

**SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL**

**SACRAMENTO RIVER
FLOOD CONTROL PROJECT**

UNIT NO. 145-PART NO. 1

**EAST LEVEE OF FEATHER RIVER,
SOUTH LEVEE OF YUBA RIVER,
BOTH LEVEES OF W.P.R.R. INTERCEPTING CHANNEL,
WEST LEVEE OF SOUTH DRY CREEK
AND NORTH LEVEE OF BEAR RIVER**



Copy of Title 33

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

FILE COPY

In

Murakami, Robert SPK

From: Bergmooser, Larry M SPK
Sent: Tuesday, September 09, 2008 6:18 AM
To: Murakami, Robert SPK
Cc: Nagy, Meegan G SPK; Sandner, James R SPK; Caldwell, Paige SPK
Subject: FW: PL84-99 Rehab: 2006 Event, RD784, Yuba River, Site 5

Bob; recommend you put this msg in the RD784 O&M manual...

From: Haile-Selassie, Samson [mailto:samsonhs@water.ca.gov]
Sent: Friday, September 05, 2008 1:55 PM
To: Bergmooser, Larry M SPK
Cc: Sandhu, Tirath Pal; steve@rd784.org
Subject: RE: PL84-99 Rehab: 2006 Event, RD784, Yuba River, Site 5

Larry,

We reviewed the status of the training levee on the south of the Yuba River, east of Hwy 70. I have summarized below what we have gathered in discussing the issue with DWR's Office of Flood maintenance; DWR's Levee Inspections & Integrity Branch and also with RD 784 management & district engineer.

- The existing levee on the south side of the Yuba was reconstructed and turned over to the State in 1962. This reach was originally MA8, but was later turned over to RD 784 in 1974.
- RD 784 and DWR maintenance have never and do not plan to maintain the training levee within the channel/flood plain. The RD has no funds available for operations and maintenance of that levee.
- The training levee is not part of the DWR inspection route. The O&M manuals do not mention it.
- The training levee is used as a ramp for off-road vehicles & the public has been accessing the river for years by driving over the training levee; and RD784 has no means or methods available to protect the levee itself.
- RD 784 states that evidence of the protection offered by the training levee while intuitive, is unsupported by engineering studies and that the potential impacts on other levees within the area are unknown. RD784 is unwilling to accept potential liability.

Therefore, you can go ahead and remove RD 784 PL 84-99 site no. 5, located on the above mentioned levee, from the PL 84-99 levee repairs list. Please let me know if you have any questions on this or need further clarifications.

Thanks, Samson



From: Bergmooser, Larry M SPK [mailto:Larry.M.Bergmooser@usace.army.mil]

Sent: Friday, August 29, 2008 10:56 AM

To: Haile-Selassie, Samson

Cc: Sandhu, Tirath Pal; Sandner, James R SPK; Caldwell, Paige SPK; Nagy, Meegan G SPK; Sisley, John L SPK; Mahlum, Scotty W SPK

Subject: PL84-99 Rehab: 2006 Event, RD784, Yuba River, Site 5

Samson; re our site inspection yesterday and my phone msg to you this morning. We've reviewed our records here and find no evidence that the training levee we inspected had any federal involvement in construction or eligibility under the PL84-99 program.

If you are able to find any evidence of eligibility, please call me immediately. Lacking that eligibility, I will not proceed w/preparation of the scope of work revisions we discussed and will not modify the contract to include this work.

Larry.

9/24/2008

CORPS OF ENGINEERS
U. S. ARMY

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WEST LEVEE OF SOUTH DRY CREEK
AND NORTH LEVEE OF BEAR RIVER

Sacramento District
Corps of Engineers
U. S. Army
August 1955

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UNIT NO. 145

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WEST LEVEE OF SOUTH DRY CREEK
AND NORTH LEVEE OF BEAR RIVER

LOCATION	ADDITION OR REVISION	DATE
1-04 g.	Add contract no. 56-217	Nov 1963
1-04 h.	Add contract no. 62-62	Nov 1963
Exhibit B	Add drawing 4-1-392	Nov 1963
Exhibit B	Add drawing 8-4-666	Nov 1963
1-04 i.	Add contract no. 63-28	Oct 1964
1-04 j.	Add contract no. 64-37	Oct 1964
Exhibit B	Add drawing no. 2-4-174	Oct 1964
Exhibit B	Add drawing no. 4-4-544	Oct 1964
Exhibit F	Add letter of acceptance dated 16 Dec 1963	Oct 1964
Exhibit F	Add letter of acceptance dated 10 Mar 1964	Oct 1964
1-04	Add subparagraph k, contract DACW05-86-C-0115	May 1988
Exhibit B	Add drawing YU-25-47	May 1988
Exhibit F	Add copy of letter of notification dated 30 Jan 1987	May 1988
1-04	Add subparagraph l, contract DACW05-86-C-0107	May 1988
Exhibit B	Add drawings BE-4-14 (sheets 1 & 2)	May 1988
2-05	Add subparagraph a, environmental protection	May 1988
1-04	Add subparagraph m.	Dec 1993
2-05	Add subparagraph b.	Dec 1993
Exhibit B	Add exhibit B-1 and Exhibit B-1A	Dec 1993
1-04	Add subparagraph n	Nov 2010
Exhibit B	Add Plan Sheets G-1, C-1 to C-6 (7 sheets)	Nov 2010
Exhibit F	Add copy of letter of transfer dated 25 Jan 1946	27 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 6 Feb 1946	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 8 Dec 1951	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 13 Dec 1951	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 18 Dec 1956	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 16 Feb 1959	27 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 14 Apr 1959	27 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 27 Nov 1961	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 30 Aug 1962	27 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 19 Sep 1962	27 Dec 2010

LOCATION	ADDITION OR REVISION	DATE
Exhibit F	Add copy of letter of transfer dated 24 Oct 1963	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 27 Dec 1963	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 9 Jul 1992	27 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 25 Sep 1992	27 Dec 2010
Exhibit F	Add copy of letter of transfer dated 4 Jan 2011	24 May 2011

TABLE OF CONTENTS

SECTION I - INTRODUCTION

<u>Paragraph</u>	<u>Subject</u>	<u>Page</u>
1-01	Location	1
1-02	Project Works	1
1-03	Protection Provided	2
1-04	Construction Data and Contractor	3
1-05	Flood Flows	4
1-06	Assurances Provided by Local Interests	4
1-07	Acceptance by State Reclamation Board	4
1-08	Superintendent	4

SECTION II - FEATURES OF THE PROJECT
SUBJECT TO FLOOD CONTROL REGULATIONS

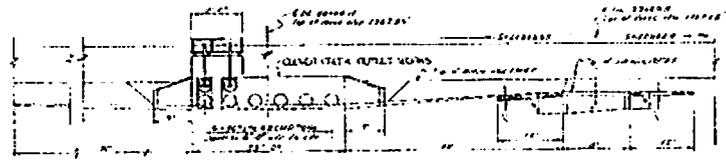
2-01	Levees	5
2-02	Drainage and Irrigation Structures	5
2-03	Channels	7
2-04	Miscellaneous Facilities	8

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

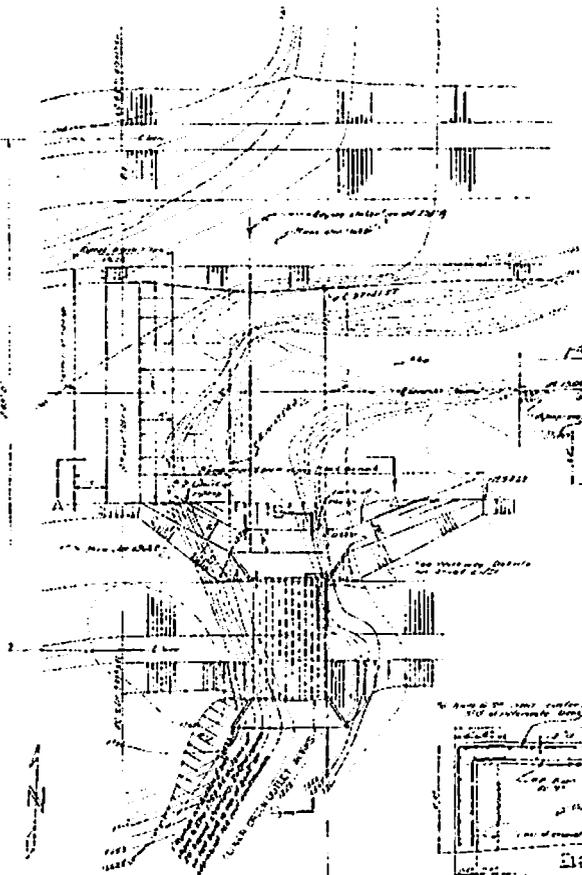
3-01	Repair of Damage	10
3-02	Applicable Methods of Combating Floods	10

EXHIBITS

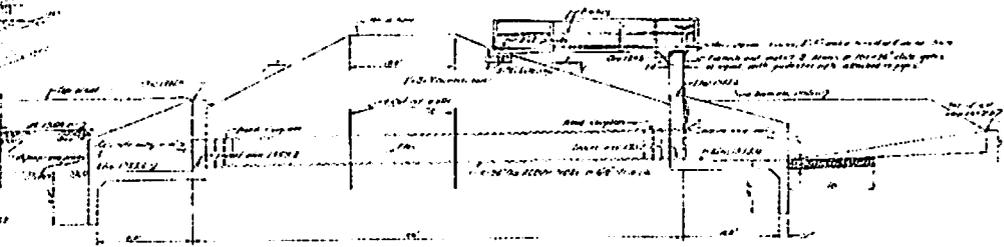
<u>Exhibit</u>	<u>Description</u>
A	Flood Control Regulations - - - - - Unattached (Contained in Standard Manual)
A-1	Location Drawing - - - - - 1 Sheet
B	"As Constructed" Drawings - - - - - Unattached
C	Plates of Suggested Flood Fighting Methods- Unattached (Contained in Standard Manual)
D	Check List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



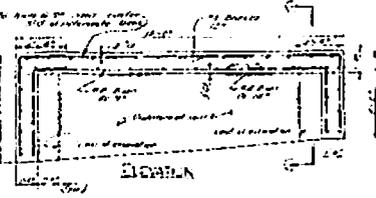
SECTION A-A
2/21/28



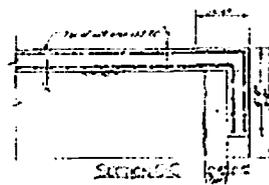
PLAN OF CROSS SECTION WITH OUTLET WORKS
2/21/28



SECTION B-B
2/21/28



ELEVATION



SECTION C-C

DIVISION SURVEY DETAIL
2/21/28

DIVERSION STRUCTURE
AS CONSTRUCTED

DESIGNED BY GEORGE W. STOWELL CHIEF ENGINEER CORPS OF ENGINEERS	CHECKED BY W. H. STOWELL CHIEF ENGINEER CORPS OF ENGINEERS
DATE 1928	PROJECT FLOOD CONTROL PROJECT MOORE CREEK LEVEE CONSTRUCTION & CHANNEL IMPROVEMENT
SCALE AS SHOWN	CONTRACT NO. CC-4-4-25
APPROVED BY <i>[Signature]</i>	DATE 1928

SUPPLEMENT TO STANDARD
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SECTION I

INTRODUCTION

1-01. Location. The improvement covered by this manual is Unit No. 145 - Part No. 1 of the Sacramento River Flood Control Project which, in general, comprises levees and channels or floodways in an area that lies south of the City of Marysville and northwesterly from the town of Wheatland. Levees and channels of this unit are located in Reclamation Districts No. 784 and No. 817, in Yuba County, California, as shown on Location Map, Exhibit A-1.

1-02. Project Works. The flood control works included in this manual were authorized by the Flood Control Act of 1917 as modified by the Acts of 1928, 1937, and 1941, and consists of:

a. The south levee and channel of the Yuba River from the east boundary of Reclamation District No. 784 downstream to the junction of the Yuba and Feather Rivers, excepting therefrom a portion of the south levee of the Yuba River extending from the east boundary of Reclamation District No. 784 at approximate station 69+34 downstream to the Southern Pacific Railroad crossing at station 0+00 (see Drwg. No. 4-4-210, sheet 5 of Exhibit B).

b. The east levee and adjacent channel of the Feather River from the junction of the Yuba and Feather Rivers downstream about 13.78 miles to its junction with the north levee of the Bear River, excepting therefrom a section of levee along the Sacramento Northern Railroad extending from station 197+43 to station 146+45 as shown on Drwg. No. 4-4-210A, sheet 4 of Exhibit B.

c. The north levee and adjacent channel of the Bear River from the west levee of South Dry Creek downstream to the east levee of the Feather River, a distance of about 7.37 miles.

d. The west levee and channel of South Dry Creek extending from the Bear River upstream about 1.71 miles.

e. The west levee and adjacent channel of the Western Pacific Railroad Intercepting Channel from the Bear River upstream about 6.21 miles. Also the east levee of the Western Pacific Railroad Intercepting Channel and the south bank of North Dry Creek extending from the Bear River upstream about 4.17 miles.

Part No. 1 of Unit No. 145 completes Unit No. 145 with exception of the west levee of Clark Slough Lateral and exceptions as indicated in 1-02a and 1-02b above. At such times when the excepted portions of this Unit are completed to project standards, a revised Operations and Maintenance Manual will be written to cover the entire unit.

This manual covers and supersedes a portion of the operation and maintenance manual designated as Manual No. 5 entitled, "Bear River levee system constructed in vicinity of Rio Oso, Sutter County, California, approximately 28 miles northerly of Sacramento, California." The portion of Manual No. 5 which is included in Unit No. 145 – Part No. 1 comprises the north levee of South Dry Creek; that portions of the north levee of the Bear River that lies between South Dry Creek and the Western Pacific Intercepting Channel; the east levee of the Western Pacific Intercepting Channel; and the South Levee of North Dry Creek.

1-03. Protection Provided. The levees as described in this unit provide direct protection to Reclamation Districts No. 784 and No. 817 and vicinity against high water of the Yuba, Feather and Bear Rivers and their tributaries. The adopted flood plane along the main channel of the Yuba River within this unit varies from elevation 81.9 at the upper end to elevation 78.2 at the junction of the Yuba and Feather River; in the Feather River channel the flood plane varies from elevation 78.2 at the junction of the Yuba and Feather Rivers to 56.4 at its junction with the Bear River; the adopted flood plane of the South Dry Creek varies from elevation 69.2 at its upper end at 69.2 at its junction with the Bear River; and the adopted flood plane along the W.P.R.R. Intercepting Channel varies from elevation 60.0 at the upper end of the west levee to elevation 59.0 at its junction with the Bear River. (All elevations are referred to U.S. Corps of Engineer datum). The levee grade within this unit provides for a free board which equals or exceeds 3 feet. The project design capacities of the channels are follows: Yuba River 120,000 cubic feet per second, Feather River 300,000 cubic feet per second, Bear River 40,000 cubic feet per second, W.P.R.R. Intercepting Channel 10,000 cubic feet per second, and South Dry Creek 7,000 cubic feet per second.

1-04. Construction Data and Contractor. Construction required by the U.S. Corps of Engineers to bring levees of Unit No. 145 Part No. 1 to project standards and to perform emergency repair work to locally built levees was accomplished under the following contracts:

a. Construction of the east levee of the Feather River 1-1/2 miles south of Shanghai Bend to upper end of Starr bend was accomplished under Contract No. W-1105-eng-1776 by Macco Construction Co. and completed on 19 December 1936.

b. Enlargement of the east levee of the Feather River 2.8 miles southerly from Eliza Bend to mouth of Yuba River and south levee of the Yuba River from Feather River easterly was accomplished under Contract No. W-1105-eng-2762 by the Calowell Construction Co. and completed on 30 November 1941.

c. Enlargement of the east levee of the Feather River from 2-1/2 miles above Starr Bend to Bear River and north levee of Bear River to the W.P.R.R. was accomplished under Contract No. W-1105-eng-2836 by Morrison-Knudsen co. and completed on 20 September 1941.

d. Enlargement of the west levee of the W.P.R.R. Intercepting Channel was accomplished under Contract No. W-1105-eng-3260 by Paulos & McEwen and completed on 22 December 1941.

e. Enlargement of Bear River Levees from the W.P.R.R. upstream 4 miles, South Dry Creek levees upstream from mouth 2 miles, and east levee of the W.P.R.R. Intercepting Channel was accomplished under Contract No. W-04-167-eng-633 by H. Earl Parker. Construction on this contract was started on 8 October 1944 and completed on 6 October 1945.

f. Surfacing of a portion of the Bear River and South Dry Creek levees was accomplished under Contract No. DA-04-167-eng-828 by Browne and Krull and completed on 2 December 1952.

g. Installation of relief wells, left bank Feather River, vicinity of Starr Bend in R.D. 784 was accomplished under Contract No. DA-04-167-CIVENG-56-217 by L.C. Parkinson, contractor, during the period from 4 June 1956 to 23 June 1956, Specification No. 2103-A, Drawing No. 4-1-392.

h. Levee construction on left bank of Feather and Yuba Rivers was accomplished under Contract No. DA-04-167-CIVENG-62-62 by Lee Stephens, contractor, during the period from 3 May 1962 to 17 August 1962, Specification No. 2740, Drawing No. 8-4-666.

i. Levee construction, right and left banks Bear River, W.P.R.R. Interceptor - Channel and Yankee Slough was accomplished under Contract No. DA-04-167-Civeng-63-28 by H. Earl Parker, Inc., during the period from 11 September 1962 to 18 October 1963, Specification No. 2792, Drawing No. 2-4-174.

j. Berm construction, left bank Feather River in R.D. 784 was accomplished under Contract No. DA-04-167-CIVENG-64-37 by Melvin R. Weir, contractor, during the period from 13 September 1963 to 23 December 1963, Specification No. 3016, Drawing No. 4-4-544.

k. Installation of landside toe drainage trench and levee repairs as part of PL84-99 emergency repairs, left bank Yuba River, between State Hwy 70 and Southern Pacific

Railroad tracks and left bank and left bank Feather River in R.D. 784 was accomplished under the period from 25 September 1986 to 3 November 1986 by K.G. Walters Construction in accordance with Specification No. 8031, Contract No. DACW05-86-C-0115 and Drawing No. YU-25-47.

l. PL84-99 Emergency Levee Repairs on North levee of Bear River located approximately 2.2 miles upstream from Pleasant Grove Rd. was accomplished under Contract No. DACW05-86-C-0107 by Ford Construction Company Inc., during the period from 20 September 1986 to 13 November 1986 (Ref. Drawing File No. BE-4-14, sheets 1 & 2, and Specification No. 8010). Federal cost, which included levee repairs on Yankee Slough and Natomas Cross Canal, totaled \$212,997.18

m. Filling of a scour hole, plugging of a drain pipe in the scour hole and installing two toe drain risers at the landside toe of the project levee adjacent to the 1986 levee break was accomplished under Contract Purchase Order No. DACW05-92-P-0588. See Exhibit B-1 for the plans and Exhibit B-1A for the scope of work and the specifications.

n. PL 84-99 rehabilitation repairs to the right bank levee of Dry Creek and the left bank levee of the Western Pacific Interceptor Canal, under Contract No. W91238-08-D-0016 (Task Order No. 0004) by Santos Excavating, Inc., was completed on September 20, 2008. Specifications: P.L. 84-99 Levee Rehabilitation Repairs. Drawings: "PL 84-99 Levee Rehabilitation Repairs, CY2007 Orders 3-5 Site, Reclamation District 784".

TABLE 1: Dry Creek

SITE	COORDINATES (NAD 83)				SITE LENGTH (FT)
	(N)	(W)	(N)	(W)	
007	38.98167,	-121.51583	to 38.97700,	-121.52219	2,250

TABLE 2: Western Pacific Interceptor Canal

SITE	COORDINATES (NAD 83)				SITE LENGTH (FT)
	(N)	(W)	(N)	(W)	
009	38.01181,	-121.53263	to 38.00986,	-121.53475	1,127

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 Yuba River reaches or exceeds the reading of 66.0 on the U. S. Weather Bureau gage located on the right bank of the Yuba River on the first pier of the "D" Street Bridge at Marysville (Staff gage set on U. S. Corps of Engineers datum). On the Bear River drainage area "high water period" shall refer to flows when the water surface reaches or exceeds the reading of 11.0 on the U. S. Geological Survey gage located on the right bank of the Bear River, 100 feet downstream from the U. S. Highway 99E at Wheatland, California (Zero on this gage and on the staff gage on downstream side of highway bridge, is approximately elevation 80.4 U. S. Corps of Engineers datum).

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 State Reclamation Board. Responsibility for operating and maintaining the completed works of Unit No. 145 - Part No. 1 was officially accepted by the Reclamation Board of the State of California on 18 December 1951 and 2 January 1952, 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 FLCOD CONTROL REGULATIONS

2-01. Levees.

a. Description. The limits of the levees covered in Unit No. 145 - Part No. 1 are as described in paragraph 1-02 of this manual. The east levee of the Feather River has been enlarged to form a crown width of 20 feet and slopes of one vertical on three horizontal for both riverside and landside slopes. The slab levee along the W.P.R.R. at the Intercepting Channel has a crown width of 12 feet. All other levees within this unit have been enlarged to form a crown 20 feet wide, a landside slope of one vertical on two horizontal and a riverside slope of one vertical on three horizontal. Construction also included a gravel road surfacing 12 feet wide on top of the levee with turnouts at 1,000 - foot intervals, 50 feet long and 18 feet wide, and the necessary drainage structures, road approaches and appurtenances. For more complete detail of items included in construction of above mentioned levees reference is made to the "As Constructed" drawings of Exhibit B. Structures affecting levee maintenance are listed in Exhibit E.

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 Manual.

2-02. Drainage and Irrigation Structures.

a. Description. Drainage and irrigation structures which extend through the levee are listed as follows:

Location Station	Size and Kind of Pipe	Gate Model No.:		Elev. of In- vert at pipe
---------------------	--------------------------	--------------------	--	------------------------------

South Levee Yuba River (See Drwg. 4-4-210A, Sheet 4 of Exhibit B)

227+00	4" Steel			82.30
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East Levee Feather River (See Drwg. 4-4-210A and 4-4-236A of Exhibit B)

102+88	48" C.M.P.	101		54.00
37+72	18" Steel		Gate Valve	
377+70	2-36" C.M.P.	101	2 Pumps	42.20
195+00	2-30" C.M.P.		2 Pumps	46.90
194+85	2-72" C.M.P.		Slide Gates R.S. and L.S.	27.10

North Levee Bear River (See Drwg. 4-4-236A and 2-4-106 of Exhibit B)

424+00	3-48" C.M.P.	100	Algodon Slough Crossing	35.0
92+88	30" C.M.P.	100		46.9
143+15	18" C.M.P.	100		53.5

West Levee of South Dry Creek (See Drwg. 2-4-106 of Exhibit B)

4+96	18" C.M.P.	100		51.20
9+85	18" C.M.P.	100		50.90
21+35	18" C.M.P.	100		54.30
35+57	24" C.M.P.	100		52.20
43+17	24" C.M.P.	100		49.60
69+17	18" C.M.P.	100		56.30
74+72	18" C.M.P.	100		57.30

East Levee of W.P.R.R. Intercepting Channel (See Drwg. 2-4-106 of Exhibit B)

25+28	18" C.M.P.	100		46.80
63+00	30" C.M.P.	100		39.80
103+23	18" C.M.P.	100		47.70
116+78	18" C.M.P.	100		48.70
126+53	18" C.M.P.	100		49.10
13+72	18" C.M.P.	100		47.60
44+96	12" C.M.P.	100		52.00
53+86	18" C.M.P.	100		48.40
83+39	18" C.M.P.	100		56.30
91+50	18" C.M.P.	100		56.00

West Levee of W.P.R.R. Intercepting Channel (See Drwg. 2-4-84-1 of Exhibit B)

120+80	24" C.M.P.	1001		37.00
132+40	18" Cast Iron			45.30
264+60	24" C.M.P.	1001		40.20

Notes on Gate Model numbers:

Gate Model No. 100 is a Calco automatic drainage gate or outlet end of pipe. It closes against face pressure and opens automatically to permit outflow when pressure is released.

Gate Model No. 101 is a Calco slide gate which operates by handscrew on a steel frame.

Gate Model No. 1001 is a combination gate which includes the features of gates No. 100 and 101.

Abbreviations are as follows:

C.M.P. = Corrugated Metal Pipe
R.S. = Riverside
L.S. = Landside
W.P.R.R. = Western Pacific Railroad

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) 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 of the Yuba River, Feather River, Bear River, South Dry Creek, the Western Pacific Railroad Intercepting Channel and North Dry Creek for this unit lie adjacent to levees as described in paragraph 1-02. The project design capacities of channels within this unit are as listed in paragraph 1-03 of this manual.

The maintenance and operation of the channel of the Feather 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 66.0 on the gage located at the "D" Street Bridge at Marysville or a reading of 11.0 on the gage located near U. S. Highway 99E at Wheatland as indicated in paragraph 1-05 of this manual. The Superintendent shall dispatch a message by the most suitable means to the District Engineer whenever the water surface in the Yuba River or the Bear River reaches the gage readings indicated above. The Superintendent shall cause readings to be taken at said gages at intervals of two to four hours during the period when the water surface is above the flood-flow stages indicated above and record the time of 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 existed in conjunction with the protective works, and which might affect their functioning, include the following:

(1) Bridge Crossings:

(a) Southern Pacific Railroad Bridge crossing the Yuba River at station 0+00 near Marysville.

(b) ^{STATE 70} U.S. Highway 99E Bridge crossing the Yuba River at ^{present} "D" Street (Marysville). ₁₉₃₀

(c) Western Pacific Railroad Bridge crossing the Yuba River at station 212+56 at Marysville.

(d) Sacramento Northern Railroad Bridge crossing the Yuba River at station 197+80 at Marysville.

(e) County Highway Bridge crossing the Bear River at station 41+30 near Rio Oso (Rio Oso to Marysville Road). _{1917 Hwy 70}

(f) Sacramento Northern Railroad Bridge crossing the Bear River at station 420+78 near Rio Oso.

(g) Western Pacific Railroad Bridge crossing the Bear River at station 395+73 near Rio Oso.

(2) Utility Relocations. Because of the nature of the construction of the levees by local interests, no records of any utility relocations are available.

(3) Hydrographic Facilities.

(a) A continuous water stage recorder and staff gage to be maintained by the U. S. Weather Bureau that is located on the right bank of the Yuba River on the first pier of the "D" Street Bridge at Marysville.

(b) A continuous water stage recorder and staff gage to be maintained by the U. S. Geological Survey that is located on the right bank of the Bear River, 100 feet downstream from the U. S. Highway 99E at Wheatland, California.

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.

2-05.

a. Vegetation preserved as a part of selective clearing on the waterside berm or slope above the bank protection during prosecution of the contract shall not be removed as a part of normal maintenance. Dead trees with wildlife value will be retained except where they constitute a hazard to existing flood control works.

2-05.

b. The rock filled drain (2050 lineal feet), the two PVC risers with covers, and the piezometer constructed adjacent to the landside levee toe (refer to paragraphs 1-04. k. and 1-04. m. of this manual) shall remain in place and be undisturbed by maintenance activities. The toe drain area shall be kept free of growth of trees, brush and other items that may affect the performance of the drains or obstruct inspection during floods and general inspection activities. The risers and covers and the piezometer shall be protected and preserved from damage or destruction. Any damage to these facilities shall be repaired.

SECTION III

REPAIR OF DAMAGE TO PROJECT WORKS AND

METHODS OF COMBATING FLOOD CONDITIONS

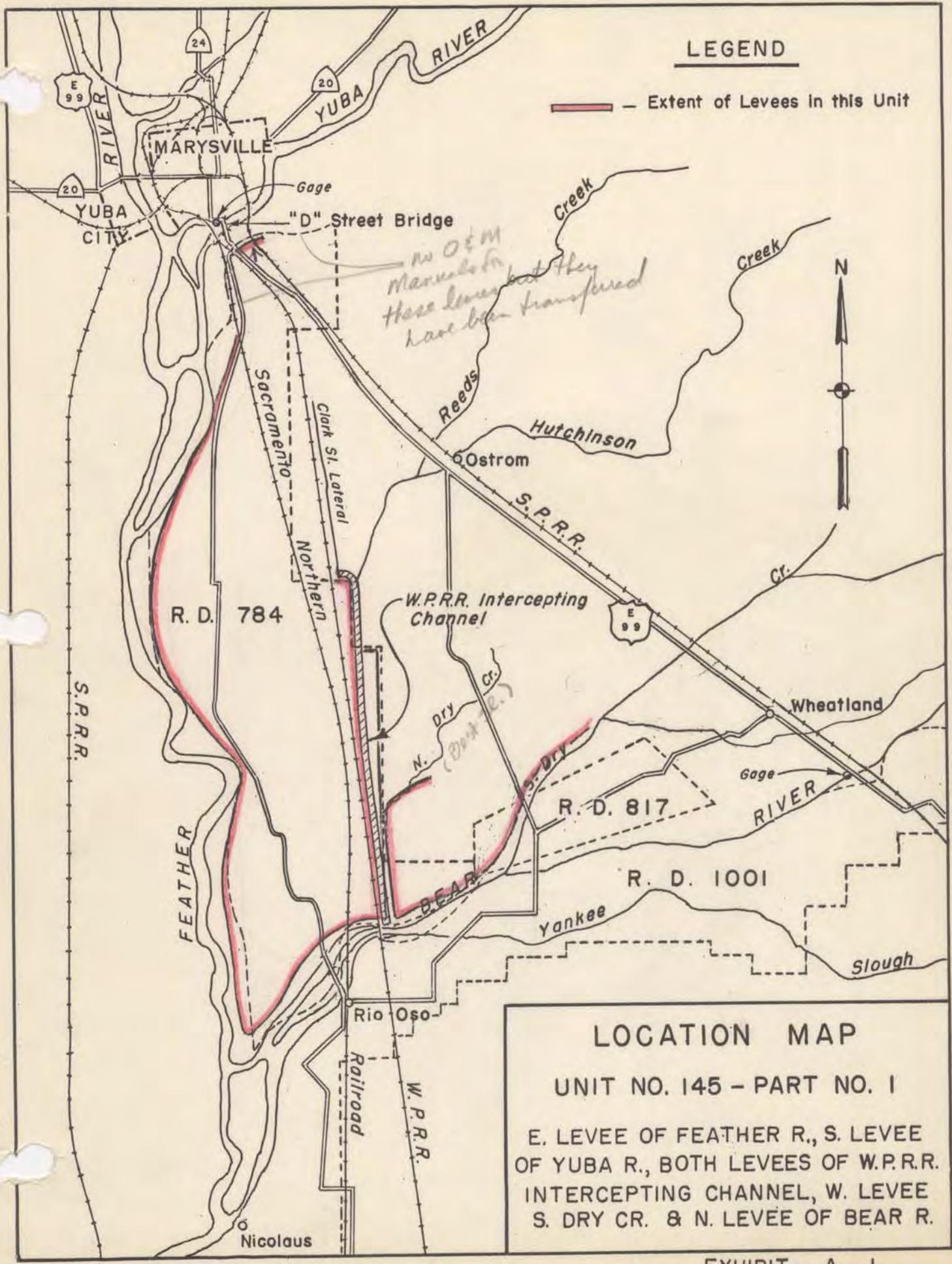
3-01. Repair of Damage. In the event of serious damage to the project works, whether due to flood conditions or other causes, and which may be beyond the capability of local interests to repair, the Superintendent will contact a representative of the Division of Water Resources, State of California, 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 of Combating Floods. 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)

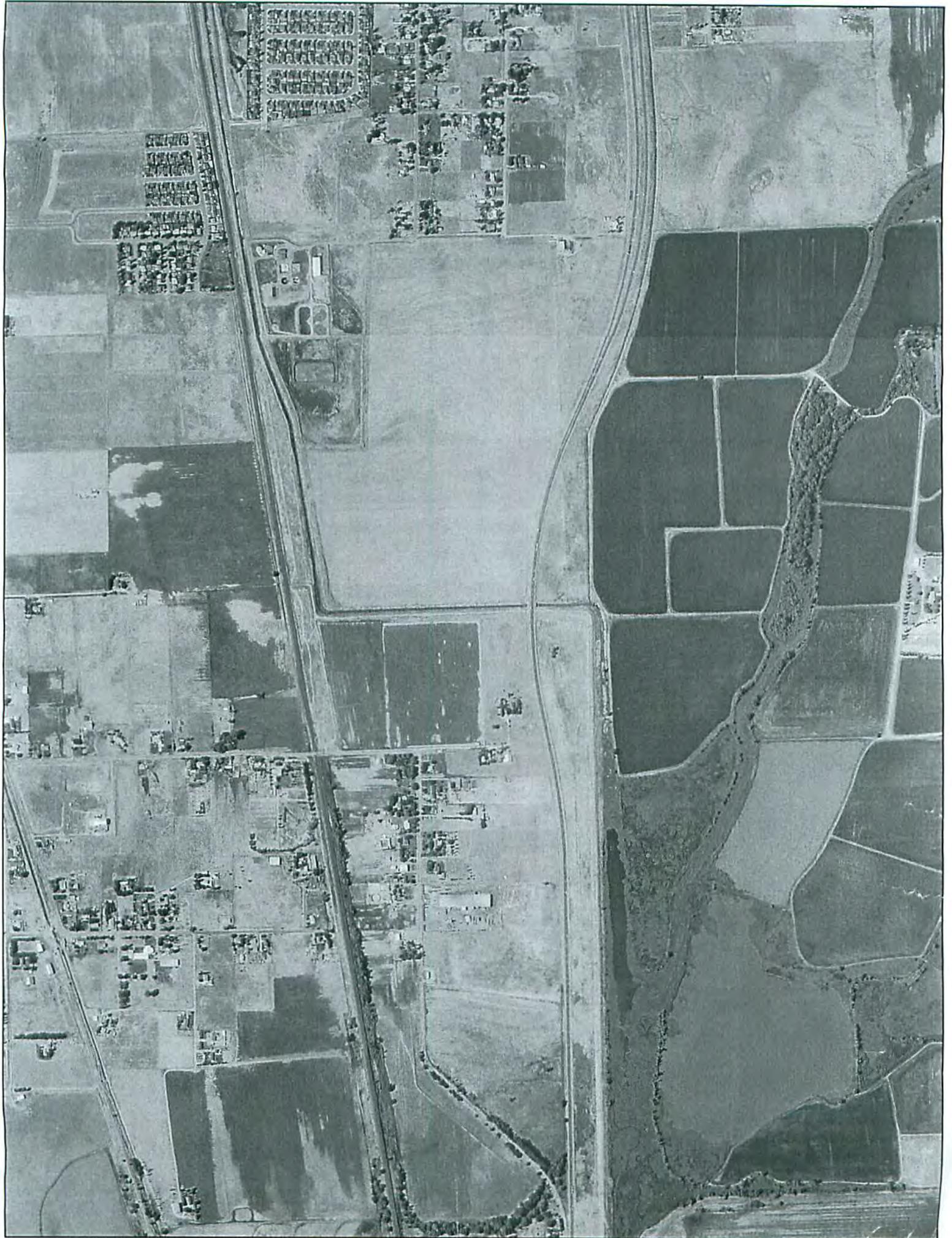


LEGEND

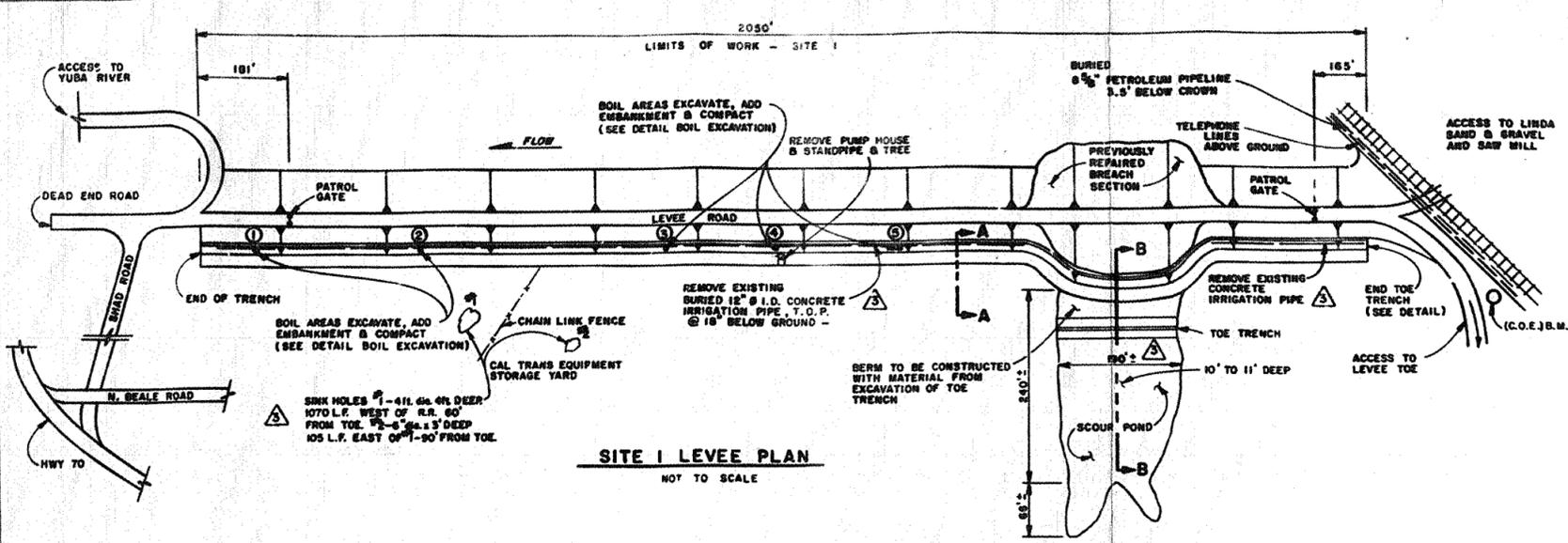
— Extent of Levees in this Unit

No O&M Manual for these levees but they have been transferred

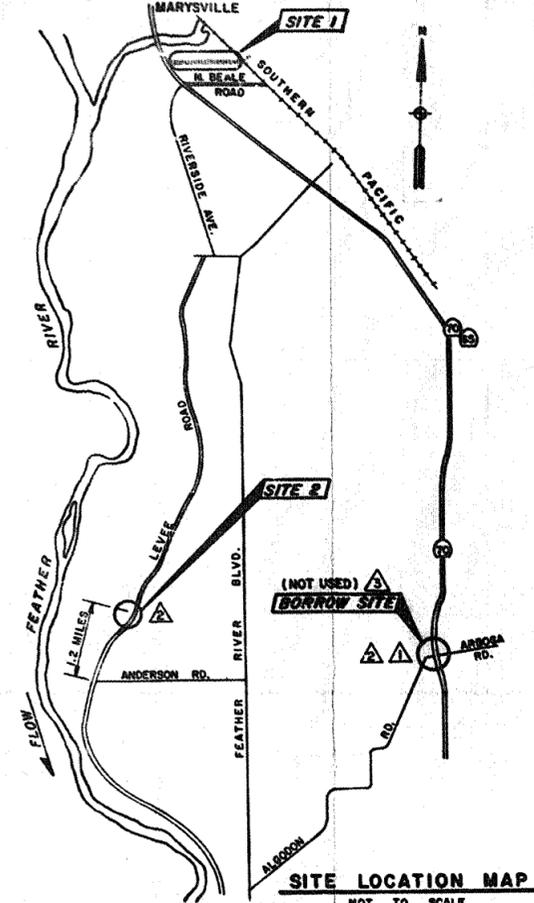
LOCATION MAP
 UNIT NO. 145 - PART NO. 1
 E. LEVEE OF FEATHER R., S. LEVEE OF YUBA R., BOTH LEVEES OF W.P.R.R. INTERCEPTING CHANNEL, W. LEVEE S. DRY CR. & N. LEVEE OF BEAR R.



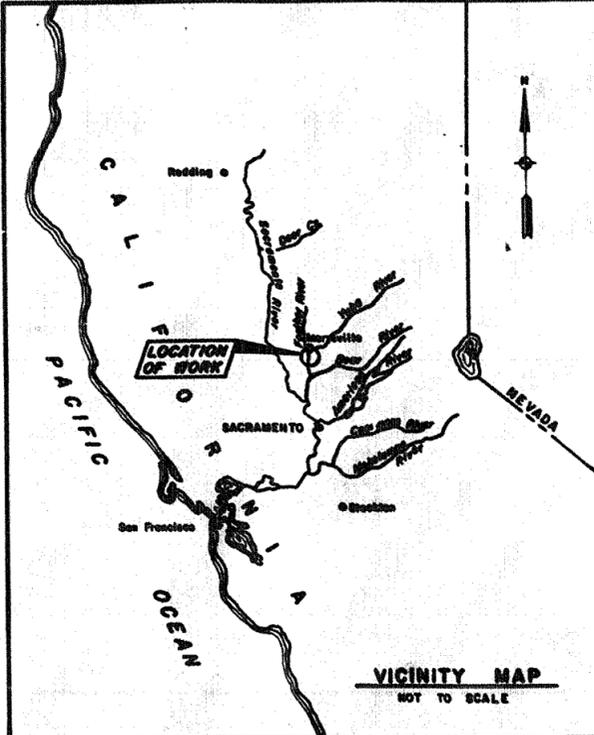
FUNCTIONAL ANALYSIS - VE PAYS



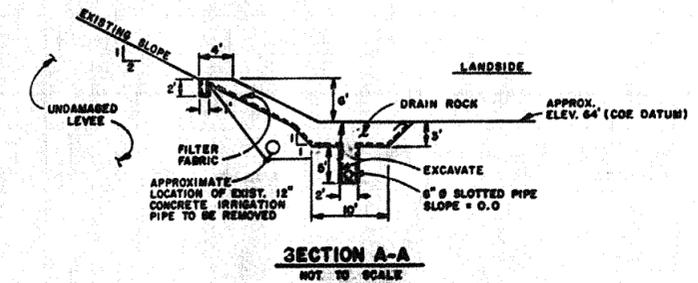
SITE 1 LEVEE PLAN
NOT TO SCALE



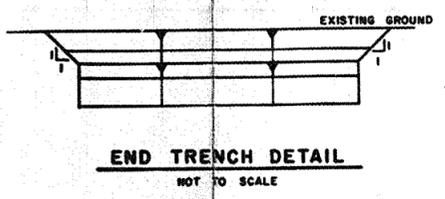
SITE LOCATION MAP
NOT TO SCALE



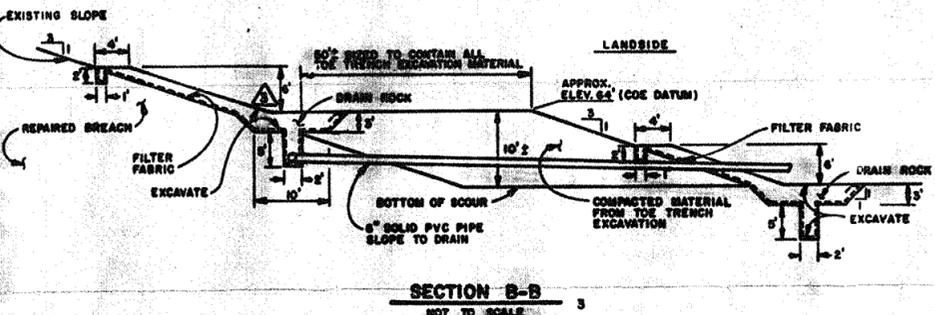
VICINITY MAP
NOT TO SCALE



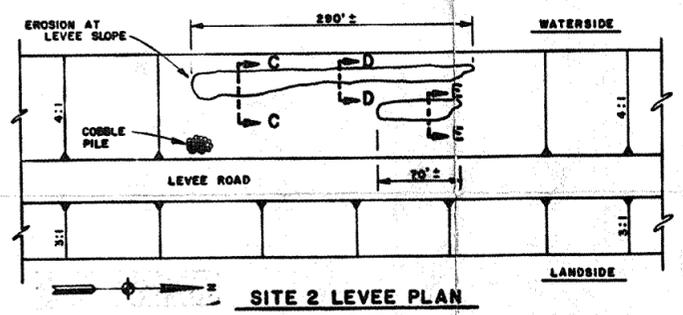
SECTION A-A
NOT TO SCALE



END TRENCH DETAIL
NOT TO SCALE

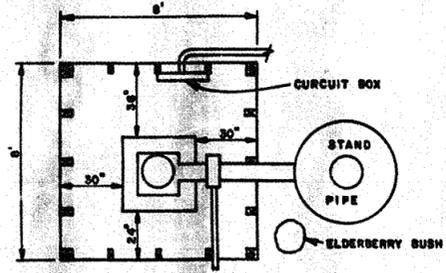


SECTION B-B
NOT TO SCALE

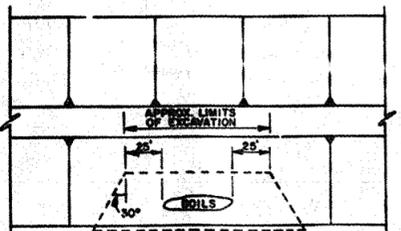


SITE 2 LEVEE PLAN
NOT TO SCALE

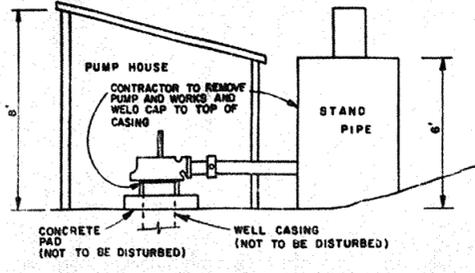
- GENERAL NOTES**
1. LIMITS OF BOIL AREA TO BE STAKED IN FIELD BY CONTRACTING OFFICERS REPRESENTATIVE PRIOR TO CONSTRUCTION.
 2. THE CRITERIA FOR DETERMINING THE FILTER FABRIC TO BE USED AT SITE 1 ARE GIVEN IN THE SPECIFICATIONS.
 3. ACCESS FROM THE LEVEE TO SITES TO BE DEVELOPED BY CONTRACTOR AND RESTORED TO PRE CONSTRUCTION CONDITIONS WHEN WORK IS COMPLETED.
 4. LOCATION OF TRENCH IN SCOUR HOLE TO BE DETERMINED BY THE AMOUNT OF FILL AVAILABLE FROM TRENCHING ACTIVITY AT LEVEE TOE. SEE SITE 1 SECTION B-B.



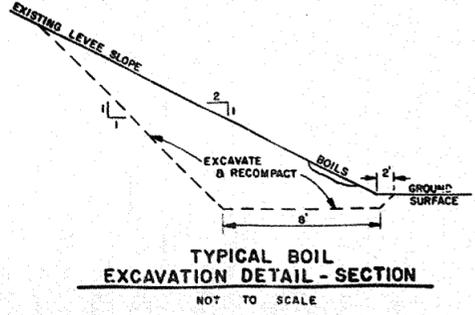
PUMP HOUSE - PLAN
NOT TO SCALE



TYPICAL BOIL EXCAVATION DETAIL - PLAN
NOT TO SCALE

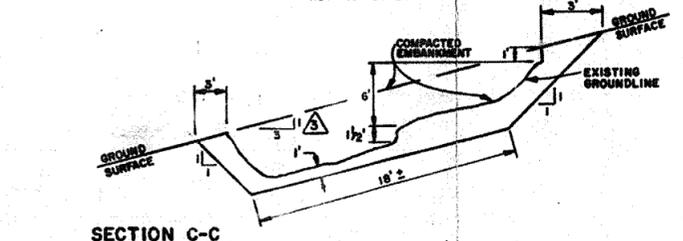


PUMP HOUSE - SECTION
NOT TO SCALE

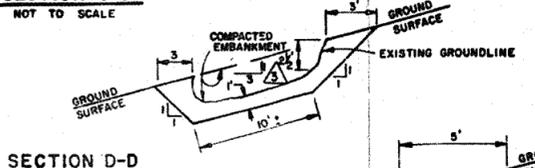


TYPICAL BOIL EXCAVATION DETAIL - SECTION
NOT TO SCALE

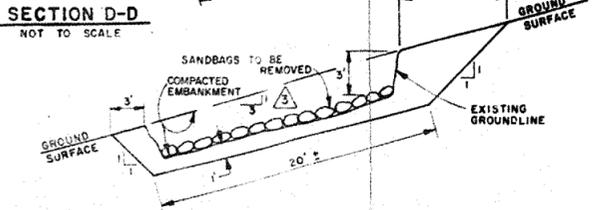
BOIL NO.	APPROX LENGTH OF EXCAVATION
①	120'
②	110'
③	55'
④	60'
⑤	55'



SECTION C-C
NOT TO SCALE



SECTION D-D
NOT TO SCALE



SECTION E-E
NOT TO SCALE

AS-CONSTRUCTED
CONR. NO. 86-C-015

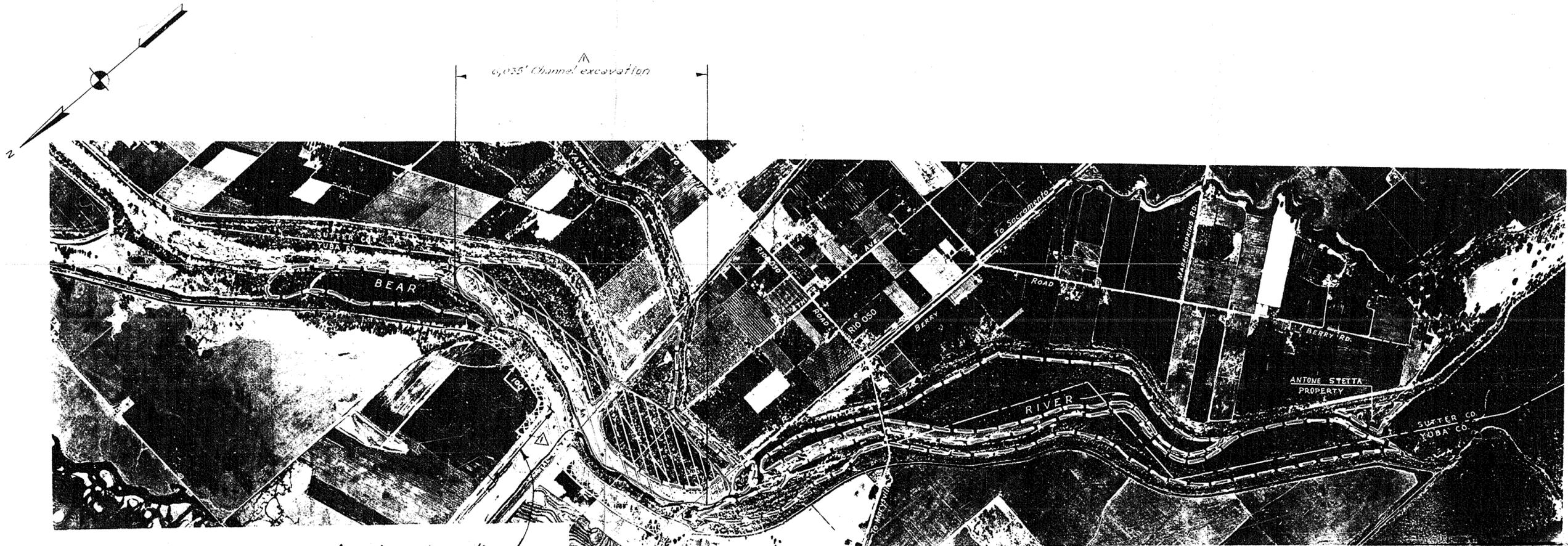
DESIGNED BY: S. Barth	DATE: 2 SEP 1986
DRAWN BY: R. Lovison	SCALE: AS SHOWN
CHECKED BY: S. Morris	SHEET: 1 of 1
APPROVED BY: Wayne J. Scholl	FILE NO: YU-25-47

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

PL 84-99
EMERGENCY LEVEE REPAIR RD784
LEFT BANK YUBA RIVER
LEFT BANK FEATHER RIVER
SUTTER AND YUBA COUNTIES CALIFORNIA

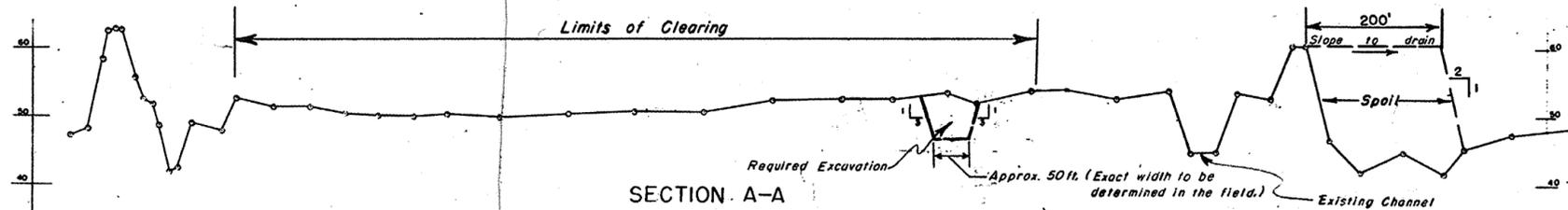
SIGNATURES AFFIXED BELOW INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL DRAWINGS IN THIS SET AS INDEXED ON THIS SHEET

WAYNE J. SCHOLL
CAL. CORP. OF ENGINEERS, E. & A.

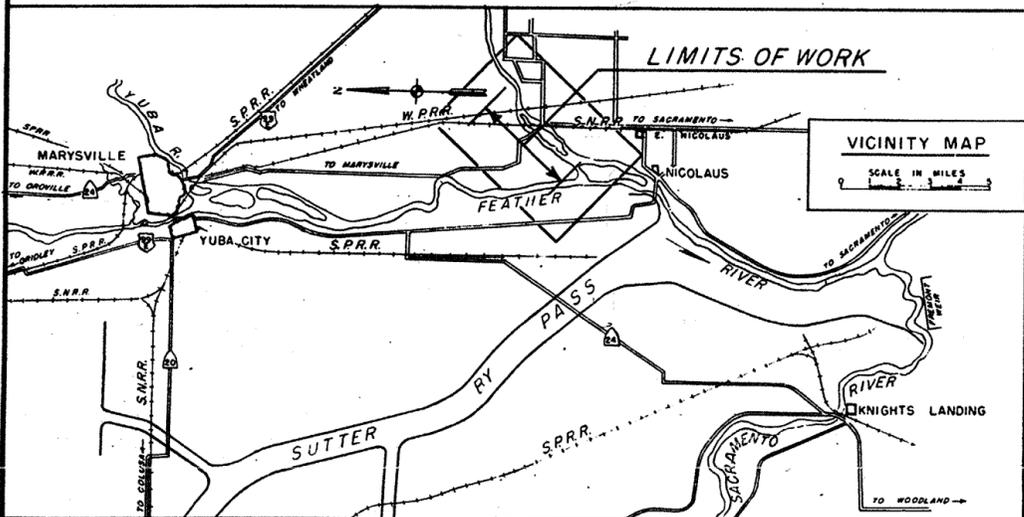


△ 1600' Channel excavation
 △ Note: All areas cleared as indicated.

PLAN
 Scale: 1" = 800'



SECTION A-A
 TYPICAL SECTION CHANNEL EXCAVATION
 Scale: 1" = 100' HOR., 10' VER.



LEGEND

- = AREA TO BE CLEARED
- ▨ = DEBRIS REMOVAL
- ▩ = SPOIL AREA

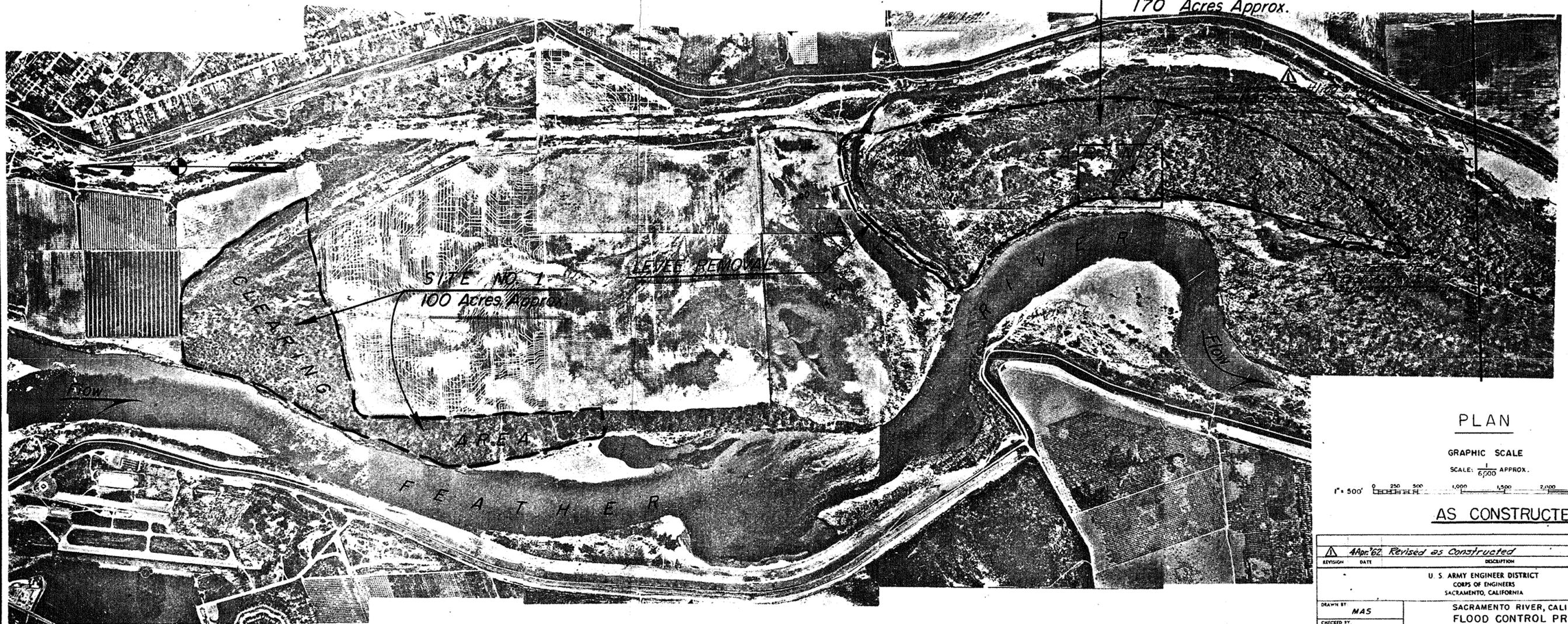
NOTE:
 ALL ELEVATIONS ARE REFERRED TO C. OF E.
 DATUM + 3.0 ft. BELOW MEAN SEA LEVEL
 PHOTOGRAPHS FLOWN IN SEPT. 1955

AS CONSTRUCTED

REVISION	DATE	DESCRIPTION	BY	CHK.
△	20 Aug 57	Revised as Constructed		
CORPS OF ENGINEERS, U. S. ARMY OFFICE OF THE DISTRICT ENGINEER SACRAMENTO DISTRICT SACRAMENTO, CALIFORNIA				
DRAWN BY: B.L.S.		SACRAMENTO RIVER, CALIFORNIA FLOOD CONTROL PROJECT CLEARING AND DEBRIS REMOVAL BEAR RIVER FROM FEATHER RIVER UPSTREAM APPROX 4 MILES		
CHECKED BY: M.A.S.				
PREPARED BY: J.H.K. : L.E.H.				
SUBMITTED BY: <i>W. B. S. Chalmers</i> CHIEF LEV. & CHAL. SECTION				
APPROVED BY: <i>W. B. S. Chalmers</i>		APPROVED BY: <i>W. B. S. Chalmers</i> DISTRICT ENGINEER		
DATE: FEBRUARY 1956		SCALE AS SHOWN SHEET NO. 2002 FILE NO. 2-6-133 SHEETS 2-6-133 IN ONE SHEET 133/1.1		

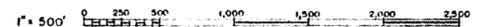


SITE NO. 2
170 Acres Approx.



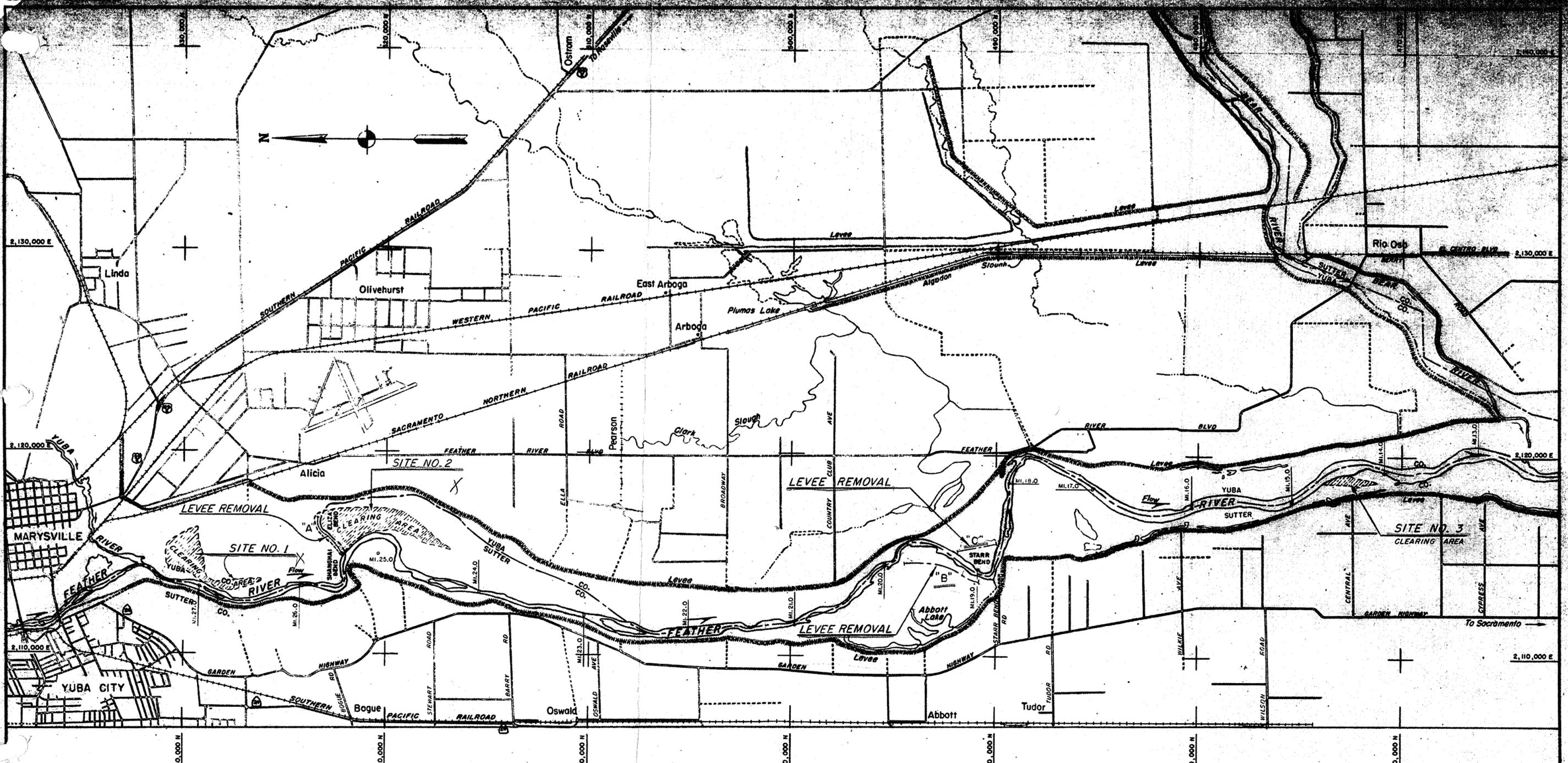
PLAN

GRAPHIC SCALE
SCALE: 1/6,700 APPROX.



AS CONSTRUCTED

REVISION	DATE	DESCRIPTION	BY	ST
4	Apr 62	Revised as Constructed		
U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA				
DRAWN BY MAS		SACRAMENTO RIVER, CALIFORNIA FLOOD CONTROL PROJECT FEATHER RIVER CHANNEL CLEARING BETWEEN YUBA AND BEAR RIVERS		
CHECKED BY MAS				
PREPARED BY JAS				
SUBMITTED BY K. Berardelli CHIEF, I. & C. DIVISION		APPROVED: <i>H. A. Gomez</i> CHIEF, DISTRICT ENGINEERS		
APPROVED: <i>W. A. Baker</i> DISTRICT ENGINEER		SCALE: AS SHOWN SPEC. NO. 2729		
DATE: MAY 1961		FILE NO. 4-6-514		
		SHEETS 514/1 To 514/4		
		SHEET NO. 514/2.1		



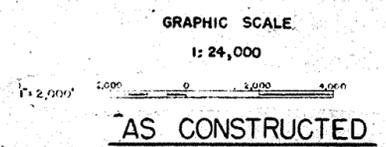
LIST OF DRAWINGS

FILE NO.	SHEET NO.	DESCRIPTION
4-6-514	514/1	LOCALITY MAP
4-6-514	514/2	PLAN SITES 1 & 2 AND LEVEE REMOVAL "A"
4-6-514	514/3	PLAN SITE 3 AND LEVEE REMOVAL "B" & "C"
4-6-514	514/4	PROFILES & CROSS-SECTIONS

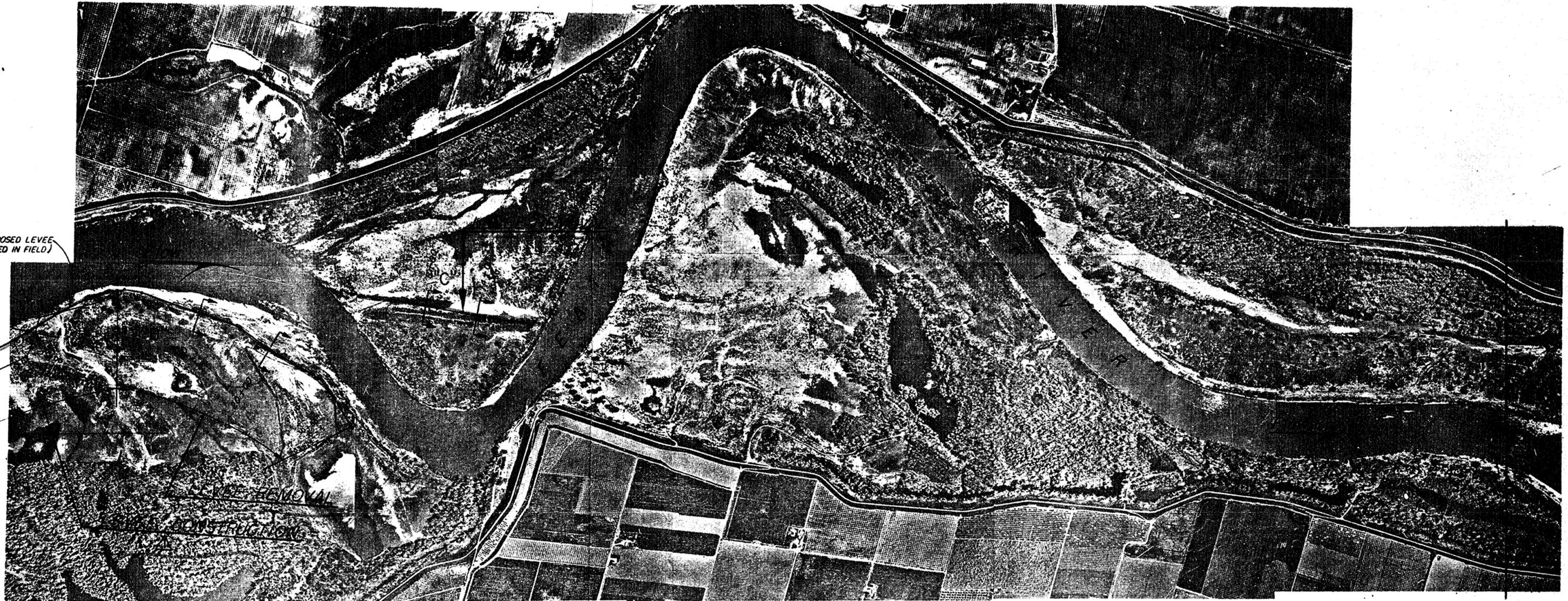
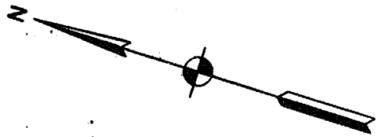
LEGEND

- EXISTING PROJECT LEVEES - - - - -
- CHANNEL CLEARING - - - - -
- LEVEES TO BE REMOVED - - - - -

LOCALITY MAP



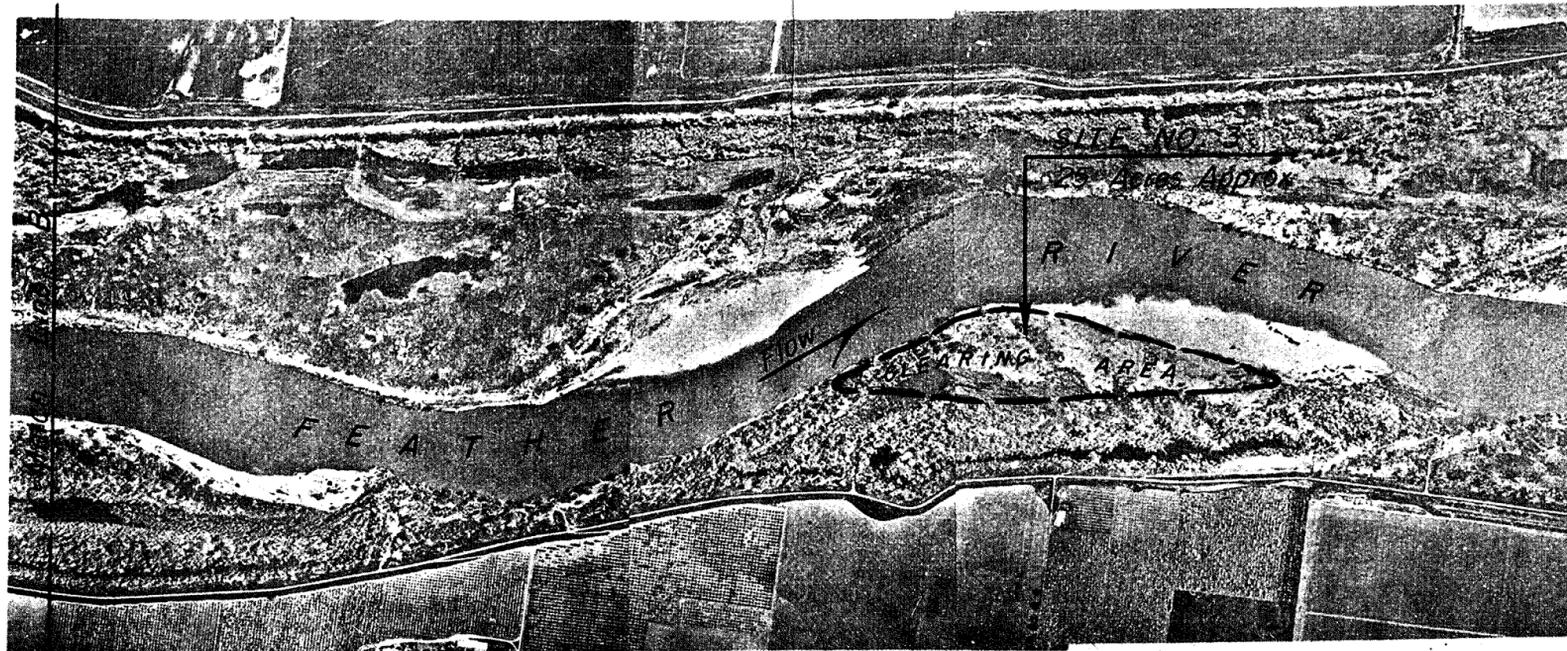
U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA	
SACRAMENTO RIVER, CALIFORNIA FLOOD CONTROL PROJECT FEATHER RIVER CHANNEL CLEARING BETWEEN YUBA AND BEAR RIVERS	
DRAWN BY: PBV CHECKED BY: MAS PREPARED BY: JAS APPROVED BY: <i>[Signature]</i> DESIGNER: <i>[Signature]</i>	SHEET NO. 2729 FILE NO. 4-6-514 SHEETS 514/1 TO 514/4 SHEET NO. 514/1
DATE: MAY 1961	



LINE OF PROPOSED LEVEE
(AS STAKED IN FIELD)

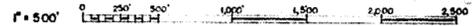
214+00

14+35



PLAN

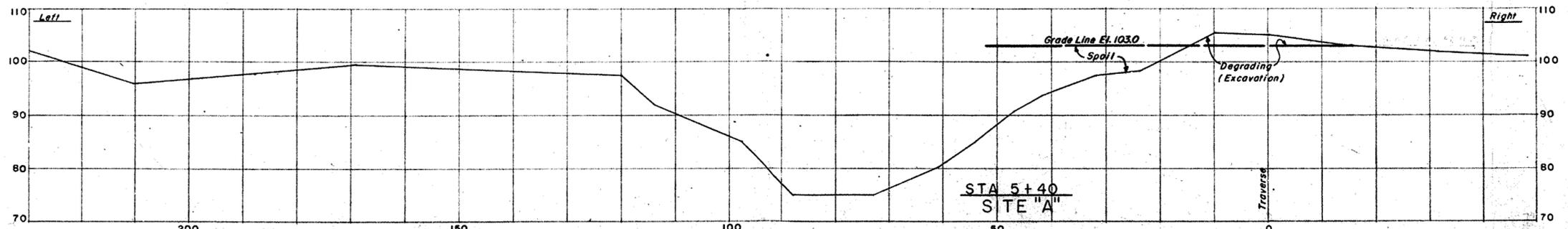
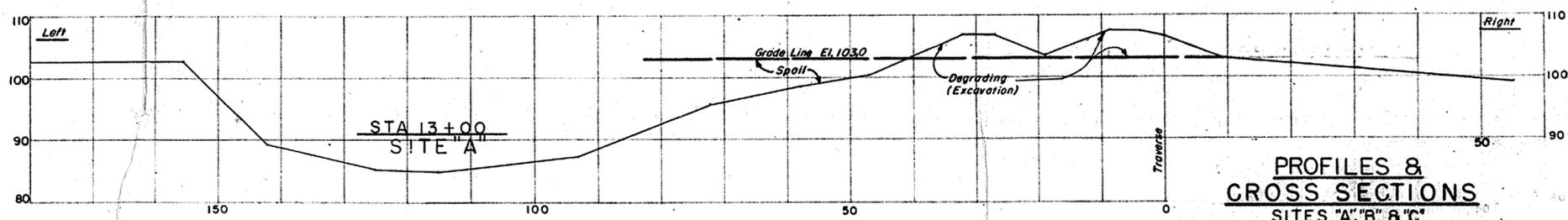
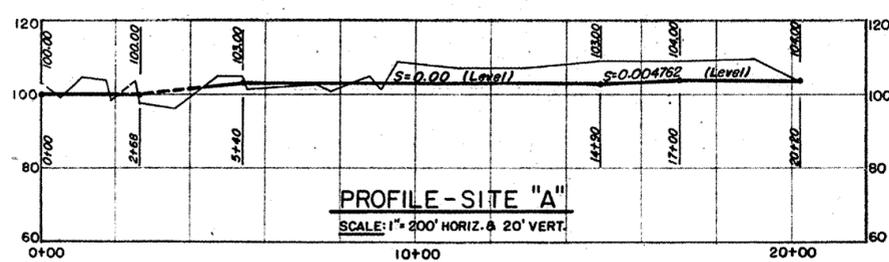
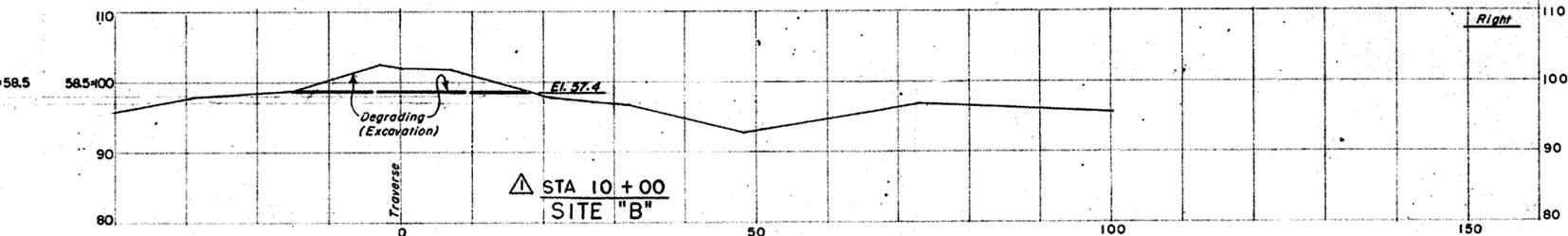
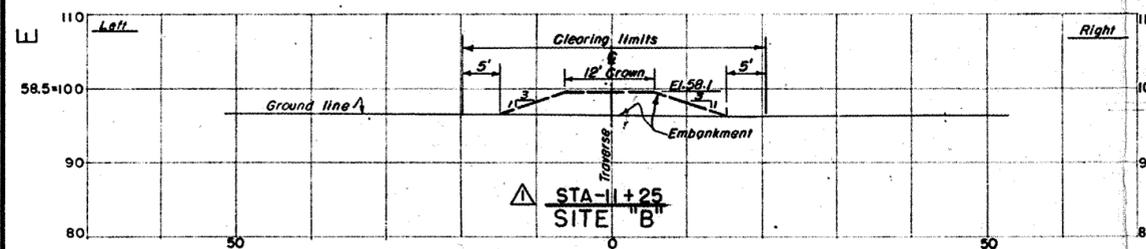
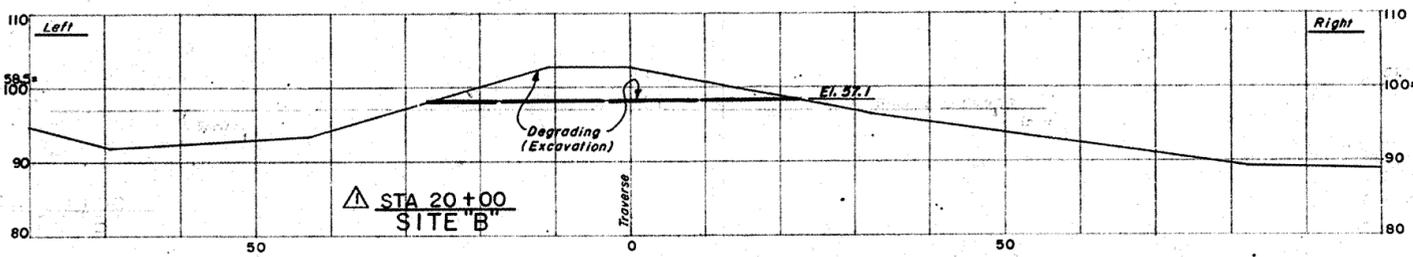
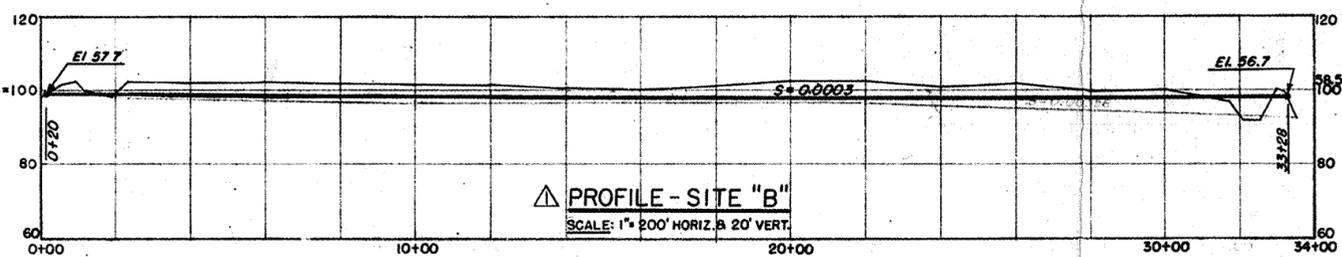
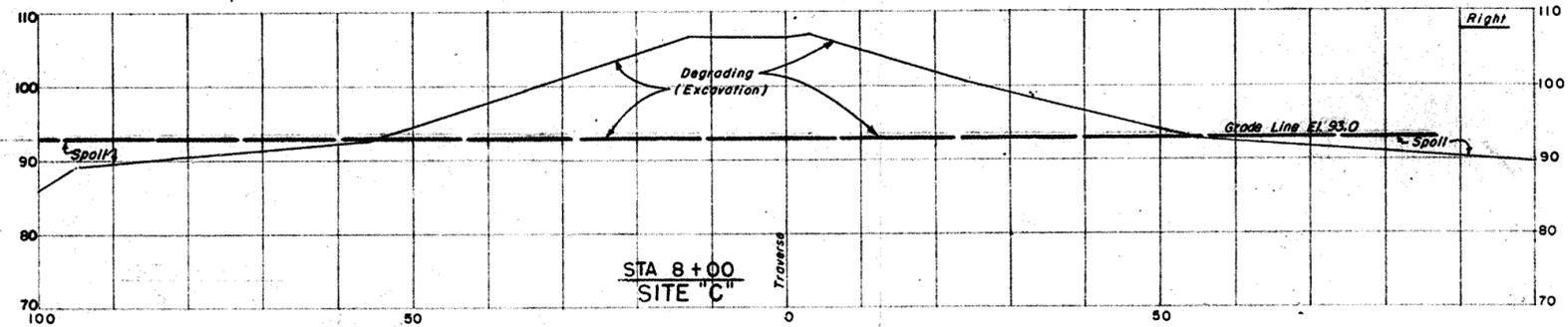
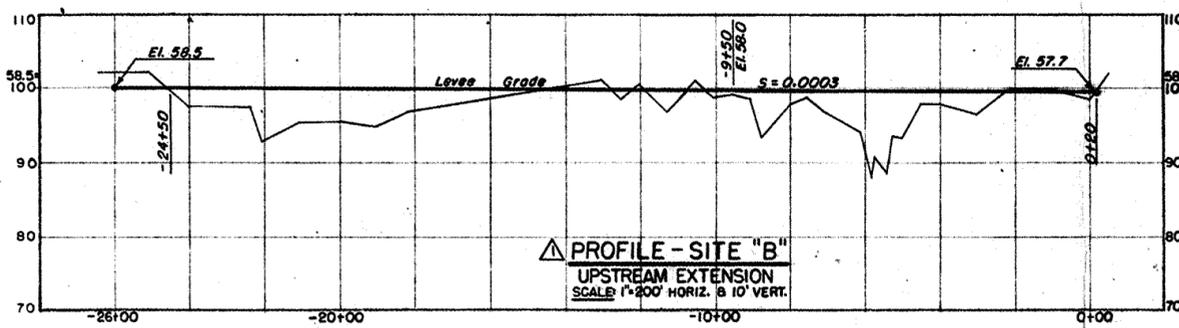
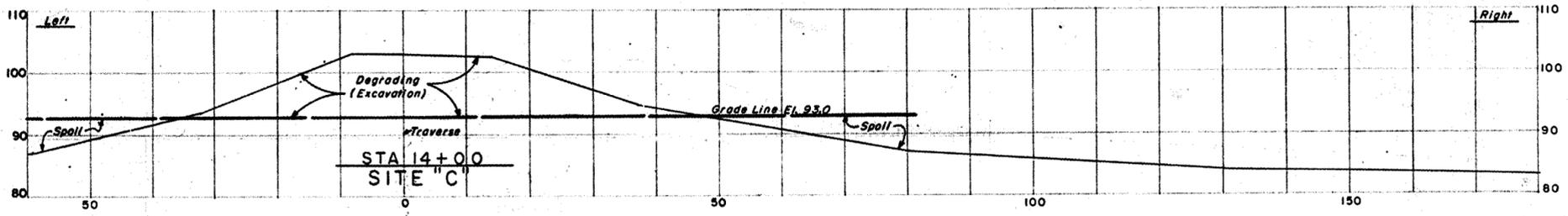
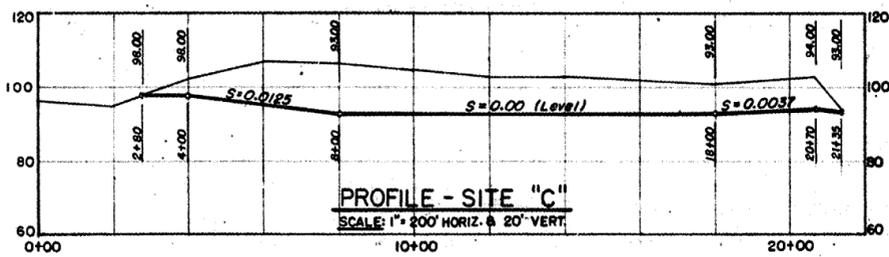
GRAPHIC SCALE
SCALE: 6,000 APPROX.



AS CONSTRUCTED.

REVISION	DATE	DESCRIPTION	BY	BY
13	Sept 61	Added Levee Construction to Site "B"		
U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA				
SACRAMENTO RIVER, CALIFORNIA FLOOD CONTROL PROJECT				
FEATHER RIVER CHANNEL CLEARING BETWEEN YUBA AND BEAR RIVERS				
DRAWN BY:	MAS			
CHECKED BY:	MAS			
PREPARED BY:	JAS			
SUBMITTED BY:	<i>Kutner</i>			
APPROVED:	<i>Henry Detting</i>	<i>H. Thomas</i>		
SCALE:	AS SHOWN	SPEC. NO.	2729	
FILE NO.:	4-6-514			
DATE:	MAY 1961	SHEETS	514/1 To 514/8	
		SHEET NO.	514/31	

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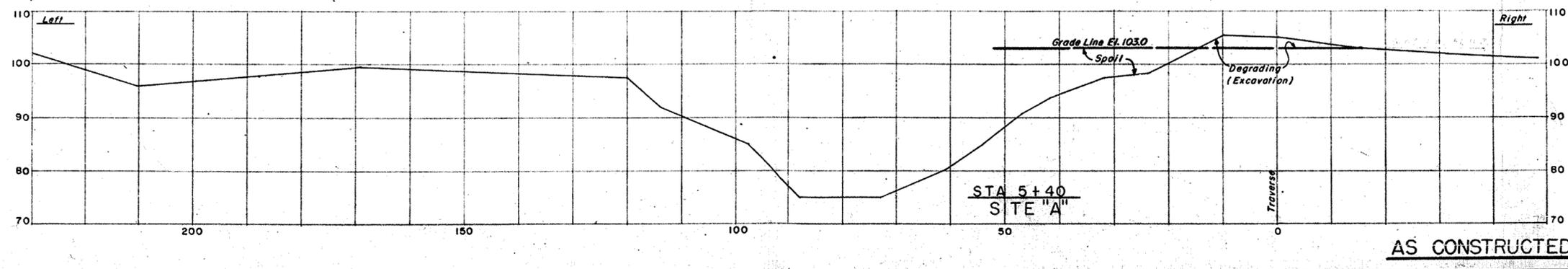
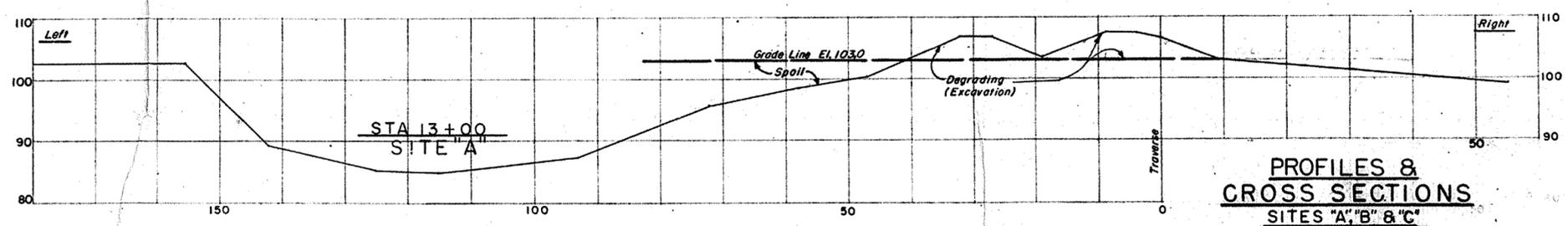
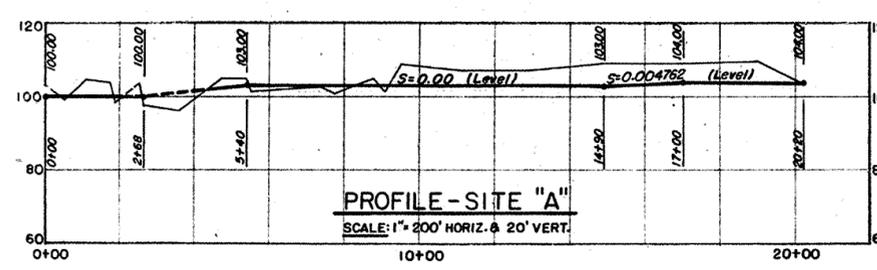
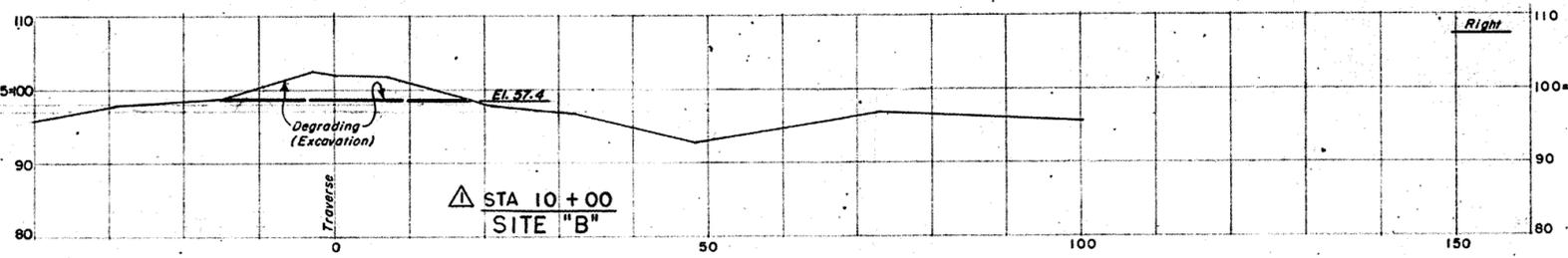
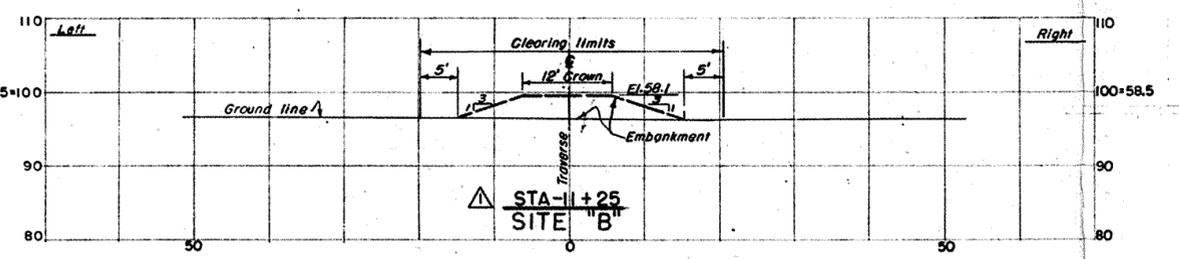
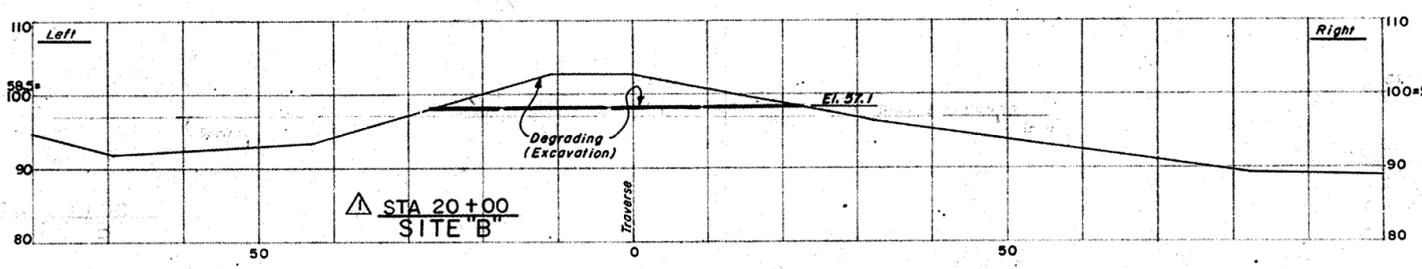
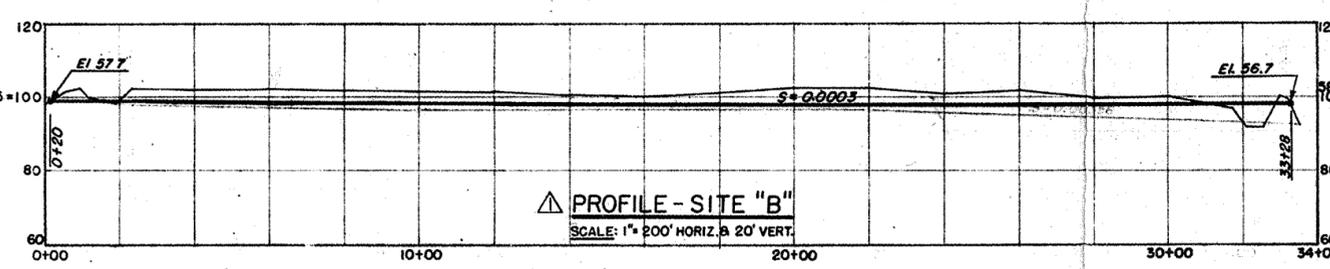
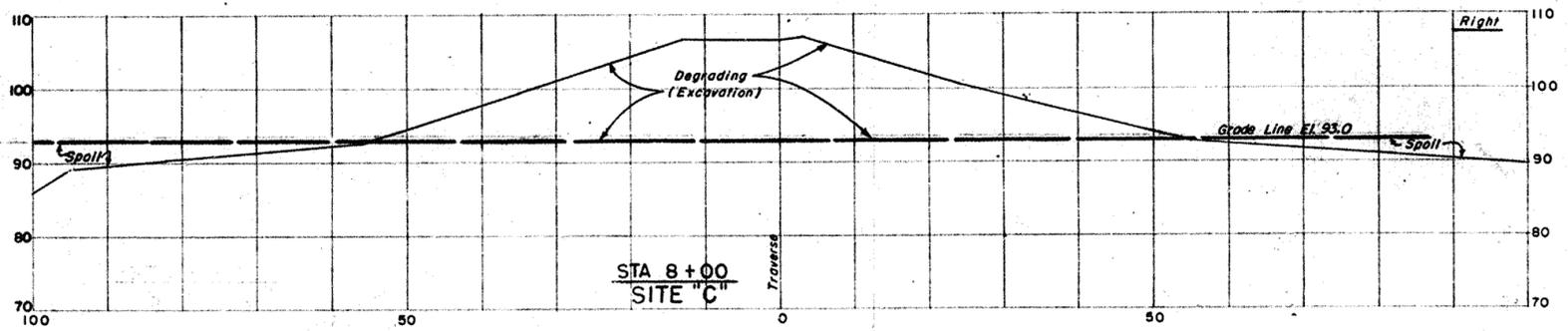
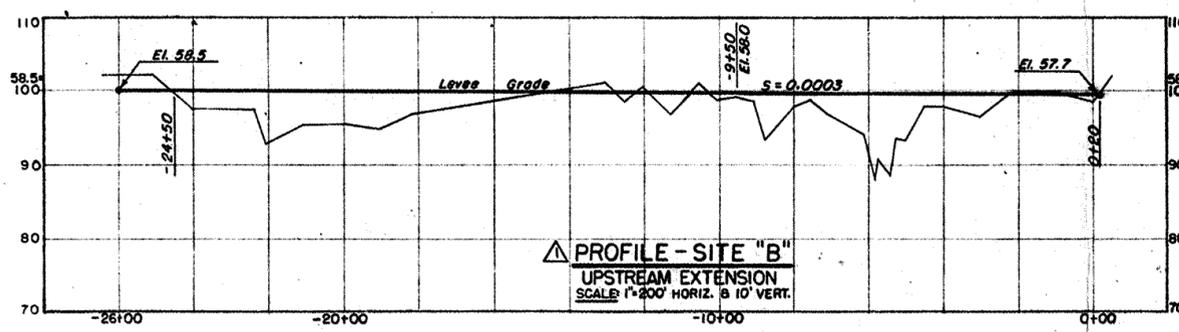
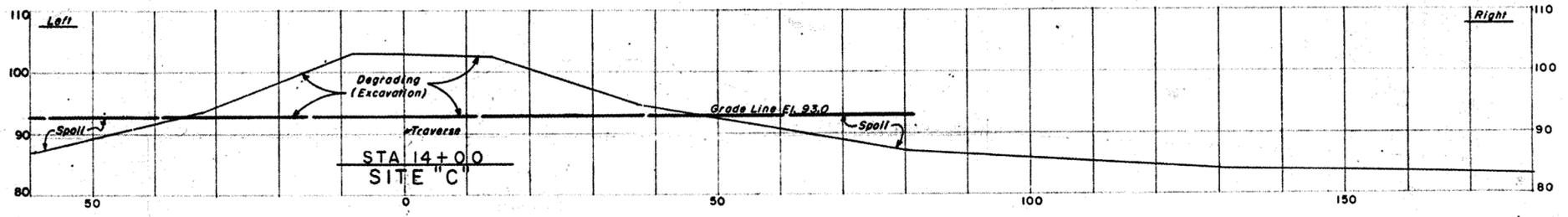
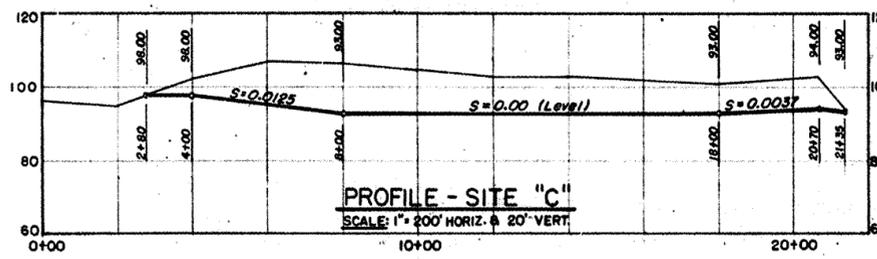


PROFILES & CROSS SECTIONS
SITES "A", "B" & "C"
SCALE: 1"=200' HORIZ. & 20' VERT. & 1"=10' HORIZ. & VERT.

REVISION	DATE	DESCRIPTION	BY	BT
13	5/24/61	Revised and added Profile & Cross-Sections to SITE "B"	AKP	BT
U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA				
DESIGNED BY	R P D	SACRAMENTO RIVER, CALIFORNIA FLOOD CONTROL PROJECT FEATHER RIVER CHANNEL CLEARING, BETWEEN YUBA AND BEAR RIVERS		
CHECKED BY	M A S			
FORWARDED BY	J A S			
APPROVED	<i>[Signature]</i>			
APPROVED	<i>[Signature]</i>	SCALE: AS SHOWN	SPEC. NO. 2729	
DATE	MAY 1961	FILE NO. 4-6-514	SHEETS 514/1 to 514/4	SHEET NO. 514/4

AS CONSTRUCTED

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**PROFILES & CROSS SECTIONS
SITES "A", "B" & "C"**
SCALE: 1" = 200' HORIZ. & 20' VERT. & 1" = 10' HORIZ. & VERT.

REVISION	DATE	DESCRIPTION	BY	BY
13	5/26/61	Revised and added Profile & Cross-Sections to SITE "B"	AKP	
U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA				
SACRAMENTO RIVER, CALIFORNIA FLOOD CONTROL PROJECT FEATHER RIVER CHANNEL CLEARING BETWEEN YUBA AND BEAR RIVERS				
DESIGNED BY:	GMK	R P D		
CHECKED BY:	M A S			
APPROVED BY:	J A S			
APPROVED BY:	<i>Calverdale</i>			
APPROVED BY:	<i>Henry Dittus</i>			
APPROVED BY:	<i>W. H. Morrison</i>			
SCALE:	AS SHOWN	SPC NO. 2729		
FILE NO.:	4-6-514			
SHEETS:	514/1 to 514/4	SHEET NO.:	514/4.1	
DATE:	MAY 1961			

EXHIBIT B

"AS CONSTRUCTED"

DRAWINGS

See separate folder for the following drawings:

4-1-488	RELIEF WELLS RE-4-4-544.
<u>File No.</u>	<u>Title</u>
4-4-210 and 4-4-210A	Enlargment of East Levee of Feather River from 2.8 Miles Southerly from Eliza Bend to Mouth of Yuba River and South Yuba River from Feather River Easterly 2.8 Miles. Sheets 1 to 6, Incl.
4-4-236 and 4-4-236A	Enlargement of East Feather River from 2-1/2 Miles above Starr Bend to Bear River and North Levee Bear River to W.P.R.R. Sheets 1 to 6, incl.
4-4-141	East Levee Feather River from 1-1/2 Miles South of Shanghai Bend to Upper End of Starr Bend. 1 Sheet.
2-4-84-1	Enlargement of West Levee of W.P.R.R. Intercepting Channel. Sheet 1 to 4, incl.
2-4-106	Enlargement of Bear River Levees from W.P.R.R. Upstream 4 Miles, South Dry Creek Levees, East Levee of W.P.R.R. Intercepting Channel and South Levee of North Dry Creek. Sheets 1 to 6, incl.

Additional drawings of cross-sections, structures, and miscellaneous facilities are available in the Office of the District Engineer.

4-1-392	Relief wells, left bank Feather River, vicinity of Starr Bend in R. D. 784, in 1 sheet
8-4-666	Levee construction, left bank Feather and Yuba Rivers, in 10 sheets
2-4-174	Levee Construction, Right and Left Banks Bear River, W.P.R.R. Interceptor Channel and Yankee Slough, in 22 sheets.
4-4-544	Berm Construction, Left Bank Feather River in R. D. 784, in 3 sheets.

4-6-514 - REMOVE obstructing Residual levees and clearing between Bear River and Yuba River on the Feather River. EXHIBIT B Unattached

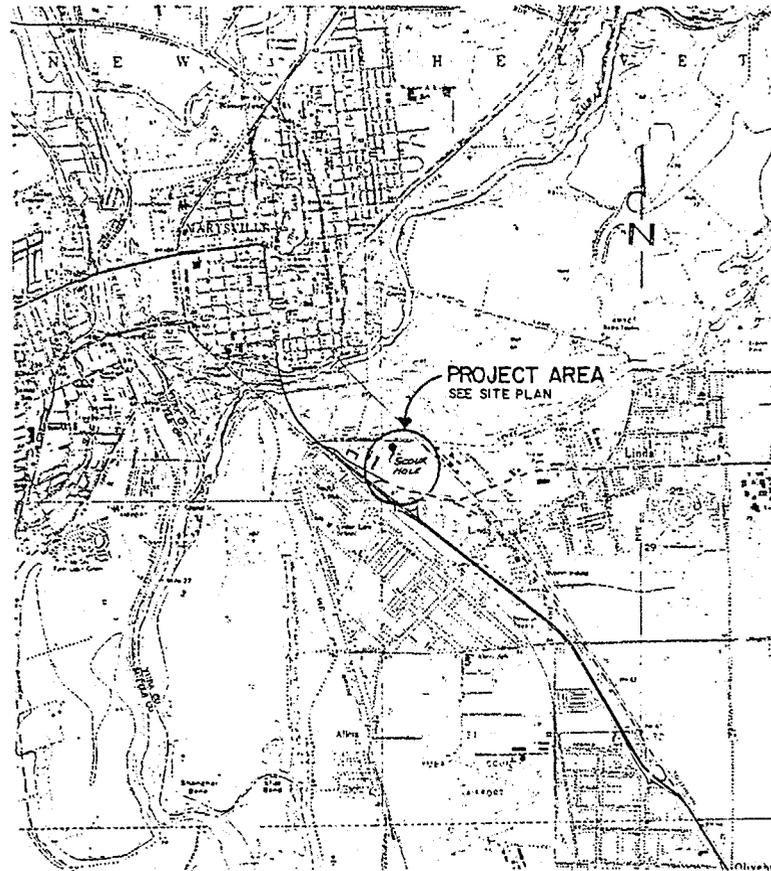
2-6-133 - Clearing & Debris removal on Bear River from Feather River upstream about 4 miles

4-6-361 - Clearing Feather River, Sutter Bypass (OVER) upstream to Yuba River FOR MORE

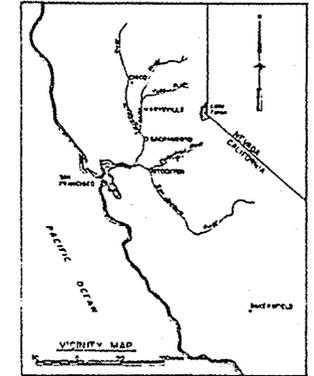
EXHIBIT B

YU-25-47	PL 84-99 Emergency Levee Repair RD 784, Left Bank Yuba River, Left Bank Feather River, in 1 sheet.
BE-4-14	Sutter and Yuba Counties – PL84-99 Levee Rehabilitation, Bear River – RD 817 and Yankee Slough & Natomas Cross Canal – RD 1001, Emergency Levee Repairs in 2 sheets.
None	PL 84-99 Levee Rehabilitation Repairs CY2007 Order 3 – 5 Sites Reclamation District 784, Yuba County, California, in 7 sheets.

SCOUR HOLE REPAIR LINDA, CALIFORNIA



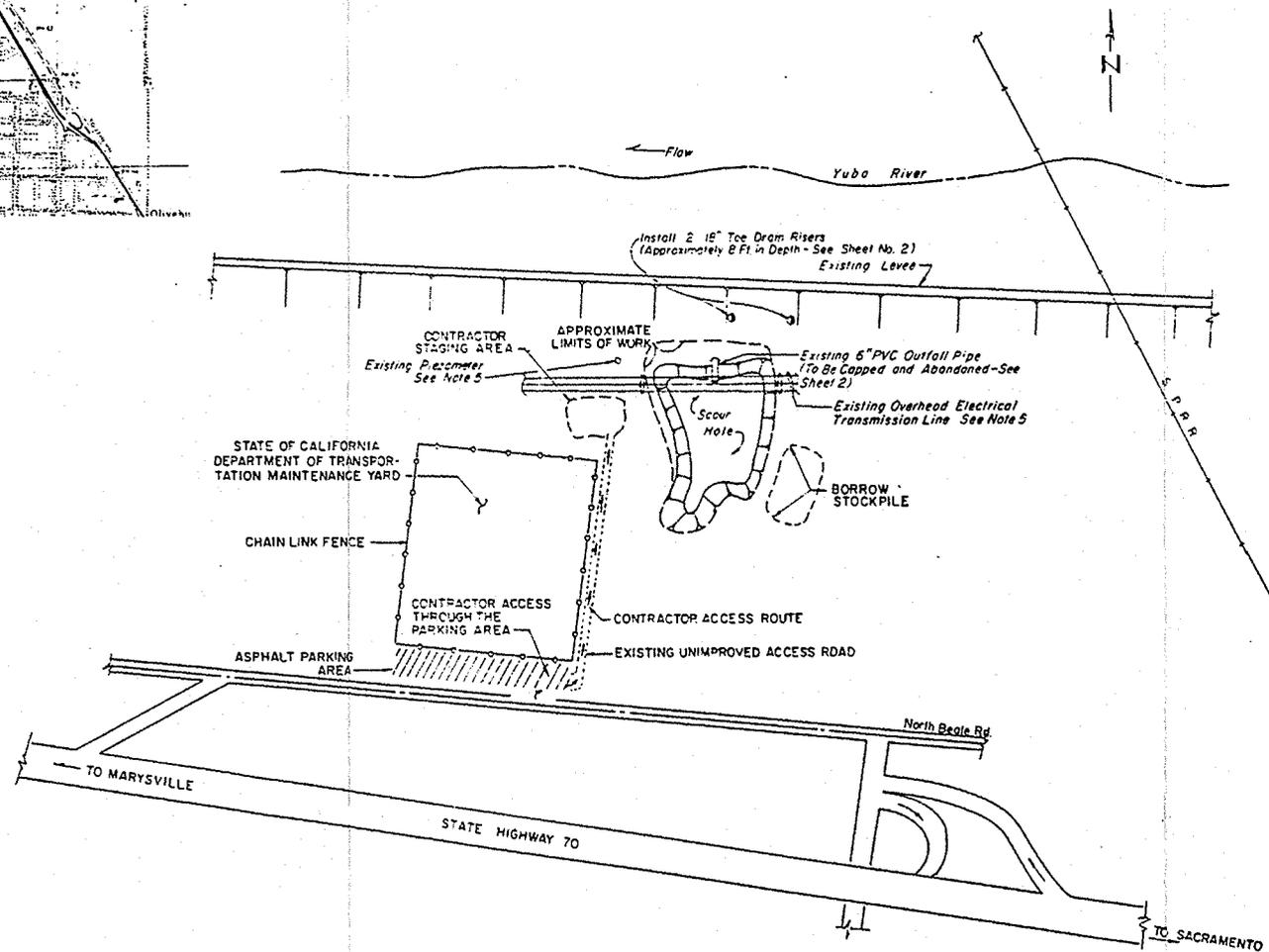
LOCATION MAP
SCALE 1" = 2000'



VICINITY MAP
SCALE AS SHOWN

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL ESTABLISH BASE LINES FOR SURVEYS AND CONSTRUCTION OFFSETS, WITHIN LIMITS OF SITE OR AS DIRECTED BY THE CONTRACTING OFFICER.
2. EXACT LIMITS OF SITE WILL BE STAKED IN THE FIELD BY A GOVERNMENT REPRESENTATIVE.
3. CONTRACTOR TO EXERCISE CAUTION IN CROSSING STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, ASPHALT PARKING AREA. ANY DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT NO ADDITIONAL COSTS TO THE GOVERNMENT.
4. BORROW MATERIAL SHALL BE AVAILABLE AT THE PROJECT SITE. MATERIAL SHALL BE STOCKPILED BY OTHERS FOR USE BY THE CONTRACTOR.
5. CONTRACTOR TO EXERCISE CAUTION IN WORKING IN VICINITY OF EXISTING PIEZOMETER AND OVERHEAD ELECTRICAL TRANSMISSION LINES. ANY DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPLACED AT NO ADDITIONAL COSTS TO THE GOVERNMENT.



SITE PLAN
NOT TO SCALE

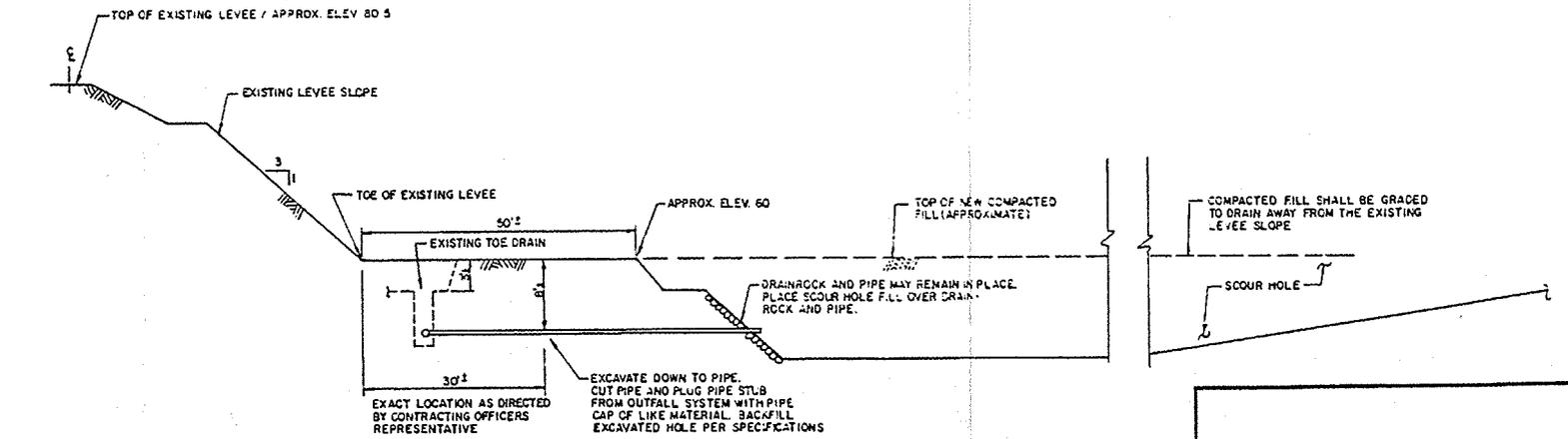
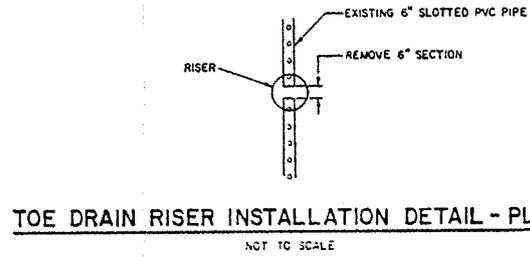
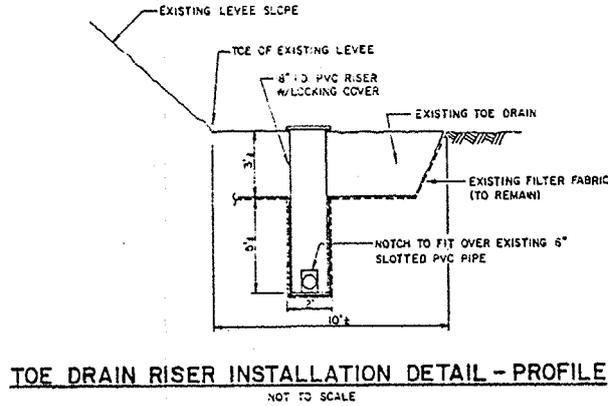
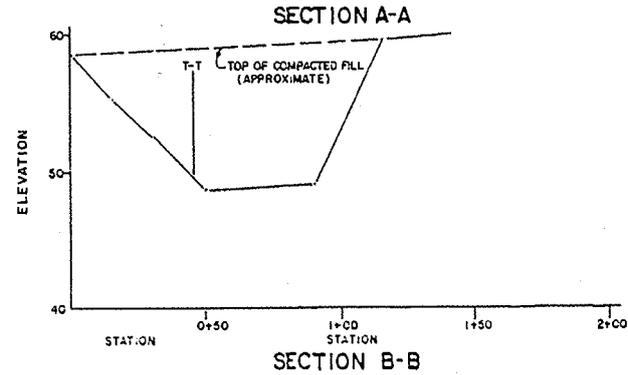
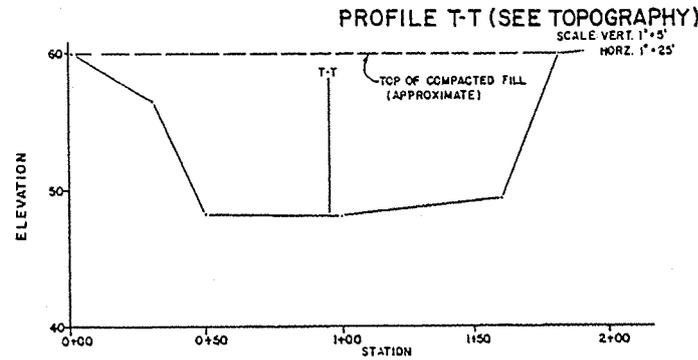
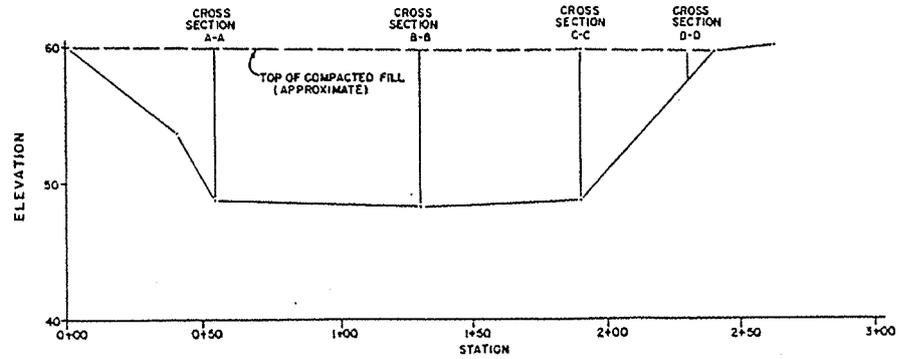
REVISION		DATE	DESCRIPTION	BY	CHKD
DEPARTMENT OF THE ARMY SACRAMENTO DISTRICT, CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA					
DESIGNER: B. FAYES	SCOUR HOLE REPAIR LINDA, CALIFORNIA TITLE SHEET, VICINITY MAP LOCATION MAP, SITE PLAN				
DRAWN BY: L. KIMMEL					
CHECKED BY: L. CLAY					
SUBMITTED BY:					
SIGNATURES AFFIXED BELOW INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL DRAWINGS IN THIS SET AS INDEXED ON THIS SHEET					
APPROVAL: _____ DATE: _____	APPROVED: _____ DATE: _____				
PREPARED UNDER THE DIRECTION OF LAURENCE R. SADOFF CHIEF, DISTRICT OF SACRAMENTO, CALIF.					
SCALE: NONE		SHEET: 1 OF 2		FILE NO. 1	

ENVIRONMENTAL
 ENHANCEMENT
 THROUGH ENGINEERING

FUNCTION ANALYSIS - VE PAYS

DEPARTMENT OF COMMERCE
 U.S. COAST & GEODETIC SURVEY
 FORM 685A
 DESIGNATION V743 STATE CALIFORNIA COUNTY YUBA
 Nearest town MARYSVILLE COUNTY YUBA DECEMBER 1948
 Distance and direction from nearest town At MARYSVILLE
 Character mark IRON DISK
 Established by U.S. COAST & GEODETIC SURVEY STAMPING V743 844
 Present condition Good
 Detailed report RECOVERED AS DESCRIBED IN LITHOGRAPHED LIST

ORIGINAL DESCRIPTIONS V743, -- AT MARYSVILLE, YUBA COUNTY, ABOUT 0.35 MILE SOUTH ALONG THE SOUTHERN PACIFIC CO. RAILROAD FROM THE STATION. AT THE NORTH END OF A LONG TRESTLE OVER YUBA RIVER, ABOUT 101 FEET SOUTH OF THE NORTH END OF THE SHORT APPROACH FILL TO THE BRIDGE, IN THE TOP OF THE EAST CONCRETE RETAINING WALL PARALLELING THE TRACK, 1.3 FEET NORTH OF THE SOUTH END, 4.5 FEET EAST OF THE EAST RAIL AND ABOUT LEVEL WITH THE BASE OF THE RAILS.



TOPOGRAPHY DATE OF SURVEY: APRIL 1990
 SCALE: 1"=100'

NOTE: TOPOGRAPHY, PROFILE AND CROSS SECTIONS SHOWN ARE FOR SOLICITATION FOR BID PURPOSES ONLY. THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH BASE LINE SURVEYS FOR PROJECT CONSTRUCTION AS NOTED BY CONSTRUCTION NOTE 1, SHEET 1.

NO.	DATE	BY	CHKD
DEPARTMENT OF THE ARMY SACRAMENTO DISTRICT CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA			
DESIGNED BY B. FAKES	PROJECT YUBA RIVER LINDA, CALIFORNIA		
CHECKED BY L. KIMMEL	SCOPE SCOUR HOLE REPAIR		
DATE L. CLAY	TITLE TOPOGRAPHY, PROFILE, CROSS SECTIONS & EXISTING OUTFALL PIPE PLUG DETAIL		
SCALE AS SHOWN	SHEET NO. 2 OF 2	DATE 1990	
SAFETY 3 PAYS			

SCOPE OF WORK AND SPECIFICATIONS

PART 1

SCOUR HOLE FILL

1. GENERAL: The work covered by this section of the specifications consists of furnishing all plant, labor, and equipment and performing all operations in connection with filling the scour hole to the lines and grades indicated on the drawings, installing toe drain risers and capping the existing 6-inch PVC outfall pipe.

2. BORROW: The borrow material shall be supplied at the site by others as stated on the drawings.

3. PREPARATION OF THE FOUNDATION:

3.1 General: Prior to placement of fill material, the contractor shall precondition the scour hole foundation. Any tires, tree stumps, or miscellaneous organic materials shall be removed from the scour hole and shall become property of the contractor. The foundation shall be preconditioned with 4 passes of a tamping foot roller. If in the opinion of the Contracting Officer the foundation is too dry, it shall be pre-moistened prior to rolling with the tamping foot roller.

3.2 Drainage: The scour hole shall be kept thoroughly drained throughout the progress of the work. It is the contractor's responsibility to divert any flows away from the scour hole, and to dewater the site if necessary to accomplish the work.

4. FILL PLACEMENT:

4.1 General: Fill placement shall be brought to the indicated finished lines and grade as indicated on the drawings. Fill shall consist of material stockpiled on site by others. Fill shall be placed and compacted with a minimum of four (4) passes of a tamping foot roller as defined in paragraph 4.2. Each lift of fill shall be placed in approximately horizontal layers not to exceed a thickness of nine (9) inches. If, in the opinion of the Contracting Officer, the surface of any layer is too smooth to bond properly with succeeding layer, it shall be scarified before the succeeding layer is placed thereon.

4.2 Compaction Equipment: Tamping foot rollers shall be used to compact the fill material. The drums shall be water or sand and water ballasted and have staggered feet uniformly spaced over the cylindrical surface such as to

provide approximately three tamping feet for each two square feet of drum surface. The roller shall be equipped with cleaning fingers, so designed and attached as to prevent the accumulation of material between the tamping feet, and these cleaning fingers shall be maintained at their full length throughout the use of the roller. The weight of the roller shall be a minimum of 2000 pounds per foot of drum width. The roller shall be drawn with either a crawler type tractor or pneumatic tired equipment at speeds not to exceed 3.5 miles per hour.

5. CAPPING EXISTING 6-INCH OUTFALL PIPE: The 6-inch drain pipe shall be capped at the location shown on the drawings. The end shall be cemented with PVC cementing compound and capped with a Schedule 40 end cap.

5.1 Shoring: Shoring shall be furnished and installed as necessary to protect workmen inside the open excavation at the outfall pipe. Shoring shall be in compliance with the Corps of Engineers Manual EM 385-1-1, April 1981, Revised Oct 1987, SAFETY AND HEALTH REQUIREMENTS MANUAL. Shoring and any bracing shall be removed as the excavation is backfilled with the same material removed from the excavation.

5.2 Backfilling: After the PVC pipe has been capped, the trench excavation shall be backfilled to the original ground surface elevation. The backfill shall consist of the same material removed from the trench with lifts not to exceed four (4) inches loose thickness and compacted with two passes of a hand operated vibratory plate.

6. INSTALLATION OF TOE DRAIN RISER: The 18-inch toe drain risers shall be installed as shown on the drawings. The approximate locations of the risers are as shown on the drawings. The actual locations shall be established in the field by the Contracting Officer. The risers shall be PVC pipe with slotted open bottom as shown on the drawings. The pipe shall be Class 160 PVC which conforms to ASTM D 2241. A protective metal cover shall be provided. The cover shall be corrugated metal of 16 gage, galvanized, conforming to the requirements of Fed. Spec. WW-P-405, Class I, Shape 1. Galvanized steel for the hinged lid shall conform to the requirements of ASTM A 444. Hardware for the hinged lid shall consist of 2 1/2 inch plain hinges, type 2172G conforming to Fed Spec FF-H-116 and hasp of type F1403 conforming to Fed Spec FF-H-111.

7. PAYMENT: Payment for filling the scour hole will be paid for at the contract unit price per cubic yard

for the item "Scour Hole Fill", which price shall include all costs of placing, compacting fill and preparing the foundation. Payment for the excavation for capping the 6-inch outfall pipe shall be paid for at the contract lump sum price for the item "Capping 6-inch Outfall Pipe," which payment shall constitute full compensation for all work to accomplish capping and backfilling the outfall pipe excavation trench. Payment for the installing the toe drain riser will be paid for at the contract lump sum price for the item "Installation of Toe Drain Risers", which price includes all costs for excavation, installation, backfilling and removal of waste material.

PART 2

GENERAL REQUIREMENTS

1. STORAGE OF MATERIALS, EQUIPMENT, OR SUPPLIES: The Contracting Officer representative shall designate a location for storage of equipment, material and supplies. The protection and storage facilities shall be the Contractor's responsibility, and only equipment and supplies approved by the Contracting Officer may be stored in the project area. All equipment and materials used by the Contractor shall be protected from public accessibility. The Contractor shall erect barriers and post necessary warning signs. If the Contracting Officer's representative determines that additional barriers and/or warning signs are necessary, the Contractor shall install such barriers and/or signs at no additional cost to the Government.

2. WATER AND SANITARY FACILITIES: The Contractor shall locate the nearest available non-potable water. No sanitary facilities are located at the project site.

3. NONCOMPLIANCE WITH CONTRACT: The Contracting Officer representative will notify the Contractor of any noncompliance with the contract and the actions to be taken. The Contractor; shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his or her Representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Contracting Officer's representative may issue an order stopping all or part of the work until satisfactory corrective action is taken. No part of the time lost due to any stop orders shall be made to the subject of claim for extension of time on or for excess costs or damages by the Contractor.

4. DAMAGE TO ROADS: The Contractor shall preserve and protect all existing private or project access or right-of-way roads. At the completion of work and prior to the Contractor leaving the project, he/she shall restore to pre-project conditions all such roads.

5. QUANTITY SURVEYS: Quantity surveys shall be conducted by a licensed surveyor, and the data derived from these surveys shall be used in computing the quantities of work performed and actual construction completed and in place. The Contractor shall conduct the original and final surveys. The Government shall make computations as are necessary to determine the quantities of work performed or finally in place. Promptly after completion of the survey, the Contractor shall furnish the originals of all field

notes and all other records relating to the survey or to the layout of the work to the Contracting Officer. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

6. CONSTRUCTION PERIOD: All construction shall be completed not later than 14 calendar days from notice to proceed.

7. SITE VISIT: A tour of the project site may be arranged by telephoning the Sacramento District, Corps of Engineers, Mr. Bill Fakes, (916) 557-6609.

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. 145 - PART NO. 1

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

Item	Remarks
(a) Location by Station	
(b) Settlement, sloughing, or loss of grade	
(c) Erosion of 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	

INSTRUCTIONS FOR COMPLETING SHEET 2, EXHIBIT E

- 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.

CHECK LIST NO. 3

CHANNEL AND RIGHT-OF-WAY
UNIT NO. 145-PART NO. 1

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

- 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.

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES
UNIT NO. 145 - PART NO. 1

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

See drawings of EXHIBIT B for location of stations

(a) Location by station	(b) 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
<u>SOUTH LEVEE YUBA RIVER</u>							
227 / 00	left						
<u>EAST LEVEE FEATHER RIVER</u>							
102 / 88	left						
37 / 72	"						
377 / 70	"						
195 / 00	"						
194 / 85	"						
<u>NORTH LEVEE BEAR RIVER</u>							
424 / 00	right						
92 / 88	"						
143 / 15	"						

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES, cont.
UNIT NO. 145-PART NO. 1

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

See drawings of EXHIBIT B for location of stations

(a) Location By Station	(b) Bank	(c) Debris or Other Obstruction To flow	(d) Damage or Settlement Of pipe or Concut	(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>WEST LEVEE SOUTH DRY CREEK</u>							
4 + 96	Right						
9 + 85	"						
21 + 35	"						
35 + 57	"						
43 + 17	"						
69 + 17	"						
74 + 72	"						
<u>EAST LEVEE W.P.R.R. INTERCEPTING CHANNEL</u>							
25 + 28	Left						
63 + 00	"						
103 + 23	"						
116 + 78	"						
13 + 72	"						
44 + 96	"						
53 + 86	"						
126 + 53	"						

EXHIBIT E
 Sheet 7 of 9

INSTRUCTIONS 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 structures 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.

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES, cont.
UNIT NO. 145-PART NO. 1

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

See drawings of EXHIBIT B for location of stations

(a) By Station	(b) Bank Location	(c) Debris or other Obstruction No 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
EAST LEVEE W.P.R.R. INTERCEPTING CHANNEL							
83 + 39 91 + 50	Left "						
WEST LEVEE W.P.R.R. INTERCEPTING CHANNEL							
120 + 80 132 + 40 264 + 60	Right " "						

EXHIBIT F
LETTER OF ACCEPTANCE
BY STATE RECLAMATION BOARD

EXHIBIT F
Sheets 1 thru 4

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 (Sac. Riv. F.C.P.) 13 Dec 1951, (2) your letter SPKKO-P 824.3 (Sac. Riv. F.C.P.) 19 Dec 1951, and (3) your letter SPKKA 824.3 (Sac. Riv. F.C.P.) 13 Dec 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

/s/ By A. M. Barton
A. M. BARTON

Chief Engineer and General
Manager

C
O
P
Y

January 2, 1952

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>NO.</u>	<u>DATE OF LETTER</u>	<u>LEVEE LOCATION</u>	<u>REMARKS</u>
1	13 Dec 1951	-----	-----
3	13 Dec 1951	S. Levee North Dry Creek to W.P.R.R. In- terceptor	Completed Contract
3	13 Dec 1951	E. Levee W.P.R.R. Interceptor from North Dry Creek to Bear River	Completed Contract
3	13 Dec 1951	N. Levee Bear River from W.P.R.R. Intercep- tor to South Dry Creek	Completed Contract Maintained by R.D. No. 784
3	13 Dec 1951	N. Levee South Dry Creek from Bear River to high ground	Completed Contract Maintained by R.D. No. 784

NOTE: Only items pertaining to Operation and Maintenance Manual No. 145 - Part No. 1 are included in the above copy.

EXHIBIT F
Sheet 2 of 4

THE RECLAMATION BOARD
OF THE
STATE OF CALIFORNIA

March 11, 1953

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

Dear Sir:

Reference your letters file No. SPKKO-P 824.3 (Sac.R.F.C.P.) dated 1 December 1951, 3 December, 1951, 4 December, 1951, three letters dated 6 December, 1951, 7 December, 1951 and six letters dated 8 December, 1951. Subject letters transferred to The Reclamation Board for operation and maintenance, various levee units of the Sacramento Flood Control Project.

The Reclamation Board at its 18 December, 1951 meeting on behalf of the State of California, accepted certain of the transferred units together with their contiguous waterway banks for operation and maintenance, and rejected others. A tabulation of the units so accepted or rejected is attached hereto.

Yours very truly,

THE RECLAMATION BOARD
A. M. BARTON
Chief Engineer and General Manager

/s/ By D. M. Carr
D. M. GARR

EXHIBIT F
Sheet 3 of 4

December 18, 1951

The Board accepted the transfer from the Corps of Engineers, in letters of dates 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>NO.</u>	<u>DATE OF LETTER</u>	<u>LEVEE LOCATION</u>	<u>REMARKS</u>
1	1 Dec 1951	-----	-----
11	8 Dec 1951	East Levee Feather River from mouth to Mile 26.5, except 2.37 miles S/of Nicolaus Bridge to Bear River	Maintained by R.D. Nos. 1001 and 784
11	8 Dec 1951	S. Levee Yuba River from W.N.R.R. to S.P.R.R.	Maintained by R.D. No. 784
11	8 Dec 1951	N. Levee Bear River from Feather River to W.P.R.R. Interceptor	Maintained by R.D. No. 784
11	8 Dec 1951	E. Levee R.D. 784 (W Levee W.P.R.R. Interceptor) Bear River to intersection with W.P.R.R. in S1/2 Sec. 17, T. 14 N., R.4 E.	Maintained by R.D. No. 784
12	8 Dec 1951	-----	-----

NOTE: Only Items pertaining to Operating and Maintenance Manual No. 145 - Part No. 1 are included in the above copy.

EXHIBIT F
Sheet 4 of 4



DEPARTMENT OF THE ARMY
U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

REPLY TO
ATTENTION OF

Flood Protection and Navigation Section

JAN - 4 2011

Mr. Jay Punia, Executive Officer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

Dear Mr. Punia:

The U.S. Army Corps of Engineers has completed a portion of work under PL 84-99, Flood Control and Coastal Emergencies (FCCE) (33 U.S.C. 701n) (69 Stat. 186) for emergency management activities. Repairs were made to rehabilitate various sites within RD 784. Additional information about the repair and location of the site(s) may be found in the document titled, Project Information Report (PIR) for PL 84-99 Levee Rehabilitation, Reclamation District 784, dated August 25, 2005.

The rehabilitation work meets the requirements of the existing Operation and Maintenance Manuals (O&M) and enclosed revisions. The subject flood damage reduction project is considered complete as of the date of this letter. The repairs were completed under Contract Number W91238-08-D-0016, Task Order Number 4. As-constructed drawings and revisions to the Operation and Maintenance Manual are enclosed. The Central Valley Flood Protection Board shall continue to operate and maintain the completed Rehabilitation Effort as part of the project.

Please note that the Yuba River repair (site 20051230-025-005), as shown in the drawings, was not completed as part of this contract. The site is not part of the Federally Constructed project and not eligible for rehabilitation assistance.

If you have any questions regarding this project, please contact Ms. Paige Caldwell (916) 557-6919 or Ms. Christy Jones (916) 557-7107, Readiness Section. If you have any questions regarding this transfer, please contact Ms. Meegan Nagy at (916) 557-7257 or Mr. Robert Murakami at (916) 557-6738, Flood Protection and Navigation Section.

A copy of this letter is being furnished to Reclamation District 784, 1594 Broadway, Arboga, CA 95961.

Sincerely,


WJL
William J. Leady, P.E.
Colonel, U.S. Army
District Commander

Enclosure

Unit 145

Flood Protection and Navigation Section

cc: CESPCK-CO-E (Jones)

MURAKAMI *ky*
LARSON *Riz*
NAGY *MAW*
CALDWELL *ELC*
OLSEN *PO*
MAHONEY *Conner*
FAUSTINO *A*
MULLINS
LEADY

\\spk-netapp1\coopublic\fp&nav\ICW\Transfer Letters\RD 0784\RD 784 Order 3-5\Transfer Letter Unit 145 Pt. 1 RD 784.doc

THE RECLAMATION BOARD

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



SEP 25 1992

Colonel Laurence R. Sadoff
District Engineer
Sacramento District
U.S. Army Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Dear Colonel Sadoff:

This is in regard to your letter of July 9, 1992, in which you transferred the completed Yuba River, California, Scour Hole Repair to the State of California for operation and maintenance. The Reclamation Board, at its meeting on September 18, 1992, formally accepted the completed flood control work from the District Engineer.

The work consisted of filling of the scour hole; capping of the existing outfall pipe into the scour hole; and installation of two toe drain risers.

We concur that the specified contract work, immediately interfacing the Corps' 1986 PL-99 repair work, was completed on December 24, 1991, in a workmanlike manner in conformance with Contract No. DACW05-92-P-0588, insofar as could be determined visually.

If you have any questions concerning this letter, please contact me at the above address or have your staff contact Peter Rabbon at (916) 653-6075.

Sincerely,

A handwritten signature in cursive script, appearing to read "Raymond E. Barsch".

Raymond E. Barsch
General Manager

Unit 445

July 9, 1992

Civil Projects Section A

Mr. Raymond E. Barsch
General Manager
The Reclamation Board
1416 Ninth Street, Room 455-6
Sacramento, California 95814

no drawing

Dear Mr. Barsch:

This is in regard to the Yuba River, California, Scour Hole Repair. The work was performed in accordance with the Agreement of Services signed August 28, 1991, and the regulations prescribed by the Secretary of the Army. The project consisted of filling the scour hole created by the 1986 breaching of the south levee along the Yuba River near Linda, California, capping the existing outfall pipe into the scour hole, and installing two toe drain risers. The fill materials for this work, as approved by the Sacramento District, Corps of Engineers (Corps), were provided at the project site by the State of California (State).

The specified contract work, immediately interfacing the Corps' 1986 PL-99 repair work, was completed on December 24, 1991, in accordance with Contract Number DACW05-92-P-0588. The stockpiled fill material was insufficient to properly level the work area at that time, and additional fill material was subsequently placed to complete the work in accordance with the Corps' plans and specifications. As of the date of this letter, the completed project is turned over to the State which will ensure its continued operation and maintenance. It is our understanding that this area will be operated and maintained by Reclamation District 784, under the terms of its assurance agreement with The Reclamation Board.

Sincerely,

Kurt A. Schaefer
Lieutenant Colonel,
Corps of Engineers
Acting District Engineer

Copy Furnished:

Mr. George T. Qualley
Chief, Division of Flood Management
Department of Water Resources
1416 Ninth Street, Room 1601
Sacramento, California 95814

Unit 119

cc:
Eng Div
Civ Proj Br
Civ Proj Sec A
Central Valley Sec
Operation Br.

Fakes
FAKES
RIVEY

Muller
MULLER

Nolan
NOLAN

Whitney
WHITNEY

SAIA
SAIA

Kasprisin
KASPRISIN

KAS
SCHAEFER

Unit 115



January 30, 1987

Navigation and Flood Control Unit

The Reclamation Board
State of California
1415 - 9th Street, Room 455-6
Sacramento, California 95814

Members of the Board:

You are hereby notified that the Corps of Engineers has completed emergency repairs to project levees under authority of Section 3 of the Flood Control Act of August 18, 1941, as amended (Public Law 99, 84th Congress, 1st Session). The work was completed on November 3, 1986, and consisted of restoring a portion of the Yuba River left bank levee in Reclamation District 784, in accordance with Contract Number DACW05-86-C-0153 and Drawing Number YU-25-47. 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 Number 145, Sacramento River Flood Control Project. Copies will be furnished to your office at a later date.

Sincerely,

Wayne J. Scholl
Colonel, Corps of Engineers
District Engineer

THE RECLAMATION BOARD

1215 O STREET • SACRAMENTO 95814



STANLEY W. KRONICK, *President*
J. J. MADIGAN, *Vice Pres.*
WALLACE McCORMACK, *Secy.*
GEORGE W. NICKEL, JR.
CHARLES J. MATHEWS
HAROLD J. O'BANION
MAX S. VANN, SR.
COL. A. E. McCOLLAM, *General Manager*

March 10, 1964

Refer to: 4130.70.608

Cont. 64-37

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

Dear Sir:

Reference is made to your letter of 27 December 1963 concerning transfer to the State of California of flood control work on the Feather River in the vicinity of Star Bend, in accordance with Specification No. 3016 and being item 36e in Supplement dated 29 November 1957, to the Memorandum of Understanding covering added items of work required to complete the Sacramento River Flood Control Project.

The Reclamation Board at its meeting of March 5, 1964, formally accepted the above referred to flood control work for operation and maintenance.

Sincerely yours,

A. E. McCollam
A. E. McCOLLAM
General Manager

JHMacC:gg

*Copy sent to - Northern Area
Barsdale
Jensen*

Supplement #1

SPKCO-N

27 December 1963

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



OPERATIONS BRANCH
NAVIGATION SECT

Gentlemen:

Reference is made to the joint inspection made on 29 November 1963 of flood control work on the Feather River, a unit of the Sacramento River Flood Control Project, for the purpose of transferring it to the State of California for operation and maintenance. Reference is also made to Supplement dated 29 November 1957 to the Memorandum of Understanding entered into with the State of California under date of 30 November 1953, covering added items of work required to complete the Sacramento River Flood Control Project.

The flood control work, listed as Item No. 36e in the above referenced supplement, consists of berm construction for correcting seepage condition at two locations on the left bank of Feather River in the vicinity of Reclamation District No. 784. The work was completed on 20 December 1963 in accordance with Specification No. 3016, Contract No. DA-04-167-CIVENG-64-37 and Drawing No. 4-4-544.

The foregoing supplemental work, having been completed to current standards for the Sacramento River Flood Control Project, is hereby transferred to the State of California for operation and maintenance. A manual for this portion of the project has already been furnished, which adequately covers operation and maintenance requirements for the above item.

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

LKR
KRISTOF/pnp

Sincerely yours,

THOMPSON
HART

ROBERT E. MATHE
Colonel, CE
District Engineer

MATHE
all

Copy furnished:
Dept Water Resources
23rd & "R" Streets
Sacramento, Calif.

O.C.E.
S.P.D.

cc: Engr Div-Lev&Chan
Engr Div-ProgDevBr
F& A
Northern Area Office

Hcm 36e

THE RECLAMATION BOARD
of the
STATE OF CALIFORNIA

December 16, 1963

Refer to: 7001.70.607

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

Dear Sir:

Reference is made to your letter of October 24, 1963, concerning transfer to the State of California of levee construction on the right and left banks of the Bear River, Western Pacific Railroad Interceptor Canal and Yankee Slough, designated in the Supplement to the Memorandum of Understanding as items 100-16, 100-18, 100-19, 100-21 and 100-24. This work was completed under Specification No. 2792.

The Reclamation Board at its meeting of November 15, 1963, formally accepted the above referred to levee work for operation and maintenance.

Sincerely yours,

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

SPKGO-C

24 October 1963

Suppl # 1

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

Gentlemen:

Reference is made to the joint inspection made on 21 October 1963, of flood control work pertaining to the Sacramento River Flood Control Project for the purpose of transferring it to the State of California for operation and maintenance. Reference is also made to Supplement dated 29 November 1957 to Memorandum of Understanding entered into with the State of California under date of 30 November 1953, covering added items of work required to complete the Sacramento River Flood Control Project.

The flood control work consists of levee construction on right and left banks of Bear River, W.P.R.R. Interceptor Channel, and Yankee Slough, designated in the above referenced supplement as Items 100-16, 100-18, 100-19, 100-21, and 100-24. This work was completed on 18 October 1963, in accordance with Specification No. 2792, Contract No. DA-04-167-CIVENG-63-28, and Drawing No. 2-4-174.

The foregoing supplemental work having been completed to current standards for the Sacramento River Flood Control Project, is hereby transferred to the State of California for operation and maintenance. A manual for this portion of the project has already been furnished which adequately covers operation and maintenance requirements for the above item.

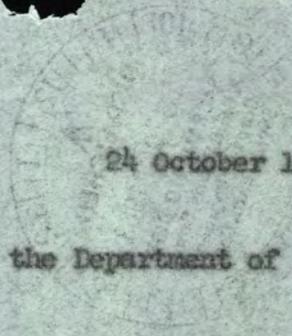
It is also to be noted that the above work completes all of Bear River flood control work under the Sacramento River Flood Control Project.

Clm 7 145, 146

REGISTERED
RETURN RECEIPT REQUESTED

Supp of 29 Nov 57

Suppl



SPKGO-C
The Reclamation Board

24 October 1963

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

Sincerely yours,

F. N. ANDERSON
EXECUTIVE ASSISTANT
FOR AND IN THE TEMPORARY ABSENCE OF
C. R. TEAGLE
LT Col, CE
Acting District Engineer

Copy furnished:
Dept Water Resources

O.C.E.
S.P.D.

cc: Engr Div-Lev & Channels
Engr Div - Prog Dev Br
F & A
Northern Area Office

[Signature]
THOMPSON/ pnp
[Signature]
HARDY
[Signature]
TEAGLE

Unit 7 p11

aw

EDMUND G. BROWN
GOVERNOR

STANLEY W. KRONICK, SACRAMENTO
PRESIDENT

J. J. MADIGAN, CHICO
VICE PRESIDENT

WALLACE MCCORMACK, RIO VISTA
SECRETARY

THE RECLAMATION BOARD

OF THE
STATE OF CALIFORNIA

1215 O STREET
SACRAMENTO 14, CALIFORNIA

TELEPHONE: HI 5-4711

September 19, 1962

MAX S. VANN, SR., WILLIAMS
CHARLES J. MATHEWS, MARYSVILLE
GEORGE W. NICKEL, JR., SAN FRANCISCO
HAROLD J. O'BANION, DOS PALOS
BOARD MEMBERS

A. N. MURRAY
GENERAL MANAGER AND CHIEF ENGINEER

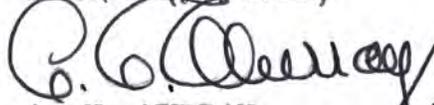
District Engineer
Corps of Engineers
U. S. Army
P. O. Box 1739
Sacramento, California

Dear Sir:

Reference is made to your letter of August 30, 1962 concerning transfer to the State of California of levee improvement work along the left bank of the Yuba and Feather Rivers designated as Unit No. 667, which was completed in accordance with Specification No. 2740. This work consists of levee construction on the left bank of the Yuba River from River Mile 0.75 to high ground, and levee enlargement and surfacing of the left bank of the Feather River from River Mile 25.61 to 26.50.

The Reclamation Board at its meeting of September 6, 1962 formally accepted the above referred to levee improvement work for operation and maintenance.

Sincerely yours,



A. N. MURRAY
General Manager and Chief Engineer

HSH:jc

Copies furnished 9/24/62
Northern Area
Bardsdale
Jensen
Units 1415/1417

667

SPKKO-C

30 AUG 1962

Unit 667

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

Gentlemen:

Reference is made to the joint inspection made on 21 August 1962 of flood control work on a unit of the Sacramento River Flood Control Project for the purpose of transferring it to the State of California for operation and maintenance.

The above work, designated as Unit No. 667, consists of levee construction on left bank of Yuba River, from mile point 0.75 to High Ground; and levee enlargement and surfacing of left bank Feather River, from mile point 25.61 to 26.50. This work was completed on 17 August 1962 in accordance with Specification No. 2740, Contract No. DA-04-167-CIVENS-62-62, and Drawing No. 8-4-666.

The Flood control work described above now meets the requirements of the Sacramento River Flood Control Project. Therefore, said flood control work, together with the waterway banks contiguous thereto are transferred to the State of California for operation and maintenance.

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 by the current issue of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project. As provided under Paragraph 208.10(10) of these regulations, a supplement to the Standard Operation and Maintenance Manual covering the above described unit of work is in process of preparation and will be furnished to you upon completion.

REGISTERED
RETURN RECEIPT REQUESTED

Units 1461
147

P

667

OPERATIONS BRANCH
CHANNELS & LEVEES SECTION

Unit 667

30 AUG 1962

SPKKO-C
The Reclamation Board

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

Sincerely yours,

1 Incl
F.C. Regulations

F. KOCHES
Acting District Engineer

Copy furnished:
Dept Water Resources
23rd & "H" Streets
Sacramento, Calif.

O.C.E.
S.P.D.

cc: Engr Div, Lev & Chan
Engr Div, Pro Dev Br
F&A Br
Northern Area Ofc

LJK
8/29/62
KRISTOF/lis

[Signature]
THOMPSON

[Signature]
JOHNSON
[Signature]
KOCHES

OPERATIONS BRANCH
CHANNELS & LEVELS SECTION

Units 145, 147

EDMUND G. BROWN
GOVERNOR

STANLEY W. KRONICK, SACRAMENTO
PRESIDENT
J. J. MADIGAN, CHICO
VICE PRESIDENT
WALLACE MCCORMACK, RIO VISTA
SECRETARY

THE RECLAMATION BOARD
OF THE
STATE OF CALIFORNIA

1215 O STREET
SACRAMENTO 14, CALIFORNIA
TELEPHONE: HI 5-4711

MAX S. VANN, SR., WILLIAMS
GEORGE W. NICKEL, JR., LOS BANOS
HAROLD J. O'BANION, DOS PALOS
CHARLES J. MATHEWS, MARYSVILLE
BOARD MEMBERS

ROBERT W. JAMES
GENERAL MANAGER AND CHIEF COUNSEL

November 27, 1961

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

*Cont #62-26
Spec 2729*

Dear Sir:

Reference is made to your letter of November 13, 1961, regarding transfer to the State of California of the cleared Flood Plain of the Feather River between Yuba River and Bear River after residual levee removal and channel clearing under Corps Specification No. 2729.

The Board, at its meeting of November 16, 1961, formally accepted the above cleared channel for operation and maintenance.

Sincerely yours,



ROBERT W. JAMES
General Manager and Chief Counsel

HSH:els

Unit 145, 165

*Copy sent to -
Barstote
Northern District*

13 NOV 1961

Supplement #1

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

Gentlemen:

Reference is made to the joint inspection made on 19 October 1961 of flood control work on the Feather River, a unit of the Sacramento River Flood Control Project, for the purpose of transferring it to the State of California for operation and maintenance. Reference is also made to Supplement dated 29 November 1957 to the Memorandum of Understanding entered into with the State of California under date of 30 November 1953, covering added items of work required to complete the Sacramento River Flood Control Project.

The flood control work, consisting of removal of obstructing residual levees and channel clearing in the Feather River Flood Plain, between Yuba and Bear Rivers, (items listed below as indicated in the referenced supplement,) was completed on 3 November 1961 in accordance with Specification No. 2729, Contract No. DA-04-167-CIVENG-62-26 and Drawing No. 4-6-514:

Item 1aa--Remove obstructing residual levees in Feather River Flood Plain.

Item 1y---Clear additional obstructing trees in Feather River Flood Plain.

The foregoing supplemental work, having been completed to current standards for the Sacramento River Flood Control Project, is hereby transferred to the State of California for operation and maintenance.

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 by the current issued

Unit 145, 165

Supplement #1

LHK: pnp

13 NOV 1961

EPKCO-C
The Reclamation Board

of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project. As provided under Paragraph 208.10(10) of these regulations, a supplement to the Standard Operation and Maintenance Manual covering these units of work is in process of preparation and will be furnished to you upon completion.

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

Sincerely yours,

H. N. TURNER
Colonel, CE
District Engineer

1 Incl
F.C. Reg.

Copy furnished:
Dept Water Resources
23rd & "R" Streets
Sacramento, Calif.

O.C.E.
S.P.D.

cc: Engr Divn- Lev & Chan
Engr Divn-Prog Dev Br
Fin & Acctg B
Northern Area Office

OPERATIONS BRANCH
CHANNELS & LEVEES SECTION

Concurrences	
Originator:	LHK
Date:	11/9/61
Dist. Engr.	
Dep. Dist. Engr.	
Exec. Asst.	
Comptlr.	
Budget	
Fin. & Acctg.	
Mgmt.	
Property	
Office Service	
Constn. Opns.	
Engr'n.	
R. E.	
Personnel	
Counsel	
Supply	
Security	
Safety	
Tech. Liaison	

Units 145, 145

EDMUND G. BROWN
GOVERNOR

STANLEY W. KRONICK, SACRAMENTO
PRESIDENT
GROVER SHANNON, YUBA CITY
VICE PRESIDENT
GEO. H. HOLMES, CLARKSBURG
SECRETARY
J. J. MADIGAN, CHICO
MAX S. VANN, SR., WILLIAMS
WALLACE McCORMACK, RIO VISTA
GEORGE W. NICKEL, JR., LOS BANOS

THE RECLAMATION BOARD

OF THE
STATE OF CALIFORNIA

1215 O STREET
SACRAMENTO 14, CALIFORNIA
TELEPHONE: HI 5-4711

A. M. BARTON
CHIEF ENGINEER AND GENERAL MANAGER
STANLEY MOSK
LEGAL ADVISER
HOWARD S. HITCHCOCK
ASSISTANT CHIEF ENGINEER
WILLIAM A. CARVER
ASSISTANT SECRETARY
ROBERT W. JAMES
ASSOCIATE COUNSEL

April 14, 1959

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

Dear Sir:

Reference is made to your letters of February 16, 1959, SPKKO-P, and February 18, 1959, SPKGD-L, regarding the responsibility of operation and maintenance of emergency repairs to both levees of the Sutter Bypass from Wadsworth Canal to Gilsizer Slough, and to the left bank of the Feather River in Reclamation District No. 784.

The Reclamation Board, at its meeting of April 1, 1959, formally accepted the maintenance responsibility for the above indicated work.

Yours very truly

THE RECLAMATION BOARD
A. M. BARTON
Chief Engineer and General Manager

By William A. Carver
WILLIAM A. CARVER
Assistant Secretary

WAC:emw

285-1680

Reclamation

Unit 145

Copy sent to J. J. ... 12/30/54
Northern - ref ofc 12/30/57

WAC - OL
file
WPH

SPKKG-P

16 FEB 1959

16 Feb 1959

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

Gentlemen:

Reference is made to the emergency repair program on the Sacramento River Flood Control Project formulated as a result of requests from local interests, joint inspections and investigations participated in by State, local and Corps of Engineers representatives.

Emergency repairs have been completed under the general authority of Public Law 99, 84th Congress, 1st Session, on the left bank of the Feather River in Reclamation District No. 784.

The emergency work consisted of the construction of relief walls and a landside berm and was completed 10 October 1958 in accordance with Specification No. 2462, Contract No. DA-04-167-CIVENG-59-29 and Drawing No. 4-1-488.

The above work as completed is hereby transferred to the State of California for operation and maintenance as an appurtenance of the levee reach in this area transferred to the State on 8 December 1951.

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

Sincerely yours,

Copy furnished:
Dept Water Res
23rd & "R" Sts
Sacto, Calif.

O.C.E.
SoPacDivnEngr

cc: Opers Br ✓

A. E. McCOLLAM
Colonel, CE
District Engineer

Unit #145

*See Unit #168
Letter No. 12*

OPERATIONS BRANCH

REGISTERED

RETURN RECEIPT REQUESTED

SPARO-P 824.3 (Sacto. Riv. F.C.P.)

18 DEC 1956

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

Gentlemen:

Reference is made to the District Engineer's letter dated 20 September 1956, relative to the joint inspection, made on 1 October 1956, of the clearing and debris removal work in the Bear River from the Feather River upstream approximately four miles.

The clearing and debris removal work referred to above was completed on 11 October 1956 under Contract No. DA-04-167-CIVENS-56-197, Specification No. 2002, Drawing No. 2-6-133. This work forms an integral part of the Sacramento River Flood Control Project and meets the requirements of the project; therefore said work is hereby transferred to the jurisdiction of the State of California for operation and maintenance.

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 by the current issue of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project. As provided under paragraph 208.10 (10) of these regulations, a supplement to the Standard Operation and Maintenance Manual covering this unit of work is in process of preparation and will be furnished to you upon completion.

REGISTERED

RETURN RECEIPT REQUESTED

Posted
Unit 145
Cont. # 56-197
Unit 557

W. B. HARGRAVES

SPKXO-P 824.3 (Sacto. Riv. F.C.P.)
The Reclamation Board

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

Sincerely yours,

1 Incl
1. P.C. Reg.

A. E. McCOLLAM
Colonel, CE
District Engineer

Copy furnished:
Department of Water Resources
Sacramento, California w/o incl
OCE w/o incl
So.Pac.Divn. Engr. w/o incl

cc: Engr. Div. w/o incl
Northern Area Ofc
W. B. Hargraves



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.

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

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

204 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. ✓ 0
- ✓ 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



SPKRA 324.3 (Sac. Riv. F. C. 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
- Reach No. 30 ✓ (288) 1. 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) n. 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

REGISTERED MAIL
Receipt Receipt
Requested

Letter No. 12

12

SPKKA 824,3(Sac. Riv. F.C.P.)

8 DEC 1951

The Reclamation Board
State of California
1100 "O" Street
Sacramento 16, California

Gentlemen:

Reference is made to your letter of 22 June 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:

140. a. Northerly levee of the American River from Jibboom Street Bridge to Sacramento River. 118.2 (?)

b. Easterly levee of the Sacramento River.

Reach 15 141. (1) American River to Natones Out. 60.25 to 79.0 124

Reach No. 11 142. (2) At Moulton Weir. (man 2) 154

143. (3) Mile 158.5 (North End Moulton Weir) to Mile 164.4 (Princeton Ferry). (man 2) ? 134

144. (4) Mile 168.5 to Mile 168.9 (at Dutch City). (man 2) ? 138

c. Westerly levee of the Sacramento River.

145. (1) Mile 59.9 to Mile 60.75. 116

146. (2) Mile 61.8 to Mile 62.65 (at Drye Bend) 116

62.65

Accepted by letter dated 9 March 1953

Letter 12 Items 140 to 198

12

Letter No. 12

12

c. Westerly levee of the Sacramento River, (cont'd)

- ✓ 147. (8) Mile 62.65 to Mile 63.1 (South End Sacramento Weir). 116
- ✓ 148. (4) At Sacramento Weir. 158
- ✓ 149. (5) Mile 63.5 (North End Sacramento Weir) to Mile 67.11. 122
- ✓ 150. (6) Mile 68.42 to Mile 70.9. 122
- ✓ 151. (7) Mile 76.5 to Mile 81.7 (East End Fremont Weir). 123
- ✓ 152. (8) Along Fremont Weir. 157
- ✓ 153. (9) Mile 84.0 (West End Fremont Weir) to Mile 85.3. 128
- ✓ 154. (10) Mile 85.5 to Mile 85.9. 128
- ✓ 155. (11) Mile 87.6 to Mile 88.4. 128
- ✓ 156. (12) Mile 89.2 to Mile 89.8 (Knights Landing Highway Bridge). 128
- ✓ 157. (13) Mile ^{89.2}89.8 (Knights Landing Highway Bridge) to Sycamore Slough. 89.9 128
- ✓ 158. (14) Mile ^{100.6}100.6 to Mile 101.4. 128
- ✓ 159. (15) Mile 110.9 to Mile 111.2. 128

Reach No. 5

Reach No. 4

d. Westerly levee of the Feather River.

- Reach 39 ✓ 160. (1) Sutter Bypass to Nicolaus Bridge. 143
- ✓ 161. (2) From a point 3.51 miles northerly from Nicolaus Bridge to the Fifth Street Bridge between Marysville and Yuba City. 143, 144
- Reach 38 ✓ 162. (3) From a point 1,400 feet northerly from the Fifth Street Bridge between Marysville and Yuba City to Station 774+00 "Y.C.N.B." Traverse. 144
- ✓ 163. (4) From a point east of Station 1188+00 "Y.C.N.B." Traverse to high ground just northerly from the Western Canal Headgate. 144

Reach 42 ✓ 164. a. Easterly levee of the Sacramento River from Natomas Cut to Feather River. 141.1

12

Letter No. 12

12

f. Easterly levee of the Feather River.

- Reach 42 ✓ 165. (1) Sacramento River to a point 2.37 miles southerly from Nicolaus Bridge. 141 Pt 1
- Reach 41 ✓ 166. (2) Bear River to Mile 14.4. } 145
- ✓ 167. (3) Mile 14.4 to Mile 14.7. }
- ✓ 168. (4) Mile 14.7 to Mile 21.5. }
- ✓ 169. (5) Mile 21.5 to Mile 22.75. }
- ✓ 170. (6) Mile 22.75 to Mile 26.5 (Point where levee and S.M.R.R. meet). 145

g. Levees protecting the City of Marysville. All 147

- Reach 43 ✓ 171. (1) From the W.P.R.R. at Simerly Slough easterly to the Yuba River.
- ✓ 172. (2) Along the Yuba River from the "D" Street Bridge to the back levee near the Valley Meat Company.

h. Levees protecting Reclamation District No. 10.

- Reach No. 40 ✓ 173. (1) Northerly levee of Simerly Slough from the W.P.R.R. to the S.P.R.R. 151
- ✓ 174. (2) Easterly levee of the Feather River from Simerly Slough to a point 4.3 miles northerly from Simerly Slough. 151

Reach 46 ✓ 175. i. Northerly levee of the Yuba River from the back levee of the City of Marysville to a point 1.3 miles easterly from said back levee. 147

Reach 47 ✓ 176. j. Southerly levee of the Yuba River from Feather River (i.e. S.M.R.R.) easterly to the S.P.R.R. Main Line. 147

45 ✓ 177. k. Northerly levee of Bear River from Feather River easterly to the W. P.R.R. Interceptor. 145

45 ✓ 178. l. Westerly levee of the W.P.R.R. Interceptor and Clark Slough Interceptor (i.e. back levee of Reclamation District No. 784) from Bear River to the southerly end of the Clark Slough Interceptor. 145

12

SPIKA 824.3 (Sac. Riv. P.C.P.)
The Reclamation Board

Letter No. 12

12

m. Southerly levee of the American River.

Reach
No. 25 ✓

- ✓ 179. (1) Sixteenth Street Bridge to the S.N.R.R. 118.1
- ✓ 180. (2) From a point 800 feet easterly from the W.P.R.R. to Mayhew Station. 118.1

n. Westerly levee of the Yolo Bypass.

- ✓ 181. (1) Sacramento River to Knights Landing Ridge Cut. 127
- ✓ 182. (2) Knights Landing Ridge Cut to the northeast corner of the Cache Creek Settling Basin. 126
- 28 ✓ 183. (3) S.N.R.R. Woodland Branch to a point 1.6 miles southerly from said railroad. 121
- 28 ✓ 184. (4) From a point 1.6 miles southerly from the S.N.R.R. Woodland Branch to the Willow Slough Pipes. 121
- 28 ✓ 185. (5) From a point 1.48 miles southerly from the Willow Slough Pipes to a point 1.9 miles southerly from said pipes. 121
- 28 ✓ 186. (6) From a point 1.9 miles southerly from the Willow Slough Pipes to the Willow Slough Interceptor. 121
- 28 ✓ 187. (7) From the Willow Slough Interceptor to Highway U.S. 40. 120
- ✓ 24 ✓ 188. (8) From Highway U.S. 40 to Putah Creek. 119

27 ✓ 189 o. Easterly and Westerly training levees of Cache Creek Settling Basin from Cache Creek southerly. 126

28 ✓ 190 p. Northerly and Southerly levees of the Willow Slough Interceptor from the S.P.R.R. to the Yolo Bypass. 120

29 ✓ 191 q. Northerly levee of Putah Creek from Yolo Bypass westerly to high ground. 119

✓ 192 r. Southerly levee of Putah Creek from high ground on Dixon Ridge westerly to high ground. 119

s. Southerly levee of Knights Landing Ridge Cut. 127

- 26 ✓ 193 (1) From Yolo Bypass westerly 600 feet. Also covered under Unit 96-A
- 26 ✓ 194 (2) { From a point 2,500 feet westerly from Yolo Bypass to a point 2,900 feet westerly from Yolo Bypass. 127
Also covered under 96-A

12

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

Letter No. 12

12

s. Southerly levee of Knights Landing Ridge Cut. (cont'd)

- 26 ✓ 195 (S) { From a point 3,300 feet westerly from Yolo Bypass to a point 7,100 feet westerly from Yolo Bypass. 127
Also covered under Unit No. 96-A
- 35 ✓ 196 t. That portion of the back or westerly levee of Hastings Tract which runs east and west along the County Road for a distance of approximately one mile. 107
- ✓ 197 u. Northerly levee of Sycamore Slough from Sacramento River to Knights Landing Outfall Gates. 130
- ✓ 198 v. Southerly levee of Sycamore Slough from Sacramento River to Knights Landing Outfall Gates. 132

The records of this office show that your Board has accepted the levees and/or works covered by Items b.(1), b.(2), b.(3), c.(2), c.(4), c.(8), c.(11), c.(12), c.(14), d.(1), d.(3), d.(4), f.(3), f.(5), g., h., i., l., m., n.(1), n.(2), n.(3), n.(6), n.(7), n.(8), o., p., q., r. and s.(1) 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., b.(4), c.(1), c.(3), c.(5), c.(6), c.(7), c.(9), c.(10), c.(13), c.(15), d.(2), e., f.(1), f.(2), f.(4), f.(6), j., k., n.(4), n.(5), s.(2), s.(3), t., u. and v., above, although complete has not been formally transferred as contemplated by the Project documents. 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. Reifsnnyder
Lt. Colonel, Corps of Engineers
Executive Officer

12

RESOLUTION

ADOPTED BY THE RECLAMATION BOARD

FEBRUARY 6, 1946

- - - - -

WHEREAS The Reclamation Board on February 6, 1946, did approve a certain item of "new construction", said work consisting of the construction of the Bear River levees from Western Pacific Railroad upstream four miles, South Dry Creek levees upstream from its mouth two miles, East levee, Western Pacific Intercepting Canal and South levee of North Dry Creek; and

WHEREAS the War Department, U. S. Engineer Office, District Engineer, under date of January 25, 1946, has notified The Reclamation Board of the completion of such work of "new construction" and its desire to turn over to The Reclamation Board such work as completed, for maintenance by the proper local interests; and

WHEREAS the Chief Engineer of The Reclamation Board has caused to be made inspection on the ground of such work of "new construction", and has found and determined that such work, as completed, has been prosecuted and carried out in conformance with the plans and specifications therefor; now, therefore, be it

RESOLVED AND ORDERED, That The Reclamation Board does hereby accept, for the State of California, the said item of "new construction" as aforesaid, which has, on the date hereinabove set forth, been turned over to said Board by the War Department, U. S. Engineer Office; and be it further

RESOLVED AND ORDERED, That the south levee of Bear River, together with the channel of said river, be turned over to Reclamation District No. 1001 for maintenance and operation, as the legally authorized function of said District; and be it further

Manual No. 5

UNVT 145, 1412

RESOLVED AND ORDERED, That the north levee of Bear River upstream from the mouth of South Dry Creek, together with the channel of said river in that vicinity and the levees of South Dry Creek, together with the channel of said creek, be turned over to Reclamation District No. 817 for maintenance and operation, as the legally authorized function of said District; and be it further

RESOLVED AND ORDERED that the North levee of Bear River downstream from the mouth of Dry Creek, the east levee of the Western Pacific Intercepting Canal and the South levee of North Dry Creek, together with the channels adjacent to said levees, be turned over to Reclamation District No. 784, for maintenance and operation, as the legally authorized function of said District.

STATE OF CALIFORNIA)
COUNTY OF SACRAMENTO) SS
Office of The Reclamation Board)

I, GEORGE H. HOLMES, Secretary of the Reclamation Board, do hereby certify that the above and foregoing is a true and correct copy of a resolution duly passed and adopted by said Board at its meeting held February 6, 1946.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of The Reclamation Board this 15th day of February, 1946.

George H. Holmes
GEORGE H. HOLMES
Secretary
The Reclamation Board

Manual No. 5

Unit 145, 141

Exhibit "F"

PAKJ

25 January 1946

Maintenance of the Bear River Levee System

The Reclamation Board
1100 "O" Street
Sacramento, California

Gentlemen:

Enlargement has been completed of the Bear River Levee System in the vicinity of Rio Oso and Wheatland, California. Therefore, in accordance with established procedure, this portion of completed levee is hereby transferred to the State of California for maintenance.

This construction forms an integral part of the Sacramento River Flood Control Project. The details and extent of the work are shown on inclosed drawing No. 2-4-106 in six sheets, entitled "Proposed Levee Enlargement, Bear River Levees from W.P.R.R. upstream 4 miles, South Dry Creek Levees upstream from North 2 Miles, East Levee W.P.R.R. Intercepting Channel and South Levee of North Dry Creek."

There is also inclosed copy of Flood Control Regulations prescribed by the Secretary of War pursuant to the provisions of Section 3 of the Act of Congress approved 22 June 1936, as amended and supplemented, to govern the maintenance and operation of flood control works, of which the levee referred to is a part. In accordance with paragraph 208.10(10) of said regulations, at a later date this office will furnish your Board and local interests with an Operation and Maintenance Manual to assist in carrying out their obligations established by these regulations.

For the records of this office, acknowledgment of receipt of this letter is requested on or before 28 February 1946.

Copy of this letter, with inclosures, is being transmitted to the State Engineer.

2 Incls.
Dwg. No. 2-4-106 (in 6 shts)
Flood Control Regulations

/s/ LESTER P. NICHOLS
Colonel, CE
District Engineer

Manual No. 5

*141-1
145*

EXHIBIT G
SUGGESTED SEMIANNUAL REPORT FORM

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 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

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____) Unit No. 145 - Part No. 1 of the Sacramento River Flood Control Project, the East Levee of Feather River, South Levee of Yuba River, both levees of W.P.R.R. Intercepting Channel, West Levee of South Dry Creek and North Levee of Bear River 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 periods (water level at 66.0 on the gage at "D" street Marysville and 11.0 on gage in Bear River 100 feet downstream from U. S. Highway 99E at Wheatland) occurred on the following dates:

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

SCOPE OF WORK AND SPECIFICATIONS

PART 1

SCOUR HOLE FILL

1. **GENERAL:** The work covered by this section of the specifications consists of furnishing all plant, labor, and equipment and performing all operations in connection with filling the scour hole to the lines and grades indicated on the drawings, installing toe drain risers and capping the existing 6-inch PVC outfall pipe.

2. **BORROW:** The borrow material shall be supplied at the site by others as stated on the drawings.

3. PREPARATION OF THE FOUNDATION:

3.1 General: Prior to placement of fill material, the contractor shall precondition the scour hole foundation. Any tires, tree stumps, or miscellaneous organic materials shall be removed from the scour hole and shall become property of the contractor. The foundation shall be preconditioned with 4 passes of a tamping foot roller. If in the opinion of the Contracting Officer the foundation is too dry, it shall be pre-moistened prior to rolling with the tamping foot roller.

3.2 Drainage: The scour hole shall be kept thoroughly drained throughout the progress of the work. It is the contractor's responsibility to divert any flows away from the scour hole, and to dewater the site if necessary to accomplish the work.

4. FILL PLACEMENT:

4.1 General: Fill placement shall be brought to the indicated finished lines and grade as indicated on the drawings. Fill shall consist of material stockpiled on site by others. Fill shall be placed and compacted with a minimum of four (4) passes of a tamping foot roller as defined in paragraph 4.2. Each lift of fill shall be placed in approximately horizontal layers not to exceed a thickness of nine (9) inches. If, in the opinion of the Contracting Officer, the surface of any layer is too smooth to bond properly with succeeding layer, it shall be scarified before the succeeding layer is placed thereon.

4.2 Compaction Equipment: Tamping foot rollers shall be used to compact the fill material. The drums shall be water or sand and water ballasted and have staggered feet uniformly spaced over the cylindrical surface such as to

provide approximately three tamping feet for each two square feet of drum surface. The roller shall be equipped with cleaning fingers, so designed and attached as to prevent the accumulation of material between the tamping feet, and these cleaning fingers shall be maintained at their full length throughout the use of the roller. The weight of the roller shall be a minimum of 2000 pounds per foot of drum width. The roller shall be drawn with either a crawler type tractor or pneumatic tired equipment at speeds not to exceed 3.5 miles per hour.

5. CAPPING EXISTING 6-INCH OUTFALL PIPE: The 6-inch drain pipe shall be capped at the location shown on the drawings. The end shall be cemented with PVC cementing compound and capped with a Schedule 40 end cap.

5.1 Shoring: Shoring shall be furnished and installed as necessary to protect workmen inside the open excavation at the outfall pipe. Shoring shall be in compliance with the Corps of Engineers Manual EM 385-1-1, April 1981, Revised Oct 1987, SAFETY AND HEALTH REQUIREMENTS MANUAL. Shoring and any bracing shall be removed as the excavation is backfilled with the same material removed from the excavation.

5.2 Backfilling: After the PVC pipe has been capped, the trench excavation shall be backfilled to the original ground surface elevation. The backfill shall consist of the same material removed from the trench with lifts not to exceed four (4) inches loose thickness and compacted with two passes of a hand operated vibratory plate.

6. INSTALLATION OF TOE DRAIN RISER: The 18-inch toe drain risers shall be installed as shown on the drawings. The approximate locations of the risers are as shown on the drawings. The actual locations shall be established in the field by the Contracting Officer. The risers shall be PVC pipe with slotted open bottom as shown on the drawings. The pipe shall be Class 160 PVC which conforms to ASTM D 2241. A protective metal cover shall be provided. The cover shall be corrugated metal of 16 gage, galvanized, conforming to the requirements of Fed. Spec. WW-P-405, Class I, Shape 1. Galvanized steel for the hinged lid shall conform to the requirements of ASTM A 444. Hardware for the hinged lid shall consist of 2 1/2 inch plain hinges, type 2172G conforming to Fed Spec FF-H-116 and hasp of type F1403 conforming to Fed Spec FF-H-111.

7. PAYMENT: Payment for filling the scour hole will be paid for at the contract unit price per cubic yard

Request # 122-01-101-010

for the item "Scour Hole Fill", which price shall include all costs of placing, compacting fill and preparing the foundation. Payment for the excavation for capping the 6-inch outfall pipe shall be paid for at the contract lump sum price for the item "Capping 6-inch Outfall Pipe," which payment shall constitute full compensation for all work to accomplish capping and backfilling the outfall pipe excavation trench. Payment for the installing the toe drain riser will be paid for at the contract lump sum price for the item "Installation of Toe Drain Risers", which price includes all costs for excavation, installation, backfilling and removal of waste material.

PART 2

GENERAL REQUIREMENTS

1. STORAGE OF MATERIALS, EQUIPMENT, OR SUPPLIES: The Contracting Officer representative shall designate a location for storage of equipment, material and supplies. The protection and storage facilities shall be the Contractor's responsibility, and only equipment and supplies approved by the Contracting Officer may be stored in the project area. All equipment and materials used by the Contractor shall be protected from public accessibility. The Contractor shall erect barriers and post necessary warning signs. If the Contracting Officer's representative determines that additional barriers and/or warning signs are necessary, the Contractor shall install such barriers and/or signs at no additional cost to the Government.

2. WATER AND SANITARY FACILITIES: The Contractor shall locate the nearest available non-potable water. No sanitary facilities are located at the project site.

3. NONCOMPLIANCE WITH CONTRACT: The Contracting Officer representative will notify the Contractor of any noncompliance with the contract and the actions to be taken. The Contractor; shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his or her Representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Contracting Officer's representative may issue an order stopping all or part of the work until satisfactory corrective action is taken. No part of the time lost due to any stop orders shall be made to the subject of claim for extension of time on or for excess costs or damages by the Contractor.

4. DAMAGE TO ROADS: The Contractor shall preserve and protect all existing private or project access or right-of-way roads. At the completion of work and prior to the Contractor leaving the project, he/she shall restore to pre-project conditions all such roads.

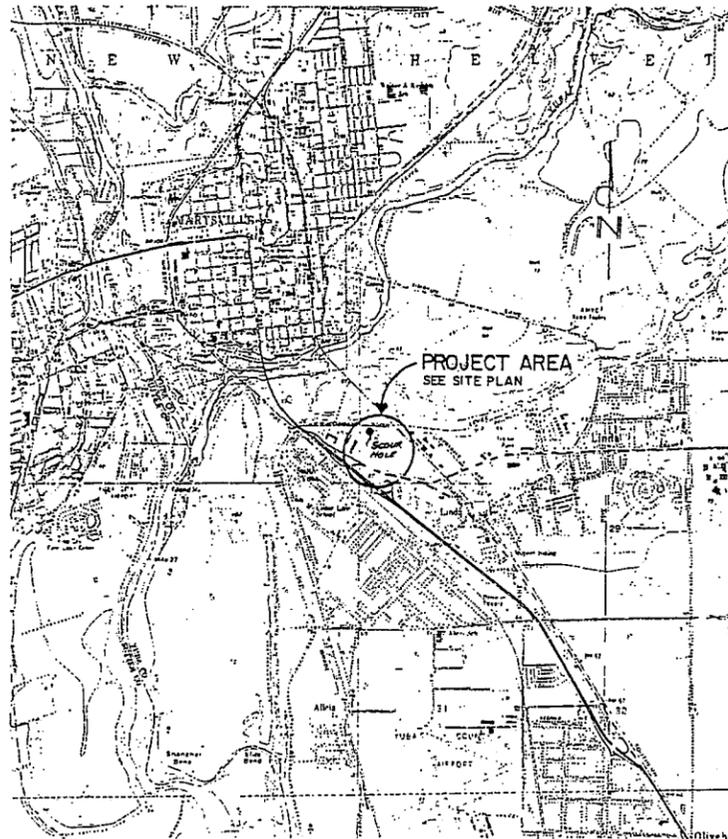
5. QUANTITY SURVEYS: Quantity surveys shall be conducted by a licensed surveyor, and the data derived from these surveys shall be used in computing the quantities of work performed and actual construction completed and in place. The Contractor shall conduct the original and final surveys. The Government shall make computations as are necessary to determine the quantities of work performed or finally in place. Promptly after completion of the survey, the Contractor shall furnish the originals of all field

notes and all other records relating to the survey or to the layout of the work to the Contracting Officer. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

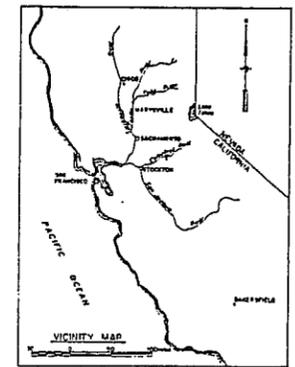
6. CONSTRUCTION PERIOD: All construction shall be completed not later than 14 calendar days from notice to proceed.

7. SITE VISIT: A tour of the project site may be arranged by telephoning the Sacramento District, Corps of Engineers, Mr. Bill Fakes, (916) 557-6609.

SCOUR HOLE REPAIR LINDA, CALIFORNIA



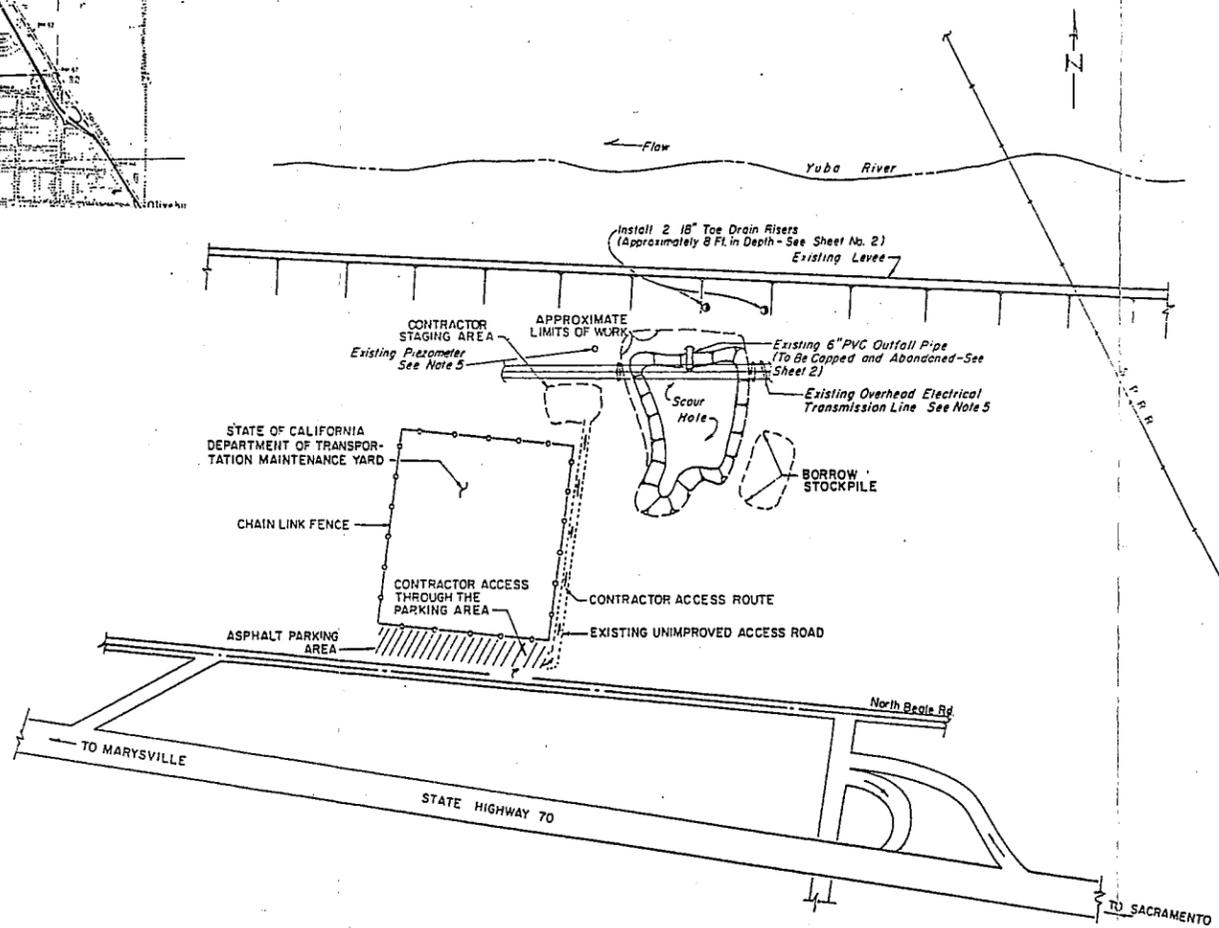
LOCATION MAP
SCALE 1" = 2000'



VICINITY MAP
SCALE AS SHOWN

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL ESTABLISH BASE LINES FOR SURVEYS AND CONSTRUCTION OFFSETS, WITHIN LIMITS OF SITE OR AS DIRECTED BY THE CONTRACTING OFFICER.
2. EXACT LIMITS OF SITE WILL BE STAKED IN THE FIELD BY A GOVERNMENT REPRESENTATIVE.
3. CONTRACTOR TO EXERCISE CAUTION IN CROSSING STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, ASPHALT PARKING AREA. ANY DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT NO ADDITIONAL COSTS TO THE GOVERNMENT.
4. BORROW MATERIAL SHALL BE AVAILABLE AT THE PROJECT SITE. MATERIAL SHALL BE STOCKPILED BY OTHERS FOR USE BY THE CONTRACTOR.
5. CONTRACTOR TO EXERCISE CAUTION IN WORKING IN VICINITY OF EXISTING PIEZOMETER AND OVERHEAD ELECTRICAL TRANSMISSION LINES. ANY DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPLACED AT NO ADDITIONAL COSTS TO THE GOVERNMENT.



SITE PLAN
NOT TO SCALE

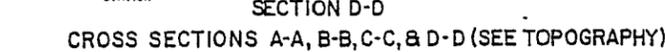
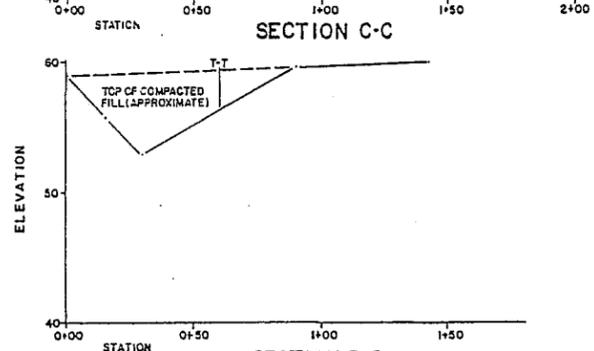
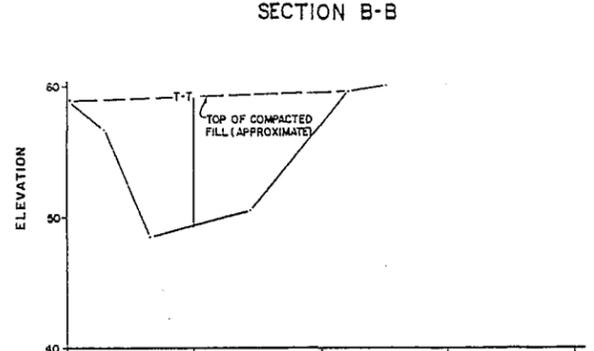
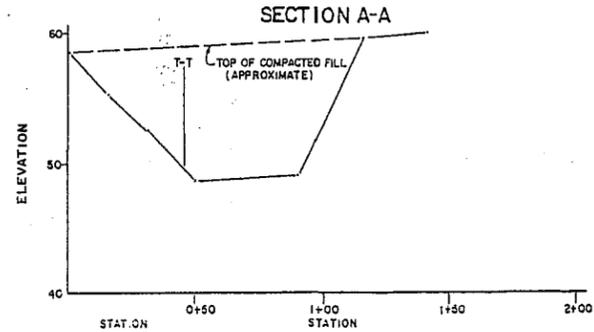
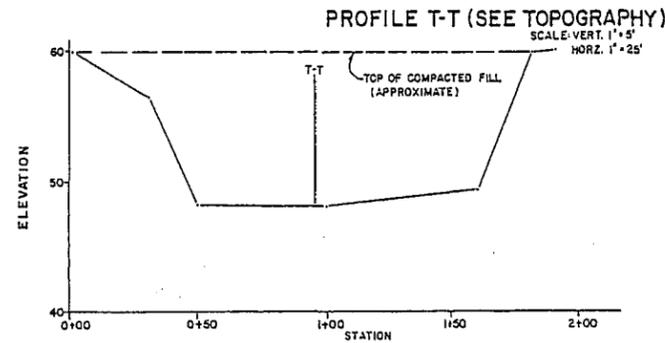
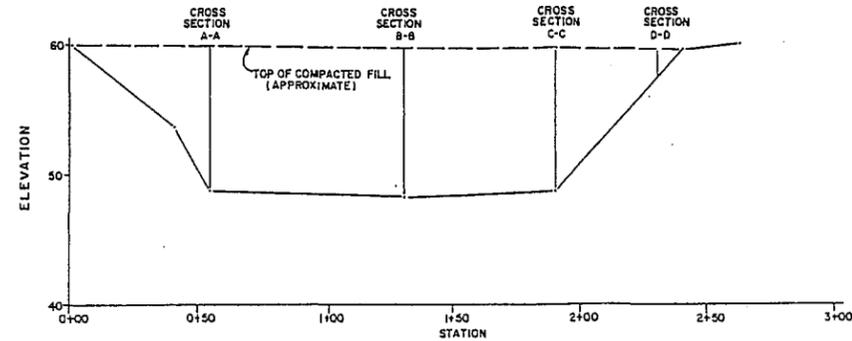
ENVIRONMENTAL
ENHANCEMENT
ENGINEERING

NO.	DATE	DESCRIPTION	BY	CHK'D BY	
DEPARTMENT OF THE ARMY SACRAMENTO DISTRICT, CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA					
DESIGNED BY B. FAYES		SCOUR HOLE REPAIR LINDA, CALIFORNIA TITLE SHEET, VICINITY MAP, LOCATION MAP, SITE PLAN			
DRAWN BY L. KIMMEL					
CHECKED BY L. CLAY					
DATE 					
SIGNATURES AFFIXED BELOW INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL DRAWINGS IN THIS SET AS INDEXED ON THIS SHEET					
APPROVAL AUTHORITY	DATE	APPROVED	DATE	SCALE: NONE	
PREPARED UNDER THE DIRECTION OF LAURENCE R. SADOFF SACRAMENTO DISTRICT, CORPS OF ENGINEERS				SHEET 1 OF 2	FILE NO.

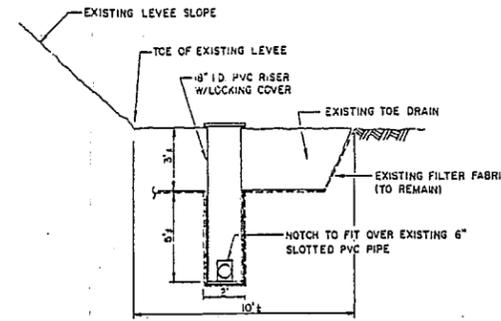
FUNCTION ANALYSIS - VE PAYS

DEPARTMENT OF COMMERCE
 U.S. COAST & GEODETIC SURVEY
 FORM 685A
 DESIGNATION V743 STATE CALIFORNIA COUNTY YUBA
 Nearest town MARYSVILLE COUNTY YUBA DECEMBER 1948
 Distance and direction from nearest town to MARYSVILLE
 Charactermark IRON DISK STAMPING V743 944
 Established by U.S. COAST & GEODETIC SURVEY
 Present condition Good
 Detailed report RECOVERED AS DESCRIBED IN LITHOGRAPHED LIST

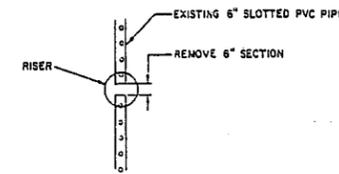
ORIGINAL DESCRIPTIONS V743.-- AT MARYSVILLE, YUBA COUNTY, ABOUT 0.35 MILE SOUTH ALONG THE SOUTHERN PACIFIC CO. RAILROAD FROM THE STATION, AT THE NORTH END OF A LONG TRESTLE OVER YUBA RIVER, ABOUT 101 FEET SOUTH OF THE NORTH END OF THE SHORT APPROACH FILL TO THE BRIDGE, IN THE TOP OF THE EAST CONCRETE RETAINING WALL PARALLELING THE TRACK, 13 FEET NORTH OF THE SOUTH END, 4.5 FEET EAST OF THE EAST RAIL AND ABOUT LEVEL WITH THE BASE OF THE RAILS.



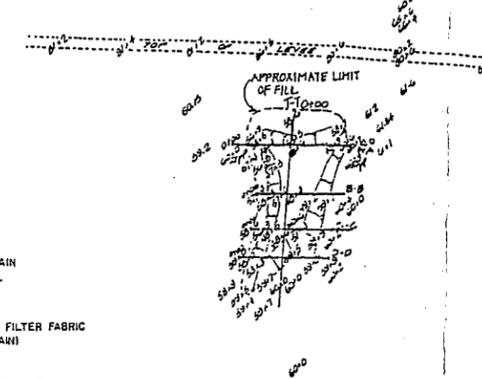
CROSS SECTIONS A-A, B-B, C-C, & D-D (SEE TOPOGRAPHY)



TOE DRAIN RISER INSTALLATION DETAIL - PROFILE
 NOT TO SCALE

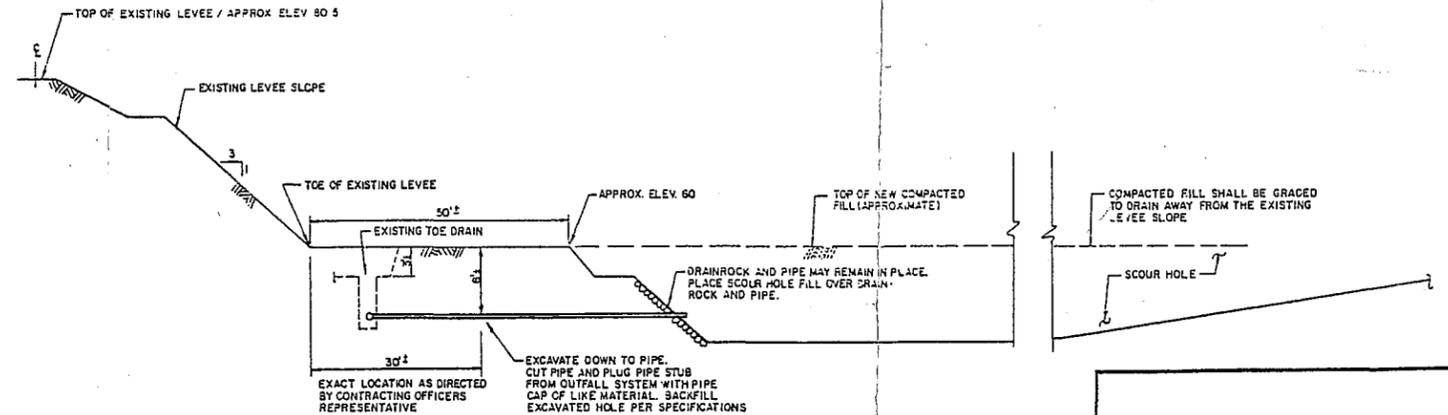


TOE DRAIN RISER INSTALLATION DETAIL - PLAN
 NOT TO SCALE



TOPOGRAPHY DATE OF SURVEY: APRIL 1990
 SCALE: 1"=100'

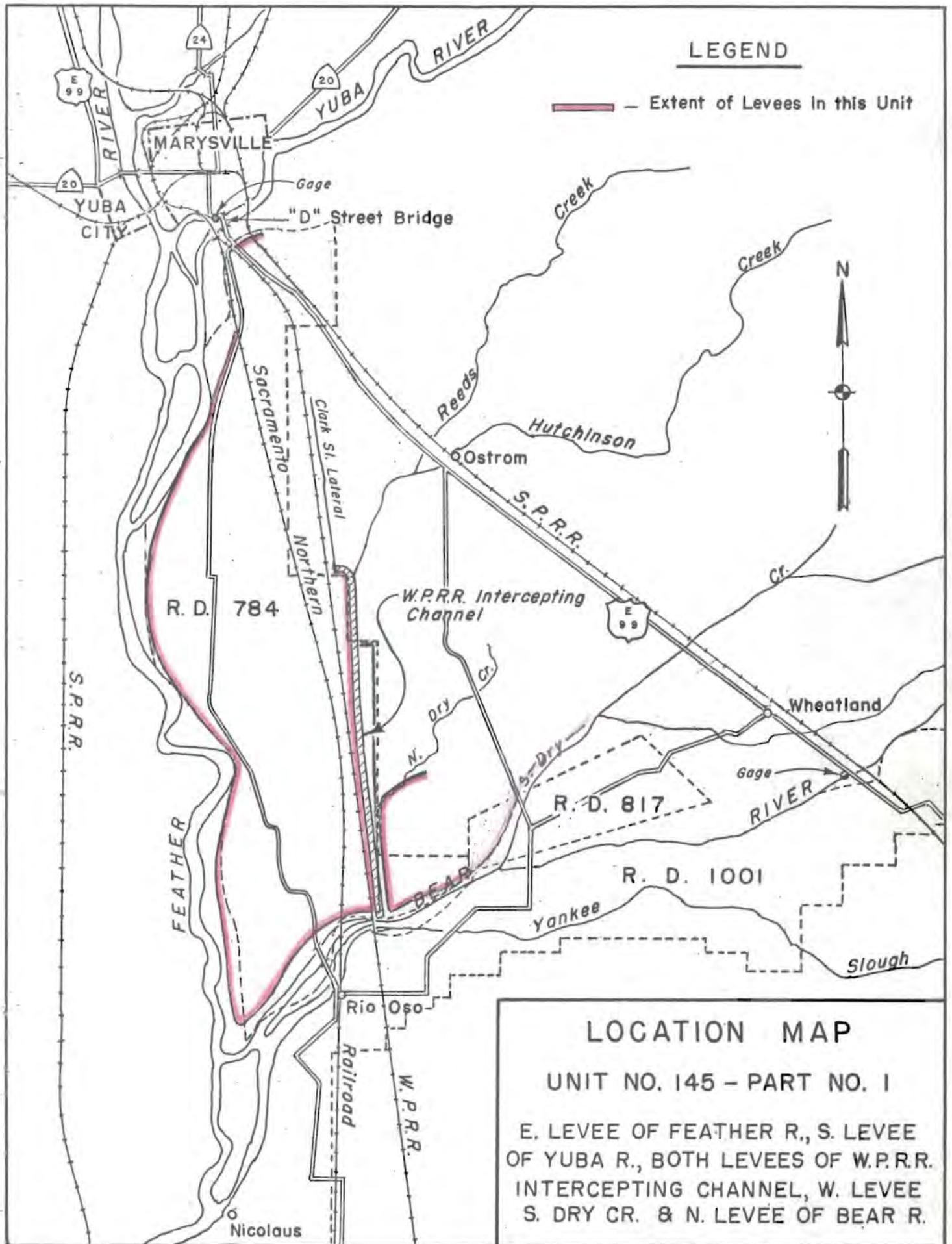
NOTE: TOPOGRAPHY, PROFILE AND CROSS SECTIONS SHOWN ARE FOR SOLICITATION FOR BID PURPOSES ONLY. THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH BASE LINE SURVEYS FOR PROJECT CONSTRUCTION AS NOTED BY CONSTRUCTION NOTE 1, SHEET 1.



EXISTING OFFFALL PIPE PLUG DETAIL
 NOT TO SCALE

NO.	DATE	DESCRIPTION	BY	CHK
DEPARTMENT OF THE ARMY SACRAMENTO DISTRICT, CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA				
DESIGNER	YUBA RIVER LINDA, CALIFORNIA			
NAME	SCOUR HOLE REPAIR			
ENGINEER	TOPOGRAPHY, PROFILE, CROSS SECTIONS & EXISTING OFFFALL PIPE PLUG DETAIL			
DATE	AS SHOWN	SPEC. NO.		
2 OF 2	2	743 944		

ENVIRONMENTAL
 ENHANCEMENT
 ENGINEERING



LEGEND

— Extent of Levees in this Unit



LOCATION MAP

UNIT NO. 145 - PART NO. 1

E. LEVEE OF FEATHER R., S. LEVEE OF YUBA R., BOTH LEVEES OF W.P.R.R. INTERCEPTING CHANNEL, W. LEVEE S. DRY CR. & N. LEVEE OF BEAR R.