 (14) Mile 18.5 to Mile 21.5. v o " 103
- 219 (15) Mile 21.6 to Mile 26.3. v o " 103
- 220 (16) Mile 26.4 to Georgiana Slough. v o 103
- 221 (17) Mile 26.5 to Mile 27.55. v o III
- 222 (18) Mile 27.7 to Mile 28.5. III

2 X

Reach
19

SPKKA 824.3(Sac. Riv. F.O.P.)
The Reclamation Board

d. Easterly levee of the Sacramento River. (cont'd)

- ✓ 223 (19) Mile 28.6 to Mile 28.9.
- ✓ 224 (20) Mile 29.1 to Mile 29.9.
- ✓ 225 (21) Mile 30.25 to Mile 30.55.
- ✓ 226 (22) Mile 30.75 to Mile 31.5.
- ✓ 227 (23) Mile 31.8 to Mile 32.2.
- ✓ 228 (24) Mile 32.4 to Mile 33.0.
- ✓ 229 (25) Mile 33.1 to Mile 34.45.
- ✓ 230 (26) Mile 34.65 to Mile 34.95.
- ✓ 231 (27) Mile 35.1 to Mile 36.38.
- ✓ 232 (28) Mile 35.38 to Mile 35.74. ✓
- ✓ 233 (29) Mile 35.85 to Mile 36.55.
- ✓ 234 (30) Mile 36.5 to Mile 36.75.
- ✓ 235 (31) Mile 36.85 to Mile 37.15.
- ✓ 236 (32) Mile 37.3 to Mile 37.85.
- ✓ 237 (33) Mile 38.0 to Mile 38.3.
- ✓ 238 (34) Mile 38.5 to Mile 39.15.
- ✓ 239 (35) Mile 39.75 to Mile 39.9.
- ✓ 240 (36) Mile 40.0 to Mile 40.15.
- ✓ 241 (37) Mile 40.25 to Mile 40.35.
- ✓ 242 (38) Mile 40.5 to Mile 40.8.
- ✓ 243 (39) Mile 41.2 to Mile 41.6.
- ✓ 244 (40) Mile 41.75 to Mile 42.35.
- ✓ 245 (41) Mile 42.5 to Mile 43.05.

Head 17



SPKKA 324.3 (Sac. Riv. F. O. P.)
The Reclamation Board

d. Easterly levee of the Sacramento River. (cont'd)

Reach 17

- ✓ (246) (42) Mile 43.3 to Mile 45.55. } III
- ✓ (247) (43) Mile 45.55 to Mile 44.2. }
- ✓ (248) (44) Mile 44.5 to Mile 45.3. x D 115
- ✓ (249) (45) Mile 55.4 to Mile 55.5. 115
- ✓ (250) (46) Mile 55.1 to American River. x D 118.1
- (251) (47) West levee of Sutter Bypass to Mile 87.5. ^{84.5}
- (252) (48) Mile 91.4 to Mile 92.1.
- (253) (49) Mile 92.6 to Mile 92.7.
- (254) (50) Mile 92.9 to Mile 94.0. ✓ ○
- (255) (51) Mile 96.6 to Mile 97.4.
- (256) (52) Mile 97.5 to Mile 97.7. ✓ ○
- (257) (53) Mile 97.7 to Mile 97.8.
- (258) (54) Mile 99.9 to Mile 102.5. ✓ ○
- (259) (55) Mile 103.45 to Mile 103.7.
- (260) (56) Mile 103.8 to Mile 104.2.
- (261) (57) Mile 104.2 to Mile 104.7. ✓ ○
- (262) (58) Mile 104.7 to Mile 105.55.
- (263) (59) Mile 110.9 to Mile 111.5. ✓ ○
- (264) (60) Mile 118.4 to Mile 118.6 (South End Tisdale Weir).
- (265) (61) At Tisdale Weir. ✓ ○ 150

Reach 1A



(266) e. Northerly levee of Miner Slough from a point 1,200 feet easterly from the easterly levee of Yolo Bypass to a point 4,400 feet easterly from the easterly levee of Yolo Bypass.

SPKHA 324.3 (Sec. Riv. F.O.P.)
The Reclamation Board

Letter No. 13

13

f. Westerly levee of Sutter Slough. 113

Ranch 36

- ✓ (267) (1) Mile 26.5 to Mile 26.7.
- ✓ (268) (2) Mile 27.05 to Mile 27.2.
- ✓ (269) (3) Mile 27.3 to Elkhorn Slough.

g. Westerly levee of Elkhorn Slough.

- ✓ (270) (1) Sutter Slough to Station "A" 431+00.
- ✓ (271) (2) Station "A" 429+50 to Station "A" 405+00.
- ✓ (272) (3) Station "A" 403+50 to Station "A" 344+75.
- ✓ (273) (4) Station "A" 340+75 to Station "A" 326+00.
- ✓ (274) (5) Station "A" 70+50 to Station "A" 60+50.

h. Westerly levee of the Sacramento River.

Ranch 3

- ✓ (275) (1) Mile 119.2 to Mile 119.7.
- ✓ (276) (2) Mile 131.4 to Mile 131.8.
- ✓ (277) (3) Mile 133.1 to Mile 133.3. ✓ 0
- ✓ (278) (4) Mile 134.0 (Meridian Bridge) to Mile 134.3.
- ✓ (279) (5) Mile 134.3 to Mile 140.6. ✓ 0
- ✓ (280) (6) Mile 140.6 to Mile 141.3.
- ✓ (281) (7) Mile 141.3 to Mile 142.0. ✓ 0
- ✓ (282) (8) Mile 142.0 to Mile 142.3.
- ✓ (283) (9) Mile 142.3 to Mile 142.7 (Union Oil Co. Wharf). ✓ 0

AX (284) i. Easterly levee of Georgiana Slough from the S.P.R.R. stream 22,500 feet. ✓ 103

XB

(285) j. Northerly levee of the American River and the back levee of Reclamation District No. 1000 from Jibboom Street Bridge to El Camino Avenue. 125 x D

13

SPEKA 824.3(Sac.Riv.F.C.P.)
The Reclamation Board

k. Northerly levee of Natamas Cut.

- 48 ✓ (286) (1) From Sacramento River easterly to a point 1,550 feet easterly from the Garden Highway Bridge. 142
- ✓ (287) (2) From a point 2,550 feet easterly from the Garden Highway Bridge to a point 3,250 feet easterly from the Garden Highway Bridge. 142
- ✓ (288) l. Back levee of Reclamation District No. 2068 along the S.N.R.R. from the County Road northeasterly 7,200 feet to high ground. 109
- ✓ (289) m. Southerly levee of North Dry Creek near Wheatland from high ground to the W.P.R.R. Interceptor. 145
- ✓ (290) n. Easterly levee of the W. P. R. R. Interceptor from North Dry Creek southerly to Bear River. 145
- ✓ (291) o. Northerly levee of Bear River from the W. P. R. R. Interceptor easterly to South Dry Creek. 145
- ✓ (292) p. Northerly levee of South Dry Creek near Wheatland from Bear River easterly to high ground, including the Singh saddle closure levee. 145
- ✓ (293) q. Southerly levee of Bear River from the W.P.R.R. easterly to a point 5,400 feet easterly from Carlin Bridge. 141.1
- ✓ (294) r. Southerly levee of South Dry Creek near Wheatland from Bear River easterly 1.86 miles. 144
- ✓ (295) s. Northerly levee of Bear River from South Dry Creek easterly to a point 4,000 feet easterly from Carlin Bridge. 144

The records of this office show that your Board has accepted the levees and/or works covered by Items d.(14), d.(15), d.(16), d.(29), d.(50), d.(52), d.(54), d.(57), d.(59), d.(61), h.(3), h.(5), h.(7), h.(9), i., m., n., o., p., q., r., and s., above, as complete. Accordingly the waterway bank contiguous to said Items is hereby transferred to the State of California for maintenance and operation.

The levee covered by Items a. to c., inclusive, d.(1) to d.(13), inclusive, d.(17), to d.(27), inclusive, d.(29), to d.(49), inclusive, d.(51), d.(53), d.(55), d.(56), d.(58), d.(60), e., f., g., h.(1), h.(2), h.(4), h.(6), h.(8) and j. to l., inclusive, above, although complete has not been formally transferred as contemplated by the Project documents.

Letter No. 13

13

SPKKA 624.3(Sac.Riv.F.C.P.)
The Reclamation Board

Accordingly the levee covered by said items, together with the waterway bank contiguous thereto, is hereby transferred to the State of California for maintenance and operation.

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations which have been prescribed by the Secretary of the Army pursuant to Section 3 of the Act of Congress approved 22 June 1936, as amended and supplemented. As provided under paragraph 208.10(10) of these regulations, a maintenance manual covering these works is in process of preparation and will be furnished your Board upon completion.

A copy of this letter is being transmitted to the State Engineer.

FOR THE DISTRICT ENGINEER:

Sincerely yours,

Copy Furnished:
Office, Chief of Engrs.
So. Pac. Div. Engr.
State Engineer
Engr. Div. (2)
C. de Arrieta

H. R. Reifsnyder
Lt. Colonel, Corps of Engineers
Executive Officer

EXHIBIT G

SUGGESTED SEMI-ANNUAL REPORT FORM

CORPS OF ENGINEERS, U. S. ARMY
Office of the District Engineer
SACRAMENTO DISTRICT
Wright Bldg., 1209-8th St.
Sacramento, California

TO: The District Engineer
Sacramento District
Corps of Engineers
1209-8th Street
Sacramento, California

(1 May 19____)
(1 Nov. 19____)

Dear Sir:

The semi-annual report for the period (1 May 19____ to 31 October 19____)
(1 November 19____ to 30 April 19____) Sacramento River Flood Control Project
Unit No. 115, the east levee of the Sacramento River from Sutterville Road
to the North Boundary of R.D. No. 744, of the Sacramento River Flood Control
Project is as follows:

a. The physical condition of the protective works is indicated by the
inspector's report, copies of which are inclosed, and may be summarized as
follows:

(Superintendent's summary of conditions)

It is our intention to perform the following maintenance work in
order to repair or correct the conditions indicated:
(Outline the anticipated maintenance operations for the following
6 months.)

b. During this report period, major high water stages (water level at
25.0 on the U. S. Weather Bureau recording gage at the "I" Street Bridge)
occurred on the following dates:

<u>Dates</u>	<u>Maximum Elevation</u>
_____	_____
_____	_____
_____	_____

Comments on the behaviour of the protective works during such high water periods are as follows:

(Superintendent's log of flood observations)

During the high water stages when the water leve reached a height of _____, on the gage or excess thereof (dates) _____, it was necessary to organize and carry out flood operations as follows:

(See Maintenance Manual_____.)

c. The inspections have indicated (no) or (the following) encroachments or trespasses upon the project right-of-way.

d. (No) (_____) permits have been issued for (the following) improvements or construction within the project right-of-way.

Executed copies of the permit documents issued are transmitted for your files.

e. The status of maintenance measures, indicated in the previous semi-annual report as being required or as suggested by the representatives of the District Engineer, is as follows:

(Statement of maintenance operations, item by item with percent completion.)

f. The fiscal statement of the Superintendent's operations for the current report period is as follows:

	<u>Labor</u>	<u>Material</u>	<u>Equipment</u>	<u>Overhead</u>	<u>Total</u>
1. Inspection					
2. Maintenance					
3. Flood fighting operations					
TOTAL					

Respectfully Submitted,

Superintendent of Works

February 22, 1993

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416-9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the Greenhaven-Pocket Phase I work on the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of the construction of approximately two miles of seepage cutoff wall in the Maintenance Area 9 levee between approximately levee miles 0.51 and 2.51.

The work was completed on December 15, 1992, in accordance with Contract Number DACW05-90-C-0117, Specification Number 8848, and Drawing Number 50-4-5826.

The levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. The new work will be added by amendment to the Operation and Maintenance Manual, Supplement Number 115, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Sincerely,

KELLY/ms

Laurence R. Sadoff
Colonel, Corps of Engineers
District Engineer

HELM

WINTON

Copies Furnished:

Department of Water Resources, ATTN: G. Snow, 3201 S Street, DENNIS
Sacramento, California 95816-7017

Department of Water Resources, ATTN: G. Qualley, 1416 Ninth
Street, Sacramento, California 95814 CHILD'S

CDR, SPD, ATTN: CESP-D-CO-O

CDR, USACE, ATTN: DAEN-CECW-OM

SAIA

cc:

> Central Valley Sec
PM (Childs)
Prog Dev
F&A Br
Valley Res Ofc

SADOFF 1A

LU/K0068

April 30, 1993

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416-9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the Greenhaven-Pocket Phase II work on the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of the construction of approximately ten miles of seepage cutoff slurry wall in the City of Sacramento levee between approximately levee mile 2.1 and Sutterville Road and the Maintenance Area 9 levee between Sutterville Road and approximately 2600 feet south of the Freeport Bridge.

The work was completed on March 30, 1993, in accordance with Contract Number DACW05-91-C-0114, Specification Number 8849, and Drawing Number 50-4-5834.

The levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. The new work will be added by amendment to the Operation and Maintenance Manuals, Supplement Number 115 and 117, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

TAVANA/ms

Sincerely,

KELLY

Laurence R. Sadoff
Colonel, Corps of Engineers
District Engineer

HELM

Copies Furnished:

WINTON

Department of Water Resources, ATTN: G. Snow, 3201 S Street,
Sacramento, California 95816-7017

DENNIS

Department of Water Resources, ATTN: G. Qualley, 1416 Ninth
Street, Sacramento, California 95814

CDR, SPD, ATTN: CESPDP-CO-O

SAIA

CDR, USACE, ATTN: DAEN-CECW-OM

cc:

KASPRISIN

>Central Valley Sec
FM (Childs)
Prog Dev
F&A Br
Valley Res Ofc

SADOFF

LU/T0042.LT

EXHIBIT F

THE RECLAMATION BOARD

1416 Ninth Street, Room 455-6
Sacramento, CA 95814-5594
(916) 653-5434 FAX: (916) 653-5805



FEB 15 1994

Colonel John N. Reese
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Colonel Reese:

This is in reference to additions to the supplements of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project for Units 115, 117, and 124. These additions address the reconstruction work completed as part of the Sacramento Urban Area Levee Reconstruction Project.

The Reclamation Board requests the additions to the Standard Operation and Maintenance Manual for Item C, subparagraph 7, Paragraph 2.04, Miscellaneous Facilities, within Section II be modified. The requirement to begin well observations 48 to 72 hours prior to the river stage being forecasted to reach 20 feet is incompatible with current practice. Reclamation District 1000, local maintaining agency for unit 124, and the City of Sacramento, local maintaining agency for unit 117, commence highwater inspections when the "I" Street gage on the Sacramento River measures approximately 25 feet. The Department of Water Resources' Sacramento Maintenance Yard, local maintaining agency for unit 115, commences highwater inspections when the "I" Street gage measures at least 23 feet and the Sacramento River is forecasted to rise. Therefore, to combine the highwater inspections and observation well readings into a more efficient task, the Board recommends that observation well readings begin once the gage at "I" Street reaches 25 feet and readings shall be taken as close to 12-hour intervals as possible. The Board and local maintaining agencies believe the following draft of Item C is reasonable and within their ability to perform:

(c) Highwater monitoring of the observation wells should begin when the river stage at the I Street gage is forecasted to reach an elevation of 25 feet and should continue until the river stage recedes below elevation 25 as conditions permit. Observations should be made as reasonably close to 12-hour intervals as possible.

Colonel John N. Reese
FEB 15 1994
Page Two

For further information, please contact me at (916) 653-5434
or have your staff contact Ricardo Pineda at (916) 327-1596 or
Victor Pacheco at (916) 327-1532.

Sincerely,

Original signed by
Raymond E. Barsch

Raymond E. Barsch
General Manager

cc: Mr. John P. Saia
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Mr. Larry Johnson
Programs and Project Management
Division
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Memorandum

*File MA 9
O & M Manual*

Date : MAR 2 - 1994

To : David N. Kennedy, Director
Department of Water Resources
1416 Ninth Street, Room 1115-1
Sacramento, California 95814

From : THE RECLAMATION BOARD

Subject : Sacramento River Flood Control Project - Additions to the Supplements of the Standard Operation and Maintenance Manual

Attached are copies of the additions to the supplements of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project. These additions are for part of the completed Sacramento Urban Area Levee Reconstruction Project. The requirements of Item C, subparagraph 7, Paragraph 2.04, Miscellaneous Facilities, have been discussed with your staff as well as other local maintaining agencies. As a result of these discussions, a letter (copy attached) requesting modification of this section was sent to the U.S. Army Corps of Engineers. Until a response is received from the Corps, the Board recommends compliance with the additions. The Board will forward the Corps' response upon receipt.

The Department of Water Resources, as local maintaining agency, is responsible for the data collection and preparation of an annual report on the observation wells for Unit 115. The Board requests that DWR, on behalf of the Board, assess the cutoff wall performance during the preparation of the annual report. The familiarity of DWR staff with the physical features and collected data would provide a more accurate performance assessment.

For additional information, please contact me at (916) 653-5434 or have your staff contact Victor Pacheco at (916) 327-1532.

Original signed by
Raymond E. Barsch

Raymond E. Barsch
General Manager

Attachments

- cc: Carroll Hamon
- George Qualley
- Larry Lee
- Gene Snow
- James Coe ✓
- Bill Helms
- Al Romero

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT

UNIT NO. 115

EAST LEVEE OF THE SACRAMENTO RIVER
FROM
SUTTERVILLE ROAD TO
NORTH BOUNDARY OF RECL. DIST. NO. 744

REVISION OR ADDITIONS	DATE
Paragraph 1-04 - - Add subparagraph h.	August 1993
Paragraph 1-04 - - Add subparagraph i	August 1993
Paragraph 2-04 - - Add subparagraph (7)	August 1993
EXHIBIT A-2 - - - Add Location Map of Observation Wells	August 1993
EXHIBIT A-3 - - - Add Location Map of Observation Wells	August 1993
EXHIBIT B - - - - - Add Drawing No. 50-4-5826	August 1993
EXHIBIT B - - - - - Add Drawing No. 50-4-5834	August 1993
EXHIBIT F - - - - - Add copy of letter of transfer dated 22 Feb 93	August 1993
EXHIBIT F - - - - - Add copy of letter of transfer dated 30 Apr 93	August 1993

SECTION I

1-04.

h. Construction of a slurry cutoff wall in the Maintenance Area 9 levee between approximately levee miles 0.51 and 2.51. Observation wells were placed at various location along the slurry cutoff wall (EXHIBIT A-2). This work was accomplished under Contract No. DACW05-90-C-0117, Specification No. 8848, Drawing No. 50-4-5826.

i. Construction of a slurry cutoff wall in the Maintenance Area 9 levee between approximately levee mile 2.51 and 2600 feet south of the Freeport Bridge. Observation wells were placed at various location along the slurry cutoff wall (EXHIBIT A-3). This work was accomplished under Contract No. DACW05-91-C-0114, Specification No. 8849, Drawing No. 50-4-5834.

SECTION II

2-04. Miscellaneous Facilities.

(7) Slurry Cutoff Wall and Observation Wells:

(a) All observation well readings shall be referenced from the top of the PVC riser pipe.

(b) Observation well readings should be collected monthly for at least a one year period and plotted along with the river stage. After the first year of data collection, readings should only be collected during high river stage.

(c) High water monitoring of the observation wells should begin 48 to 72 hours before river stage is forecasted to be at elevation 20 and continue until 48 to 72 hours following the return of river stage to that elevation. Observations should be made at 12 hour intervals.

(d) If any of the following conditions are noted, they should be reported immediately to the Chief, Emergency Management Division (916-557-6919), and the Chief, Geotechnical Branch (916-557-7197), U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814

- (1) Visual signs of levee distress, such as cracking, sloughing, settlement, etc.
- (2) Seepage emerging at or above the landside levee toe.
- (3) Saturation and/or development of boils near the landside toe.
- (4) Sudden or rapid rise of water level in the landside observation wells (i.e., ≥ 6 inches in 12 hours)

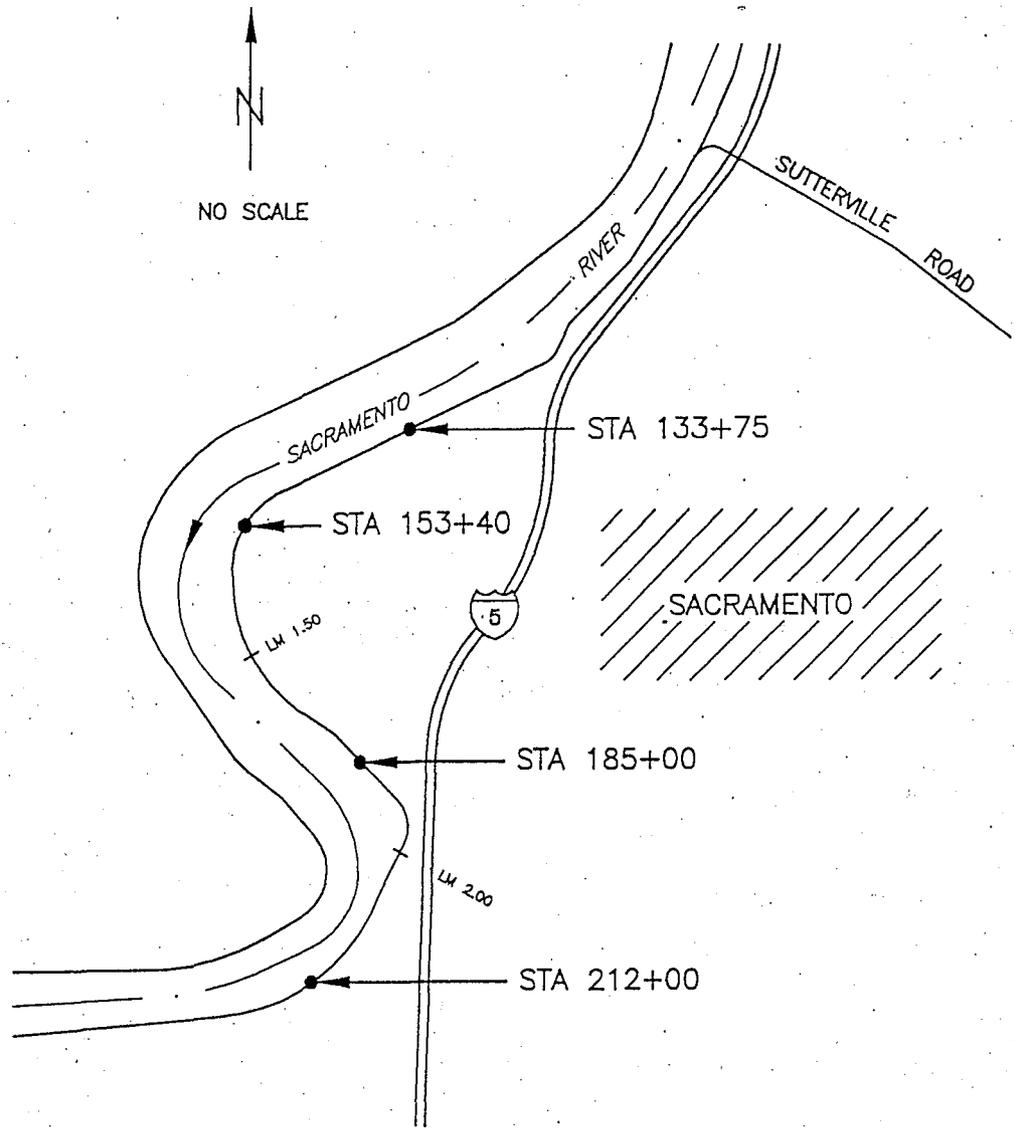
(e) The data should be tabulated and furnished in report form annually before 1 September of each year to the Chief, Geotechnical Branch, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814.

(f) The General Manager, Reclamation Board, shall be responsible for performing or having performed evaluation of the adequacy of the cutoff wall performance to include comparison with expected or previous years cutoff wall performance. This analysis will be included in the annual data report and will include a statement of the adequacy of cutoff wall performance and any recommendations, such as placement of additional observation wells.

(g) Maintenance of the observation wells shall include determining individual sediment levels annually, by measuring from the top of the PVC riser pipe to the sediment in the slotted interval. Ensure that the well is capped between readings and the cap is vented with a 1/8-inch diameter air hole. No fluids such as antifreeze or preparations designed to lubricate the inside of the riser pipe shall be introduced into any observation well. These types of fluids can damage the water tight joints, promote clogging of the slotted interval, and introduce contaminated into the groundwater. Any well observed with signs of tampering or vandalism should be measured for depth and checked for obstructions.

EXHIBIT B

<u>File No.</u>	<u>Title</u>
50-4-5826	Sacramento Urban Area Levee Reconstruction Project, Greenhaven-Pocket Phase I in 18 sheets
50-4-5834	Sacramento Urban Area Levee Reconstruction Project, Greenhaven-Pocket Phase II in 59 sheets



LEGEND

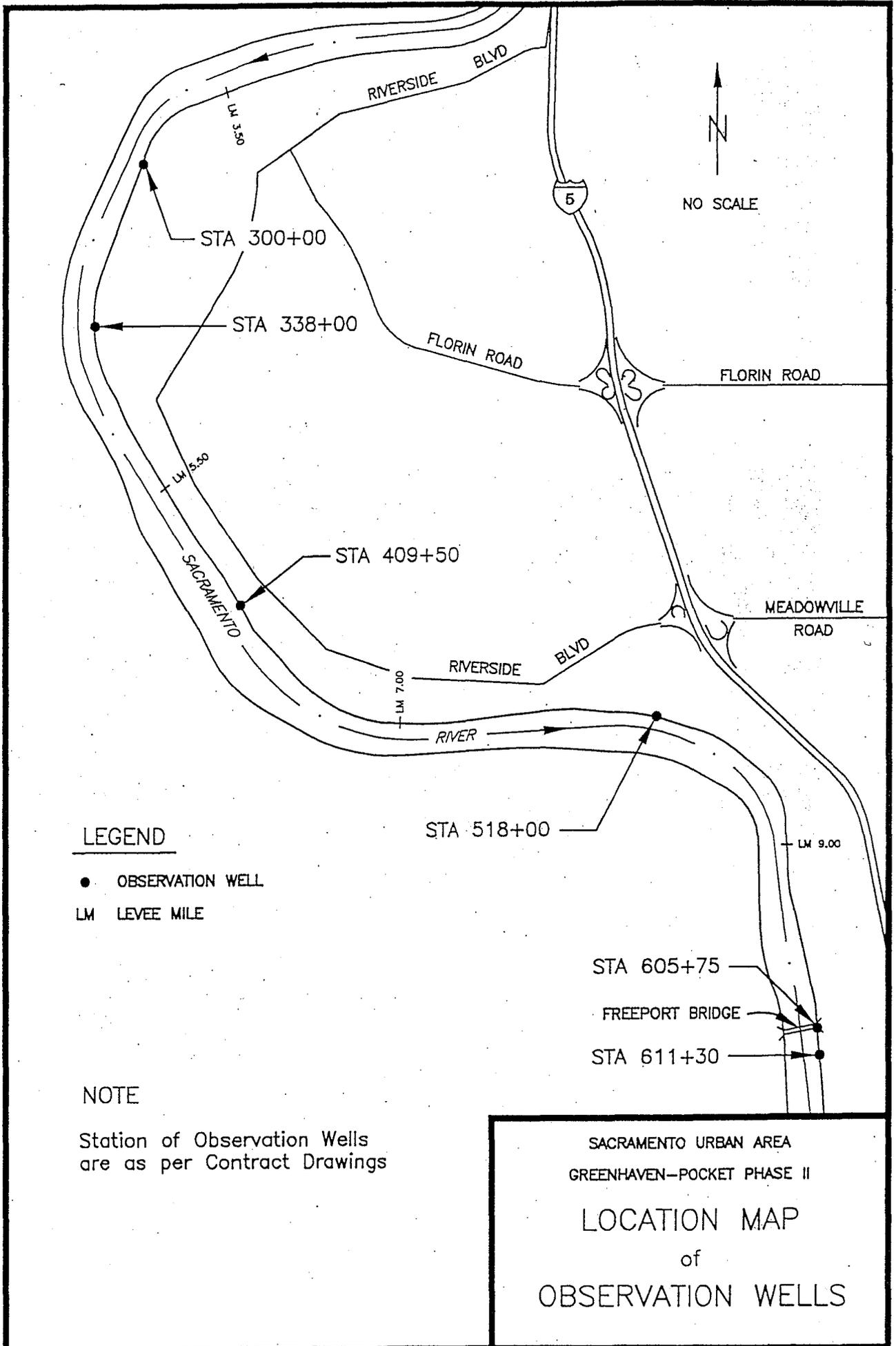
- OBSERVATION WELL
- LM LEVEE MILE

NOTE

Station of Observation Wells
are as per Contract Drawings

SACRAMENTO URBAN AREA
GREENHAVEN-POCKET PHASE I

LOCATION MAP
of
OBSERVATION WELLS



LEGEND

- OBSERVATION WELL
- LM LEVEE MILE

NOTE

Station of Observation Wells are as per Contract Drawings

SACRAMENTO URBAN AREA
 GREENHAVEN-POCKET PHASE II
LOCATION MAP
 of
OBSERVATION WELLS

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT

UNIT NO. 117

EAST LEVEE OF THE SACRAMENTO RIVER
THROUGH THE CITY OF SACRAMENTO
FROM
TOWER BRIDGE TO SUTTERVILLE ROAD

REVISION OR ADDITIONS	DATE
Paragraph 1-03 - - Add subparagraph b.	August 1993
Paragraph 2-04 - - Add subparagraph (4)	August 1993
EXHIBIT A-2 - - - Add Location Map of Observation Wells	August 1993
EXHIBIT B - - - - - Add Drawing No. 50-4-5834	August 1993
EXHIBIT F - - - - - Add copy of letter of transfer dated 30 Apr 93	August 1993

SECTION I

1-03.

b. Construction of a slurry cutoff wall in the City of Sacramento levee between Miller Park and Sutterville Road. Observation wells were placed at various location along the slurry cutoff wall (EXHIBIT A-2). This work was accomplished under Contract No. DACW05-91-C-0114, Specification No. 8849; Drawing No. 50-4-5834.

SECTION II

2-04. Miscellaneous Facilities.

(7) Slurry Cutoff Wall and Observation Wells:

(a) All observation well readings shall be referenced from the top of the PVC riser pipe.

(b) Observation well readings should be collected monthly for at least a one year period and plotted along with the river stage. After the first year of data collection, readings should only be collected during high river stage.

(c) High water monitoring of the observation wells should begin 48 to 72 hours before river stage is forecasted to be at elevation 20 and continue until 48 to 72 hours following the return of river stage to that elevation. Observations should be made at 12 hour intervals.

(d) If any of the following conditions are noted, they should be reported immediately to the Chief, Emergency Management Division (916-557-6919), and the Chief, Geotechnical Branch (916-557-7197), U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814.

- (1) Visual signs of levee distress, such as cracking, sloughing, settlement, etc.
- (2) Seepage emerging at or above the landside levee toe.
- (3) Saturation and/or development of boils near the landside toe.
- (4) Sudden or rapid rise of water level in the landside observation wells (i.e., ≥ 6 inches in 12 hours)

(e) The data should be tabulated and furnished in report form annually before 1 September of each year to the Chief, Geotechnical Branch, U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, CA 95814.

(f) The General Manager, Reclamation Board, shall be responsible for performing or having performed evaluation of the adequacy of the cutoff wall performance to include comparison with expected or previous years cutoff wall performance. This analysis will be included in the annual data report and will include a statement of the adequacy of cutoff wall performance and any recommendations, such as placement of additional observation wells.

(g) Maintenance of the observation wells shall include determining individual sediment levels annually, by measuring from the top of the PVC riser pipe to the sediment in the slotted interval. Ensure that the well is capped between readings and the cap is vented with a 1/8-inch diameter air hole. No fluids such as antifreeze or preparations designed to lubricate the inside of the riser pipe shall be introduced into any observation well. These types of fluids can damage the water tight joints,

promote clogging of the slotted interval, and introduce
contaminates into the groundwater. Any well-observed with signs
of tampering or vandalism should be measured for depth and
checked for obstructions.

EXHIBIT B

File No.

Title

50-4-5834

Sacramento Urban Area Levee Reconstruction
Project, Greenhaven-Pocket, Phase II in
59 sheets

April 30, 1993

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416-9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed the Greenhaven-Pocket Phase II work on the Sacramento River left bank levee under authority of the Flood Control Act of 1917 as amended and modified. The work consisted of the construction of approximately ten miles of seepage cutoff slurry wall in the City of Sacramento levee between approximately levee mile 2.1 and Sutterville Road and the Maintenance Area 9 levee between Sutterville Road and approximately 2600 feet south of the Freepoint Bridge.

The work was completed on March 30, 1993, in accordance with Contract Number DACW05-91-C-0114, Specification Number 8849, and Drawing Number 50-4-5834.

The levee will continue to be maintained in accordance with the Local Cooperation Agreement between the Department of the Army and the State of California dated June 14, 1990. The new work will be added by amendment to the Operation and Maintenance Manuals, Supplement Number 115 and 117, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

TAVANA/ms

Sincerely,

KELLY

Laurence R. Sadoff
Colonel, Corps of Engineers
District Engineer

HELM

Copies Furnished:

WINTON

Department of Water Resources, ATTN: G. Snow, 3201 S Street,
Sacramento, California 95816-7017

DENNIS

Department of Water Resources, ATTN: G. Qualley, 1416 Ninth
Street, Sacramento, California 95814

SAIA

CDR, SPD, ATTN: CESPd-CO-0
CDR, USACE, ATTN: DAEN-CECW-OM

KASPRISIN

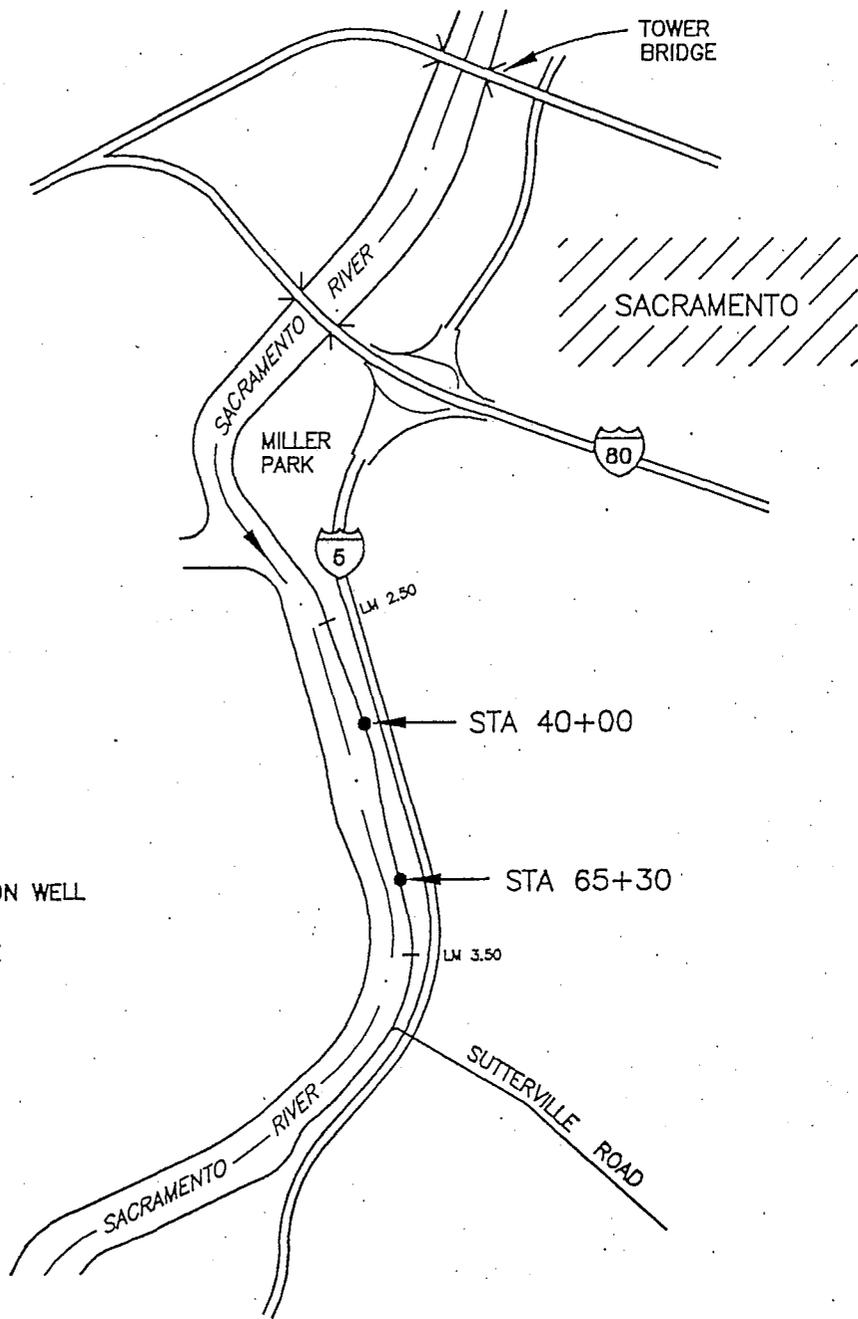
cc:

> Central Valley Sec
PM (Childs)
Prog Dev
F&A Br
Valley Res Ofc

SADOFF

LU/T0042.LT

↑
N
NO SCALE



LEGEND

- OBSERVATION WELL
- LM LEVEE MILE

NOTE

Station of Observation Wells
are as per Contract Drawings

SACRAMENTO URBAN AREA
GREENHAVEN-POCKET PHASE II

LOCATION MAP
of
OBSERVATION WELLS

SUPPLEMENT TO STANDARD
 OPERATION AND MAINTENANCE MANUAL
 SACRAMENTO RIVER FLOOD CONTROL PROJECT

UNIT NO. 115

EAST LEVEE OF SACRAMENTO RIVER
 FROM SUTTERVILLE ROAD TO
 NORTH BOUNDARY OF RD NO. 744

REVISIONS OR ADDITIONS	DATE
Paragraph 1-04 - - - Add subparagraph g.	September 1983
EXHIBIT B - - - - - Add Drawing No. 50-4-5347	September 1983
EXHIBIT F - - - - - Add copy of letter of transfer dated 5 February 1981	September 1983

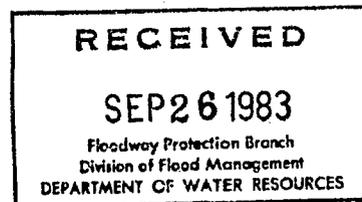
SECTION I

1-04.

g. Bank sloping, stone protection and selective clearing on the left bank of the Sacramento River at Site Miles 51.2, 52.2 and 55.6 (a portion of Unit 33) was accomplished under Contract No. DACW05-77-C-0101 by Dutra Construction Company, Inc. Construction was completed on 12 October 1980, Specification No. 5269, Drawing No. 50-4-5347.

EXHIBIT B

<u>File No.</u>	<u>Title</u>
50-4-5347	Bank Protection, Various Locations, Right and Left Banks, Sacramento River Mile 15.0 to 60.0, in 33 sheets.



Memorandum

Date : APR 21 1994

To : David N. Kennedy, Director
Department of Water Resources
1416 Ninth Street, Room 1115-9
Sacramento, California 95814

From : THE RECLAMATION BOARD

Subject : Sacramento River Flood Control Project - Additions to the
Supplements of the Standard Operation and Maintenance Manual

Enclosed is a copy of the revised additions to the supplements of the Standard Operation and Maintenance Manual for Item (c), subparagraph 7, Paragraph 2.04, Miscellaneous Facilities, within Section II of Unit No. 115 of the Sacramento River Flood Control Project. These modifications result from a request made to the Corps of Engineers in February 1994.

For further information, please contact me at
(916) 653-5434 or have your staff contact Mark Meeks at
(916) 327-1608.

Original signed by
Raymond E. Barsch

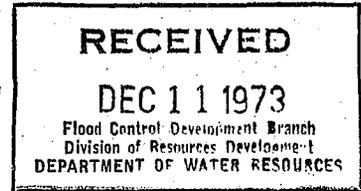
Raymond E. Barsch
General Manager

Enclosure

cc: Carroll Hamon
George Qualley
James Coe
Gene Snow
Bill Helms
Larry Lee
Al Romero

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT

UNIT NO. 115



EAST LEVEE OF SACRAMENTO RIVER
FROM SUTTERVILLE ROAD TO NORTH BOUNDARY OF RECL. DIST. NO. 744

REVISIONS OR ADDITIONS

ADDITIONS	DATE
Paragraph 1-04 ----- Add subparagraph f	December 1973
Paragraph 2-01 ----- Add subparagraph c	December 1973
Paragraph 2-04 ----- Add subparagraph a(4)(a)	December 1973
EXHIBIT B ----- Add Drawing No. 50-4-4772	December 1973
EXHIBIT F ----- Add copy of letter of acceptance dated 17 July 1973	December 1973

1-04. Construction Data.

f. Selective clearing, bank sloping, stone protection, and recreation facilities, including boat launching ramp and vehicle parking, at Garcia Bend on the left bank of the Sacramento River at Site Mile 49.3 (a portion of Unit No. 21A, Sacramento River Bank Protection Project) were accomplished under Contract No. DACW05-73-C-0031 by James L. Ferry and Son during the period from 26 September 1972 to 7 July 1973. Specification No. 4235, Drawing No. 50-4-4772.

2-01. Levees.

c. Environmental Values. Trees preserved on the berm above the bank protection at Site Mile 49.3 during prosecution of contract listed in paragraph 1-04f shall not be removed as a part of normal maintenance as long as they remain healthy.

2-04. Miscellaneous Facilities.

a.(4) Recreation Facilities.

- (a) A boat launching ramp and access ramp at River Mile 49.3 as shown on drawings of Exhibit B.

EXHIBIT B

DRAWING NO.

TITLE

50-4-4772

Bank Protection, Left Bank, Sacramento River at Mile 49.3,
in 5 sheets

C
O
P
Y

THE RECLAMATION BOARD
STATE OF CALIFORNIA

C
O
P
Y

Jul 17, 1973

District Engineer
Sacramento District
U.S. Army Corps of Engineers
650 Capitol Mall
Sacramento, CA 95814

Refer to: 4130.60.109A

Dear Sir:

Reference is made to your letter of June 26, 1973, concerning the transfer to the State of California, for operation and maintenance, a portion of the Sacramento River Bank Protection Project, Unit No. 21-A.

The flood control work consisted of selective clearing, levee bank sloping, placement of stone bank protection, the construction of the Garcia Bend Recreation Facilities, and such miscellaneous work as necessary to complete the construction at Site Mile 49.3 Left Bank, Sacramento River.

The work has been completed and was constructed in a workmanlike manner. This work has been constructed in accordance with Drawing No. 50-4-4772, Specification No. 4235, and Contract No. DACW05-73-C-0031, insofar as could be determined visually.

The Reclamation Board at its regular meeting of July 16, 1973, formally accepted from the District Engineer for operation and maintenance, the completed flood control work on the above referenced site.

Sincerely yours,

/s/ A. E. McCollam
A. E. McCOLLAM
Chief Engineer and
General Manager

EXHIBIT F
Sheet 1 of 1

M.A. 9

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT

UNIT NO. 115

EAST LEVEE OF SACRAMENTO RIVER
FROM SUTTERVILLE ROAD TO NORTH BOUNDARY OF RECL. DIST NO. 744

REVISIONS OR ADDITIONS

ADDITIONS	DATE
Paragraph 1-04 e ----- Add Contract No. DACW05-71-C-0021	December 1971
EXHIBIT B ----- Add Drawing No. 50-4-4378	December 1971
EXHIBIT F ----- Add copy of letter of acceptance dated 17 December 1970.	December 1971

1-04. Construction Data.

e. Bank sloping and stone protection on the left bank of the Sacramento River at Site Mile 53.7 (a portion of Unit No.19, Sacramento River Bank Protection Project) was accomplished under Contract No. DACW05-71-C-0021 by James L. Ferry and Son during the period from 26 August 1970 to 20 December 1971. Specification No. 3427, Drawing No. 50-4-4378.

EXHIBIT B

DRAWING NO.

TITLE

50-4-4378

Bank Protection, Various Locations, Left Bank,
Sacramento River between mile 24.7 and 53.7, in
23 sheets

C
O
P
Y

THE RECLAMATION BOARD
STATE OF CALIFORNIA

C
O
P
Y

Dec 17, 1970

File No. 4130.60.108
Your Contract 71-C-0021

District Engineer
U. S. Army Corps of Engineers
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

Reference is made to your letter of November 20, 1970, concerning transfer to the State of California of a portion of the Sacramento River Bank Protection Project (Unit No. 19) for maintenance and operation. The transferred sites were as follows:

Sacramento River, Mile 53.7, Left Bank

This work was constructed in conformance with specification No. 3427, Contract No. DACW05-71-C-0021, Drawing No. 50-4-4378 and the work to be done on Sacramento River, Left Bank.

The Reclamation Board at its meeting of December 3, 1970, formally accepted the above-referred to work for operation and maintenance.

Sincerely yours,

/s/ A. E. McCollam
A. E. McCOLLAM
Chief Engineer and General Manager

EXHIBIT F