

PLUM CREEK WATERSHED PROJECT

FLOODWATER RETARDING DAM NO. 21

DRAINAGE AREA	5536 ACRES
TOTAL STORAGE	3283 AC.FT.
WATER SURFACE AREA	57 ACRES
HEIGHT OF DAM	30 FEET
VOLUME OF FILL	207,350 CU.YDS.

BUILT UNDER THE WATERSHED PROTECTION
AND FLOOD PREVENTION ACT

BY

HAYS-CALDWELL-TRAVIS SOIL CONSERVATION DISTRICT

AND

PLUM CREEK CONSERVATION DISTRICT

WITH THE ASSISTANCE OF

SOIL CONSERVATION SERVICE

OF THE

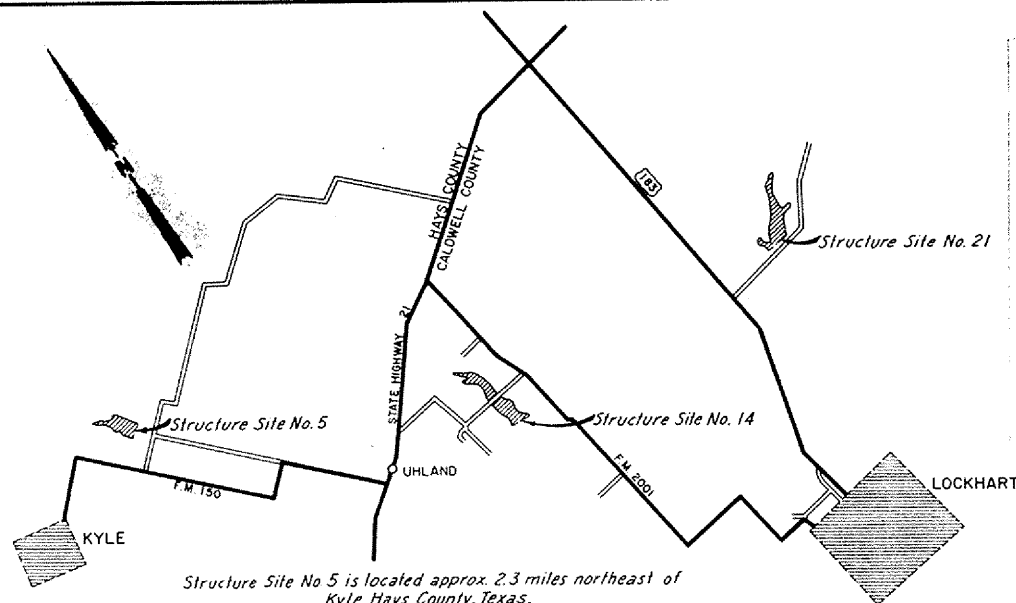
U. S. DEPARTMENT OF AGRICULTURE

1961

*As Built Plans
Const. Completed - 7-13-62*

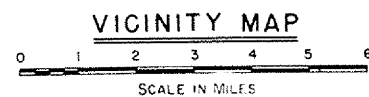
CONSTRUCTION DRAWINGS APPROVED

<i>Howard Watson</i>	11-1-61
HEAD ENGINEERING & SURVEYING PLANNING UNIT	Date
<i>John L. ...</i>	11-1-61
STATE CONSERVATION ENGINEER'S OFFICE	Date
TEXAS	



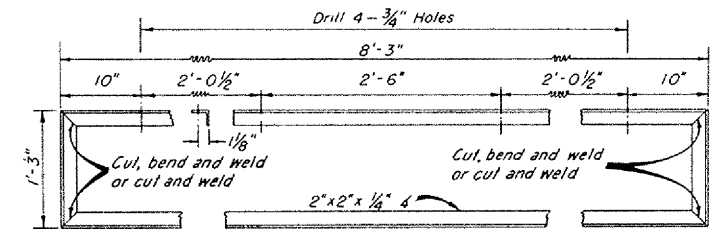
Structure Site No. 5 is located approx. 2.3 miles northeast of Kyle, Hays County, Texas.

Structure Site No. 21 is located approx. 5 miles north and one east of Lockhart, Caldwell County, Texas.

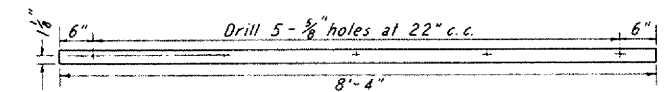


Notes:

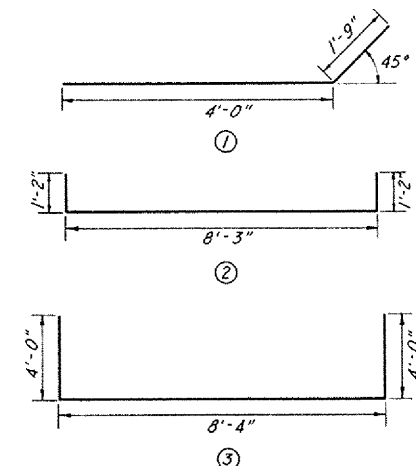
1. The orifice plates and air vent shall be removed from the top of the inlet and the materials salvaged. Salvaged materials shall be stored on the site as directed by the Engineer.
2. The four existing 8" x 10" ports in the inlet shall remain unchanged.
3. Four new ports shall be constructed in the inlet. The crest elevation, size, and location shall be as shown on the drawings. Construction of these ports may be accomplished by sawing or by use of mechanical hammer or drill. Sufficient care shall be exercised to prevent excessive damage to the concrete outside the limits of the constructed ports.
4. Reinforcing steel exposed during construction of the ports shall be cut and removed from the port openings.
5. After constructing the ports, any excessively damaged or spalled concrete surfaces shall be repaired and brought to a true surface and finish using an epoxy mortar acceptable to the Engineer and applied as recommended by the manufacturer.
6. The trash guards for the ports shall be fabricated of new materials and in a workman like manner. Members ①, ② and ③ may be either deformed steel bars or smooth steel rods.
7. All metal to metal connections in the trash guards for the ports shall be made by welding.
8. After fabrication the trash guards for the ports shall be painted with two coats of red lead base paint and two coats of aluminum paint. Surface preparation prior to painting and application of paint shall be in accordance with the manufacturers recommendations. Quality of paints used shall be acceptable to the Engineer.
9. The trash guard for the ports shall be attached to the existing 4" C with five 3/8" galvanized machine bolts, as shown, and to the existing principal spillway inlet with four 5/8" bolts or lag screws. Holes drilled through the sidewall or acceptable expansion anchors set in the sidewall may be used for attaching the trash guards for the ports to the existing inlet.



DETAIL - ANGLE "D"

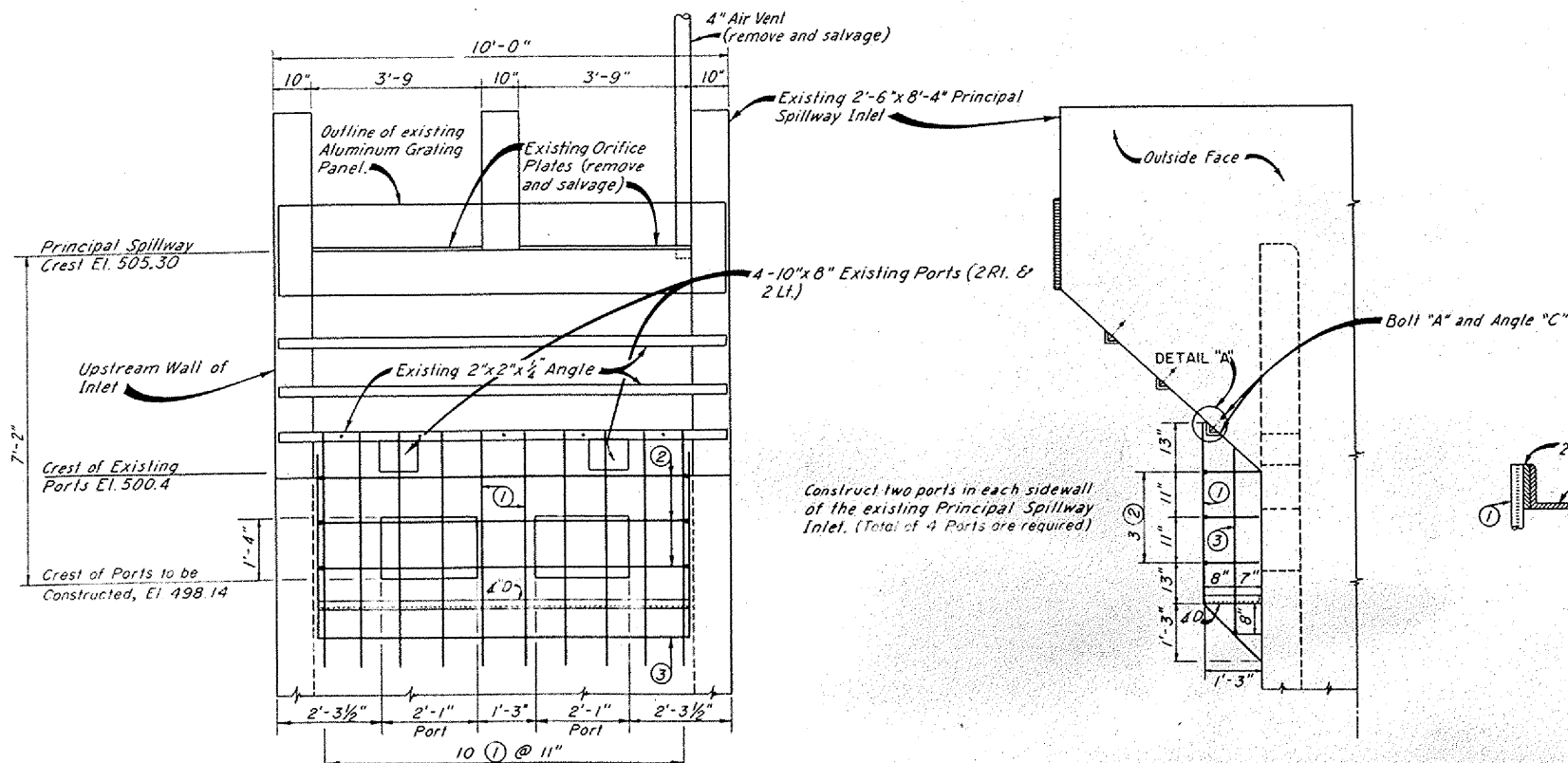


STRAP DETAIL



Note: Dimensions shown for bending of bars are out to out of bar

BAR DETAILS



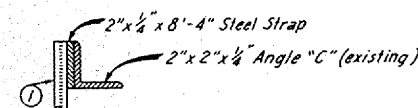
SIDE ELEVATION

HALF ELEVATION

TRASH GUARD

SCHEDULE OF QUANTITIES - TRASH GUARD FOR PORTS		
ITEM	QUANTITY	DESCRIPTION
①	10	3/8" dia., Steel; bend as shown; weld to ②, ③, 4D and strap.
②	3	1/2" dia., Steel; bend as shown; weld to ① and ③.
③	1	1/2" dia., Steel; bend as shown; weld to ①, ② and 4D.
4D	1	2" x 2" x 1/4" x 10'-0" Steel angle; fabricate as shown; weld to ① and ③.
Strap	1	2" x 1/4" x 8'-4" Steel; drill 5-5/8" holes as shown; weld to ①.
Bolts	5	1/2" galvanized, Machine with galv. nuts, lockwashers and flatwashers.
Bolts	4	5/8" galvanized (See Note 9 above)

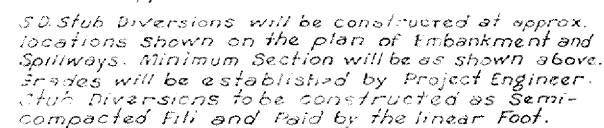
Note: Quantities shown above are for one trash guard. Two trash guards are required; one on either side of the inlet.



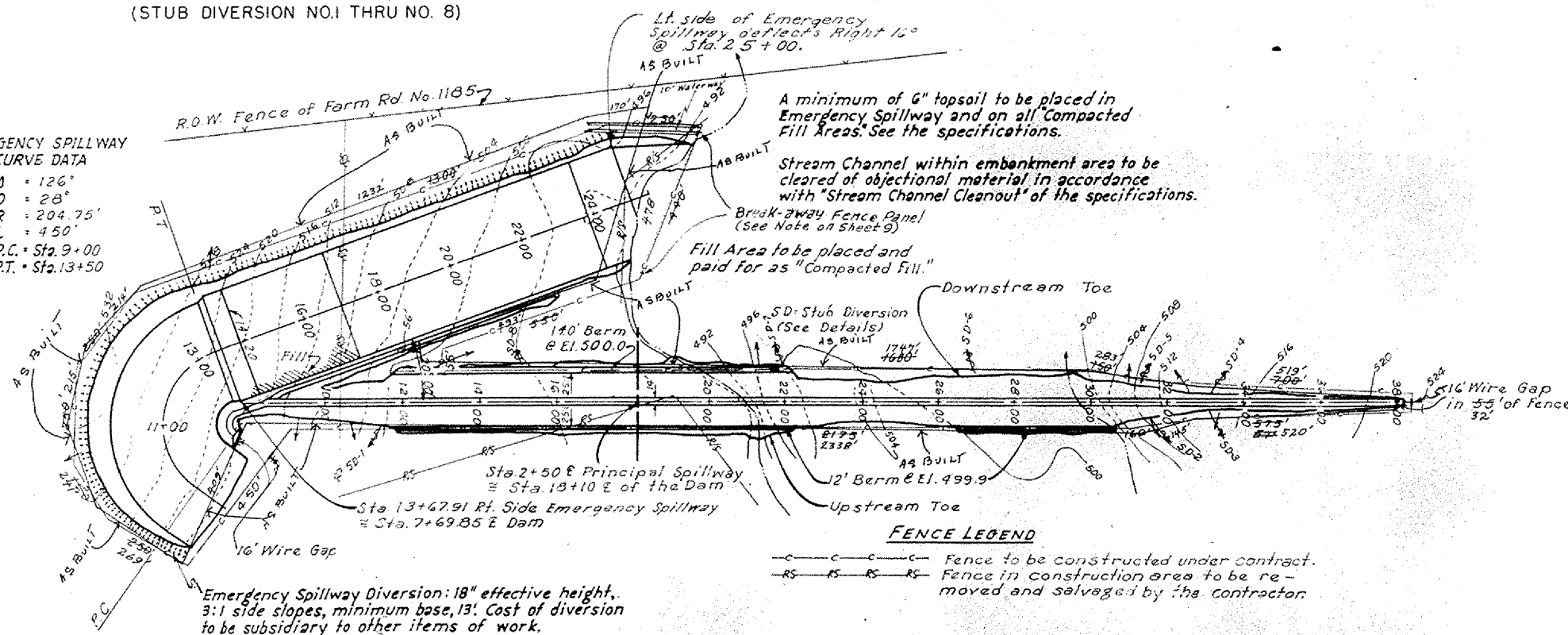
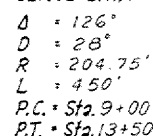
DETAIL "A"

As Built (Plan)
Const Comp. 9-12-68
No Change in Const.
Rev. 4-67

INLET STRUCTURE MODIFICATION FLOODWATER RETARDING STRUCTURE SITE No. 21 PLUM CREEK WATERSHED IN HAYS, CALDWELL & TRAVIS COUNTIES, TEXAS			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed	H.W.A.	11-65	Checked
Drawn	H.W.A.	11-65	Checked
Traced	F.I.B.	4-67	Checked
Checked	H.W.A. & G.C.V.	11-65	Checked
			4-E-15,942

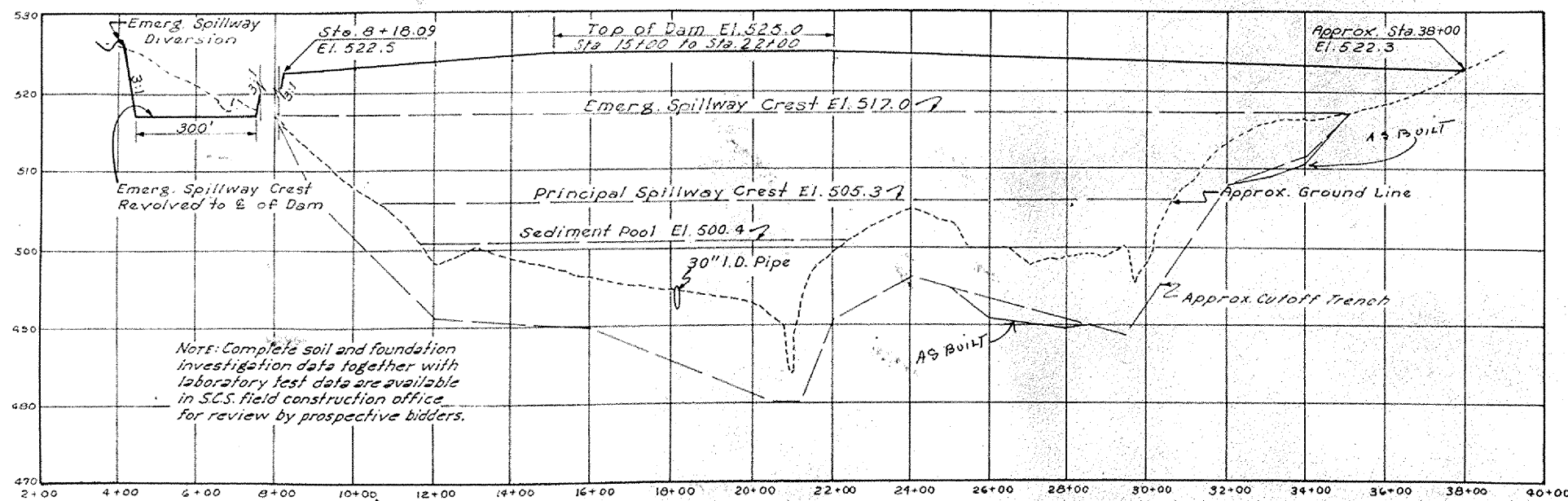


(STUB DIVERSION NO.1 THRU NO. 8)

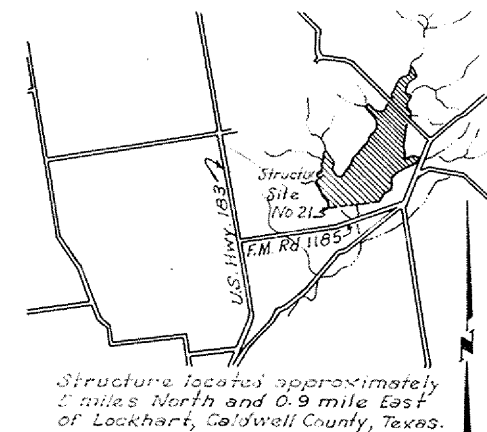


0 200 400 600 800 1000

SCALE IN FEET



PROFILE ON C OF DAM



VICINITY MAP

0 1 2 3
SCALE IN MILES

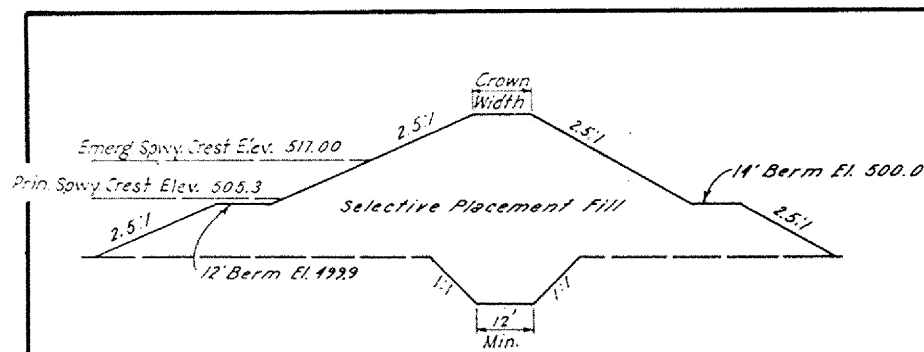
As Built Plans
Const. Completed - 7-13-62

EMBANKMENT PLAN AND PROFILE
FLOODWATER RETARDING STRUCTURE SITE No. 21
PLUM CREEK WATERSHED
IN
HAYS, CALDWELL AND TRAVIS COUNTIES, TEXAS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

	Date	21 Jan
Designed <u>A.E.G.</u>	8-61	Approved by WAS. ENGINEERING & WATERWAYS PLANNING DIV. FORT MONROE, TEXAS
Drawn <u>A.E.G. & OLS.</u>	9-61	STATE CONSTRUCTION ENGINEER, S.C.T.
Traced <u>O.L.S.</u>	9-61	STAFF, TEXAS
Checked <u>A.E.G. & H.H.K.</u>	10-61	Drawing No. <u>2</u> Sheet <u>2</u> 4-E-15,942

JAN 2 1967



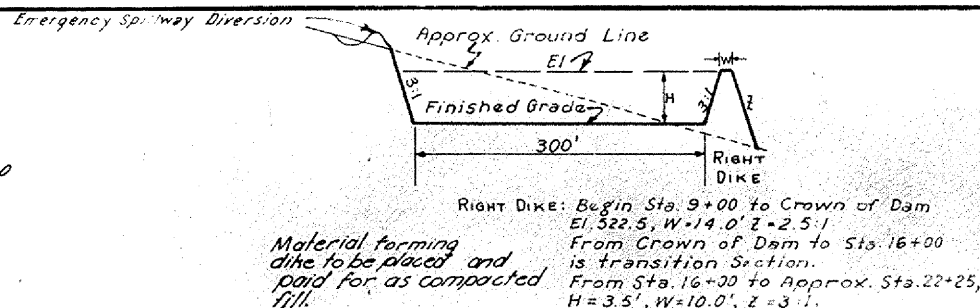
TYPICAL SECTION

SELECTIVE PLACEMENT FILL						
LAB TEST		Min. Dry Density		Moisture Range		Lab. Curve No.
*Modified Standard	Max Dry Opt'm	Lbs. Per Cu. Ft.	From	To		
Den.	Moist					
106.5	17.5	101.0	17.0	7	1	
107.5	17.5	102.0	17.0	7	2	
102.0	19.5	97.0	19.0	7	4	
103.0	18.0	98.0	17.5	7	5	
*114.0	14.5	102.5	14.0	7	3	

Place materials represented by curves 1, 2, 4 & 5 in any portion of the embankment. If it is necessary to use material represented by curve No. 3 it should be used in the center section of the embankment.

Maximum dry density, optimum moisture, minimum acceptable dry density and moisture range shown in the table above are for material particles passing the No. 4 sieve. If the material being placed contains 1/4" or larger rock particles, the minimum acceptable dry density and moisture range will be corrected for the presence of rock.

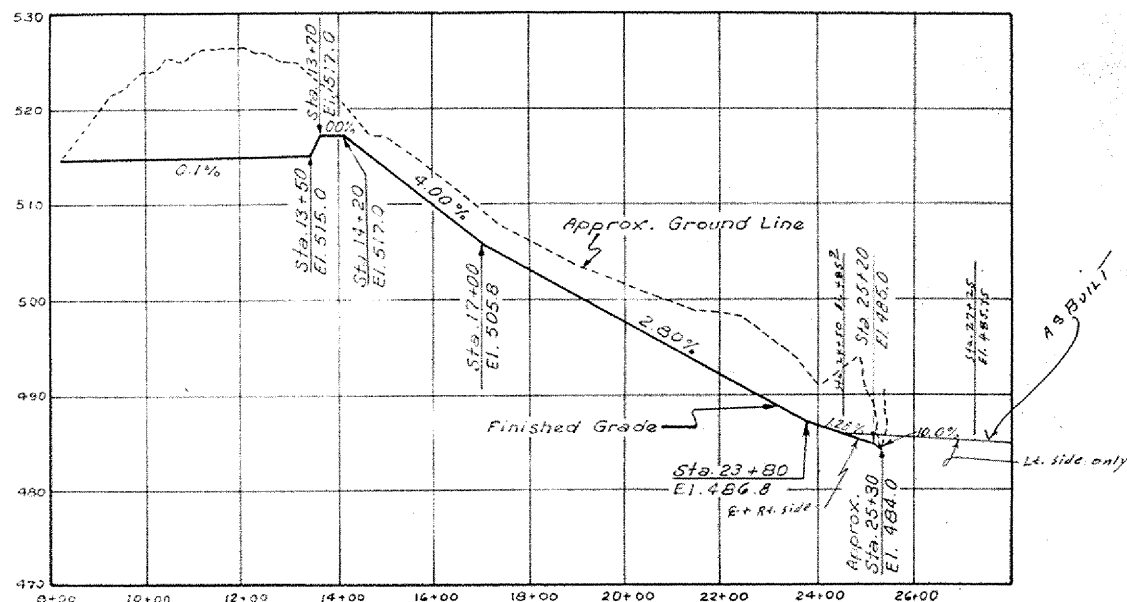
No upward placement moisture limits are established. Upward limits of placement moisture will be determined during construction by the engineer, based on the workability aspects of the materials and the densities reached.



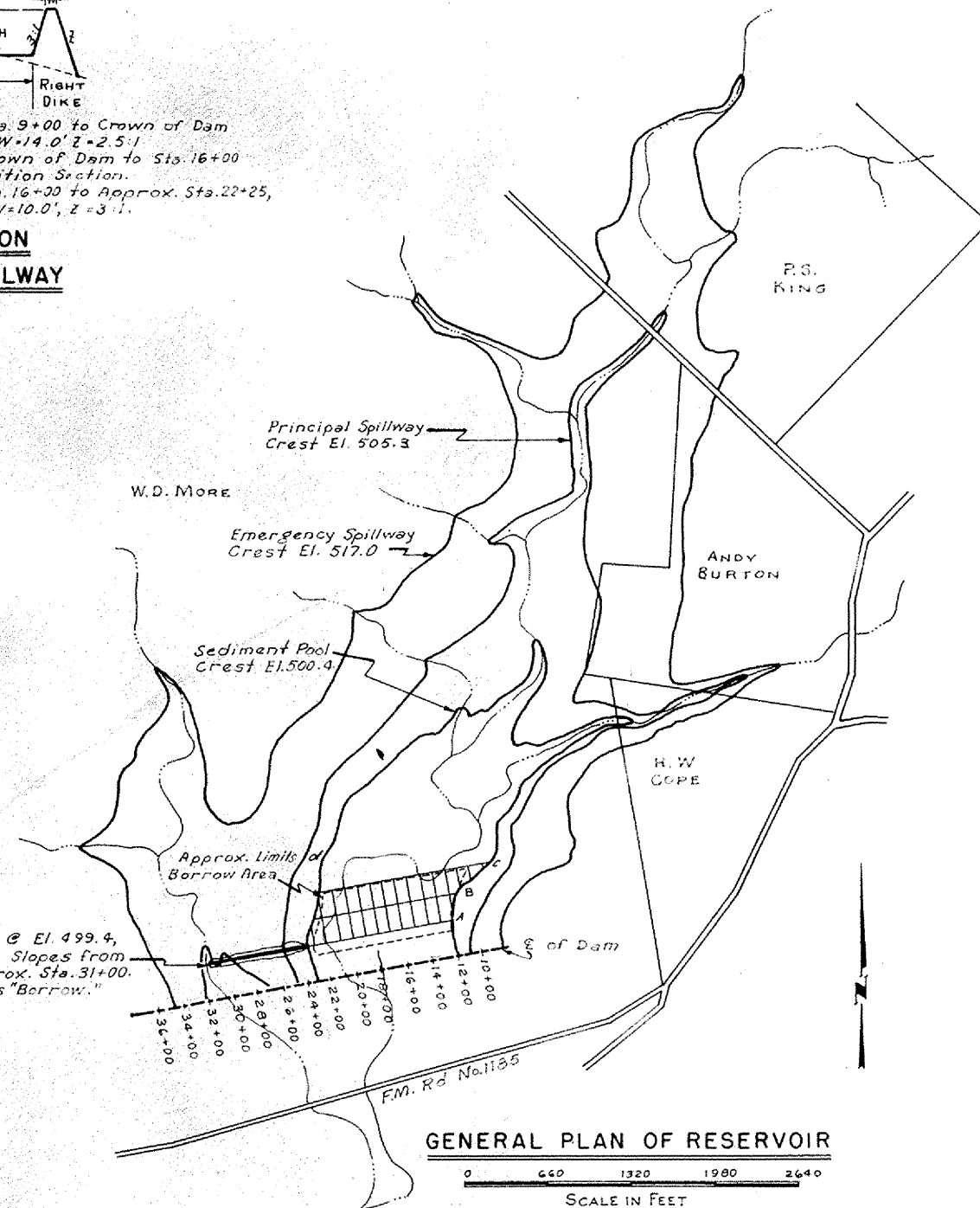
TYPICAL SECTION
EMERGENCY SPILLWAY

ELEVATION	SURFACE ACRES	STORAGE	
		ACRE FEET	INCHES
408	0.0	0.00	0.00
492	0.6	1.20	0.00
496	17.4	37.20	0.03
500	51.0	174.00	0.38
500.4	56.95	195.59	0.42
504	110.5	497.00	1.08
505.3	129.58	653.05	1.42
505.9	138.39	733.44	1.59
508	169.2	1056.41	2.29
512	236.0	1866.81	4.05
516	311.5	2961.81	6.42
517	331.28	3283.20	7.12
520	390.6	4366.02	9.46
522.3	437.24	5318.04	11.53
524	471.7	6090.64	13.20
Top of Dam (Effective) Elev.		522.3	
Emergency Spillway Crest Elev.		517.0	
Principal Spillway Crest Elev.		505.3	
Sediment Pool Elev.		500.4	
Drainage Area, Acres		5536	
Sediment Storage, Acre Feet		733.44	
Floodwater Storage, Acre Feet		2549.76	
Max. Emergency Spillway Cap., c.f.s.		8512	

Borrow Trench on Grid A @ El. 499.4, 25' Bottom width, 3:1 Side Slopes from approx. Sta. 23+50 to approx. Sta. 31+00. Material to be classified as "Borrow."



PROFILE ON Q OF EMERGENCY SPILLWAY



GENERAL PLAN OF RESERVOIR

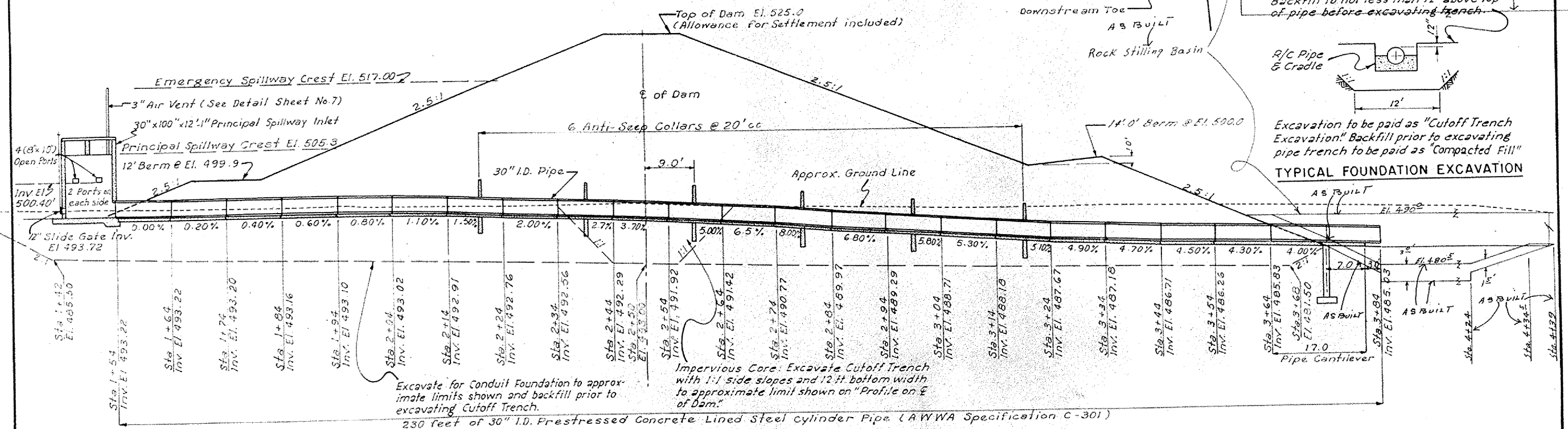
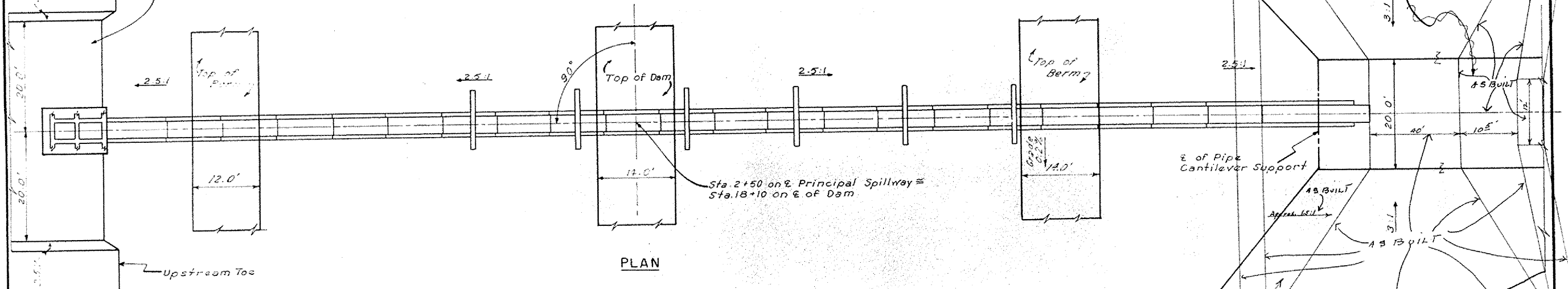
0 660 1320 1980 2640
SCALE IN FEET

As Built Plans
const. completed 7-13-62

GENERAL PLAN OF RESERVOIR FLOODWATER RETARDING STRUCTURE SITE No. 21 PLUM CREEK WATERSHED IN HAYS, CALDWELL AND TRAVIS COUNTIES, TEXAS			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed <u>A.E.G.</u>	Date <u>8-61</u>	Approved by <u>[Signature]</u>	
Drawn <u>A.E.G. & O.L.S.</u>	Sheet <u>9-61</u>	HEAD, ENGINEERING & WATER PLANNING UNIT FORT WORTH, TEXAS	
Traced <u>O.L.S.</u>	Sheet <u>9-61</u>	TENTH, TEXAS No. <u>3</u> of <u>9</u>	
Checked <u>A.E.G. & H.H.K.</u>	Date <u>10-61</u>	Drawing No. <u>4-E-15,942</u>	

Excavate to limits shown @ Elev. 493.22 from upstream toe to borrow area. Material to be classed as "Borrow."

Excavate open channel on uniform grade from one foot below invert of outfall pipe to natural drain @ approximate Sta. 4 + 30 To be paid as "Channel Excavation"



PRINCIPAL SPILLWAY—PLAN AND SECTION
FLOODWATER RETARDING STRUCTURE SITE NO. 21
PLUM CREEK WATERSHED
IN
HAYS, CALDWELL AND TRAVIS COUNTIES, TEXAS

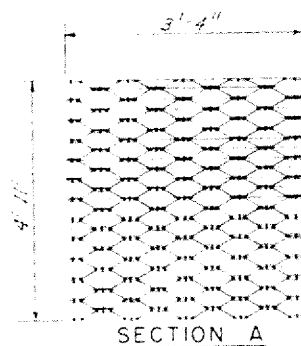
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed: A.E.G. Date: 8-61
Drawn: A.E.G. & O.L.S. 9-61
Traced: O.L.S. 9-61
Checked: A.E.G. & H.H.K. 10-61

Approved by: [Signature]
HEAD ENGINEERING & PLANNING UNIT
FORT WORTH, TEXAS

Sheet: 4 of 9
Drawing No: 4-E-15,942

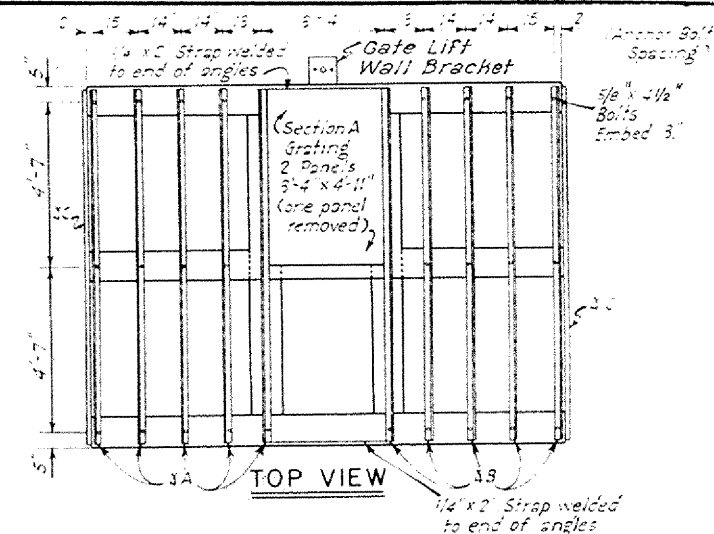
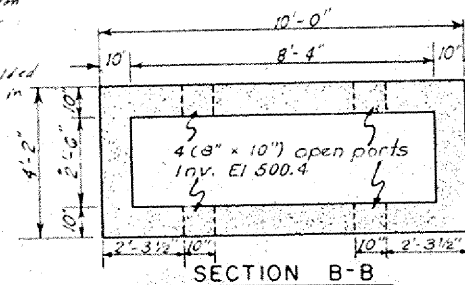
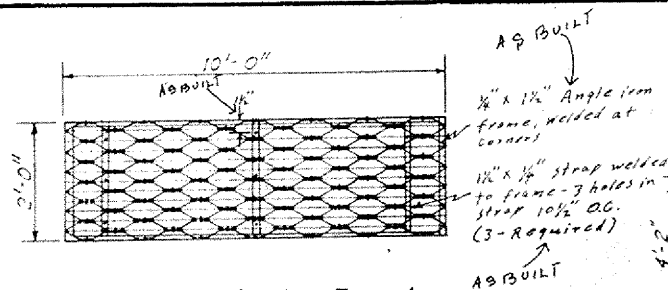
As Built Plans
Const. Completed 7-13-62



2 Required
Fasten to supporting angles with Type F-5 clips Not less than 3 clips on each side of each panel.

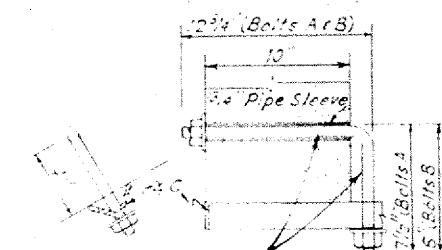
Aluminum Grating, Borden Type A, Size No. 1 or equivalent. Bearing bars $3/4$ " x $1/8$ ".

SECTION B
2 Required

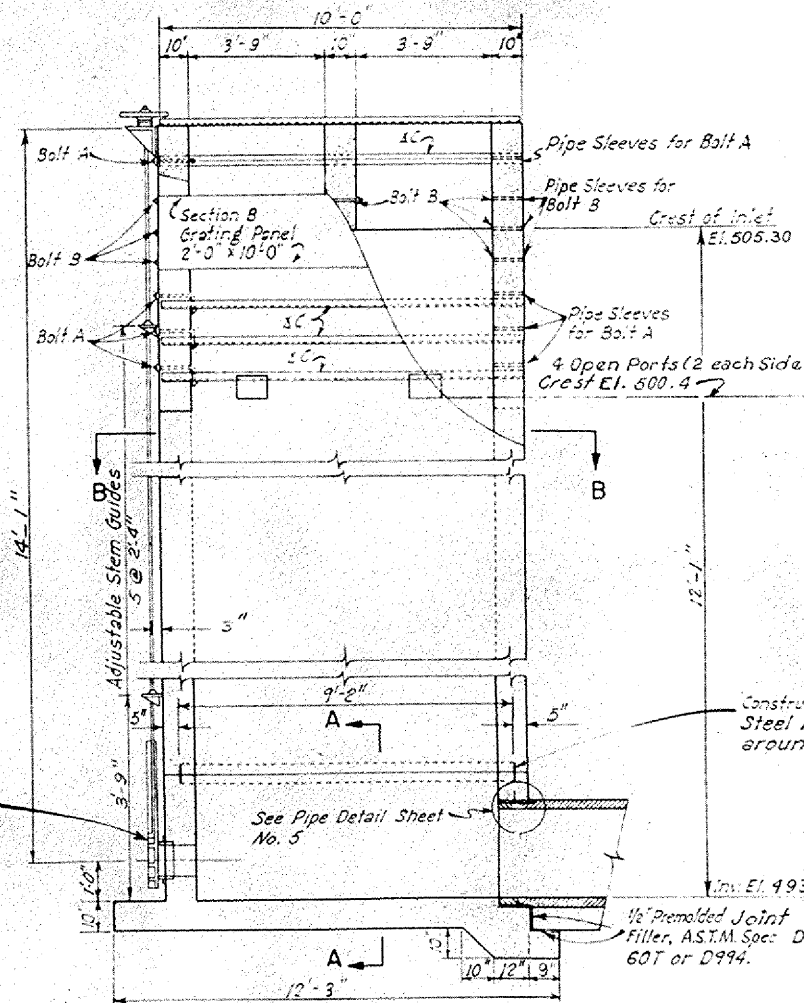
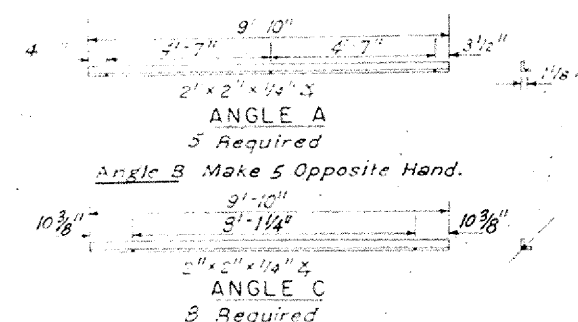


Quantity	Item	Description
5	SA	2' x 2' x 1/4" x 9'-10"
5	SB	2' x 2' x 1/4" x 9'-10"
8	SC	2' x 2' x 1/4" x 9'-10"
5	Steel Straps	1/4" x 2" x 3'-5"
50	Pipe Sleeves	3/4" x 10"
16	Bolt A & Nuts	5/8" - See Detail A
14	Bolt B & Nuts	5/8" - See Detail A
30	Nash Bolts & Nuts	5/8" x 4 1/2"
90	Flat Washers	5/8"
90	Lock Washers	5/8"

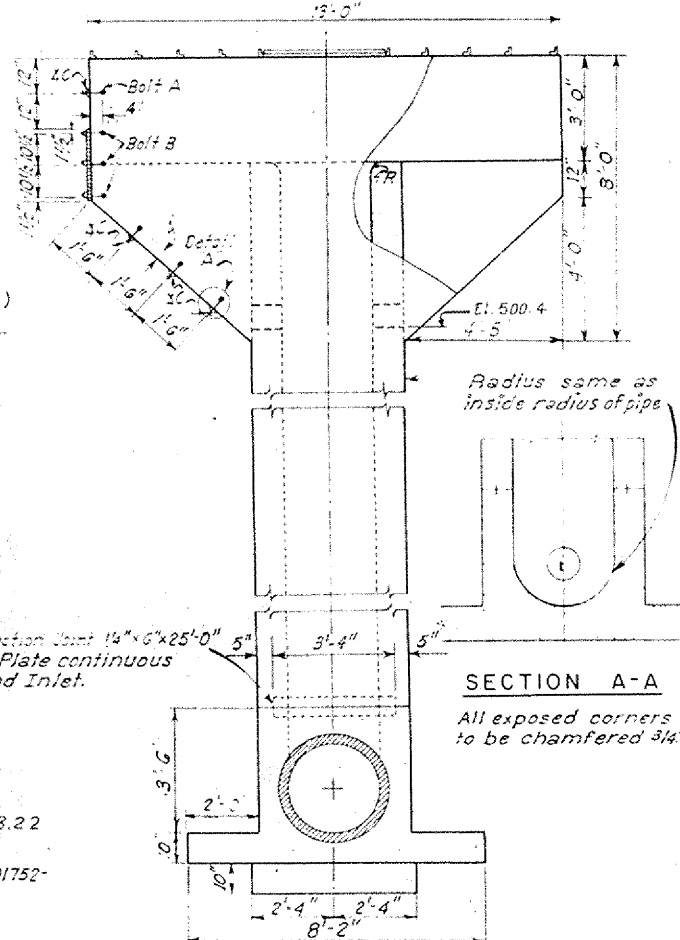
All pipe sleeves, bolts and washers are to be galvanized unless otherwise specified



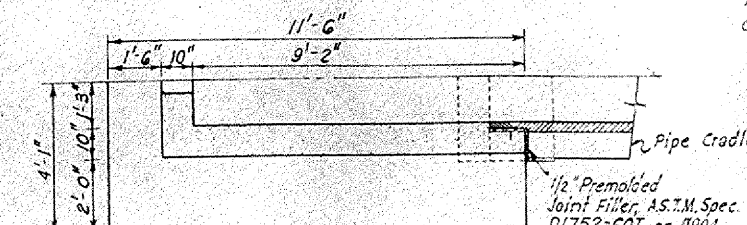
5/8" Bolt - Bend on 1" radius. Std. thread both ends.
Bolt A - 16 Required
Bolt B - 14 Required



SECTIONAL ELEVATION



ELEVATION



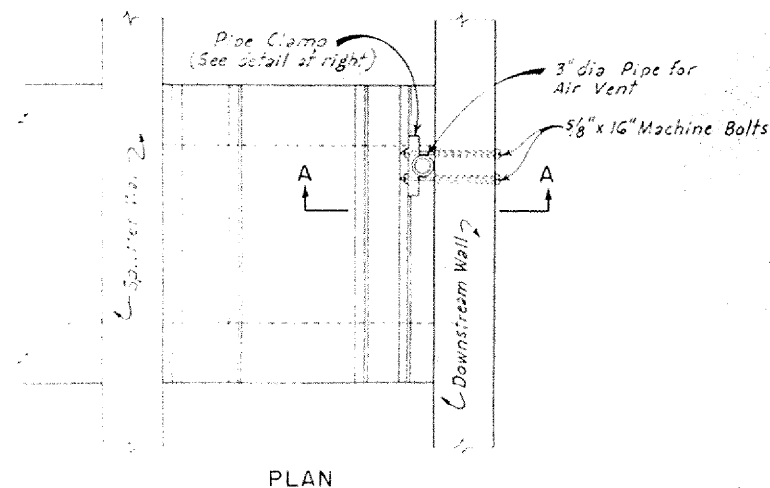
HALF PLAN - BASE

PRINCIPAL SPILLWAY - INLET
FLOODWATER RETARDING STRUCTURE SITE No. 21
PLUM CREEK WATERSHED
IN
HAYS, CALDWELL AND TRAVIS COUNTIES, TEXAS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Drawn: A.E.G. 9-61
Checked: A.E.G. & O.L.S. 9-61
In Charge: O.L.S. 9-61
Date: 9-61

4-E-15,942

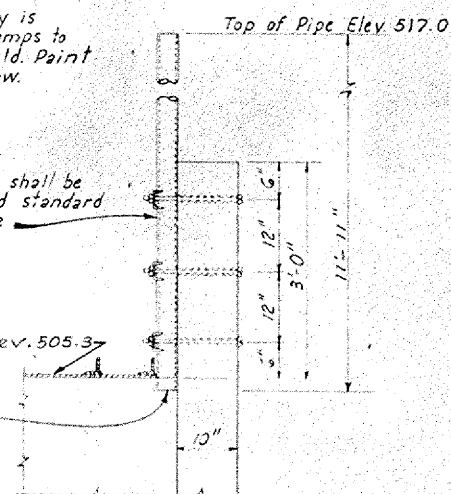


AIR VENT DETAIL

After air vent assembly is complete, weld pipe clamps to pipe with $\frac{1}{4}$ " fillet weld. Paint weld as specified below.

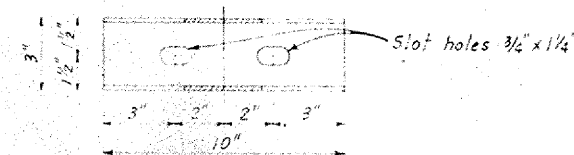
Pipe for air vent shall be 3" I.D. galvanized standard weight steel pipe

Air vent pipe shall extend below orifice plate a minimum of 2" as shown.



SECTION A-A

Make "R" the same as the outside radius of the air vent pipe



Pipe clamps shall be fabricated of 3U G.O. Cut both flanges to fit outside of pipe and slot holes in web for $\frac{5}{8}$ " machine bolts as shown. 3 pipe clamps required.

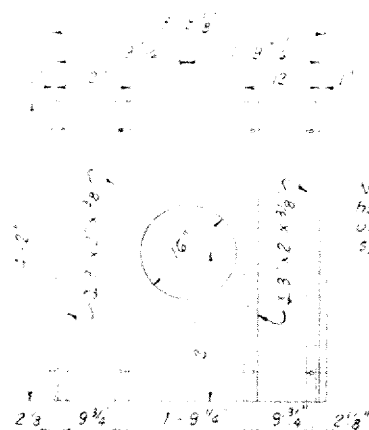
PIPE CLAMP DETAIL

SCHEDULE OF QUANTITIES FOR ORIFICE PLATES		
Quantities	Item	Description
5	Angles	3"x2"x $\frac{3}{8}$ "x4'-2" Punch as shown and weld to plate.
3	Plates	1/4"x4'-9"x3'-8 $\frac{3}{8}$ " Punched as shown
16	Bolts	5/8"x6" Machine, nuts and washers

SCHEDULE OF QUANTITIES FOR AIR VENT		
Quantities	Item	Description
11'-11"	Vent Pipe	3" I.D. Standard Weight Steel Pipe, not threaded
6	Pipe Sleeves	3/4"x10" Standard Weight Steel Pipe, not threaded
6	Bolts	5/8"x16" Machine nuts and washers
3	Pipe Clamps	3" Channel @ G.O. b./linear ft., cut and punch as shown.

GENERAL NOTES:

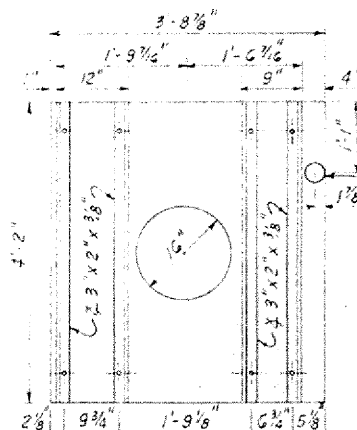
1. Air vent pipe is to extend through orifice plate and one panel of Section A Grating. Do not weld the air vent pipe to the orifice plate or to the grating.
2. All bolts, nuts, washers, pipe and pipe sleeves are to be galvanized unless otherwise specified.
3. Place a flat washer between head of bolt and concrete. Place a flat washer and a lock washer between nut and steel.
4. Orifice plates and pipe clamps shall be painted in accordance with Special Construction Material Specification 121-GOT.



Weld 2" legs to plate with continuous $\frac{1}{4}$ " fillet weld on each side of each angle.

1/4"x3'-8 $\frac{3}{8}$ "x4'-2" Steel Plate

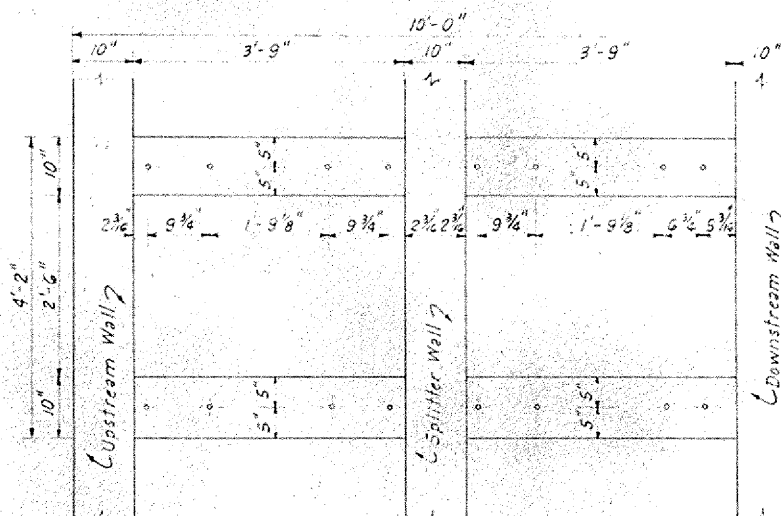
ORIFICE PLATE DETAIL



Weld 2" legs to plate with continuous $\frac{1}{4}$ " fillet weld on each side of each angle.

1/4"x3'-8 $\frac{3}{8}$ "x4'-2" Steel Plate

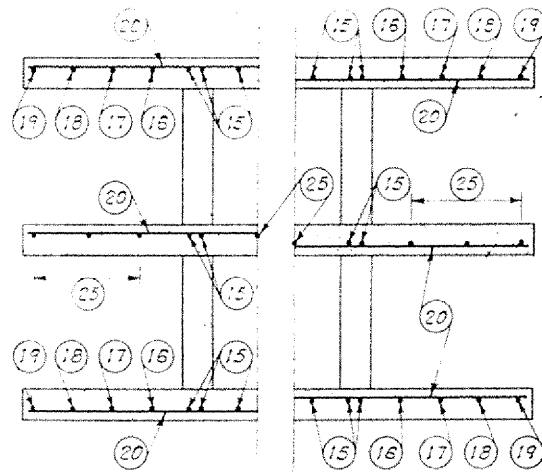
BOLT PLACEMENT FOR ORIFICE PLATES



5/8"x6" Machine bolts set as shown above for bolting orifice plate in position. Embed bolts 4 1/2" in concrete.

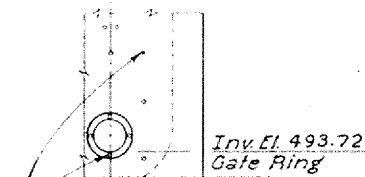
As Built Plans
Const. Comp. 7-13-62

ORIFICE PLATE AND AIR VENT DETAILS FLOODWATER RETARDING STRUCTURE SITE No. 21 PLUM CREEK WATERSHED IN HAYS, CALDWELL AND TRAVIS COUNTIES, TEXAS			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed A. E. G.	Date 9-61	Approved By: [Signature]	State Engineer
Drawn A. E. G. & D. L. S.	Date 9-61	Checked [Signature]	District Engineer
Traces D. L. S.	Date 9-61	Sheet No. 7	Drawing No.
Checked A. E. G. & H. H. K.	Date 10-61	Sheet No. 9	4-E-15,942



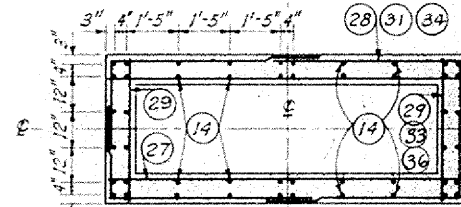
SECTION B-B

Steel symmetrical about both centerlines.



Set anchor bolts to fit gate and ring for Armco bronze mounted spigot back slide gate No. 50-100 or equivalent.

SLIDE GATE



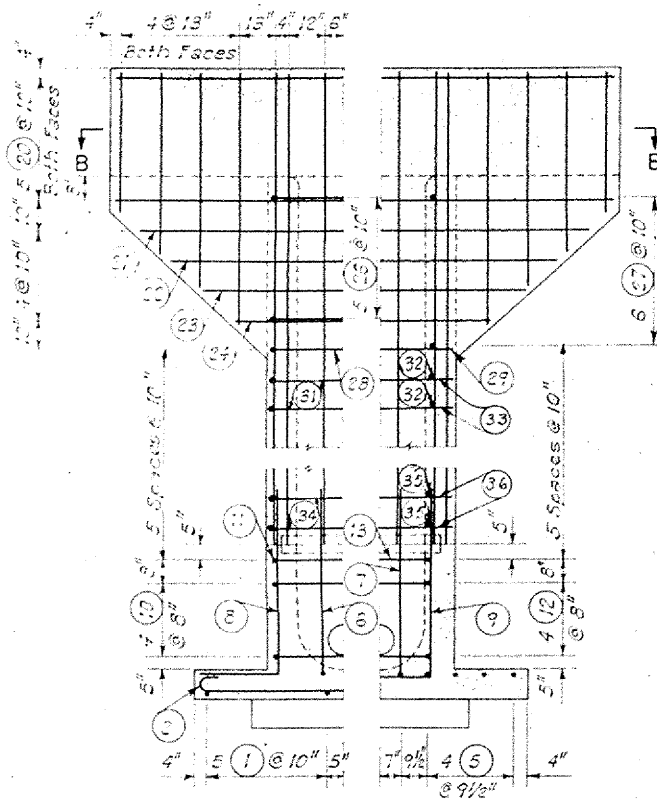
All vertical bars (15's) except as noted. Steel symmetrical about both centerlines.

SECTION A-A

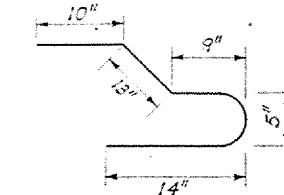
No.	Qty.	Lgth.	Total Lgth.	Size	Type	A	B	C	D	E	F	G	H	J	O	No.	Qty.	Lgth.	Total Lgth.	Size	Type	A	B	C	D	E	F	G	H	J	O	
1	10	11-9	117-6	5	1	0-7	11-2								J-5	21	4	11-6	46-0	4	Str.											
2	14	9-0	126-0	5	1	0-7	7-10					0-7			0-5	22	4	9-8	38-8	4	Str.											
3	7	4-0	28-0	5	A	See detail below																										
4	3	4-4	13-0	5	Str.											23	4	7-10	31-4	4	Str.											
5	8	11-2	89-4	5	Str.											24	4	6-0	24-0	4	Str.											
6	2	6-10	13-8	5	2	5-4	1-6									25	14	2-8	37-4	4	Str.											
7	2	14-6	29-0	5	2	5-4	9-2									26	20	6-9	135-0	4	2	1-3	5-6									
8	26	7-4	190-8	5	2	5-4	2-0									27	12	9-8	116-0	4	Str.											
9	20	7-8	153-4	5	2	5-4	2-4									28	4	8-1	32-4	4	2	2-7	5-6									
10	8	12-7	100-8	6	2	2-11	9-8									29	2	3-10	7-8	4	Str.											
11	4	8-9	35-0	6	2	2-11	5-10									30	2	7-10	15-8	5	Str.											
12	8	11-7	92-8	6	2	2-5	9-2									31	8	8-3	67-4	5	2	2-9	5-8									
13	4	7-9	31-0	6	2	2-5	5-4									32	4	9-8	38-8	5	Str.											
14	16	8-5	134-8	4	Str.											33	4	3-10	15-4	5	Str.											
15	32	11-5	365-4	4	Str.											34	8	8-9	70-0	6	2	2-11	5-10									
16	8	6-11	55-4	4	Str.											35	4	9-8	38-8	6	Str.											
17	8	5-11	47-4	4	Str.											36	4	3-10	15-4	6	Str.											
18	8	5-0	40-0	4	Str.																											
19	8	4-0	32-0	4	Str.																											
20	28	12-8	354-8	4	Str.																											

Total Size 4 Steel in Prin. Spwy. Inlet = 1497' 1-8" = 1000.44 lbs.
 " Size 5 " " " " " = 897' 1-6" = 936.09 lbs.
 " Size 6 " " " " " = 383' 1-4" = 575.77 lbs.

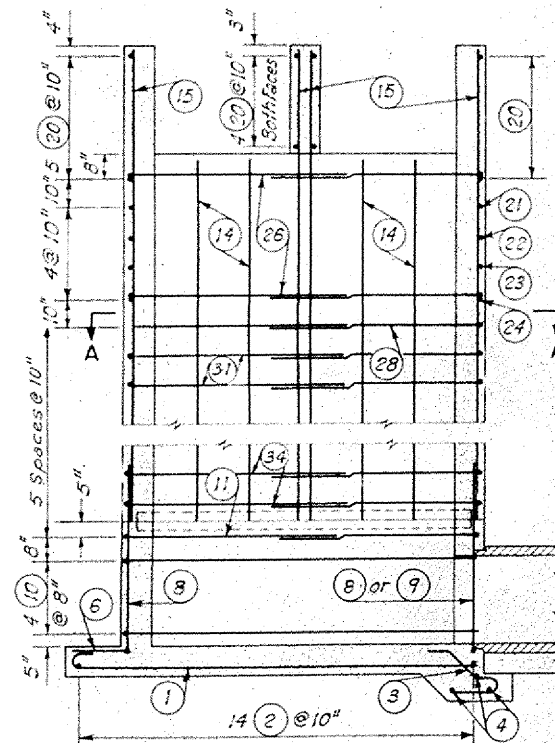
Total Steel in Principal Spillway Inlet = 2512.30 lbs.
 Total Class "B" Concrete in Prin. Spwy. Inlet = 17.71 cu yds.



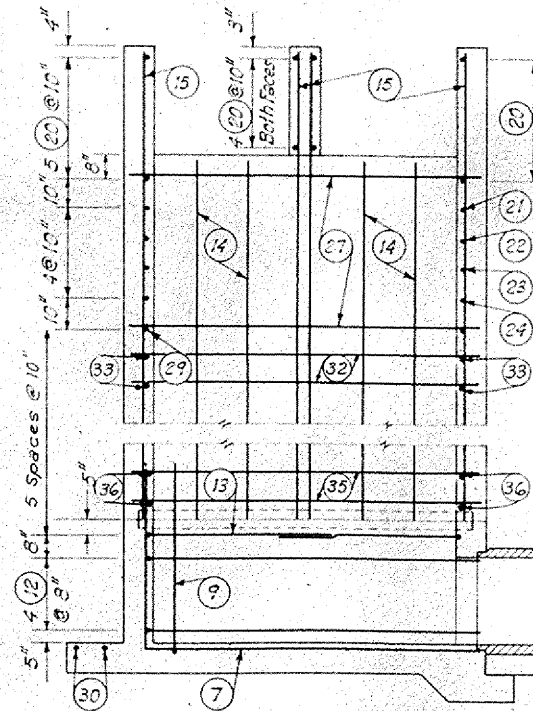
OUTSIDE INSIDE
HALF SECTIONS
(UPSTREAM)



DETAIL BAR No. 3

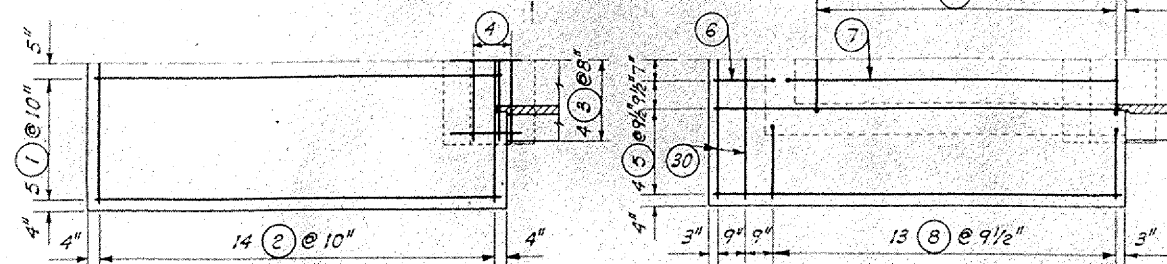


OUTSIDE



INSIDE

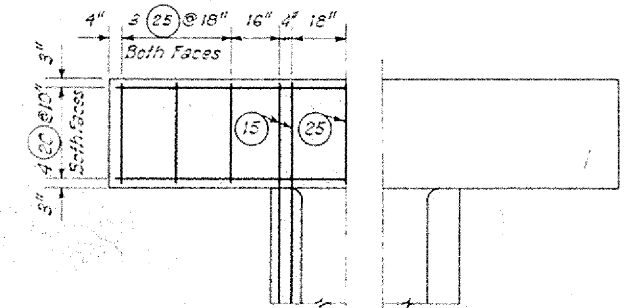
SECTION ALONG C



BOTTOM

TOP

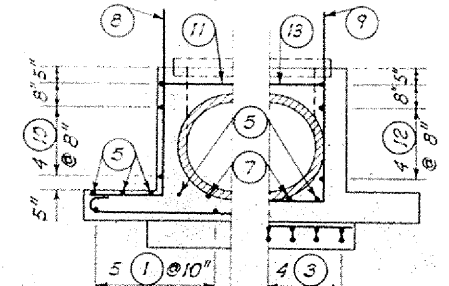
FOUNDATION SLAB



ELEVATION SPLITTER WALL

Steel symmetrical about centerline

Note: Steel above construction joint same as upstream sections.



OUTSIDE INSIDE

HALF SECTIONS

(DOWNSTREAM)

As Built Plans
Const. Comm. 7-13-62
No change in construction

STEEL PLACEMENT-PRINCIPAL SPILLWAY INLET

FLOODWATER RETARDING STRUCTURE SITE No. 21

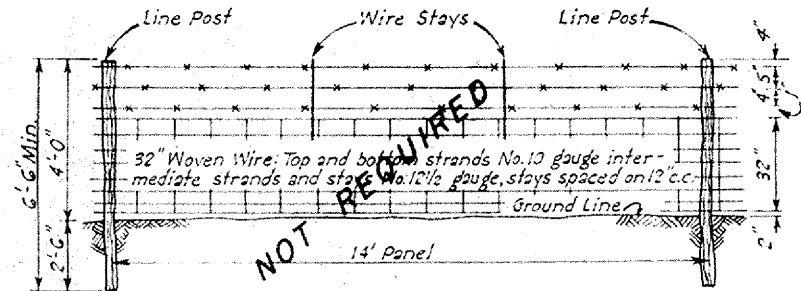
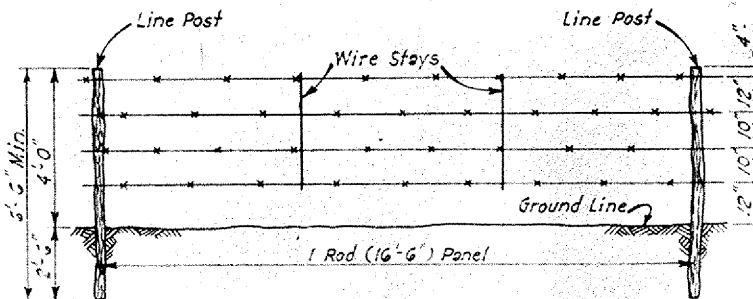
PLUM CREEK WATERSHED

IN HAYS, CALDWELL AND TRAVIS COUNTIES, TEXAS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed A.E.G.	Date 9-61	Approved by [Signature]
Drawn A.E.G. & O.L.S.	9-61	Checked [Signature]
Traced O.L.S.	9-61	Sheet No. 8
Checked A.E.G. & H.H.K. 10-61	9-61	Drawing No. 4-E-15,942

Note: Wire stays to be 10 ga. (min. size), galv. two strand spiral, twist-on type. Length to extend from top fence strand to 3" below bottom fence strand for barbed wire fences and from top strand to 3" below the second strand of the woven wire for woven wire fences. Wire stays to be spaced equally, two stays per line post panel. Stays to be twisted firmly against top strand.



BARBED WIRE

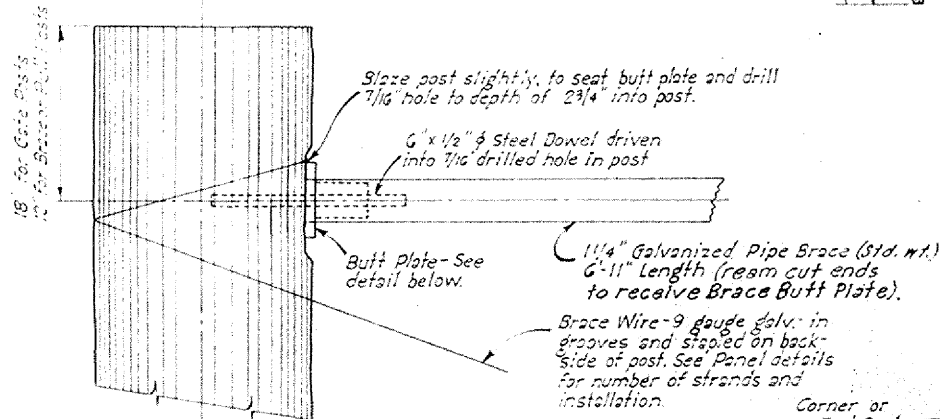
Barbed wire to be 12 1/2 ga. galv. double strand barbed wire with 14 ga. 2 point barbs at 4" c.c. Staples to be 9 ga. galv. 1 1/2" minimum length for treated pine and cedar posts and 1" minimum length for bois d'arc. Galvanizing shall conform to A.S.T.M. Specifications A-121, Class I Coating.

WOVEN WIRE

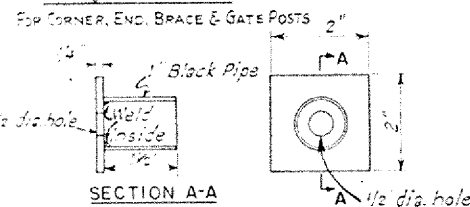
MINIMUM POST SIZE

Corner & Brace	Cedar, 8" dia. Treated Pine, 6" dia. Bois d'arc, 6" dia.
Line Posts	Cedar, 4" dia. Treated Pine, 3" dia. Bois d'arc, 3" dia. Other, see specifications.
Gate Posts	Treated Pine, 5" dia.

Note: Ash Juniper is considered as meeting the requirements of the specifications for cedar posts. Creosote-Cool Tar Solution will be used for treatment of pine posts.

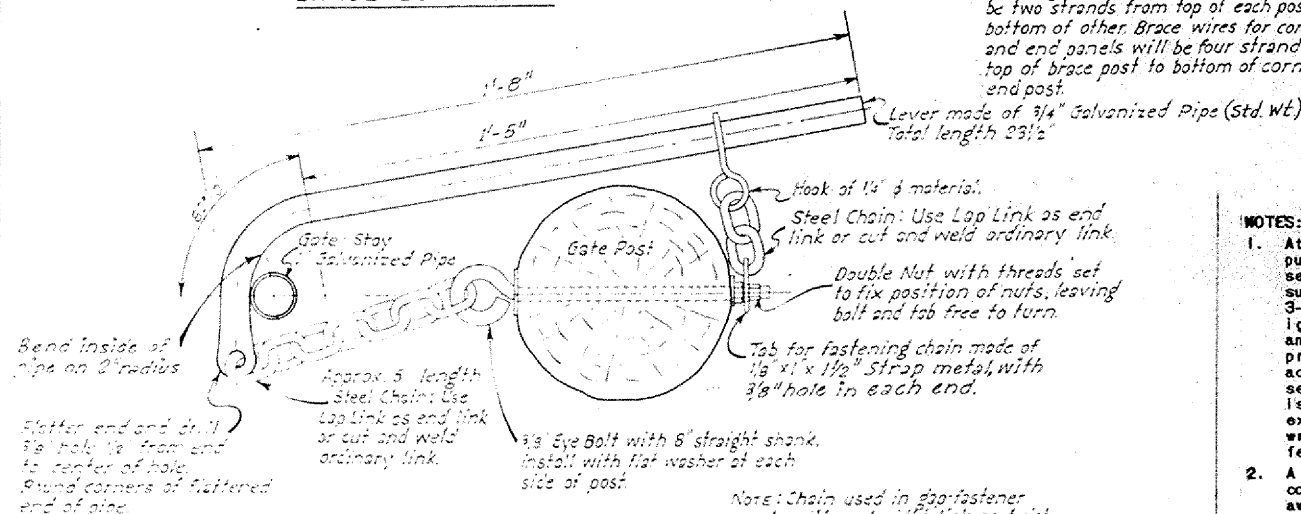


POST DETAIL



Brace Butt Plate of plate steel 2 x 2 x 1/4", 1 1/2" dia. hole drilled in center, with thimble of 1" dia. black steel pipe, 1 1/2" long, welded to plate; weld to be inside of pipe with plate concentrically centered with the 1 1/2" drilled hole in the plate.

BRACE BUTT PLATE



WIRE GAP FASTENER DETAIL

Note: Chain used in gap fastener may be either straight link or twist link chain; material size from 1/8" to 1/32", links per foot from 10 to 19, wt. per foot from 0.1 to 0.5 lbs. Weldless wire-twist chain will not be permitted.

CORNER, END, OR PULL PANEL

Pull panel does not require concrete setting. Brace wires for Pull Panel will be two strands from top of each post to bottom of other. Brace wires for corner and end panels will be four strands from top of brace post to bottom of corner or end post.

Where fence extends in line left or right of Gate Panel's Brace Wires for Gate Panel will be four strands from top of Brace Post to bottom of Gate Post. Where there is no pull of line fence (that is, the Gate Panel is at a corner), Brace Wires for the Gate Panel will be two strands from top of each post to bottom of other.

WIRE GAP PANEL

NOTES:

- At changes in vertical alignment, such as crossings of stub diversions, line posts or pull-panel posts that restrain upward pull of the fence strands shall be anchored by setting such posts in concrete, with a minimum 3" thickness of concrete at the ground surface and a minimum 6" at the bottom of the post hole, so as to provide a minimum 3-inch taper to the outside surface of the embedding concrete. The engineer will designate the post locations where this anchorage treatment is required. In addition, anchorage of fence wires to posts where there is change in vertical alignment that produces upward or downward pull, shall be accomplished with a special tie-wire, in addition to stapling. A tie-wire of a strand of No. 9 smooth galvanized wire shall be secured to the post with two wraps and tie 3" above the top fence wire (where the pull is downward) or 6" below the bottom fence wire (where the pull is upward) and shall be extended to each successive fence wire, securing each in position by two close drawn wraps. The engineer will designate the posts where this special fastening of the fence wires is required.
- A break-away fence panel 400 feet in length (at the location shown on sheet 2), shall be constructed with a pull panel at both ends, and with the fence wires of the break-away panel wrapped around a 1-1/4" galv. pipe stay at the south end. The pipe stay shall be secured by No. 9 galv. wire loops around the pipe and adjacent post. Line posts in the break-away panel shall be set shallow (in post holes approx. 12" in depth).

As Built Plans
Comp. 7-13-62

FENCE DETAILS

FLOODWATER RETARDING STRUCTURE SITE No. 21
PLUM CREEK WATERSHED
IN
HAYS, CALDWELL AND TRAVIS COUNTIES, TEXAS

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

Designed A.E.G.	Date 9-61	Approved by [Signature]
Drawn A.E.G. & O.L.S.	Date 9-61	Field Inspector [Signature]
Traced O.L.S.	Date 9-61	State Conservation Engineer [Signature]
Checked A.E.G. & H.H.K.	Date 10-61	Sheet No. 9 of 9

4-E-15,942

JAN 5 1962

FENCE DETAILS