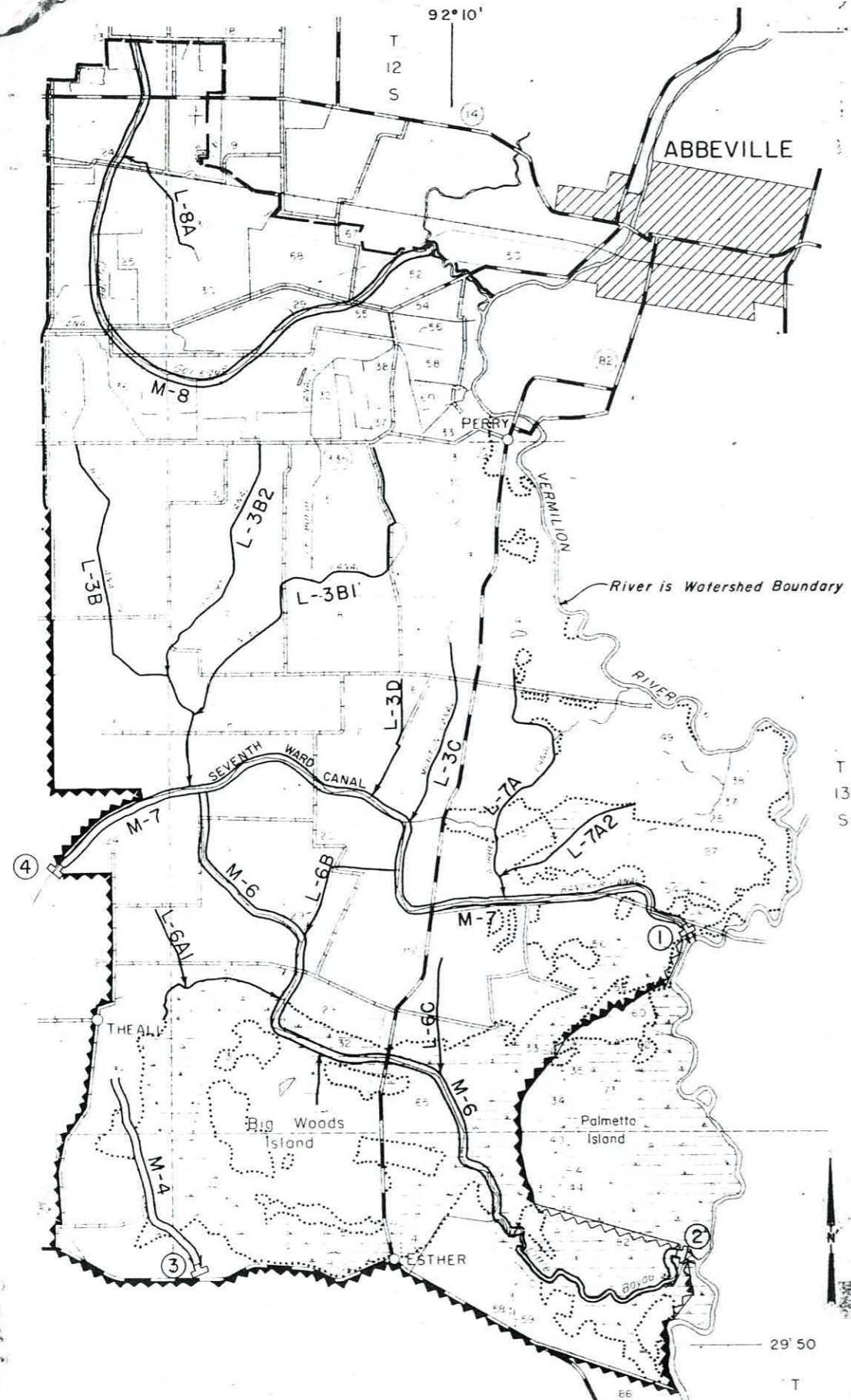


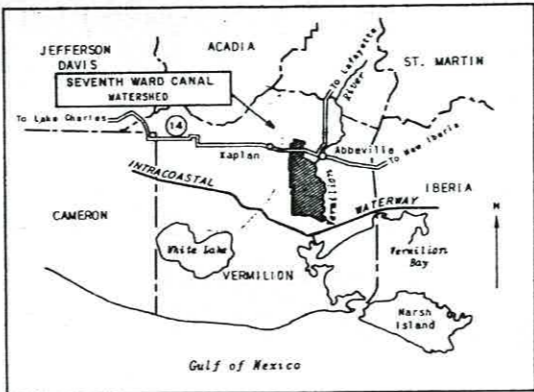
R 3 E

92° 10'

30° 00'



VICINITY MAP



LOCATION MAP

LEGEND

- Hard Surface Road
- Semi-hard Surface Road
- Dirt Road
- Railroad
- Section Line
- Township or Range Line
- Town or Community
- Creek
- River
- Existing Barrier (High Ground, Road, or Highline Canal)
- Adequate Lateral Drainage Ditch
- Adequate Main Drainage Ditch
- Watershed Boundary
- Area Benefited
- Waterflow Control Structure
- \*M-6 Main Drainage Ditch for Flood Prevention and Drainage
- \*L-6B Lateral Drainage Ditch for Flood Prevention and Drainage
- \*Levee To Be Improved
- \*To Be Constructed in Separate Contract

**REDLINE COPY**

INDEX TO DRAWINGS

- Sheet No.
1. Vicinity Map
  2. General Plan - Structure No. 1
  3. General Plan - Structure No. 2
  4. Profile and Typical Sections - Structure No. 2
  5. Land Rights Map - Structure No. 2
  6. General Plan - Structure No. 3
  7. General Plan - Structure No. 4
  8. Detail Plan and Section Structure No. 1
  9. Detail Plan and Section Structure No. 2
  10. Detail Plan and Section Structure No. 3
  11. Detail Plan and Section Structure No. 4
  12. Detail Steel Placement - Structure No. 1
  13. Detail Steel Placement - Structure No. 2
  14. Detail Steel Placement - Structure No. 3
  15. Detail Steel Placement - Structure No. 4
  16. Walkway Details
  17. Gate Details
  18. Steel Schedules
  19. Schedules of Quantities
  20. Geologic Investigation - Structure No. 1
  21. Geologic Investigation - Structure No. 2
  22. Geologic Investigation - Structure No. 3
  23. Geologic Investigation - Structure No. 4

"AS-BUILT" PLANS

*Nathan J. Schiller Jr.*  
 Nathan J. Schiller Jr.  
 GOVERNMENT REPRESENTATIVE  
 October 24, 1967  
 Checked By: *J. S. 11/14/67*  
 APPROVED BY: *R. Y. Stewart Jr.*  
*Atty Gen. Eng. 11/14/67*

**SEVENTH WARD CANAL  
 WATERSHED PROJECT**  
 WATER CONTROL STRUCTURES NO. 1, 2, 3 & 4  
 BUILT UNDER THE WATERSHED PROTECTION  
 AND FLOOD PREVENTION ACT  
 BY  
 IBERIA-VERMILION SOIL CONSERVATION DISTRICT  
 SEVENTH WARD CANAL GRAVITY DRAINAGE DISTRICT  
 VERMILION PARISH POLICE JURY  
 WITH THE ASSISTANCE OF  
 SOIL CONSERVATION SERVICE  
 OF THE  
 U. S. DEPARTMENT OF AGRICULTURE  
 1965



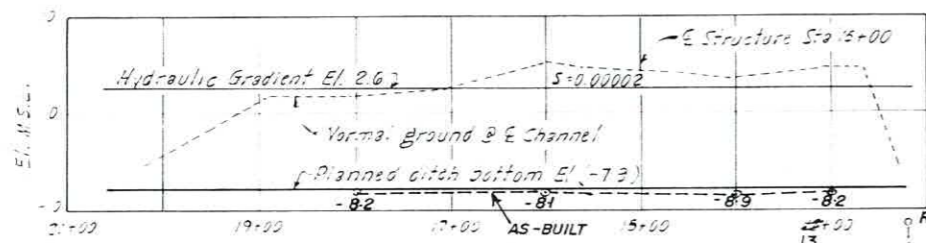
Approximate Scale  
 Approximate Area 32,000 Acres

CONSTRUCTION DRAWINGS APPROVED  
*Howard Matson* July 13, 1965  
 HEAD, ENGINEERING & WATERSHED PLANNING UNIT, DATE  
*R. Y. Stewart Jr.* July 13, 1965  
 SOIL CONSERVATION ENGINEER, DATE  
 ALEXANDRIA, LOUISIANA

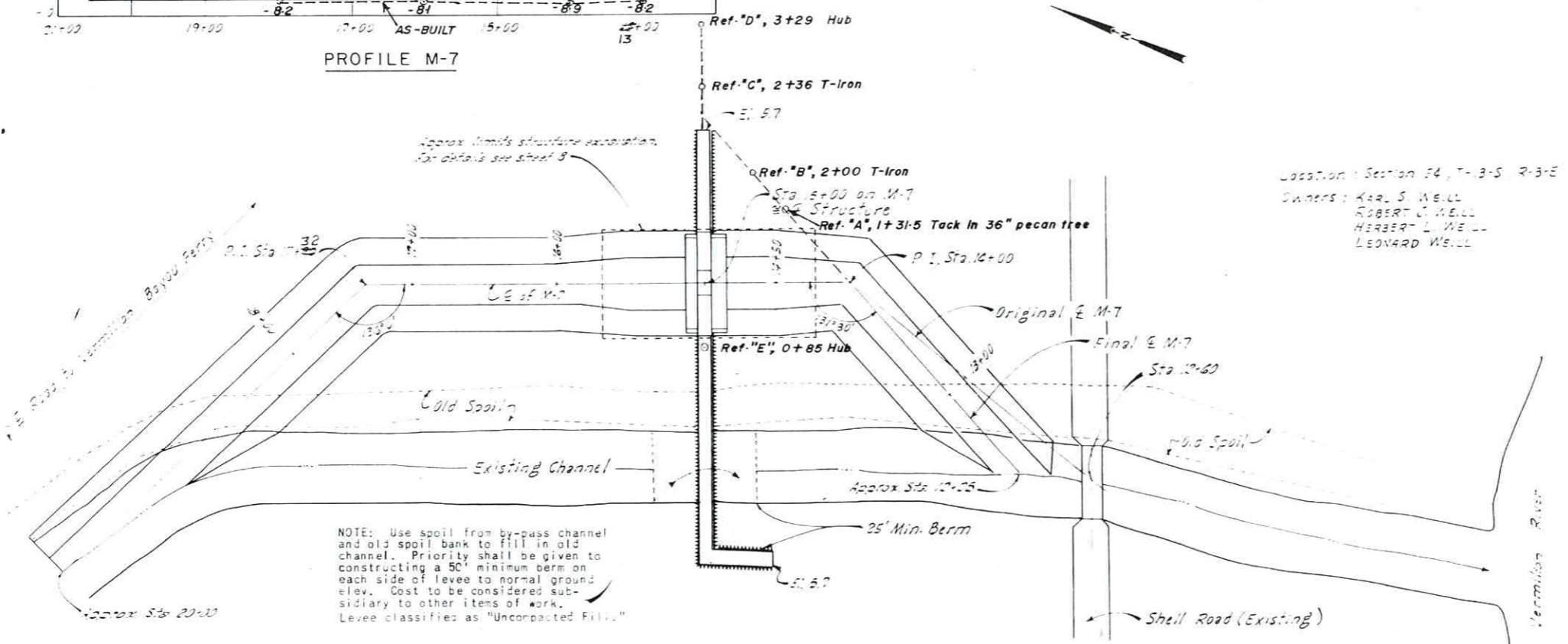
Sheet No.	Drawing No.
4 of 23	4-E-19,617

Base made from 4-R-16,822



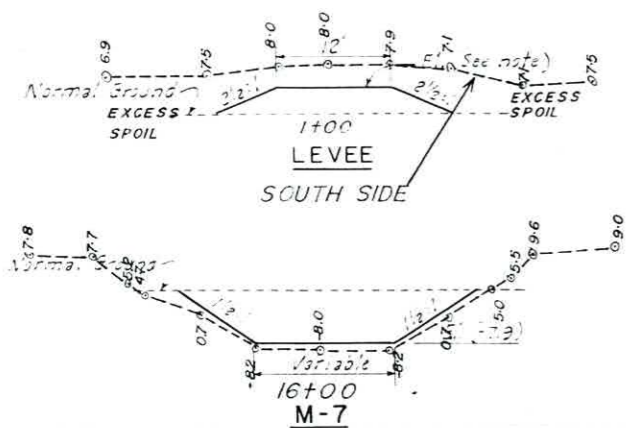


PROFILE M-7



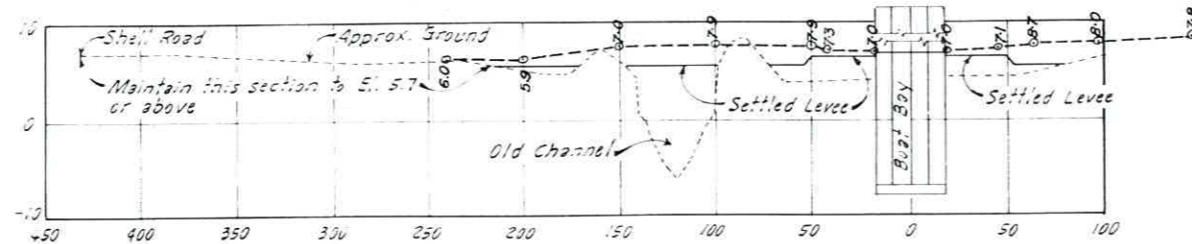
PLAN

NOTE: Red dotted lines indicate "AS-BUILT" sections



TYPICAL SECTION

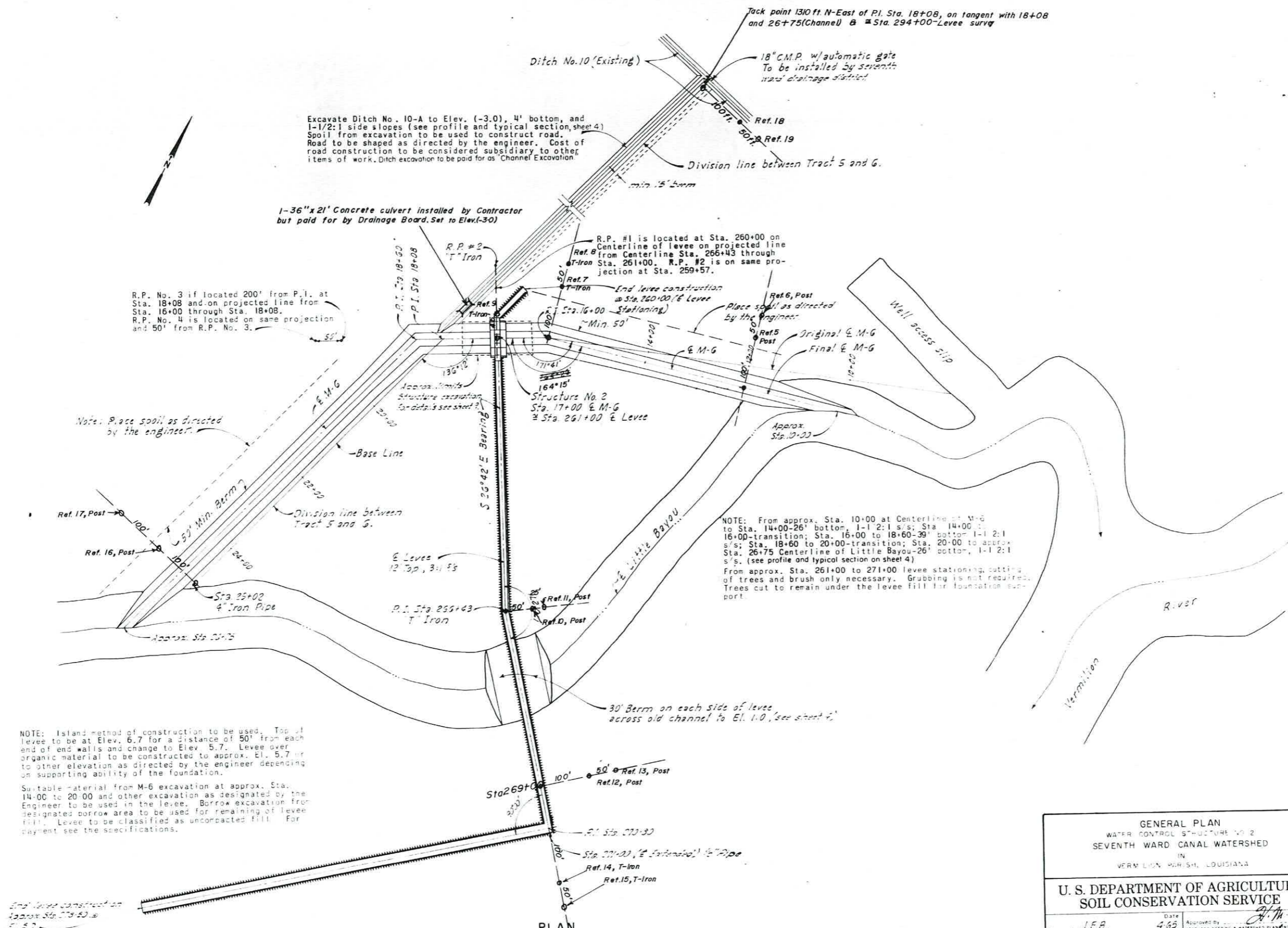
From approx. Sta. 12+25 Centerline of existing channel to Sta. 14+00 28' bottom 1-1/2:1 s/s; Sta. 14+00 to 14+50 transition; Sta. 14+50 to 15+50 35' bottom 1-1/2:1 s/s; Sta. 15+50 to 16+00 transition; Sta. 16+00 to approx. Sta. 20+00 Centerline of existing channel 20' bottom and 1-1/2:1 s/s.



PROFILE ON Q OF LEVEE

NOTE: Island method of construction to be used on levees. Top of levee to be at Elev. 6.7 for a distance of 50' from each end of endwalls and change to Elev. 5.7. Settled height shown, 25% for dozer placement or 33% for dragline placement to be added for settlement. Cost to be considered subsidiary to other items of work.

GENERAL PLAN WATER CONTROL STRUCTURE NO. 1 SEVENTH WARD CANAL WATERSHED VERMILION PARISH, LOUISIANA			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed	J.F.A.	Date	4-65
Drawn	N.B.R.	Date	4-65
Traced	C.V.C.	Date	5-65
Checked	J.F.A.	Date	5-65
Approved by	[Signature]		
Sheet	No 2	Drawing No	4-E-19,617



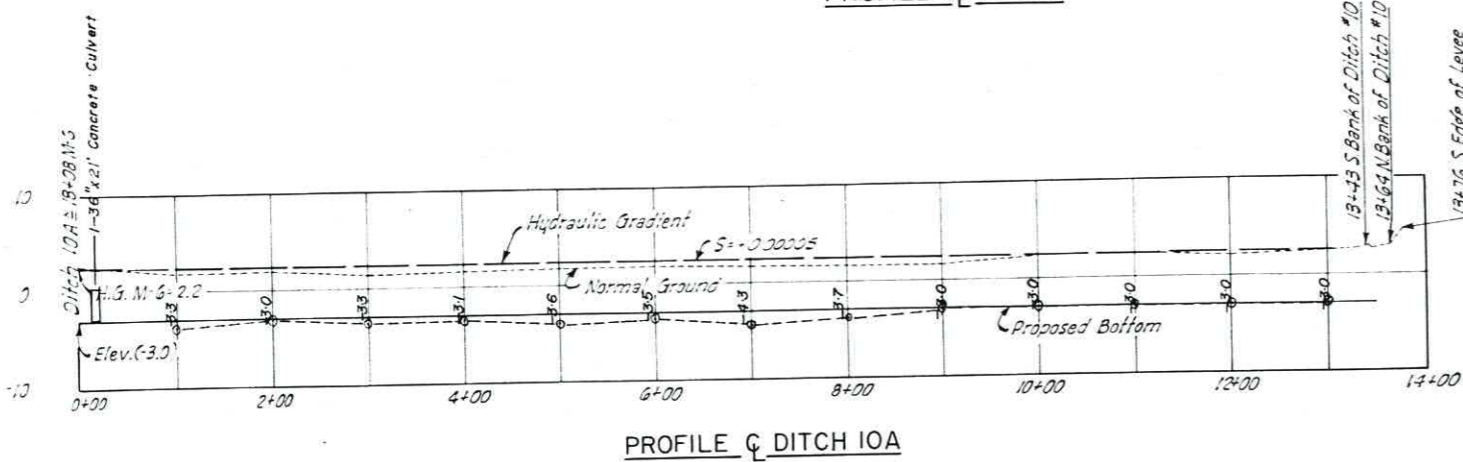
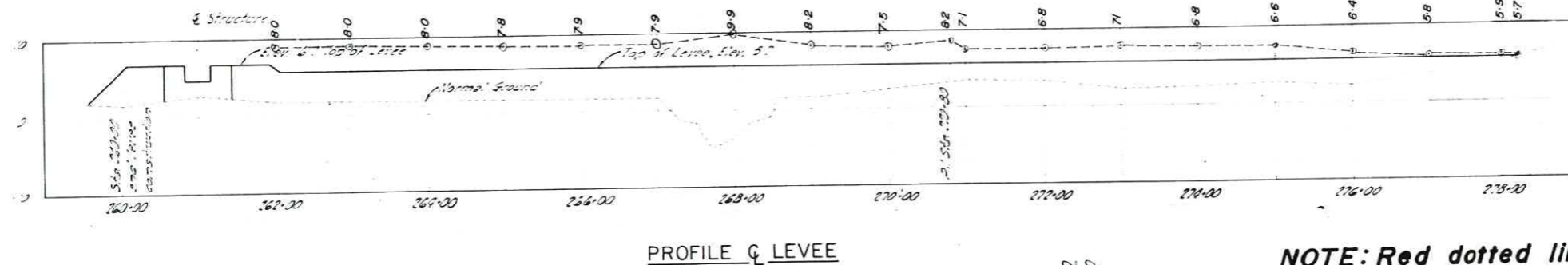
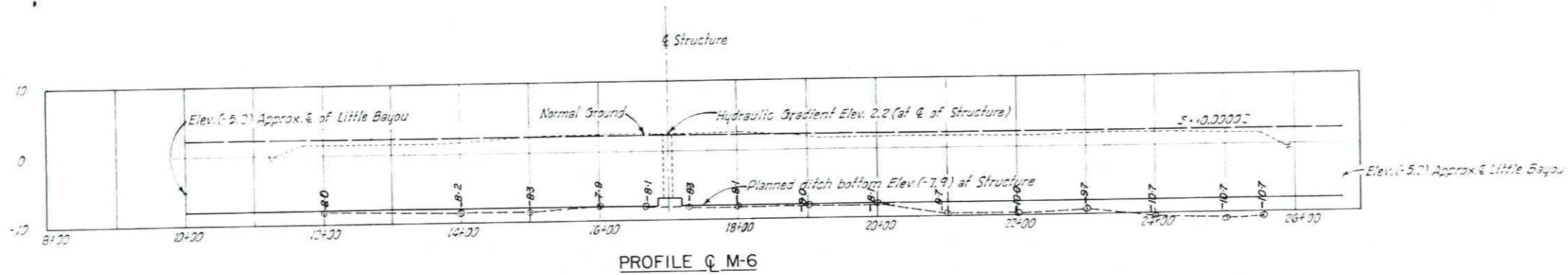
PLAN

NOTE: From approx. Sta. 10+00 at Centerline of M-6 to Sta. 14+00-26' bottom, 1-1 2:1 s/s; Sta. 14+00 to 16+00-transition; Sta. 16+00 to 18+60-39' bottom 1-1 2:1 s/s; Sta. 18+60 to 20+00-transition; Sta. 20+00 to approx. Sta. 26+75 Centerline of Little Bayou-26' bottom, 1-1 2:1 s/s. (see profile and typical section on sheet 4)

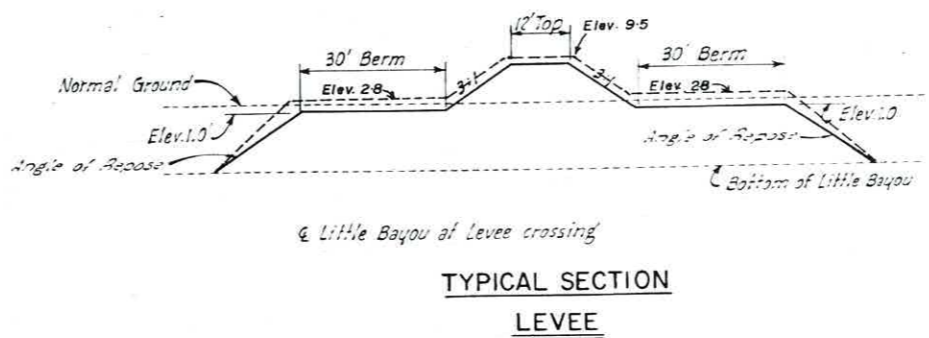
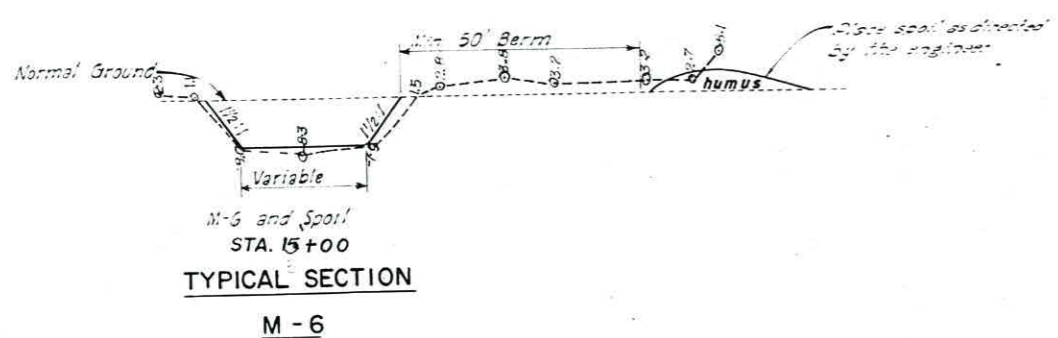
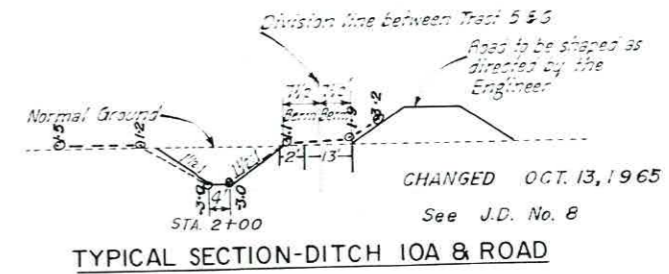
From approx. Sta. 261+00 to 271+00 levee stationing, cutting of trees and brush only necessary. Grubbing is not required. Trees cut to remain under the levee fill for foundation support.

GENERAL PLAN			
WATER CONTROL STRUCTURE NO. 2			
SEVENTH WARD CANAL WATERSHED			
IN			
VERMILION PARISH, LOUISIANA			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed	J.F.B.	Date	4-65
Drawn	N.B.R.	Date	4-65
Traced	C.K.C.	Date	5-65
Checked	J.P.C.	Date	5-65
Approved By	<i>[Signature]</i>		
Checked	<i>[Signature]</i>		
Sheet	No. 3	Drawing No.	4-E-19,617





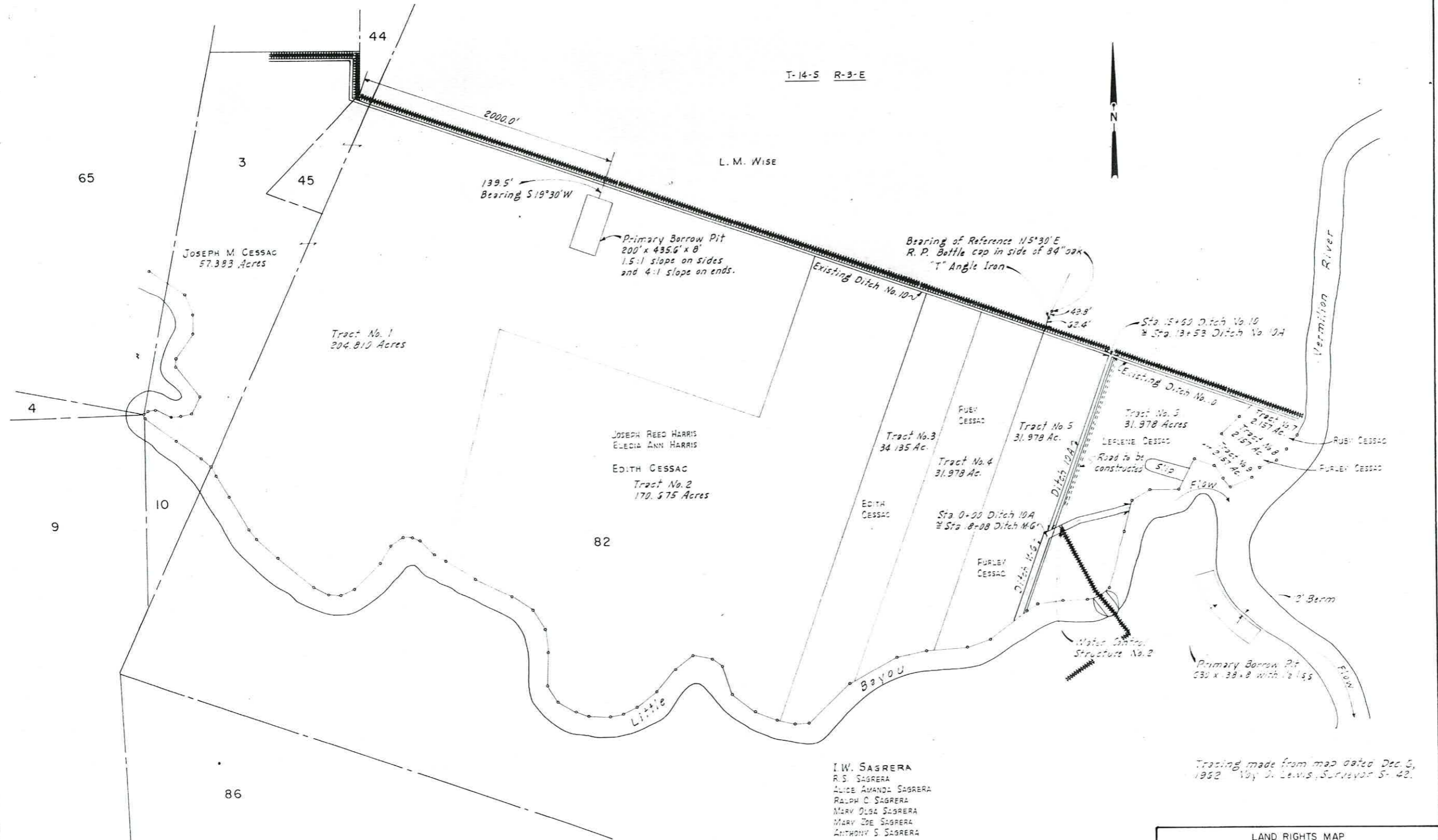
**NOTE: Red dotted lines indicate "AS-BUILT" sections**



PROFILES AND TYPICAL SECTIONS WATER CONTROL STRUCTURE NO. 2 SEVENTH WARD CANAL WATERSHED IN VERMILION PARISH, LOUISIANA			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designer J.F.R.	Date 11-64	Approved by 	
Drawn J.F.R. & N.B.A.	11-64	STATE OF LOUISIANA ALEXANDER & LOUISIANA ENGINEERS & ARCHITECTS 233 PINE STREET NEW ORLEANS, LA.	
Traced A.H.J.	5-65	Sheet No. 4	Drawing No. 4-E-19,617
Checked J.R.E. & R.S.M.S.	5-65	Sheet of 23	



T-14-S R-3-E



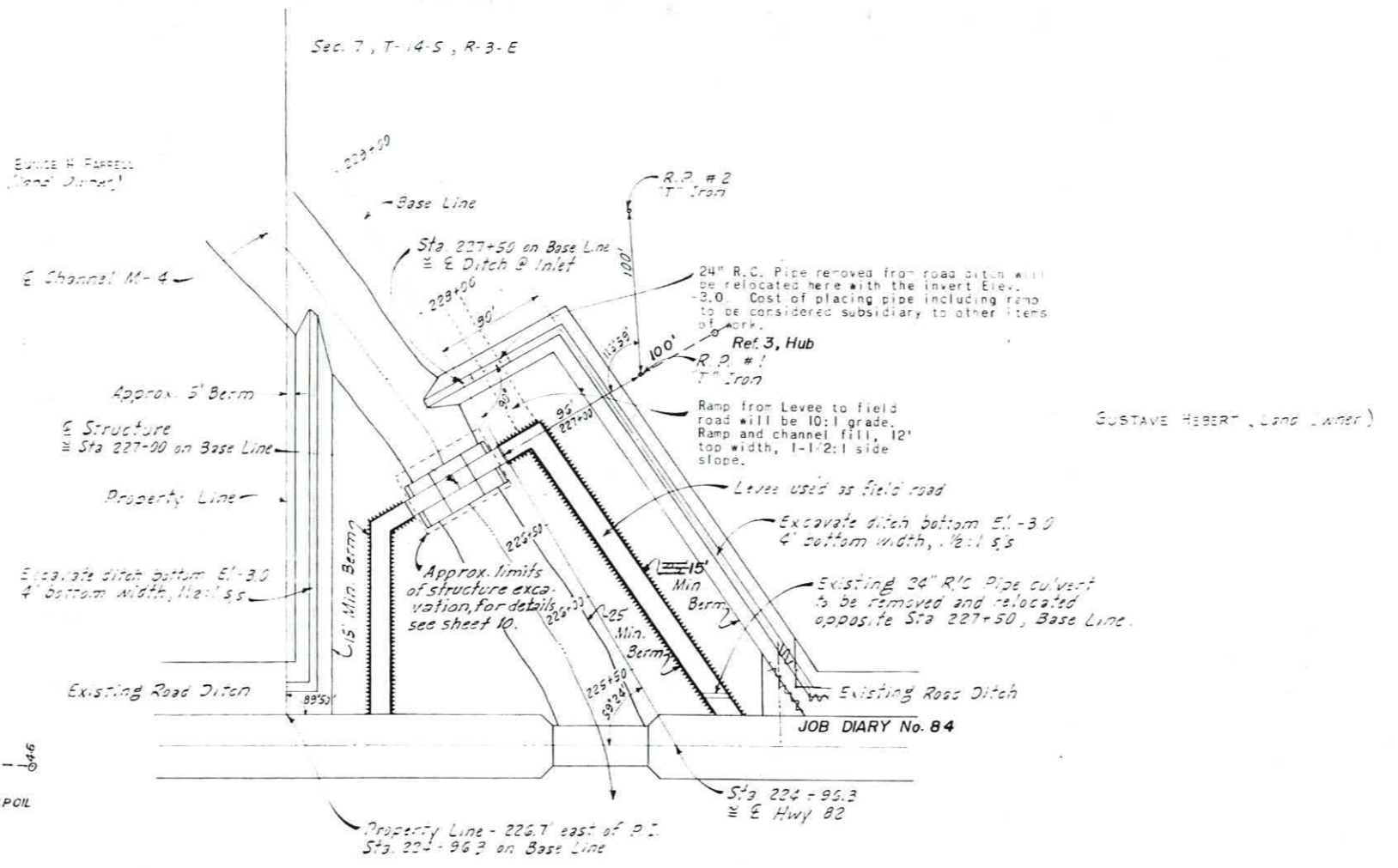
JOSEPH REED HARRIS  
ELEDIA ANN HARRIS  
EDITH CESSAC  
Tract No. 2  
170.575 Acres

I.W. SAGRERA  
R.S. SAGRERA  
ALICE AMANDA SAGRERA  
RALPH C. SAGRERA  
MARY OLGA SAGRERA  
MARY JOE SAGRERA  
ANTHONY S. SAGRERA  
LYDIA S. SAGRERA

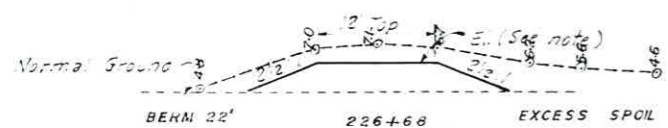
Tracing made from map dated Dec. 3,  
1952 by J. Lewis, Surveyor S-42.

LAND RIGHTS MAP			
WATER CONTROL STRUCTURE NO. 2			
SEVENTH WARD CANAL WATERSHED			
IN			
VERMILION PARISH, LOUISIANA			
U. S. DEPARTMENT OF AGRICULTURE			
SOIL CONSERVATION SERVICE			
Designed	J.F.A.	Date	4-65
Drawn	N.B.B.	Date	4-65
Traced	C.V.C.	Date	5-65
Checked	J.R.E., J.F.A., E.W.C.S. S-55	Sheet	No 5 of 23
		Approved By	<i>J. M. [Signature]</i>
		Head Eng. & Surveyor	<i>[Signature]</i>
		State Conservation Engineer	<i>[Signature]</i>
		State Conservation Engineer	ALABAMA, LOUISIANA
		Sheet	No 5 of 23
		Drawing No.	4-E-19,617



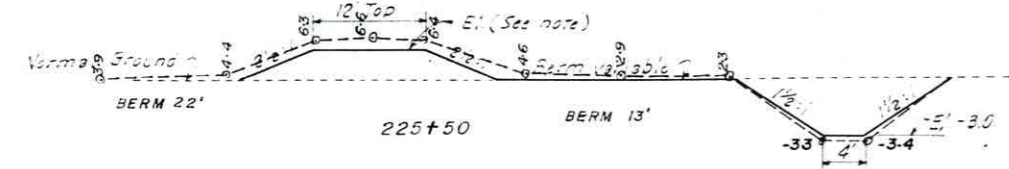


NOTE: It may be necessary to remove the entrance points of the two ditches temporarily to allow for the better bars. Any channel excavation resulting from moving the entrance point during construction to be backfilled. Cost of excavation and backfill to be subsidiary to other items of work.



TYPICAL SECTION  
(LEVEE)  
— WEST SIDE —

**NOTE: Red dotted lines indicate "AS-BUILT" sections**



TYPICAL SECTION  
— EAST SIDE —

PLAN

NOTE: Island method of construction to be used. Top of levee to be at Elev. 6.7 for a distance of 50' from each end of structure endwalls and change to Elev. 5.7. Settled height shown. 25% for dozer construction or 33% for dragline construction to be added to fill height for settlement. Cost to be considered subsidiary to other items of work. Levee classified as "uncompacted fill."  
Excavate M-4 to Elev. -4.9 with 22' bottom and 1-1 2:1 slopes at base line Sta. 227+00 on uniform slope to channel grade at Sta. 225+50. To be paid as "Channel Excavation."

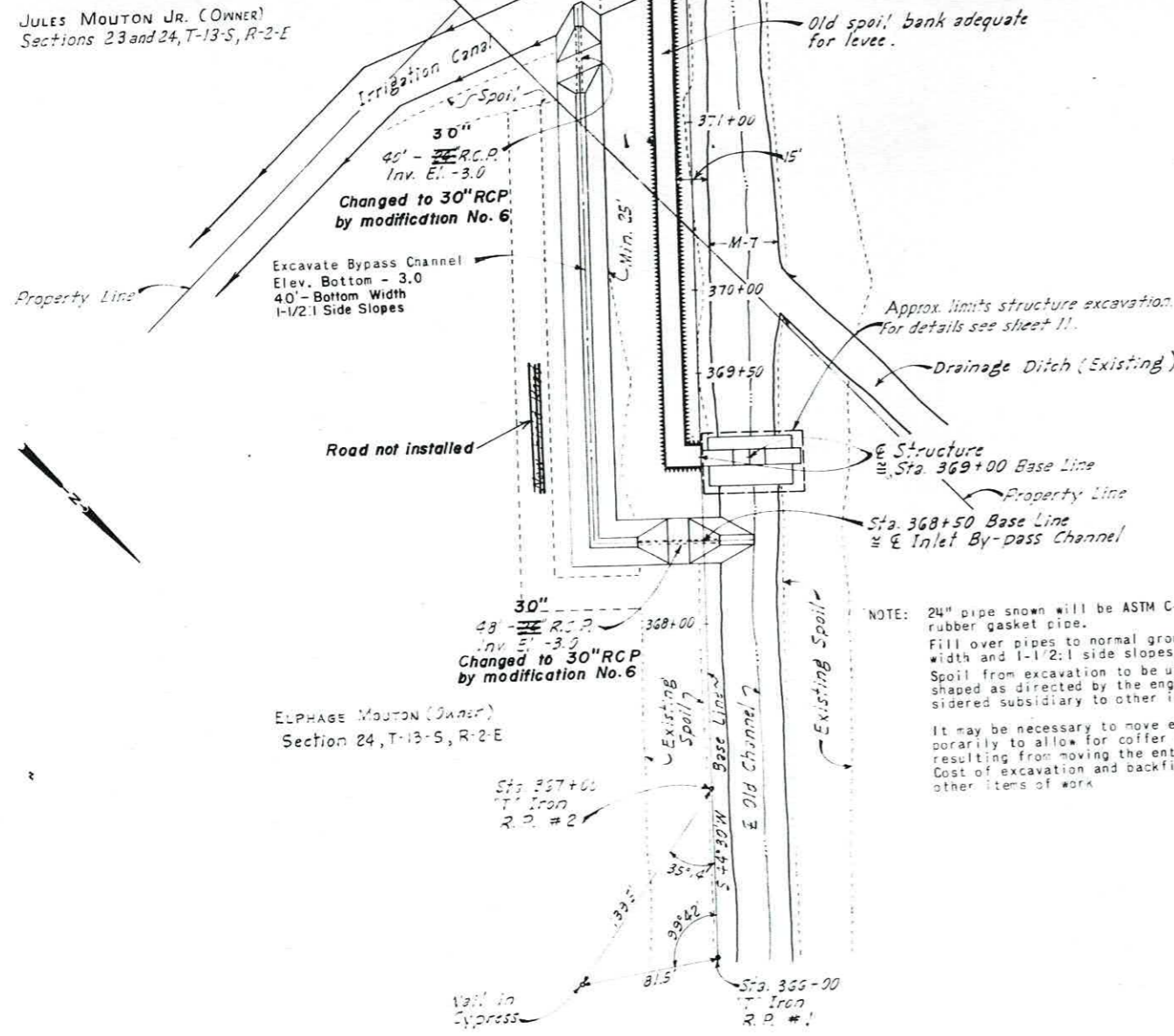
<b>GENERAL PLAN</b> WATER CONTROL STRUCTURE NO. 3 SEVENTH WARD CANAL WATERSHED IN VERMILION PARISH, LOUISIANA			
<b>U. S. DEPARTMENT OF AGRICULTURE</b> <b>SOIL CONSERVATION SERVICE</b>			
Designed	J.F.R.	Date	4-65
Drawn	N.B.R.	Approved by	<i>[Signature]</i>
Traced	G.V.C.	Checked	J.R.E.
Checked	J.R.E.	Sheet	6
		Drawing No.	4-E-19,617



JULES MOUTON JR. (OWNER)  
Sections 23 and 24, T-13-S, R-2-E

Fill irrigation canal to Elev. 6.9 with 12' top width and 1-1/2:1 side slopes. Construct berm to natural ground as spoil permits from levee to bypass ditch. Cost to be considered subsidiary to other items of work.

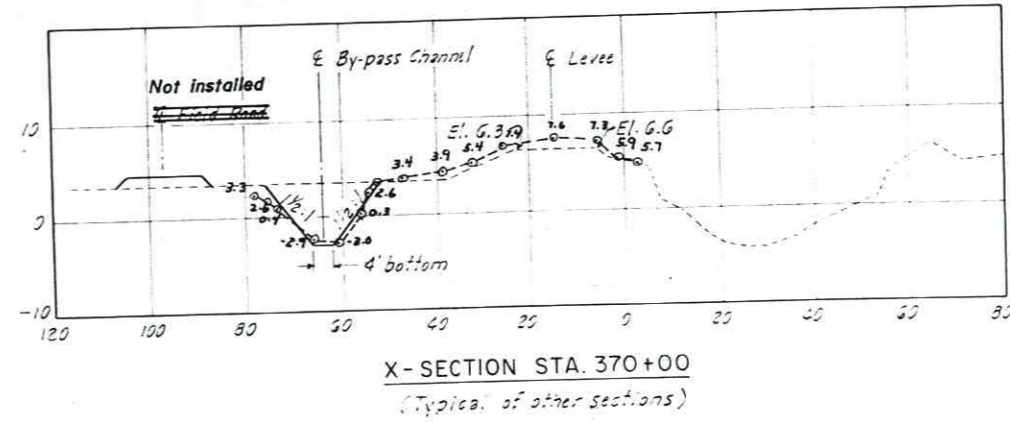
1-24" x 52' C.M.P. with Floodgate placed toward M-7 side of channel, placed under dam upon demand by Landowner, paid for by Drainage Board. Inv. Elev. = -3.2



ELPHAGE MOUTON (Owner)  
Section 24, T-13-S, R-2-E

NOTE: 24" pipe shown will be ASTM C-76-60T standard reinforced rubber gasket pipe. Fill over pipes to normal ground Elev. with a 12' top width and 1-1/2:1 side slopes. Spoil from excavation to be used for road. Road to be shaped as directed by the engineer. Cost to be considered subsidiary to other items of work. It may be necessary to move entrance at Sta. 368+50 temporarily to allow for coffer dam. Any channel excavation resulting from moving the entrance point to be back filled. Cost of excavation and backfill considered subsidiary to other items of work.

PLAN

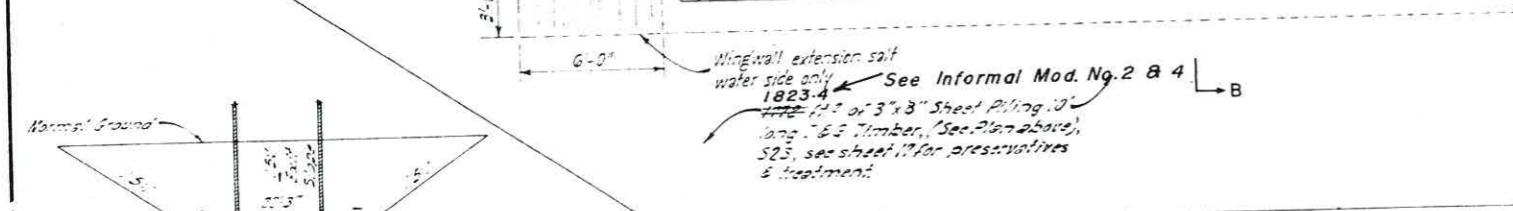
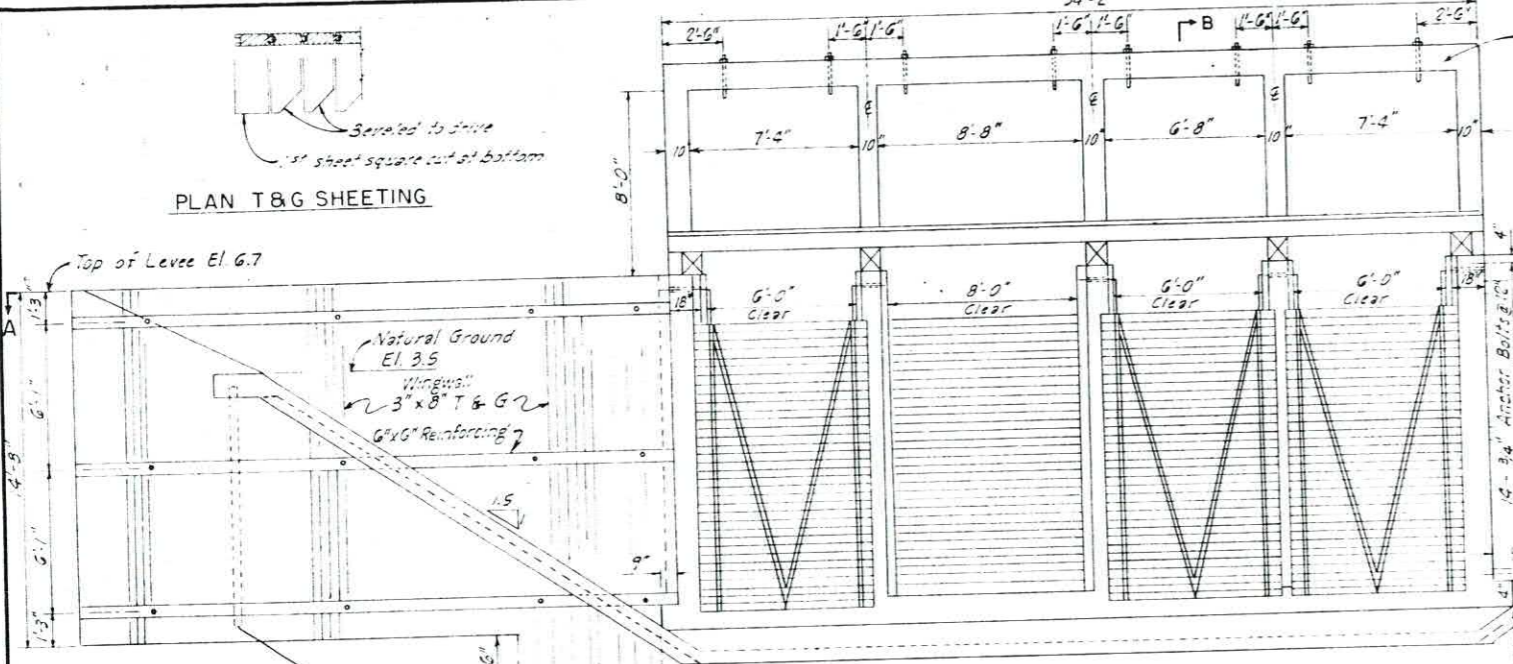


NOTE: Red dotted lines indicate "AS-BUILT" sections.

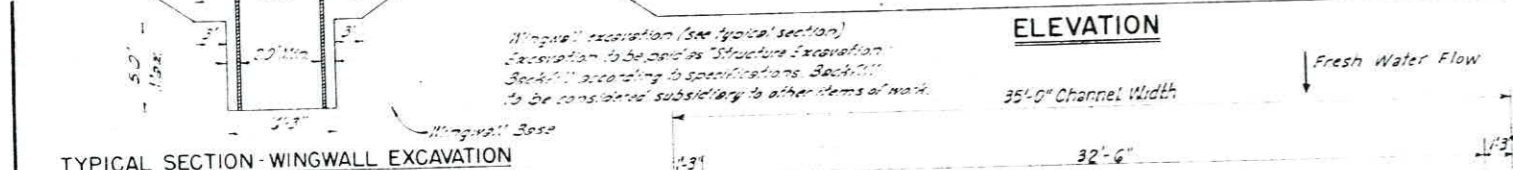
GENERAL PLAN WATER CONTROL STRUCTURE NO. 4 SEVENTH WARD CANAL WATERSHED IN VERMILION PARISH, LOUISIANA			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed	J.F.R.	Date	4-65
Drawn	N.B.R.	Date	4-65
Traced	C.V.C.	Date	5-65
Checked	J.R.E., J.F.R., H.O.S.	Date	6-65
Approved by		[Signature]	
Checked by		[Signature]	
Sheet		No. 7	
Drawing No.		4-E-19,617	



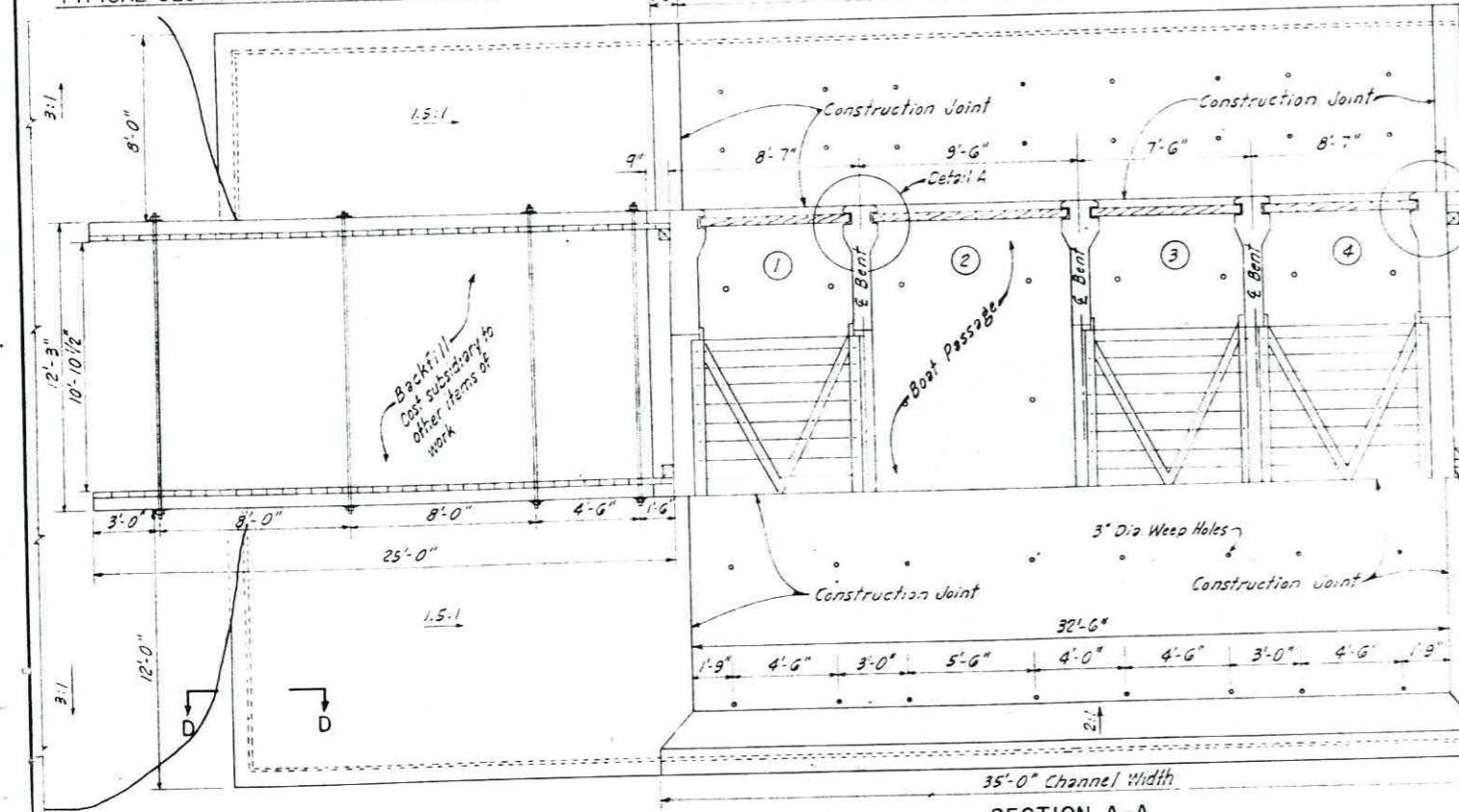
**PLAN T & G SHEETING**



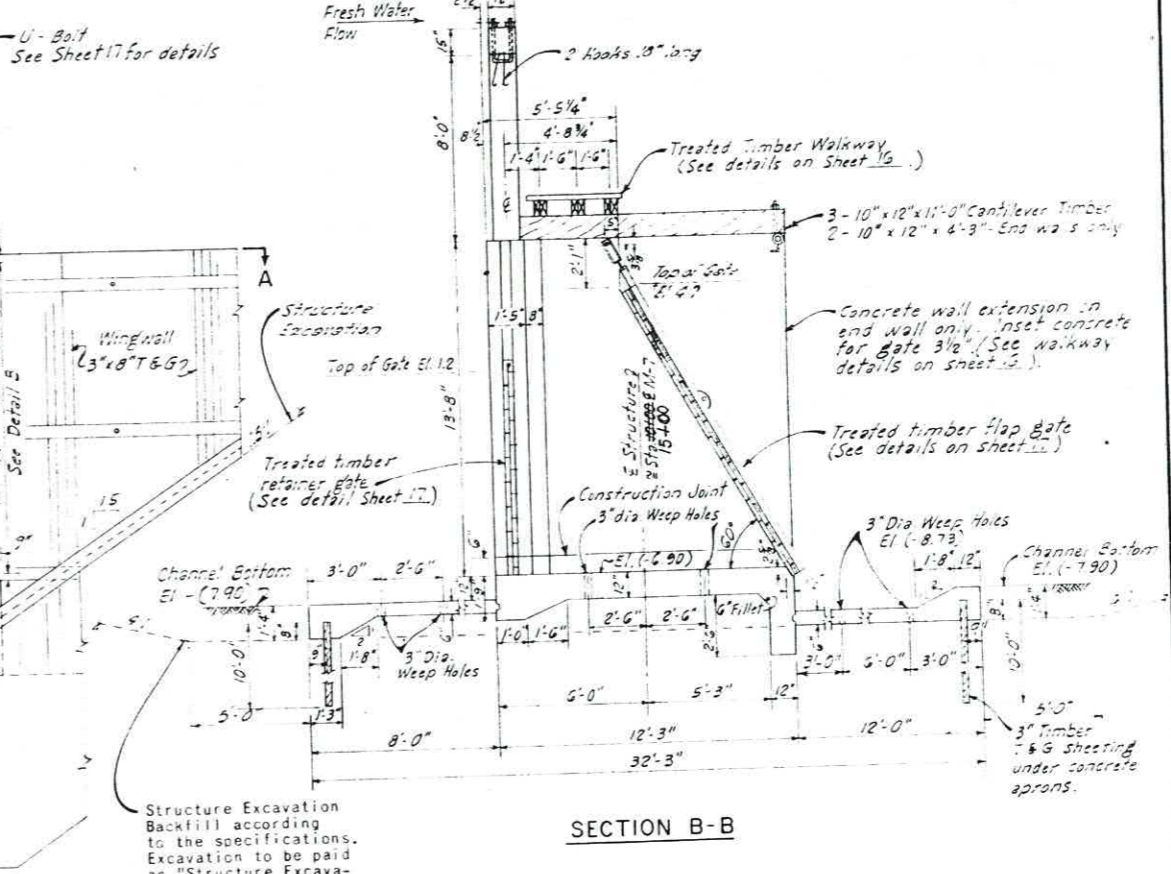
**ELEVATION**



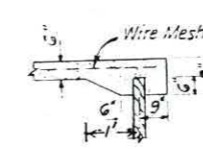
**TYPICAL SECTION - WINGWALL EXCAVATION**



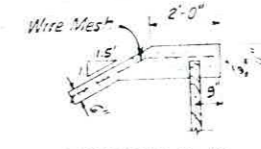
**SECTION A-A**



**SECTION B-B**



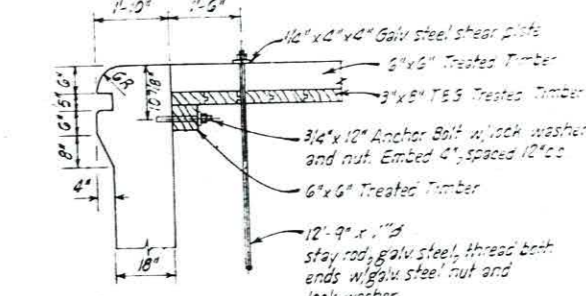
**SECTION C-C**



**SECTION D-D**



**DETAIL A**



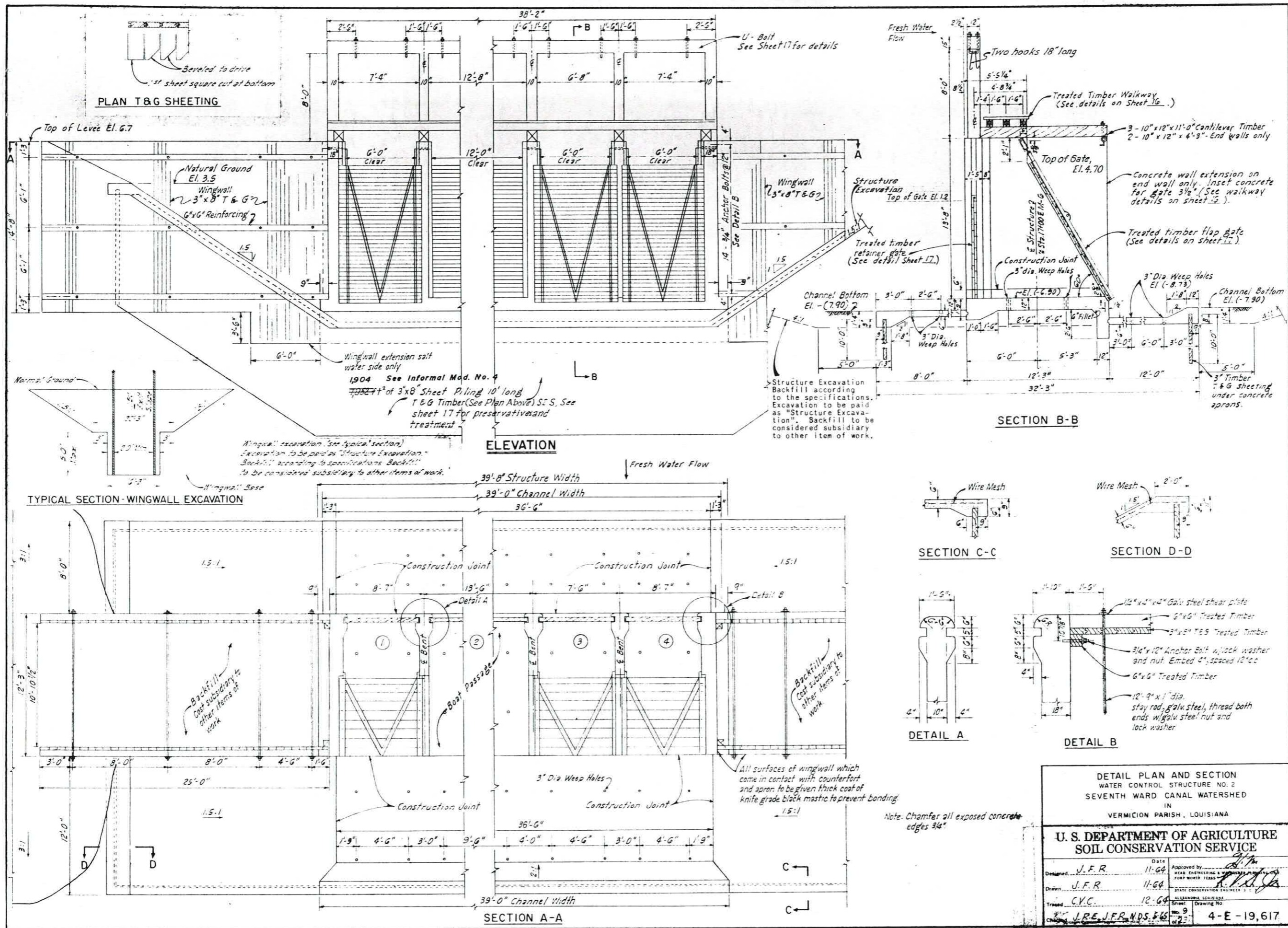
**DETAIL B**

**DETAIL PLAN AND SECTION**  
 WATER CONTROL STRUCTURE NO. 1  
 SEVENTH WARD CANAL WATERSHED  
 IN  
 VERMILION PARISH, LOUISIANA

**U.S. DEPARTMENT OF AGRICULTURE**

J.R.E., J.F.R., N.D.S. 5-65





DETAIL PLAN AND SECTION  
WATER CONTROL STRUCTURE NO. 2  
SEVENTH WARD CANAL WATERSHED  
IN  
VERMILION PARISH, LOUISIANA

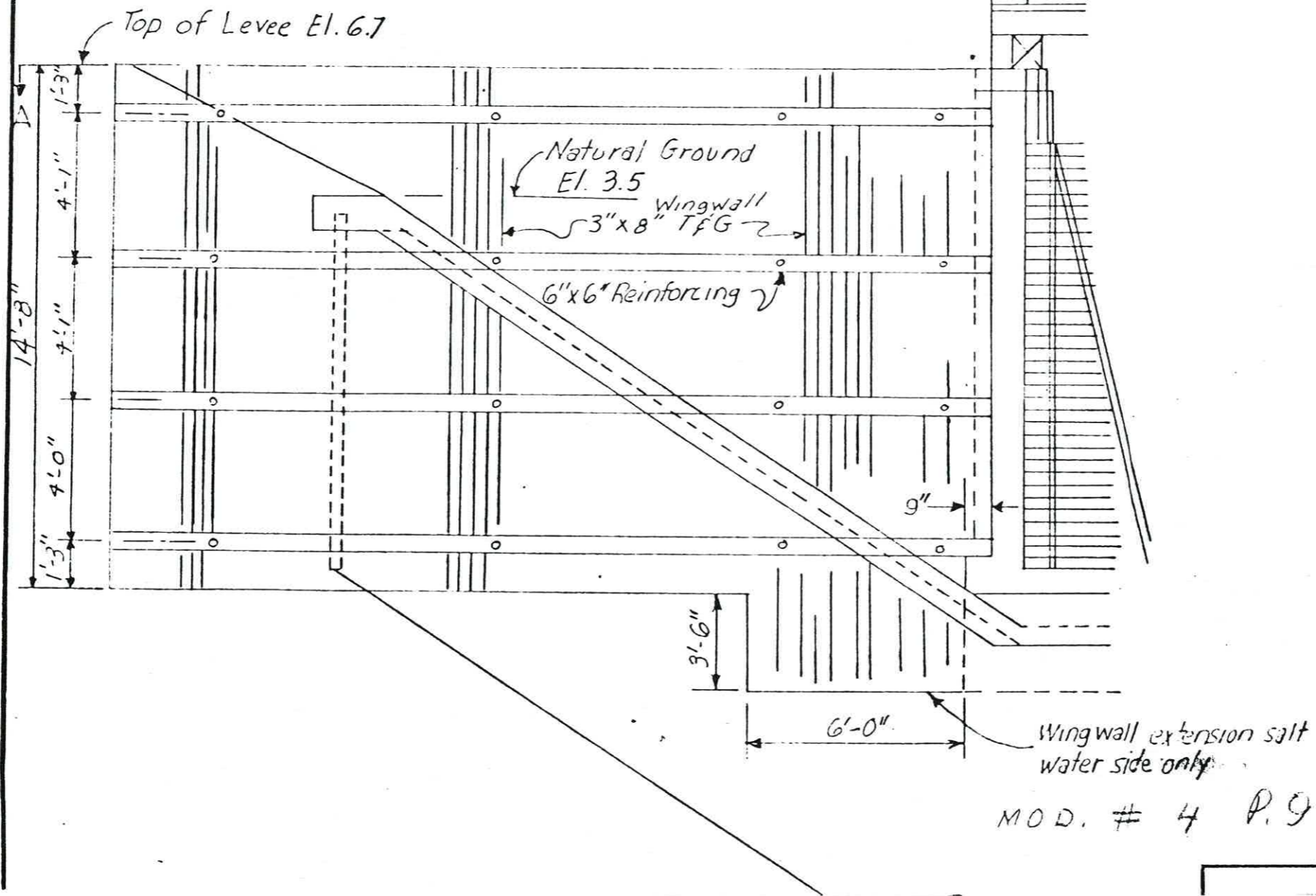
U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Designed	J. F. R.	Date	11-64
Drawn	J. F. R.	Approved by	(Signature)
Traced	C. Y. C.	Checked by	(Signature)
Checked	J. F. R., J. F. R., N. D. S., F. G. S.	Sheet	No. 9 of 23

4-E-19,617



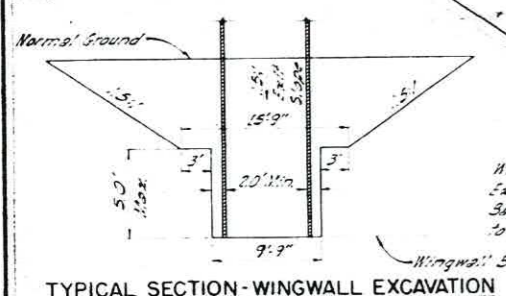
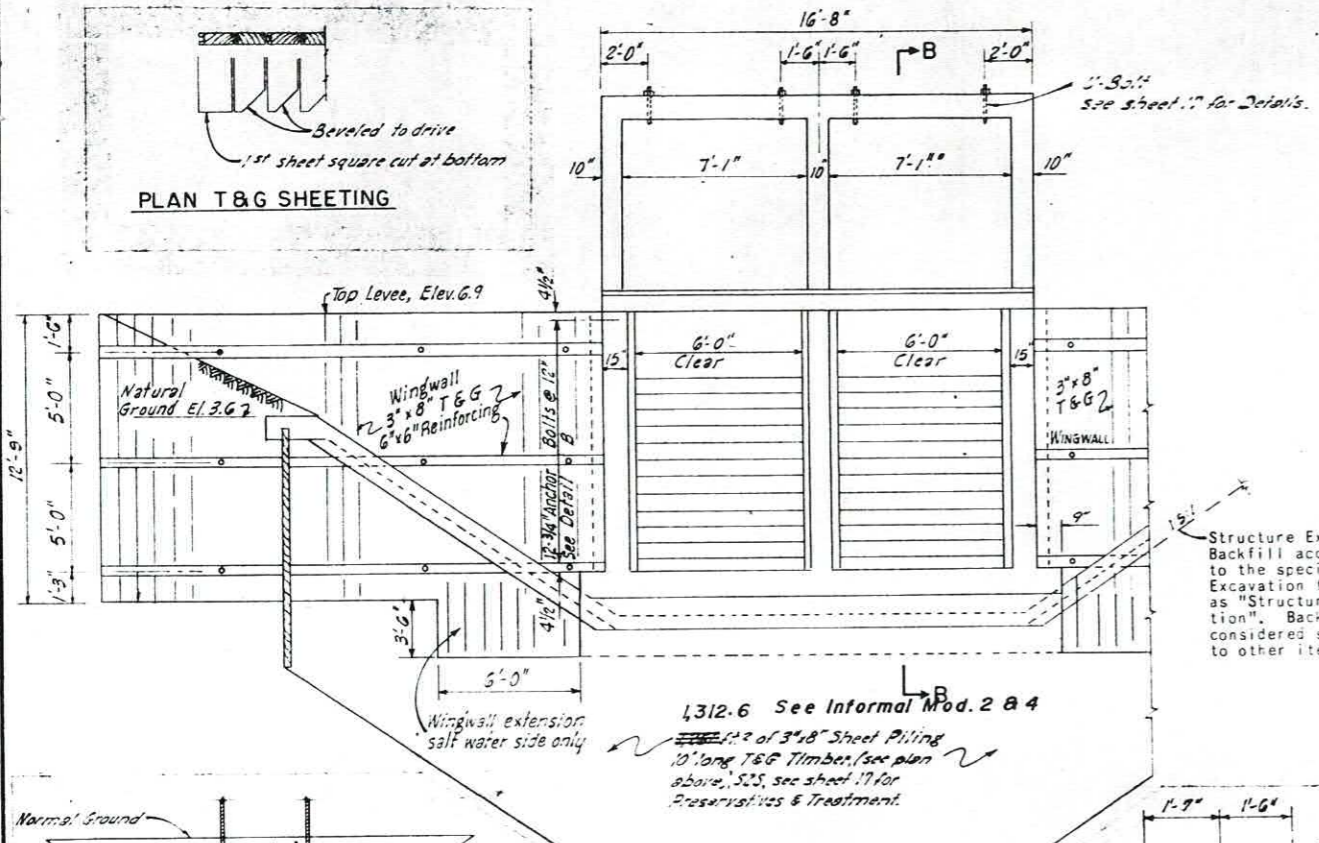
PLAN T&G SHEETING





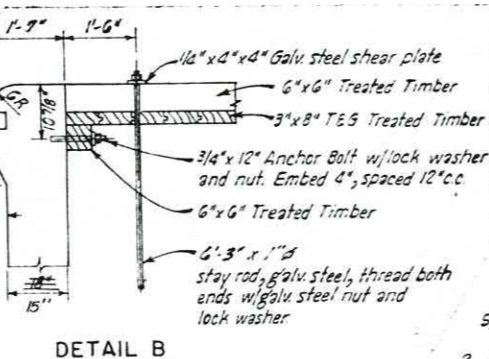


**PLAN T & G SHEETING**

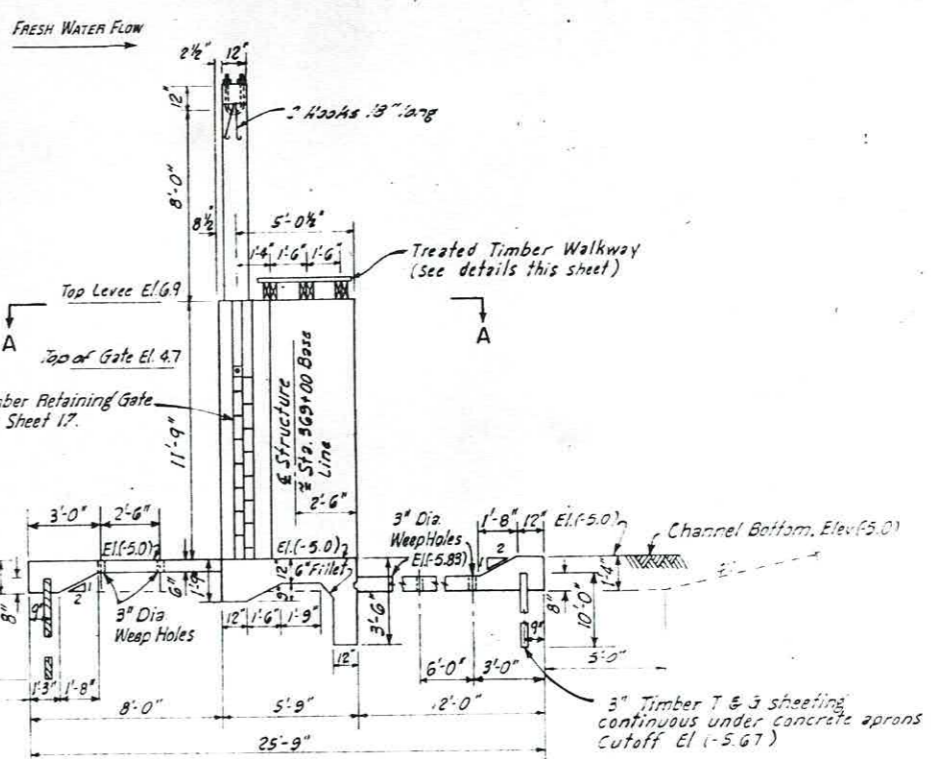


**ELEVATION**

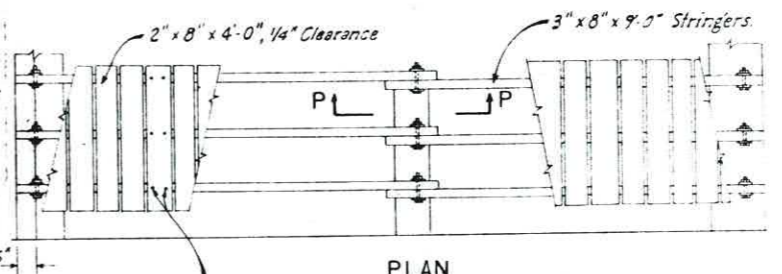
Wingwall excavation (see typical sections)  
Excavation to be paid as "Structure Excavation"  
Backfill according to specifications. Backfill  
to be considered subsidiary to other items of work.



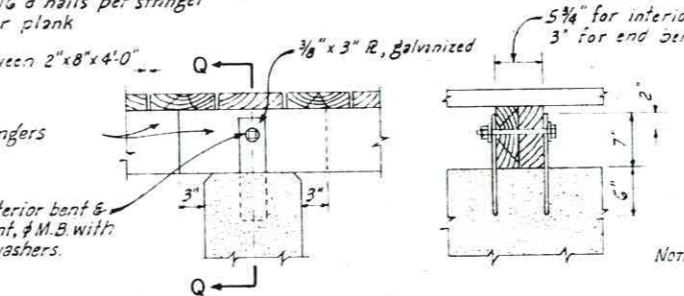
**DETAIL B**



**SECTION B-B**



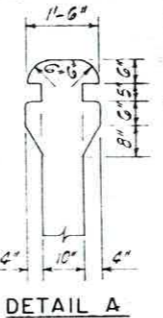
**PLAN**



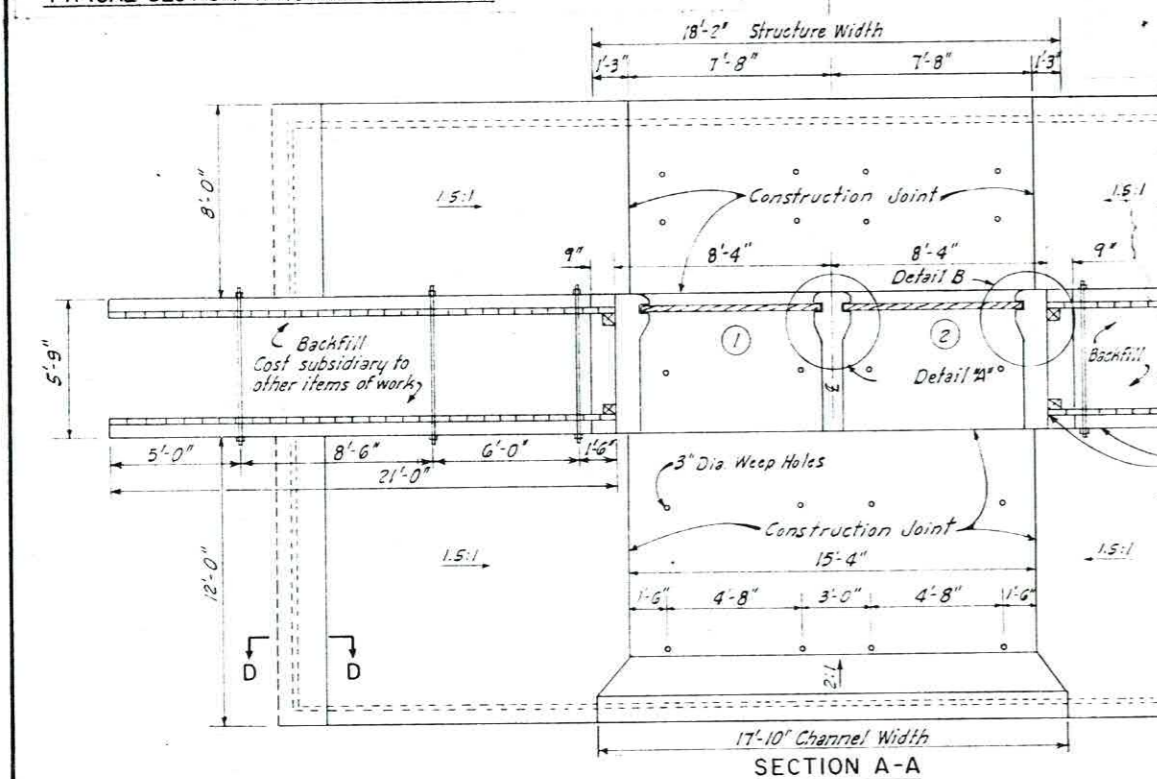
**SECTION P-P**

**SECTION Q-Q**

**WALKWAY DETAILS**



**DETAIL A**



**SECTION A-A**

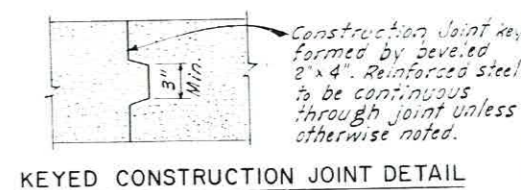
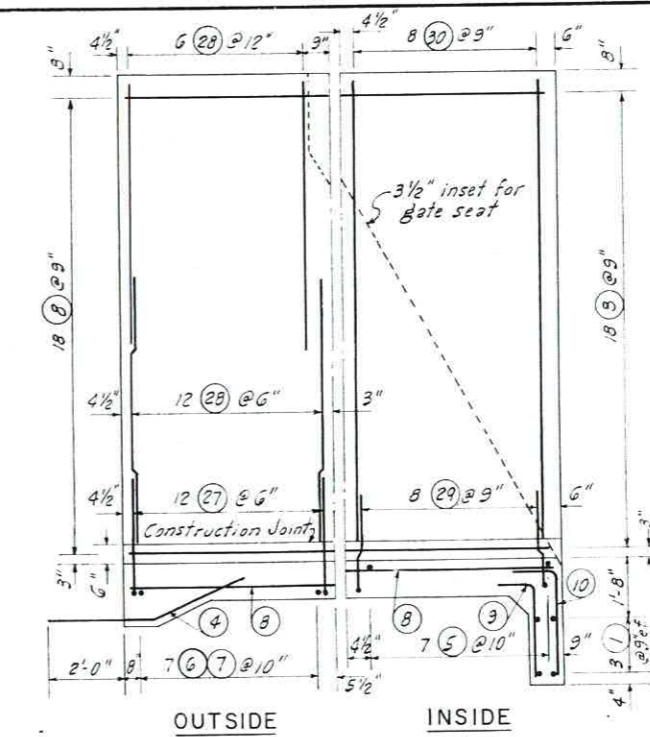
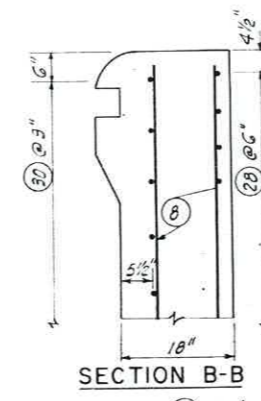
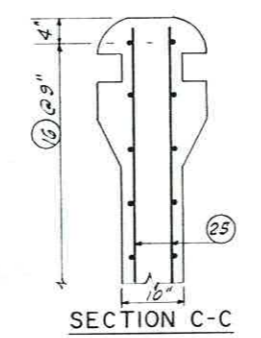
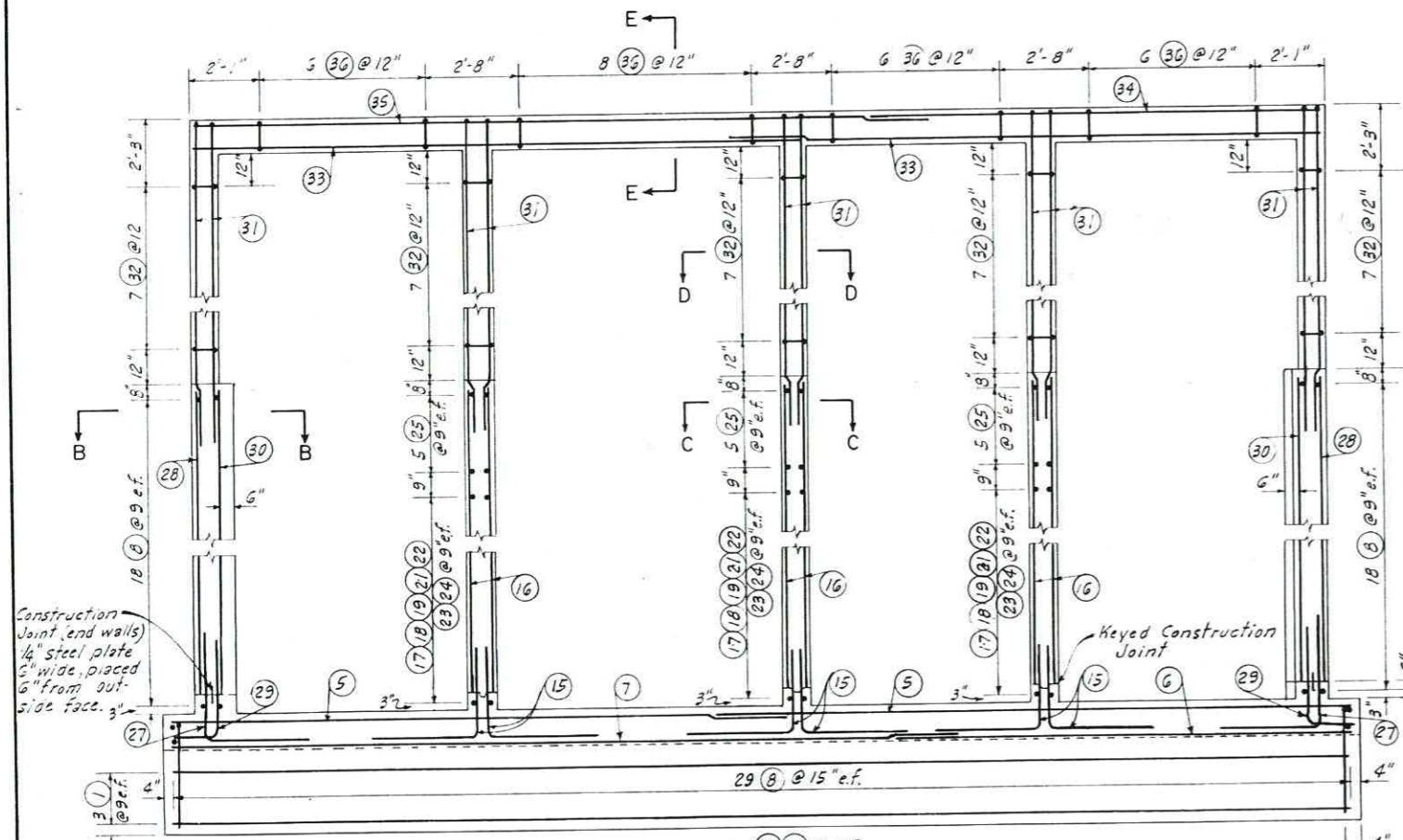
All surfaces of wingwall which come in contact with counterfort and apron to be given a thick coat of knife grade black mastic to prevent bonding.

DETAIL PLAN AND SECTION  
WATER CONTROL STRUCTURE NO 4  
SEVENTH WARD CANAL WATERSHED  
IN  
VERMILION PARISH, LOUISIANA

**U. S. DEPARTMENT OF AGRICULTURE**  
**SOIL CONSERVATION SERVICE**

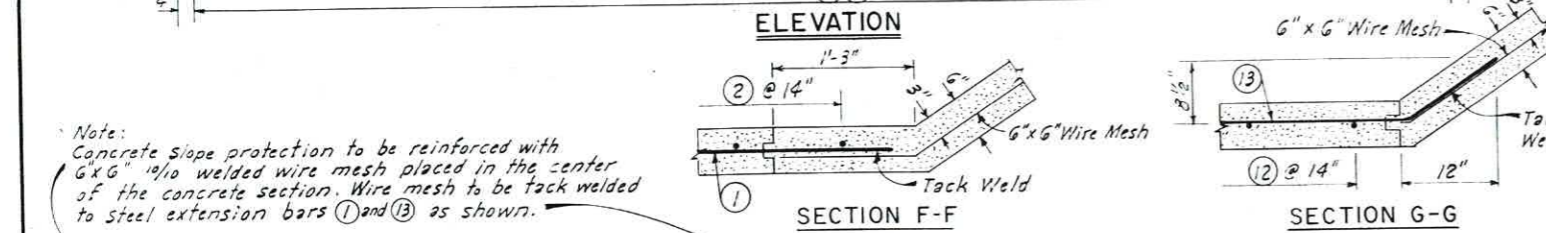
4-E-19,617



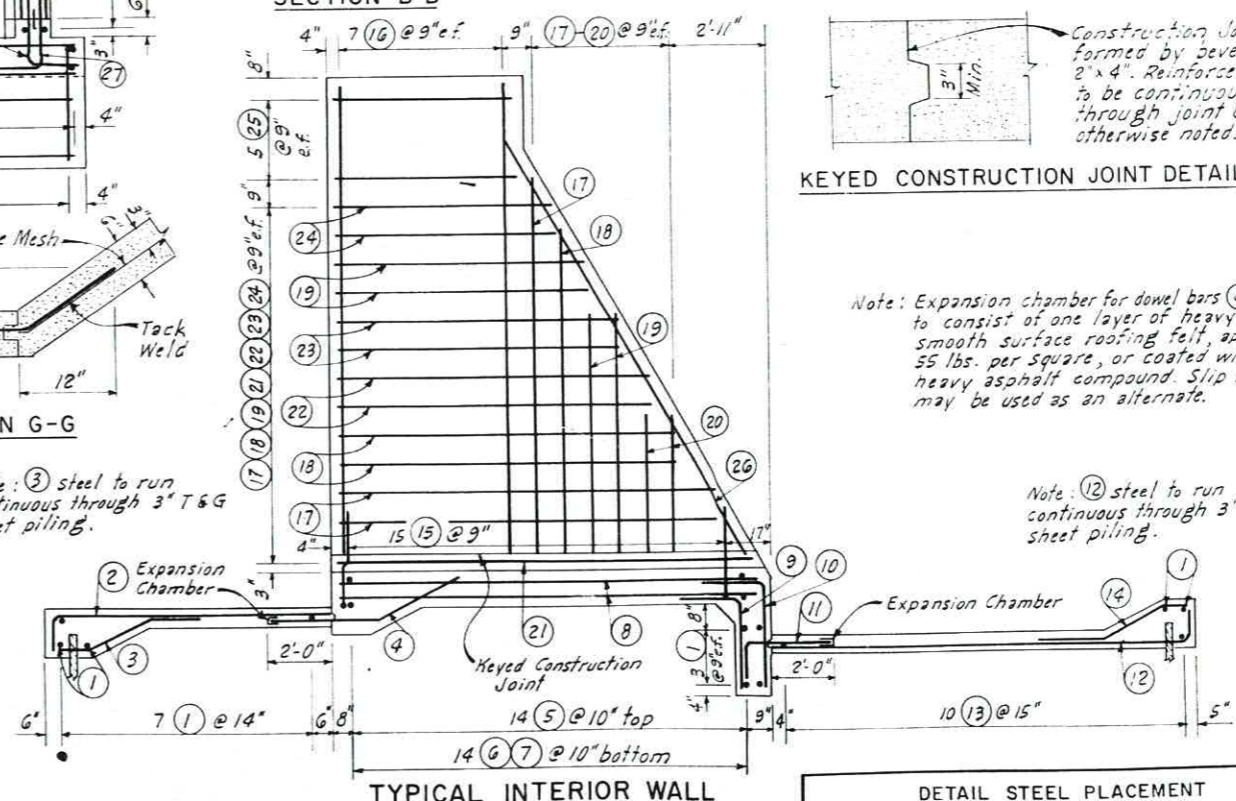


Note: Expansion chamber for dowel bars (4) & (11) to consist of one layer of heavy, smooth surface roofing felt, approx. 55 lbs. per square, or coated with a heavy asphalt compound. Slip dowel may be used as an alternate.

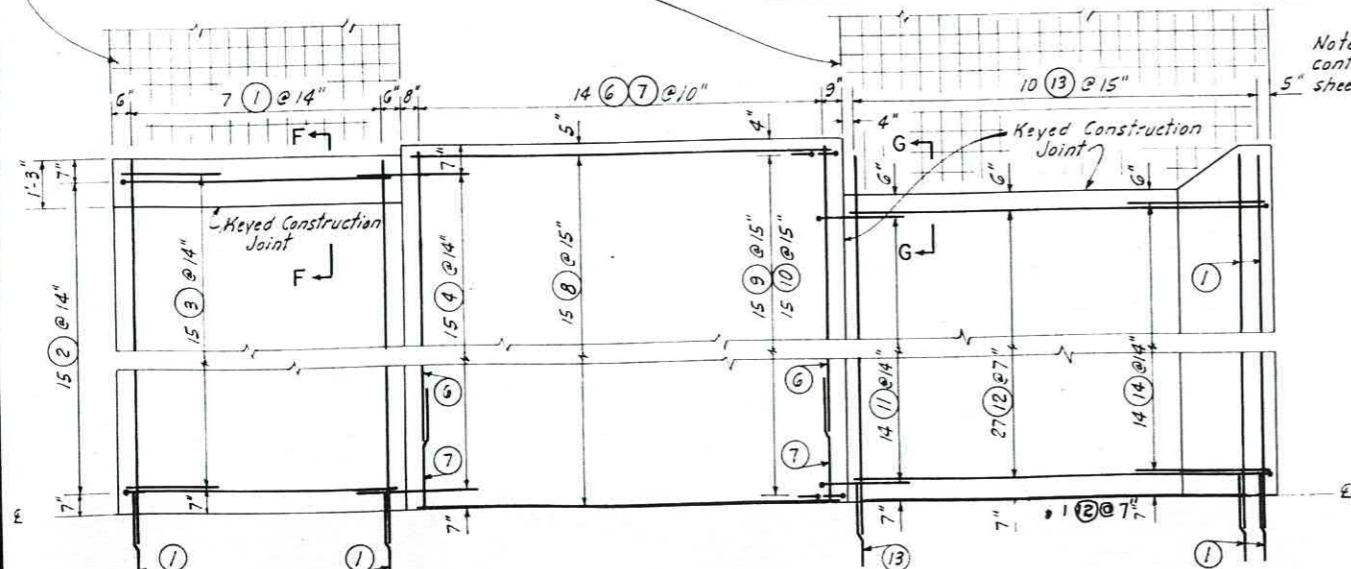
Note: (12) steel to run continuous through 3" T & G sheet piling.



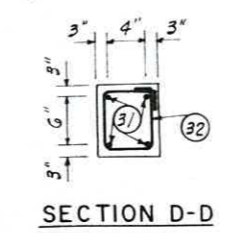
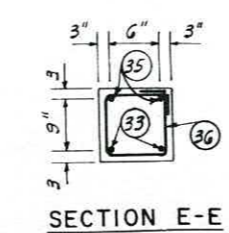
Note: Concrete slope protection to be reinforced with 6" x 6" wire mesh placed in the center of the concrete section. Wire mesh to be tack welded to steel extension bars (1) and (13) as shown.



Note: (3) steel to run continuous through 3" T & G 5" sheet piling.



Note: Steel to be placed 2" from inside and outside face except as shown.

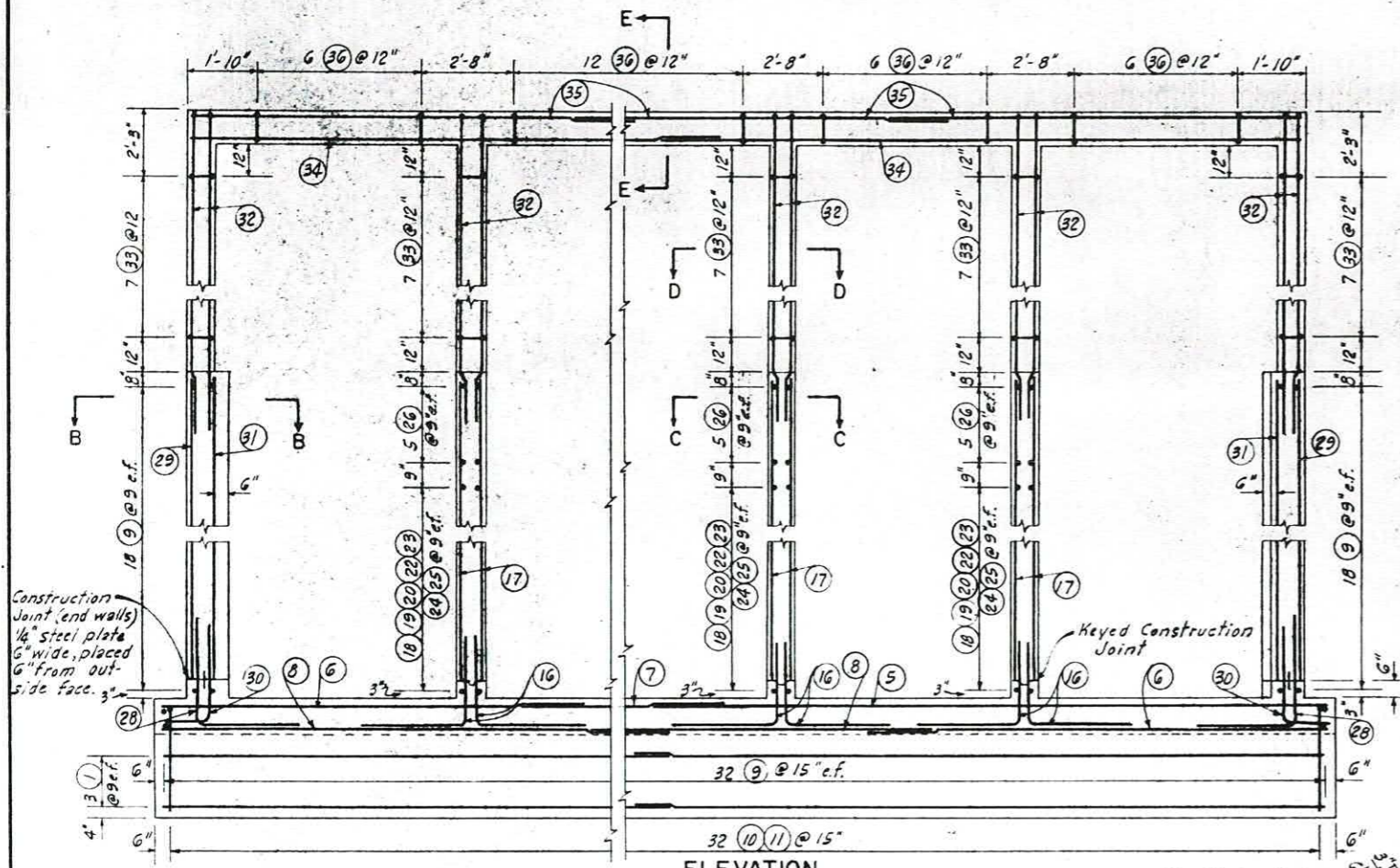


**DETAIL STEEL PLACEMENT**  
 WATER CONTROL STRUCTURE NO. 1  
 SEVENTH WARD CANAL WATERSHED  
 IN  
 VERMILION PARISH, LOUISIANA

**U. S. DEPARTMENT OF AGRICULTURE**

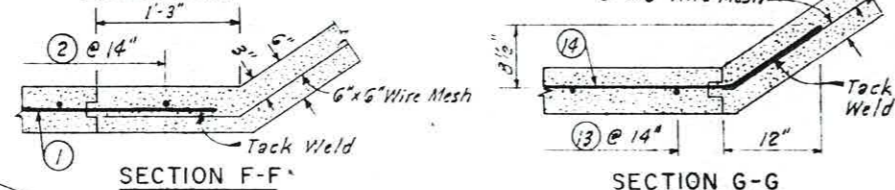
Checked: J. H. ... 19,617





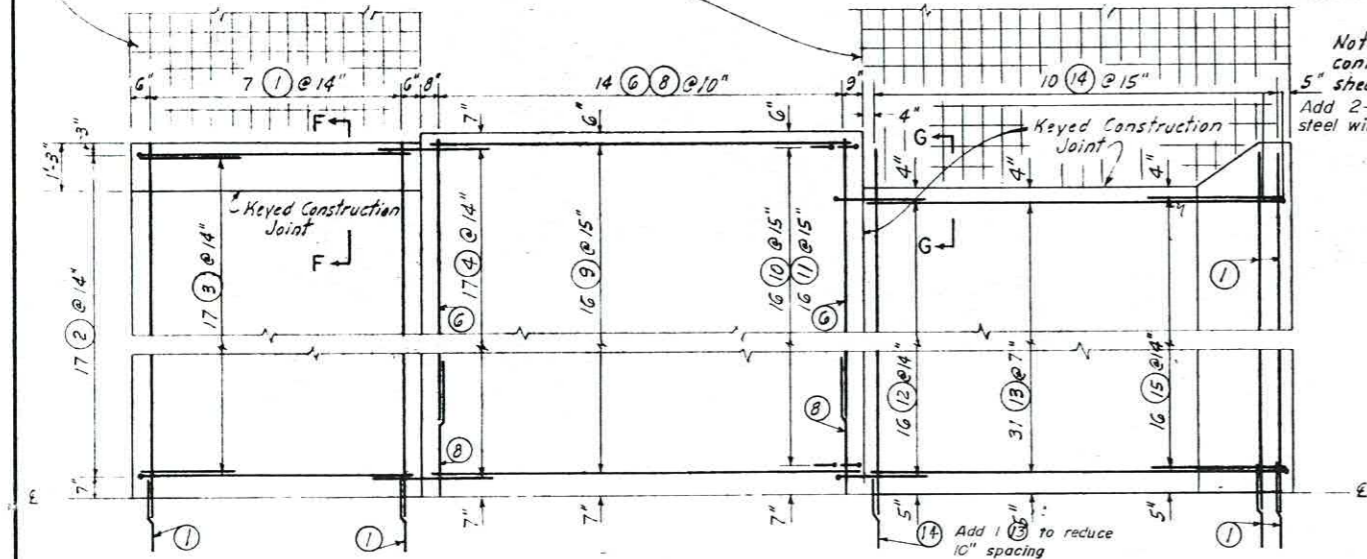
ELEVATION

Note: Concrete slope protection to be reinforced with 6x6 wire mesh placed in the center of the concrete section. Wire mesh to be tack welded to steel extension bars 1 and 14 as shown.



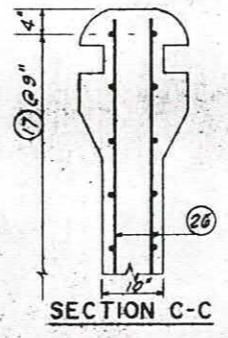
SECTION F-F

SECTION G-G

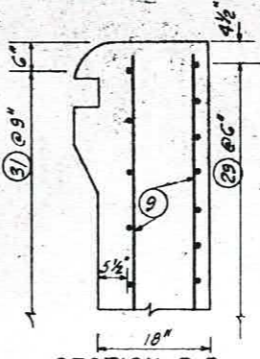


HALF PLAN - BASE SLAB  
Steel 3" from bottom of slab

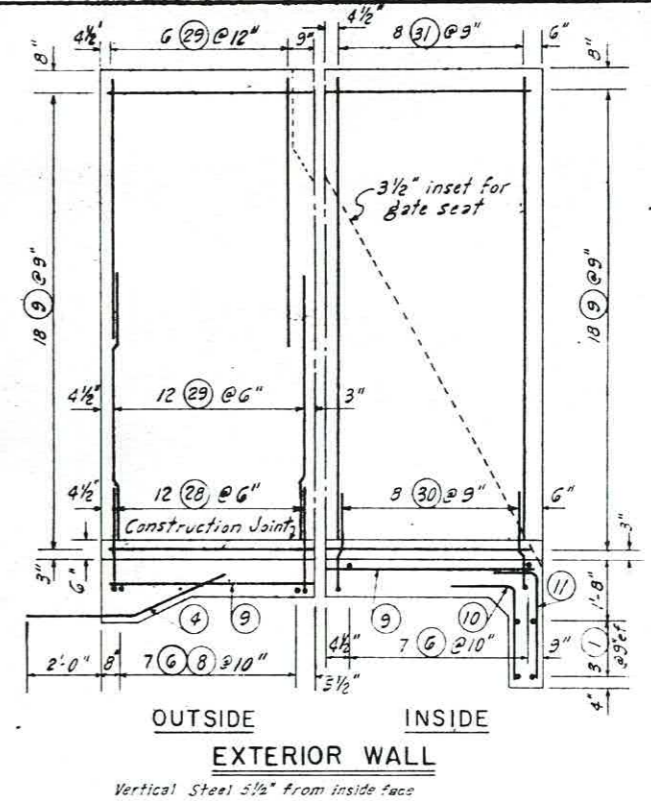
Note: Steel to be placed 2" from inside and outside face except as shown.



SECTION C-C

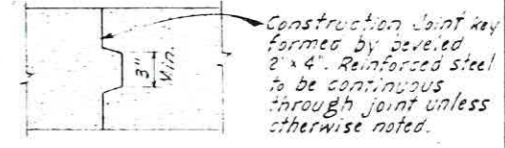


SECTION B-B



OUTSIDE INSIDE  
EXTERIOR WALL

Vertical Steel 5/8" from inside face



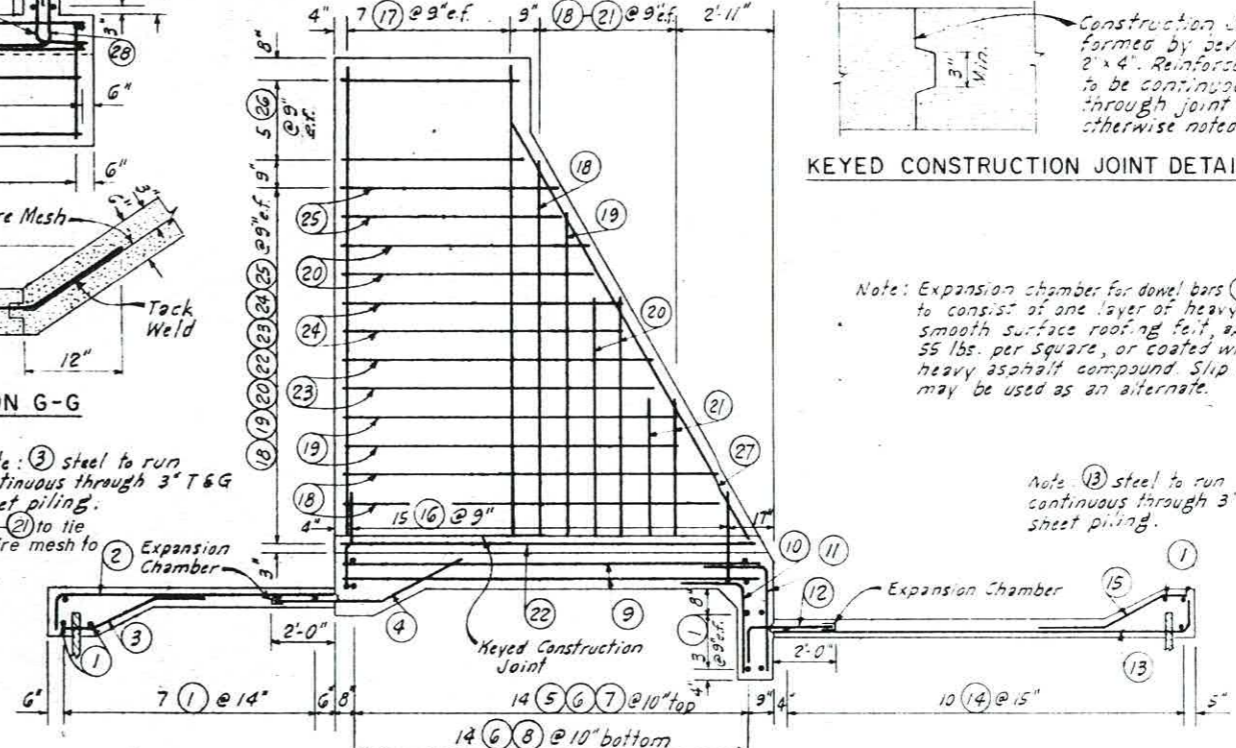
KEYED CONSTRUCTION JOINT DETAIL

Construction Joint key formed by paved 2" x 4". Reinforced steel to be continuous through joint unless otherwise noted.

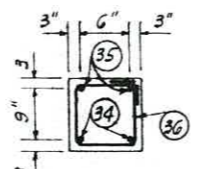
Note: Expansion chamber for dowel bars 4 & 12 to consist of one layer of heavy smooth surface roofing felt, approx 55 lbs. per square, or coated with a heavy asphalt compound. Slip dowel may be used as an alternate.

Note: 13 steel to run continuous through 3" T & G sheet piling.

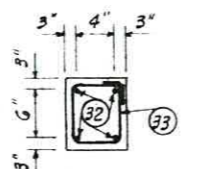
Note: 3 steel to run continuous through 3" T & G sheet piling. Add 2 20 to tie steel wire mesh to



TYPICAL INTERIOR WALL



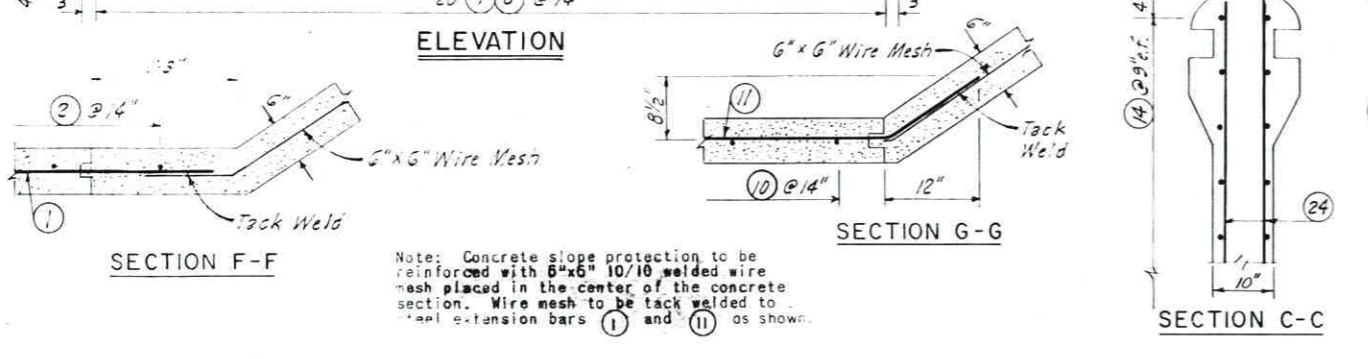
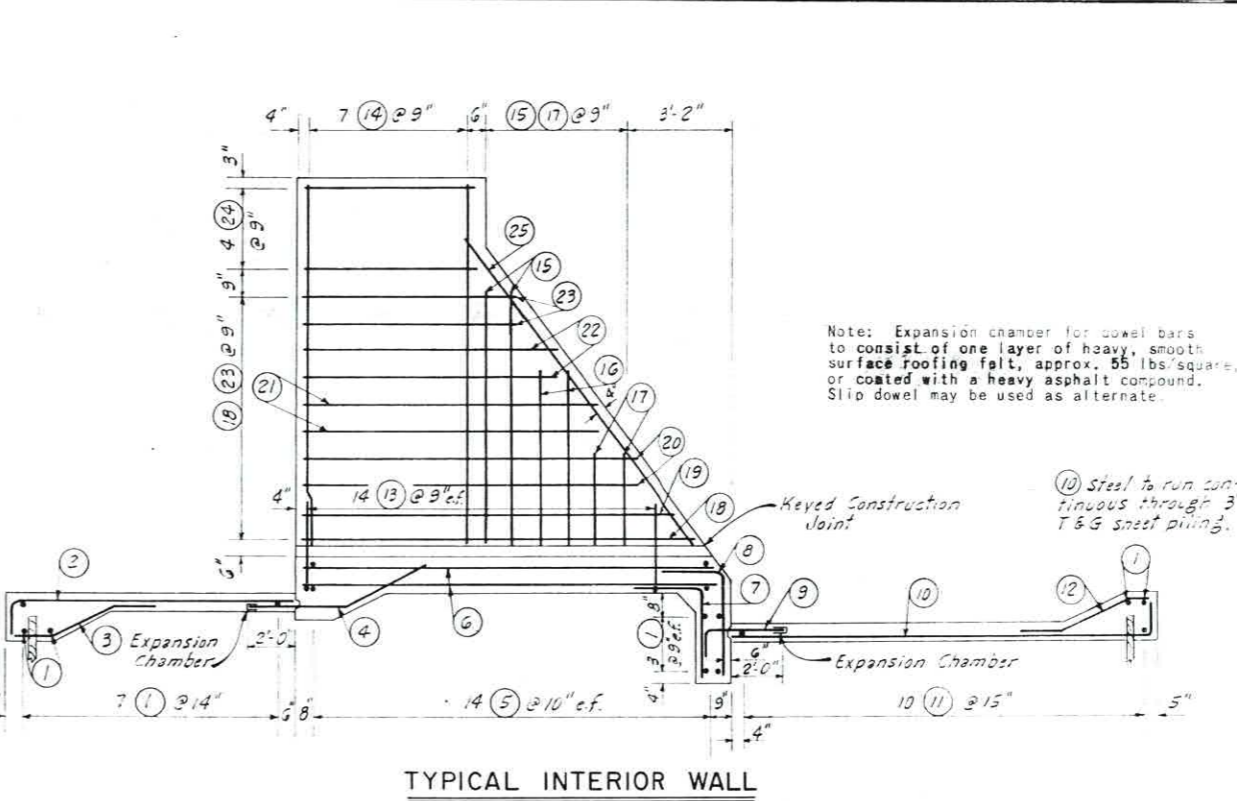
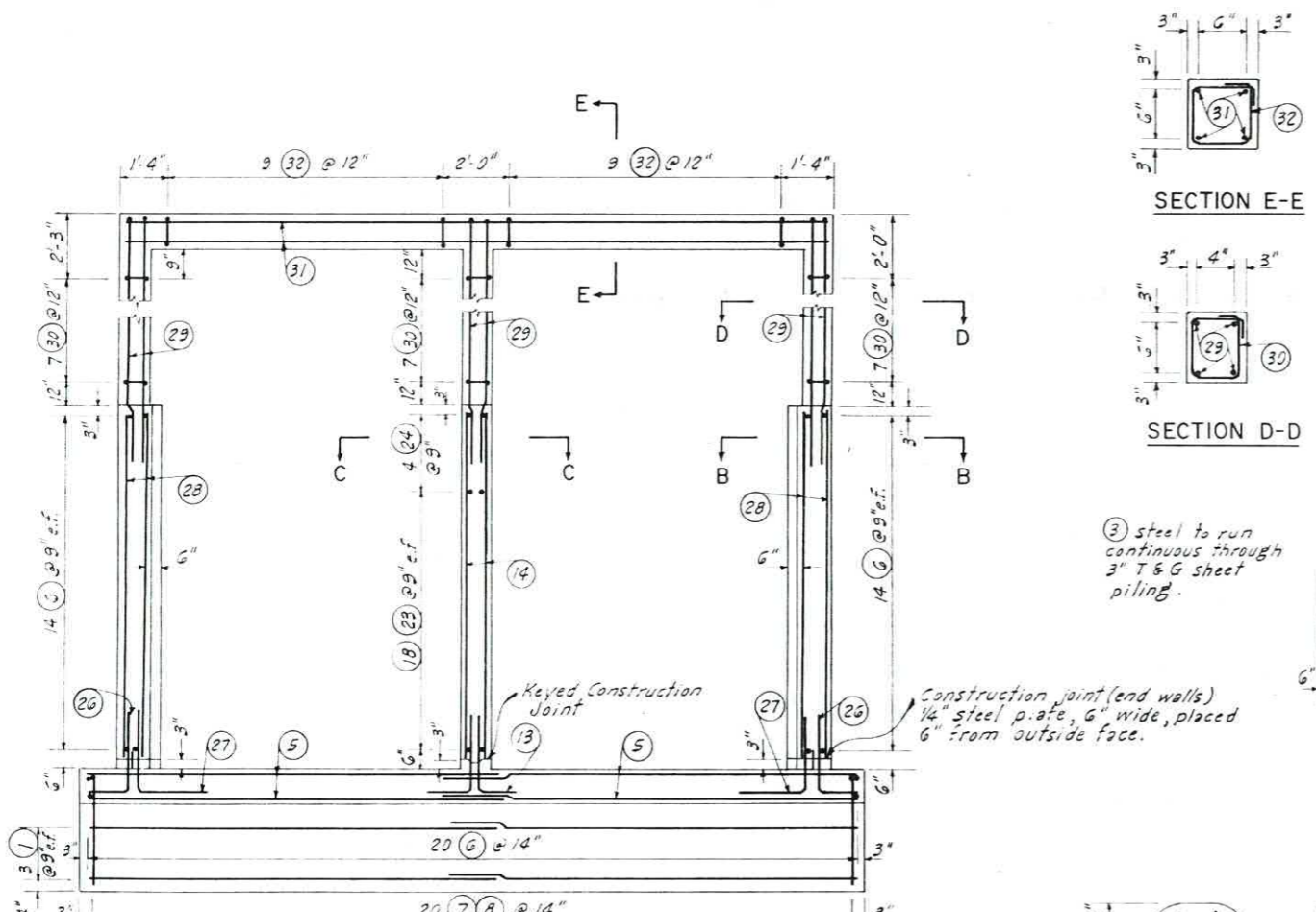
SECTION E-E



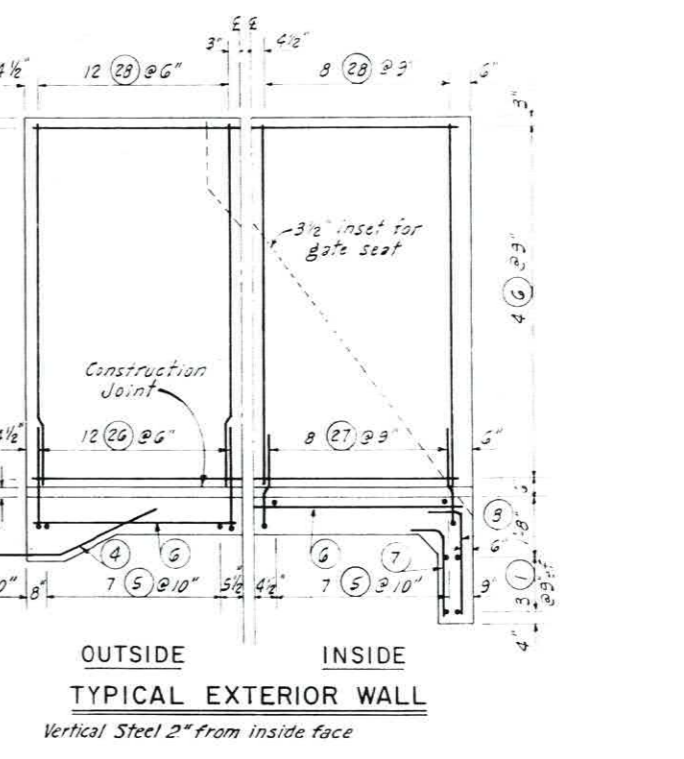
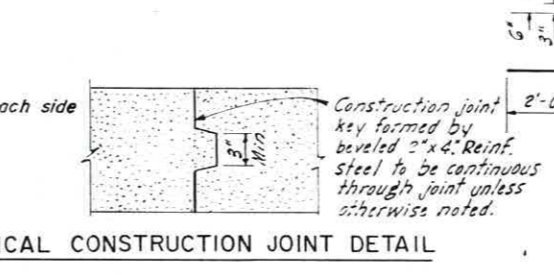
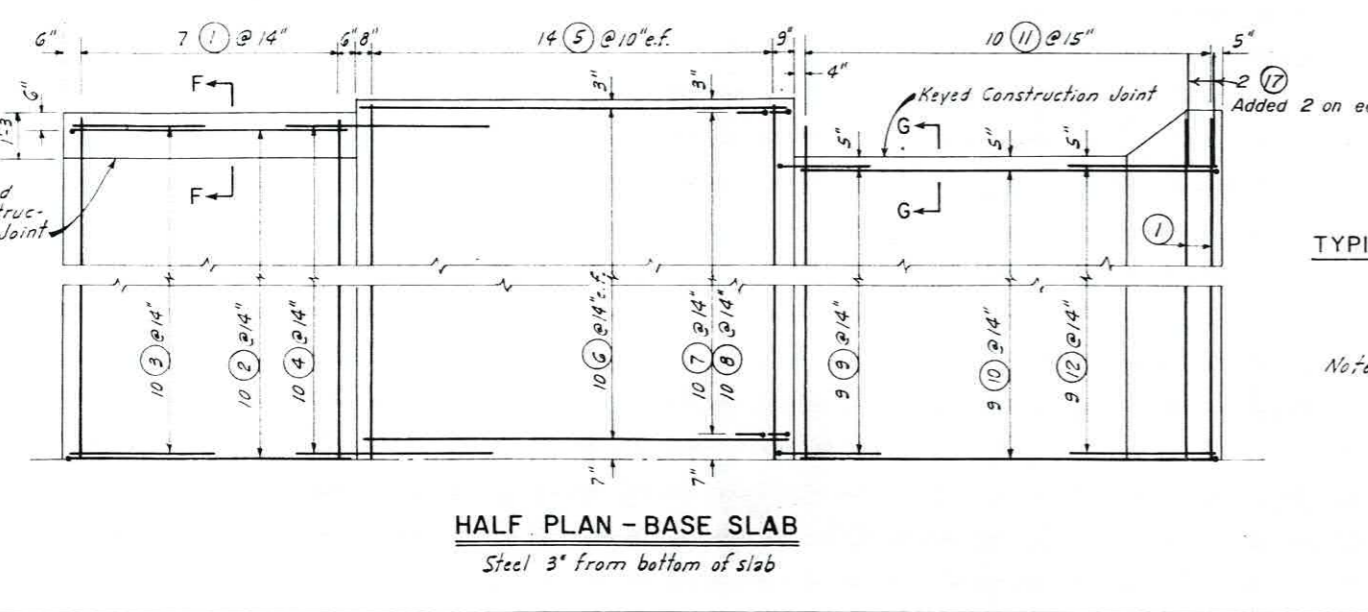
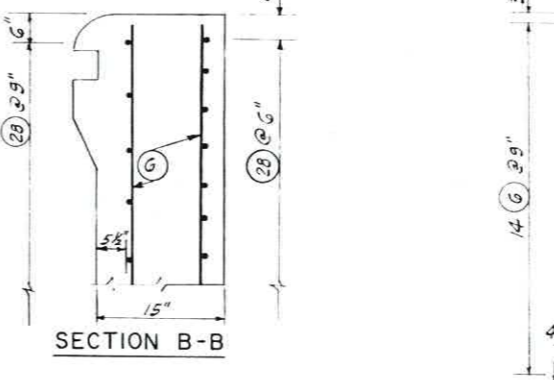
SECTION D-D

DETAIL STEEL PLACEMENT	
WATER CONTROL STRUCTURE NO 2	
SEVENTH WARD CANAL WATERSHED	
IN VERMILION PARISH, LOUISIANA	
U. S. DEPARTMENT OF AGRICULTURE	
SOIL CONSERVATION SERVICE	
Designed: J.F.R.	Drawn: J.F.R.
Traced: C.V.C.	Checked: J.F.R., H.B.P.
Scale: 1/8" = 1'-0"	Sheet: 4-E-19,617



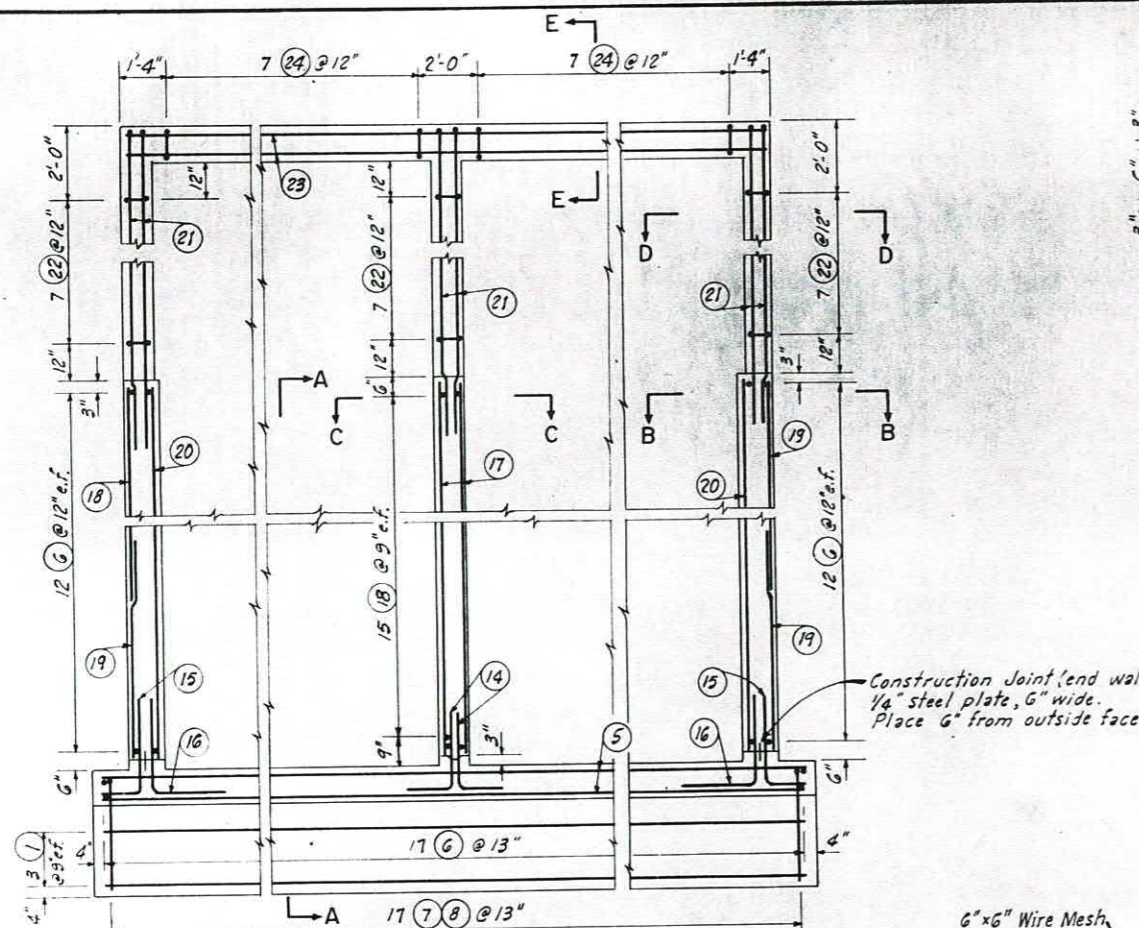


Note: Concrete slope protection to be reinforced with 6"x6" 10/10 welded wire mesh placed in the center of the concrete section. Wire mesh to be tack welded to steel expansion bars ① and ⑪ as shown.



DETAIL STEEL PLACEMENT			
WATER CONTROL STRUCTURE NO 3			
SEVENTH WARD CANAL WATERSHED			
IN			
VERMILION PARISH, LOUISIANA			
U. S. DEPARTMENT OF AGRICULTURE			
SOIL CONSERVATION SERVICE			
Designed	J.F.R.	Date	11-66
Drawn	J.F.R.	Checked	11-66
Traced	G.Y.C.	Sheet	12-66
Checked	J.P.R., J.F.R., N.B.R. S.B.	No. of	14
		of	23
			Drawing No
			4-E-19,617





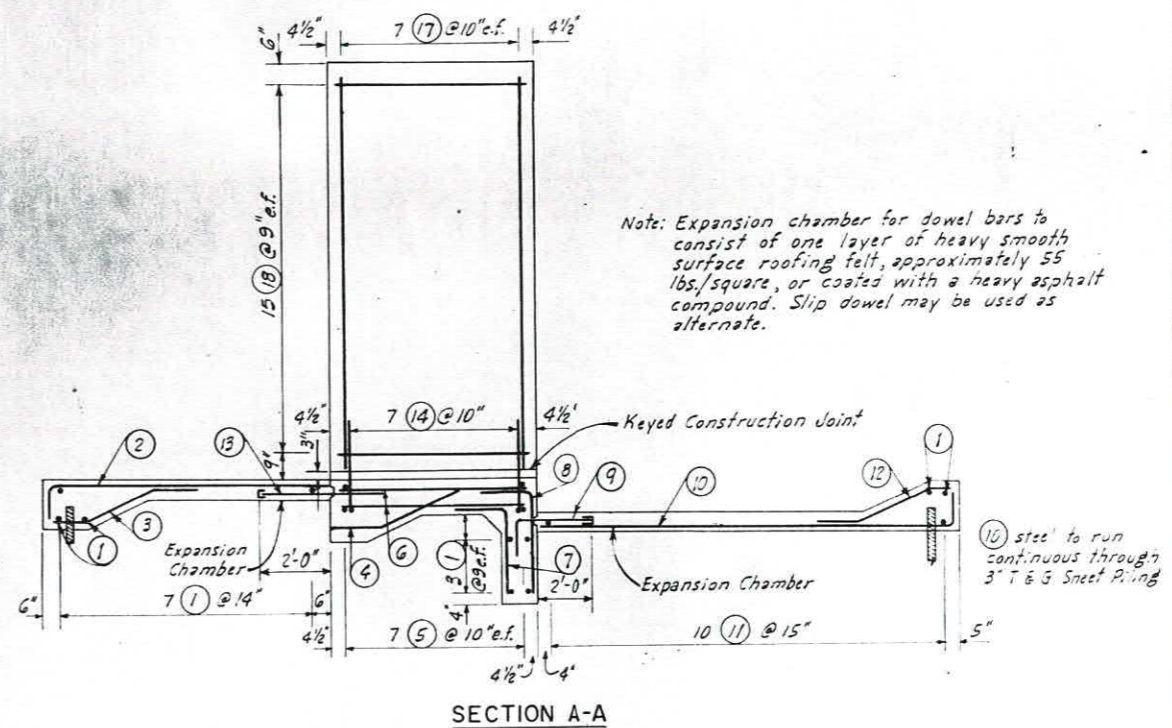
**ELEVATION**

**SECTION E-E**

**SECTION D-D**

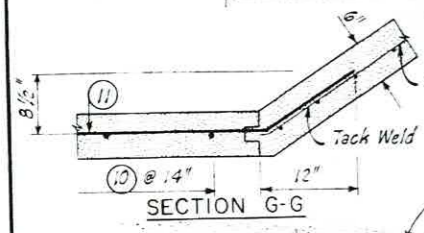
③ steel to run continuous through 3" T & G Sheet Piling

Construction Joint (end walls)  
1/4" steel plate, 6" wide.  
Place 6" from outside face.

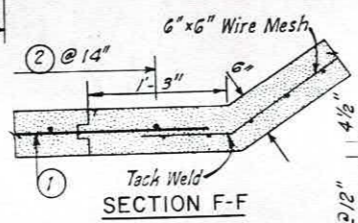


Note: Expansion chamber for dowel bars to consist of one layer of heavy smooth surface roofing felt, approximately 55 lbs./square, or coated with a heavy asphalt compound. Slip dowel may be used as alternate.

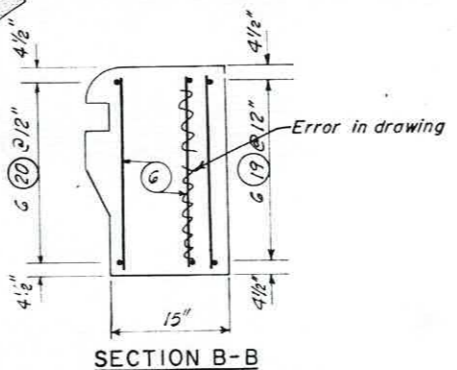
**SECTION A-A**



Concrete slope protection to be reinforced with 6"x6"x1/16" welded wire mesh placed in the center of the concrete section. Wire mesh to be tack welded to steel extension bars ① and ⑪ as shown.

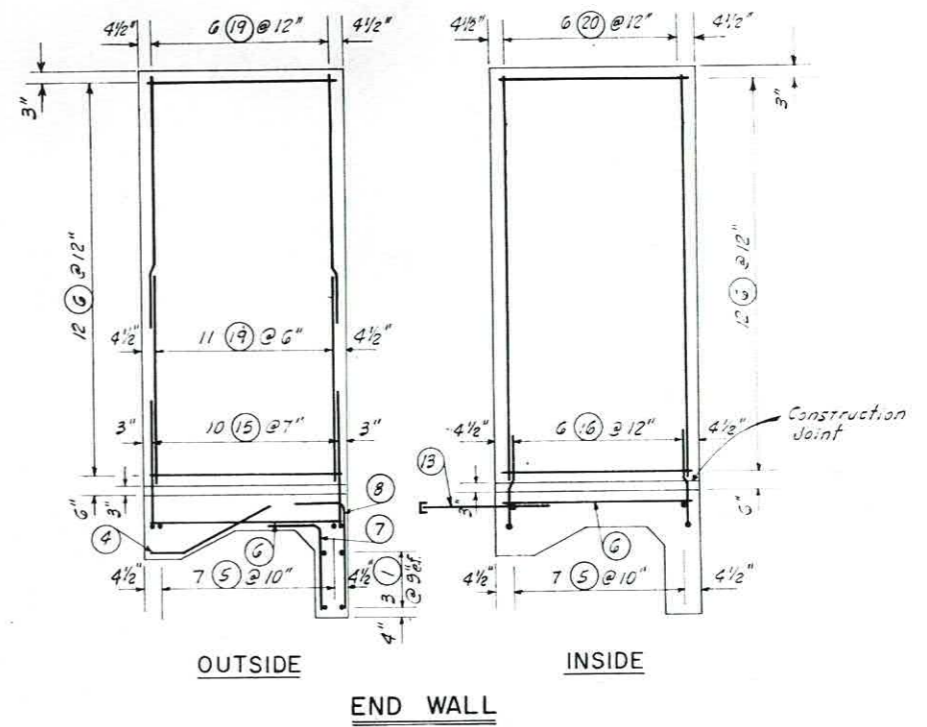


**SECTION F-F**



**SECTION B-B**

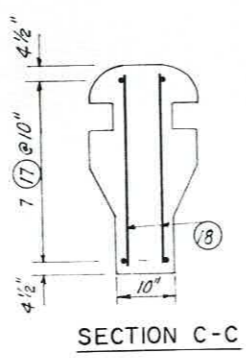
Error in drawing



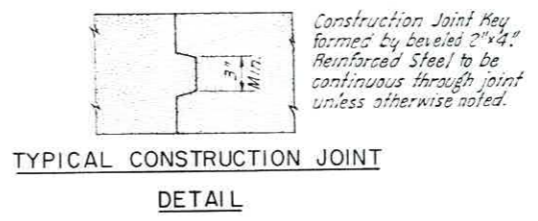
**OUTSIDE**

**INSIDE**

**END WALL**



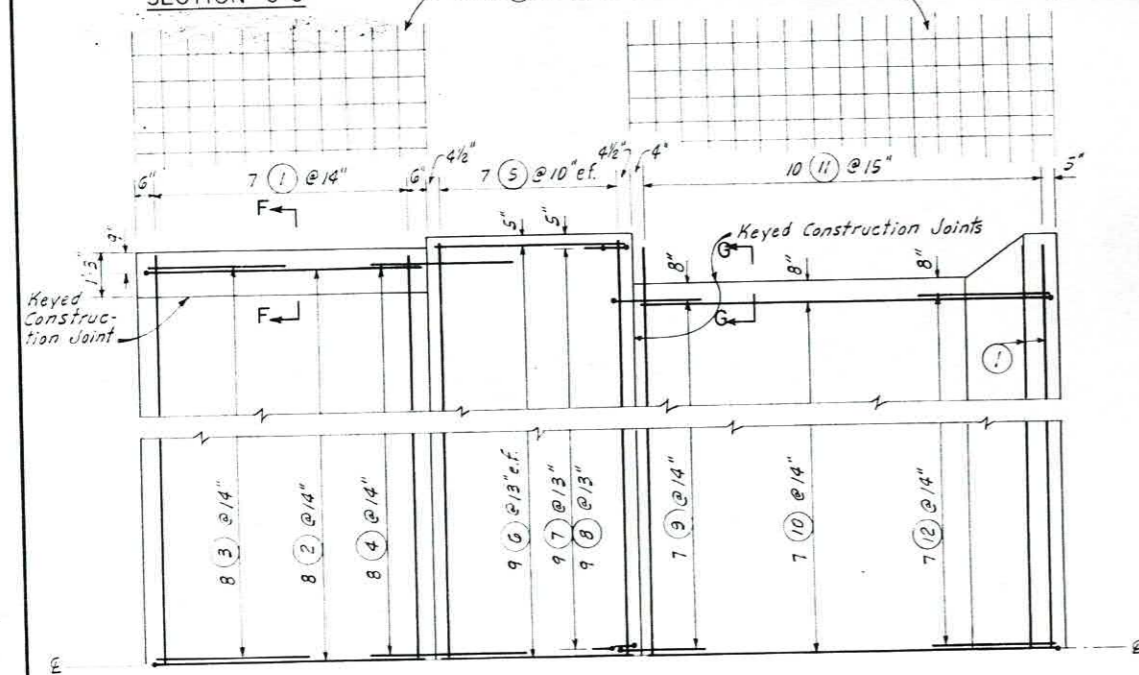
**SECTION C-C**



**TYPICAL CONSTRUCTION JOINT**

**DETAIL**

Construction Joint Key formed by beveled 2"x4" Reinforced Steel to be continuous through joint unless otherwise noted.



**HALF PLAN - BASE SLAB**

Steel 3" from bottom of slab.

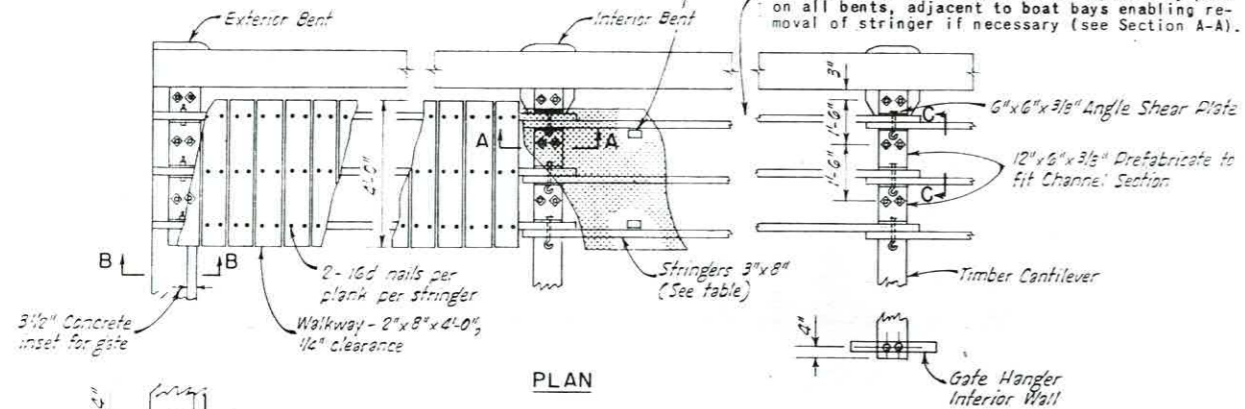
Note: Place steel 2" from inside and outside faces except as shown.

DETAIL-STEEL PLACEMENT WATER CONTROL STRUCTURE NO 4 SEVENTH WARD CANAL WATERSHED IN VERMILION PARISH, LOUISIANA			
<b>U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE</b>			
Designed	J.F.R.	Date	11-64
Drawn	J.F.R.	Sheet	11-64
Traced	C.V.C.	State Conservation Engineer	12-64
Checked	J.R.E., J.F.R.	Drawing No	6-65
		No. of Sheets	15 of 23
		Drawing No	4-E-19,617



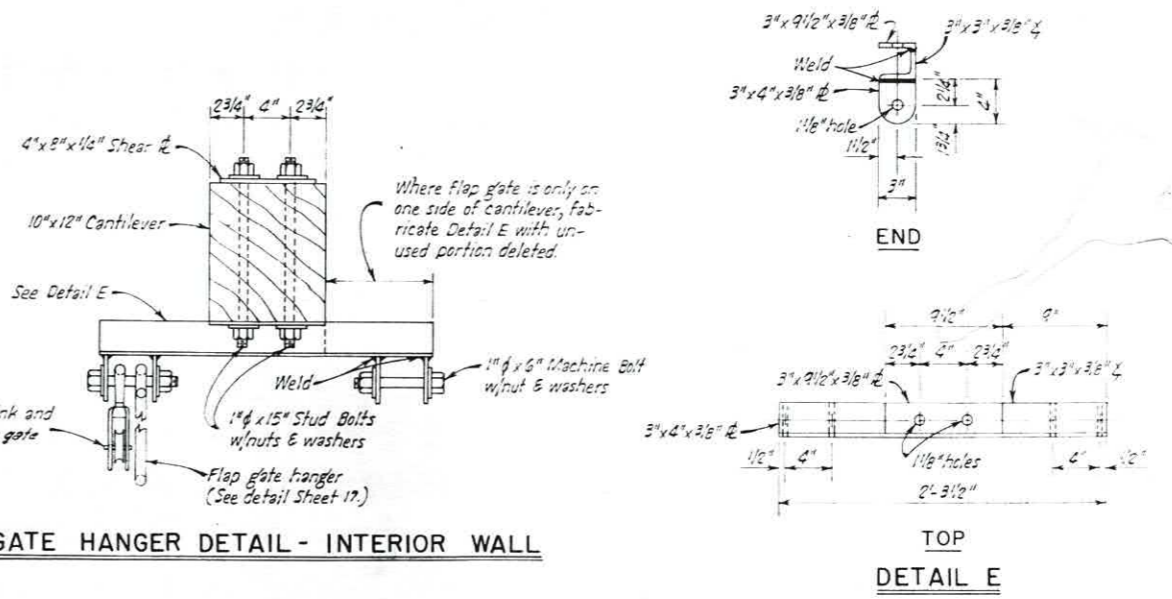
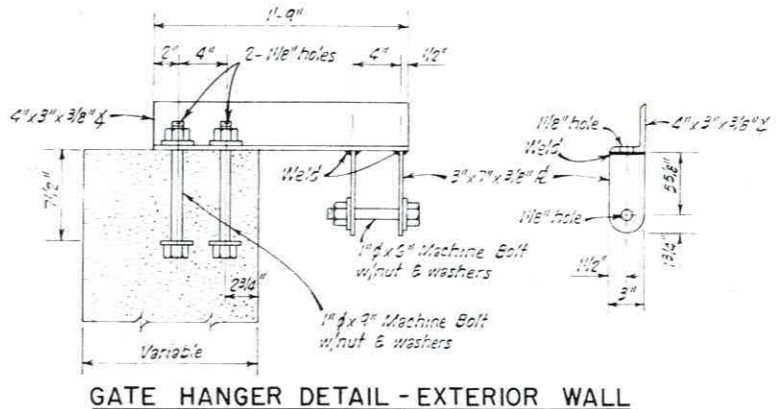
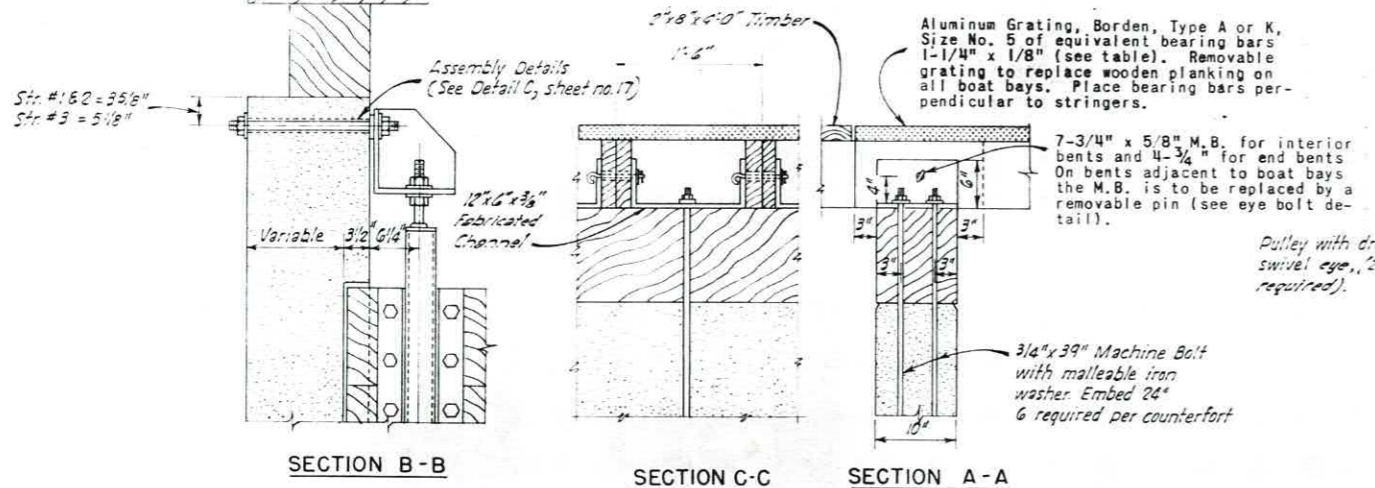
Weld 3/8" x 3" x 3" Aluminum section angle to base of grating adjacent to inside wall of outside stringers at intervals to prevent lateral sliding of grating.

Typical Boat Bay - Removable grating to replace wooden planking on boat bay all structures. Stringer bolt connections to be replaced by pins on all bents, adjacent to boat bays enabling removal of stringer if necessary (see Section A-A).

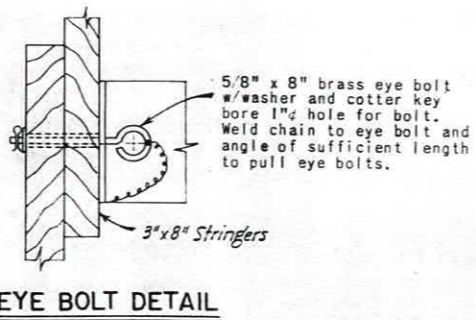
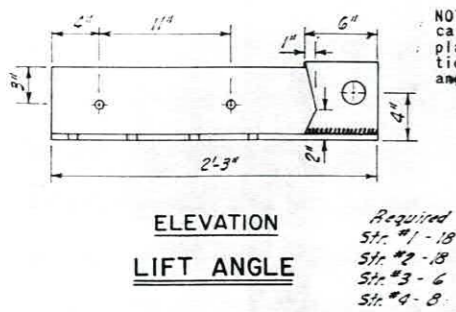
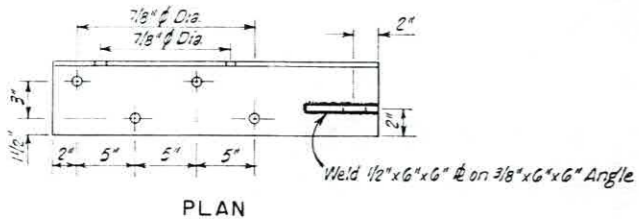


WALKWAY STRINGER LENGTH				
Structure No.	1	2	3	4
Bay No.	1	2	3	4
	9'-3"	9'-3"	11'-0"	9'-0"
	10'-10"	14'-10"	11'-0"	9'-0"
	8'-10"	8'-10"		
	9'-3"	9'-3"		

WALKWAY GRATING OVER BOAT BAYS		
Structure No.	No. Sections	Dimensions
1	1	4'-0" x 10'-9"
2	2	4'-0" x 7'-5"
3	1	4'-0" x 10'-9"



Note: Welding to develop full strength of each member joined.



WALKWAY DETAILS  
WATER CONTROL STRUCTURES NO. 1, 2, & 3  
SEVENTH WARD CANAL WATERSHED  
IN  
VERMILION PARISH, LOUISIANA

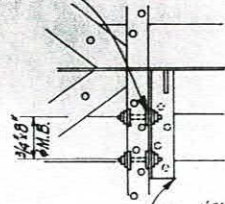
U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Designed J.F.R. 11-64 Approved by [Signature]  
Date 11-64  
Drawn J.F.R. 11-64  
Traced R.C.G. 12-64  
Checked J.R.E., J.F.R., N.D.S. 4-65

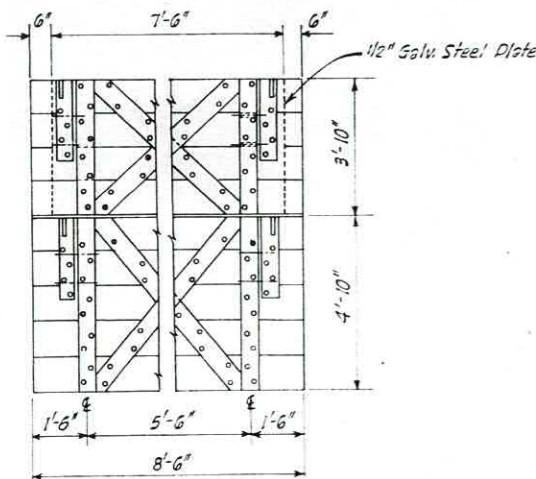
Sheet No. 16 of 23  
Drawing No. 4-E-19,617



2-2 5/8" x 6" x 1/2" shear plate required per bolt in all lift angles as shown.



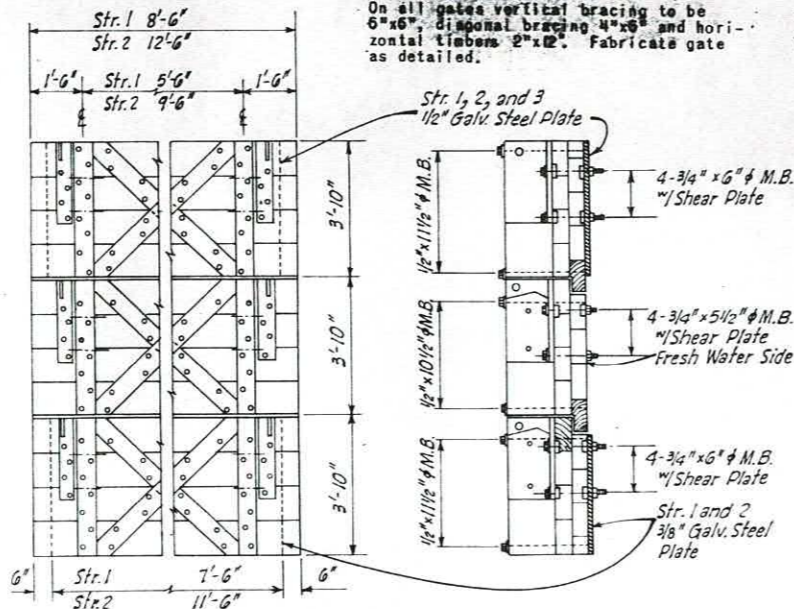
For lift angle detail, see Sheet No. 16.



STRUCTURE NO. 3

Structure No. 1 - 1 required  
Structure No. 2 - 1 required  
Structure No. 3 - 1 required

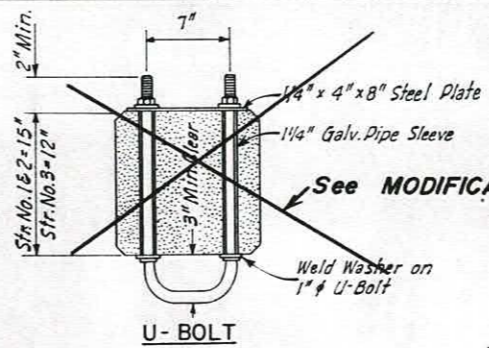
**BOAT BAY GATE**



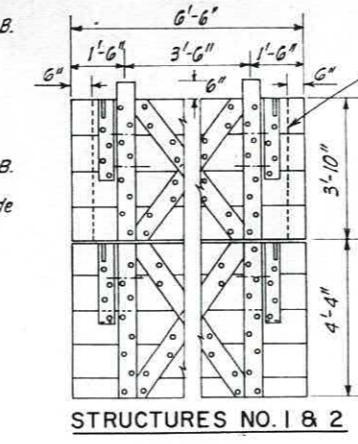
STRUCTURES NO. 1 & 2

NOTE: All lumber to be #1 structural grade pressure treated pine with not less than 12 lbs. retention per cu. ft. The preservative shall meet one of the following specifications: ASTM Designation C 390-53  
ASTM Designation C 391-51T  
Federal Specification TT-C-685a  
Federal Specification TT-W-566b  
Federal Specification TT-W-570a

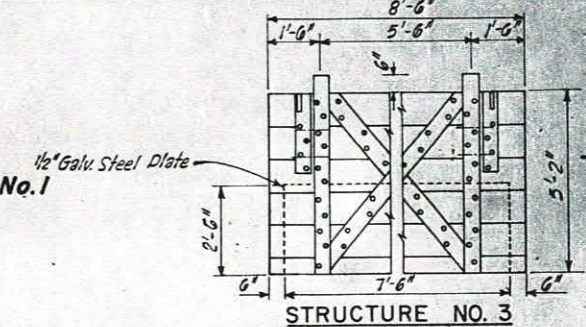
NOTES:  
1/2" x 9" M.B. with washers on all diagonal bracing as shown.  
All metal including nuts, bolts, and washers to be galvanized steel. Lock washers required on metal to metal contact. The plates shall be placed in the structure with the bracing timbers on the salt water side.  
On all gates vertical bracing to be 6" x 6", diagonal bracing 4" x 6" and horizontal timbers 2" x 12". Fabricate gate as detailed.



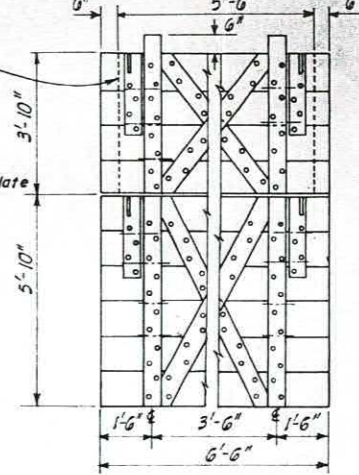
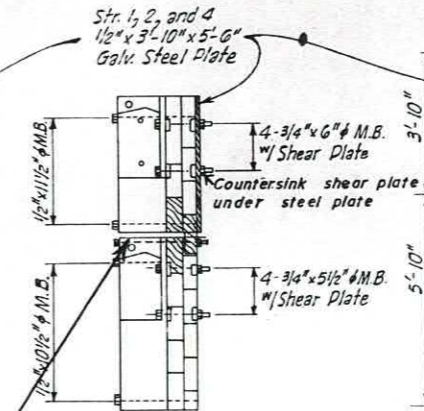
See MODIFICATION No. 1



See MODIFICATION No. 2



STRUCTURE NO. 3



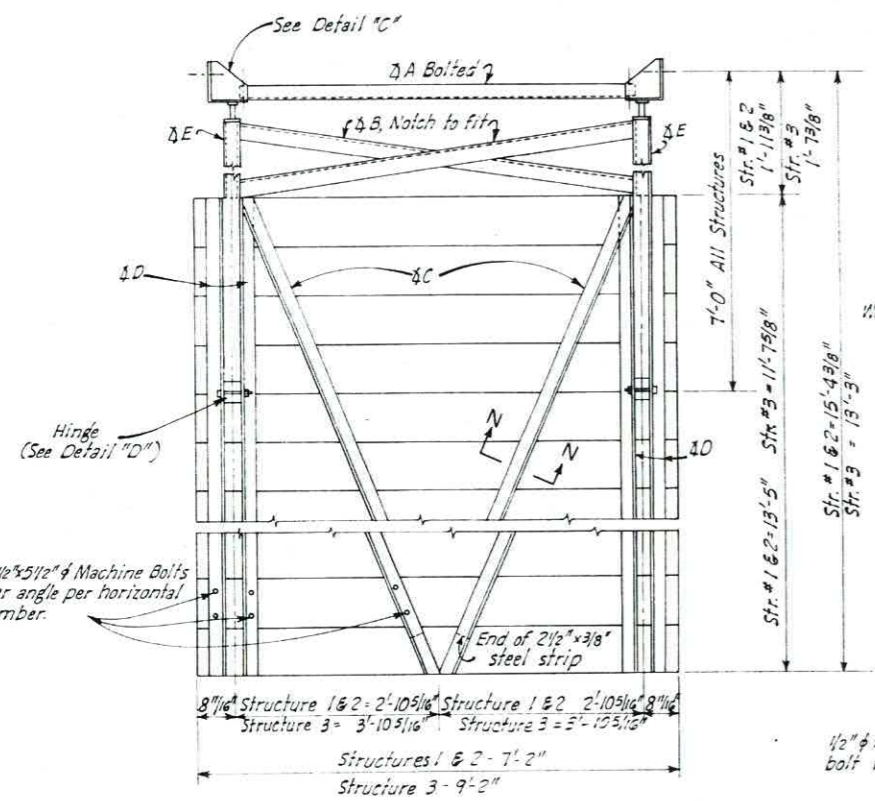
STRUCTURE NO. 4

NOTE: Structure Gates 1, 2, and 4. When top gate is lifted bottom gate will float so it can be lifted also. Both gates together will not float.

**RETAINER GATE**

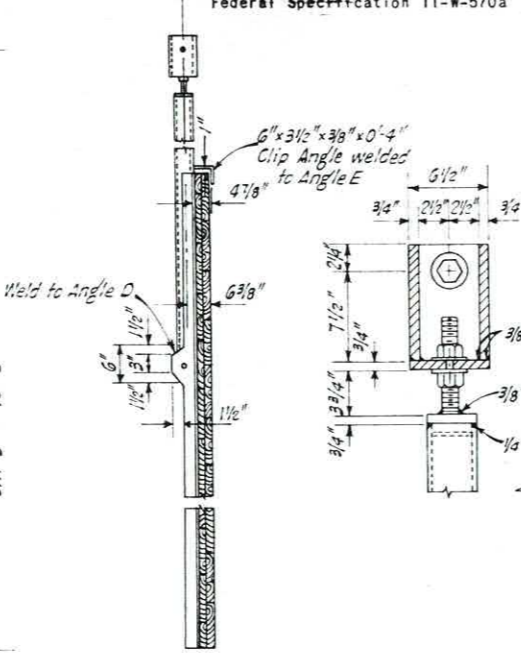
Structure No. 1 - 3 required  
Structure No. 2 - 2 required  
Structure No. 3 - 1 required  
Structure No. 4 - 2 required

Used flat washer against wood on bolted end. Use flat and lock washers on nut end. (See Job Diary No. 1, pg. 8).

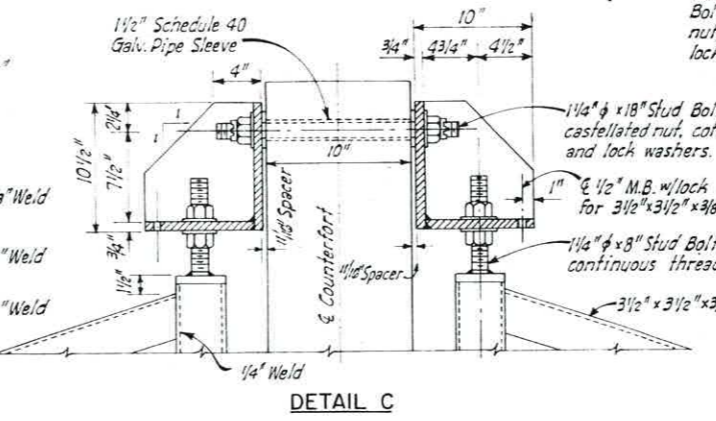


**FLAP GATE**

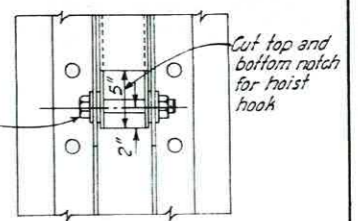
Structure No. 1 - 3 required  
Structure No. 2 - 3 required  
Structure No. 3 - 1 required



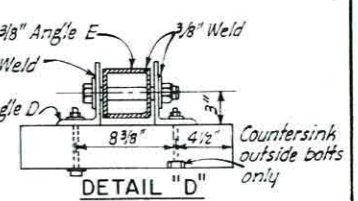
SECTION N-N



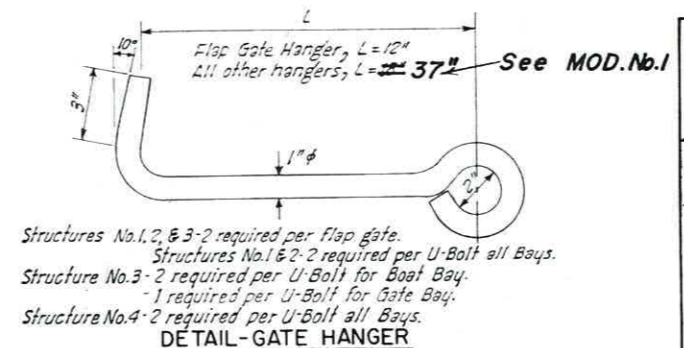
DETAIL C



PLAN



DETAIL "D"



DETAIL-GATE HANGER

GATE DETAILS WATER CONTROL STRUCTURES NO. 1, 2, 3 & 4 SEVENTH WARD CANAL WATERSHED IN VERMILION PARISH, LOUISIANA			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed	J.F.R.	Date	1-64
Drawn	J.F.R.	Approved by	[Signature]
Traced	A.H.J.	Checked	J.R.E. & J.F.R.
Checked	J.R.E. & J.F.R.	Sheet	No. 17 of 23
		Drawing No.	4-E-19,617

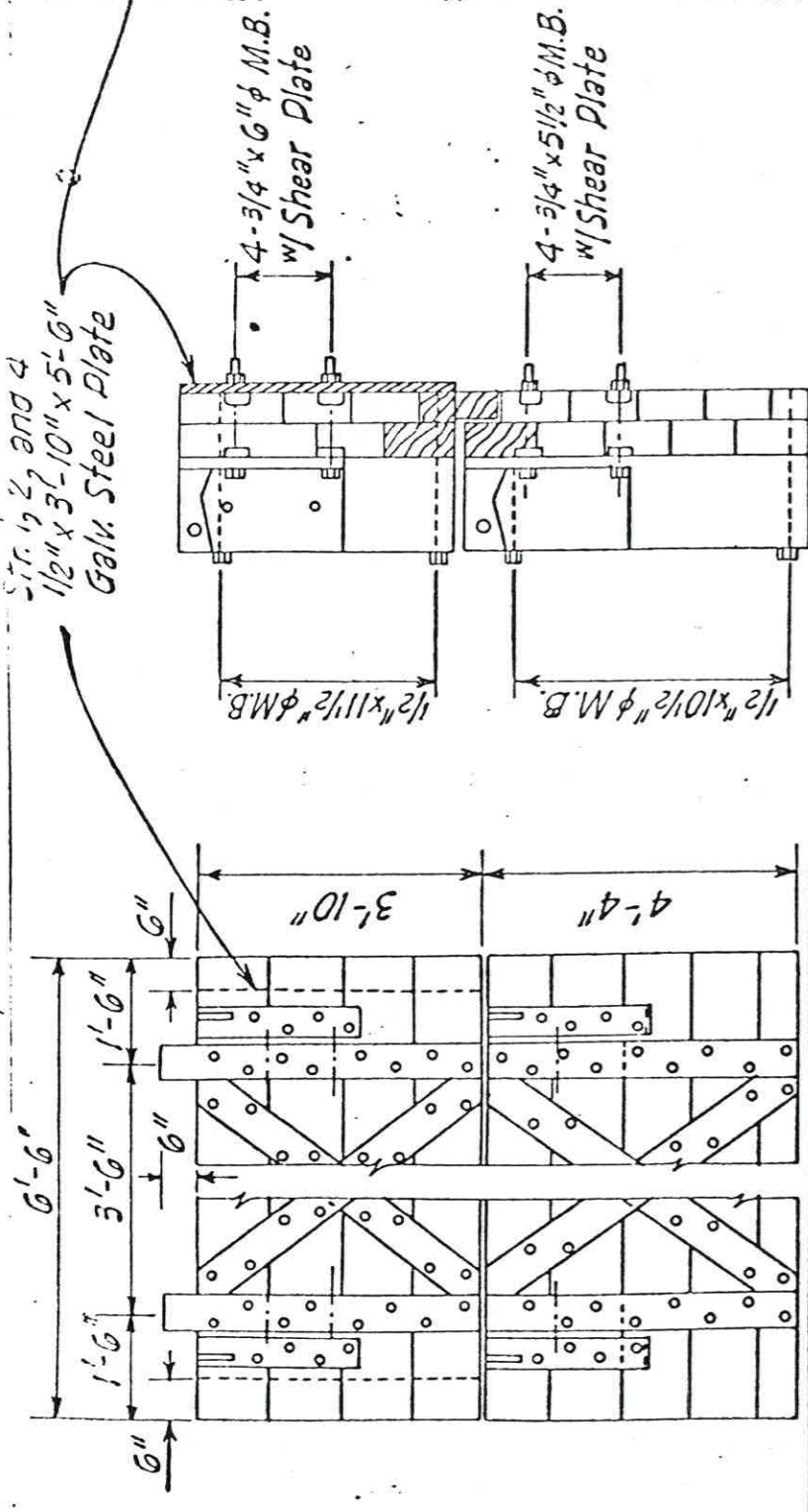


SEVENTH WARD CANAL VIA WERSHED

C.R.S.

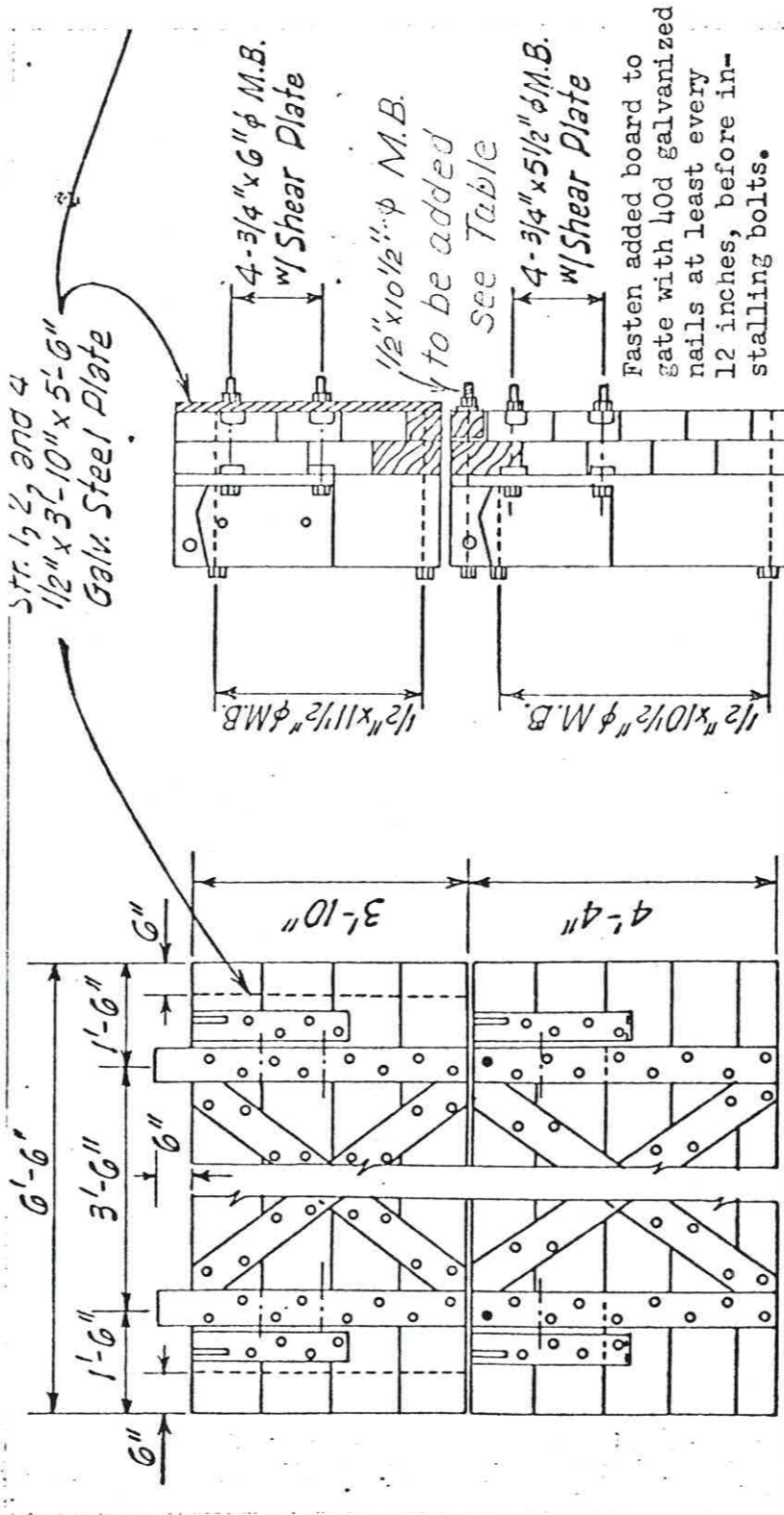
Date: 1-3-66

Proposed Modifications



TYPICAL SECTION

Gate Juncture as Originally Planned



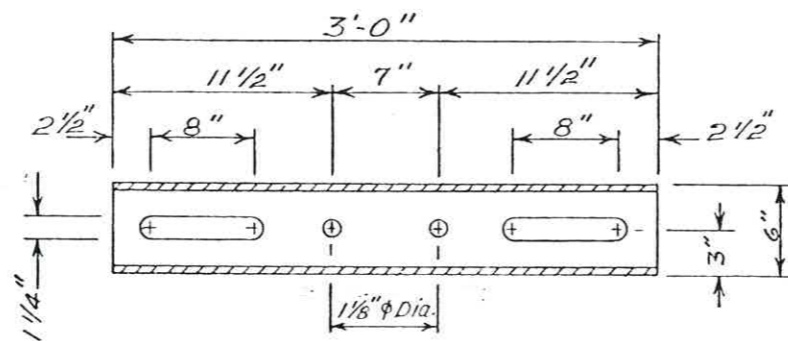
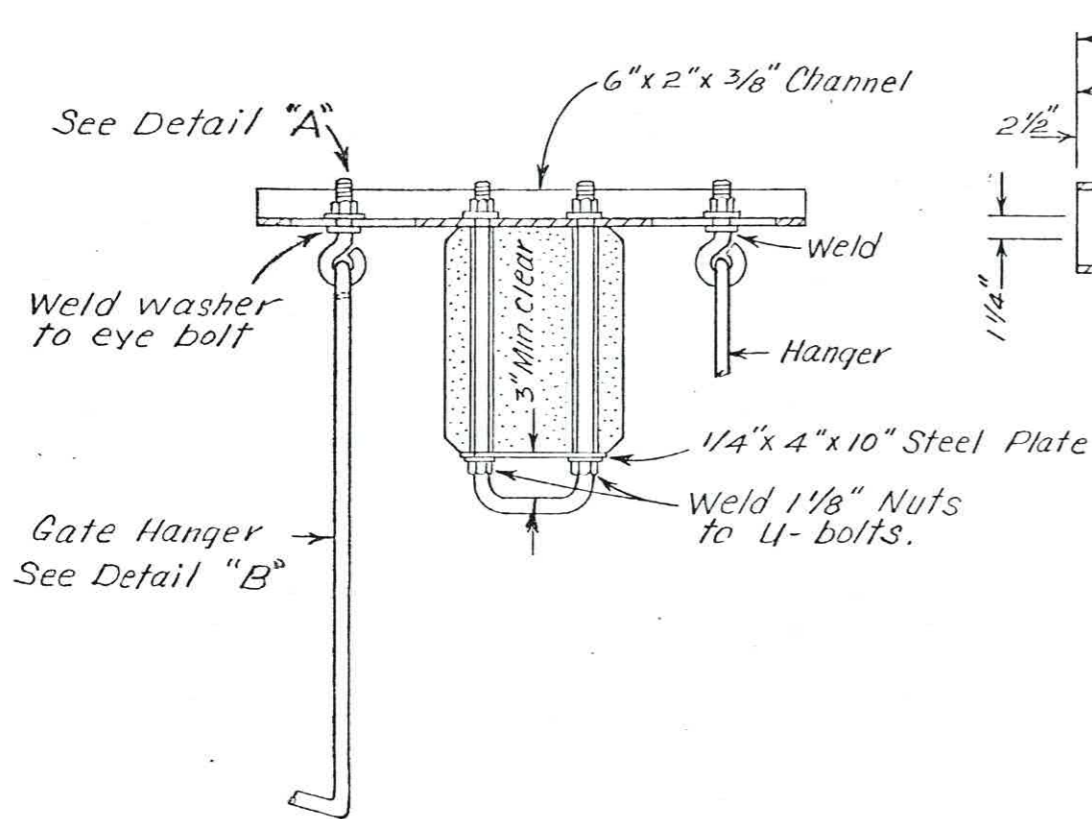
TYPICAL SECTION

Gate Juncture as Modified

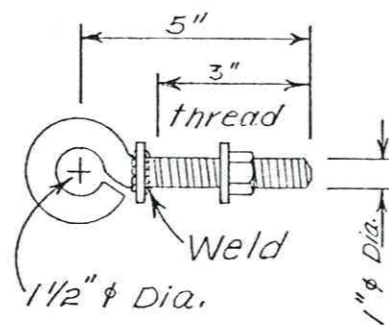
New Items	Number		Structure	
	Str. # 1	Str. # 2	Str. # 3	Str. # 4
1/2" x 10 1/2" φ M.B.	8	8	2	4

Note: All Gate Structures to be Modified as shown. Bolts to be included in all gates except in the bottom section of two. Any gates shown in this plan that are to be omitted.

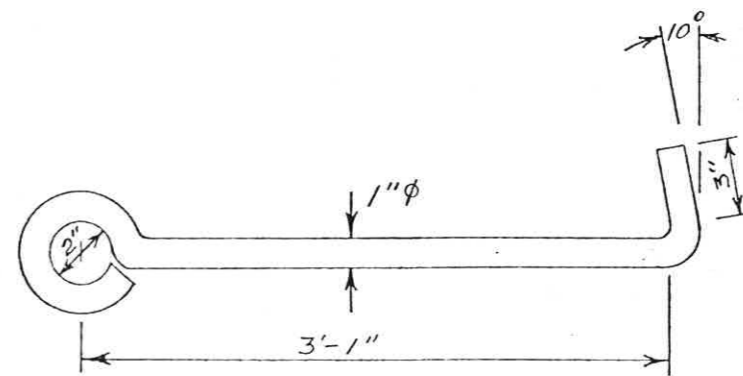




PLAN



DETAIL "A"



DETAIL "B"

New Items, Items Modified, & Items Deleted	Number Per Structure			
	Str. # 1	Str. # 2	Str. # 3	Str. # 4
<b>New Items:</b>				
① 6" x 2" x 3/8" Channel	8	8	4	4
② Eye bolt, washer, & nut - See Detail "A"	16	16	8	8
<b>Items modified from Original Design:</b>				
① Gate hanger from L=18" to L=37" - See Detail "B"	16	16	8	8
② 1/4" x 4" x 10" Steel Plate from 1/4" x 4" x 8"	8	8	4	4
③ U-Bolt with 2-1 1/8" Nuts welded to U-Bolt	8	8	4	4
<b>Items deleted from Original Design</b>				
① Gate hanger L=18"	16	16	4	8
② 1/4" x 4" x 8" Steel Plate	8	8	4	4

**MODIFICATION No. 1, pg. 17**

SEVENTH WARD CANAL WATERSHED  
GATE HANGER MODIFICATION

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
DESIGNED BY	J. F. R. 10/65	APPROVED BY	<i>W. A. ...</i>
CHECKED BY	N. D. S. 10/65	DRAWING NO.	
DRAWN BY	N. B. R. 10/65	SHEET	1 OF 1



**STRUCTURE NO. 1**

FOR TYPICAL BAR TYPES REFER TO ACI STANDARD 315-57

No.	Qty.	Length	Total Length	Size	Type	A	B	C	D	E	G	J	H	K
1	34	18-0	612-0	4	Str.									
2	30	8-9	262-6	4	2	1-0	7-9							
3	30	3-9	112-6	4	6		1-0	1-6	1-3				0-10	1-2
4	30	5-3	157-6	4	6			3-0	2-3				(Dowel Bar)	1-0
5	28	18-9	525-0	6	Str.									
6	14	13-9	192-6	6	Str.									
7	14	23-9	332-6	6	Str.									
8	130	11-9	1527-6	5	Str.									
9	29	4-3	123-3	5	2	2-6	1-9							
10	29	4-9	137-9	5	2	3-0	1-9							
11	28	3-6	98-0	4	2	1-0	2-6						(Dowel Bar)	
12	54	12-9	688-6	4	2	1-0	11-9							
13	20	18-3	366-0	4	6			1-3	17-0				(See Section GG)	
14	28	4-3	119-0	4	6		0-9	2-1	1-5				0 - 11-1/2	1-10
15	90	5-9	517-6	4	2	2-6	3-3							
16	42	13-0	546-0	4	Str.									
17	18	10-6	189-0	4	Str.									
18	18	9-3	166-6	4	Str.									
19	24	6-9	162-0	4	Str.									
20	12	4-0	48-0	4	Str.									
21	6	11-3	67-6	4	Str.									
22	12	8-6	102-0	4	Str.									
23	12	7-9	93-0	4	Str.									
24	12	6-0	72-0	4	Str.									
25	30	5-0	150-0	4	Str.									
26	6	13-6	81-0	4	Str.									
27	48	6-3	300-0	8	2	3-3	3-0							
28	72	7-3	522-0	6	Str.									
29	32	4-6	144-0	5	2	3-0	1-6							
30	32	13-0	416-0	5	Str.									
31	20	10-9	215-0	5	1	0-9	10-9						0-5	
32	35	3-6	122-6	3	T2	0-7	0-8	0-6	0-8	0-6	0-7			
33	4	17-9	71-0	5	Str.									
34	2	13-0	26-0	5	Str.									
35	2	22-6	45-0	5	Str.									
36	26	4-0	104-0	3	T2	0-5	0-8	0-11	0-8	0-11	0-5			

Total Size No. 3 Steel = 226'-6" = 85.16 lbs.  
 Total Size No. 4 Steel = 3,079'-6" = 1,079.13 lbs. 3,087.66  
 Total Size No. 5 Steel = 2,705'-6" = 2,821.83 lbs.  
 Total Size No. 6 Steel = 1,572'-0" = 2,361.14 lbs.  
 Total Size No. 8 Steel = 300'-0" = 801.00 lbs.  
 Total Steel in Structure No. 1 = 9,140.28 lbs. 9,156.8 Informal Mod. No. 1  
 Total Area of 6"x6" Wire Mesh = 931 sq. ft. 957-08 Informal Mod. 2 & 4  
 Total Class 4000 Concrete in Structure No. 1 including apron and bank slope protection = 90.9 cu. yds. 91.8 Informal Mod. No. 1

**STRUCTURE NO. 2**

FOR TYPICAL BAR TYPES REFER TO ACI STANDARD 315-57

No.	Qty.	Length	Total Length	Size	Type	A	B	C	D	E	F	G	H	J	K
1	34	20-0	680-0	4	Str.										
2	34	8-9	297-6	4	2	1-0	7-9								
3	34	3-9	127-6	4	6		1-0	1-6	1-3				0-10		1-2
4	34	5-3	178-6	4	6		3-0	2-3	(Dowel Bars)				1-0		2-0
5	14	20-6	287-0	6	Str.										
6	28	12-6	350-0	6	Str.										
7	14	10-0	140-0	7	Str.										
8	28	15-3	427-0	6	Str.										
9	136	11-9	1598-0	5	Str.										
10	32	4-3	136-0	5	2	2-6	1-9								
11	32	4-9	152-0	5	2	3-0	1-9								
12	32	3-9	120-0	4	2	1-0	2-9						(Dowel Bars)		
13	62	12-9	798-6	4	2	1-0	11-9								
14	20	22-3	445-0	4	6			1-3	21-0				(See Section GG)		
15	32	4-3	136-0	4	6		0-9	2-1	1-5				0 - 11-1/2		1-10
16	90	5-9	517-6	4	2	2-6	3-3								
17	42	13-0	546-0	4	Str.										
18	18	10-6	189-0	4	Str.										
19	18	9-3	166-6	4	Str.										
20	24	6-9	162-0	4	Str.										
21	4	4-0	16-0	4	Str.										
22	6	11-3	67-6	4	Str.										
23	12	8-6	102-0	4	Str.										
24	12	7-9	93-0	4	Str.										
25	12	6-0	72-0	4	Str.										
26	30	5-0	150-0	4	Str.										
27	6	13-6	81-0	4	Str.										
28	48	6-3	300-0	8	2	3-3	3-0								
29	72	7-3	522-0	6	Str.										
30	32	4-6	144-0	5	2	3-0	1-6								
31	32	13-0	416-0	5	Str.										
32	20	11-6	230-0	5	1	0-9	10-9							0-5	
33	35	3-6	122-6	3	T2	0-7	0-8	0-6	0-8	0-6	0-7				
34	4	10-9	79-0	5	Str.										
35	6	13-9	82-6	5	Str.										
36	30	4-0	120-0	3	T2	0-5	0-8	0-11	0-8	0-11	0-5				

Total Size No. 3 Steel = 242'-6" = 91.18 lbs.  
 Total Size No. 4 Steel = 3,319'-6" = 3,319.08 lbs. 3,338.63  
 Total Size No. 5 Steel = 2,837'-6" = 2,959.51 lbs.  
 Total Size No. 6 Steel = 1,586'-0" = 2,382.17 lbs.  
 Total Size No. 7 Steel = 140'-0" = 286.16 lbs.  
 Total Size No. 8 Steel = 300'-0" = 801.00 lbs.  
 Total Steel = 9,839.65 lbs. 9,858.62 Informal Mod. No. 2 & 4  
 Total Area 6"x6" Wire Mesh = 931 sq. ft. 957-08 Informal Mod. No. 4  
 Total Class 4000 Concrete in Structure No. 2 including apron and bank slope protection = 95.4 cu. yds. 96-19 Informal Mod. No. 4

**STRUCTURE NO. 3**

FOR TYPICAL BAR TYPES REFER TO ACI STANDARD 315-57

No.	Qty.	Length	Total Length	Size	Type	A	B	C	D	E	K	G	H	J
1	34	12-3	416-6	4	Str.									
2	19	8-9	166-3	4	2	1-0	7-9							
3	19	4-3	80-9	4	6		1-0	1-11	1-4				0-10	
4	19	5-3	99-9	4	6		3-0	2-3	(Dowel Bars)				2-0	1-0
5	56	13-0	728-0	6	Str.									
6	96	11-6	1104-0	5	Str.									
7	20	4-3	85-0	5	2	2-6	1-9							
8	20	4-9	95-0	5	2	3-0	1-9							
9	17	3-9	63-0	4	2	1-0	2-9						(Dowel Bars)	
10	17	12-9	216-9	4	2	1-0	11-9							
11	20	12-3	245-0	4	6			1-3	11-0				(See Detail GG)	
12	17	4-3	72-3	4	6		0-9	2-0	1-6				1-6	0-11
13	28	3-6	98-0	4	2	2-3	1-3							
14	14	10-0	140-0	4	Str.									
15	4	7-0	28-0	4	Str.									
16	4	4-9	19-0	4	Str.									
17	2	2-6	10-6	4	Str.									
18	2	10-9	21-6	4	Str.									
19	2	10-6	21-0	4	Str.									
20	4	9-3	37-0	4	Str.									
21	4	8-0	32-0	4	Str.									
22	4	7-0	28-0	4	Str.									
23	4	6-0	24-0	4	Str.									
24	8	4-9	38-0	4	Str.									
25	2	10-9	21-6	4	Str.									
26	48	3-6	168-0	6	2	2-6	1-0							
27	32	4-6	144-0	5	2	2-6	2-0							
28	90	10-0	800-0	5	Str.									
29	12	11-3	135-0	5	1	0-9	10-6							0-5
30	21	3-6	73-6	3	T2	0-7	0-6	0-8	0-6	0-8	0-7			
31	4	20-3	81-0	3	Str.									
32	18	3-6	63-0	3	T2	0-5	0-8	0-8	0-8	0-8	0-5			

Total Size No. 3 Steel = 217'-6" = 81.78 lbs.  
 Total Size No. 4 Steel = 1,255'-6" = 1,255.17 lbs. 1,261.85  
 Total Size No. 5 Steel = 2,363'-0" = 2,464.61 lbs.  
 Total Size No. 6 Steel = 896'-0" = 1,345.79 lbs.  
 Total Steel in Structure No. 3 = 5,147.35 lbs. 5,154-0 Informal Mod. No. 2  
 Total Area of 6"x6" Wire Mesh = 663 sq. ft. 681-0 Informal Mod. No. 2  
 Total Class 4000 Concrete in Structure No. 3 including apron and bank slope protection = 54.2 cu. yds. 55-84 Informal Mod. No. 2

**STRUCTURE NO. 4**

FOR TYPICAL BAR TYPES REFER TO ACI STANDARD 315-57

No.	Qty.	Length	Total Length	Size	Type	A	B	C	D	E	K	G	H	J
1	17	17-6	297-6	4	Str.									
2	15	8-9	131-3	4	2	1-0	7-9							
3	15	4-3	63-9	4	6		1-0	1-11	1-4				0-10	
4	15	3-6	52-6	4	6		1-3	2-3					2-0	1-0
5	14	17-9	248-6	6	Str.									
6	82	5-3	430-6	5	Str.									
7	17	4-0	68-0	5	2	2-6	1-6							
8	17	4-6	76-6	5	2	3-0	1-6							
9	13	3-6	45-6	4	2	1-0	2-6						(Dowel Bar)	



STRUCTURE NO. 1

SCHEDULE OF QUANTITIES-ONE (1) BOAT GATE - STRUCTURE NO. 1		
Quantity	Item	Description
6	Lift Angles	6" x 6" x 3/8" x 2'-3" (See Detail Sheet 16)
1	Galvanized Plate Steel	1/2" x 3'-10" x 7'-6"
1	"	3/8" x 3'-10" x 7'-6"
30	Machine Bolts	1/2" x 11-1/2" w/nuts and lock washers
14	"	1/2" x 10-1/2" w/nuts and lock washers
44	"	1/2" x 9" w/nuts and lock washers
8	"	3/4" x 5-1/2" w/nuts and lock washers
16	"	3/4" x 6" w/nuts and lock washers
12	"	3/4" x 8" w/nuts and lock washers
72	Shear Plate	2 5/8" Teco
6 lb.	Nails	20 penny
408 bd. ft.	2" x 12" Timber	No. 1 Str. Pine
69 bd. ft.	6" x 6" Timber	No. 1 Str. Pine
76 bd. ft.	4" x 6" Timber	No. 1 Str. Pine

SCHEDULE OF QUANTITIES - THREE (3) RETAINER GATES - STRUCTURE NO. 1		
Quantity	Item	Description
12	Lift Angles	6" x 6" x 3/8" x 2'-3" (See Detail Sheet 16)
3	Galvanized Plate Steel	1/2" x 3'-10" x 5'-6"
48	Machine Bolts	1/2" x 11-1/2" w/nuts and lock washers
48	Machine Bolts	1/2" x 10-1/2" w/nuts and lock washers
24	"	3/4" x 5-1/2" w/nuts and lock washers
24	"	3/4" x 6" w/nuts and lock washers
93	"	1/2" x 9" w/nuts and lock washers
24	"	3/4" x 8" w/nuts and lock washers
144	Shear Plate	2 5/8" Teco
12 lbs.	Nails	20 penny
663 bd. ft.	2" x 12" Timber	No. 1 Str. grade pine
156 bd. ft.	6" x 6" Timber	No. 1 Str. grade pine
122 bd. ft.	4" x 6" Timber	No. 1 Str. grade pine

SCHEDULE OF QUANTITIES - THREE (3) FLAP GATES - STRUCTURE NO. 1		
Quantity	Item	Description
3	Angle A	3-1/2" x 3-1/2" x 3/8" x 5'-3-5/8"
6	Angle B	3-1/2" x 3-1/2" x 3/8" x 5'-4-5/8"
6	Angle C	3-1/2" x 3-1/2" x 3/8" x 13'-8-7/8"
12	Angle D	3-1/2" x 3-1/2" x 3/8" x 13'-5"
12	Angle E	4" x 4" x 3/8" x 6'-2"
6	Steel Straps	2-1/2" x 3/8" x 13'-8-7/8"
6	Stud Bolt	1-1/4" x 8"
3	Stud Bolt	1-1/4" x 1'-6" w/castellated nut
2	Stud Bolt	1-1/4" x 2'-0" w/castellated nut
6	Connection Assembly (Fabricated)	See Detail C, sheet 17
6	Clip Angle	6" x 3-1/2" x 3/8" x 4"
3	Galvanized Pipe Sleeve	1 1/2" x 10"
2	Galvanized Pipe Sleeve	1 1/2" x 1'-6"
480	Machine Bolts	1/2" x 5-1/2" w/nuts and lock washers
6	Machine Bolts	1" x 8" w/castellated nut
14 lb.	Nails	20 penny
1,204 bd. ft.	2" x 12" Timber	No. 1 Str. grade pine

SCHEDULE OF QUANTITIES - WALKWAY - STRUCTURE NO. 1		
Quantity	Item	Description
10	Channel (Fabricated)	6" x 12" x 3/8" See Section A-A Sheet 16
5	Shear Plate Angle	6" x 6" x 3/8"
30	Anchor Bolt	3/4" x 39" w/nuts and lock washer
3	Machine Bolt	5/8" x 7-3/4" w/nuts and lock washer
6	"	5/8" x 4-3/4" w/nuts and lock washer
6	Eye Bolts	5/8" x 8" w/cotter key and chain See Section A-A Sheet 16
1	Aluminum Grating	4'-0" x 10'-9"
12 lb.	Nails	16 penny
193 bd. ft.	Timber 2" x 8"	No. 1 Str. Pine
229 bd. ft.	Timber 3" x 8"	No. 1 Str. Pine
415 bd. ft.	Timber 10" x 12"	No. 1 Str. Pine

SCHEDULE OF QUANTITIES - WINGWALLS - STRUCTURE NO. 1		
Quantity	Item	Description
24	Stay rods	1" x 12'-9" w/nuts, flat and lock washers
56	Anchor Bolts	3/4" x 12" w/nuts, flat and lock washers
48	Shear Plate	1/4" x 4" x 4"
4829 bd. ft.	Timber 3" x 8"	No. 1 Str. grade T and G Pine
1077 bd. ft.	Timber 6" x 6"	No. 1 Str. grade

STRUCTURE NO. 2

SCHEDULE OF QUANTITIES - ONE (1) BOAT GATE - STRUCTURE NO. 2 (Same as for Structure No. 1 except for following)		
Quantity	Item	Description
8 lb.	Nails	20 penny
600 bd. ft.	2"x12" timber	No. 1 Str. Grade Pine
118 bd. ft.	4" x 6" timber	No. 1 Str. Grade Pine
1	Galv. Steel Plate	1/2" x 3'-10" x 11'-6"
1	Galv. Steel Plate	3/4" x 3'-10" x 11'-6"

SCHEDULE OF QUANTITIES - WINGWALLS - STRUCTURE NO. 2  
MOD.No.4 adds 150 bd. ft. of 6"x6" timber-No.1 Str. grade-in wingwall of structure No. 2  
(Same as for Structure No. 1)

SCHEDULE OF QUANTITIES - WALKWAY - STRUCTURE NO. 2 (Same as for Structure No. 1 except for following)		
Quantity	Item	Description
2	Aluminum Grating	4'-0" x 7'-6"
253 bd. ft.	Timber 3"x8"	No. 1 Str. pine
13 lb.	Nails	16 penny

SCHEDULE OF QUANTITIES - THREE (3) RETAINER GATES - STRUCTURE NO. 2  
(Same as for Structure No. 1)

SCHEDULE OF QUANTITIES - THREE (3) FLAP GATES - STRUCTURE NO. 2  
(Same as for Structure No. 1)

See Modification drawings for quantities added or deleted.

MOD. 1 Pg. 17

MOD. 2 Pg. 17

MOD. 4 Pg. 9 STRUCTURE NO. 3

SCHEDULE OF QUANTITIES - ONE (1) FLAP GATE - STRUCTURE NO. 3		
Quantity	Item	Description
1	Angle A	3-1/2" x 3-1/2" x 3/8" x 7' - 3-5/8"
2	Angle B	3-1/2" x 3-1/2" x 3/8" x 7' - 4-5/8"
2	Angle C	3-1/2" x 3-1/2" x 3/8" x 12' - 2-1/2"
4	Angle D	3-1/2" x 3-1/2" x 3/8" x 11' - 7-5/8"
4	Angle E	4" x 4" x 3/8" x 6'-2"
2	Steel Straps	2-1/2" x 3/8" x 12' - 2-1/2"
2	Stud Bolt	1-1/4" x 8"
1	Stud Bolt	1-1/4" x 1'-9" w/castellated nut
1	Stud Bolt	1-1/4" x 1'-6" w/castellated nut
2	Connection Assembly (Fabricated)	See detail C, Sheet 17
2	Clip Angle	6" x 3-1/2" x 3/8" x 4"
1	Galv. Pipe Sleeves	1 1/2" x 10"
2	Galv. Pipe Sleeves	1 1/2" x 1'-3"
144	Machine Bolts	1/2" x 5-1/2" w/nuts and lock washers
2	Machine Bolts	1" x 8" w/castellated nut
5 lb.	Nails	20 penny
446 bd. ft.	2" x 12" Timber	No. 1 Str. Pine

SCHEDULE OF QUANTITIES - WALKWAY - STRUCTURE NO. 3		
Quantity	Item	Description
6	Channel (fabricated)	6" x 12" x 3/8" See Section AA Sheet 16
3	Shear Plate Angle	6" x 6" x 3/8"
18	Anchor Bolt	3/4" x 39" w/nuts and lock washer
3	Machine Bolt	5/8" x 4-3/4"
6	Eye Bolt	5/8" x 8" w/cotter key and chain
1	Aluminum Grating	4'-0" x 10'-9"
10 lb.	Nails	16 penny
83 bd. ft.	2"x8" Timber	No. 1 Str. Pine
132 bd. ft.	3"x8" Timber	No. 1 Str. Pine
195 bd. ft.	10"x12" Timber	No. 1 Str. Pine

SCHEDULE OF QUANTITIES - ONE (1) RETAINER GATE - STRUCTURE NO. 3		
Quantity	Item	Description
2	Lift Angles	6" x 6" x 3/8" x 2'-3" (See Detail Sheet 16)
1	Galvanized Plate Steel	1/2" x 2'-6" x 7'-6"
10	Machine Bolts	1/2" x 11-1/2" w/nuts and lock washers
14	"	1/2" x 10-1/2" w/nuts and lock washers
20	"	1/2" x 9" w/nuts and lock washers
8	"	3/4" x 5 1/2" w/nuts and lock washers
4	"	3/4" x 8" w/nuts and lock washers
24	Shear Plate	2 5/8" Teco
6 lb.	Nails	20 penny
184 bd. ft.	Timber 2" x 12"	No. 1 Str. Pine
34 bd. ft.	Timber 6" x 6"	No. 1 Str. Pine
29 bd. ft.	Timber 4" x 6"	No. 1 Str. Pine

STRUCTURE NO. 3 (Continued)

SCHEDULE OF QUANTITIES ONE (1) BOAT GATE - STRUCTURE NO. 3		
Quantity	Item	Description
4	Lift Angles	6" x 6" x 3/8" x 2'-3" (See Detail Sheet 16)
1	Galvanized Plate Steel	1/2" x 3'-10" x 7'-6"
16	Machine Bolts	1/2" x 11-1/2" w/nuts and lock washers
18	"	1/2" x 10-1/2" w/nuts and lock washers
18	"	1/2" x 9" w/nuts and lock washers
8	"	3/4" x 5-1/2" w/nuts and lock washers
8	"	3/4" x 6" w/nuts and lock washers
8	"	3/4" x 8" w/nuts and lock washers
48	Shear Plate	2 5/8" Teco
8 lb.	Nails	20 penny
306 bd. ft.	2" x 12" Timber	No. 1 Str. Pine
52 bd. ft.	6" x 6" Timber	No. 1 Str. Pine
53 bd. ft.	4" x 6" Timber	No. 1 Str. Pine

SCHEDULE OF QUANTITIES - WINGWALLS - STRUCTURE NO. 3		
Quantity	Item	Description
18	Stay rods	1" x 12'-9" w/nuts, flat and lock washers
44	Anchor bolts	3/4" x 12" w/nuts, flat and lock washers
36	Shear Plate	1/4" x 4" x 4"
3,152 bd. ft.	Timber 3" x 8"	No. 1 Str. Grade T & G Pine
876 bd. ft.	6" x 6" Timber	No. 1 Str. Grade Pine

STRUCTURE NO. 4

SCHEDULE OF QUANTITIES - TWO (2) RETAINER GATES - STRUCTURE NO. 4		
Quantity	Item	Description
8	Lift Angle	6" x 6" x 3/8" x 2'-3" (See detail, Sheet 16)
2	Galv. plate steel	1/2" x 3'-10" x 5'-6"
32	Machine Bolts	1/2" x 11-1/2"
44	"	1/2" x 10-1/2"
76	"	1/2" x 9"
16	"	3/4" x 5-1/2"
16	"	3/4" x 6"
16	"	3/4" x 8"
48	Shear Plate	2 5/8" Teco
8 lb.	Nails	20 penny
520 bd. ft.	Timber 2" x 12"	No. 1 Str. Pine
123 bd. ft.	Timber 6" x 6"	No. 1 Str. Pine
91 bd. ft.	Timber 4" x 6"	No. 1 Str. Pine

SCHEDULE OF QUANTITIES - WINGWALLS - STRUCTURE NO. 4		
Quantity	Item	Description
18	Stay Rods	1" x 6'-3" w/nuts, flat and lock washers
44	Anchor bolts	3/4" x 12" w/nuts, flat and lock washers
36	Shear Plate	1/4" x 4" x 4"
3562 bd. ft.	Timber 3"x9"	No. 1 Str. Grade T & G Pine
909 bd. ft.	Timber 6"x6"	No. 1 Str. Grade Pine

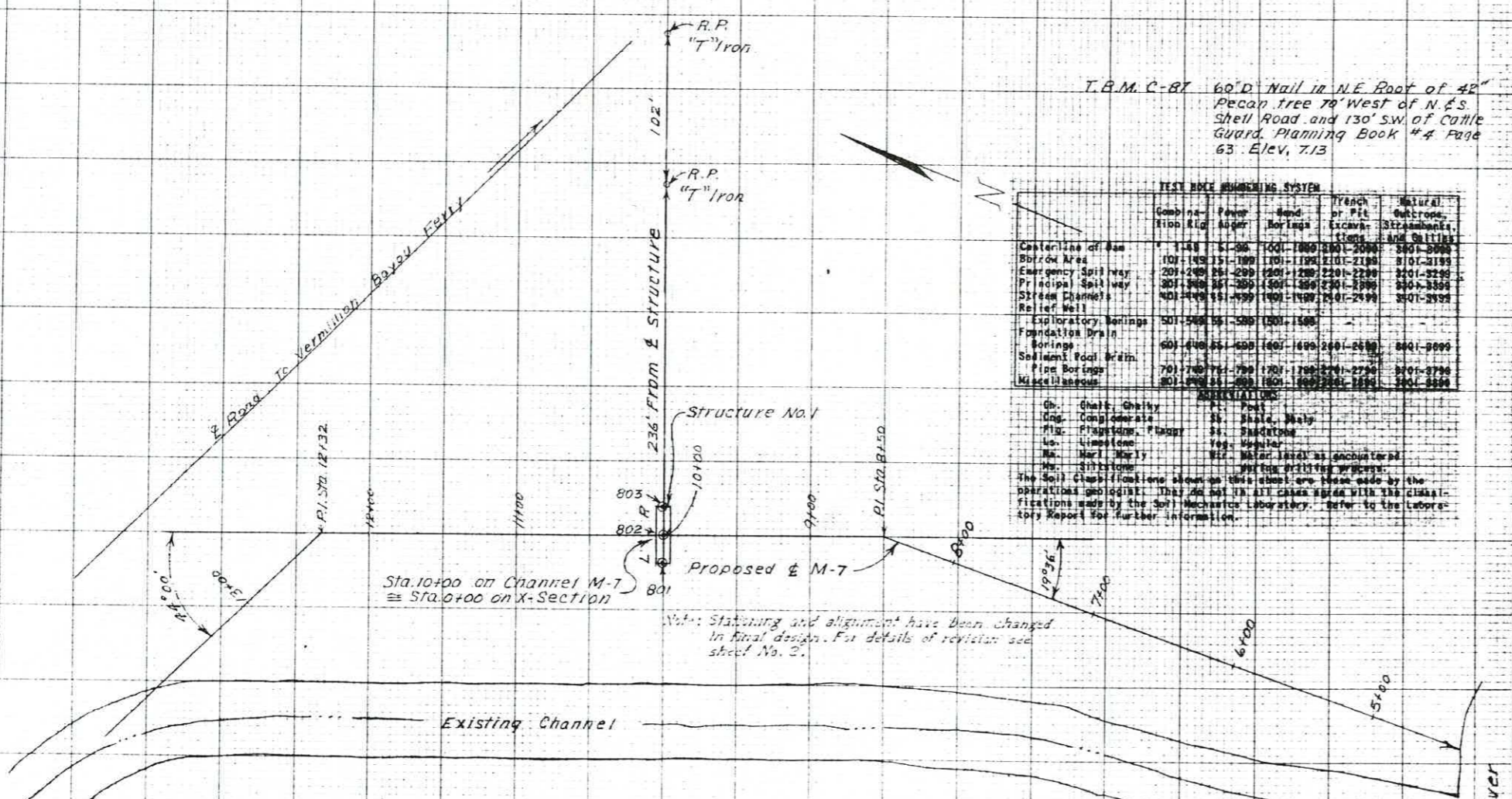
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Quantity	Item	Description
18	Steel Plate	3" x 3/8" x 13"
3	Machine Bolts	5/8" x 7-3/4"
6	Machine Bolts	5/8" x 4-3/4"
10 lb.	Nails	16 penny
138 bd. ft.	Timber 2"x8"	No. 1 Str. Pine
108 bd. ft.	Timber 3"x8"	No. 1 Str. Pine

SCHEDULES OF QUANTITIES  
WATER CONTROL STRUCTURES NO. 1, 2, 3 & 4  
SEVENTH WARD CANAL WATERSHED  
IN  
VERMILION PARISH, LOUISIANA

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

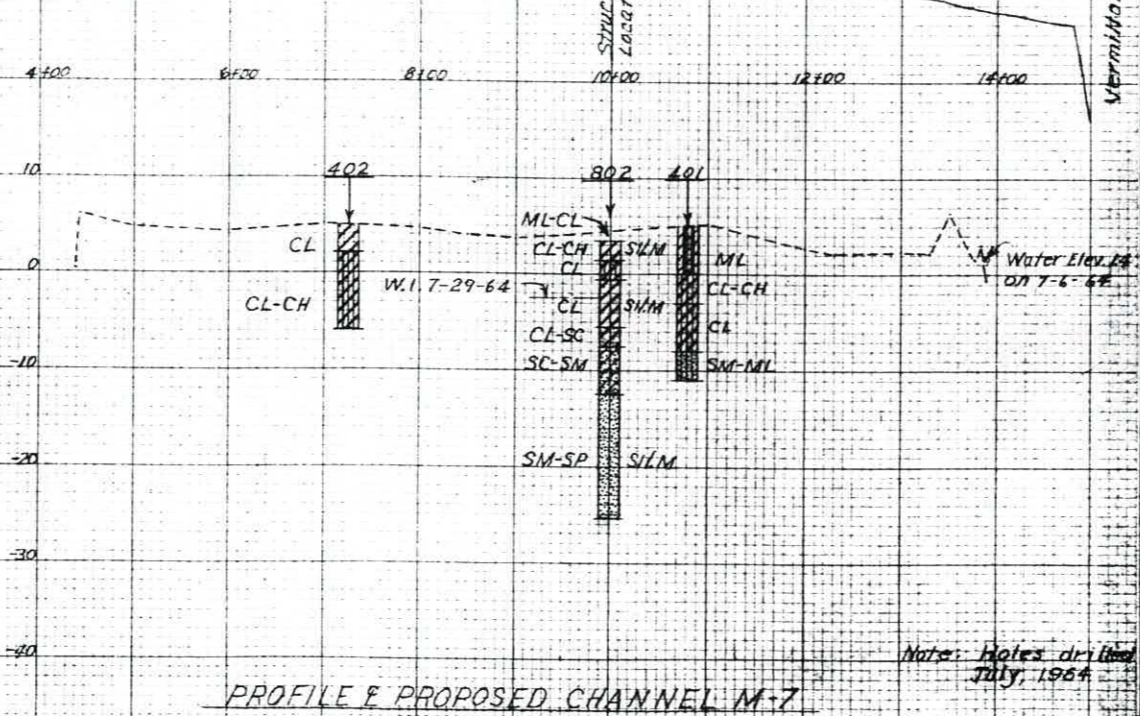
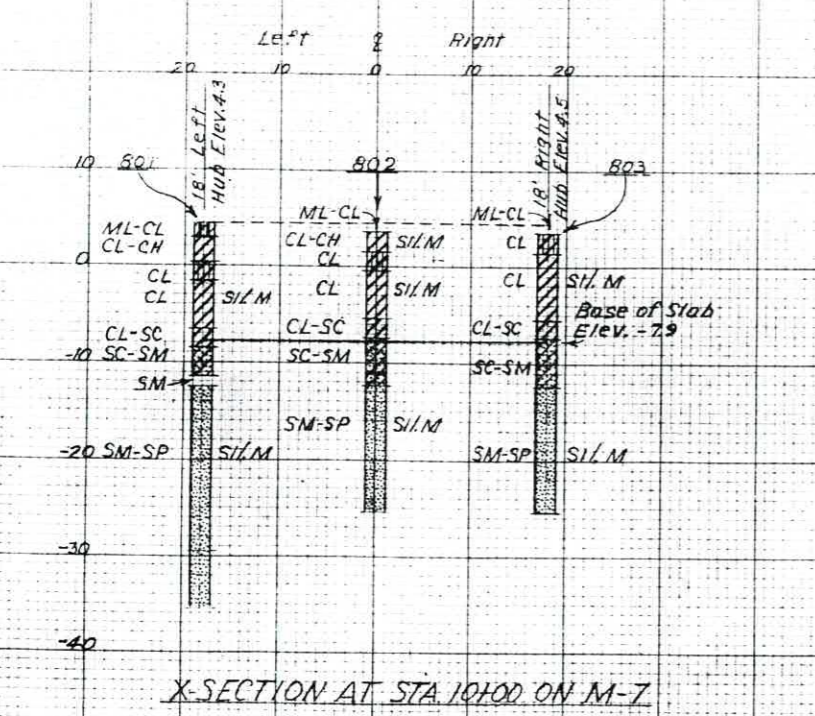
Designed J.F.R. Date 4-65  
Drawn N.B.R. 4-65  
Traced C.V.C. 6-65  
Checked J.R.E., J.F.R., N.B.R. 6-65  
Approved by [Signature] 4-65  
STATE CONSERVATION DISTRICT [Signature]  
Drawing No. 4-E-19,617





T.B.M. C-87 60" D. Nail in NE Root of 42" Pecan tree 70' West of N.E.S. Shell Road and 130' S.W. of Cattle Guard, Planning Book #4 Page 63 Elev. 7.13

Comb. No.	Flow	Flow	Flow	Flow	Flow	Natural
Flow	Flow	Flow	Flow	Flow	Flow	Flow
Centerline of dam	101-199	201-299	301-399	401-499	501-599	601-699
Borrow area	100-199	200-299	300-399	400-499	500-599	600-699
Emergency spillway	201-299	301-399	401-499	501-599	601-699	701-799
Principal spillway	201-299	301-399	401-499	501-599	601-699	701-799
Stream channel	401-499	501-599	601-699	701-799	801-899	901-999
Relief Well	501-599	601-699	701-799	801-899	901-999	
Exploratory borings	501-599	601-699	701-799	801-899	901-999	
Foundation borings	601-699	701-799	801-899	901-999		
Soil borings	701-799	801-899	901-999			
Line borings	801-899	901-999				
Miscellaneous	901-999					



### LEGEND

**SYMBOLS**

**UNCONSOLIDATED MATERIAL**

gravel	sand	silt	clay	cobbles, boulders
gravel, sandy	sand, gravelly	silt, gravelly	clay, gravelly	peat or muck
gravel, silty	sand, silty	silt, sandy	clay, sandy	
gravel, clayey	sand, clayey	silt, clayey	clay, silty	

**CONSOLIDATED MATERIAL**

**Sedimentary Rocks**

Conglomerate	shale	limestone	coal
breccia	siltstone	dolomite	gypsum
sandstone	marl	chalk	chert

**Metamorphic Rocks**

gneiss	schist	intrusive	extrusive
quartzite	slate	pyroclastic	

**Igneous Rocks**

marble	soapstone	undifferentiated
	talc	serpentine

**Other Symbols**

- hole logged only
- hole sampled
- ✂ strike and dip
- ⊥ pit or trench

**ABBREVIATIONS**

ang.	angular	lam.	laminated	G	gravel, gravelly
bld.	boulders (> 12")	lse.	loose	S	sand, sandy
calc.	calcareous	mas.	massive	M	silt, silty
cali.	caliche	med.	medium	C	clay, clayey
cav.	cavities	mic.	micaceous	O	organic
cmt.	cemented	mod.	moderately	W	well graded
cse.	coarse	n. r.	no recovery	P	poorly graded
cbl.	cobbles (3"-12")	per.	permeable		
cpt.	compact	po.	poorly		
con.	concretions	rd.	rounded		
cr.	crystalline	sl.	slightly		
ds.	dense	st.	soft		
dip.	dipping	st.	some		
d.s.	downstream	sl.	slowly		
fn.	fine	stf.	stiff		
frm.	firm	t.b.	thin bedded		
frac.	fractured	tuf.	tuffaceous		
frg.	fragments	u.s.	upstream		
fr.	frable	var.	variable		
grn.	grain	w.	with		
gyp.	gypseous	w.	with		
hd.	hard	wea.	weathered		
h.	highly	w.l.	water static water level		

**TEST HOLE NUMBERING SYSTEM**

Centerline of dam	1 99	Stream channel	401-499
Borrow area	101-199	Relief wells	501-599
Emergency spillway	201-299		601-699
Centerline of outlet structure	301-399		701-799

**UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOLS**

GW	Well graded gravels, gravel-sand mixtures
GP	Poorly graded gravels
GM	Silty gravels, gravel-sand-silt mixtures
GC	Clayey gravels, gravel-sand-clay mixtures
SW	Well graded sands, sand-gravel mixtures
SP	Poorly graded sands
SM	Silty sand
SC	Clayey sands, sand-clay mixtures
ML	Silts with liquid limit of 50 or less
MH	Silts with liquid limit above 50
CL	Clays with liquid limit of 50 or less
CH	Clays with liquid limit above 50
OL	Organic silts and clays with liquid limit of 50 or less
OH	Organic silts and clays with liquid limit above 50

Revised February 1963

**PLAN AND PROFILES - GEOLOGIC INVESTIGATIONS**

**WATER CONTROL STRUCTURE NO. 1**  
**SEVENTH WARD CANAL WATERSHED**  
**VERMILION PARISH, LOUISIANA**

**U. S. DEPARTMENT OF AGRICULTURE**  
**SOIL CONSERVATION SERVICE**

Investigated by: E. G. Nicholas, Jr. Date: 8-64  
 Title: Geologic  
 Checked by: [Signature]  
 Approved by: [Signature]  
 Title: [Signature]  
 Drawing No.: 4-E-19,617  
 Sheet: 20 of 23  
 Logs Plotted by: N.B.R. 8-64  
 Logs Checked by: J.E.R. 6-65

Note: Holes drilled July, 1964



TAM. Structure, 40' d. nail in N. root of a forked 46" oak tree is on ridge approx. 100' S. of proposed structure and approx. 500' from West bank of Little Bayou. Planning Book 15 Page 59. Elev. 3.72

### LEGEND

**SYMBOLS**

**UNCONSOLIDATED MATERIAL**

gravel	sand	silt	clay	cobbles, boulders
gravel, sandy	sand, gravelly	silt, gravelly	clay, gravelly	peat or muck
gravel, silty	sand, silty	silt, sandy	clay, sandy	
gravel, clayey	sand, clayey	silt, clayey	clay, silty	

**CONSOLIDATED MATERIAL**

**Sedimentary Rocks**

Conglomerate	shale	limestone	coal
breccia	siltstone	dolomite	gypsum
sandstone	marl	chalk	chert

**Metamorphic Rocks**

gneiss	schist	intrusive	extrusive
quartzite	slate	pyroclastic	
marble	soapstone	undifferentiated	

**Other Symbols**

- hole logged only
- hole sampled
- ↘ strike and dip
- pit or trench

### ABBREVIATIONS

ang.	angular	lam.	laminated	G	gravel, gravelly
bld.	boulders (> 12")	lse.	loose	S	sand, sandy
calc.	calcareous	mas.	massive	M	silt, silty
cali.	caliche	med.	medium	C	clay, clayey
cav.	cavities	mic.	micaceous	O	organic
cmt.	cemented	mod.	moderately	W	well graded
cse.	coarse	n. r.	no recovery	P	poorly graded
cbl.	cobbles (3"-12")	per.	permeable		
cpt.	Compact	po.	poorly		
con.	concretions	rd.	rounded		
xln.	crystalline	s/l.	slightly		
ds.	dense	sft.	soft		
dip.	dipping	s/.	some		
d.s.	downstream	slo.	slowly		
fn.	fine	stf.	stiff		
frm.	firm	t.b.	thin bedded		
frac.	fractured	tuff.	tuffaceous		
frg.	fragments	u.s.	upstream		
fr.	friable	var.	variable		
grn.	grain	w/.	with		
gyp.	gypseous	wea.	weathered		
hd.	hard	w.l.	(date) static water level		
h.	highly				

### TEST HOLE NUMBERING SYSTEM

Centerline of dam	1 99	Stream channel	401 499
Borrow area	101 - 199	Relief wells	501 599
Emergency spillway	201 - 299		601 699
Centerline of outlet structure	301 - 399		701 799

### UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOLS

GW	Well graded gravels, gravel sand mixtures
GP	Poorly graded gravels
GM	Silty gravels, gravel sand silt mixtures
GC	Clayey gravels, gravel sand clay mixtures
SW	Well graded sands, sand gravel mixtures
SP	Poorly graded sands
SM	Silty sand
SC	Clayey sands, sand clay mixtures
ML	Silts with liquid limit of 50 or less
MH	Silts with liquid limit above 50
CL	Clays with liquid limit of 50 or less
CH	Clays with liquid limit above 50
OL	Organic silts and clays with liquid limit of 50 or less
OH	Organic silts and clays with liquid limit above 50

Revised February 1963

PLAN AND PROFILES — GEOLOGIC INVESTIGATIONS  
**WATER CONTROL STRUCTURE NO. 2**  
**SEVENTH WARD CANAL WATERSHED**  
**VERMILION PARISH, LOUISIANA**

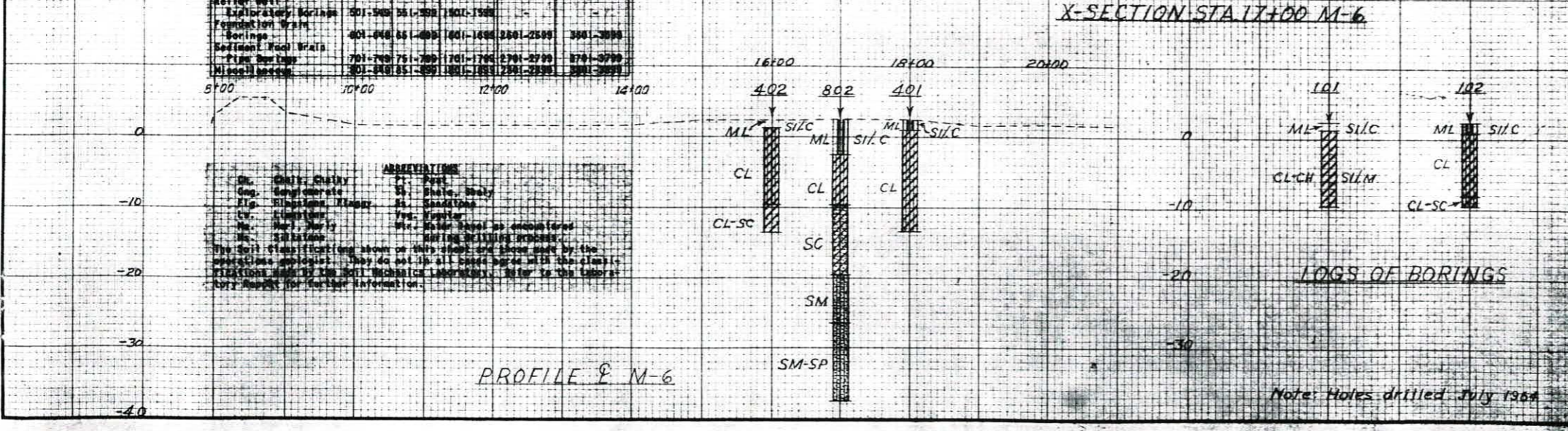
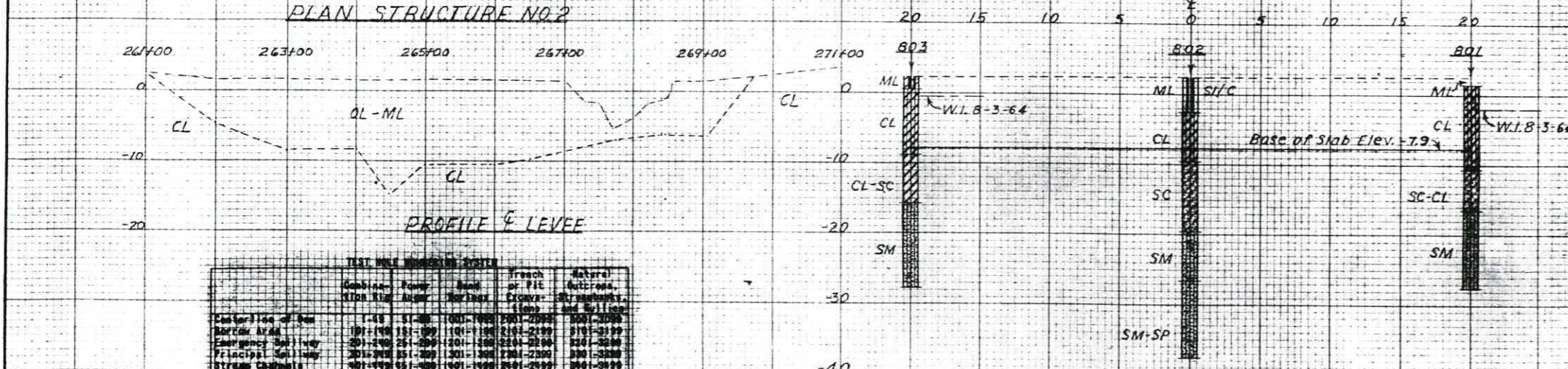
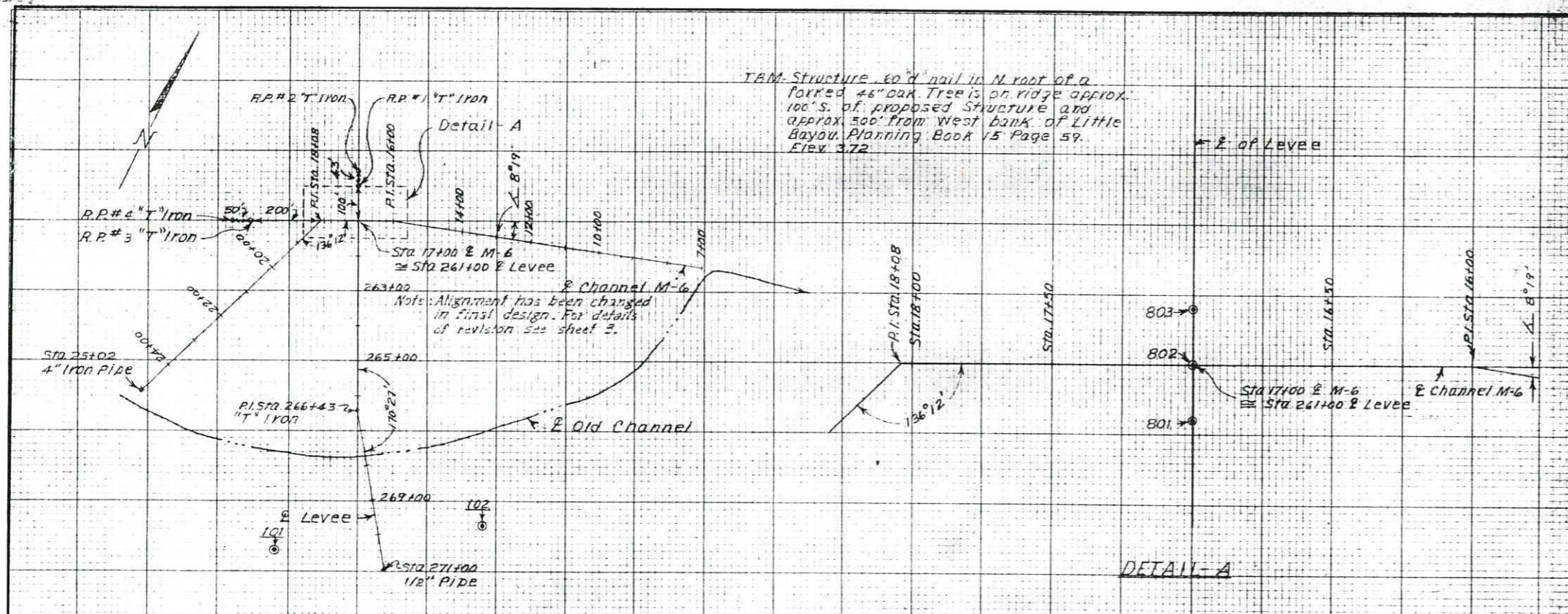
U. S. DEPARTMENT OF AGRICULTURE  
**SOIL CONSERVATION SERVICE**

Investigated by: E.C. Nicholas, Jr. 8-64  
 Date: \_\_\_\_\_  
 Title: Geologist  
 Checked by: \_\_\_\_\_  
 Title: \_\_\_\_\_

Approved by: R.M.  
 Title: \_\_\_\_\_  
 Checked by: K.V.S.P.  
 Title: \_\_\_\_\_

Logs Plotted by N.B.R. 8-64  
 Logs Checked by J.F.R. 6-65

Sheet 21  
 Drawing No. 4-E-19617



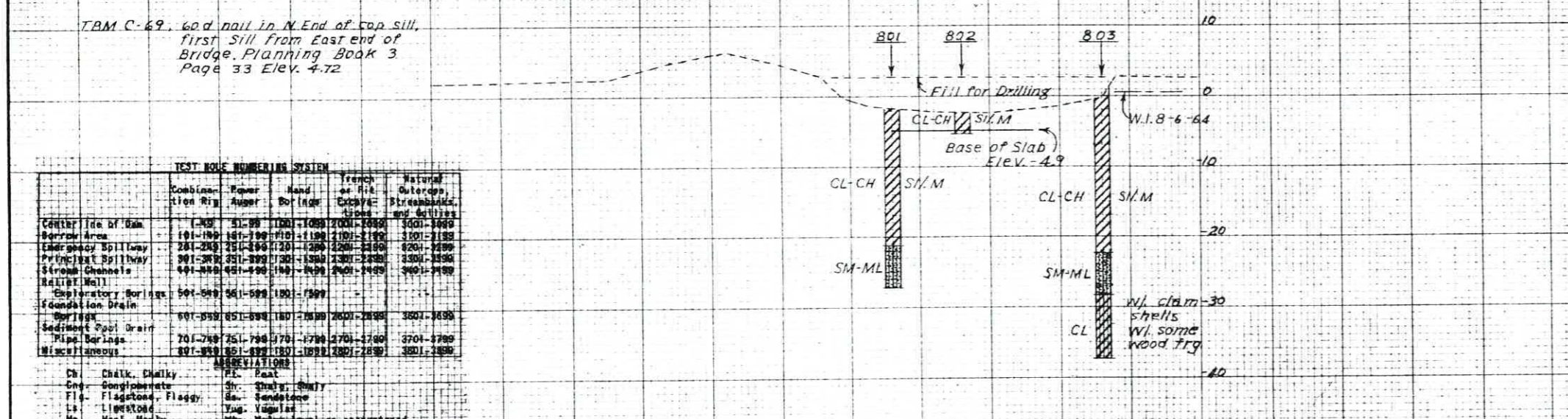
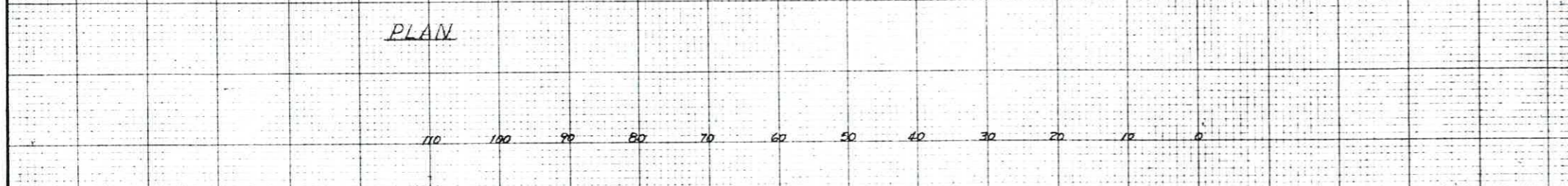
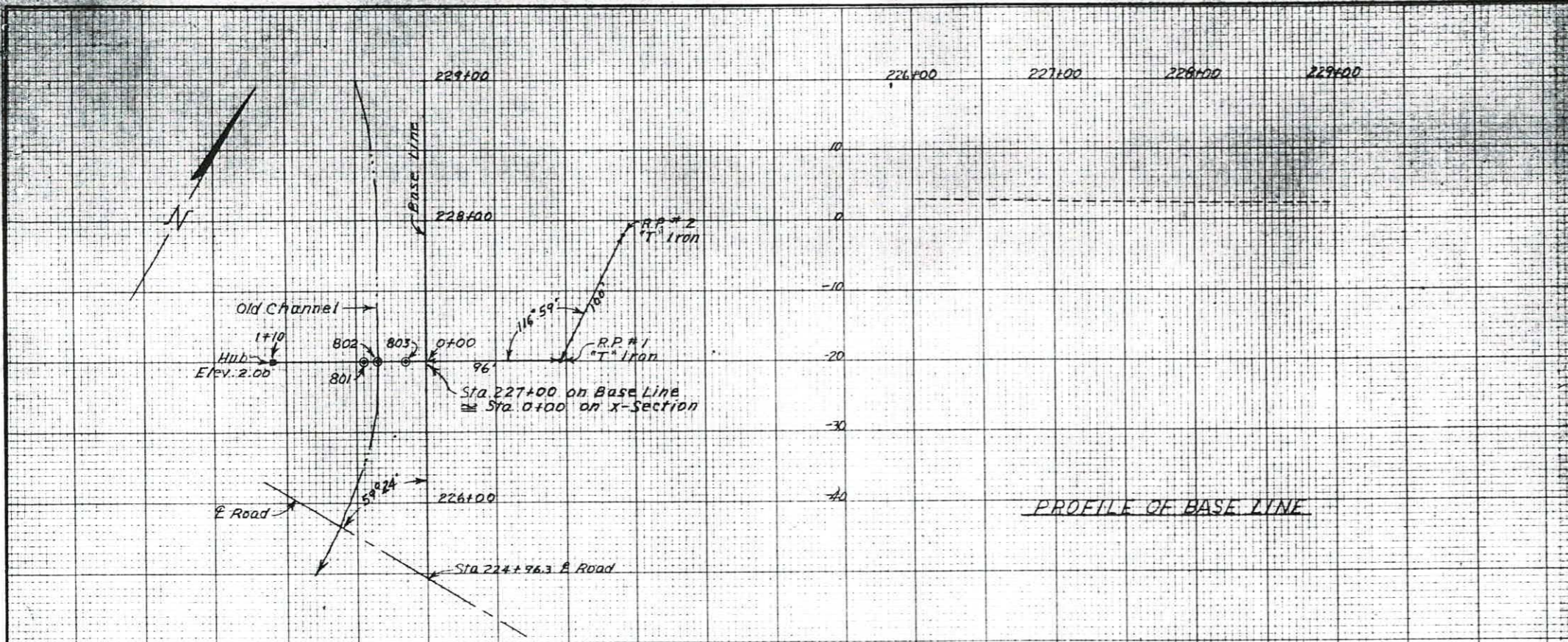
### TEST HOLE NUMBERING SYSTEM

Location	Station	Depth	Notes
Centerline of Dam	1-99		
Borrow Area	101-199		
Emergency Spillway	201-299		
Centerline of Outlet Structure	301-399		
Stream Channel	401-499		
Relief Wells	501-599		
Other	601-699		
Other	701-799		

### ABBREVIATIONS

Symbol	Material
Cl.	Clay, clayey
Sl.	Silt, silty
G.	Gravel, gravelly
S.	Sand, sandy
M.	Mud, silty
C.	Clay, clayey
O.	Organic
W.	Well graded
P.	Poorly graded





### LEGEND

**SYMBOLS**

**UNCONSOLIDATED MATERIAL**

gravel	sand	silt	clay	cobbles, boulders
gravel, sandy	sand, gravelly	silt, gravelly	clay, gravelly	peat or muck
gravel, silty	sand, silty	silt, sandy	clay, sandy	
gravel, clayey	sand, clayey	silt, clayey	clay, silty	

**CONSOLIDATED MATERIAL**

**Sedimentary Rocks**

Conglomerate Cng.	shale sh.	limestone ls.	coal
breccia br.	siltstone slst.	dolomite dol.	gypsum gyp.
sandstone ss.	marl	chalk ck.	chert cht.

**Metamorphic Rocks**

gneiss	schist	intrusive	extrusive
quartzite	slate	pyroclastic	
marble	sapstone talc	serpentine	

**Other Symbols**

- hole logged only
- hole sampled
- ↙ strike and dip
- pit or trench

**ABBREVIATIONS**

ang. angular	lam. laminated	G gravel, gravelly
bld. boulders (> 12")	lse. loose	S sand, sandy
calc. calcareous	mas. massive	M silt, silty
cali. caliche	med. medium	C clay, clayey
cav. cavities	mic. micaceous	O organic
cmt. cemented	mod. moderately	W well graded
cse. coarse	n. r. no recovery	P poorly graded
cbl. cobbles (3"-12")	per. permeable	
cpt. Compact	po. poorly	
con. concretions	rd. rounded	
xdn. crystalline	sl. slightly	
ds. dense	sft. soft	
dip. dipping	s/. some	
d.s. downstream	slw. slowly	
fn. fine	stf. stiff	
frm. firm	t.b. thin bedded	
frac. fractured	tuff. tuffaceous	
frg. fragments	u.s. upstream	
fr. friable	var. variable	
grn. grain	v/. very	
gyp. gypseous	w/. with	
hd. hard	wea. weathered	
h. highly	w.l. (date) static water level	

**TEST HOLE NUMBERING SYSTEM**

Centerline of dam	1 99	Stream channel	401 - 499
Borrow area	101 - 199	Relief wells	501 - 599
Emergency spillway	201 - 299		601 - 699
Centerline of outlet structure	301 - 399		701 - 799

**UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOLS**

GW	Well graded gravels, gravel sand mixtures
GP	Poorly graded gravels
GM	Silty gravels, gravel sand/silt mixtures
GC	Clayey gravels, gravel sand/clay mixtures
SW	Well graded sands, sand gravel mixtures
SP	Poorly graded sands
SM	Silty sand
SC	Clayey sands, sand/clay mixtures
ML	Silts with liquid limit of 50 or less
MH	Silts with liquid limit above 50
CL	Clays with liquid limit of 50 or less
CH	Clays with liquid limit above 50
OL	Organic silts and clays with liquid limit of 50 or less
OH	Organic silts and clays with liquid limit above 50

Revised February 1963

**TEST HOLE NUMBERING SYSTEM**

	Centerline of Dam	Borrow Area	Emergency Spillway	Principal Spillway	Stream Channels	Relief Wells	Exploratory Borings	Foundation Drain	Sediment Pool Drain	Pipe Borings	Miscellaneous
Centerline of Dam	1-99	101-199	201-299	301-399	401-499	501-599	601-699	701-799	801-899	901-999	1001-1099
Borrow Area		101-199	201-299	301-399	401-499	501-599	601-699	701-799	801-899	901-999	1001-1099
Emergency Spillway			201-299	301-399	401-499	501-599	601-699	701-799	801-899	901-999	1001-1099
Principal Spillway			201-299	301-399	401-499	501-599	601-699	701-799	801-899	901-999	1001-1099
Stream Channels				301-399	401-499	501-599	601-699	701-799	801-899	901-999	1001-1099
Relief Wells						501-599	601-699	701-799	801-899	901-999	1001-1099
Exploratory Borings						601-699	701-799	801-899	901-999	1001-1099	1101-1199
Foundation Drain							701-799	801-899	901-999	1001-1099	1101-1199
Sediment Pool Drain								801-899	901-999	1001-1099	1101-1199
Pipe Borings									901-999	1001-1099	1101-1199
Miscellaneous										1001-1099	1101-1199

**ABBREVIATIONS**

Ch	Chalk, Chalky	Pl.	Peat
Cng.	Conglomerate	Sh.	Shaly, Shaly
Flg.	Flagstone, Flagg.	Ss.	Sandstone
Ls.	Limestone	Yg.	Yugular
Ma.	Marl, Marly	Wtr.	Water level as encountered
Sl.	Siltstone		during drilling process

The Soil Classifications shown on this sheet are those made by the operations geologists. They do not in all cases agree with the classifications made by the Soil Mechanics Laboratory. Refer to the Laboratory Report for further interpretation.

**PLAN AND PROFILES — GEOLOGIC INVESTIGATIONS**

**WATER CONTROL STRUCTURE NO. 3**

**SEVENTH WARD CANAL WATERSHED**

**VERMILION PARISH, LOUISIANA**

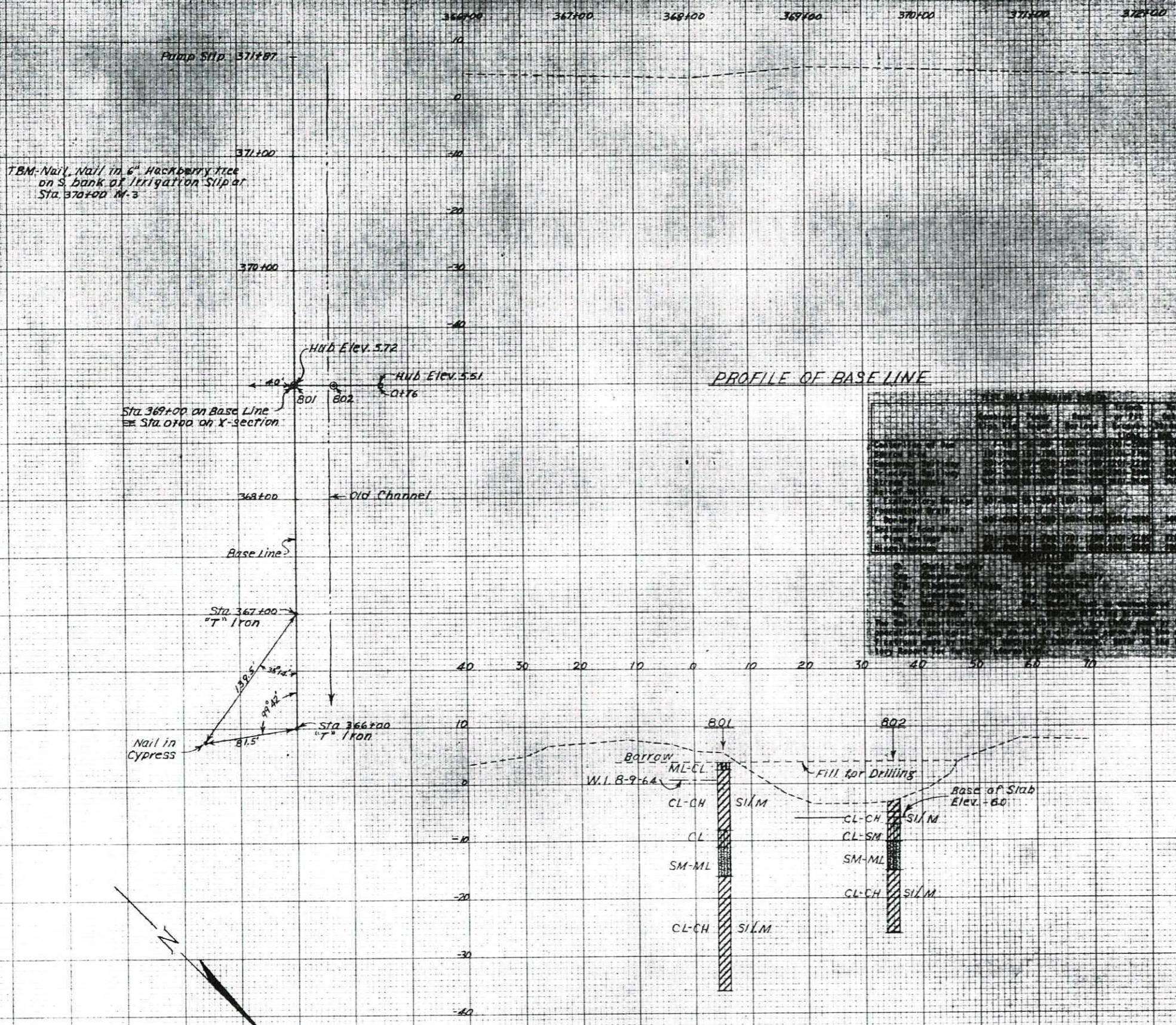
**U. S. DEPARTMENT OF AGRICULTURE**

**SOIL CONSERVATION SERVICE**

Investigated by: E. C. ...  
 Title: 520/2355  
 Checked by: K. V. S. Q.  
 Date: 4-E-19,617  
 Log Plotted by: N.R. F-44  
 Log Checked by: L.F.R. 6-66

Note: Notes drilled July 1964





### LEGEND

**SYMBOLS**

**UNCONSOLIDATED MATERIAL**

gravel	sand	silt	clay	cobbles, boulders
gravel, sandy	sand, gravelly	silt, gravelly	clay, gravelly	peat or muck
gravel, silty	sand, silty	silt, sandy	clay, sandy	
gravel, clayey	sand, clayey	silt, clayey	clay, silty	

**CONSOLIDATED MATERIAL**

**Sedimentary Rocks**

Conglomerate Cng.	shale sh.	limestone ls.	coal
breccia br.	siltstone silt.	dolomite dol.	gypsum gyp.
sandstone ss.	marl	chalk ck.	chert cht.

**Metamorphic Rocks**

gneiss	schist	intrusive	extrusive
quartzite	slate	pyroclastic	
marble	soapstone talc	serpentine	Undifferentiated

**Other Symbols**

- hole logged only
- ⊙ hole sampled
- ↙ strike and dip
- pit or trench

### ABBREVIATIONS

ang.	angular	lam.	laminated	G	gravel, gravelly
bld.	boulders (> 12")	lse.	loose	S	sand, sandy
calc.	calcareous	mas.	massive	M	silt, silty
cali.	caliche	med.	medium	C	clay, clayey
cav.	cavities	mic.	micaceous	O	organic
cmt.	cemented	mod.	moderately	W	well graded
cse.	coarse	n. r.	no recovery	P	poorly graded
cbl.	cobbles (3"-12")	per.	permeable		
cpt.	Compact	po.	poorly		
con.	concretions	rdd	rounded		
xln.	crystalline	sl/	slightly		
ds.	dense	st/	soft		
dip.	dipping	s/	some		
d.s.	downstream	sl.	slowly		
fn.	fine	stf.	stiff		
frm.	firm	t.b.	thin-bedded		
frac.	fractured	tuff.	tuffaceous		
frg.	fragments	u.s.	upstream		
fri.	friable	var.	variable		
grn.	grain	v/	very		
gyp.	gypseous	w/	with		
hd.	hard	wea.	weathered		
h.	highly	w.l.	(date) static water level		

### TEST HOLE NUMBERING SYSTEM

Centerline of dam	1 - 99	Stream channel	401 - 499
Borrow area	101 - 199	Relief wells	501 - 599
Emergency spillway	201 - 299		601 - 699
Centerline of outlet structure	301 - 399		701 - 799

### UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOLS

GW	Well graded gravels; gravel-sand mixtures
GP	Poorly graded gravels
GM	Silty gravels; gravel-sand-silt mixtures
GC	Clayey gravels; gravel-sand-clay mixtures
SW	Well graded sands; sand gravel mixtures
SP	Poorly graded sands
SM	Silty sand
SC	Clayey sands; sand clay mixtures
ML	Silts with liquid limit of 50 or less
MH	Silts with liquid limit above 50
CL	Clays with liquid limit of 50 or less
CH	Clays with liquid limit above 50
OL	Organic silts and clays with liquid limit of 50 or less
OH	Organic silts and clays with liquid limit above 50

Revised February 1963

PLAN AND PROFILES FOR GEOLOGIC INVESTIGATIONS  
**WATER CONTROL STRUCTURE NO. 4**  
**SEVENTH WARD CANAL WATERSHED**  
**VERMILLION PARISH, LOUISIANA**

**U. S. DEPARTMENT OF AGRICULTURE**  
**SOIL CONSERVATION SERVICE**

Investigated by E.C. Nicholas, Jr. Date 8-64 Approved by J.M.  
 Title Geologist Checked by K.V. S.J.  
 Checked by \_\_\_\_\_  
 Title \_\_\_\_\_  
 Logs Plotted by N.B.R. 8-64 Sheet 23 Drawing No. 4-E-19,617  
 Logs Checked by J.B.R. 6-65 Sheet 23

**X SECTION AT STA 369+00 ON BASE LINE**

Notes: Holes drilled July, 1964