K-4

Name Camp Fire Girls, Lane County Council

By

Address 1626 Willamette Street
Eugene, Oregon

Date filed October 21, 1960

Priority October 21, 1960

Action suspended until

Returned to applicant

Date of approval March 16, 1961

CONSTRUCTION

Date for beginning March 16, 1962

Date for completion October 1, 1962

Extended to

Date for application of water

Extended to

PROSECUTION OF WORK

Form "A" filed Started

Form "B" filed Oct. 2, 1962

Form "C" filed

FINAL PROOF

Blank mailed APRIL 11 1967

Proof received

Date certificate issued MAY 24 1967

Application No. R- 34424

Permit No. R- 2584

Certificate No. 33930

Stream Index, Page No. 2-14G

See : Map File C-17-16

See Also File #34603

FEES PAID

Date	Amount	Receipt No.
10-21-60	15.00	27414
	B. P. Fee	
4-24-67	$1 Cert. Fee	3473

FEES REFUNDED

Date	Amount	Check No.

ASSIGNMENTS

Date	To Whom	Address	Volume	Page

REMARKS

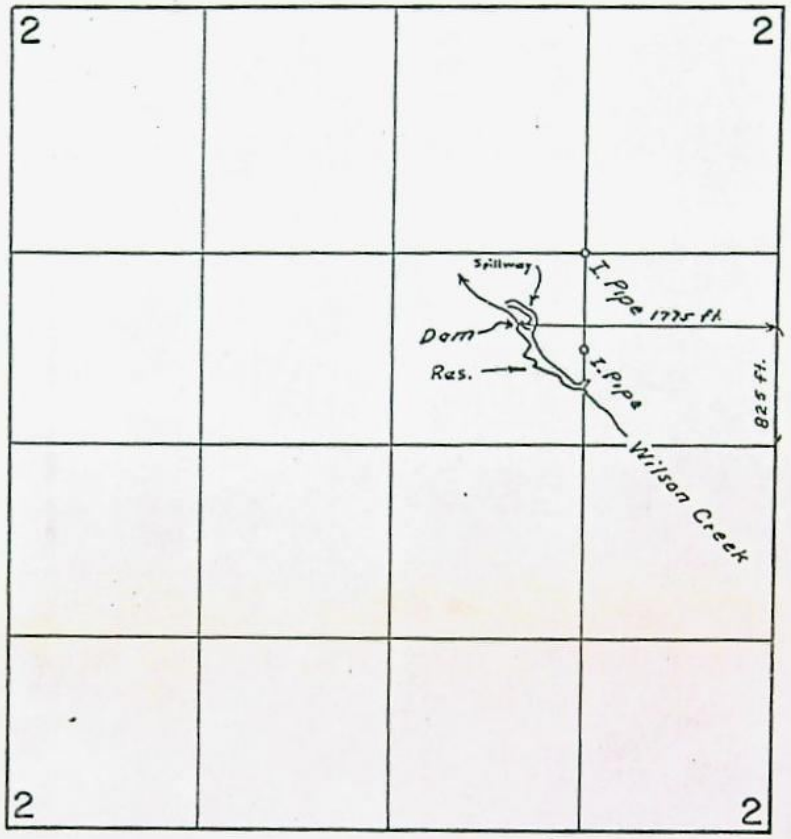
Lake Hahnee Reservoir & storage of 3.95 a.f. from Wilson Creek (Long Tom River) for recreation.

State Printing 26674

Mrs Smith
1626 W. Hamolla
Eugene
343-8332

10 am Tues

T.18S.R.6W.W.M.



FINAL PROOF SURVEY
UNDER

Application No. 34603 R-34424 Permit No. 27171 R-2584.
IN NAME OF

CAMP FIRE GIRLS

Surveyed April 29, 1965., by Clayton J. Gardner

1965-J

Application
R-34424

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Room 410, Courthouse
Eugene, Oregon

August 12, 1963

RECEIVED
AUG 14 1963
STATE ENGINEER
SALEM, OREGON

Chris Wheeler
Oregon State Engineer
Salem, Oregon

Dear Mr. Wheeler:

Please find enclosed "As Built Plans" for the Camp Fire Girls Dam, Lane County, Oregon. Also enclosed are copies of the revised spillway design and summary of density determinations.

Very truly yours,

Donald L. Stettler
Agricultural Engineer

cc: Hubert Oliver, SCS, Albany, Oregon

DLS:ej

Oregon Camp Fire Girls Dam
U.C.E. 8/18/63
Revised Spillway Design

RECEIVED
AUG 1963
STATE ENGINEER
SALEM, OREGON

The following will not change.

1. Q = 150 c.f.s.
2. n = 0.04
3. L = 100 ft.
4. S_c = 0.025 ft./ft.
5. V_c = 5.1 fps
6. b = 30 ft.
7. z = 1:1
8. d_c = 0.81 ft.
9. n_D = 1.42

V_o & d_o will change to correspond with change of S_o to 0.09 ft./ft.

Compute V_o

$$V_o = V_c (S_o \div S_c)^{3/10}$$

$$= 5.1 (0.09 \div 0.025)^{3/10}$$

$$= 7.49 \text{ fps}$$

Compute A_o

$$A_o = Q/V_o = 150/7.49 = 20.0 \text{ ft}^2$$

Determine d_o

Try d_o = 0.56

$$A = b d_o + z d_o^2$$

$$= (35)(0.56) + (1)(0.56)^2$$

$$= 19.91$$

$\approx A_o$ So use d_o = 0.56 ft.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
209 S. W. Fifth Avenue
Portland 4, Oregon

R-34 424

July 17, 1963

Mr. Chris L. Wheeler
Oregon State Engineer
516 Public Service Bldg.
Salem 10, Oregon

RECEIVED
JUL 19 1963
STATE ENGINEER
SALEM, OREGON

Dear Mr. Wheeler:

Attached are one copy each of the completion report for the Camp Fire Girls dam, computation sheet showing changes, and summary of density determinations.

Reproducible transparent prints of Drawing 7-E-16347, sheets 1 through 4, are being sent under separate cover. Sheet 2 shows the changes, and all are "As Built."

Very truly yours,

Merritt V. Penwell
State Engineer

Attachments - 3

Merritt V. Penwell

Growth Through Agricultural Progress

Oregon Camp Fire Girls Dam
O.L.S. 2/18/63
Revised Spillway Design

RECEIVED
JUL 2 1963
STATE ENGINEER
SALEM, OREGON

The following will not change

1. Q = 150 c.f.s.
2. n = 0.04
3. L = 100 ft.
4. S_c = 0.025 ft./ft.
5. V_c = 5.1 fps
6. b = 35 ft.
7. z = 1:1
8. d_c = 0.81 ft.
9. Hp = 1.42

V_c & d_c will change to correspond with change of S_o to 0.09 ft./ft.

Compute V_o

$$V_o = V_c (S_o \div S_c)^{3/10}$$
$$= 5.1 (0.09 \div 0.025)^{3/10}$$
$$= 7.49 \text{ fps}$$

Compute A_o

$$A_o = Q/V_o = 150/7.49 = 20.0 \text{ ft}^2$$

Determine d_o

Try d_o = 0.56

$$A = b d_o + z d_o^2$$
$$= (35)(0.56) + (1)(0.56)^2$$
$$= 19.91$$
$$\approx A_o \text{ so use } d_o = 0.56 \text{ ft.}$$

Form SCS-532
MAY 55

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

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JUL 19 1963
STATE ENGINEER
SALEM, OREGON

WEEKLY SUMMARY OF DENSITY DETERMINATIONS

Location Mid Lane S C D Owner Camp Fire Girls Submitted By: D.L.S. Date 9 19 63

Watershed _____ Sub-watershed _____ Site No. _____

Contractor Glen Ousley Constr. Co. Contract No. _____ Report period: From 8/19 19 62 to 9/10 19 62

Test No.	Date of Test	Location of Sample: From (Dam, Core, etc.)	Sta. No.	Distance Rt. or Lt. of ℄	Elev.	Corr. % Moist.	Dry Density Lbs/C.F.	Opt. Moist. %	Max. Dry Density Lbs/C.F.	% Comp.	Instructions to Contractor	Tested By
	8/19/62	Core	—	—	—	20	100	18-22	97	103		D.L.S.
	9/5/62	Fill	—	—	—	23.7	85.5	"	"	88	Not to use material which contained weathered sandstone	G.M.G. J.D.P.
	9/6/62	Fill	—	—	—	22.9	96.8	"	"	99.7		D.L.S.
	9/7/62	Fill	—	—	—	24.3	96.8	"	"	99.7		D.L.S.
	9/8/62	Fill	—	—	—	21.8	97.9	"	"	100.9		D.L.S.
	9/10/62	Fill	—	—	—	21.3	106.6	"	"	109.9		D.L.S.

1 copy to E and WP Unit (Distribute other copies as directed by State Conservationist)

RECEIVED
JUL 19 1963
STATE ENGINEER
SALEM, OREGON

COMPLETION REPORT

for

Camp Fire Girls Dam

Mid Lane Soil Conservation District

Construction on the Camp Fire Girls Dam actually began in the middle of October 1960. This was done against our most strenuous of objections due to the lateness of the season. Construction ended approximately one week later when it began to rain. At this time the Camp Fire Girl's board agreed to shut down for the year. During this period the core trench was excavated and backfilled. The backfill was too moist and minimum compaction requirements were not met. The site was also disrupted considerably.

Construction began for the second time August 16, 1962, with a new contractor, by excavating the core trench again. This time compaction requirements were met when the core trench was backfilled.

Supervision of construction was rather difficult. This difficulty stemmed from the fact that the contractor mainly constructed the dam as a sideline after 5:00 p.m., and on Saturdays and Sunday. Although an attempt was made to check construction at crucial points at these hours, there was much to be desired.

Equipment used was a backhoe, cat, and carryall. In general, it was felt that the contractor did a very good job in obtaining the required compaction.

Due to the contractors short hours, the dam was not completed until October 16, 1962. This late date made it impossible to establish an adequate sod to protect the spillway as planned. Because of this the spillway has eroded some despite an attempt to establish a sod of annual rye.

The main difficulty encountered in the construction of the dam was the wasting of excavation from the spillway. This difficulty stemmed from the fact that the dam only contained 1,081 cubic yards compared to the spillway's 3,834 cubic yards.

Two deviations in the plans were necessary. One involved the raising of the conduit three feet. This was necessary because of the construction in 1960. A deviation was also necessary on the spillway grade on layout. The grade was changed from 0.107 ft/ft to 0.09 ft/ft.

Prepared by: Donald J. Stettler 2/19/63
Resident Engineer

Approved by: Louis Barton 2/19/63
Work Unit Conservationist

Camp Fire Girls Dam

10/11/60

Ht of Dam = 20'

Reservoir @ = 3.95 Ac. Ft.

Ⓐ Conduit (elev) = 75.0 (discharge) 79.5 (intake)
Normal W.S. = 90.75

① Contour	② Res. Capacity (Ac. Ft.)	③ Interval @ (Ac. Ft.)	④ Head	⑤ Mean interval head	⑥ Flow @ mean head	⑦ Ac. ft / 24 hrs.	⑧ Days ③/⑦
90.75	2.95		11.25				
		2.70		8.37	2.35	4.7	.57
85.0	1.25		5.5				
		1.10		2.75	1.22	2.64	.42
79.5	0.15 (D.S)		0				
							.99

Evacuation time = 1 day

Conduit should be adequate.

Gus -

PROCEDURE FOR FILING AN APPLICATION FOR A PERMIT

Complete and return the application together with the accompanying map, fees, and legal description of the property as explained in the Rules and Regulations of the State Engineer.

It is essential that the map accompanying an application be drawn on transparent tracing paper or tracing cloth and prepared as explained on Pages 7 to 9 of the Rules and Regulations, showing the required reference monument and tie to a recognized identified government survey corner.

Regardless of the size of the proposed appropriation, the map should be made by someone who has had experience in surveying and the preparation of maps.

THE NORMAL FLOW IN MOST OF THE STREAMS IN THIS STATE IS NOW REQUIRED TO SATISFY EXISTING RIGHTS. ANY PERMIT THAT MAY BE ISSUED WOULD GRANT A RIGHT TO APPROPRIATE WATER ONLY WHEN THERE IS A SURPLUS IN THE SOURCE INVOLVED OVER AND ABOVE THAT REQUIRED TO SATISFY PRIOR RIGHTS.

Mail completed application and data to:

Lewis A. Stanley
State Engineer
251 Finance Building
Salem, Oregon

Surface Water

Oregon Camp Fire Girls Dam
D.L.S. 2/12/60
Hydrology

1 5

Watershed Area - 561 acres
Soil - Josephine - K_s = 1.05
Topography - 10-30% K_t = 1.10
Cover - Timber K_c = 0.80

2.95
- 2.00

K = 0.95

Compute runoff for a 10% storm *

A = 561 acres
K = 0.95
$q_{10\%}$ = 0.28

$Q = qKA$
$= (0.28)(0.95)(561)$
$= 149$ use 150 cfs

RECEIVED
SEP 23 1960
STATE ENGINEER
SALEM, OREGON

* Minimum requirement for class A dams with storage between 0-5 acre-feet as set up in Oregon Technical Requirements

(V) 4-27-60

Oregon Camp Fire Girls Dam

D.L.S. 3/18/60

Spillway Design 2 5

(V) H-27-60 ~~DOH~~

$Q = 150$ cfs
$S_o = 0.107$
$L = 100'$
$Z = 1:1$
$n = 0.04$
$V_{em} = 8.0$ fps

Using Technical Release No. 2

Try $w = 36'$

Compute q_c

$$q_c = \frac{Q}{w} = \frac{150}{36}$$

$$= 4.16$$

From Std Dwg No ES 98 1/4

$d_c = 0.81$

$V_c = 5.1$ fps

From Std Dwg ES 98 3/4

$S_c = 0.025$

Compute $S_{o\,max}$

$$S_{o\,max} = S_c (V_{em} \div V_c)^{10/3}$$

$$= 0.025 (8.0 \div 5.1)^{10/3}$$

$$= 0.112 \quad OK$$

Convert w to b

$$b = w - (Z)(d_c)$$

$$= 36.0 - (1)(0.81) = 35.19 \quad \underline{\text{use } 35.0'}$$

Oregon Camp Fire Girls Dam
D.L.S. 3/18/60
Spillway Design 3 of 5

Compute Ve

$$Ve = Vc(So \div Sc)^{3/10}$$
$$= 5.1(0.107 \div 0.025)^{3/10}$$
$$= 7.9 \text{ fps}$$

Compute de

$$A = \frac{Q}{V}$$
$$= \frac{150}{7.9}$$
$$= 18.9$$

de = 0.53

Using Technical Release No. 2 Supplement A
From Std Dwg ES-164 2/7 & extrapolating

Hp = 1.42

Summary

dc = 0.81'
Vc = 5.1 fps
Sc = 0.025
b = 35'
Ve = 7.9 fps
de = 0.53'
Hp = 1.42'

(V) 4-27-60 ~~DGH~~

Oregon Camp Fire Girls Dam
D.L.S. 3/21/60
Base Flow, Conduit Size, & Riser Size 4 5

Using Design Memo – EWP-6

Base Flow

Watershed Area – 561 acres
Annual Rainfall – 40 inches

$$Q_b = \frac{P^2 A}{428,000}$$

$$= \frac{(40)^2 (561)}{428,000}$$

$$= 2.1 \text{ cfs}$$

Conduit Size

L = 70'
H = 17.5' (high)

From Figure 1

Try 8"

Q = 4.8 OK

Use 8" welded steel pipe

Riser Size

Q = 4.8

From Figure 3

d = 18"

H = 0.48

(r) 4-27-60 ~~DDH~~

Oregon Camp Fire Girls Dam
O.L.S. 3/22/60
Anti-Seep Collars 5 5

$L = 80$

$V = 1.5$

Try $n = 4$

$L = L + 2nV$

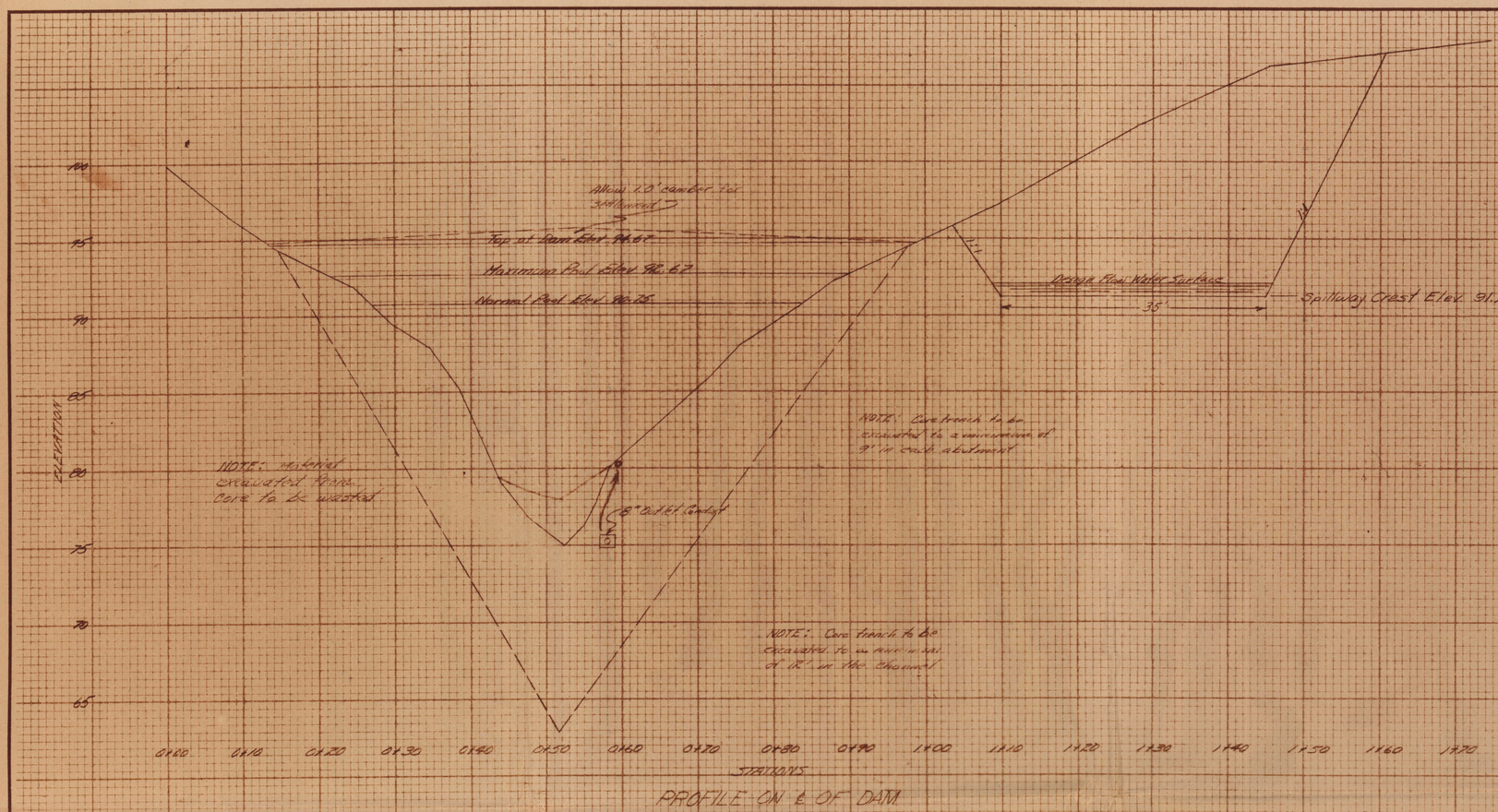
$80 = 80 + (2)(4)(1.5)$

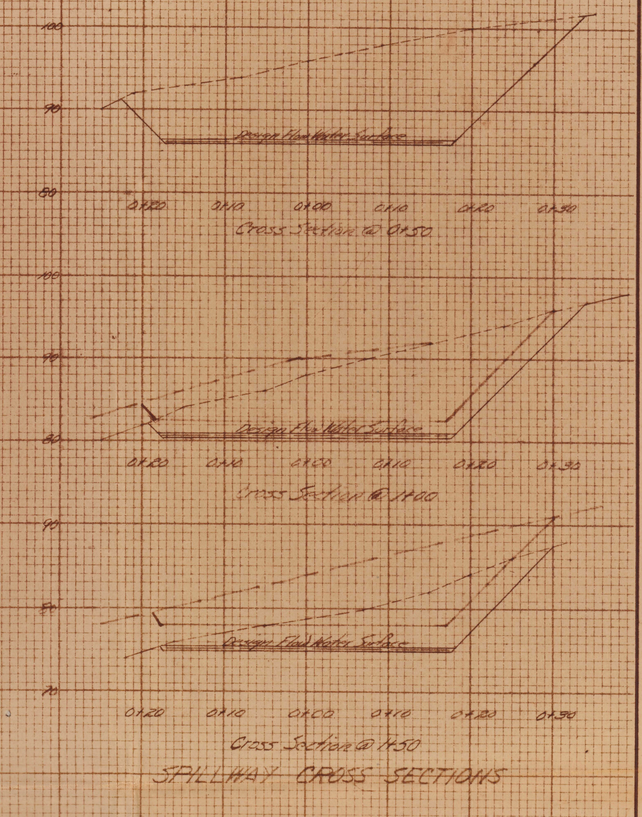
$80 = 92$

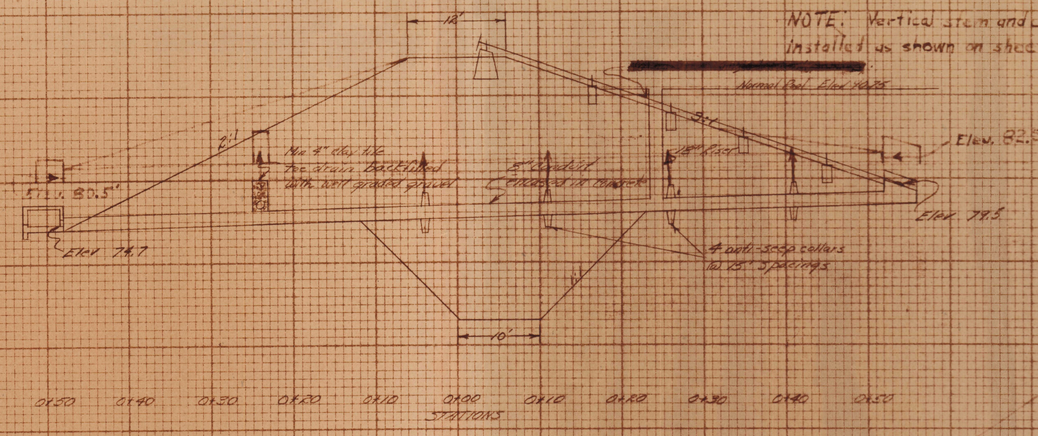
$= 1.15$ OK

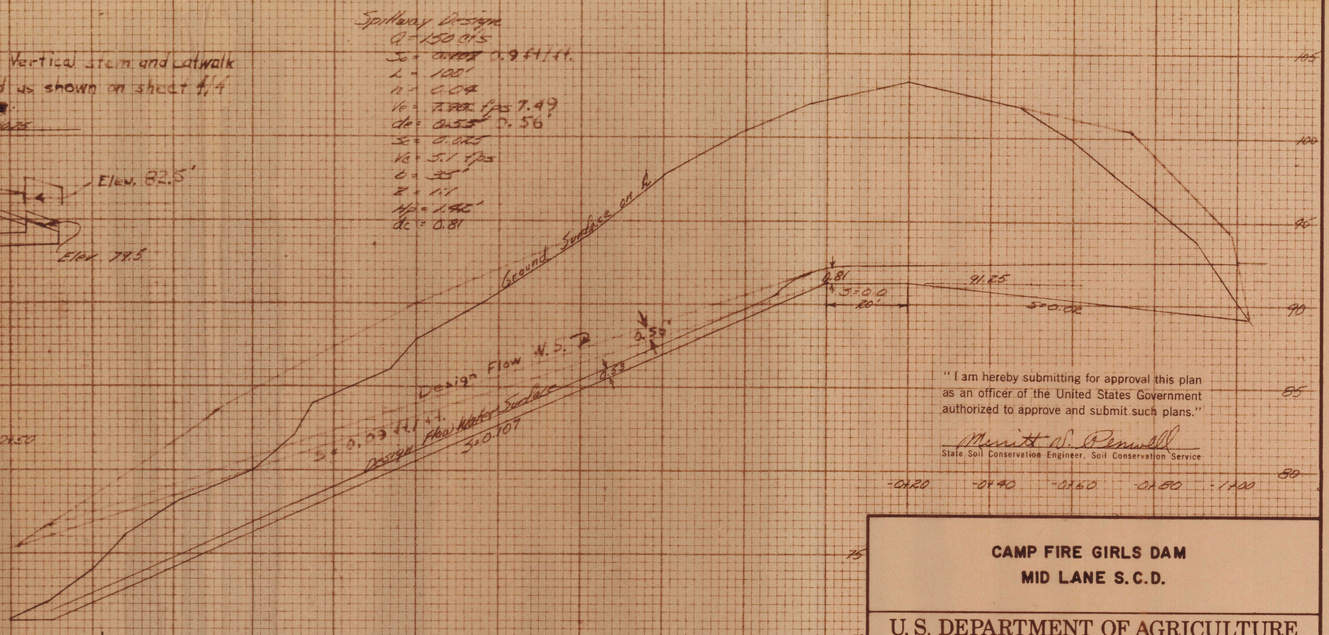
Use 4 anti-seep collars

(r) 4-27-60 ~~BCOH~~









"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

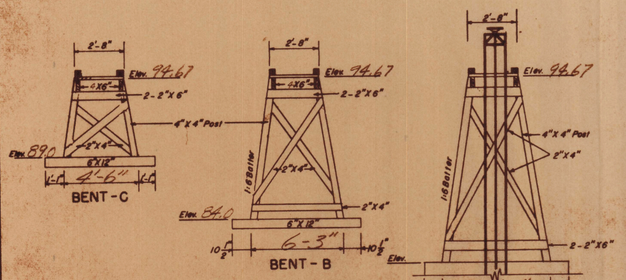
Merritt N. Pennell
State Soil Conservation Engineer, Soil Conservation Service

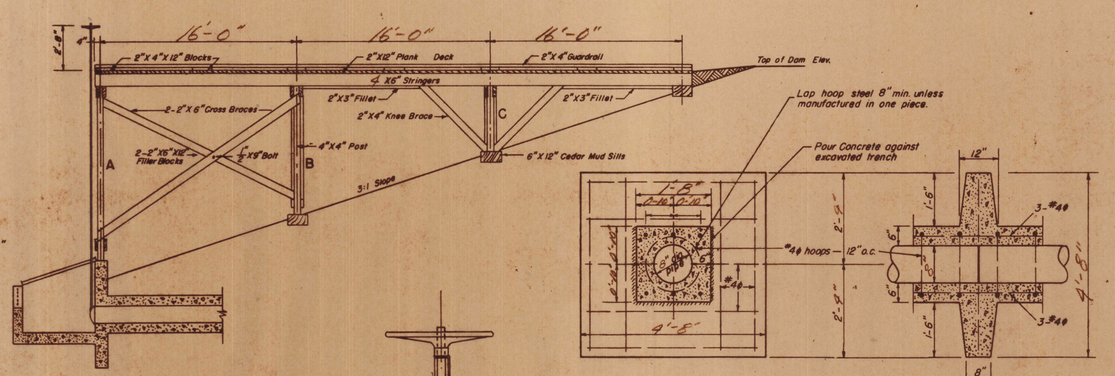
CAMP FIRE GIRLS DAM
MID LANE S.C.D.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed	Date	Approved by	Donald W. Hesdorf
Drawn: Donald W. Stoller	3/60	Title	CIVIL ENGINEER
Traced: Donald W. Stoller	3/60	Title	
Checked: DWH	4/22/60	Sheet No. 2 of 4	Drawing No. 7-E-16347

U. S. GOVERNMENT PRINTING OFFICE : 1956 O - 373189

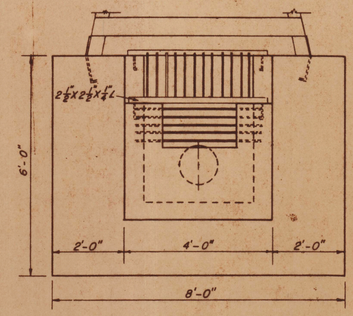




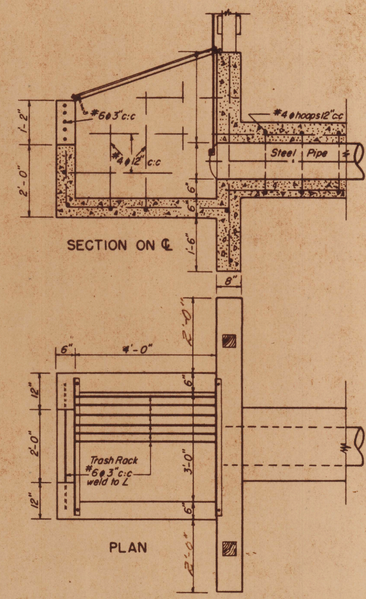
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SECTION THRU CONCRETE CONDUIT SHOWING CUTOFF COLLARS

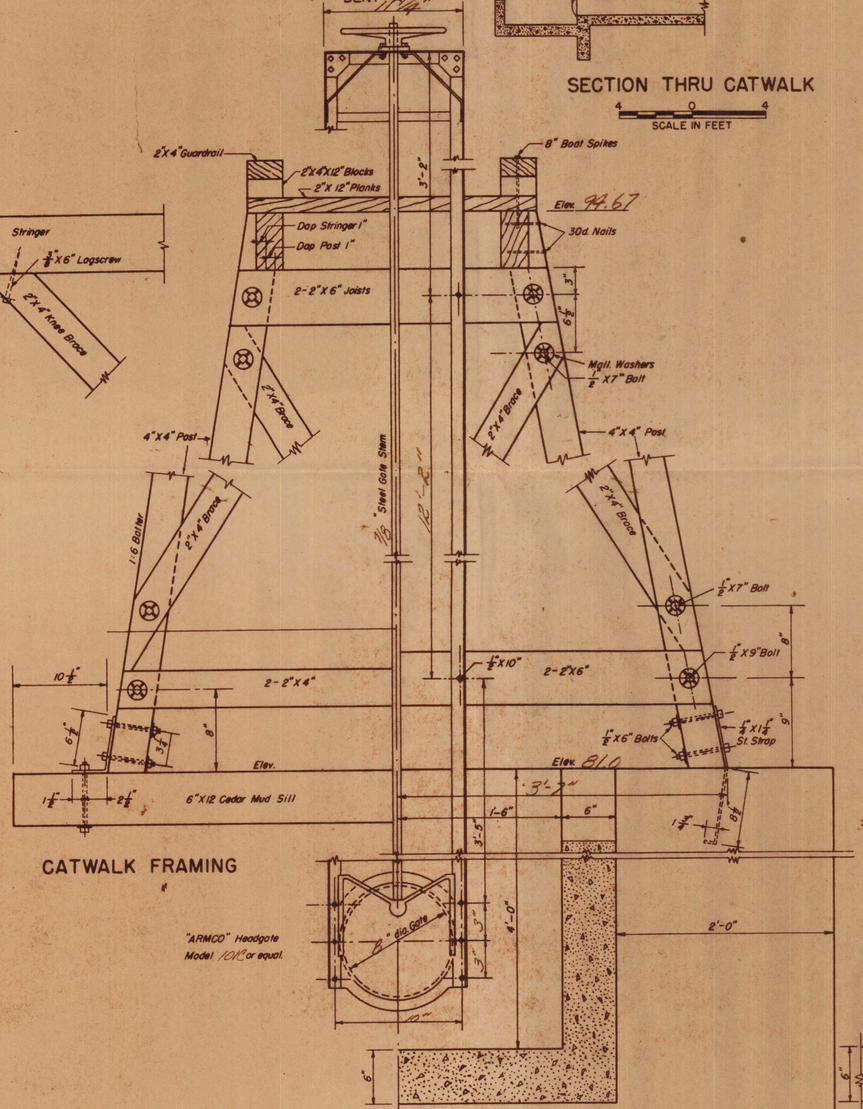
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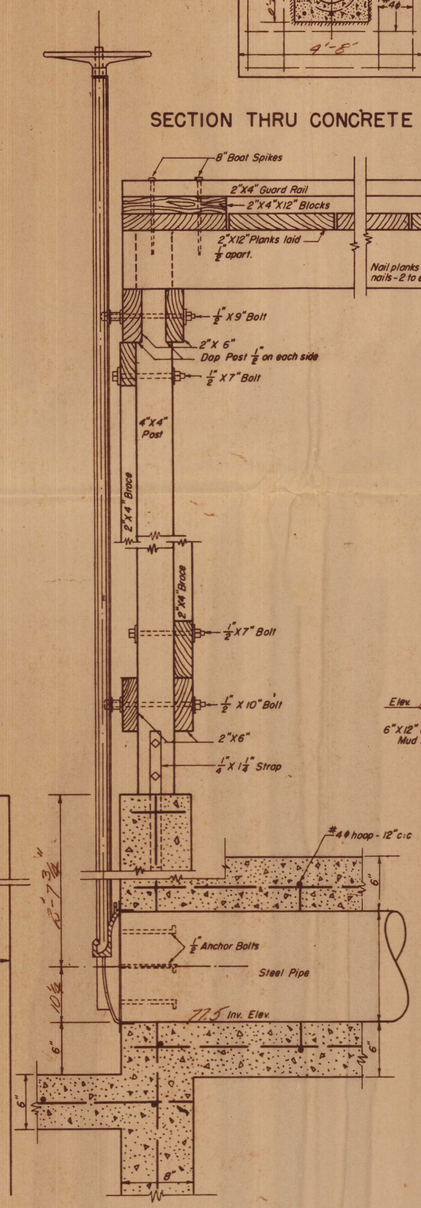


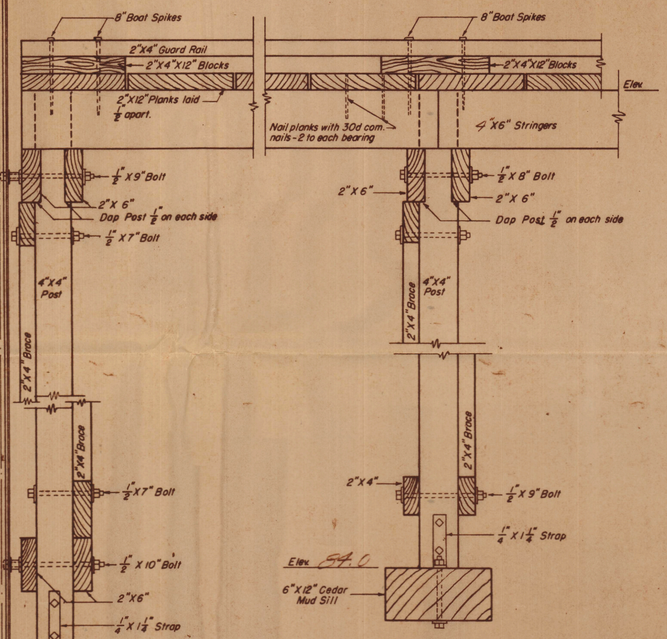
ELEVATION

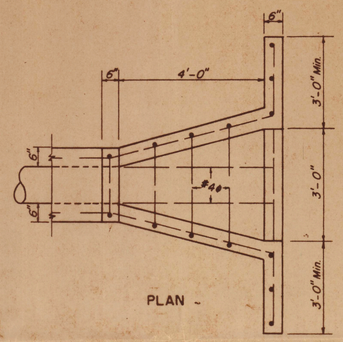


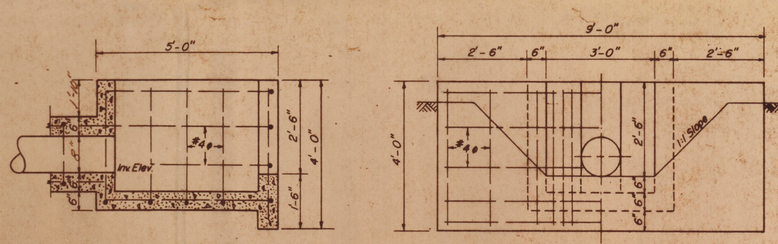
DETAIL OF INTAKE STRUCTURE











DETAIL OF OUTLET STRUCTURE

SCALE IN FEET

"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Merritt N. Pennell
State Soil Conservation Engineer, Soil Conservation Service

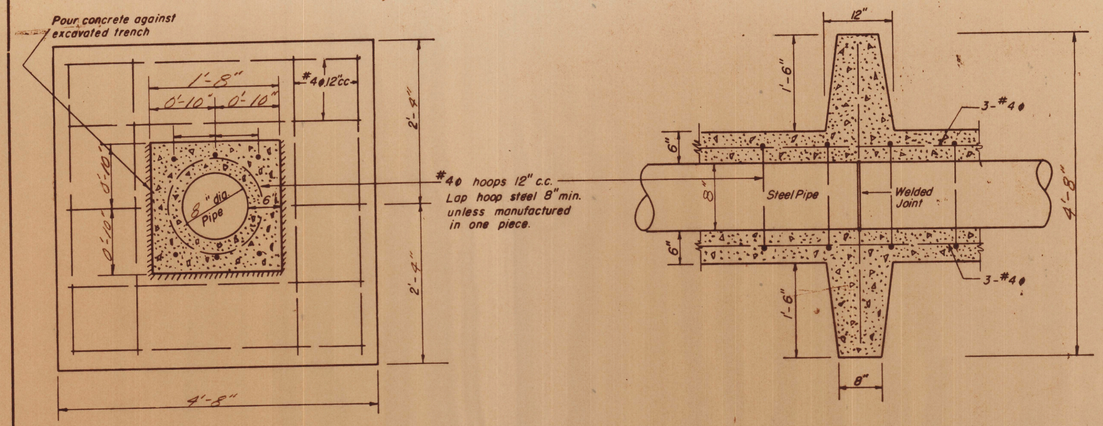
ALTERNATE PLAN FOR INLET STRUCTURE

AS BUILT

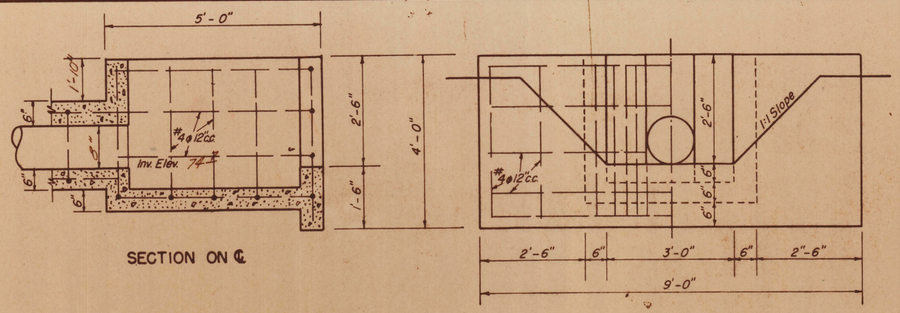
CAMP FIRE GIRLS DAM
MID LANE S.C.D.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

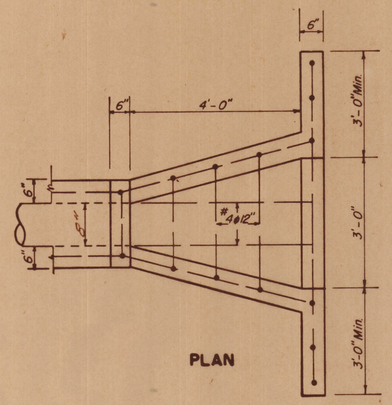
Designed Donald L. Stettler 3/60	Approved by Donald L. Haslam
Drawn Donald L. Stettler 3/60	Title CIVIL ENGINEER
Traced	Title
Checked DWH 4/29/60	Sheet No. 4 of 4 sheets
	Drawing No. 7-E-16347



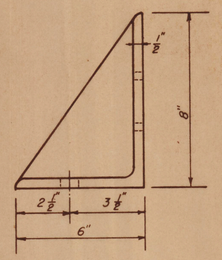
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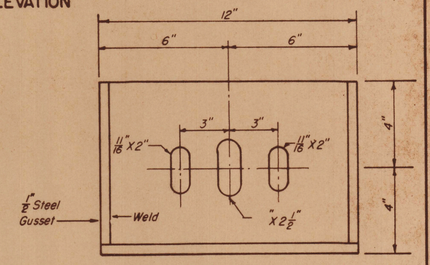
DOWNSTREAM ELEVATION



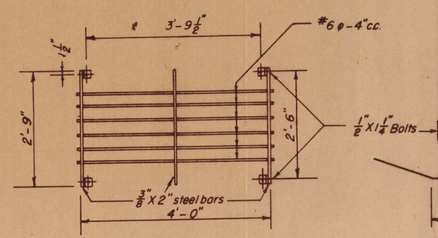
PLAN



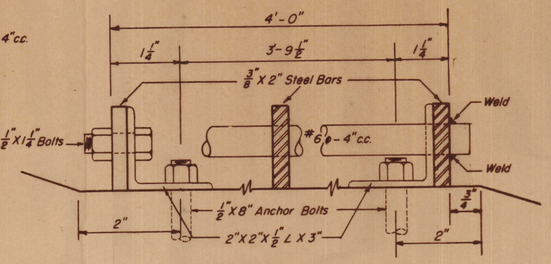
SIDE VIEW



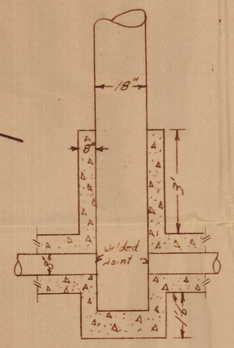
ELEVATION



TRASH RACK

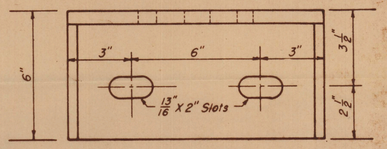


TRASH RACK DETAILS



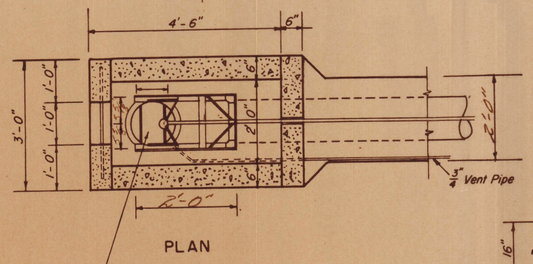
RISER CONNECTION

DETAIL OF OUTLET STRUCTURE

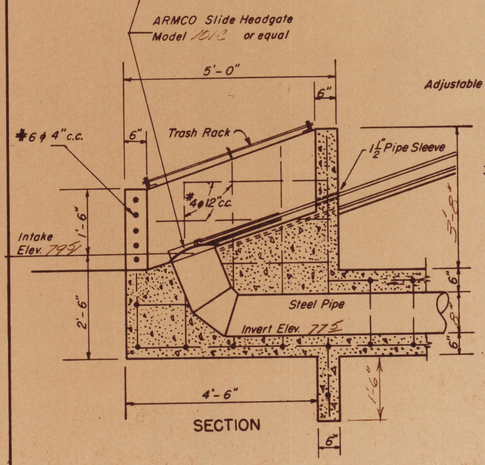


PLAN

GATE STEM SUPPORT

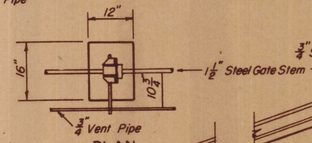


PLAN

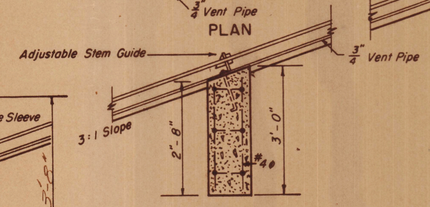


SECTION

INTAKE STRUCTURE

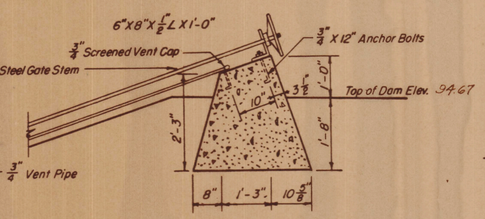


PLAN

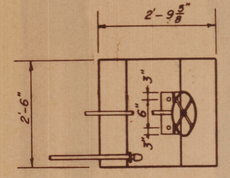


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GATE STEM PEDESTAL

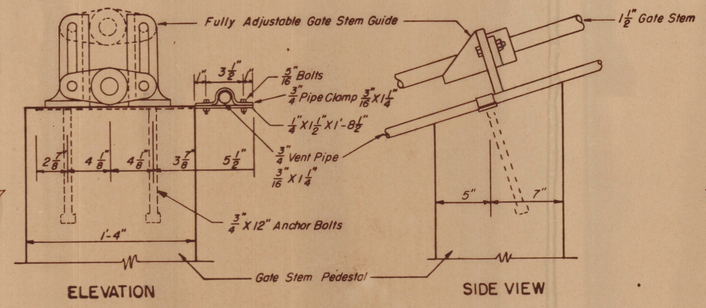


SECTION



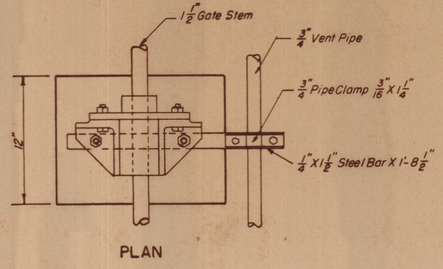
PLAN

GATE CONTROL STRUCTURE



ELEVATION

SIDE VIEW



PLAN

ADJUSTABLE STEM GUIDE & VENT PIPE HANGER

AS BUILT

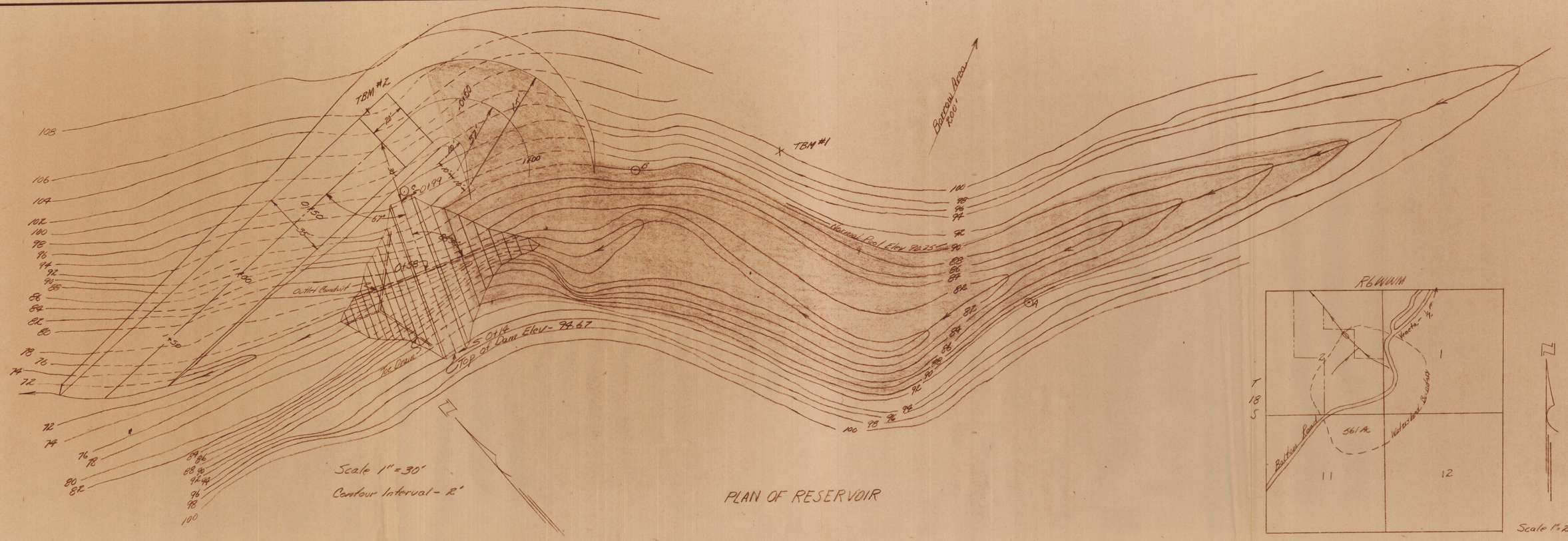
"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Merritt N. Pinnell
State Soil Conservation Engineer, Soil Conservation Service

CAMP FIRE GIRLS DAM
MID LANE S.C.D.

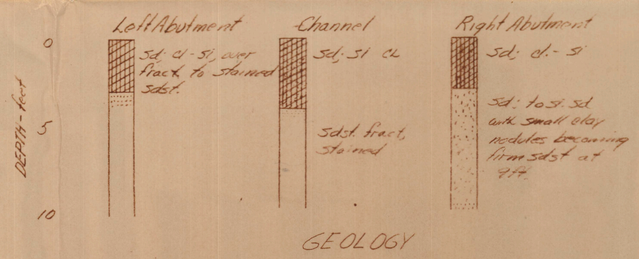
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

	Date		
Designed Donald L. Stettler	3/64	Approved by Donald W. Haslam	
Drawn Donald L. Stettler	3/64	Title CIVIL ENGINEER	
Traced		Title	
Checked DWH	4/28/64	Sheet No. 3 of 4	Drawing No. 7-E-16347



PLAN OF RESERVOIR

LOCATION MAP



GEOLOGY

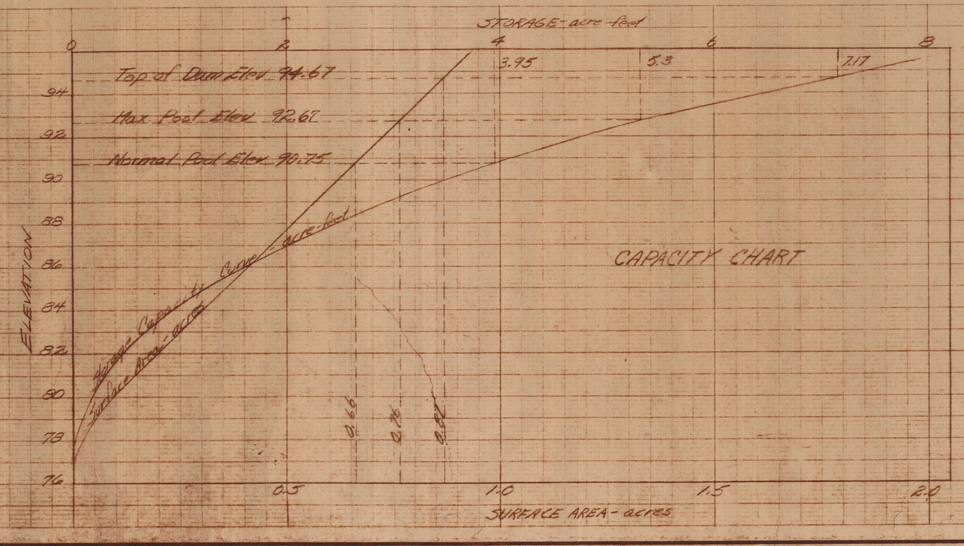
COMPACTED VOLUME
Embankment - 1081 cy
Cut-off - 466 cy

EXCAVATION VOLUMES
Spillway - 3834 cy
Cut-off - 466 cy

CONCRETE VOLUMES
Encasement & collars - 11.75
Intake structure and Perforations - 3.03
Outlet Structure - 1.87

TRICKLE TUBE
Conduit - 8 inches in diameter
Riser - 18 inches in diameter

RESERVOIR
Capacity - 3.95 acre-feet
Surface Area - 0.66 acres
Mean Depth - 6.0 feet



AS BUILT

"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Merritt N. Bonsell
State Soil Conservation Engineer, Soil Conservation Service

CAMP FIRE GIRLS DAM
MID LANE S. C. D.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed	Date	Approved by
Donald L. Stettler	3/60	Donald W. Haslem
Drawn		Title CIVIL ENGINEER
Donald L. Stettler	3/60	
Traced		Title
Checked		Sheet No. 1 of 4
D.W.H.	4/28/60	Drawing No. 7-E-16347

U. S. GOVERNMENT PRINTING OFFICE : 1956 O - 373149

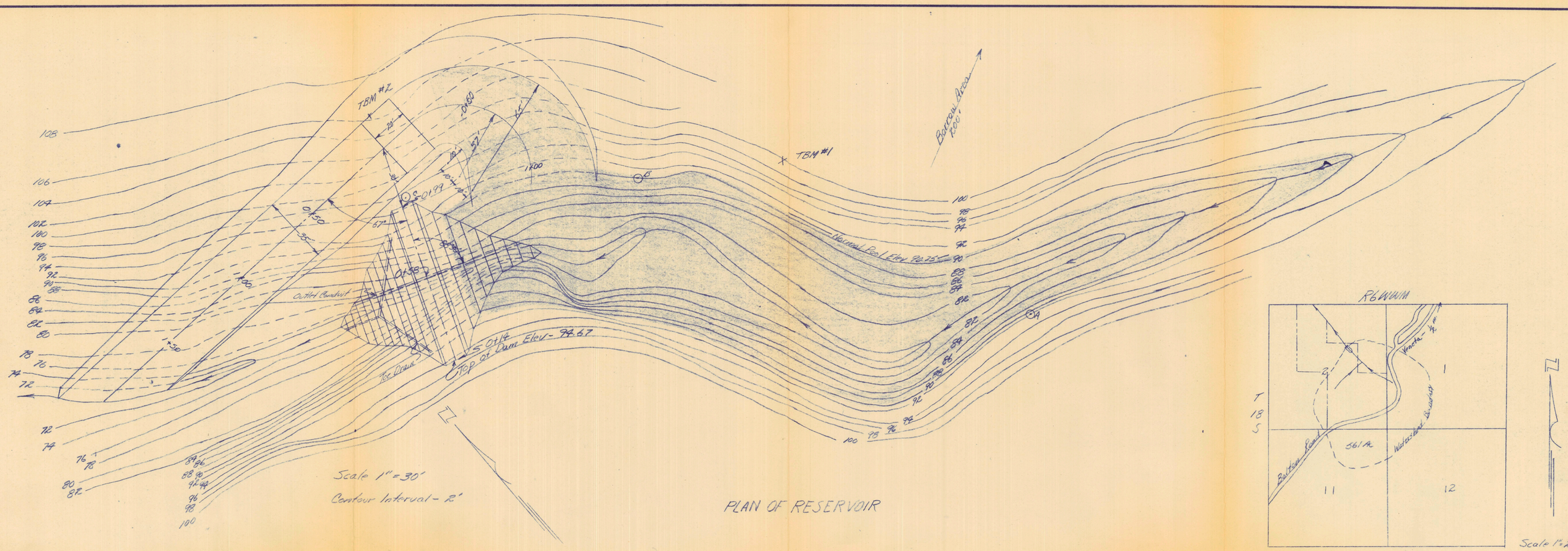
Form SCS-318 (November 1955)

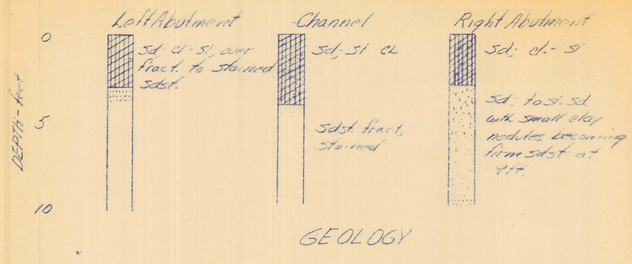
4-12-66
9:10 A.M.

Al:

Please call Ops. 61, Eugene, 343-8332 Mrs. Smith for the campfire girls. It is concerning the dam at the campfire camp.

Fairly urgent





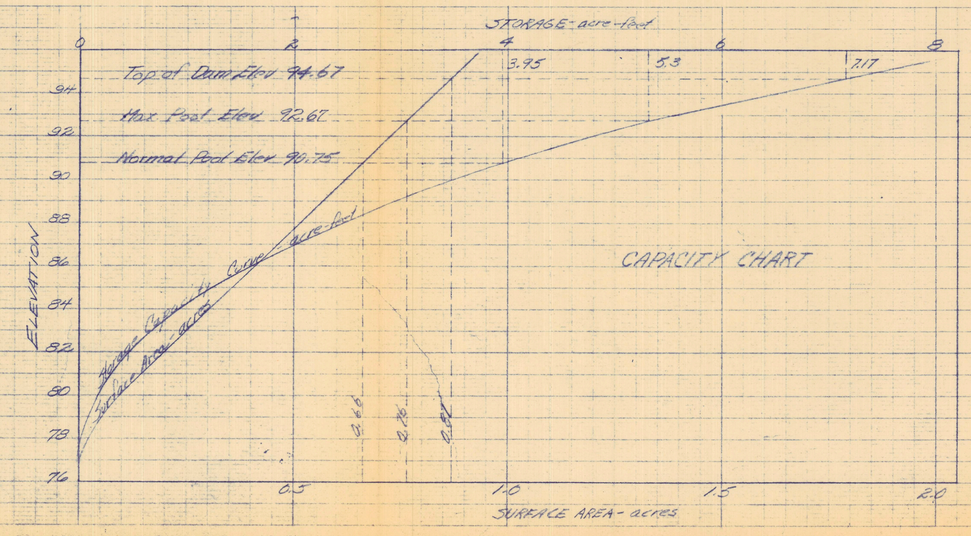
COMPACTED VOLUME
Embankment - 1081 c.y.
Cut-off - 466 c.y.

EXCAVATION VOLUMES
Spillway - 3834 c.y.
Cut-off - 466 c.y.

CONCRETE VOLUMES
Encasement & collars - 11.75
Intake Structure and Barrels - 3.03
Outlet Structure - 1.27

TRICKLE TUBE
Conduit - 8 inches in diameter
Riser - 18 inches in diameter

RESERVOIR
Capacity - 3.95 acre-feet
Surface Area - 0.66 acres
Mean Depth - 6.0 feet



AS BUILT

"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Merritt N. Barnwell
State Soil Conservation Engineer, Soil Conservation Service

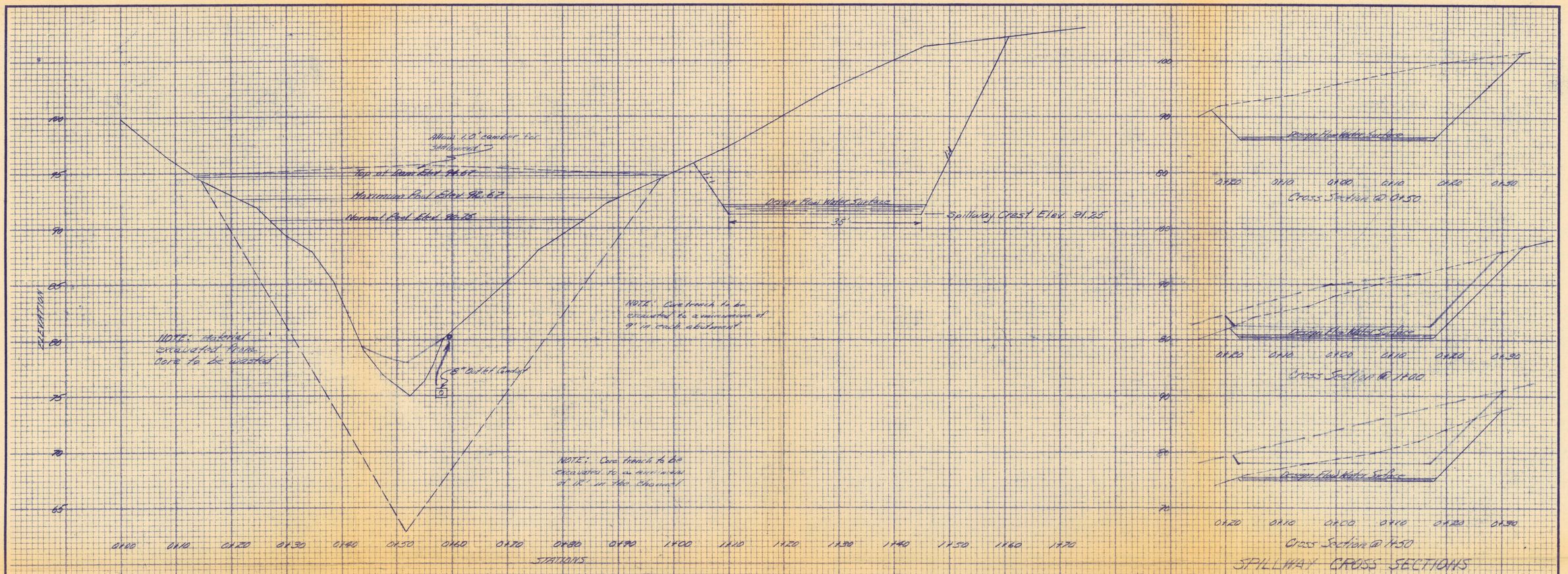
CAMP FIRE GIRLS DAM
MID LANE S.C.D.

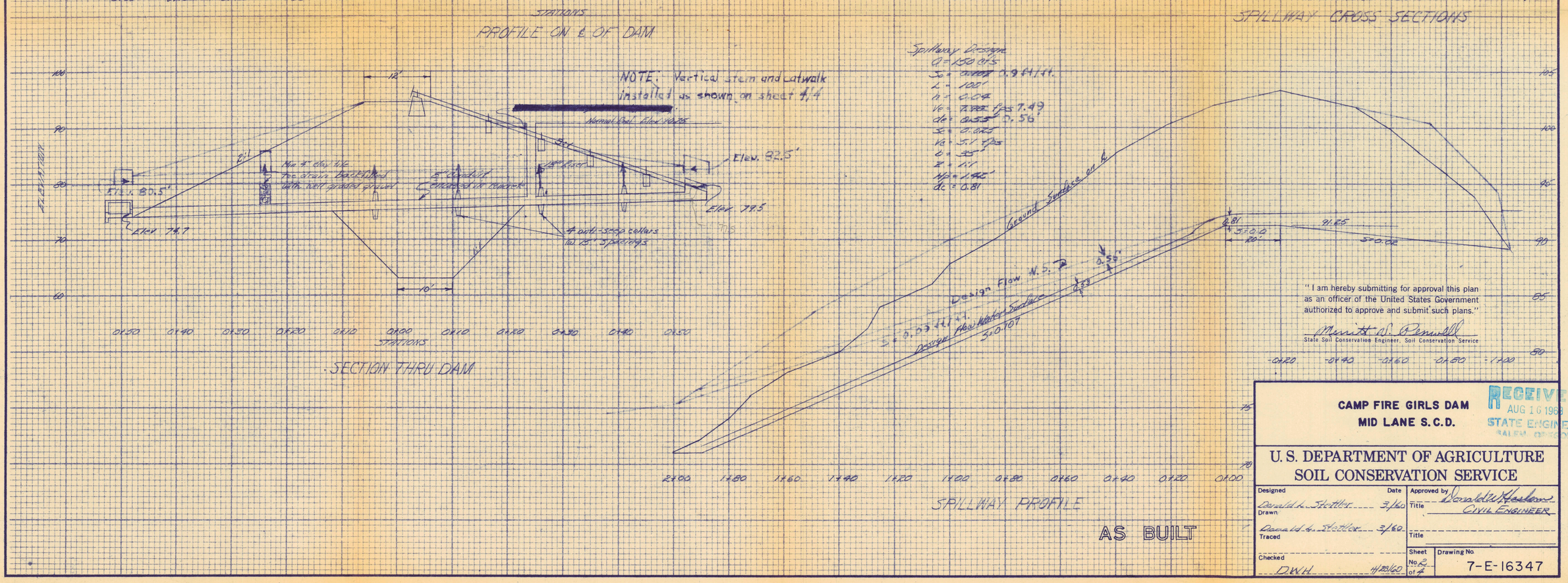
RECEIVED
AUG 16 1963
STATE ENGINEER
SALEM, OREGON

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed	Date	Approved by	
Donald L. Stettler	3/60	Title	Donald W. Haslem, CIVIL ENGINEER
Drawn: Donald L. Stettler	3/60		
Traced		Title	
Checked: DWH	4/29/60	Sheet No. 1 of 4	Drawing No. 7-E-16347

U. S. GOVERNMENT PRINTING OFFICE : 1956 O - 373139





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Merritt A. Penwell
State Soil Conservation Engineer, Soil Conservation Service

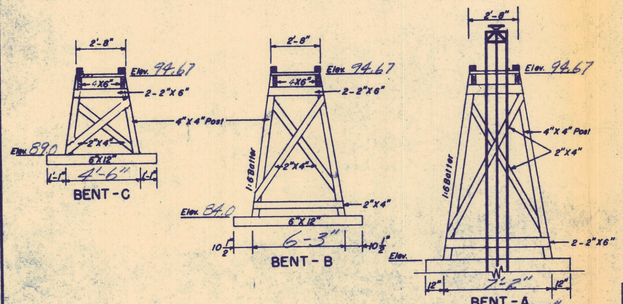
CAMP FIRE GIRLS DAM
MID LANE S.C.D.

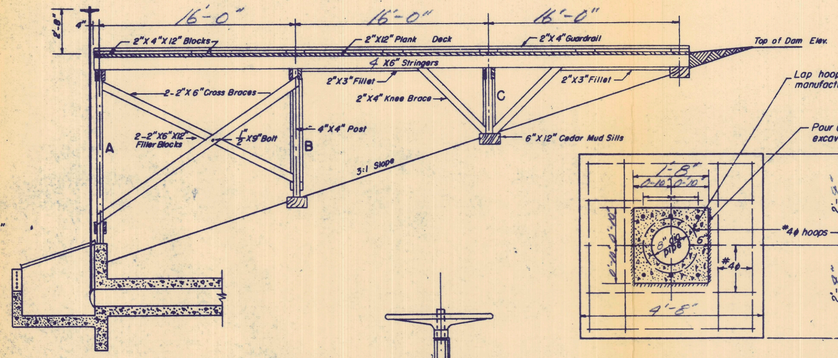
RECEIVED
AUG 10 1960
STATE ENGINEER
SALEM, OREGON

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed	Date	Approved by	Donald A. Haskins
Donald A. Stettler	3/60	Title	CIVIL ENGINEER
Drawn			
Donald A. Stettler	3/60	Title	
Traced			
Checked		Sheet No.	2 of 4
DWH	4/28/60	Drawing No.	7-E-16347

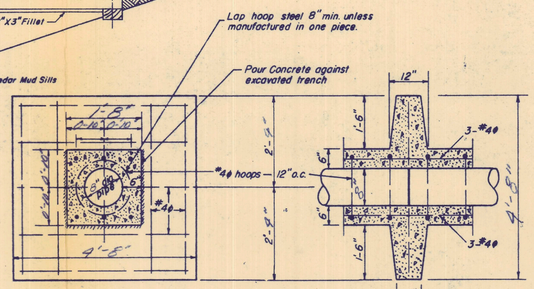
U. S. GOVERNMENT PRINTING OFFICE : 1956 O - 373189



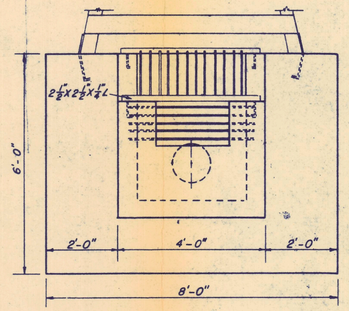


SECTION THRU CATWALK

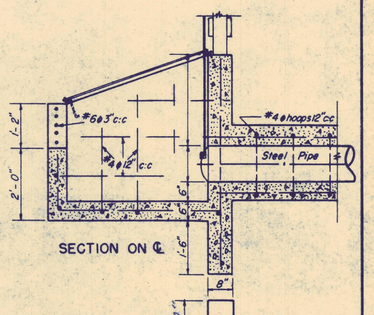
SCALE IN FEET



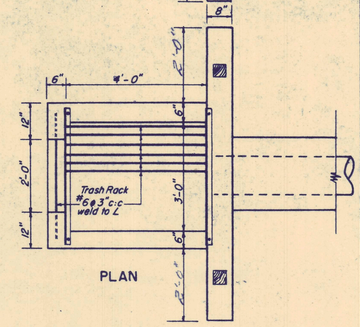
SECTION THRU CONCRETE CONDUIT SHOWING CUTOFF COLLARS



ELEVATION

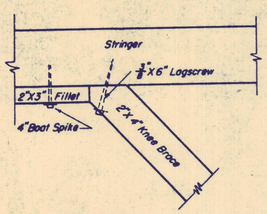


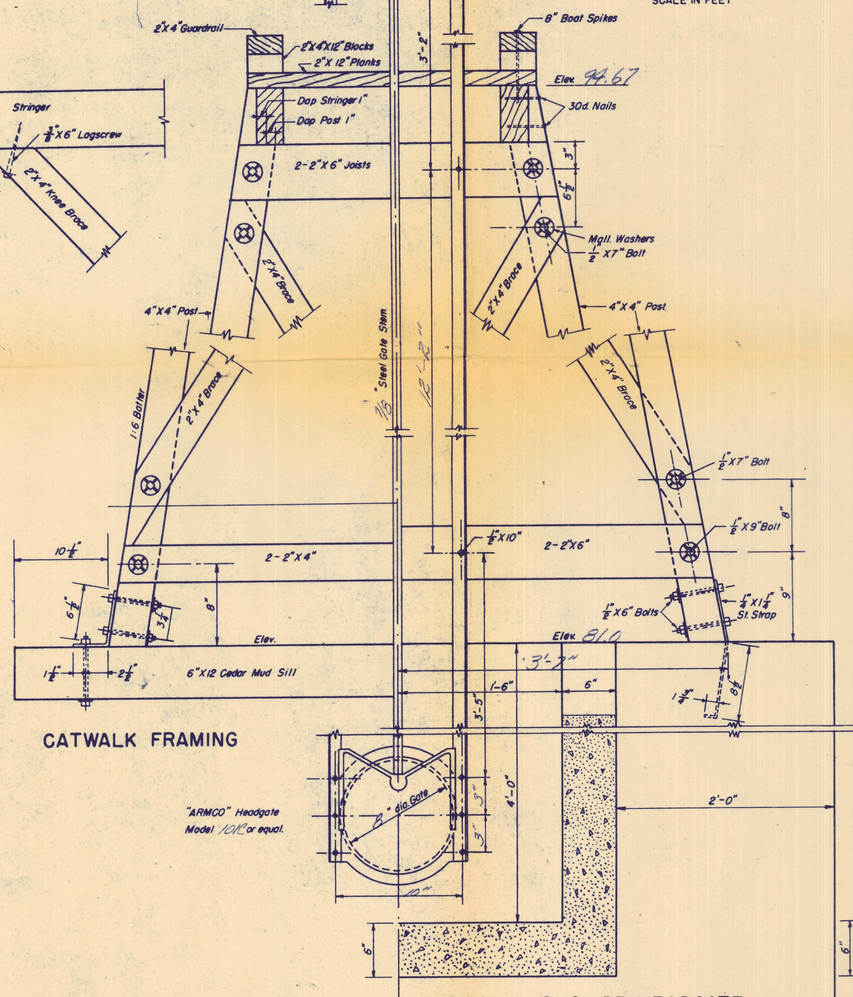
SECTION ON ℄



PLAN

DETAIL OF INTAKE STRUCTURE

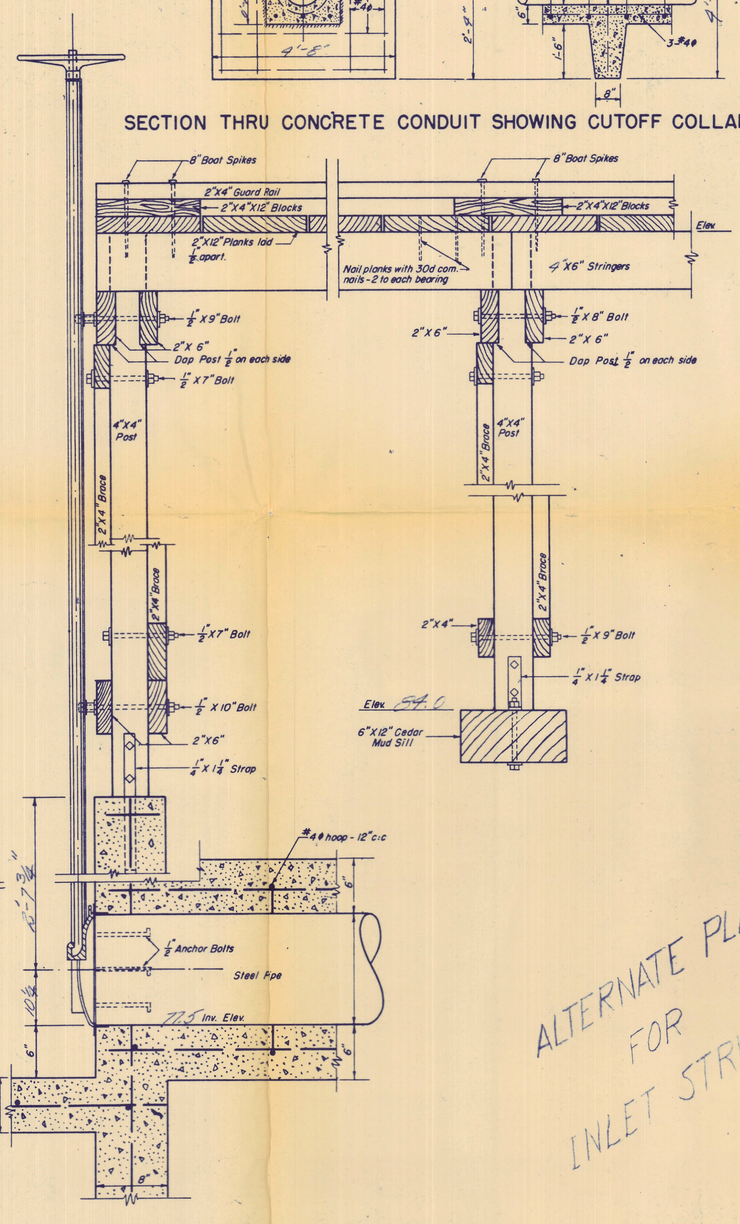


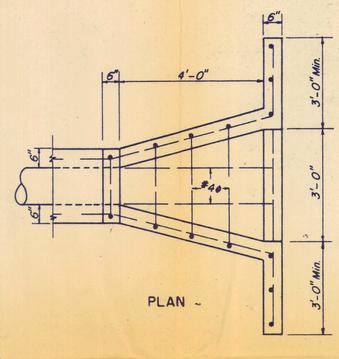


CATWALK FRAMING

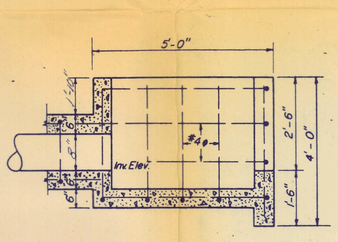
HEADWALL & SLIDE HEADGATE

SCALE IN FEET

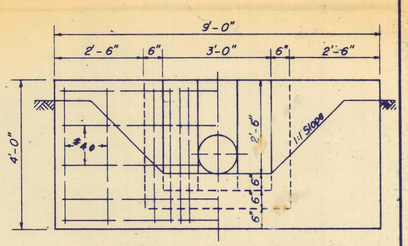




PLAN



SECTION ON ℄



DOWNSTREAM ELEVATION

DETAIL OF OUTLET STRUCTURE

SCALE IN FEET

ALTERNATE PLAN FOR INLET STRUCTURE

AS BUILT

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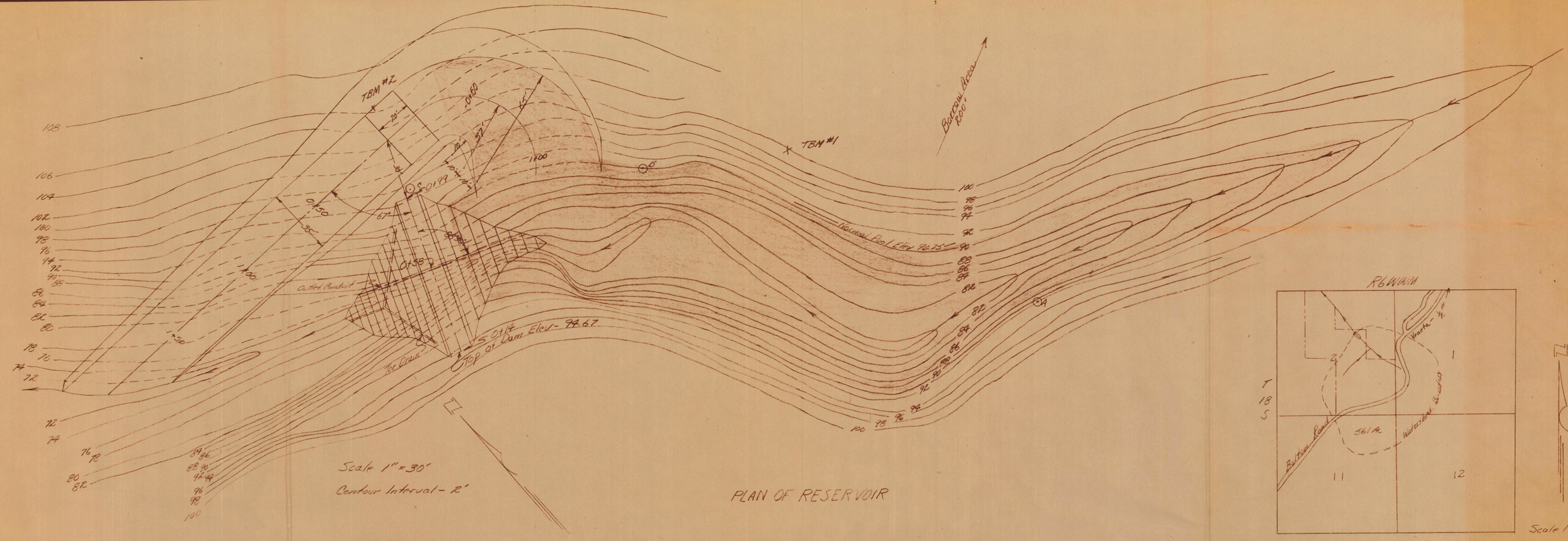
Merritt N. Pennell.
State Soil Conservation Engineer, Soil Conservation Service

CAMP FIRE GIRLS DAM
MID LANE S.C.D.

RECEIVED
AUG 16 1963
STATE ENGINEER
SALEM, OREGON

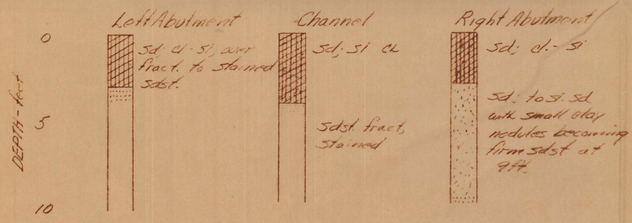
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

	Date		
Designed	Donald L. Stettler	3/60	Approved by: Donald W. Haslem
Drawn	Donald L. Stettler	3/60	Title: CIVIL ENGINEER
Traced			Title:
Checked	DWH	4/29/60	Sheet No. 4 of 4 — Drawing No. 7-E-16347



PLAN OF RESERVOIR

LOCATION MAP



GEOLOGY

Application No. R-34424 + 34603
Permit No. R-2584 + 27171

APPROVED Nov. 7, 1960
Lewis A. Stanley
STATE ENGINEER

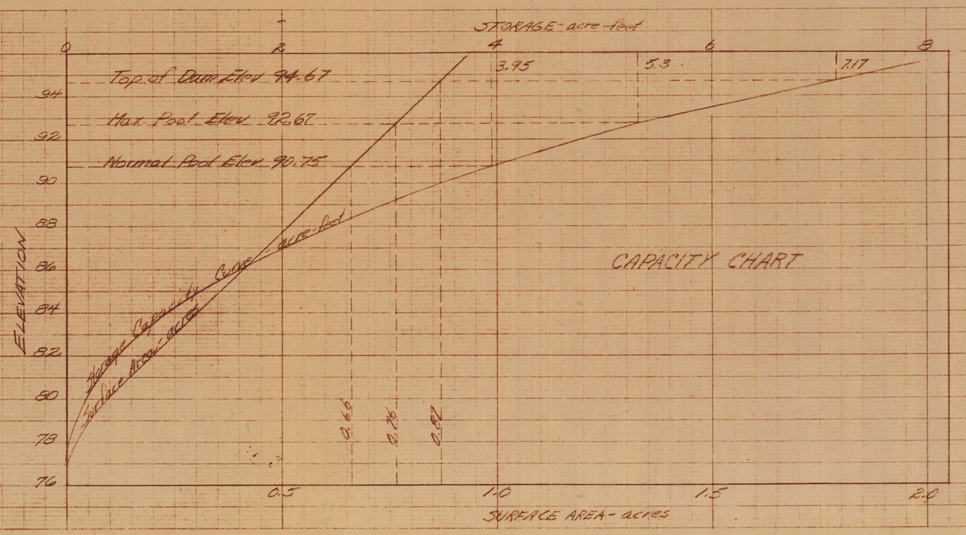
COMPACTED VOLUME
Embankment - 1051 c.y.
Cut-off - 466 c.y.

EXCAVATION VOLUMES
Spillway - 3834 c.y.
Cut-off - 466 c.y.

CONCRETE VOLUMES
Encasement & collars - 11.75
Intake structure and Perforations - 3.03
Outlet Structure - 1.27

TRICKLE TUBE
Conduit - 3 inches in diameter
Riser - 18 inches in diameter

RESERVOIR
Capacity - 3.75 acre-feet
Surface Area - 0.66 acres
Mean Depth - 6.0 feet



CAPACITY CHART

"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Merritt W. Powell
State Soil Conservation Engineer, Soil Conservation Service

RECEIVED
SEP 23 1960
STATE ENGINEER
SALEM, OREGON

CAMP FIRE GIRLS DAM
MID LANE S.C.D.

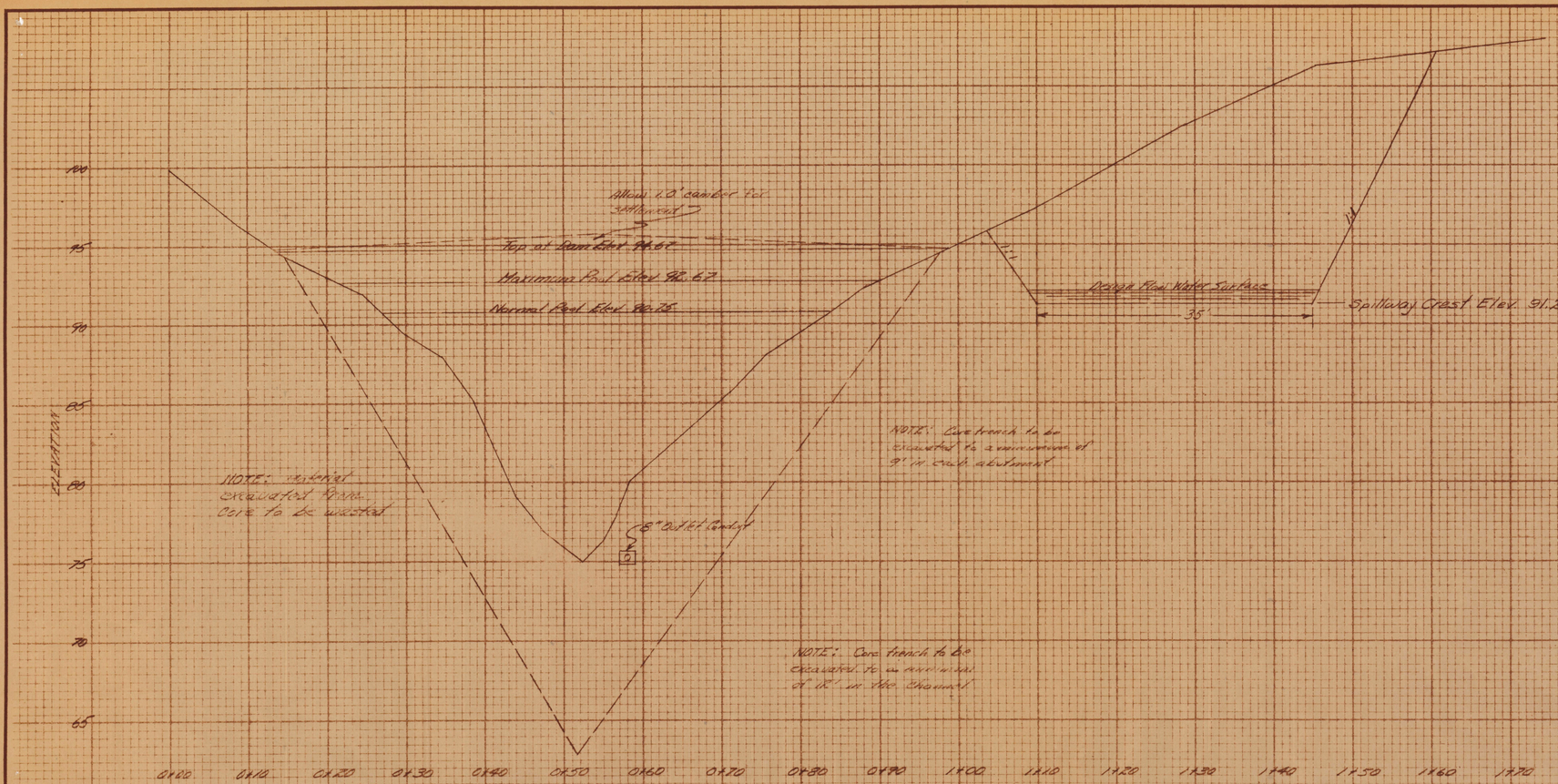
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

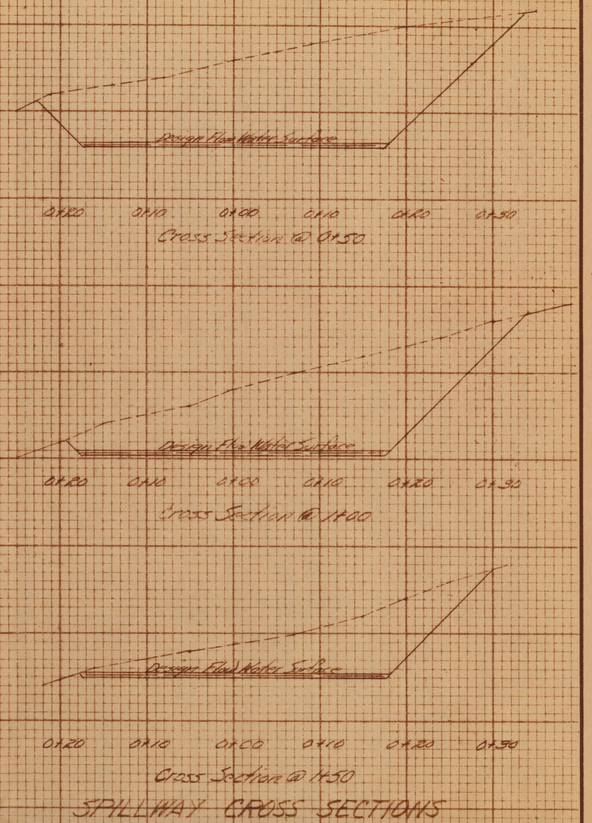
Designed	Date	Approved by
Donald L. Stettler	3/60	Donald A. Haskins
Drawn		Title: Civil Engineer
Donald L. Stettler	3/60	Title
Traced		
Checked DWH	4/28/60	Sheet No. 1 of 4 — Drawing No. 7-E-16347

U. S. GOVERNMENT PRINTING OFFICE : 1956 O - 373189

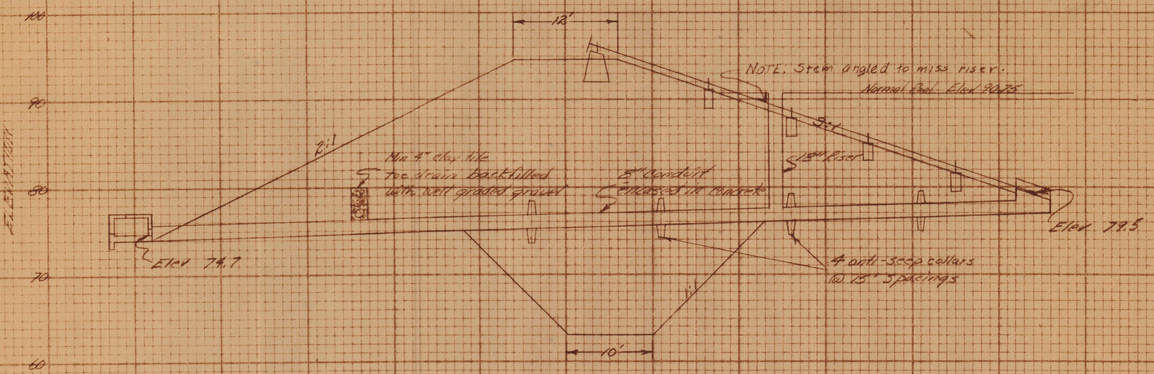
C-17-16

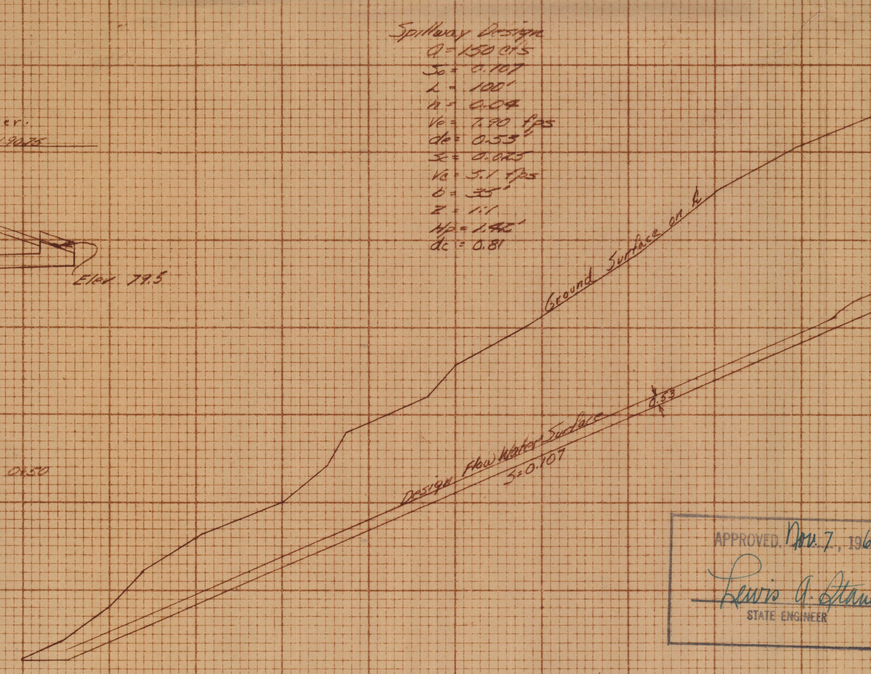
Form SCS-318 (November 1955)





SPILLWAY CROSS SECTIONS





"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Merritt A. Pennell
State Soil Conservation Engineer, Soil Conservation Service

APPROVED Nov. 7, 1960
Lewis A. Stanley
STATE ENGINEER

RECEIVED
SEP 28 1960
STATE ENGINEER
SALEM, OREGON

CAMP FIRE GIRLS DAM
MID LANE S.C.D.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

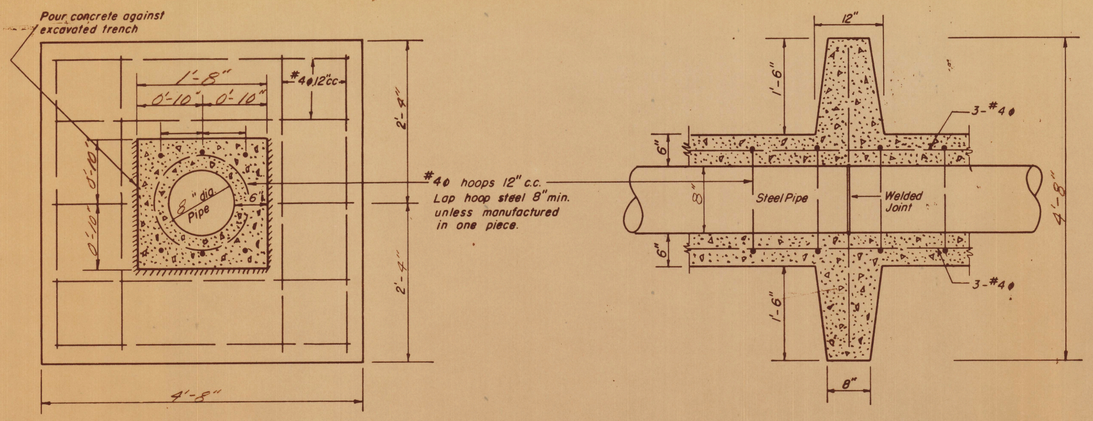
Designed	Date	Approved by
Donald L. Stettler	3/60	Donald W. Haslem
Drawn		Title: Civil Engineer
Donald L. Stettler	3/60	
Traced		Title
Checked		Sheet No. 2 of 4
DWH	4/25/60	Drawing No. 7-E-16347

Application No. R-374244 34603
Permit No. R-2584 & 27171

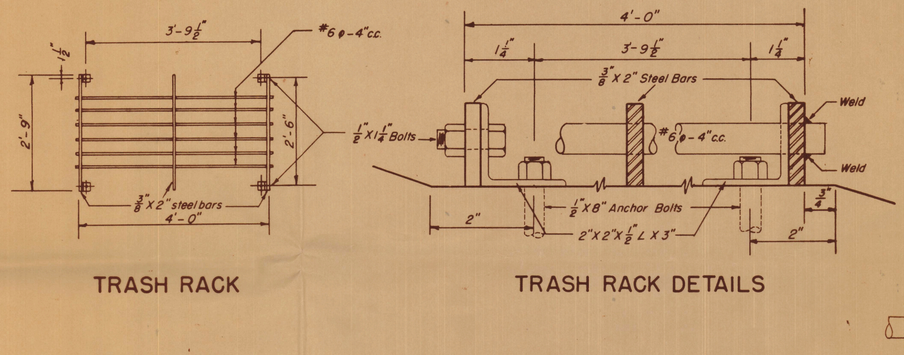
C-17-16

U. S. GOVERNMENT PRINTING OFFICE : 1956 O - 373189

Form SCS-315 (November 1955)

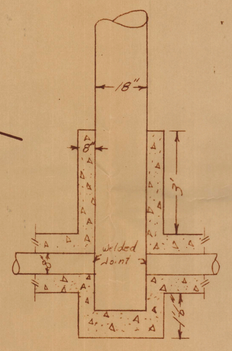


SECTION THRU CONCRETE CONDUIT SHOWING CUTOFF COLLARS

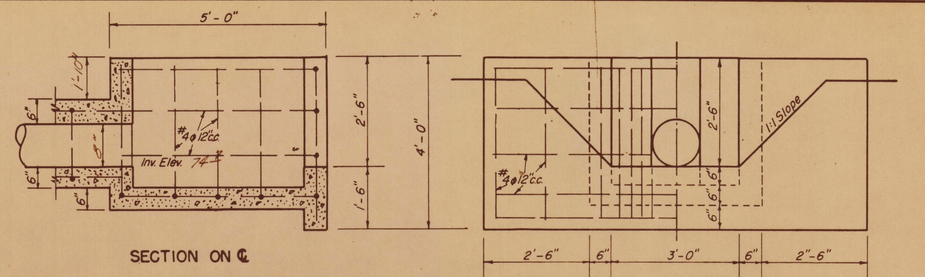


TRASH RACK

TRASH RACK DETAILS

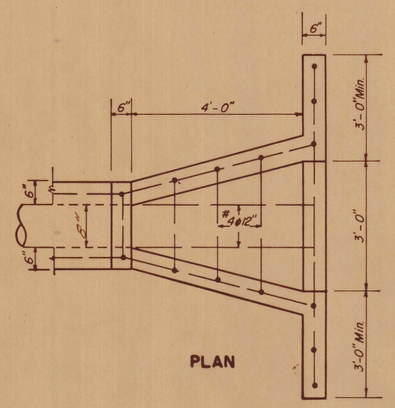


RISER CONNECTION

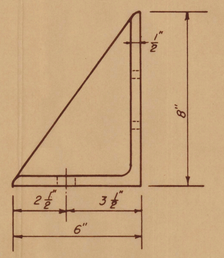


SECTION ON ℄

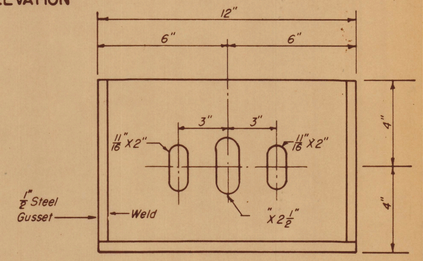
DOWNSTREAM ELEVATION



PLAN

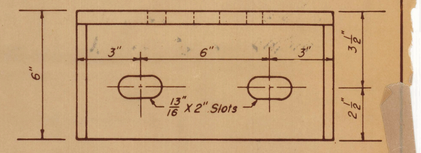


SIDE VIEW

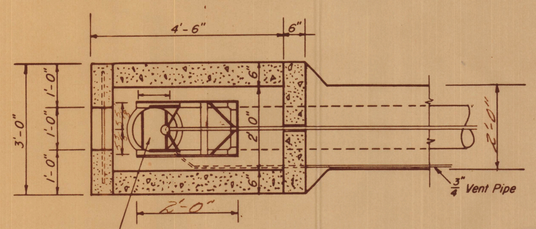


ELEVATION

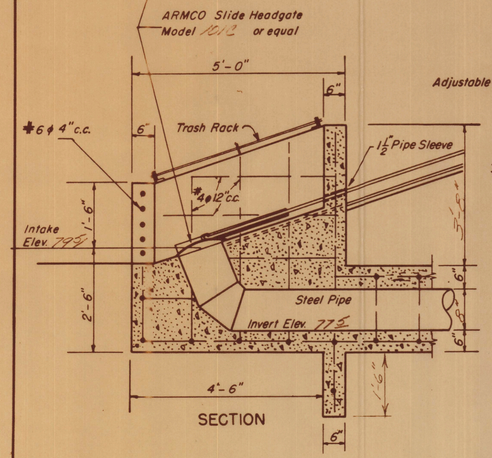
DETAIL OF OUTLET STRUCTURE



PLAN



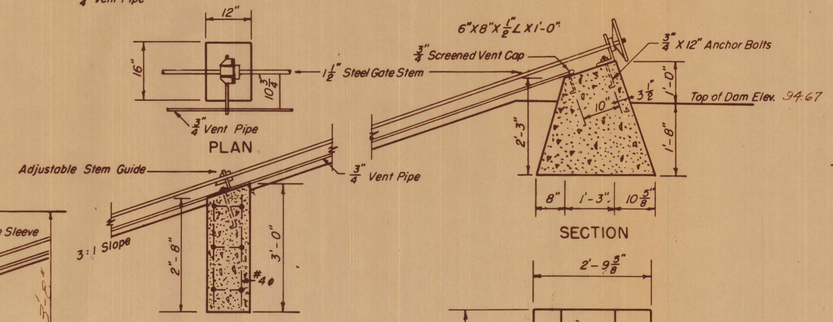
PLAN



SECTION

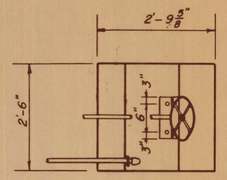
INTAKE STRUCTURE

PLAN



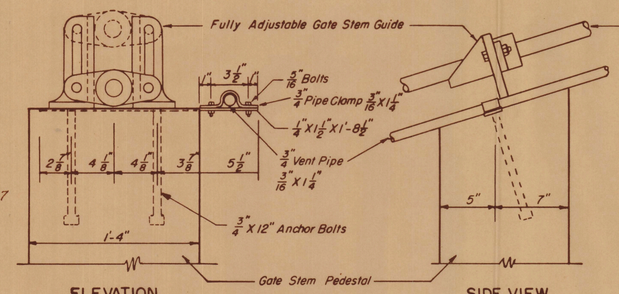
SECTION

GATE STEM PEDESTAL



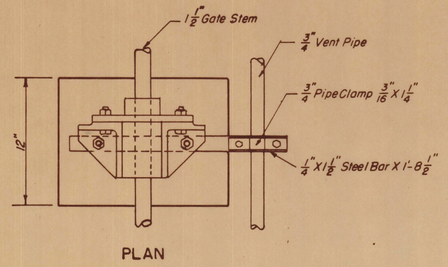
PLAN

GATE CONTROL STRUCTURE



ELEVATION

SIDE VIEW



PLAN

ADJUSTABLE STEM GUIDE & VENT PIPE HANGER

GATE STEM SUPPORT

Application No. R-34424 & 34603
Permit No. R-2584 & 27171

"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Merritt V. Powell
State Soil Conservation Engineer, Soil Conservation Service

APPROVED Nov. 7, 1960
Lewis A. Stanley
STATE ENGINEER

RECEIVED
SEP 28 1960
STATE ENGINEER
SALEM, OREGON

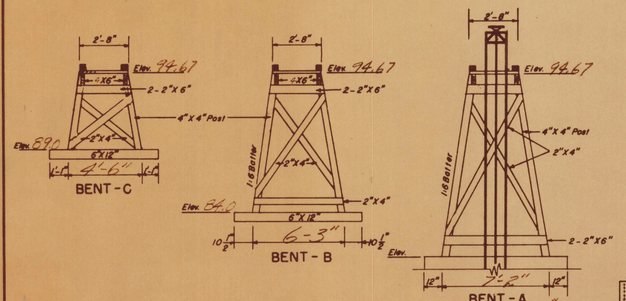
CAMP FIRE GIRLS DAM
MID LANE S.C.D.

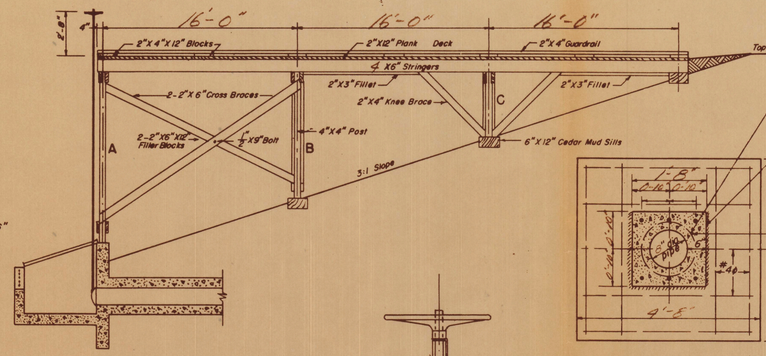
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed Donald L. Stettler 3/60	Date	Approved by Donald W. Horstem	
Drawn Donald L. Stettler 3/60		Title CIVIL ENGINEER	
Traced		Title	
Checked DWH 4/28/60		Sheet No. 3 of 4	Drawing No. 7-E-16347

C-17-16

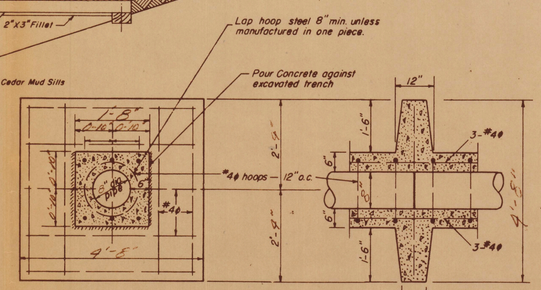
C-17-16



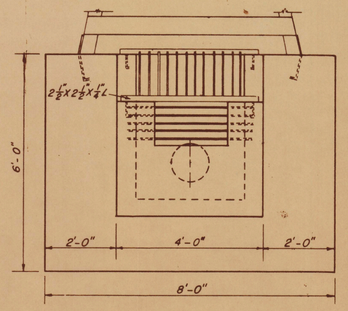


SECTION THRU CATWALK

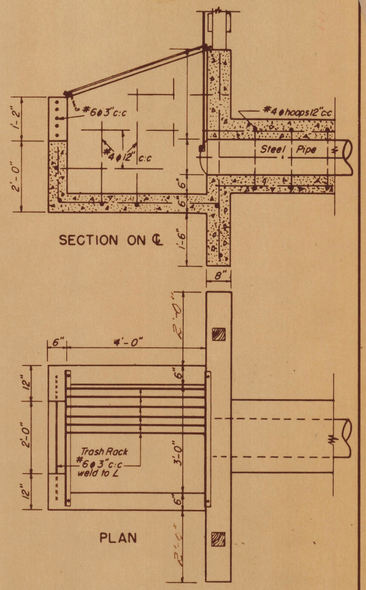
SCALE IN FEET



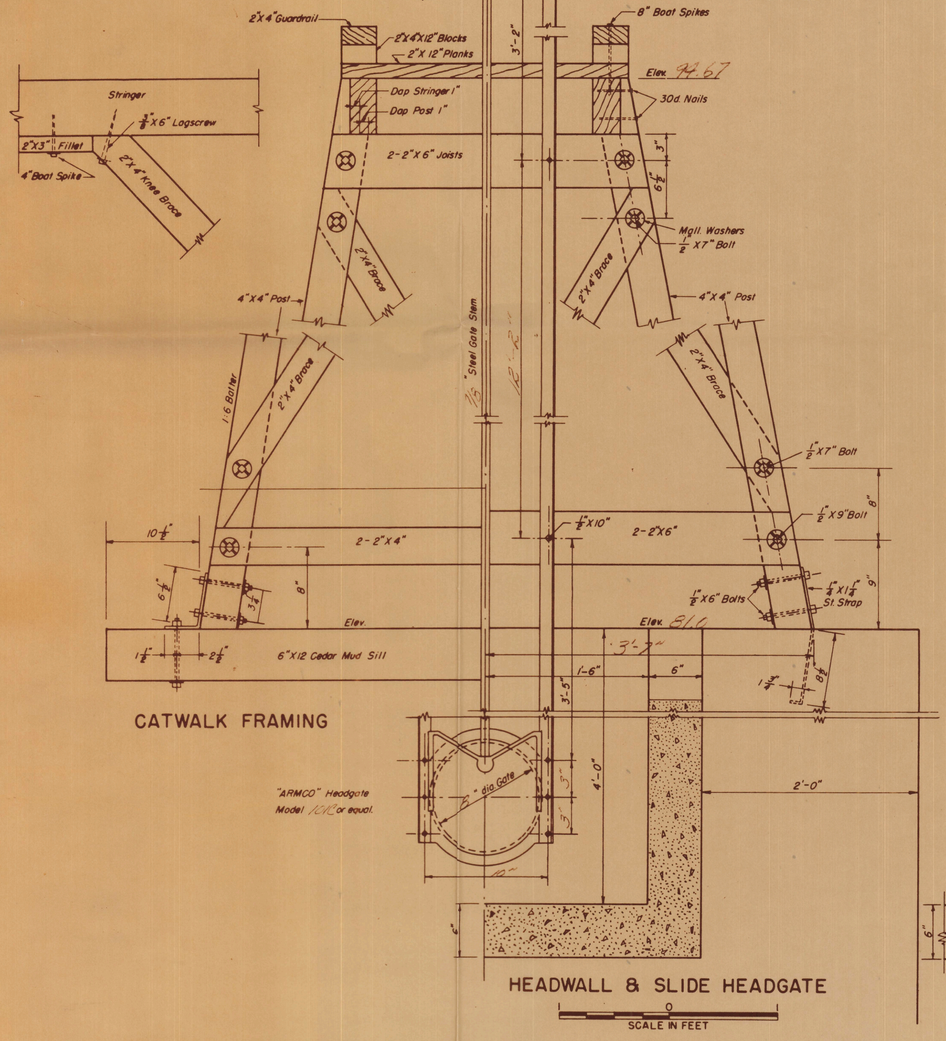
SECTION THRU CONCRETE CONDUIT SHOWING CUTOFF COLLARS



ELEVATION



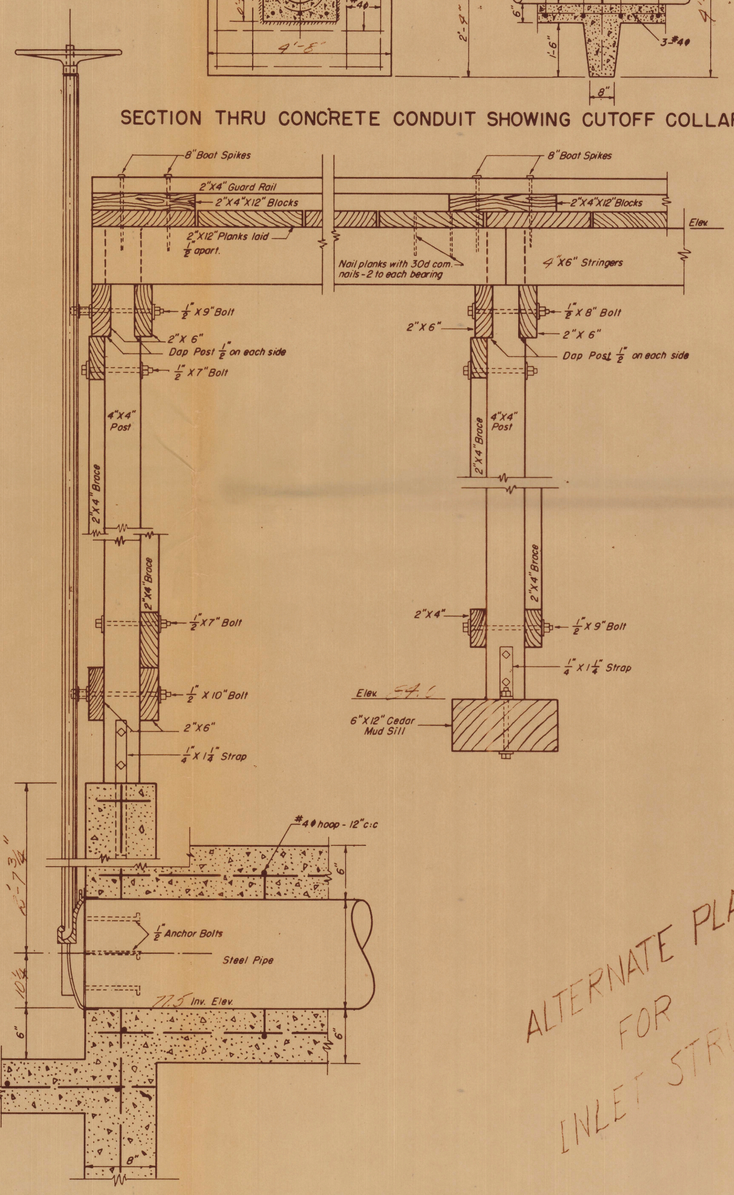
DETAIL OF INTAKE STRUCTURE

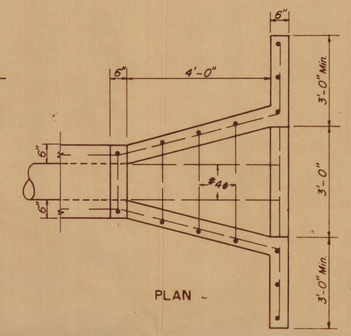


CATWALK FRAMING

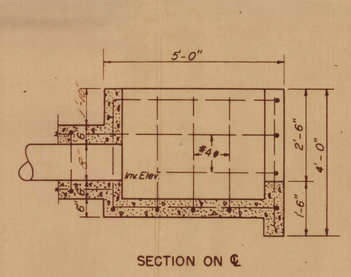
HEADWALL & SLIDE HEADGATE

SCALE IN FEET

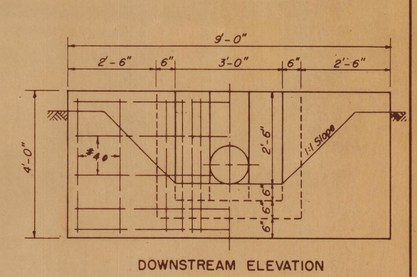




PLAN



SECTION ON ℄



DOWNSTREAM ELEVATION

DETAIL OF OUTLET STRUCTURE

SCALE IN FEET

Application No. R-34424 & 34603
Permit No. R-2584 & 27171

ALTERNATE PLAN FOR INLET STRUCTURE

APPROVED Nov. 7, 1960
Lewis A. Stanley
STATE ENGINEER

"I am hereby submitting for approval this plan as an officer of the United States Government authorized to approve and submit such plans."

Merritt W. Boswell.
State Soil Conservation Engineer, Soil Conservation Service

CAMP FIRE GIRLS DAM
MID LANE S.C.D.

RECEIVED
SEP 28 1960
STATE ENGINEER
SALEM, OREGON

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed	Donald L. Stettler 3/60	Approved by	Harold W. Hawkins
Drawn	Donald L. Stettler 3/60	Title	CIVIL ENGINEER
Traced		Title	
Checked	DWH 11/29/61	Sheet No. 4	Drawing No. 7-E-16347

Reservoir—1M—11-62 State Printing 47213

STATE OF OREGON

COUNTY OF LANE

Proof of Appropriation of Water

RECEIVED
APR 24 1967
STATE ENGINEER
SALEM OREGON

CAMP FIRE GIRLS, LANE COUNTY COUNCIL

of 1626 Willamette Street, Eugene, State of Oregon, has constructed a reservoir to store the waters of

Wilson Creek, tributary of Long Tom River, in Lake Hahnee Reservoir appropriated under Application No. 34603, Permit No. 27171

for the purposes of

recreation

under Reservoir Permit No. R-2584 of the State Engineer, and that the storage of said waters has been completed within the terms of said Permit; that the priority of the right dates from October 21, 1960

that the amount of water entitled to be stored each year under such right, for the purposes aforesaid, shall not exceed 3.95 acre feet

The reservoir is located in

SW¼ NE¼
SE¼ NE¼
Section 2
T. 18 S., R. 6 W., W. M.

I have read the above and foregoing proof of appropriation of water; I know the contents thereof, and that the facts therein stated are true.

IN WITNESS WHEREOF, I have hereunto set my hand this 21st day of April, 19 67.

Cuma Smith

1458

R-34424
34603

April 24, 1967

Camp Fire Girls
Lane County Council
1626 Willamette Street
Eugene, Oregon

Attention: Cuma Smith:

Dear Madam:

This will acknowledge receipt of the signed proofs of the proposed certificates in connection with your permits numbered R-2584 and 27171 and the certificate recording fee of $1.00 for which our receipt number 3473 is enclosed.

There are two certificates involved, each of which will require a recording fee, so if you will submit the additional fee of $1.00, we will be able to issue the certificates.

Very truly yours,

CHRIS L. WHEELER
State Engineer

By
Myron V. Bish
Assistant

MVB:pju

Enclosure

R-34424
34603
REFER TO FILE NO.

STATE OF OREGON
STATE ENGINEER
WATER RESOURCES DEPARTMENT
516 PUBLIC SERVICE BUILDING
SALEM 97310

April 11, 1967

Camp Fire Girls, Lane County Council
1626 Willamette Street
Eugene, Oregon

Dear Sirs:

Enclosed is the final proof in connection with the incomplete water right represented by your permit No. R-2584, and 27171.

The data contained in the proof, which is based on an inspection and survey of your project made by a representative of this department, defines the extent to which your water right has been completed within the terms of your permit. The proof should be dated and signed by you and returned to this office.

Upon receipt of the proof, properly executed and accompanied by the statutory recording fee of $1, a certificate of water right will be issued confirming the right thereunder and, after being recorded in the county records, will be forwarded to you.

Very truly yours,

Chris L. Wheeler

CHRIS L. WHEELER
State Engineer

Form 117

Enclosure

pju

R-34424
34603

April 13, 1966

Mr. Lester Calder
1828 Hilyard
Eugene, Oregon

Dear Mr. Calder:

This is in confirmation of our telephone conversation this date regarding the Camp Fire Girls Lake Hahnee Reservoir.

As I advised you, a permit has been issued on this project and the plans and specifications approved by this office for 3.95 acre feet of storage for recreation. This involves the construction of a dam 19.67 feet high measured on the center line with a spillway depth of 3.42. Any deviations from the physical description portrayed by the approved plans and specifications must have the prior written approval of the State Engineer before construction is initiated. As I further indicated, the erosion in the spillway can be repaired back to its original level as represented by the approved plans and specifications.

If you wish a copy of these approved plans and specifications we can have a copy made by the Highway Department at a nominal fee of 10¢ per square foot.

Very truly yours,

CHRIS L. WHEELER
State Engineer

By
A. M. Petska
Engineer

AMP:jb

cc: Ralph Jackson, Watermaster, District 2
Mrs. Smith, Camp Fire Girls, Lane County Council

Capt f. Page.
839-345-6714
Mr. Lester Calder -
839 344-9479
1824 HILYARD
Eugene

95.00
01.25
3.75

Boatwright
343 9103

MAY 58

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

[redacted] SUMMARY OF DENSITY DETERMINATIONS

cation Mid Lane S.C.D. Owner Camp Fire Girls Submitted By: D.L.S. Date 8 19 63

tershed _____ Sub-watershed _____ Site No. _____

ntractor Glen Ousley Constr. Co. Contract No. _____ Report period: From 8/19 19 62 to 9/10 19 62

est No.	Date of Test	Location of Sample: From (Dam, Core, etc.)	Sta. No.	Distance Rt. or Lt. of ℄	Elev.	Corr. % Moist.	Dry Density Lbs/C.F.	Opt. Moist. %	Max. Dry Density Lbs/C.F.	% Comp.	Instructions to Contractor	Tested By
	8/17/62	Core	—	—	—	20	100	18-22	97	103		D.L.S.
	9/5/62	Fill	—	—	—	23.7	85.5	"	"	88	Not to use material which contained woody and sandstone	G.H.C. J.D.P.
	9/6/62	Fill	—	—	—	22.9	96.8	"	"	99.7		D.L.S.
	9/7/62	Fill	—	—	—	24.5	96.8	"	"	99.7		D.L.S.
	9/8/62	Fill	—	—	—	21.8	97.9	"	"	100.9		D.L.S.
	9/10/62	Fill	—	—	—	21.3	106.6	"	"	109.9		D.L.S.

RECEIVED
AUG 16 1963
STATE ENGINEER
SALEM, OREGON

opy to E and WP Unit (Distribute other copies as directed by State Conservationist)

In suspense file
11-4-60

September 27, 1960

Lane County Council
of Camp Fire Girls, Inc.
1626 Willamette Street
Eugene, Oregon

Attention: Mrs. Guma Smith

Dear Mrs. Smith:

This will acknowledge receipt of your application for a permit to construct a reservoir and store 3.95 acre feet of water therein from an unnamed stream for recreation purposes and fees in the sum of $5.00.

Your application cannot be filed at this time as the State Engineer is required by law to collect a $10.00 examination fee before an application for a permit to appropriate water for any purpose may be filed. The fees necessary to your application as it is now written are a $10.00 examination fee and a $5.00 recording fee.

Before your application is resubmitted, it will be necessary that you submit a secondary application providing for the appropriation of the water to be stored in the reservoir and a map prepared in the form of a tracing showing the location of the reservoir, the point of diversion and the place of use. An application form, a copy of the Rules and Regulations of the State Engineer and a small dam description form are enclosed.

Your application and the submitted fees are returned herewith.

Very truly yours,

LEWIS A. STANLEY
State Engineer

Gus has plans

By
Walter N. Perry, Assistant

WNP:mgb
Enc: 5

No. 2868

_____M.O. ____Cash

_____

___face _____
___Reservoir _____
___Gr. Water _____
___Gr.Water Reg. _____
___ Transfer _____
___Tracing
___Prints
___Plans ____Specs.
___Property Description
___Spring Description
___Small Dam Data
___Ex.Time Per. _____
___Assign.Per. _____
___Cert.Rec.Fee,Per._____
___Other _____

REMARKS

not enuf money

RECEIVED
SEP 22 1960
STATE ENGINEER

Need 2868

? secondary



Lane County Council of Camp Fire Girls, Inc.

1626 WILLAMETTE STREET
EUGENE, OREGON
DIAMOND 3-8332 Sept. 21, 1960

State Engineer
Salem, Oregon

Bear Sir;

Under separate cover I am sending the specifications for the dam to be constructed at our resident camp site near Veneta, Oregon.

Yours truly,

Mrs. Cuma Smith
Executive Director

"UNITED APPEAL AGENCY"

R-34424
34603

August 14, 1964

Lane County Council of
Camp Fire Girls
1626 Willamette Street
Eugene, Oregon

Gentlemen:

Enclosed please find one set of prints of the plans which were approved for your dam.

We would have no objection to removing the material from the upstream slope so that the upstream slope would have a continuous 3:1 slope from the crest of the dam to the bottom of the reservoir as shown on the approved plans. Any material presently on the reservoir bottom as a result of the construction can be removed down to the original natural ground. So far as we are concerned, this work would not require plans as it would merely be completion of construction shown on the approved plans. I would suggest, however, that the work be done under competent supervision so that it is done properly.

If you decide to move the outlet gate so that its on the new upstream slope, the work should be done under the supervision of an engineer so that the work will be done in accordance with the original approved plans and specifications.

If we can be of any help to you, please feel free to call on us.

Very truly yours,

CHRIS L. WHEELER
State Engineer

By
Jerry W. Eggleston,
Engineer

JWE:mgb
cc: Don Stettler
Room 410
Lane County Courthouse
124 East 8th Street
Eugene, Oregon

R-34424
REFER TO FILE NO. 34603

STATE OF OREGON
STATE ENGINEER
WATER RESOURCES DEPARTMENT
516 PUBLIC SERVICE BUILDING
SALEM 10

October 18, 1962

Lane County Council of
Camp Fire Girls
1626 Willamette Street
Eugene, Oregon

Mesdames:

This will acknowledge the notice of completion of construction under the terms of permit No.s R-2584 and 27171.

Under the provisions of the permit, the time limit for completion of the appropriation by accomplishing the authorized beneficial use of water to the full extent intended will expire October 1, 1963 (In the case of irrigation completion of the appropriation means at least one beneficial irrigation of all the land to be irrigated under the subject permit.)

Very truly yours,

Chris L. Wheeler

CHRIS L. WHEELER
State Engineer

Form 119

klr

R-34424
34603

March 30, 1961

Camp Fire Girls, Lane County Council
1626 Willamette Street
Eugene, Oregon

Mesdames:

R-34424, Permit No. R-2584, Application No. 34603, Permit No. 27171 with blueprints.

R-34424
34603

February 10, 1961

Camp Fire Girls
Lane County Council
1626 Willamette Street
Eugene, Oregon

Attention: Mrs. Mark H. Hathaway

Dear Mrs. Hathaway:

This will acknowledge receipt of an application for a permit to appropriate 0.066 cubic foot of water per second from Lake Hahnee Reservoir and Wilson Creek for recreation and maintenance of Lake Hahnee Reservoir, tracing and one print, legal description and fees in the sum of $20.00 for which our receipt numbered 28581 is enclosed.

The application which has been examined and filed under application number 34603 appears to be in satisfactory form. Applications numbered R-34424 and 34603 will now be considered for approval with the next group.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By
Walter W. Perry, Assistant

mgb

Enclosure

R-34424

January 4, 1961

Camp Fire Girls
Lane County Council
1626 Willamette Street
Eugene, Oregon

Attention: Mrs. Mark H. Hathaway

Dear Mrs. Hathaway:

Your application number R-34424 which is for a permit to construct a reservoir is being held in this office without action pending submission of the completed secondary application required with your reservoir application. The secondary application should be completed in accordance with the provisions set forth in our letter of November 1, 1960.

If the secondary application is not received within thirty days from the date of this letter, your reservoir application will be returned to your for completion by submission of a secondary application.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By
Walter N. Perry, Assistant

WNP:mgb

R-34424

November 14, 1960

Mrs. Mark H. Hathaway
Camp Fire Girls
Lane County Council
1626 Willamette St.
Eugene, Oregon

Dear Mrs. Hathaway:

Due to an oversight in checking the files the fact that the plans for Lake Hahnee reservoir had been received was overlooked at the time Mr. Perry's letter of November 1, 1960 was written. The plans and specifications have been examined and found to be in satisfactory condition.

Further action will be withheld pending the return of the corrected secondary application accompanied with the required statutory fees.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By
Fred D. Gustafson
Engineer

FDG:mb

R-34424

November 1, 1960

Camp Fire Girls
Lane County Council
1626 Willamette Street
Eugene, Oregon

ATTENTION: Mrs. Mark H. Hathaway

Dear Mrs. Hathaway:

This will acknowledge receipt of two applications one for a permit to construct a reservoir and store 3.95 acre feet of water therein from an unnamed stream for recreation purposes and one for a permit to appropriate an unspecified amount of water from an unnamed stream for recreation purposes and fees in the sum of $15.00 for which our receipt numbered 27414 is enclosed.

The reservoir application has been examined and filed as provided by law under file number R-34424. The secondary application can not be filed at this time as the State Engineer is required by law to collect a $10.00 examination fee before an application for permit to appropriate water for any purpose may be filed. The fees necessary to the secondary application are a $10.00 examination fee and a $10.00 recording fee.

Before the reservoir application may be considered for approval it will be necessary that you submit the plans and specifications for the construction of the reservoir.

It will also be necessary that you complete the secondary application as follows:

Item 1: It appears that it would be to your advantage to name Lake Hahnee Reservoir and the unnamed stream as the source of your appropriation specifying in item 2 a sufficient quantity of water to be appropriated from the unnamed stream to provide for replacement of water lost through seepage and evaporation in the reservoir.

Item 3: In view of the amendments to items 1 and 2 item 3 should be amended so that the use is recreation and maintenance of the reservoir.

Item 4: The location of the point of diversion must be identified in reference from an established government survey corner. Your point of diversion in this case appears to be the location of the dam.

Item 8: This item must be completed to show the location of the place or area of use. It appears that this will be the land submerged in the reservoir.

Map: It will be necessary that you submit a map in the form of a tracing showing the location of the point of diversion and the area where the water will be used.

Your secondary application is returned herewith.

Very truly yours,

LEWIS A. STANLEY
State Engineer

By
Walter N. Perry, Assistant

WNP:vmf

Enclosures

MATERIALS TESTING SECTION REPORT	EWP-5 (10-20-56) Portland, Oregon	SOIL CLASSIFICATION

PROJECT	LOCATION
Campfire Girls Dam	Mid-Lane SCD, Oregon

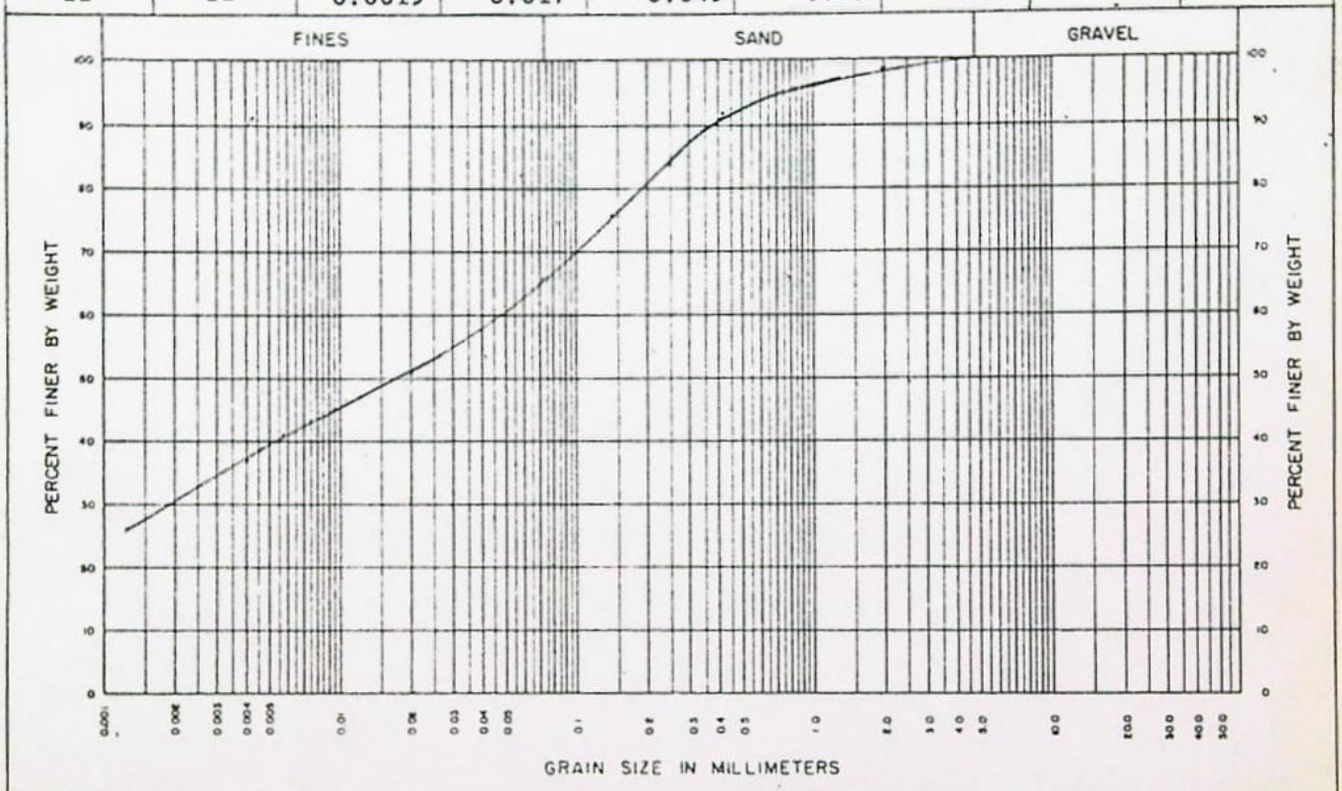
FIELD SAMPLE No	TYPE of SAMPLE	ORIGIN
X C	Bag	Depth 1.0 to 4.0 feet

PROPOSED USE	TESTING SECTION SAMPLE No	SUBMITTED BY
Core and embankment	600619	R. D. High

1: SYMBOL	2: DESCRIPTION
ML	Yellowish red sandy silt

3: GRAIN SIZE DISTRIBUTION

D_{10}	D_{15}	D_{30}	D_{50}	D_{60}	D_{85}	D_{MAX}	C_u	C_c
--	--	0.0019	0.017	0.049	0.25	4.7	--	--



4: SPECIFIC GRAVITY	5: ATTERBERG LIMITS						6: TOTAL SALTS	7: UNDISTURBED CONDITION	
	UNDISTURBED		AIR DRY		OVEN DRY			MOISTURE	UNIT WEIGHT
G	LL	PI	LL	PI	LL	PI			
2.70	--	--	44	9	--	--	-- %	-- %	-- lb/ft³

8: REMARKS

RECEIVED
SEP 23 1960
STATE ENGINEER
SALEM, OREGON

U. S. DEPARTMENT of AGRICULTURE
SOIL CONSERVATION SERVICE
ENGINEERING and WATERSHED PLANNING UNIT
PORTLAND, OREGON

SIGNATURE J. Stimson

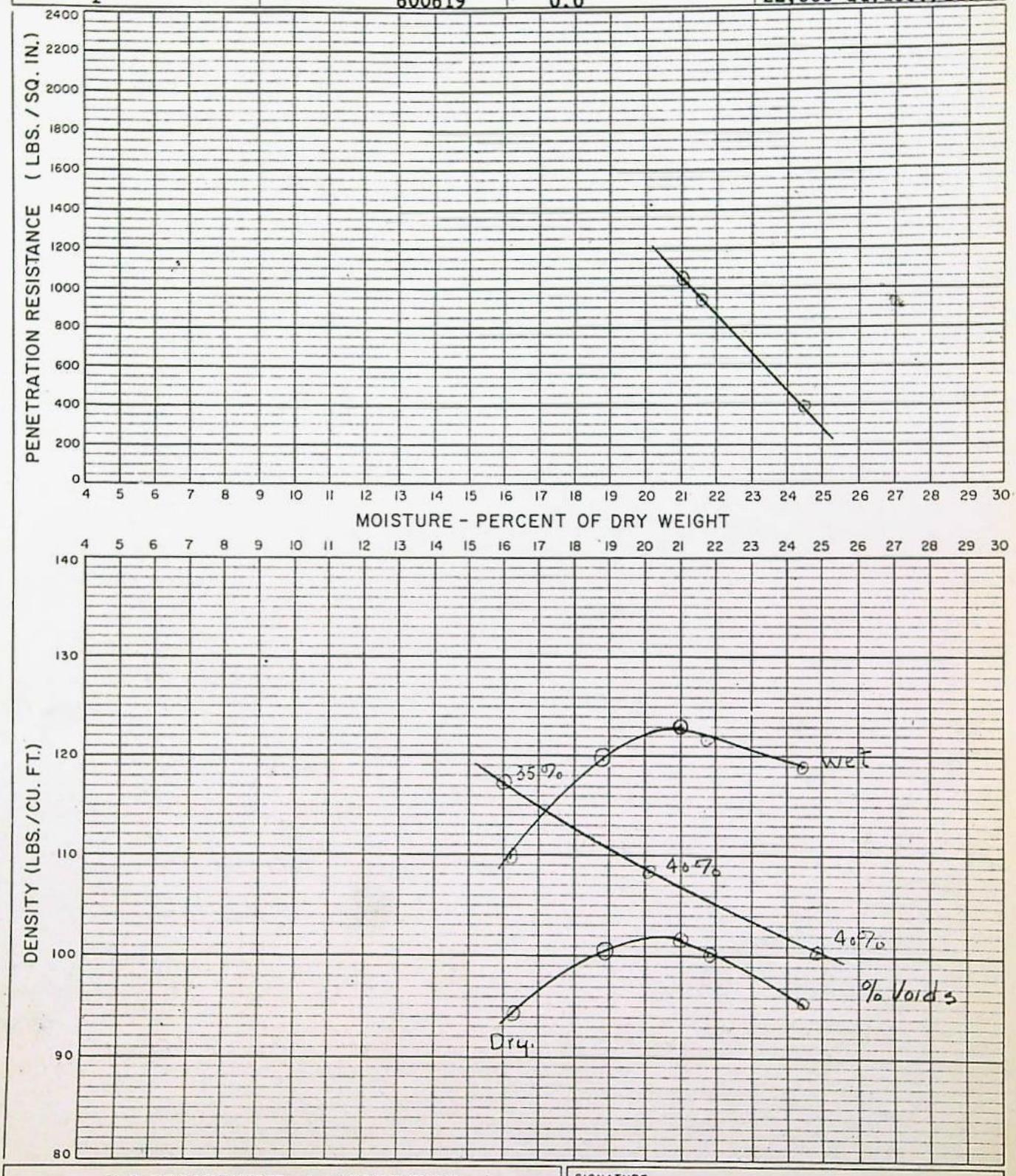
TITLE Civil Engineer

DATE 1/29/60

MATERIALS TESTING SECTION REPORT	EWP-23 1-21-59 PORTLAND, OREGON	SOIL COMPACTION CURVES

PROJECT	LOCATION
Campfire Girls Dam	Midland SCD, Oregon

FIELD SAMPLE No.	TESTING SECTION SAMPLE No.	% LARGER THAN TESTED	COMPACTIVE EFFORT
1	600619	0.0	22,000 ft. lbs./cu. ft.



U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE J. C. Stevenson TITLE: Civil Engineer DATE: 3/16/60

M-1554

7-0-14821-L

MATERIALS TESTING SECTION REPORT	EWP-5 (10-20-56) Portland, Oregon	SOIL CLASSIFICATION

PROJECT	LOCATION
Campfire Girls Dam	Mid-Lane SCD, Oregon

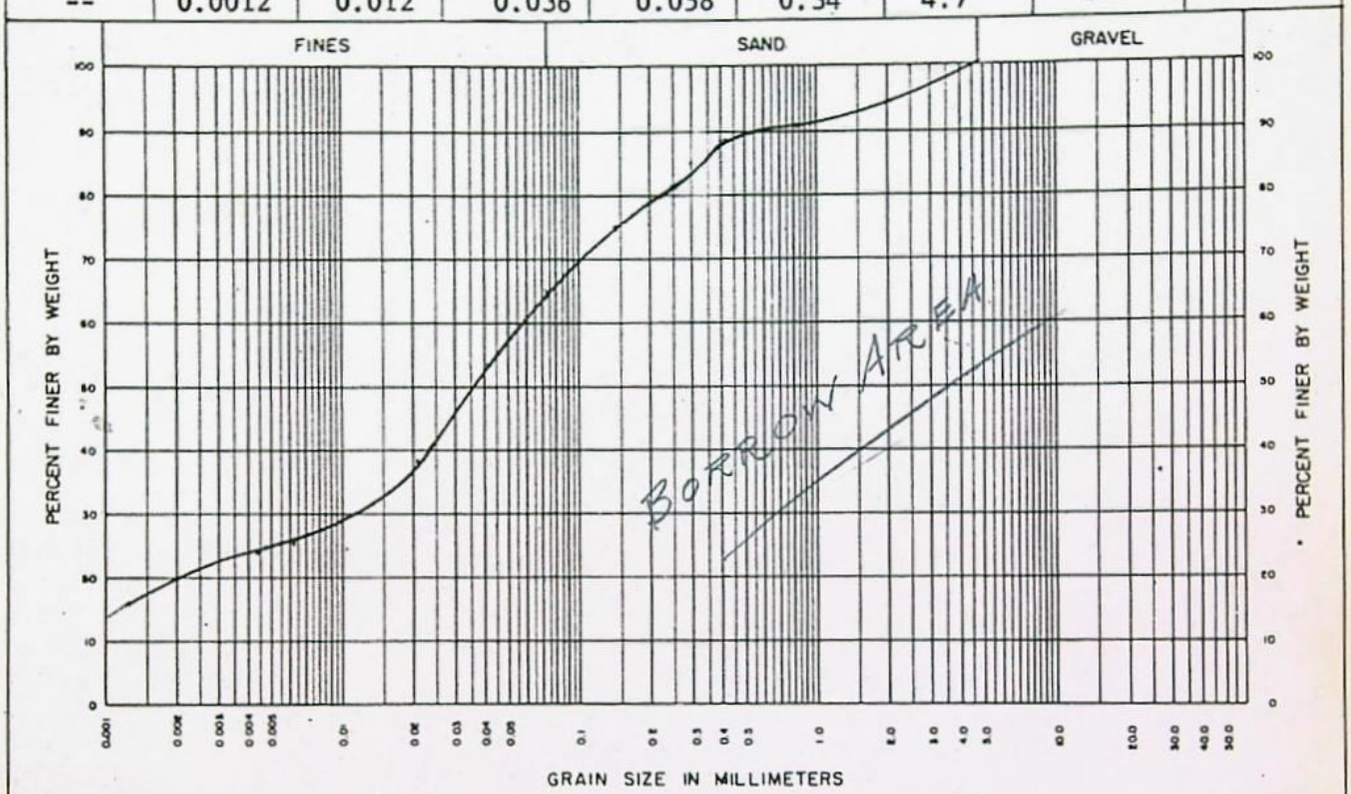
FIELD SAMPLE No.	TYPE of SAMPLE	ORIGIN
2	Bag	Borrow Area, depth 1.5 to 2.0 ft.

PROPOSED USE	TESTING SECTION SAMPLE No.	SUBMITTED BY
Fill and core	600693	Don Haslem

1: SYMBOL	2: DESCRIPTION
ML	Dark reddish brown sandy clayey silt

3: GRAIN SIZE DISTRIBUTION

D_{10}	D_{15}	D_{30}	D_{50}	D_{60}	D_{85}	D_{MAX}	C_u	C_c
--	0.0012	0.012	0.036	0.058	0.34	4.7	--	--



4: SPECIFIC GRAVITY	5: ATTERBERG LIMITS						6: TOTAL SALTS	7: UNDISTURBED CONDITION	
	UNDISTURBED		AIR DRY		OVEN DRY			MOISTURE	UNIT WEIGHT
G	LL	PI	LL	PI	LL	PI			
2.65	--	--	39	13	--	--	-- %	-- %	-- lb/ft^3

8: REMARKS

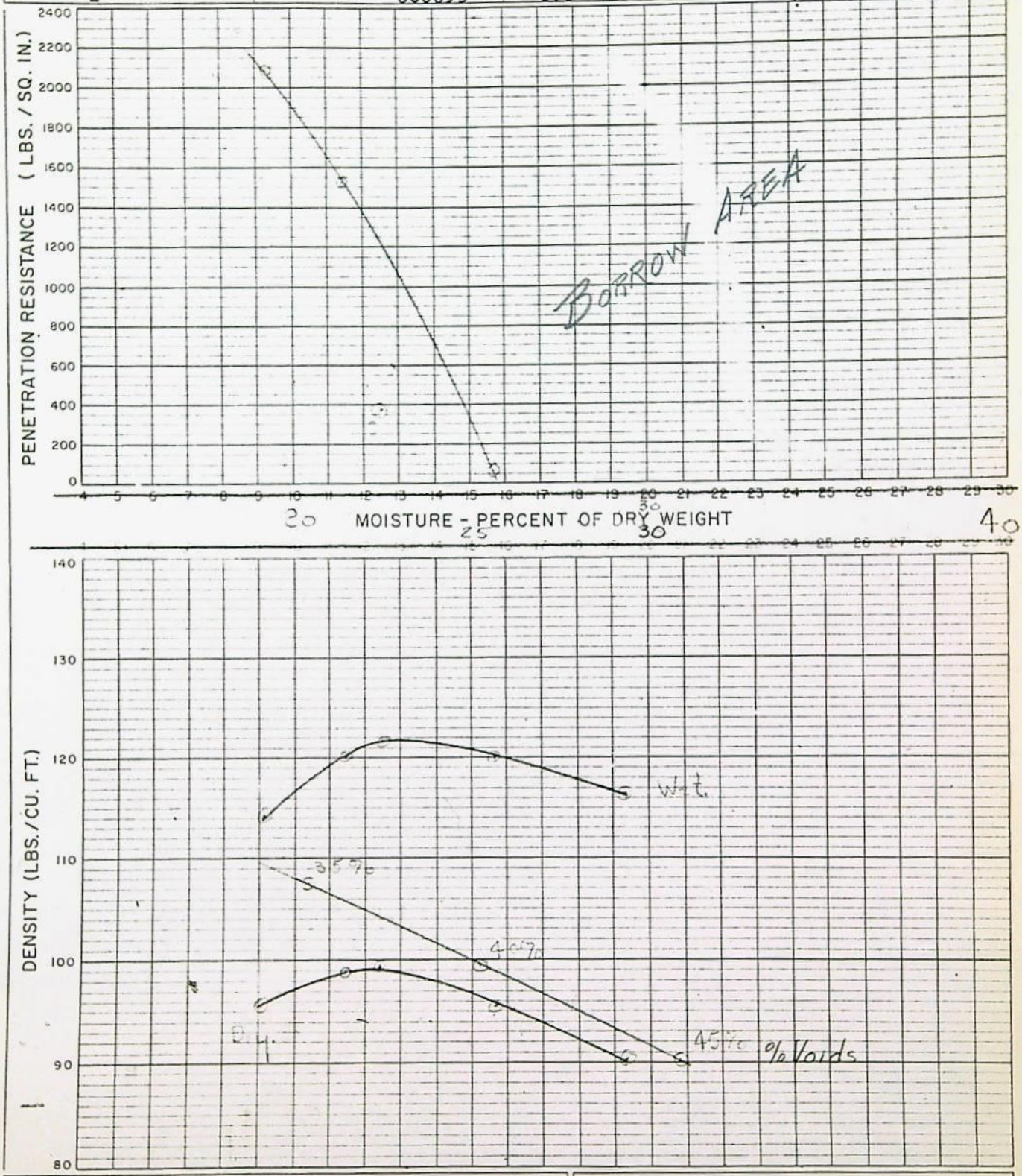
U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE J. Stevenson
	TITLE: Civil Engineer DATE: 3/8/60

M-2069

7-0-14820-L

MATERIALS TESTING SECTION REPORT	EWP-23 1-21-59 PORTLAND, OREGON	SOIL COMPACTION CURVES

PROJECT		LOCATION	
Campfire Girls Dam		Mid-Lane SCD, Oregon	
FIELD SAMPLE No	TESTING SECTION SAMPLE No	% LARGER THAN TESTED	COMPACTIVE EFFORT
2	600693	0.0	24,000 ft. lbs./cu. ft.



U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE J. Stevenson TITLE: Civil Engineer DATE: 3/8/60

M-1554

7-0-14821-L

Stettler, Eugene

Geologic Report
Campfire Girls Dam Site
Mid-Lane SCD, Eugene, Ore.
By
Robert D. High
February 15, 1960

RECEIVED
SEP 29 1960
STATE ENGINEER
SALEM, OREGON

The proposed dam and reservoir site is located in the SW¼ Sec. 2, T18S, R6W of Lane County, Oregon. A preliminary investigation of the site was made January 11, 1960, assisted by Don Stettler and Cal Graham. The structure would be approximately 15 feet high with a top length of 100 feet including the spillway to be excavated in the right abutment. Water would be supplied to the reservoir from an unnamed tributary to the Long Tom River.

Conclusions

Topographically, the site appears favorable. However, variable seepage through the foundation may develop if the underlying sandstone is highly fractured.

Excavation to deepen the reservoir area could also create a similar situation depending upon the condition of the sandstone.

Recommendations

1. The core trench on the narrow channel will require an excavation of 12 to 14 feet in order to adequately penetrate firm rock. A minimum excavation of 9 feet should be removed on each abutment to assure a firm bond with the underlying rock.

2. To avoid a possible water loss through the reservoir floor, the sandstone underlying this area should not be exposed.

3. The spillway will bottom in highly erosive materials and will require a suitable protective lining.

4. A toe drain will be necessary in the downstream section.

5. When it is reasonably certain that the dam will be built, a 40-lb. sample of Field Sample #1 (#600619) should be sent to the Materials Testing Section for compaction tests.

Discussion

The high hasard, recreational site is characterized by an extremely narrow drainage bordered by very steeply sloping abutments. Occasional small boulders of sandstone were noted in the area and one outcrop of weathered, fractured tuffaceous sandstone was observed in the confines of the narrow channel. A recently breached beaver dam has resulted in accumulation of considerable silt and debris above the proposed centerline. Two pits were opened on the abutments and one in the borrow area. Following are the results of the investigation:

2-Campfire Girls Dam Site

Left Abutment

0 - 3'	sd; cl.-si., over fract. to firm, stained sdst.

Channel

0 - 4'	sd; si. CL
4'+	sdst., fract., stained

Right Abutment

0 - 3'	sd; cl.-si., CL
3 - 9'	sd; to si. sd. with small clay nodules becoming firm sdst. at 9 feet.

Borrow Area

0 - 3'	si; sdy-cl., few roots in top 6" ML

Robert D. High

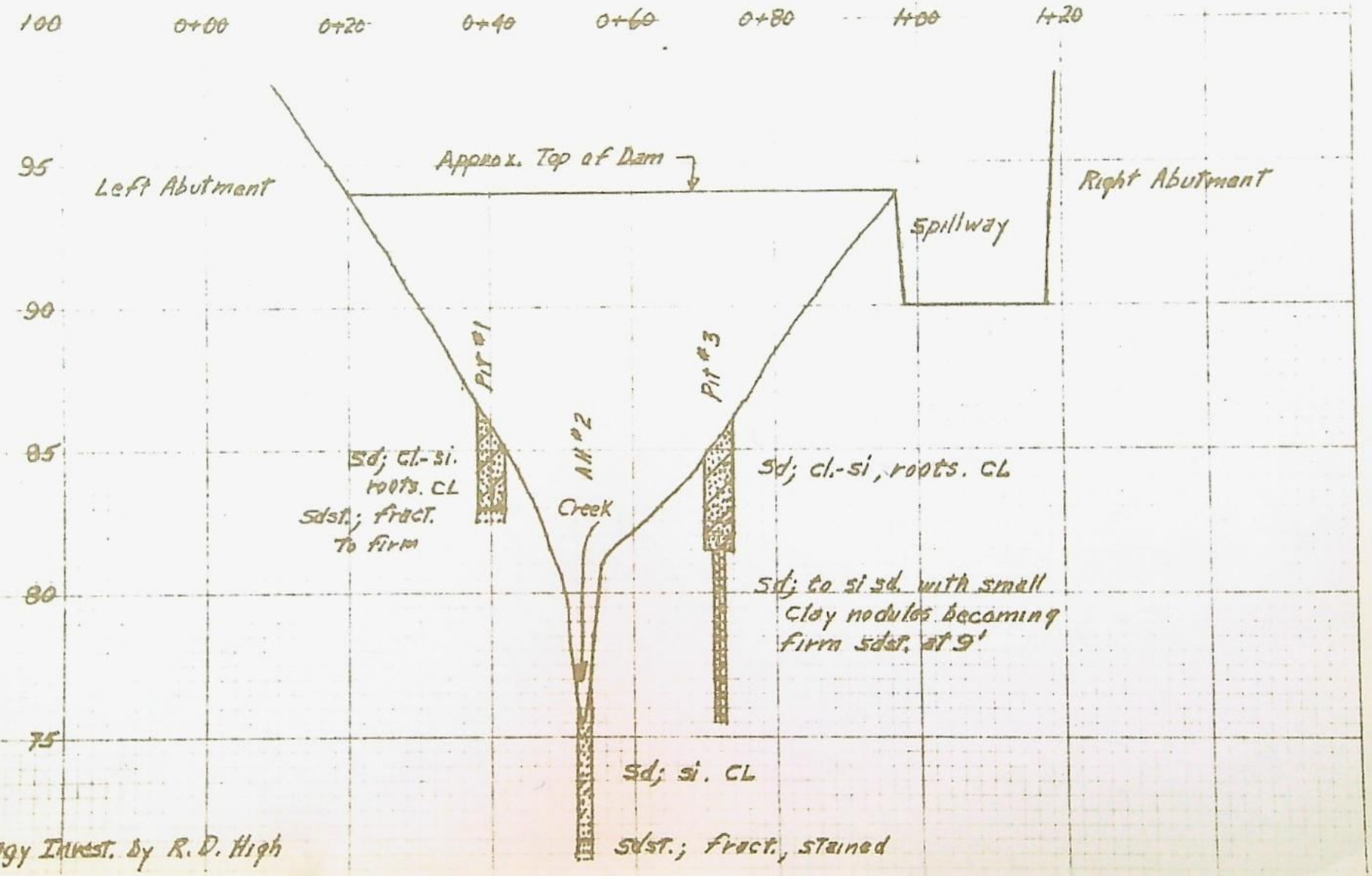
Robert D. High, Geologist

cc: Penwell (2)
Pavelek, Albany
Stettler, Eugene (2)

Mid-Lane SCD
Oct. 19, 1959
Donald L. Stettler

CAMPFIRE GIRLS
Profile of Proposed Dam

SW¼ NE¼ Sec. 2, T18S, R6W
Scale: Vert. - 1" = 5'
Hor. - 1" = 20'



Geology Invest. by R. D. High

MATERIALS TESTING SECTION REPORT	EWP-5 (10-20-56) Portland, Oregon	SOIL CLASSIFICATION

PROJECT	LOCATION
Campfire Girls Dam	Mid-Lane SCD, Oregon

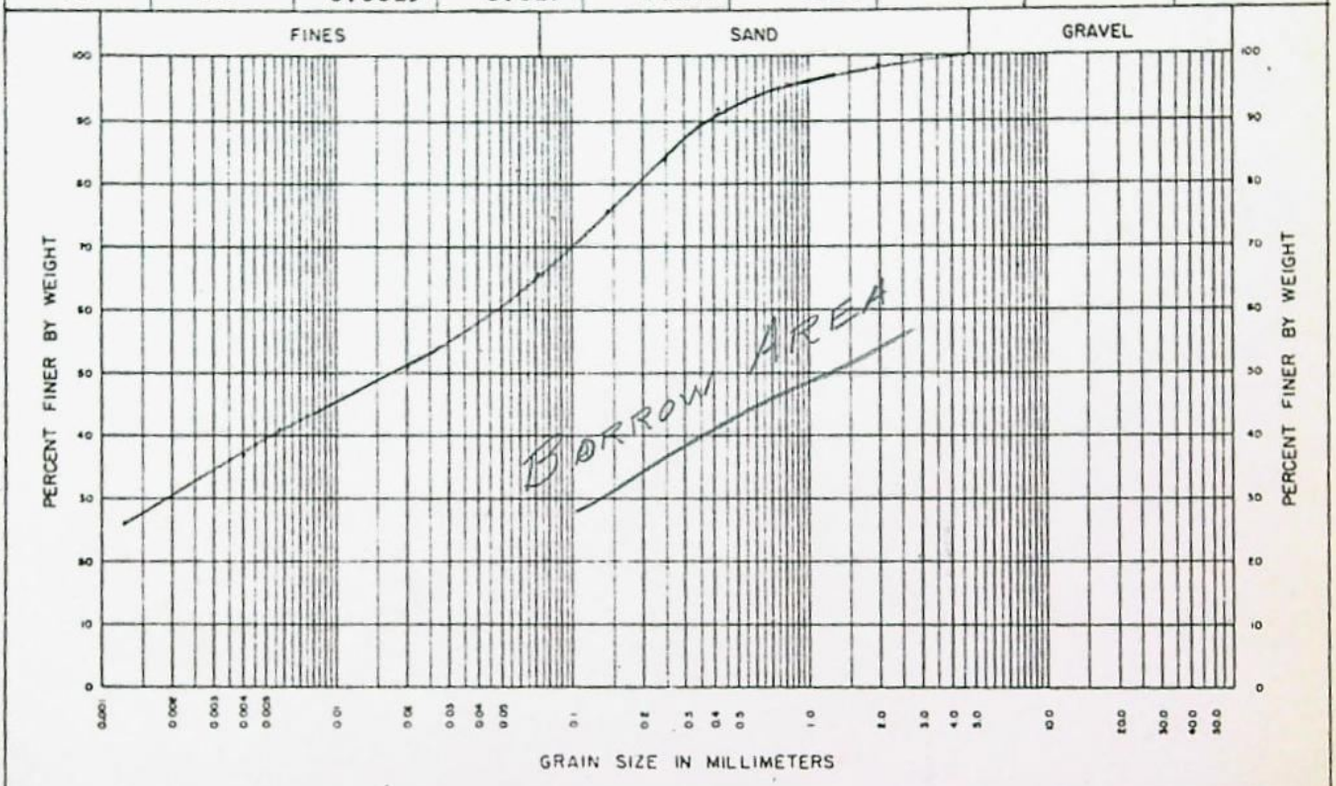
FIELD SAMPLE No.	TYPE of SAMPLE	ORIGIN
1	Bag	Depth 1.0 to 4.0 feet

PROPOSED USE	TESTING SECTION SAMPLE No.	SUBMITTED BY
Core and embankment	600619	R. D. High

1: SYMBOL	2: DESCRIPTION
ML	Yellowish red sandy silt

3: GRAIN SIZE DISTRIBUTION

D_{10}	D_{15}	D_{30}	D_{50}	D_{60}	D_{85}	D_{MAX}	C_u	C_c
--	--	0.0019	0.017	0.049	0.25	4.7	--	--



4: SPECIFIC GRAVITY	5: ATTERBERG LIMITS						6: TOTAL SALTS	7: UNDISTURBED CONDITION	
	UNDISTURBED		AIR DRY		OVEN DRY			MOISTURE	UNIT WEIGHT
G	LL	PI	LL	PI	LL	PI			
2.70	--	--	44	9	--	--	-- %	-- %	-- lb/ft³

8: REMARKS

U. S. DEPARTMENT of AGRICULTURE. SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE	
	TITLE: Civil Engineer	DATE: 1/29/60

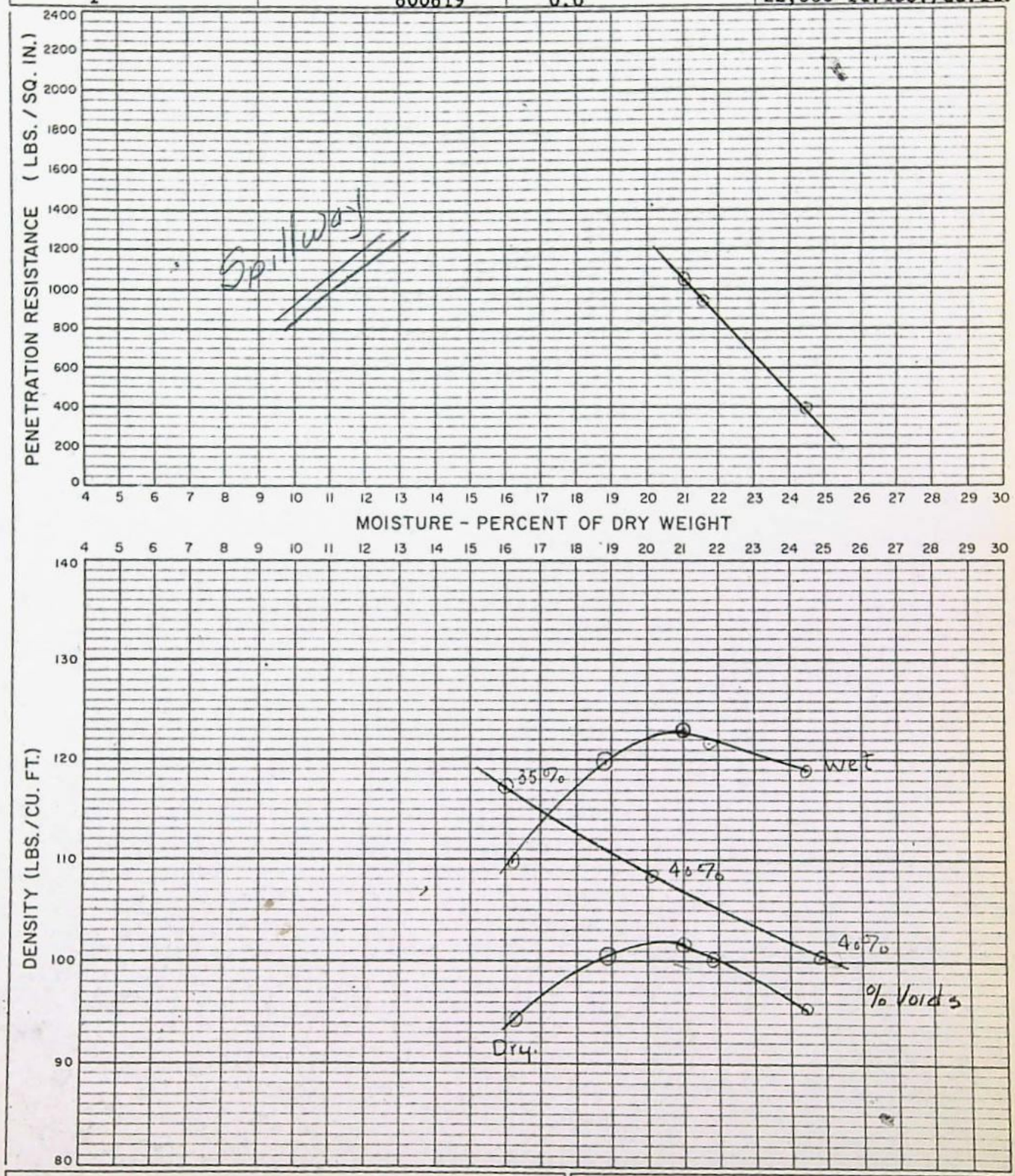
M-2069

7-0-14820-L

MATERIALS TESTING SECTION REPORT	EWP-23 1-21-59 PORTLAND, OREGON	SOIL COMPACTION CURVES

PROJECT	LOCATION
Campfire Girls Dam	Midland SCD, Oregon

FIELD SAMPLE No.	TESTING SECTION SAMPLE No.	% LARGER THAN TESTED	COMPACTIVE EFFORT
1	600619	0.0	22,000 ft. lbs./cu. ft.



U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE ENGINEERING and WATERSHED PLANNING UNIT PORTLAND, OREGON	SIGNATURE J. C. Stimson
	TITLE: Civil Engineer DATE: 3/16/60

M-1554

7-0-14821-L

Specifications for the Construction
of
The Camp Fire Girls Dam

RECEIVED
SEP 2 1960
STATE ENGINEER
SALEM, OREGON

LOCATION

The site of the work to be done under these plans and specifications is located in the SW¼ of the NE¼ of Section 2, T18S, R6W, WM. on an unnamed tributary of the Long Tom River in Lane County, Oregon on the Camp Fire Girls' camp grounds. The city of Eugene is approximately 14 miles east of the site.

DESCRIPTION

The principal features of this work consists of the construction of an earth fill dam, an earth emergency spillway lined with vegetation, a corrugated metal pipe trickle tube, and a welded steel outlet conduit with appurtenances.

The embankment will be 85 feet long, have a maximum height of 19.67 feet, and an embankment fill above the original ground surface of approximately 1,081 cubic yards.

The outlet conduit will be an eight inch welded steel pipe encased in concrete. The estimated quantity of concrete for conduit appurtenances is approximately 16 cubic yards.

PURPOSE

Proposed storage capacity of 3.95 acre-feet of water is to be used for recreation in conjunction with the Camp Fire Girls' camp.

DOWNSTREAM FLOODPLAIN CONDITIONS

Below the dam the valley remains very narrow with steep sides for approximately one mile. Below that point the valley widens considerably. About one and one quarter miles below the dam the creek becomes confluent with the Long Tom River. Most of the valley below the dam is in pasture and timber. A private road crosses the valley about one mile below the dam. One house is located beside the road in the valley. Because of the small storage capacity of the reservoir it would be anticipated that there would be little or no damage in case of failure.

PLANS

The official plans numbered approved by the Soil Conservation Service and the State Engineer, are part of these specifications.

SPECIFICATIONS

The provisions and requirements contained herein pertain to the methods and manner of performing the work, and to the quality of material used.

DEFINITIONS AND RELATIONSHIP OF PARTIES CONCERNED

Owner

In these specifications the "owner" shall be understood to be the Camp Fire Girls, Lane County Council.

The owner is responsible for all expenditures for construction. All items of work to be paid by the owner must have the owner's approval.

It is understood that the owner will execute the plans and specifications to the best of his ability, and that any changes made as construction progresses will be made with the advice and concurrence of the SCS Engineer and approval of the State Engineer.

District

The term "District" shall be understood to be the Mid Lane Soil Conservation District.

Technical assistance of the Soil Conservation Service is provided through the District. This assistance presumes that the owner and contractor will diligently follow the plans and specifications.

SCS Engineer

The term "SCS Engineer" shall refer to the District Engineer of the U.S. Soil Conservation Service and engineering representative of the Mid Lane Soil Conservation District, or his authorized representative.

The SCS Engineer acting as a technical advisor for the owner has compiled these plans and specifications. The SCS Engineer will provide surveys, tests, and technical direction of the work so that the job may be constructed as planned. He cannot authorize changes without the owner's approval.

State Engineer

The term "State Engineer" shall be understood to be the State Engineer of Oregon or his authorized representative.

Under the provisions of Water Laws of Oregon the State Engineer is charged with the examination and approval of sites, plans and specifications and inspection of construction to insure safety of such work with reference to possible damage to life and property.

These plans and specifications must have the written approval of the State Engineer prior to initiation of construction. It is further required that the work performed in the construction of the dam and the materials that are used in construction that become a part of the completed structure shall at all times be subject to the approval of the State Engineer and that no change in the plans or specifications made necessary by the development during construction of unforseen conditions or otherwise, shall be made without prior approval of the State Engineer.

SPECIFICATIONS FOR CONSTRUCTION

I. EXCAVATION

1. Borrow Pits

All materials required for construction of the embankment that are not available from required excavation, shall be taken from borrow pits. The proposed locations and extent of borrow pits are shown on the plan. The sites of the borrow pits shall be carefully stripped of all surface soil, vegetation, roots, brush, sod, and other objectionable material. This material shall not be used in any part of the fill. All materials wasted by stripping shall be piled immediately north of the borrow pits.

2. Embankment Foundation

The dam foundation shall be stripped or excavated to a sufficient depth to remove all surface soil, vegetation, roots, brush, sod, and other material not suitable for foundations. This material will be wasted as directed by the Engineer. Before fill is placed, the foundation and abutment areas shall have their surfaces in a loose and scored condition by plowing or discing to depths of 3-4 inches to provide a good bond between the foundation and the embankment. Loose earth shall not be left on the foundation area to a depth in excess of 6" above approved, undisturbed foundation material. This loose bonding surface shall contain adequate moisture for proper compaction when fill material is placed on it. No foundations or abutments shall be covered by material of the dam until the SCS Engineer has inspected and approved the same.

3. Cutoff Trench

An artificial barrier or cutoff to prevent leakage through or under the base of the dam shall be constructed. This barrier will consist of a cutoff trench backfilled with selected impervious material, properly compacted. The trench shall extend the full length of the dam. It shall be excavated to impervious material or to such depths that will prevent excessive seepage as directed by the engineer. The cutoff trench shall be located as shown on the plans and shall have a minimum bottom width of 10 feet. The side slopes of the trench shall not be steeper than 1 horizontal to 1 vertical. It shall be dewatered before any fill material is placed. Excavated material unsuitable for compacted fill will be wasted as directed by the Engineer. No fill material shall be placed in the cutoff trench until the SCS Engineer has inspected and approved the trench.

4. Spillway

A spillway channel approximately 300 feet long shall be excavated through the north abutment as shown on the plans. The channel shall

be excavated to neat lines and grades as shown on the plans varying from 65 feet at the entrance and reducing in bottom width of 35 feet for the chute section. The bottom shall be dug 6 inches below grade and backfilled with suitable topsoil with adequate compaction.

Side slopes shall be 1 horizontal to 1 vertical. Material excavated from the spillway that is not suitable for the dam shall be wasted.

II. OUTLET CONDUIT

The outlet conduit shall consist of an 8 inch steel pipe encased in concrete, a control gate, and inlet and outlet structures. The minimum thickness of the concrete encasement shall be 6 inches. The concrete cutoff collars shall be considered an integral part of the conduit encasement. No concrete shall be poured into the forms until the SCS Engineer has inspected and approved it.

1. Concrete

Concrete shall be mixed and placed as specified below;

a. Cement

To be Portland Cement of a standard commercial brand, free of lumps and partially set masses. In no case shall less than 5-1/2 sacks of cement be used in each cubic yard of concrete.

b. Water

Water shall be free of acid, alkali, oils, and organic matter. Simple rule--water should be suitable for drinking.

c. Aggregate

This may be of non-commercial sources, provided it has adequately graded, clean, hard, strong, durable particles, and is sufficiently free of deleterious substances. The aggregate shall be considered adequately graded and sufficiently free of deleterious substances when it meets the following limitations.

(1) When separated on the number four standard screen, the weight passing the sieve shall not be less than thirty percent nor more than fifty percent of the total. No rock shall exceed 1-1/2" diameter.

(2) Clay lumps do not exceed 1.5 percent.

(3) All other deleterious substances do not exceed five percent.

d. Mixing

Mixing shall be continued for at least 1-1/2 minutes after all materials, including water, are in the mixer. Each batch shall be completely discharged before the mixer is recharged. Not more than 6-1/2 gallons of water per sack of cement shall be used. This includes surface water in the aggregates. Excessive over-mixing requiring the addition of water to preserve the required concrete consistency shall not be permitted.

Truck mixing will be allowed provided that the use of this method does not violate any applicable provisions of these specifications for concrete.

e. Forms

Forms shall conform to the shape, lines, and dimensions of the members as called for on the plans, and shall be substantial and sufficiently tight to prevent leakage of mortar. They shall be properly braced and tied together so as to maintain position and shape.

f. Placing Concrete

Forms shall be wetted or oiled and thoroughly cleaned of debris. Depositing continuously at one point and letting it flow to distant points shall not be allowed since water and fines segregate from the rest of the mass. The concrete shall be spaded next to the forms to prevent honeycombing. Laitance and increased water in the upper portions of the concrete shall be prevented. Excess water shall be worked to a low point without causing flow, and be removed.

g. Reinforcing Steel

Reinforcing steel shall be furnished, fabricated, and placed as shown on the plans. All reinforcing bars shall be deformed bars of structural grade steel. Reinforcing steel, before being placed in the forms, shall be thoroughly cleaned of loose mill and rust scale, oil, dirt, or other coatings of any character that would destroy or reduce the bond.

h. Construction Joints

Joints not indicated on the plans shall be so made and located as to least impair the strength of the structure. Where a joint is to be made, the surface of the concrete shall be thoroughly cleaned, and all laitance removed. In addition to the foregoing, vertical joints shall be thoroughly wetted, but not saturated, and flushed with a coat of neat cement grout immediately before the placing of new concrete.

i. Curing

All concrete shall be kept moist for at least seven (7) days by one of the approved methods of curing. Moisture or a membrane seal shall be applied within thirty (30) minutes after placing. All concrete shall be protected from direct rays of the sun for not less than three (3) days.

III. TRICKLE TUBE

A trickle tube shall be constructed as shown on the plans. It shall consist of an 18 inch corrugated and asphalt dipped metal pipe. The connection between the trickle tube and the outlet conduit shall be water tight and encased in concrete.

IV. TOE DRAIN

The toe drain shall be constructed with a 4 inch minimum clay tile backfilled with a well graded gravel. It shall be constructed to lines and grades as shown on the plans at a time it can be placed in a minimum of two feet of compacted fill. The trench for the tile shall be backfilled with a well graded gravel. The clay tile used must meet ASTM standards. The outlet of the toe drain shall consist of a five foot minimum length of rigid pipe.

V. EMBANKMENT

The foundation for the earth fill shall be so prepared by leveling and rolling so that the surface materials of the foundation will be as compact and well bonded with the first layer of the fill as herein specified for the subsequent layers of the earth fill.

The earth fill portion of the dam, including the fill about the outlet conduit, and in the cutoff trenches shall consist of soil materials approved by the SCS Engineer from proposed borrow pits shown on the plan and from excavations required for other parts of the work. The first course of fill material shall be spread over the foundation in a thin layer such that the combined thickness of this layer and the scarified surface of the foundation shall not exceed eight inches.

No brush, roots, sod, or other perishable or unsuitable material shall be placed in the embankments. No stones having maximum dimensions of more than five inches shall be placed in the embankment. Any such stones hauled onto the embankment shall be removed before rolling.

The materials shall be spread uniformly by means of tractor-drawn scrapers in layers approximately four inches in thickness before compaction. The fill will be maintained approximately level during construction and the additional material will be placed in a direction parallel to the long axis of the dam. Equipment will be routed so as to insure that at least two-thirds of the surface of each layer is traversed by loaded scrapers traveling in a direction parallel to the axis of the dam.

The distribution and gradation of materials shall be in such a manner that the embankment will be free from lenses, pockets, streaks, or layers differing appreciably in texture or gradation for the surrounding material.

If at any time the rolled surface of any layer becomes too smooth for proper bond, it shall be adequately scarified.

Fill materials shall contain an amount of moisture sufficient to insure good compaction. The proper moisture content will be determined by the Engineer. The surface of the fill and the material being placed shall be maintained at the proper moisture content during the placing operations. Any material or surface which has dried to below the required moisture content shall be uniformly moistened, by sprinkling, before the material is compacted or before a dried surface is covered with additional fill material. Materials having a moisture content higher than that specified by the Engineer shall be removed from the fill or allowed to dry to an acceptable condition before being compacted.

If the foundation and/or abutments have insufficient moisture content, water shall be added by sprinkling. The abutments at the level of the fill surface shall be maintained at the required moisture content during placing operations.

The application of water to the material shall be done in the borrow pits insofar as practicable.

Each layer of fill material shall be compacted by passing the roller over the entire surface the number of times required to obtain the desired density.

A minimum dry density of 94 lbs. per cu. ft. shall be attained on fill obtained from the proposed borrow area. An estimated compactive effort of 24,000 ft. lb. of energy per cu. ft. of fill material is required when placed with a moisture content of 22.3 percent.

A minimum dry density of 97 lbs. per cu. ft. shall be attained on fill obtained from the spillway area. An estimated compactive effort of 22,000 ft. lb. of energy per cu. ft. of fill material is required when placed with a moisture content ranging 18.5 to 22 percent.

VI. MISCELLANEOUS METAL WORK

Miscellaneous metal work including the outlet gate, gate guides, hoisting device, trash rack bars, trash rack metal work, gate vent piping, and all other metal work shall be installed as shown on the drawings or as directed by the engineer.

6182 8867

9357

Abstract of Permit No. R-2584

Application No. R-34424 *Certificate No.*

Name CAMP FIRE GIRLS, Lane County Council

Address 1626 Willamette Street
Eugene, Oregon

Source of water supply Wilson Creek, trib. of Long Tom River, ~~to be~~ appropriated under application No. 34603, permit No. 27171

Use ~~Store water~~ in Lake Mahnee Reservoir ~~for~~ recreation

Point of diversion ~~DAM LOCATED: SW¼ NE¼, Section 2, T. 18 S., R. 6 W., W.M.,~~ in the county of Lane.

Number of acres

DESCRIPTION OF LAND TO BE IRRIGATED OR PLACE OF USE

Twp.	Range	Sec.	NE¼				NW¼				SW¼				SE¼			
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼
							~~RESERVOIR LOCATED:~~											
18 S	6 W	2		SW¼		NE¼												
				SE¼		NE¼												

Priority date October 21, 1960

Amount of water 3.95 acre-feet

Time limit to begin construction ~~March 16, 1962~~

Time limit to complete construction ~~10/1/62~~ *extended to* *extended to*

Time limit to completely apply water *extended to* *extended to*

Remarks:

Basin 2 Vol.

Source - Wilson Cr.

Elevations

Low point of inlet & outlet - 84 ±

Invert at lower End of outlet - 80 ±

Low point of Low Crest - 96 ±

Trickle Tube - 92 ±

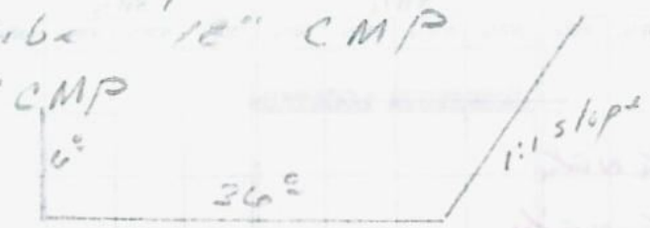
crest of spillway - 92 ±

Top [illegible] of 92 ±

Dam 125 ± long 20 ± crest

Trickle Tube 12" CMP

outlet 8" CMP



Spillway
Dirt construction -

Dam has excess of Material. it appears That they cut the spillway to deep and Then lowered The dam to make it look better.

Info - William Einsted and Leslie in camp Fire Girls head quarters.

Tie - 1/16 corner SW Cor NE¼ NE¼.

4-29-65

Clayton J. Gardner

(1.2 Surface Acres)

1.5 ft / 3.6 ± — 3 / 3.6 A.F. ±