
SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL

LOWER SAN JOAQUIN RIVER AND
TRIBUTARIES PROJECT, CALIFORNIA

UNIT NO. 3

NORTH LEVEE OF STANISLAUS RIVER
AND EAST LEVEE OF SAN JOAQUIN RIVER
WITHIN R. D. NOS. 2064, 2075, 2094 AND 2096



U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

Corps of Engineers
US Army

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Sacramento District
Corps of Engineers
US Army
December 1968

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A-1	Location Map - - - - - 1 Sheet
B	"As Constructed" Drawings - - - - - Unattached
C	Plates of Suggested Flood Fighting Methods - - - Unattached (Contained in Standard Manual)
D	Suggested Check List No. 1 - Levee Inspection Report - - - - - Unattached (Contained in Standard Manual)
E	Suggested Check List - Levee, Channels and Structures - - - - - Sheets 1 thru 7
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WITHIN R.D. 2064, 2075, 2094 and 2096

SECTION I

INTRODUCTION

1-01. Location. The improvement covered by this manual is that part of the San Joaquin River and Tributaries Project levee and channel that is located along the right bank of the Stanislaus from high ground to the San Joaquin River and the right bank of the San Joaquin River from the Stanislaus River to Walthall Slough. The area lies about 4 miles south from the town of Lathrop and 7 miles west from the town of Ripon. Location by levee mileage along the right bank of the San Joaquin River is from mile 0.00 at Weatherbee Lake to 0.17 within R.D. 2096; from mile 0.00 to mile 2.82 within R.D. 2094; from mile 0.00 to mile 7.58 within R.D. 2075; and from mile 0.00 to mile 5.45 (mouth of Stanislaus River) (Unit 1) within R.D. 2064 and mile 0.00 to mile 6.06 within R.D. 2064 (Unit 2) along the right bank of the Stanislaus River to high ground. All mileages listed above progress going upstream. The total is 22.08 miles. The area lies within the above mentioned Reclamation Districts in the county of San Joaquin, California 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 is a part of the Lower San Joaquin River and Tributaries Project as authorized by the Flood Control Act of 22 December 1944, Public Law 534, Seventy-Eighth Congress, Second Session, Section 10, and consists of the right bank and levee of the San Joaquin River from Weatherbee Lake to the mouth of the Stanislaus River; and the right bank and channel of the Stanislaus River from its mouth upstream to high ground; a total distance of about 22.08 miles.

1-03. Protection Provided. Levees along the San Joaquin and Stanislaus Rivers, as described in this unit, provide direct protection to adjacent agricultural land within Reclamation Districts No. 2064, 2075, 2094 and 2096. Along the San Joaquin River right bank levee the grade of the adopted flood plane varies from elevation 23.2 at the lower end (Weatherbee Lake) to elevation 36.2 at the mouth of the Stanislaus River. Along the Stanislaus River the grade of the adopted flood plane varies from elevation 36.2 at the mouth to elevation 49.4 at high ground. All elevations are referred to mean sea level datum (1929 adjustment). Levee grade within this unit provides for a freeboard of at least 3 feet above the adopted flood plane profile. Within this unit the project design flood for the San Joaquin River is 52,000 cubic feet per second and for the Stanislaus River 12,000 cubic feet per second.

agricultural land within Reclamation Districts No. 2064, 2075, 2094 and 2096. Along the San Joaquin River right bank levee the grade of the adopted flood plane varies from elevation 23.2 at the lower end (Weatherbee Lake) to elevation 36.2 at the mouth of the Stanislaus River. Along the Stanislaus River the grade of the adopted flood plane varies from elevation 36.2 at the mouth to elevation 49.4 at high ground. All elevations are referred to mean sea level datum (1929 adjustment). Levee grade within this unit provides for a freeboard of at least 3 feet above the adopted flood plane profile. Within this unit the project design flood for the San Joaquin River is 52,000 cubic feet per second and for the Stanislaus River 12,000 cubic feet per second.

1-04. Construction Data and Contractor. Work required by the Corps of Engineers to bring levees of this unit to project standards was accomplished under the following contracts:

a. Emergency levee repairs, right and left banks of the Stanislaus River was accomplished under Contract No. DA-04-167-CIVENG-56-216 during the period from 1 May 1956 to 1 August 1956. Specification No. 2137 and Drawing No. 7-4-1495.

b. Emergency levee repairs, right and left banks of the San Joaquin River was accomplished under Contract No. DA-04-167-CIVENG-59-44 by Lee Stephens, during the period from 13 October 1958 to 9 November 1958. Specification No. 2488, Drawing No. 7-4-1568.

c. Bank protection and levee construction along the right and left banks of the San Joaquin River at priority sites was accomplished under Contract No. DA-04-167-CIVENG-59-131 by A. Teichert & Son, Inc., during the period from 1 June 1959 to 20 November 1959. Specification No. 2565, Drawing No. 7-4-1588.

d. Levee construction and bank protection, right bank San Joaquin River at mile 62.2 was accomplished under Contract No. DA-04-167-CIVENG-63-34 by M. Malfitano & Son, Inc., during the period from 24 September 1962 to 6 November 1962. Specification No. 2895, Drawing No. 7-4-1671.

e. Levee construction and bank protection on the right bank of the San Joaquin River from north levee of R.D. 2075 to Walthall Slough was accomplished under Contract No. DA-04-167-CIVENG-62-68 by Jack Campbell, Inc., during the period from 8 June 1962 to 30 August 1963. Specification No. 2735, Drawing No. 7-4-1643.

f. Levee construction, right and left banks of the San Joaquin River between Stanislaus River and north line of R.D. 2075 was accomplished under Contract No. DA-04-167-CIVENG-66-103 by Elmer G. Wendt, Inc., during the period from 28 March 1966 to 10 March 1968. Specification No. 3042, Drawing No. 7-4-1685.

g. Completion Phase, right and left banks of the San Joaquin River and Stanislaus River was accomplished under Contract No. DACW05-68-C-0086 by Elmer G. Wendt, Inc., and completed on 14 November 1968. Specification No. 3455, Drawing No. 7-4-1710.

h. Stone protection on the right bank of the San Joaquin River at Site Mile 71.6, Reclamation District 2064 (under authority PL 99) was accomplished under Contract No. DACW05-71-C-0125 by Wayne Bailey Trucking, Inc. during the period from 12 July 1971 to 27 July 1971. Specification No. 4113, Drawing No. 7-4-1789.

1-06. Assurances Provided by Local Interest. Assurance of cooperation by local interests is provided by State Legislation as contained in Chapters 1 and 2, Part 4, Division 5 of the State Water Code (see paragraph 2-02a of the Standard Manual).

1-07. Transfer to or Acceptance by Local Interests. Responsibility for operating and maintaining portions of this unit was transferred to the State Reclamation Board by letter dated 7 December 1959. Other portions were officially accepted by the State Reclamation Board by letters dated 21 December 1962, 18 January 1963 and 2 December 1968.

1-08. Inspection Procedure. Since the enactment by State Legislation of Chapter 1528, Statutes of 1947, the Department of Water Resources, State of California, has made semi-annual inspections of all levees of authorized flood control projects in the Sacramento-San Joaquin Drainage basin pursuant to the Federal Regulations of 16 August 1944 (Title 33), and reports its findings to the local agency, the State Reclamation Board and the Sacramento District, Corps of Engineers, US Army. This activity, initiated pursuant to section 208.10(a) of the Federal Regulations, has in effect provided for transfer from the local agencies to the State Department of Water Resources the obligation of compliance with Sections 8371, 8372, and 8373 of the Water Code of the State of California. These sections of the Code require the local responsible agencies to submit a report to the State Department of Water Resources on or before 1 June of each year on the condition of the levees within their jurisdiction. Supervisory powers and duties of the Department are applicable to all works of the Lower San Joaquin River and Tributaries Flood Control Project maintained and operated by the local agencies without regard to status of completion, or expenditure of Federal funds on the construction of such works.

The following procedure is used in inspecting the levees of the responsible maintaining agency:

The personnel of the State Department of Water Resources make a detailed inspection in the spring and fall of each year and make a report on any required maintenance. The inspection objectives are to determine if the following items, which are a condensation of Federal Regulations, are being adhered to:

a. That all brush, trees and wild growth other than sod are removed from the levee crown and slopes.

b. That all weeds, grass and debris on the levee have been burned during the appropriate season, where not dangerous or impractical.

c. That all grass and weeds on the levee have been mowed where removal by burning is dangerous or impracticable. This applies only on peat levees or where burning would constitute a hazard to improvements.

- d. That all burrowing animals have been exterminated.
- e. That all caves, sloughs, burrows, holes, slips or other damaged portions of the levee have been repaired.
- f. That all irrigation and drainage structures through the levee are in good working condition.
- g. That no revetment work or riprap have been displaced, washed out or removed.
- h. That the crown of the levee is well shaped and maintained and that unauthorized vehicular travel is restricted.
- i. That stock grazing on the levee is restricted to conditions and seasons when the levee would not be seriously scarred or otherwise damaged thereby.
- j. That encroachments are not being erected on the levee which would hinder travel by authorized patrol vehicles.
- k. Prevent the erection of structures on, additions to, or alterations of, the levee unless authorized by permit from the State Reclamation Board.

Following this detailed inspection a joint field inspection is made with representatives of the responsible maintaining agency and the State Department of Water Resources to review and discuss the inspection report.

Upon completion of the fall inspection, the State Department of Water Resources publishes an annual report entitled, "Status of Project Levee Maintenance" which indicates the degree of proficiency attained by each obligated local agency in providing required maintenance.

SECTION II
FEATURES OF THE PROJECT SUBJECT TO FLOOD CONTROL REGULATIONS

2-01. Levees.

a. The levees described in this manual lie along the right bank of the San Joaquin River from Walthall Slough to the mouth of the Stanislaus River; and along the right bank of the Stanislaus River from its mouth to high ground, a total distance of about 22.08 miles. The levee has been reconstructed to project standards with a minimum crown width of 12 feet. The necessary drainage structures, road approaches, bank protection, and appurtenances were also included in the work. For more complete detail in construction of the above-mentioned levees, 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) Suggested 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 Manual.

2-02. Drainage and Irrigation Structures. Drainage and irrigation structures which extend through the levees are listed as follows:

Levee Mile	Size of Pipe	Other Description	Feet Below Crown
<u>R.D. 2096</u>			
0.03	3-36"	Automatic pumping plant L.S.	3.5
<u>R.D. 2094</u>			
0.66	14"	Steel pipe - pump W.S. - Riser Unit	10.0
1.27	20"	Steel pipe - pump W.S. - Riser Unit	10.0
2.30	20"	Steel pipe - pump W.S. - Riser Unit	6.0
<u>R.D. 2075</u>			
0.12	12"	Pump L.S.	4.0
2.30	16"	Pump L.S. - Riser Unit W.S.	4.5
4.34	16"	Slant pump W.S.	2.0
5.16	2-18"	Pumps W.S.	8.0
5.52	16"	Pump L.S.	8.0
6.40	18"	Slant pump W.S.	4.0
6.79	10	Pump L.S.	5.5

Drainage and Irrigation Structures, Con't

Levee Mile	Size of Pipe	Other Description	Feet Below Crown
7.37	12"	Pump W.S.	4.5
<u>R.D. 2064 - Unit No. 1</u>			
0.07	36"	Square culvert - Riser unit, Flapgate W.S.	21.0
1.24	12"	Pump W.S.	3.5
1.24	16"	Pump W.S.	4.0
1.65	30"	Square culvert - Riser unit, Flapgate W.S.	15.0
1.93	30"	Square culvert - Riser unit, Flapgate W.S.	14.7
2.20	18"	Pump W.S.	4.8
3.55	12"	Pump and gate valve L.S.	-
4.69	1-18" & 1-24"	Pumps W.S.	3.5
5.16	20"	Pump W.S.	4.0
<u>R.D. 2064 - Unit No. 2</u>			
0.33	16"	Pump W.S. - Riser unit L.S.	5.5
1.95	16"	Pump W.S.	4.0
2.51	30"	Concrete culvert - Pump W.S.	14.5
4.15	24"	Pump W.S. - Riser unit W.S.	6.0
"	24"	Pump W.S. - Riser unit W.S.	6.5
to	21"	Pump W.S. - Riser unit W.S.	7.0
"	15"	Pump W.S. - Riser unit W.S.	8.0
"	2-20"	Pump W.S.	8.0
4.17	36"	Pump W.S. - Riser unit W.S.	6.0
4.20	30"x30"	Concrete culvert - Riser unit W.S.	21.0
4.37	30"	Flapgate W.S.	10.5
4.47	30"	Flapgate W.S.	10.0
4.59	30"	Flapgate W.S.	8.5
4.73	30"	Flapgate W.S.	8.5
4.88	30"	Flapgate W.S.	8.0
5.05	30"	Flapgate W.S.	8.0
5.48	30"	Riser unit W.S.	10.0
5.69	20"	Riser unit W.S.	13.0
6.03	24"	Riser unit W.S.	10.0

Note on abbreviations:

L.S. = Landside
W.S. = Waterside

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

- (1) Maintenance - paragraph 5-02 of the Standard Manual.
- (2) Suggested Check Lists - EXHIBIT E of this Supplement Manual.

- (3) Operation - paragraph 5-04 of the Standard Manual.
- (4) Additional Requirements - paragraph 5-05 of the Standard Manual.
- (5) Safety Requirements - paragraph 5-06 of the Standard Manual.

2-03. Channels.

a. Description. The main channels and floodways of the San Joaquin and Stanislaus Rivers for this unit lie adjacent to the levees as described in paragraph 1-02. The project design capacities of said channels are listed in paragraph 1-03 of this manual.

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) Suggested 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 local agency responsible for maintenance to keep in contact with the State Department of Water Resources' Flood Operation Center during all periods of flood danger, and maintain a patrol of the project works in their area during periods of flood in excess of a reading of 30.5 on the Vernalis gage.

The Flood Operation Center is responsible for Data Collection and issuance of a joint river forecast with the US Weather Bureau and coordinates with the Sacramento District Engineer and other agencies to keep apprised of the current situation in accordance with terms of the Memorandum of Understanding dated 1 November 1956, between the Division Engineer, US Army Engineer Division, South Pacific and the Director, Department of Water Resources, State of California for cooperative action during flood emergencies.

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) Utility Relocation. Because of the nature of the construction of structures by local interests, records of utility relocations are not available.

- (2) Hydrologic Facilities. Hydrologic facilities for this unit consists of the existing San Joaquin River Stream Gaging Station near Vernalis located on the left bank of the river 80 feet upstream from the Durham Ferry road bridge. This station is equipped with a staff gage and a continuous water stage recorder with an on-call type radio system for reporting stages to the Federal-State Control Center in Sacramento.

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) Suggested Check Lists - paragraph 7-03 of the Standard Manual.
- (3) Operation - paragraph 7-04 of the Standard Manual.

SECTION III

REPAIR OF DAMAGE TO PROJECT WORKS AND METHODS OF COMBATING FLOOD CONDITIONS

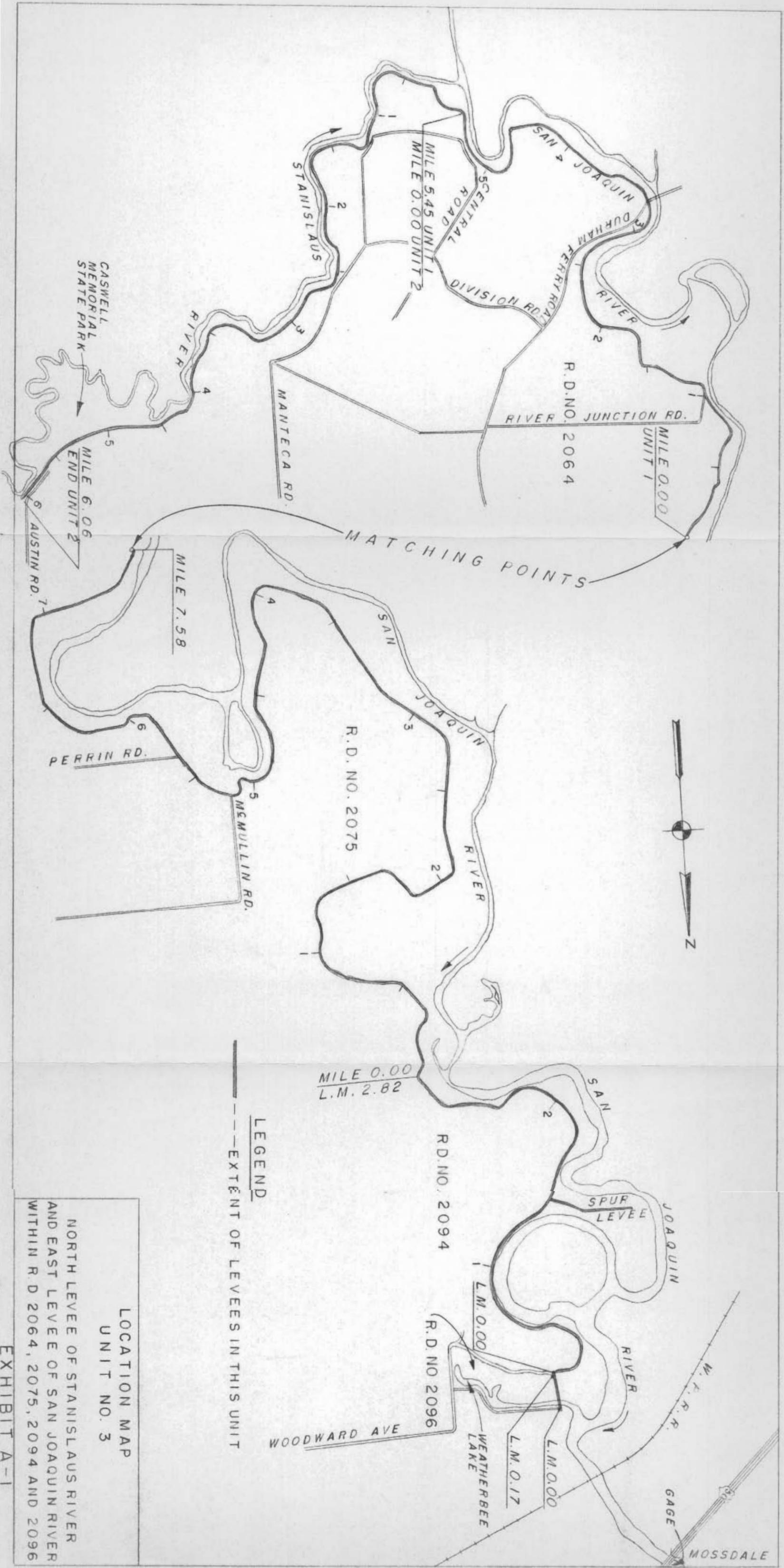
3-01. Repair of Damage. In the event of serious damage to the project works, whether due to flood conditions or other causes, and which may be beyond the capability of local interests to repair, the local agency responsible for maintenance will contact a representative of the Department of Water Resources,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

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

EXHIBIT A

FEDERAL FLOOD CONTROL REGULATIONS

(SEE STANDARD MANUAL)



LOCATION MAP
UNIT NO. 3
NORTH LEVEE OF STANISLAUS RIVER
AND EAST LEVEE OF SAN JOAQUIN RIVER
WITHIN R. D 2064, 2075, 2094 AND 2096

EXHIBIT B

"AS CONSTRUCTED"
DRAWINGS

<u>File No.</u>	<u>Title</u>
7-4-1495	Emergency Repairs, Right and Left Banks Stanislaus River, in 1 sheet.
7-4-1568	Emergency Repairs, Right and Left Banks San Joaquin River, in 1 sheet.
7-4-1588	Bank Protection and Levee Construction, Right and Left Bank San Joaquin River at Priority Sites, in 10 sheets.
7-4-1671	Levee Construction, Right Bank San Joaquin River At Mile 62.2, in 2 sheets.
7-4-1643	Levee Construction, Right Bank San Joaquin River from North Levee R.D. 2075 to Walthall Slough, in 37 sheets.
7-4-1685	Levee Construction, Right and Left Banks San Joaquin River between Stanislaus River and North Line of R.D. 2075, in 72 sheets.
7-4-1710	Completion Phase, Right and Left Banks San Joaquin and Stanislaus River, in 5 sheets.
7-4-1789	Stone Protection, Right Bank San Joaquin River, Reclamation District 2064, Mile 71.6, in one sheet.

EXHIBIT B
Unattached

EXHIBIT C

PLATES OF SUGGESTED FLOOD FIGHTING METHODS

(SEE STANDARD MANUAL)

EXHIBIT C
Unattached

EXHIBIT D

SUGGESTED CHECK LIST NO. 1

LEVEE INSPECTION REPORT

(SEE STANDARD MANUAL)

EXHIBIT D

EXHIBIT E

SUGGESTED CHECK LISTS OF LEVEES

CHANNEL AND STRUCTURES

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

SUGGESTED CHECK LIST NO. 2
UNIT NO. 3
SAN JOAQUIN RIVER

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 levee slopes	
(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	

Instruction for Completing 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 of 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.

SUGGESTED CHECK LIST NO. 3
 CHANNEL AND RIGHT-OF-WAY
 UNIT NO. 3
 SAN JOAQUIN RIVER

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 or 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, fouling of the tainter gates, or the bridges over the channel.
- Item (d) Report any construction along the diversion channel or above the diversion channel or above the diversion works 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 or 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.

SUGGESTED CHECK LIST NO. 4
DRAINAGE AND IRRIGATION STRUCTURES
UNIT NO. 3
SAN JOAQUIN RIVER

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

(a) Location by Levee Mileage	(b) Bank	(c) Debris or other obstruction to flow	(d) Damage or Settlement of Pipe or conduit	(e) Condition of concrete head- wall or invert paving	(f) Condition of right-of-way adjacent to structure	(g) Repair Measures taken since last inspection	(h) Comments
				San Joaquin River - <u>Right Bank</u> (As listed in Paragraph 2-02)			
				Stanislaus River - <u>Right Bank</u> (As listed in Paragraph 2-02)			

Instruction for Completing Sheet 6, Exhibit E
(To be printed on back of Sheet 6)

- (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", spaces, 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 TRANSFER TO OR
ACCEPTANCE BY LOCAL INTERESTS

EXHIBIT F

SPKKO-P

7 DEC 1959

The Reclamation Board
State of California
1215 "O" Street
Sacramento 14, California

Gentlemen:

Reference is made to the joint inspection made on 16 November 1959 of certain levee sections pertaining to the Lower San Joaquin River and Tributaries Project for the purpose of transferring them to the State of California for operation and maintenance.

The required work, consisting of levee construction and bank protection, is completed in accordance with Specification 2565, Contract No. DA-04-167-CIVENG-59-131 and Drawing No. 7-4-1588. The levee sections referred to above, located on the San Joaquin River at Priority sites, are listed as follows:

<u>LEVEE SECT NO.</u>	<u>SITE NO.</u>	<u>BANK</u>	<u>RIVER MILE POINTS</u>
35	E	Right	61.35 to 61.52 and 61.67 to 61.82
36	B	Left	65.63 to 65.84
37	C	Right	66.02 to 66.15

The levee sections Nos. 35 to 37 inclusive, described above, now meet the requirements of the Lower San Joaquin River and Tributaries 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 maintenance work required under the provisions of the Lower San Joaquin River and Tributaries 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 by a

C
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P
Y

C
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P
Y

SPKKO-P
The Reclamation Board

7 DEC 1959

Standard Operation and Maintenance Manual for the Lower San Joaquin River and Tributaries Project which is being prepared. As provided under Paragraph 208.10(10) of these regulations, a supplement to the Standard Operation and Maintenance Manual covering these units of work will be furnished to you upon completion.

A copy of this letter is being transmitted to the Department of Water Resources.

Sincerely yours,

/s/ H. A. Morris

EXHIBIT F
Sheet 2 of 5

C
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THE RECLAMATION BOARD
State of California

C
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P
Y

December 21, 1962

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

Dear Sir:

Reference is made to your letter of December 6, 1962 concerning transfer to the State of California of levee construction and bank protection work on the right bank of the San Joaquin River from mile 62.02 to 62.21 which was constructed under Specification No. 2895.

The Reclamation Board at its meeting of December 20, 1962 formally accepted the above-referred-to levee construction and bank protection work for operation and maintenance.

Sincerely yours,

/s/A. E. McCOLLAM
A. E. McCOLLAM
General Manager

C
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THE RECLAMATION BOARD
State of California

C
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P
Y

January 18, 1963

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

Dear Sir:

Reference is made to your letter of January 11, 1963 concerning transfer to the State of California of Unit No. 68 on the Lower San Joaquin River and Tributaries Project, consisting of levee construction, bank protection and patrol road surfacing on the right bank of the San Joaquin River from mile point 57.15 to 62.02 under Specification 2735.

The Reclamation Board at its meeting of January 17, 1963 formally accepted the above-referred-to levee and bank protection work for operation and maintenance.

Sincerely yours,

/s/ A. E. McCOLLAM
A. E. McCOLLAM
General Manager

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THE RECLAMATION BOARD
State of California

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December 2, 1968

District Engineer
Corps of Engineers
US Army
650 Capitol Mall
Sacramento, California 95814

Dear Sir:

Reference is made to your letter of September 11, 1968 concerning transfer to the State of California of the San Joaquin River Flood Control Project, right bank Stanislaus River to the San Joaquin River, and right bank of the San Joaquin River to the northerly line of Reclamation District 2075, in accordance with Specification No. 3042.

The Reclamation Board, at its meeting of October 18, 1968, 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

THE RECLAMATION BOARD
STATE OF CALIFORNIA

COPY

20 January 1970

COPY

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

Attention: Construction-Operations Division

Dear Sir:

Reference is made to the San Joaquin River Flood Control Project, and in particular to the Completion Phase, Right and Left Banks, San Joaquin River and Stanislaus River, Specification No. 3455, Contract No. DACW05-68-C-0086.

A review of this work was made in the field on December 27, 1968. The work was found to conform to the contract plans and specifications and the involved reclamation districts have been informed of the completion of project construction in this reach of the San Joaquin and Stanislaus Rivers.

Sincerely yours,

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

EXHIBIT F

EXHIBIT G

SUGGESTED SEMI-ANNUAL REPORT FORM

TO: The District Engineer
Sacramento District
Corps of Engineers
650 Capitol Mall
Sacramento, California

(May 19__)
(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__) Unit No. 3 of the Lower San Joaquin River and Tributaries 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, high water periods (water level in excess of 30.5 feet on the gage on the San Joaquin River at Vernalis) occurred on the following dates:

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

Comments on the behavior 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 level at Vernalis gage 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

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
SAN JOAQUIN RIVER AND TRIBUTARIES PROJECT

UNIT NO. 3

NORTH LEVEE OF STANISLAUS RIVER AND
EAST LEVEE OF SAN JOAQUIN RIVER WITHIN
RECLAMATION DISTRICT NOS. 2064, 2075, 2094 and 2096

REVISIONS OR ADDITIONS	
ADDITIONS	DATE
EXHIBIT F ----- Add copy of letter of acceptance dated 20 January 1969	Jan 1970
Paragraph 1-04h ----- Add Contract No. DACW05-71-C-0125 EXHIBIT B ----- Add Drawing No. 7-4-1789	November 1971 November 1971

Incl 1



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

APR 11 2001

REPLY TO
ATTENTION OF

Navigation and Flood Control Unit

Mr. Peter D. Rabbon
General Manager
The Reclamation Board State of California
1416 9th Street, Room 1601
Sacramento, California 95814

Dear Mr. Rabbon:

This letter is to transfer a portion of work on the right bank levee of the San Joaquin River from River Junction Road to the Stanislaus River in Unit 1 and a portion of the right bank of the Stanislaus River from its junction with the San Joaquin River to Austin Road in Unit 2, in RD 2064, to the State of California for operation and maintenance.

The work consisted of restoring areas damaged by the January 1997 Flood, all on the landside. The right levee of the San Joaquin River in Unit 1 was restored by excavating the levee section to a depth of 10-feet and placing and compacting levee fill at Levee Mile 0.04-0.49 and 0.66-0.69. Levee fill material was placed and compacted and the slopes were restored to pre-flood configuration at Levee Mile 0.69-1.11, 1.11-1.17, 2.18-2.69, 3.43-3.50, 3.60-3.91, and 4.19-5.00. Unit 2 was restored by excavating the levee section to a depth of 8½-feet, placing and compacting levee fill material, and reshaping slopes to pre-flood configuration. In addition, the landside berm in Unit 1 was repaired with gravel installed over geotextile at Levee Mile 2.55-2.74 and 3.12-3.51 to an average thickness of 2½-feet-deep and 50-feet-wide, and in Unit 2 to a width of 40-feet at Levee Mile 0.55-0.80 and to a width of 50-feet at Levee Mile 1.84-1.93 and 3.29-3.51. The work, as listed in the enclosure, was completed on October 29, 1997 in accordance with Specification No. 9896E, Drawing File No. SJ-4-114, Contract No. DACW05-97-C-0130.

The work was performed under the general authority of 33 U.S.C. 701n (69 Stat. 186) PL 84-99 and now meets the requirements of the Operations and Maintenance Manual for the San Joaquin River Flood Control System in RD 2064. Therefore, said flood control work, together with the waterway banks contiguous thereto, are transferred as of the date of this letter 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, San Joaquin River Flood Control Project.

Sincerely,

Michael J. Walsh
Colonel, Corps of Engineers
District Engineer

Enclosure



US Army Corps
of Engineers
Sacramento District

PL 84-99 - PHASE III EMERGENCY LEVEE REPAIR
~~RD 2064, RD 2075, RD 2094 AND RD 2096~~
 FOR WAVEWASH AND BOILS
 SAN JOAQUIN COUNTY, CALIFORNIA

As-Constructed
 Contract No. 97-C-0130

PROJECT TITLE WAVESH AND BOILS REPAIR PL 84-99 PHASE III EMERGENCY LEVEE REPAIR RD 2064, RD 2075, RD 2094 AND RD 2096 SAN JOAQUIN COUNTY, CALIFORNIA		DATE 8-20-97	
PREPARED BY B. Carter		CHECKED BY B. Dougherty	
DATE 8-20-97		PROJECT NO. 9896	
DRAWN BY B. Dougherty		DISTRICT ENGINEER Dorothy F. Klasse	
PROJECT NO. 9896		DISTRICT OFFICE SJ-4-114	
TITLE SHEET		SHEET REFERENCE NUMBER G1	
SHEET 1 OF 20		FILE NAME: E:\SJ7\sheet1.dgn	

AS PER DIAMS

JUL 20 2001

P Rabbon
HQ 1601

Mr. Dennis L. Hay, Attorney
Reclamation District No. 2064
Post Office Box 1129
Tracy, California 95378

Dear Mr. Hay:

The U.S. Army Corps of Engineers has completed the 1997 flood-damage repair on the right-bank levee of the San Joaquin River (Levee Mile 0.04 to LM 5.00) and the right bank levee of the Stanislaus River (LM 0.24 to LM 1.16) in Reclamation District No. 2064. Mr. Ron Bertoli of the Department of Water Resources' System Integrity Section, contacted Mr. Don Machado, President of RD 2064, by telephone on June 28, 2001 and received assurance of acceptance for the completed repair. The Corps has transferred the completed repair to the State of California for operation and maintenance (see enclosed letter). At its July 20, 2001 meeting, on behalf of the State of California, The Reclamation Board accepted the completed repair.

The Board hereby transfers the completed repair to RD 2064 for operation and maintenance. The Corps has advised the Board that the completed repair will be added by amendment to the Operation and Maintenance Manual, San Joaquin River Flood Control Project. In the interim, RD 2064 is to perform operation and maintenance in accordance with the current O&M Manual. As-constructed drawings are enclosed.

If you have any questions, you may contact Peter D. Rabbon, General Manager of The Reclamation Board at (916) 653-5434, or your staff may contact Debbie Carlisle, Chief of DWR's System Integrity Section of the Division of Flood Management at (916) 574-0364.

Sincerely,

ORIGINAL SIGNED BY

Betsy A. Marchand
President

Enclosures

cc: Colonel Michael J. Walsh	Mr. Kell Cloward
District Engineer	Readiness Branch
Sacramento District	Sacramento District
U.S. Army Corps of Engineers	U.S. Army Corps of Engineers
1325 J Street	1325 J Street
Sacramento, California 95814-2922	Sacramento, California 95814-2922

KLloyd:Susan RyCroft
I:\sis2001\correspondence\control\1035h hay rd2064
Spell check July 6, 2001

TRIP REPORT

1997 PL 84-99 Levee Repairs-Reclamation District No. 2094

Subject: Meeting with Brian Mizuno (RD 2094 President) regarding his concerns with the as-built configuration of repaired levee.

Date: January 15, 2002

Time: 10:30AM

Location: Reclamation District No. 2094

Attendees:	Keith Swanson	DWR
	Michele Ng	DWR
	Larry Bergmooser	USACE
	Reza Shahcheraghi	DWR
	Brian Mizuno	RD 2094

Issue for Resolution:

During the process of transferring 1997 Public Law 84-99 levee repairs (completed by the U.S. Army Corps of Engineers) to RD 2094 for operation and maintenance, RD 2094's President, Brian Mizuno expressed dissatisfaction with the completed repair. Specifically, he felt that levees reconstructed between Levee Mile 0.0 and LM 0.73 appeared to be oversteepened and he questioned whether they would perform in an acceptable manner when subjected to high river stages. In an attempt to evaluate and possibly resolve these issues, staff from DWR and USACE met with Mr. Mizuno on January 15, 2002.

Findings:

1. Repair of 1997 damage to RD 2094 levees occurred in three phases. January 1997 construction activities closed levee breaches at LM 0.0 to LM 0.15 (Site H) LM 0.5 to LM 0.73 (Site 583), and LM 1.2 to LM 1.29 (Site G). Specifications and a typical detail used in the work are shown in Appendix A. March 1997 work, completed in accordance with USACE Contract No. DACW05-97-C-0068, added impervious clay fill to the waterside slope and raised the levee crown by approximately five feet at the three 1997 breach locations. Construction drawings developed for this work are shown in Appendix B. During fall 1997, work completed under USACE Contract No. DACW05-97-C-0130 repaired landside levee erosion damage located at various areas. Construction drawings for erosion repair work are included in Appendix C. Of the three RD 2094 breach sites, only Site G was included in the scope of the levee erosion damage repair contract.
2. Information depicted on USACE repair drawings is inconsistent with respect to landside slope ratios. For the levee reach from LM 0.35 to LM 0.85, the preponderance of available information suggests that landside levee slopes were to be reconstructed at a slope ratio of 2(H) to 1(V). The exceptions to this statement are plan-view and cross-section drawings depicted on sheet C17 of contract No. DACW05-97-C-0068 that show existing landside slopes of 3(H) to 1(V). However, these drawings appear to be in conflict with Note 2 on sheet C18 that states:

"Approximate side slopes of levee prior to 1997 flood event were 3H:1V riverside and 2H:1V landside. Breach repair slopes shall match these nominal slopes or match existing side slopes of levee on both ends of breach, whichever is flatter."

3. Levee slopes in the vicinity of the Site 583 levee breach repair appeared to have a slightly oversteepened landside slope. Cross sections surveyed on January 15, 2002 (See Figure 1), confirmed this observation. While both locations had an overall slope ratio of 2(H) to 1(V), the bottom of the slope was slightly flatter and the crest was slightly steeper. Slope geometrics observed were attributed to construction activities and/or minor surface erosion.

4. San Joaquin River levees repaired after 1997 flooding have yet to be fully tested. Winter precipitation has been below average, and river stages have been low. Until 1997 PL 84-99 repairs are subjected to high river flows, levee performance will be open to debate. However, landside levee slopes located between LM 0.0 and LM 0.73, appear to be fairly consistent with USACE design details shown in 1997 repair contracts.

Discussion:

Mr. Mizuno asked if the PL 84-99 program could fund construction activities associated with flattening the landside levee slope in areas of concern. Unfortunately, this does not appear possible at this time. USACE representative Mr. Larry Bergmooser stated he currently had neither the authority nor available funding. However, Mr. Bergmooser did indicate that during future flood emergencies, the Corps would be available to provide assistance under PL 84-99 authority. The need for careful performance monitoring as well as timely requests for technical assistance was stressed.

Computation Sheet

Project RD 2094 1997 PLB4-99 LS Washline Repair Sheet
 Feature East Level of San Joaquin River Designed R.S. Date 1-18-02
 Item Cross Sections at LM 0.60 & 0.70 Checked _____ Date _____

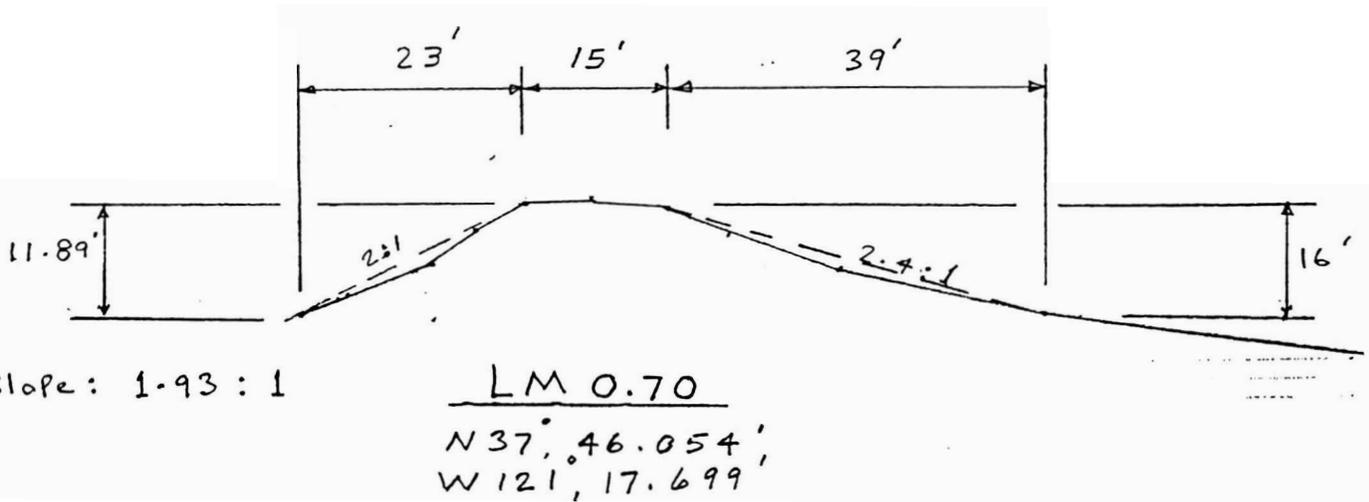
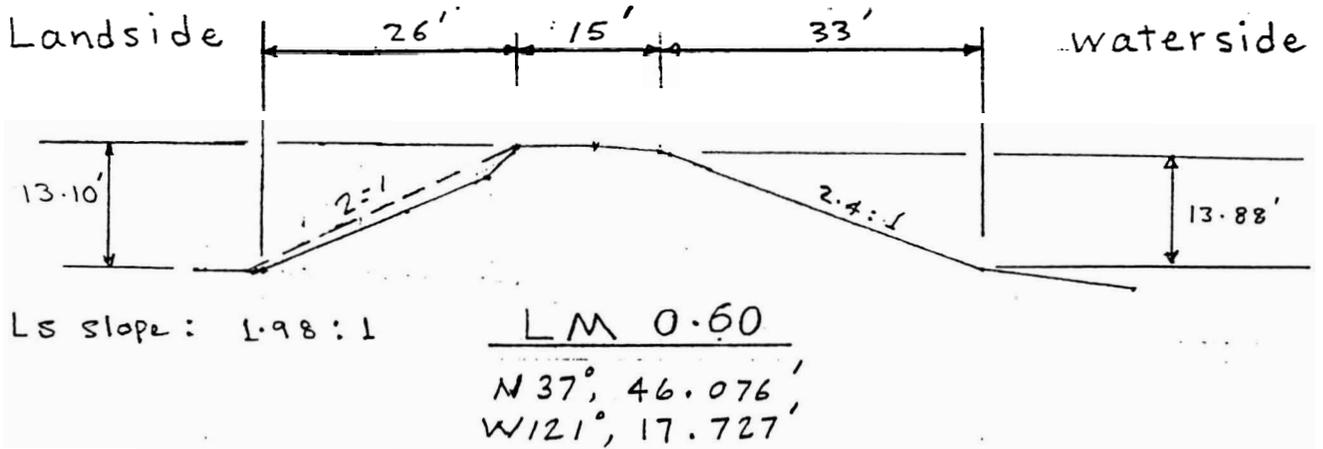


Figure 1

APPENDIX A
Reclamation District-2094 Levee Break Repair Contract

C

RD-2094 LEVEE BREAK REPAIR
SITES "G", "H", AND "583"
BIDDING SCHEDULE

Item No Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
1. Mobilization and Demobilization	1	Job	L.S.	\$ _____
2. Site Access	1	Job	L.S.	\$ _____
3. Rock Core	15,000	Tons	\$ _____	\$ _____
4. Pit Run Rock	25,400	Tons	\$ _____	\$ _____
5. Levee Fill	56,500	Tons	\$ _____	\$ _____
6. Aggregate Base Course	1,400	Tons	\$ _____	\$ _____

TOTAL ESTIMATED AMOUNT \$ _____

Bids must be submitted on all individual items of this bidding schedule: otherwise, the bids for this bidding schedule will be considered nonresponsive and will be rejected.

DIVISION 2 - SITE WORK

RD-2094 PHASE 2 LEVEE BREAK CLOSURE

1. GENERAL

This work will consist of performing all operations necessary for the partial closure of two levee breaks and one relief cut and all related work including placement of an initial rock fill core, pit run, and levee fill material to the dimensions shown on the attached drawing. The final dimensions of the repaired levee section shown on the drawings are approximate, and the levee geometry in the vicinity of the cut may be wider and/or flatter than shown. The final levee section should be shaped to conform to the adjacent levee sections but raised only to the 25-year event elevation. The 25-year event elevation is approximately 3.5 feet below the existing levee crown.

2. SITE ACCESS

Removal and replacement of cyclone fencing will be required for access into and out of the site. The contractor shall construct turnarounds as required to ensure efficient transportation and placement of closure materials, at locations approved by the Contracting Officer. Turnarounds shall be removed, and the areas returned to their original condition, upon completion of work.

3. ROCK FILL CORE

The rock fill core shall consist of minus 36-inch size rock with no more than 50 percent of the material passing a number 10 sieve size. No concrete rubble will be allowed. The rock fill core will be placed prior to placement of the levee fill material and shall be placed to a height of 1 foot above the existing water surface to the dimensions shown on the attached drawings. Site G will not require rock fill since this site is not located in standing water.

4. PIT RUN ROCK

Pit run rock shall be a well-graded minus 6-inch material with a minimum 10% fines (by weight passing the No. 200 sieve), or other material approved by the Contracting Officer. This material shall be placed under water on both sides of the rock fill core, proceeding in the direction of flow through the break, such that the initial placement is washed into the rock core for providing initial closure.

5. LEVEE FILL

Once the rock fill core and pit run rock is constructed, levee embankment fill shall be placed as shown on the attached drawings, and above the water surface elevation. This material shall consist of gravelly silty sand or gravelly clayey sand with a maximum particle size of 6-inches, and a minimum of 15% fines (by weight passing the No. 200 sieve), or other material approved by the Contracting Officer. Initial placement above the water surface may require an initial loose lift thickness appropriate to prevent instability of the underlying material. Subsequent lifts shall be approximately 12 inches in thickness and compacted with 3 passes of a dozer or other equipment as approved by the Contracting Officer. This fill shall be placed only to a height that is approximately 3.5 feet lower than the existing levee crown elevation.

6. AGGREGATE BASE MATERIAL

Aggregate base material 3 inches in thickness and 10 feet wide shall be placed along the top

of the levee surface to provide a trafficable surface.

7. LIGHTING PLANT

The Contractor shall supply a lighting plant to sufficiently provide light during periods of darkness.

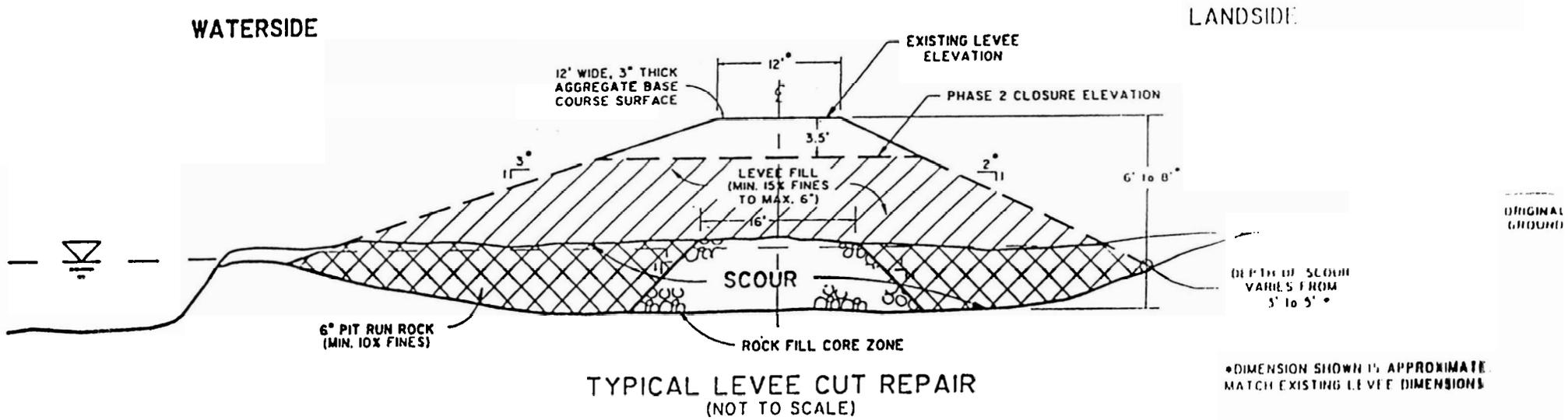
8. MEASUREMENT AND PAYMENT

Measurement and payment for the rock core material, pit run material, levee fill material and aggregate base material shall be paid by for the ton. Tonnage shall be based on weigh bill and delivery tickets. Payment includes all equipment to place the fill materials. Payment will be made for fill material placed only within the project limits.

9. PERFORMANCE PERIOD

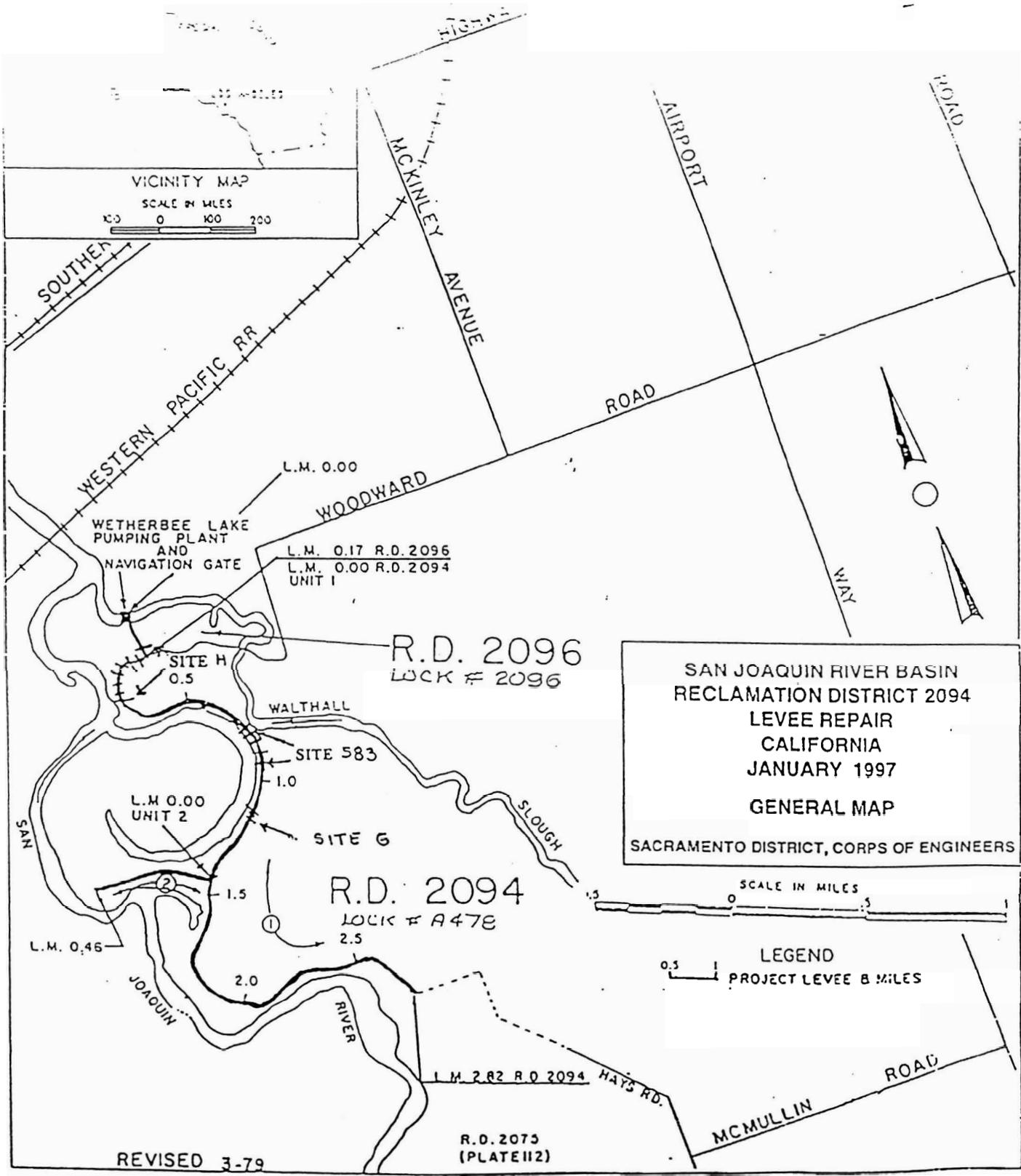
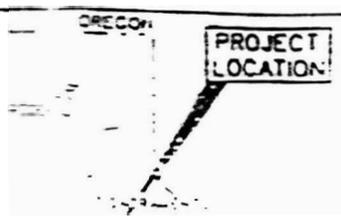
Award of this contract constitutes notice to proceed. The Contractor is required to start mobilizing upon award and to work continuously until completion of the emergency repair.

10. WEATHER DELAYS No adjustments will be made for weather related delays.



ENCLOSURE

SAN JOAQUIN COUNTY, CALIFORNIA
 PHASE 2 EMERGENCY REPAIR
 WALTHALL SLOUGH
 NEAR WEATHERBEE LAKE
 ARMY CORPS OF ENGINEERS, SACRAMENTO, CALIF.
 JANUARY, 1997



SAN JOAQUIN RIVER BASIN
RECLAMATION DISTRICT 2094
LEVEE REPAIR
CALIFORNIA
JANUARY 1997
GENERAL MAP
SACRAMENTO DISTRICT, CORPS OF ENGINEERS

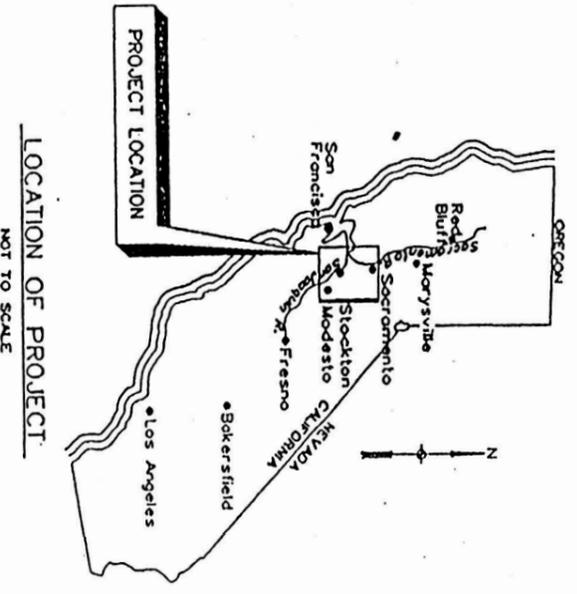


LEGEND
PROJECT LEVEE 8 MILES

REVISED 3-79

R.D. 2073
(PLATE 112)

Appendix B
Contract No. DACW05-97-0068 Drawings



LOCATION OF PROJECT
NOT TO SCALE

SCHEDULE OF DRAWINGS

DRAWING FILE NO.	SHEET NO.	DESCRIPTION
SJ-4-114	C1	TITLE SHEET, LOCATION OF PROJECT, SCHEDULE OF DRAWINGS AND GENERAL NOTES
	C2	LOCATION OF PROJECT AND SCHEDULE OF DRAWINGS
	C3	VICINITY MAP
	C1	WAVEWASH DAMAGE LOCATIONS
	C2	WAVEWASH DAMAGE STANDARD DRAWING
	C1	RD 2064 - LEVEE SECTIONS
	C1	RD 2075 - LEVEE SECTIONS
	C1	RD 2094 - LEVEE SECTIONS
	C1	RD 2094 - LEVEE SECTIONS
	C1	GRAVEL BERM

AS PER DRAWING

Sheet reference number: G-2 Sheet 2 of 20	SAN JOAQUIN COUNTY CALIFORNIA PL 84-99 PHASE III LEVEE RESTORATION RD 2064, RD 2075, RD 2094 AND RD 2096	DEPARTMENT OF THE ARMY CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA	Designed by: R. Carter Date: JUL 31, 1997 Rev.	<table border="1"> <tr> <th>Order</th> <th>Description</th> <th>Date</th> <th>Appr'd</th> <th>By</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	Order	Description	Date	Appr'd	By					
	Order	Description	Date		Appr'd	By								
LOCATION OF PROJECT AND SCHEDULE OF DRAWINGS	Michael V. Deeney CHIEF, SAN JOAQUIN RIVER BAS. SECT.	Own by: R. Boughton Ckd by: Reviewed by:	Drawing File No.: SJ-4-114 SPEC. No.: 9806E PROJ. No.: File name: SRECT02.DGN Plot date: 8/13/97 Plot scale: 1"=10'											

JUL 02 2002

Mr. Brian S. Mizuno, Chairman
Reclamation District No. 2094
29050 Ahern Road
Tracy, California 95304

Dear Mr. Mizuno:

This letter is in response to your dissatisfaction with a portion of the 1997 Public Law 84-99 repairs of the east levee of the San Joaquin River in Reclamation District No. 2094. Because RD 2094 will be responsible for operation and maintenance, you expressed the following concerns.

1. The landside slope along several reaches of the levee between Levee Mile 0.00 and LM 2.82 in Unit 1 is currently steeper than the original, pre-repair project slopes.
2. In addition to possibly having been reconstructed in an oversteepened manner, the levee slopes also appear to have eroded.

On January 15, 2002, Department of Water Resources' employees Keith Swanson, Michele Ng, Reza Shahcheraghi, and the U.S. Army Corps of Engineers' employee Mr. Larry Bergmooser met with you to investigate these issues. At this meeting, Mr. Bergmooser stated that no additional repairs could be completed as part of the 1997 PL 84-99 program. However, in the event further problems develop at this site during flood events, Mr. Bergmooser indicated that a request for assistance should be forwarded to the Corps as soon as possible. In addition, the State representatives surveyed two cross sections between LM 0.60 and LM 0.70 representing what appeared to be worst-case conditions within this reach. The results of the survey indicate landside slopes are only marginally steeper than the 2 (horizontal) to 1 (vertical) design slopes shown in 1997 USACE PL 84-99 repair documents. A trip report developed after the field meeting is attached.

We recommend that minor slope modifications be included in RD 2094's annual maintenance activities. At a minimum, during future high water events, slope performance should be closely monitored. In the event any performance issues develop during future flood emergencies, you should notify the State immediately so the Corps can be requested to provide appropriate assistance.

Mr. Brian S. Mizuno, Chairman

2002
page 2

If you have any questions, please call me at (916) 653-5434, or you may call Michele Ng, Chief of the Department of Water Resources' System Integrity Section, of the Division of Flood Management, at (916) 574-0364.

Sincerely,

ORIGINAL SIGNED BY

Peter Rabbon
General Manager

Attachments

cc: Colonel Michael J. Conrad, Jr. Mr. Kell Cloward
District Engineer Readiness Branch
Sacramento District Sacramento District
U.S. Army Corps of Engineers U.S. Army Corps of Engineers
1325 J Street 1325 J Street
Sacramento, California 95814-2922 Sacramento, California 95814-2922

(RB# 1035)

RShahcheraghi: Sherri Kemp

MSWORD6: I:\sis2001\correspondence\letters\1093L Mr. Brian Mizuno RD 2094.doc

Spell check May 22, 2002

Peter Rabban
1601

SEP 20 2002

Colonel Michael J. Conrad, Jr.
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Colonel Conrad:

In Colonel Walsh's letter of April 11, 2001 to The Reclamation Board, the U.S. Army Corps of Engineers transferred the repaired east levee of the San Joaquin River from Levee Mile 0.00 to LM 2.82 (Unit 1, Reclamation District No. 2094) to the State of California for operation and maintenance. Colonel Walsh advised the Board the completed repairs would be added by amendment to the Operation and Maintenance Manual, San Joaquin River Flood Control Project. We understand the repairs were completed in accordance with the original plans and specifications. We acknowledge receipt of as-constructed plans and will forward a copy to RD 2094.

On January 15, 2002, Department of Water Resources staff and Corps staff met with Mr. Brian Mizuno, Chairman of the Board of RD 2094, and discussed his concerns regarding the completed work. Mr. Larry Bergmooser of the Corps indicated that no additional repairs could be completed as part of the 1997 Public Law 84-99 program. He further stressed, that in the event problems develop at this site during future flood events, requests for assistance should be forwarded to the Corps as soon as possible. In addition, the State's representatives surveyed two cross sections between LM 0.60 and LM 0.70 representing what appeared to be worst-case conditions within this reach. After the field meeting, the State developed a report documenting Mr. Mizuno's concerns and their findings based on the January 15, 2002 surveys and review of three phases of 1997 PL 84-99 levee repairs in RD 2094 (enclosed).

In June 2002, Ms. Michele Ng of DWR's System Integrity Section, contacted Mr. Mizuno by telephone to inform him of the State's findings and recommendations. During this phone conversation, Mr. Mizuno stated that he is still dissatisfied with the repairs. However, he concurred that his concerns have been adequately documented.

On July 2, 2002, the State sent Mr. Mizuno a letter transmitting the report and recommending that RD 2094 include minor slope modifications in their annual maintenance activities (see enclosed letter and report).

Colonel Michael J. Conrad, Jr.

SEP 20 2002
Page 2

The Board, on behalf of the State of California, accepted the completed repairs at its September 20, 2002 meeting and transferred the San Joaquin River repairs to RD 2094. Until the Corps provides the O&M Manual amendment, RD 2094 will perform operation and maintenance according to the current manual.

If you have any questions, you may contact Peter Rabbon, General Manager of The Reclamation Board at (916) 653-5434, or your staff may contact Michele Ng, Chief of DWR's System Integrity Section, Division of Flood Management at (916) 574-0364.

Sincerely,

ORIGINAL SIGNED BY

Betsy A. Marchand
President

Enclosures

cc: Mr. Brian S. Mizuno, Chairman.
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