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472



# KEUFFEL & ESSER CO.

DRAWING MATERIALS  
AND  
SURVEYING INSTRUMENTS.  
NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

## TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.  
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.  
FOR SINGLE TRACK EXCAVATION.

"Copyright, 1895, by Keuffel & Esser Co."

	0	1	2	3	4	5	6	7	8	9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

472

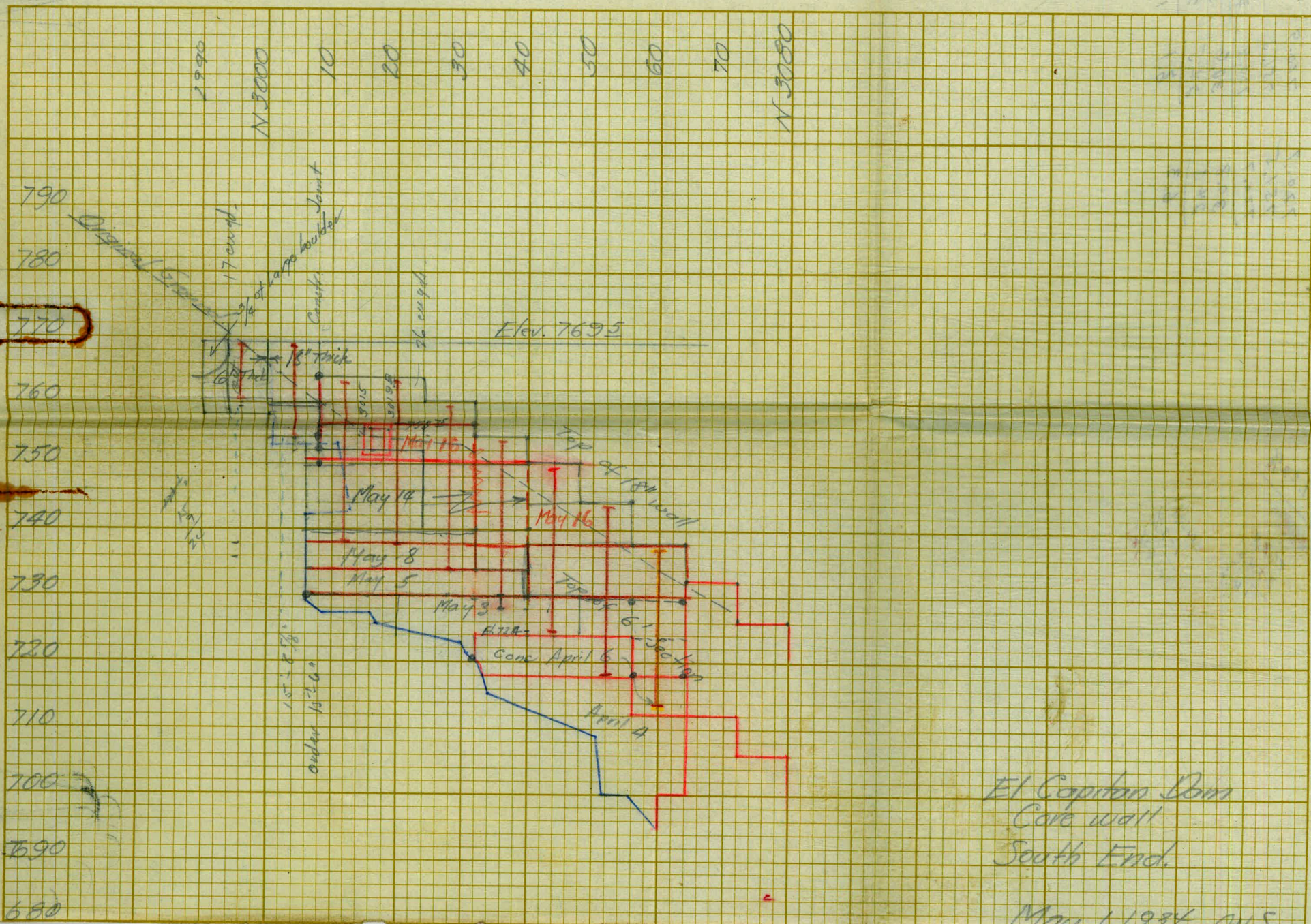
From Book No 471

Otto von Seggern  
Concrete Inspector  
El Capitan Dam.

March 22 to June 1, 1934

Continued into Book No 469



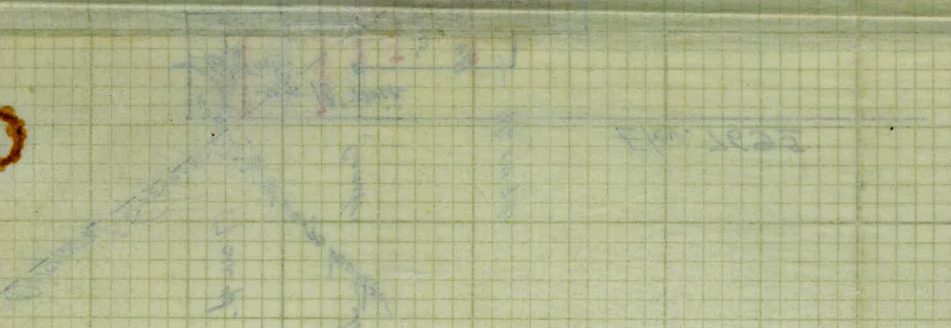
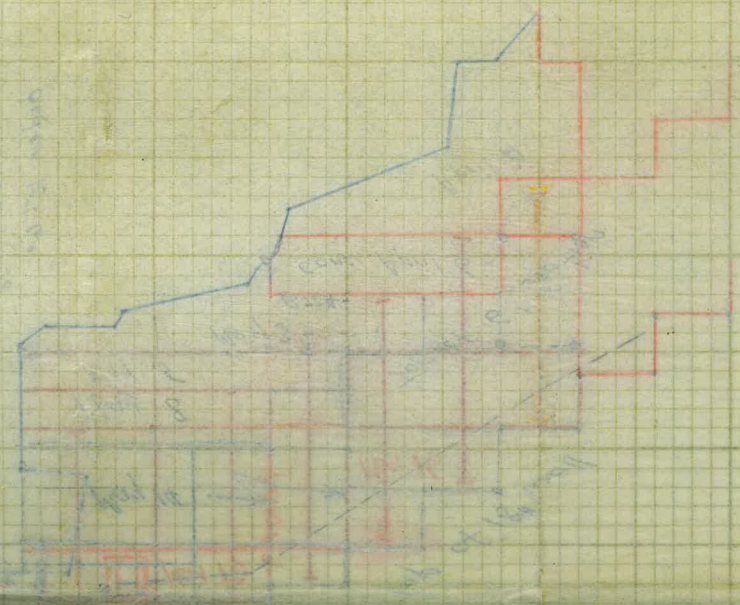


El Capitan Dam  
 Core wall  
 South End.

May 1, 1934 A.M.S.



100  
110  
120  
130  
140  
150  
160  
170  
180  
190  
200



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100  
110  
120  
130  
140  
150  
160  
170  
180  
190  
200

$$\begin{array}{r} 14.5 \\ 754.0 \\ \hline 768.5 \end{array}$$

$$\begin{array}{r} 14.5 \\ 1.92 \\ \hline 12.58 \end{array}$$

$$\begin{array}{r} 15.4 \\ 1.92 \\ \hline 13.48 \end{array}$$

$$\begin{array}{r} 720.7 \\ 751.5 \\ \hline 720.7 \\ 30.8 \\ 24.5 \\ \hline 6.3 \end{array}$$

$$\begin{array}{r} 720.9 \\ 751.5 \\ \hline 720.9 \\ 30.6 \\ 24.5 \\ \hline 8.1 \end{array}$$

$$\begin{array}{r} 720.9 \\ 757.5 \\ \hline 720.9 \\ 36.6 \\ 24.5 \\ \hline 12.1 \end{array}$$



✓  
 March 22, 1984 Jamst. Jam

Forms 7<sup>00</sup> to 9<sup>00</sup> = 2 hrs.

1- General Foreman

3 Laborers

1- Crane Operator

1- Crane Oiler

1- Nib Crane

Str. Steel

1- Carpenter Foreman 2 hrs

12<sup>30</sup> to 4 = 5<sup>1/2</sup>

Clean Up.

3- Laborers 7<sup>00</sup> to 8<sup>00</sup>

1- Laborer 8<sup>00</sup> to 9<sup>00</sup>

Mixing Plant Clean up 7<sup>00</sup> to 9<sup>00</sup>

1- Mixerman 7<sup>00</sup> to

3 Men 8<sup>00</sup> to 9<sup>00</sup>

1- Compressor 7<sup>00</sup> to

1- Laborer



March 22, 1934 7am to 4pm

Corewall

5x Mix 1:2 Grout 2 Batches 105x

6x 1:2.5 104 Batches 6245x

Start 9<sup>00</sup> Finish 4<sup>30</sup> = 6 1/2 hrs.

1- Mixing Plant

1- Barber Greene & 1 Track

2- Blaw Knox Truck Mixers

1- No 6 Crane

1- General Foreman

1- Mixerman

3 Men

Conc Del 2 Truck Drivers

Placing Conc 3 Laborers

1- Crane Oiler & Operator

App Supply 1- Truck Driver

32' Copper

Sta 0+149 to 0+43 Elev 720 to 738

Between previous pourings

1339713

March 23, 1934 7am to 4pm

Corewall

Chipping Conc. 7<sup>00</sup> to 7<sup>30</sup> = 1/2 hr.

2- Laborers

Stripping 7<sup>00</sup> to 11<sup>30</sup>

3- Laborers 7<sup>00</sup> to 7<sup>30</sup> = 1/2 hr.

2- Laborers 7<sup>30</sup> to 11<sup>30</sup> = 4 hr.

Erecting Str. Steel

1- General Foreman 7<sup>00</sup> to

1- Carpenter Foreman 7<sup>00</sup> to

1- Laborer 7<sup>00</sup> to 11<sup>30</sup> = 4 1/2

3- Laborers 7<sup>30</sup> to 1<sup>30</sup>

1- Crane

1- Crane Operator & 1 Oiler

Forms

3- Laborers 12<sup>30</sup> to

} 7<sup>00</sup> to 11<sup>30</sup> = 4 1/2



March 24, 1934 7am to 4pm

North Sidewalk ✓

Forms

- 1- Carpenter Foreman 7<sup>00</sup> to 11<sup>30</sup>
- 4- Laborers 7<sup>00</sup> to 9<sup>00</sup>

✓  
Clean Up at Mixing Plant 7<sup>00</sup> to 9<sup>00</sup>

- 1- Mixerman
- 1- Laborer

- ✓ 80<sup>+</sup> sx partly rain damaged
- 75 sx Salvaged
- 5 sx Rejected

✓ Salvaging Cement over screen  
1- Laborer 9<sup>00</sup> to 3<sup>00</sup> - 5 hrs.

March 24, 1934 ✓ 7am to 4pm

North Sidewalk 1000 sx cleaned

Mix 75x 1:2:4 #8 Batches 56 sx

Start 2<sup>30</sup> Finish 3<sup>00</sup> = 1/2 hr.

- 1- Mixing Plant
- 1- Barber Greene & 1 Truck
- 2 Blaw Knox Truck Mixers

- 1- General Foreman
- 1- Mixerman
- 4- Men

Conv. Del. 2 Truck Driver

Placing Conc. 3- Laborers.

Sta 7+07 to 7+16 Subgrade to 680

Sta 7+16 to 7+40 Elev 686 to 691



March 24, 1934 7am to 4pm. ✓

Corewall

Mix 75x 1:2:4-4 Batches. @ 28 cu

55x Grout. 1 Batches. b 55x

65x 1:2:4. 67 Batches. 2402 cu

Start 9:00 Finish 2:30 = 4 1/2 hr.

1- Mixing Plant

1- Barber Greene

2- Blaw Knox Truck Mixers

1- No 6 Crane.

1- General Foreman

1- Mixer man

4 Men.

Conc. Delivery 2- Truck Drivers

Placing Conc. 1- No 6 Crane Operator

1- " " Oiler

3- Laborers.

Agg Supply 1- Truck Driver

Sta 0+14 to 0+43 Elev 738 to 748

1330  
230

32  
12  
42 correct

1330713

March 24, 1934 7am to 4pm. ✓

Corewall

Clean up 7:00 to 9:00

1- General Foreman

1- Crane Operator

1- " Oiler

2- Laborers.

Forms

1- Carpenter Foreman 12:00 to 4:30

756  
5  
761  
13  
748

4



March 26, 1934 7am to 4pm.

March 25 Sunday.

Corewall

Chipping Conc. <sup>Clean up.</sup> 7<sup>00</sup> to 10<sup>00</sup> = 3 hrs. <sup>concrete</sup> Finishers Supply. 2 ex. Rejected

3 Laborers

2 Laborers. 12<sup>30</sup> to 4<sup>00</sup>

Forms 7<sup>00</sup> to 10<sup>00</sup> = 3

1- General Foreman

1- Carpenter Foreman

3 Laborers

Erecting St. Steel. 8<sup>00</sup> to

1- General Foreman

1- Carpenter Foreman } 10<sup>00</sup> to 3<sup>30</sup> = 1 1/2

3- Laborers

2 Laborers

10<sup>00</sup> to 11<sup>30</sup> = 1 1/2

March 26, 1934 7am to 4pm

Drilling Work

Order Drilling for Drain & Weep Holes.

as follows. South Sidenall Spillway  
weepholes to be opened.

Sta 5+38<sup>2</sup> Weephole Elev 740<sup>±</sup>

Sta 5+28<sup>2</sup> weephole Elev 740<sup>±</sup>  
+ 27 1/2

Sta 5+20<sup>2</sup> weephole Elev 732<sup>±</sup>  
52 1/2

Test for vertical Drains

5+32 1/2 6" above

Drill at Sta 5+33 Elev Spillway Floor

through concrete into drain.

Drill at Sta <sup>2 see curby for exact location.</sup> ~~5+33~~ Elev <sup>6" above</sup> Spillway Floor

5+18<sup>2</sup>  
through concrete into drain.

Finishers Work

Finish warped surface at  
intersection of Spillway Floor & O.G. Trc.

Sta 5+10.



✓  
March 26, 1934 7am to 4pm.

North Sidewall

Foreman 3<sup>30</sup> to 4<sup>00</sup>

1- Carpenter Foreman

1- General Foreman

3- Laborers

Mixing Plant Clean Up

1- Mixer man 12<sup>30</sup> to 4<sup>10</sup>

✓  
March 27, 1934 7am to 4pm

Crew wall

Clean Up 7<sup>00</sup> to 8<sup>00</sup>

1- General Foreman

4- Men

1- Carpenter Foreman

Mixing Plant

Salvaging cement over screens

1- laborer 12<sup>30</sup> to 7<sup>00</sup>



March 27, 1934 7am to 4pm

Cokewall

Mix @ 75x 1 Batches

b 55x 1 1/2 Groat 2 Batches

c 65x 1:2:5 106 Batches

Start 8<sup>00</sup> Finish 7<sup>00</sup> Delays

1- Mixing Plant

1- Barber Green & 1 Truck

2- Blain Knox Truck Mixers

1- Nob Crane

1- General Foreman

1- Mixerman

3- Men

Conc. Del 2- Truck Drivers

Placing Conc. 3 Laborers

1- Crane Operator

1- " Oiler

App. Supply 1- Truck Driver

Sta N 4160 to 0+14 Elev 740 to 747

Sta 0+14 to 0+43 Elev 748 to 758

Copper 78'

16 Batches  
500 Cleaned

43 yellow

16  
58

32  
10  
29  
7  
78

March 27, 1934 7am to 4pm

North Sideway

Forms 800 to

1- Carpenter Foreman



March 28, 1934 7am to 4pm

Corewall

Chipping Conc. 7<sup>00</sup> to 9<sup>00</sup> = 2

2- Laborers

Removing Timbers 7<sup>00</sup> to 9<sup>00</sup> = 2

1- No. 6 Crane ⊗

1- Crane Operator ⊗

1- " Oiler ⊗

1- General Foreman

4- Laborers

Erecting Str. Steel 7<sup>00</sup> to

1- Carpenter Foreman 7<sup>00</sup> to 10 = 3

1- General Foreman } 9<sup>00</sup> to 10 = 1

4- Laborers

Excavation 7<sup>00</sup> to 6

2- Laborers

Forms 10<sup>00</sup> to 4 = 5

1- General Foreman

1- Carpenter Foreman

4- Laborers

March 28, 1934

Inventory Steel Col

40± - Columns 22<sup>5</sup>-24<sup>6</sup>" laticed

Required

4 - to finish North Abutment

8 - to finish South Abutment

12

40  
12  
28 extra



March 29, 1934 7am to 4pm

Corewall

Forms 7<sup>00</sup> to 10<sup>00</sup>

1 - General Foreman = 3hrs

1 - Carpenter Foreman 7<sup>00</sup> to 4 x 8hrs.

4 - Laborers = 3hrs.

Excavation 7<sup>00</sup> to 9<sup>00</sup>

2 - Laborers = 2hrs.

Mixing Plant Clean Up.

1 - Mixerman 7<sup>00</sup> to 10 - 1hr.

1:2:5  
Mass Concrete Samples Corewall

No 2478-79-80

Sta 0+14 to 0+43 Elev 760

Limit for over-sanded and rather wet mix.  
4.2 gallons water.

300 sx Cleaned. 9

March 29, 1934 7am to 4pm

Mix 55x 1:2 Grout. & 2 Batch 10sx  
65x 1:2:5 (b) 136 Batches = 816sx

Start 10<sup>00</sup> Finish 10<sup>00</sup> Delays.  
= 10 1/2 hrs.

1 - Mixing Plant

1 - Barber Concrete & 1 Truck

2 - Blum Knox Truck Mixers

1 - No 11 Crane.

1 - General Foreman

1 - Mixerman

3 Men.

Corewall 2 - Truck Drivers

Hoop Car 3 - Laborers.

1 - Crane Operator

1 - Oiler

App Supply 1 - Truck Driver

Sta 114160 to 0+14 Elev 747 to 758

Sta 0+14 to 0+43 Elev 758 to 766

Copper 10' + 11' + 29' - 50 feet.

Warped Section  
Sta 5+10 to Sta 5+36 Elev 70 to Elev 766

136  
136  
120

136  
1:2

Changed from  
3/4" River Rock  
to 3/4" Crusher Rock.  
Changed Mix from  
650 # 3/4" to 580 #  
1240 # 1 1/2" to 1340 #



✓  
March 30, 1934 Train to 4 pm.

Corewall

Chipping Concrete

3 Laborers. 7<sup>00</sup> to 9<sup>00</sup>

Forms

1 General Foreman 7<sup>00</sup> to

1 Carpenter Foreman 9<sup>00</sup> to

6 Laborers. 9<sup>00</sup> to 11<sup>30</sup>

4 Laborers. 12<sup>30</sup> to

Erecting Str. Steel 7<sup>00</sup> to 9<sup>00</sup>

1 Carpenter Foreman

3 Laborers

✓  
March 31, 1934 Train to 4 pm

Corewall

Clean Up. 7<sup>00</sup> to 7<sup>30</sup>

1 General Foreman

3 Laborers

1 Cranc operator

1 Mixerman

2 Men

Forms

1 Carpenter Foreman 7<sup>00</sup> to 11<sup>30</sup> 2<sup>00</sup> to 4<sup>00</sup>

1 General Foreman } 2<sup>00</sup> to 4<sup>00</sup>

7<sup>00</sup> Laborers



March 31, 1934 Jam to 4 pm

Corowall

Mix 55x 1:2 Groat 1 Patches 53

65x 1:2:5 57 Patches 372

Start 7<sup>30</sup> Finish 11<sup>30</sup> Delays 1/2 hr.  
-4

1- Mixing Plant

1- Barber Greene & 1 Truck

2- Blaw Knox Truck Mixers

1- No 11 Crane

1- General Foreman

1- Mixer man

3- Men

Conc Del 2- Truck Drivers

Placing Cox. 3 Laborers

1- Crane Operator

1- " Oiler

App Supp 1- Truck Driver

Sta N 4160 to 0+14 Elev 758 to 766

8' copper

March 31, 1934

North Sidewall Jam to 4 pm

Mix 75x 1:2:4 10 Patches 70

Start 12<sup>30 P.M.</sup> Finish 2<sup>P.M.</sup> Delays 0  
= 1 1/2 hr.

1- Mixing Plant

1- Barber Greene

2- Blaw Knox Truck Mixers

1- General Foreman

1- Mixer man

3- Men

Conc Del 2- Truck Drivers

Placing Cox. 3 Laborers

1- Carpenter Foreman

App Supp 1- Truck Driver

Sta 6+83 to 7+07 Elev 694 to 700

7+07 to 7+16 Elev 680 to 688

7+80  
6/60







April 2, 1934 7am to 4pm

Carewall So. Abt.

Drilling Grout Holes.

Setting up. 7<sup>00</sup> to 8<sup>30</sup>

1- Foreman.

3- Men.

Drilling 8<sup>30</sup> to.

1- Compressor.

1- Water Lyner.

1- Driller

2- Helpers.

Grout Hole Numbers So. Abutment.

# 1 3036

# 2 3042

# 3 3048

# 4 3055

April 3, 1934 7am to 4pm.

Carewall So. Abt.

Drilling Grout Holes

Clean up. 7<sup>00</sup> to 9<sup>00</sup> - 2 hrs.

1- Foreman Driller

2- Helpers.

1- General Foreman } 2<sup>00</sup> to  
Forms. 2- Laborers

Grout Holes.

Sta	Depth of Hole	Lth. of Pipe
3036	24'-3"	20'-8"
3042	23'-8"	21'-2"
3048	24'-0"	20'-6"
3055	25'-0"	18'-8"
3060	Existing	

X Sections

N 3056	Elev 7120	Bot. of 6' Step.	Bot. of Stepped
N 3056	Elev 7180	Top of 6' Step	
N 3048	Elev 7180	Bot. of 6' Step	
N 3048	Elev 7240	Top of 6' Step	
N 3040	Elev 7240	Bot of 4' Step	
N 3040	Elev 7280	Top of 4' Step.	



✓  
April 3, 1934 7am to 4pm  
Crewell North Abt.

Forms:

- 1- General Foreman 7<sup>00</sup> to 7<sup>30</sup>
- 1- Carpenter Foreman
- 5- Laborers 7<sup>00</sup> to 7<sup>30</sup>
- 3- Laborers 2<sup>30</sup> to

✓  
April 4, 1934 7am to 4pm

No. Crewell

Mix <sup>5x</sup> 1:2 Grout for 3 Batches 15 5x  
1:2:5 @ 127 Batches 762 5x

7<sup>00</sup> Start 6<sup>45</sup> Finish 10<sup>15</sup> hrs. Delays  $\frac{1}{2}$  hr for lunch

- 1- Mixing Plant
- 1- Barber Greene & 1 Truck
- 2- Blaw Knox Truck Mixers
- 1- No 11 Crane 7<sup>00</sup> to 1<sup>30</sup> = 5 $\frac{1}{2}$

- 1- General Foreman
- 1- Mixer man
- 5- Men

Concl. 2- Truck Drivers

Placing 3 Laborers

- 1- No 11 Crane Operator } 7<sup>00</sup> to 1<sup>30</sup> = 5 $\frac{1}{2}$
- 1- " " " } }
- 1- Finisher 12<sup>30</sup> to

App Supply 1- Truck Driver 90' Copper

Sta N 4160 to O 43 Elev 766 to 769 $\frac{1}{2}$  plus wall to 771  
Sta 5410 to 5436 Elev 766 to 771  
Sta N 3034 to N 3056 Elev Subgrade to 718  
Sta N 3056 to N 3060 Subgrade to 712

500 5x cleaned  
10 5x Relevelled

14



✓  
April 4 1934 7am to 4pm.

So. Corewall

Forms & Clean Up

1 - Carpenter Foreman.

1 - Laborer 12<sup>00</sup> to (X)

Samples! North Abt.  
Test Columns Corewall

Nos. 2561 - 62 - 63

Average Mix 1:2:5

✓  
April 5, 1934 7am to 4pm

No. Corewall

Furnishing

15x cement

1 - Finisher

1 - Laborer.

So. Corewall

Chipping Conc.

3 - Laborers. 7<sup>00</sup> to 8<sup>00</sup>

Forms

1 - General Foreman

1 - Carpenter Foreman.

3 - Laborers 8<sup>00</sup> to 11<sup>30</sup>

3 - Laborers 12<sup>00</sup> to.



April 5, 1934 ✓

S. Corewall

Pressure Grouting

Setting up Equipment 7<sup>00</sup> to 11<sup>30</sup>

1- Mixerman

2- Laborers

1- Compressor 12<sup>30</sup> to

1- 7 cu ft. Grout Tank

1- Blaw Knox Truck Mixer

Pressure Grout see Book 381

# 3036

3040

3048

3055

April 6, 1934 ✓  
7 am to 4 pm

S. Corewall

Cleanup <sup>+ Delays</sup> 7<sup>00</sup> to 8<sup>00</sup>

1- General Foreman

3- Laborers

1- Mixerman

3 Men

2 Truck Drivers

N. Corewall

Finishing

1- Finisher 7<sup>00</sup> to 4 = 8

1- Laborer 7<sup>00</sup> to 8<sup>00</sup> 10<sup>30</sup> = 4 = 5<sup>1</sup>/<sub>2</sub>



✓ 25x Rebar used

April 6, 1934

So. Corewall

Mix 1:25 65x 38 Batches 228

Grout Mix 55x 1 Batches = 55x  
233

Start 8<sup>00</sup> Finish 10<sup>30</sup> Delays.

= 2 1/2

1 - Mixing Plant

1 - Barber Greene & 1 Truck

2 - Blaw Knox Truck Mixers

1 - General Foreman

1 - Mixerman

3 - Men

Conc. Delivery 2 - Truck Drivers

Placing Conc. 3 Laborers

Sta N 3032 to N 3056 Elev 718 to 724

Sta N 3056 to N. 3064 Elev 712 to 718

Copper 6'  
34  
38'

17

✓  
April 6, 1934 7am to 4pm

Salvaging Steel for Culvert

1 - Carpenter Foreman 7<sup>00</sup> to 9<sup>00</sup>

N. Sidewall

Forms

1 - Carpenter Foreman 9<sup>00</sup> to

1 - General Foreman } 10<sup>30</sup> to

3 Laborers



April 7, 1934 7am to 4pm  
N. Sidewall

Forms

- 1- General Foreman }  
1- Carpenter Foreman } 7<sup>00</sup> to 9<sup>30</sup>  
3- Laborers. }  
1- Carpenter Foreman. 9<sup>30</sup> to 11<sup>30</sup>

Corewall & Waiped Section

Finishing 7<sup>00</sup> to

1- Finisher

1- Laborer.

Wetting Conc. 1- Laborer. 12<sup>30</sup> to.

Mixing Plant Cleanup

- 1- Mixerman }  
1- Laborer. } 7<sup>00</sup> to 9<sup>30</sup>

April 7, 1934 7am to 4pm.  
N. Sidewall

Start 9<sup>30</sup> Finish 11<sup>30</sup><sub>4</sub>

Mix 65x 1:2 Grout. (a) 2<sup>4</sup> Batches 125x

65x 1:2:4 (b) 11 Batches 665x  
99  
785x

1- Mixing Plant

2- Blaw Knox Track Mixers

1- General Foreman

1- Mixerman

10- Men

Conc. Del. 2- Truck Drivers

Placing Conc. 3- Laborers.

Sta 6+88 to 7+07 Elev 700 to finish line

Sta 7+07 to 7+16 Elev 688 to " "

Sta 7+16 to 7+40 Elev 691 to " "

Concrete Samples April 7, 1934

Nos. 2619-20-21 N. Sidewall

1<sup>1</sup>/<sub>2</sub> Rock from below Santee

1040<sup>#</sup> Sand 1100<sup>#</sup> 1<sup>1</sup>/<sub>2</sub> 560<sup>#</sup> 3<sup>1</sup>/<sub>4</sub> 220<sup>#</sup> pea.



✓✓  
April 7, 1934  
Work Order #25  
Flume Culvert Crossing

Beginning of Work Order  
Saturday 1st day

Bending Steel 12<sup>30</sup> to 4

1- Carpenter Foreman }  
1- Laborers. } 3<sup>1/2</sup>  
1- General Foreman

1- Welder & Outfit 3<sup>00</sup> to 4<sup>00</sup> = 1 hr.

1- Candy wagon & Driver 3<sup>30</sup> to 4<sup>00</sup> = 1 hr.

✓  
April 9, 1934 7am to 4pm

April 8, Sunday) 1- Laborer  
& 1 Water Tank

Corewall's Warped Section

Finishing 7<sup>00</sup> to 9<sup>30</sup> = 2 1/2 hrs.

1- Finisher

1- Laborer

Wetting Conc { 3<sup>00</sup> to 4<sup>00</sup> = 1 hr.  
7<sup>00</sup> to 9<sup>30</sup> = 2 1/2 hrs.  
12<sup>30</sup> to 1<sup>30</sup> = 1 hr. = 1 + 3 1/2

1- Laborer & 1 Water Tank truck

North Sidewall

Finishing 9<sup>30</sup> to

1- Finisher

1- Laborer

Shipping 1- Laborer 9<sup>30</sup> to 11<sup>30</sup> = 2 1/2

1<sup>30</sup> to 3<sup>00</sup> = 1 1/2  
3/2

Wetting Conc. 1 hr.



W ✓  
April 9, 1934 7am to 4pm  
Work Order #25 Flame Crossing

Bending Steel 7<sup>00</sup> to 4 = 8 hrs. ✓

1 - General Foreman

1 - Carpenter Foreman

1 - Laborer

1 - Welder & Outfit 7<sup>00</sup> to 8<sup>00</sup> = 1 hr.

8<sup>30</sup> to 10<sup>30</sup> = 2 hr  
3 hrs

1 - Candy Wagon & Driver

8<sup>00</sup> to 9<sup>30</sup> = 1 1/2 hr.

20 ✓  
April 10, 1934  
North Sidewall

Finishing 7<sup>00</sup> to 4 = 8

1 Finisher

1 Laborer

Wetting Conc.

1 Laborer & 1 Water Tank

7<sup>00</sup> to 8<sup>00</sup> = 1 hr.



✓  
April 10, 1934 Rain to 4 pm

Corewall

Form 7<sup>00</sup> to 4 = 8 hrs.

1 - Carpenter Foreman

1 - Laborer

1 - General Foreman

1 - Laborer 8<sup>00</sup> to 3 = 6

Wetting Conc

1 - Laborer 1 hr.

Aggregate Samples

3/4" Crusher Run 2634

3/4" River Gravel 2635

1 1/2" Crusher Run 2636

1 1/2" River Gravel 2637

21  
✓  
April 11, 1934 Rain to 4 pm.

North Sidewall

Finishing 7<sup>00</sup> to

To Finisher  
55x cement.

1 - Finisher

1 - Laborer

Wetting Conc 7<sup>00</sup> to 8<sup>00</sup> = 1 hr.

1 - Laborer & 1 Water Tank Truck

Clean up 10<sup>00</sup> to 4 = 5 hrs.

1 - Truck & Driver

1 - Laborer

1 - Laborer 1<sup>30</sup> to 4 = 2 1/2



✓  
April 11, 1934 7am to 4pm.  
Corewall N. Abt.

Forms. 7<sup>00</sup> to 10<sup>03</sup>

- 1- General Foreman
- 1- Carpenter Foreman.
- 1- Laborer.
- 1- Laborer 8<sup>00</sup> to 10.

Mixing Plant Clean up 8<sup>00</sup> to 10 + 1<sup>03</sup>

- 1- Mixerman
- 1- Laborer.

✓  
18' Core wall Concrete.

2652-53-54

Sta N 4080 to N 4104 Elev 732

Mix 75x 1740<sup>#</sup> Sand 1100<sup>#</sup> 1<sup>1</sup>/<sub>2</sub> 560<sup>#</sup> 3/4"  
270<sup>#</sup> per.

27  
✓ Cleaned 1200 5x  
Reclaimed 15 5x  
April 11, 1934 7am to 4pm.

Corewall

Mix 7 5x 1:2:4 (a)  $\frac{13}{2}$  Batches. 91

1:2 Grout. 5st (b) 1- Batches. = 55x

Start 10<sup>00</sup> Finish ~~730~~ <sup>730</sup> Delays.

- 1- Mixing Plant. - 2<sup>1</sup>/<sub>2</sub>
- 1- Blaw Knox Truck Mixers.
- 1- No 11 Crane.

1- General Foreman

1- Mixerman

1- Man.

Core. Del 1- Truck Drivers

Placing Con. 1- Laborers.

1- Crane Operator.

1- " Oiler

1- Carpenter Foreman.

9' copper.

Sta N 4080 to N 4088 Elev 732 to 738

Sta N 4088 to N 4096 Elev 732 to 742

Sta N 4096 to N 4104 Elev 732 to 746



✓  
April 11, 1934 7am to 4pm.  
Work Order #25 Flume Crossing

Forms.

1- Carpenter 7<sup>00</sup> to 4 = 8 hrs. ✓

1- Carpenter Foreman } 1<sup>30</sup> to 4:20 ✓

1- General Foreman  
1st load Lumber delivered 9<sup>30</sup>

1- Band Saw & Platform 2 1/2 hrs. ✓  
4 hrs ✓

✓  
April 12, 1934 7am to 4pm

North Sidewalk

Finishing 7<sup>00</sup> to 2<sup>00</sup> = 6 hrs.

1- Finisher

1- Laborer

Clean Up 7<sup>00</sup> to 4<sup>00</sup>

1- Truck & Driver

1- Laborer

1- Laborer 8<sup>00</sup> to 4 = 7 hrs.

N. Corwell

Clean Up

1- Laborer 7<sup>00</sup> to 8<sup>45</sup> = 1 1/2

Stripping 2<sup>00</sup> to 4<sup>00</sup> = 2 hrs

1- Finisher

1- Laborer



✓  
April 12, 1934

Work Order #25 Flame Crossing

Forms 7<sup>00</sup> to

1 - General Foreman 7<sup>00</sup> to 10<sup>00</sup> 5 hrs. ↓  
2<sup>00</sup> to 4<sup>00</sup>

1 - Carpenter Foreman } 8 hrs. ✓

1 - Carpenter

1 - Band Saws & Platform. 8 hrs.

Corewall

Repairing Flame Contractors Aest

1 - General Foreman

10<sup>00</sup> to 2<sup>00</sup> - 3 hrs.

✓  
April 13, 1934 7am to 4pm

N. Corewall

Stripping

2 - Laborers

2 - Laborers 9<sup>00</sup> to

Spillway Floor

Clean Up

2 - Laborers 7<sup>00</sup> to 8<sup>00</sup>

Laying Tile

2 - Laborers 8<sup>00</sup> to 9<sup>00</sup>

60' - 4" Drain Tile

Sta 6+80 to 7+40



April 13, 1934 7am to 4pm

Work Order #25 Home Crossing

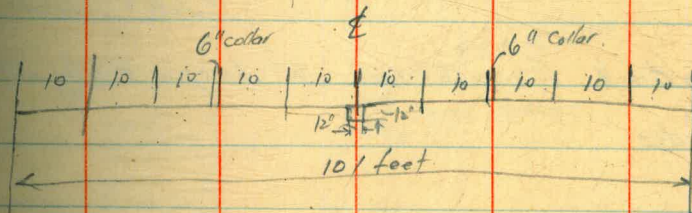
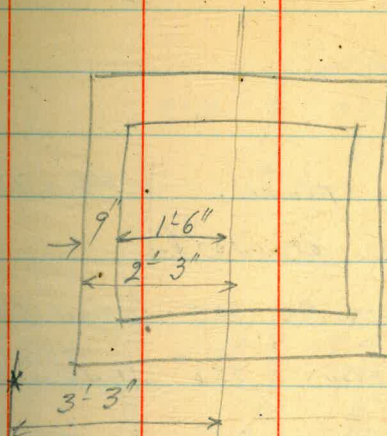
Forms. 7<sup>00</sup> to 4 = 8 hrs. ✓

1- General Foreman

1- Carpenter Foreman

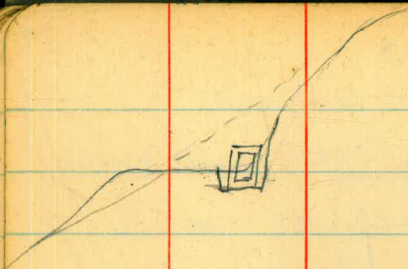
1- Band Saw & Platform

✓ 1- Candy Wagon <sup>& Drier \*</sup> 4 hrs





757.6



Flame. | FL = 755  
Elev 754

3.75

Elev 9L 753 Original Bench

753.00

Elev 752 Intersection

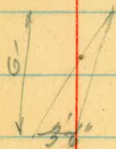
3.75

751.25 Subgrade Elev 751

Culvert Subgrade

On Bench Excavation 2' deep x 7' x 100' = 54 yds

Sides



$3 \times 3 \times \frac{4}{27} = 36$  cu yds.  
 $\frac{54}{3} = 90$  cu yds.

Hand Labor Time man hours.

2 yds per man = 50 man hours.

or 10 men 5 days.

TOO MUCH WORK

Relocate grade &amp; location

Original location

Culvert near base of slope 26

at base of slope  
3'-10" x 6'-1" x 3'-6" out  
6' cut.

Right Side

2'-6" x 4' of Culvert.  
3'-6" out  
6' cut to original Bench.

Line of Old Flume

Axis of Dam  
1'-0" x Large Boulder

1'-0" Large Boulders

2'-6" x 4' of Culvert.  
3'-6" out  
(4') cut to orig. Bench

2'-6" x 3'-6" out  
(5') cut to orig. Bench.

R.P.



April 14, 1934 7am to 4pm

Carewall

Stripping

2 Laborers 7<sup>00</sup> to 8<sup>00</sup> = 1 hr.

1 Laborer 8<sup>00</sup> to 4 = 8 hrs.

1 Truck

April 14, 1934

Work Order #25 Flame Crossing

Hauling Forms 7<sup>00</sup> to

✓ 1 Dandy Wagon & Driver 7<sup>00</sup> to 9<sup>30</sup> = 2 1/2

✓ 1 Carpenter Foreman } 7<sup>00</sup> to 9<sup>00</sup> = 2  
✓ 1 Laborer

8" Pipe for By Pass & Flame Bulkheads

✓ 1 Welding Outfit & Welder.

✓ 1 Truck & Driver 7<sup>00</sup> to 4<sup>00</sup>

✓ 1 General Foreman ✓

✓ 1 Laborer.

✓ 1 Laborer 8<sup>00</sup> to

✓ 1 Carpenter Foreman } 9<sup>00</sup> to 4 = 6 hrs  
✓ 1 Laborer

✓ Maryland Flatbeds



✓  
April 16 1934 7am to 4pm.

April 15 Sunday No work

Work Order #25 Flume Crossing

Excavation for 3x3 Culvert

✓ 7-Muckers 7<sup>00</sup> to 1-Driller

✓ 1-Compressor 2-Breakers

Hauling Forms up hill. 7<sup>00</sup> to

✓ 5-Laborers.

Forms 7<sup>00</sup> to

✓ 1-General Foreman

✓ 1-Carpenter Foreman

✓ 1-Carpenter

8<sup>00</sup> By Pass. 7<sup>00</sup> to 11<sup>00</sup> ±

✓ 1-Welding Outfit & Welder

✓ 8-1/2" x 1/2" nuts & bolts.

✓ 24-1/2" cut washers.

✓ 1/2 Keg 6d nails

✓  
April 17, 1934

Work Order #25 Flume Crossing

Excavation

✓ 3-Muckers 7<sup>00</sup> to 11<sup>30</sup> = 4 1/2 hrs.

✓ 1-Compressor 1-Jackhammer 7<sup>00</sup> to 10<sup>30</sup>

✓ 1-Drillers Helper. 7<sup>00</sup> to 11<sup>30</sup> = 4 1/2 hrs

Hauling Forms & Material up Hill

✓ 5-Laborers. 7<sup>00</sup> to 1<sup>00</sup> 2<sup>00</sup> to 4 = 7 hrs.

✓ 2-Laborers 1<sup>00</sup> to 2<sup>00</sup> = 1 hr.

✓ 4-Laborers 12<sup>30</sup> to 4 = 3 1/2 hrs  
Forms

✓ 1-General Foreman 7<sup>00</sup> to 4<sup>00</sup> 8 hrs.

✓ 1-Carpenter 7<sup>00</sup> to 2<sup>00</sup> = 6 hrs.

✓ 1-Carpenter Foreman 10<sup>00</sup> to 4 = 5 hrs.

Rec'd Stod

✓ 1-Carpenter Foreman 7<sup>00</sup> to 10<sup>00</sup> = 3 hrs

✓ 1-Candy Wagon & Driver 8<sup>00</sup> to 10<sup>00</sup> = 2 hrs

✓ Material

✓ 10 sticks of powder  
8 caps & fuse



✓  
April 17 1934

Wetting Corewall 1<sup>00</sup> to 2<sup>00</sup>

1 - Laborer & Water Tank Truck

✓  
Coast Manufacturing & Supply Co

Livermore

Cal

Manufacturers of Safety Fuse

✓  
April 18, 1934

Work Order #25 Flume Crossing

Forms

1 - General Foreman

1 - Carpenter Foreman

3 - Laborers. see note 7<sup>00</sup> to 4 = 8 hrs

1 - Carpenter 1<sup>30</sup> to 4<sup>00</sup> = 2 1/2

~~Note~~

1 - Laborer 7<sup>00</sup> to 4<sup>00</sup> ✓

2 - " 7<sup>00</sup> to 4<sup>00</sup> to Mixing Plant.

✓  
\* see April 13 & 17 <sup>29</sup>



Schedule

Flume Crossing

April 18, 1934 Wednesday

1st pour Start at 1:00

Concrete Finish 4:00 pm Bottom

April 19, 1934 Thursday

Forms & Steel

9:00 to 11:30

Concrete 12:00 to 4:00 pm Top & sides

Transition Section.

April 18 Carpenter work on transitions

1:00 to 4:00 pm

April 19 Carpenter work on transitions

12:30 to 4:00 pm

5:00 to 11:00 pm

April 20 Friday 7am to 4pm

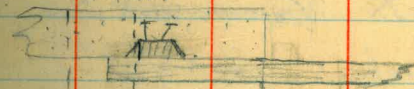
Stripping ✓ ✓

Finish Transition ✓ on time

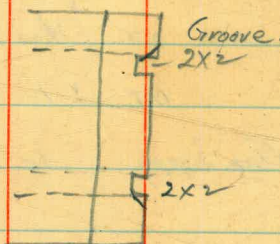
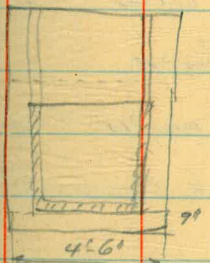
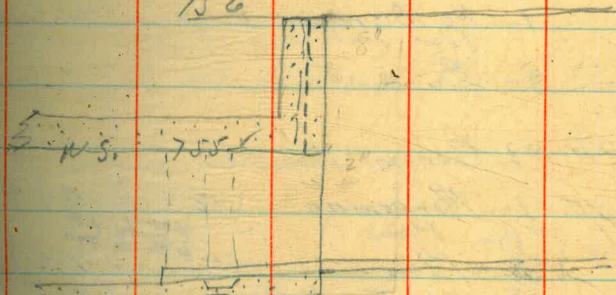
Open flumes ✓

14x Steels  
April 19th  
Graveyard  
Shift  
40 man  
equipment

Plan



756



9" flat  $4.5 \times \frac{75}{12} \times \frac{100}{27} = 12 \frac{1}{2}$  yds.

10" flat  $4.5 \times \frac{10}{12} \times \frac{100}{27} = 14$  yds.

Collars  $\frac{9}{27} = \frac{1}{3}$  yd.



✓✓ 17 Mixed = 119  
 2 Rejected = 14  
 15 Batches.  $\frac{100}{100}$

15  
 105

April 18, 1934.

2 out (Gravel yard shift)

Concrete Start 6:00 to 6:30 Finish 8:30 to 9:00

- 1- Mixing Plant. 3:00 to 7:00 am 2hr.
- 1- Barbed Wire & 1 Truck 12:30 to 4:00
- 2- Blaw Knox Truck Mixers. 3:00 to 7:00
- 1- No 10 Crane & Conc. Bucket 3:15 to 8:45 from rock embankment.
- 2- Buggies. = 5hr

- O.T. 1- General Foreman 3hr
- O.T. 1- Mixerman } 12:30 to 4:00 = 3 1/2
- O.T. 1- Man } 4:00 to 7:00 = 2 hrs.
- O.T. 1- Man } 4:00 to 7:00

Conc. Delivery 1 Truck Driver 3:00 to 7:00  
 1 Truck Drivers 3:00 to

Placing Conc. 1- Crane Operator } 3:15 to 8:45 =  
 1- " Oiler }

- O.T. 4- Laborers.
- O.T. 1- Carpenter Foreman

Agg. Supply 1- Truck Driver 12:30 to 4:00 = 3 1/2  
 2007

O.T. Finishing 1 Finisher 6:00 to

Mr. DeLong acct. 100

April 18, 1934

3:30 pm.

Crane #10 ripped out power line to mixing plant.

All hands off from 4:30 to 6:00 while power is repaired. 1 1/2 hr

Power on at 5:30 at Mixing Plant.

2- Batches Rejected



7:00 am to 4:00 pm

April 18, 1934 Summary.

Work Order #25 Flume Crossing

Forms & Placing Steel.

- 1- General Foreman } 7:00 to 4:00
- 1- Carpenter Foreman } 8 hrs.
- 8 laborers. }
- 1- Carpenter } 1:30 to 4:00
- 2 1/2 hrs

Mixing Plant Clean Up.

- 1- Mixerman } 3 1/2 hrs. 12:30 to 4:00
- 1- Laborer }
- 1- Truck Driver 1 hr. 3:00 to 4:00

1/4 to 5:00 6:00 to 8:30 37

April 18, 1934 Summary

Work Order #25 Flume Crossing Concrete

1- Mixing Plant

1- Barber Greene & 1 Truck } 3 hrs.

2- Blaw Knox Truck Mixers } 2 hrs.

1- Conc Bucket & 2 Buggies.

1- No 10 Crane 5 1/2 hrs.

2- Flood Lights 2 hrs.

1- General Foreman

4- Laborers. } 3 hrs. O.T.

1- Carpenter Foreman

1- Finisher

1- Mixerman } 2 hrs. O.T.

3- Men

2- Truck Drivers (2 hrs) } 3 hrs.

1- " Driver (3 hrs)

1- Crane Operator } 5 1/2 hrs.

1- " Operator }

1- Electrician 1 hr.

1- Cat & Operator 1 hr. \*

1- Truck Driver 2 hrs. \*



April 19, 1934  
Material Work Order #25

✓✓ 6-  $\frac{5}{8}$ "  $\phi$  x 40 - bars from Stock Pile

6-  $\frac{7}{8}$ "  $\phi$  x 22 - bars from " "

1x6 250 lineal feet.

30 - 2x4 x 18 op.

✓✓✓  
✓✓✓  
✓✓✓

100 # no 16 tie wire

see new Hank 215 - 7<sup>th</sup> St.

6-  $\frac{7}{8}$ "  $\phi$  x 22' bars from Stock Pile.

65-  $\frac{7}{8}$ "  $\phi$  x 22' bars. ✓ ✓ ✓  
Total 71  
from Stock Pile

Order from lakeside -

15 # 8<sup>d</sup> pails

30 # 16<sup>d</sup> nails.

Overhauling Mixing Plant ✓

1- Mixerman } 12<sup>30</sup> to 4<sup>00</sup> = 3 1/2 hrs.

1- laborer.

✓  
22  
83  
105  
# copper.

Order water turned out of flume  
at 12<sup>30</sup> pm April 20

✓✓

#1 Shift ✓ 33

April 19, 1934 7am to 4pm.

Work Order #25 - Flume Grading

Forms. 7<sup>00</sup> to

1- General Foreman

1- Carpenter Foreman  
(Steel Worker)

6- Laborers.

7<sup>00</sup> to 4<sup>00</sup> = 8 hrs. ✓

Overtime ✓

5<sup>00</sup> to 8<sup>00</sup> } = 3 1/2

4<sup>30</sup> to 5<sup>00</sup> } ✓

13 hrs  
N

2- Laborers 7<sup>00</sup> to

1- Candy Wagon + Driver

9<sup>00</sup> to 10<sup>00</sup> = 1 hr.

1<sup>00</sup> to 7<sup>00</sup> = 1 hr

Forms.

#2 Shift

1- Carpenter } 5<sup>00</sup> to 2<sup>00</sup> = 8

2- Laborers } O.T.

✓ Forms #3 Shift

1- Carpenter 2<sup>00</sup> to 6<sup>00</sup> = 4 + 2 1/2 ✓  
O.T.



✓  
20  
April 7, 1934 # 3 Shift

Shift Hours.

Work Order #25 Flame Crossing  
#3 Shift 2am to 7am

75x Mix 26 Batches - 18x  
+ 75x Grout 1 - "  
1350 Sand 55x Mixing Plant 3 - "

- 1- Barber Greene 1 Truck
- 2- Blaw Knox Track Mixers
- 1- No 10 Crane 100 to 800 - 7
- 1- Concrete Bucket 2 Buggies

Flood Lights

- 1- Cat Operator 1 hr \* April 18
- 1- General Foreman 2:00 to 7:30

- 1- Mixerman } 12:30 to 7:30 = 7 hrs O.T.
- 2- Men }
- 1- Man 2:00 to 7:00 5 1/2

Cone Delivery 2 Track Drivers 2:00 to 7:30 = 5 1/2 O.T.

Placing Conc. 1- Crane Operator } 1:00 to 6:00 O.T. = 5  
1- " Oiler } 6:00 to 8:00 = 2 hrs

- 3- Laborers 2:00 to 7:30 = 5 1/2
- 2- Laborers 2:00 to 6:00 O.T. = 4
- 1- Carpenter Foreman

Agg. Supply 1- Truck Driver 2:00 to 6:00  
as Finisher 7 1/2

Finishing 1- Finisher 2:00 to 7am 5 1/2  
as Laborer 2:00 to 4:00 7am to 11:30 4 1/2

Shift #1 7am to 4pm = 8 hrs ✓  
7am to 3pm

Shift #2 5pm to 2am = 8 hrs ✓  
3pm to 11pm

Shift #3 2am to 7am = 5 hrs ✓  
11pm to 7am

13 1/2  
16

13 1/2  
9

5 1/2  
4  
5  
5

5 1/2 4  
~~8~~ 5

14 1/2 - 15  
8  
7 hr O.T. ✓

8 hr. 8  
1 hr O.T.

13 1/2  
4  
5  
13 1/2  
19 1/2  
27 1/2



✓  
April 20, 1934 #1 Shift

7am to 4pm

Work Order #25 Flame Crossing

Forms & Transition Section

1- Carpenter <sup>Foreman</sup> 7<sup>00</sup> to 4<sup>30</sup> - (7)

1- Laborer

Stripping 12<sup>30</sup> to 4<sup>30</sup> - (3 1/2)

1- Compressor

1- General Foreman

1- Carpenter ✓

Ed. - Jack - Bud - Joe

4- Laborers

1- Laborer 12<sup>30</sup> to 4<sup>30</sup> O.T. - 3 1/2  
(Finisher)

Finishing

1- Finisher <sup>O.T.</sup> 12<sup>30</sup> to ~~X~~

✓  
April 20, 1934

#2 Shift 5<sup>00</sup> to 2<sup>00</sup>

Work Order #25 Flame Crossing

Transition Sections

1- General Foreman 5<sup>00</sup> to 10<sup>00</sup> = 5 hrs.

1- Carpenter Foreman

1- Carpenter

3- Laborers

1- Compressor 5<sup>00</sup> to 6<sup>00</sup>

Watchman #2 Shift

1- Laborer 10<sup>00</sup> pm to 2am ✓  
= 4 hrs. O.T.

Watchman #3 Shift = 8 hrs. (?)

& continue until Monday a.m.

4 1/2  
5 1/4  
9 1/4

J.V. 8 hrs.  
5 1/4  
2 3/4  
16 1/4

8  
6  
14  
35



✓  
April 21, 1934

7am to 4pm

Work Order #25 Flume Crossing

Stripping 8hrs.

1- General Foreman

3- Laborers

#2 Shift Laborer  
Watchman 8hrs

#3 " " 8hrs

36  
✓  
April 21, 1934

7am to 4pm

N. Corewall 4 1/2 hrs.

Stripping

3- Laborers

General Plant

Stripping 3 1/2 hrs.

3- Laborers



✓  
April 22 Sunday

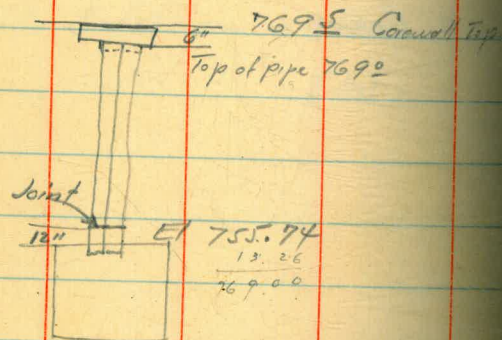
Watchman Laborer.

1- Foreman 4 hrs.

# 1 Shift = 8 hrs. + 1/2 = 12

# 2 " = 8 hrs. = 12

# 3 " = 8 hrs. 7 am Monday morning



Length of pipe 13.26 ✓ - 13' 3"

less

Cut to 12' 3"

2 pipes =  $\begin{array}{r} 14' 0'' \\ 14' 0'' \\ \hline 28' 0'' \end{array}$

✓  
April 23, 1934

Team to 4 pm

Work Order # 25 Flume Crossing

Stripping

3- Laborers

1- Finisher 25x cement.

1- General Foreman



✓✓  
April 24, 1934.

Work Order #25 Flume Crossing

Clean Up 7<sup>00</sup> to 9<sup>30</sup> = 2½ hrs

1- General Foreman ⊗

2- Laborers.

38

✓  
April 24, 1934 - 7am to 4pm

Cleaning forms General Plant

1- General Foreman 7<sup>00</sup> to 9<sup>30</sup> = 2½

1- Laborer

1- Carpenter Foreman

Repairing Fence

2- Laborers. 9<sup>00</sup> to



✓  
April 25, 1934 7am to 4pm  
Work Order #25 Flume Crossing

Clean up. 7<sup>00</sup> to 2<sup>00</sup> = 6 hrs.

- 1- Truck (White Dump)
- 2- Laborers.

Pipe Cutting 7<sup>00</sup> to 9<sup>30</sup> = 2 1/2

- 1- Welding Outfit & welder

✓  
April 25, 1934. 7am to 4pm.

Note Spalling of joint beams on O.G.  
at Sta 3+50 ± near Hogwash dam

Clean up Corwall 2<sup>00</sup> to see

- 1- Truck
- 2- Laborers.

On vacation to May 1st



✓  
✓  
May 1, 1934

Corewall

Drilling Grout Holes. 7am to 4pm  
& Clean Up.

- 1- Compressor
- 1- water legner
- 1- Driller
- 2- Helpers.

	Station	Length of Pipe	Depth of Hole
# 1	3012	18'-2"	24'0"
# 2	3020	18'-2"	25'0"
# 3	3028	20'-8"	23'6"

59- Ladder Rungs-

✓  
May 2, 1934

Corewall Concrete So. Abt.

Forms. 7<sup>00</sup> to

- 1- General Foreman
- 1- Carpenter Foreman
- 1- Candy wagon & Driver 1 hr.
- 4- Laborers.



✓  
May 3, 1934 7am to 4pm

Corewall

Forms. 7<sup>00</sup> to 10<sup>00</sup> = 3 hrs.

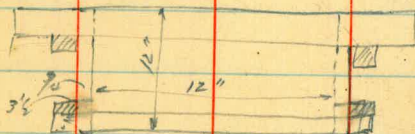
1. General Foreman

1 - Carpenter Foreman

4. Laborers.

Reinf Steel 10<sup>00</sup> to 4 = 5 hrs.

1 - Carpenter Foreman



4 1/4  
4 1/2  

---

12 8 1/2

✓ 65 to 70  
May 3, 1934 7am to 4pm

Corewall Concrete Cleaned 300 sq.

Reclaimed 8 sq.

Start 10<sup>00</sup> Finish 4-5 55x

55x 1:2 Groat (a) 1 - Batches 55x

65x 1:2:5 Mix (b) 54 - Batches 324 5x

75x 1:2:4 Mix (c) 124 Batches Mixed 98  
Rejected (d) 4 = 3  
1 - Mixing Plant (e) 10 used = 705x

1 - Barber Greener 1 Truck

2 Blaw Knox Track Mixers

46 gallons per batch (f) 146  
7.66 9.45  
42.10  
36.1

1 General Foreman

1 - Mixerman

3 Men

Core Set 2 Truck Drivers

Placing Conc 4 Laborers

Log Supply 1 - Truck Driver

58' copper

Sta 3056 to 3064 Elev 718 to 730

3006 to 3032 Subgrade to Elev 730

3032 to 3056 Elev 724 to 730



✓  
May 4, 1934 7am to 4pm

Corewall

Chipping Concrete

4 - Laborers 7<sup>00</sup> to 8<sup>00</sup> = 1hr

Erecting Reinf. Steel.

1 - General Foreman 7<sup>00</sup> to

1 - Carpenter Foreman

4 - Laborers 8<sup>00</sup> to 12<sup>30</sup>

3 - ✓ 12<sup>30</sup> to 4<sup>00</sup>

42

✓  
May 5, 1934 7am to 4pm

Corewall

Forms 7<sup>00</sup> to 9<sup>00</sup> = 2 hrs.

1 - General Foreman

1 - Carpenter Foreman

3 - Laborers

✓  
Mixing Plant Clean Up 8<sup>00</sup> to 9<sup>00</sup>

1 - Barber Greene / 1 Truck

1 - Truck Driver

1 - Mixer man

4 - Men



✓  
May 5, 1934 Tams to top

Core wall

a 55x 1:2 Grout 1 Batches 5 5x  
b 65x 1:2.5 Mix 33 Batches 198 5x  
c 75x 1:2.4 Mix 3 Batches 21 5x  
124 5x

Start 9<sup>00</sup> Finish 2<sup>30</sup>

1- Mixing Plant 4 1/2 hr

1- Barber Greene

2- Blaw Knox Truck Mixers

1- No 10 Crane

1- General Foreman

1- Mixer man

4 Men

Conc. Delivery 2 Truck Drivers

Placing Conc. 3 Laborers

1- Crane Operator

1 " Oiler

Copper 56' feet.

Sta 3006 to 3040 Elev 730 to 734

Sta 3040 to 3064 Elev 730 to 738

✓  
May 5, 1934

Spillway Floor

65x Cement.

1500 Sand 4 1/2 gallons.

1340<sup>7</sup> 1 1/2"

560<sup>4</sup> 3/4"

220<sup>7</sup> pea

3620

to 5<sup>00</sup> = 2 1/2  
Start 7<sup>30</sup> Finish 6<sup>00</sup> = 3 1/2

Sta 648<sup>?</sup> to 7140

to finish up to wall.

65x 1:2:9 15 Batches = 905x



✓  
May 6, 1934 Sunday

Corewall & Chipping  
Wetting, Concrete

1 - Laborer 8 hrs.

✓  
May 7, 1934 Tues to 4 pm.

Forms

1 - General Foreman

1 - Carpenter Foreman

2 - Laborers

✓  
Pressure Grouting Continued

Sta	Cu. Ft GROUT.	Remarks
3012	4	Some free tie from 3026 to 3012
3020	$\frac{7}{2} = 16$	Wet Drill Hole
3028	$3\frac{1}{2}$	indicating of spring seams
	<hr/> $23\frac{1}{2}$	

Pressure Grouting ✓

Setting up Equipment 7<sup>00</sup> to 10<sup>00</sup> = 3

1 - Mixerman

1 - Foreman  
1 - Laborer

Pressure Grouting 10<sup>00</sup> to 2<sup>00</sup> = 3

1 - Compressor & GROUT Tank & Truck Mixer

105 = cement

1 - Mixerman

5 SK

1 - Foreman

10 SK = 21 cu. ft.



✓  
May 8, 1934 7am to 4pm

Corewall

Erecting Str. Steel. 7<sup>00</sup> to 10<sup>30</sup>

- 1- Carpenter Foreman
- 1- Mixerman = 3 1/2
- 1- Foreman
- 2- Laborers

Forms 7<sup>00</sup> to 10<sup>30</sup>

- 1- General Foreman
- 1- Laborer = 3 1/2

1- Carpenter 10<sup>30</sup> to

✓  
Concrete Samples 6' Corewall

Nos. 1:2:5 Mix average rather wet.

2764  
2765  
2766

✓  
May 8, 1934

Corewall Sta 3006 to 3040 Elev 734 to 740

~~3040 to 3056 Elev 738 to 744~~

Mix 55x 1-Batches 1:2 Grout = 55x

75x Batches 1:2:4

65x 40 Batches 1:2:5 240  
Total 245 5x

Start 10<sup>30</sup> Finish 4<sup>00</sup> Delays Power Off 3<sup>00</sup>

1- Mixing Plant

1- Barber Greener & Truck = 4 1/2

2- Blaw Knox Truck Mixers

1- No 10 Crane

1- General Foreman

1- Mixerman

3- Men

Core Wall 2- Truck Drivers

Piling Co. 3 Laborers

1- Crane Operator

1- Oilor

App Supply 1- Truck Driver

Sta 3006 to 3040  
Elev 734 to 758  
54' copper  
4  
58'



✓  
May 9, 1934

Corewall Excavation

- 1 - No 10 Crane
- 1 - Truck
- 1 - Compressor
- 2 - Jack hammers

- 1 - General Foreman
- 1 - Foreman
- 1 - Crane operator
- 1 - Truck Driver
- 2 - Drillers
- 2 - Muckers

Timbers

- 1 - Carpenter Foreman
- 1 - Truck 2 hrs.

⊕  
200 yds. from Corewall to  
up stream Rock Embankment.

✓  
May 10, 1934

Corewall Excavation 700 to 400

- 1 - No 10 Crane
- 1 - Dump Truck
- 1 - Compressor
- 2 - Jack hammers

- 1 - General Foreman
- 1 - Foreman
- 1 - Crane Operator
- 1 - Truck Driver
- 4 - Muckers.

Corewall Concrete 700 to 400

Finishing & Remaining Cores.

- 1 - Carpenter Foreman.

Stripping

- 1 - Carpenter 3 1/2 hrs.



✓  
May 11, 1934 7am to 4pm  
Cement Excavation 7<sup>00</sup> to 10<sup>00</sup>

1- No 10 Crane

1 Dump Truck

1- Compressor 3

1- General Foreman

1- Crane Operator

1- Truck Driver

2- Muckers.

Drilling Pressure Grout Holes

1- Compressor 7<sup>00</sup> to

1- Water Legner

1- Driller

2- Helpers

47  
✓  
May 11, 1934  
Cement  
Forms & Str. Steel  
7<sup>00</sup> to 10<sup>00</sup>.

1- Candy wagon & Driver = 3 hrs

1- Carpenter Foreman 7<sup>00</sup> to

1- General Foreman 10<sup>00</sup> to

1- Foreman

1- Laborer



✓  
May 12, 1934 7am to 4pm  
Coyewall

Drilling Casing Nolas 700 to 132 = 5 1/2

2 Compressors N 2997 #1 - 21' 0"

1 Water Leyster N 3003 #2 - 23' 10"

1 Driller

2 Helpers

Forms

1 General Foreman

1 Carpenter Foreman

1 Foreman

2 Laborers

✓  
May 12, 1934

Spillway Excavation

1 Compressors <sup>1230</sup>~~700~~ to 4

1 Compressor 130 to 4

1 Foreman } <sup>1230</sup>~~700~~ to 4

4 Muckers }

1 Driller } 130 to 4

2 Muckers }

May 13, 1934 Sunday  
Forms & Working Copy  
1 General Foreman 8hrs.



May 14, 1934 Jam to 4pm

Corewall

Forms & Clean Up. 7<sup>00</sup> to

Erecting Stk

1- General Foreman 7<sup>00</sup> to 8<sup>00</sup> 2<sup>3</sup>/<sub>4</sub> hr

1- Carpenter Foreman 7<sup>00</sup> to 4<sup>00</sup> - 8

2- Laborers 7<sup>00</sup> to 8<sup>00</sup> 2<sup>3</sup>/<sub>4</sub> hr

1- Foreman 2<sup>30</sup> to 4 = 2<sup>1</sup>/<sub>2</sub>

Plant Clean Up 7<sup>00</sup> to 8<sup>00</sup> - 1

1- Mixer man

2- Truck Drivers

3- Men

1- Crane Operator

1 " Oiler

Concrete Samples Rather wet mix form

Nos. 2790-91-92 18' Corewall

Sta 3020 to 3040 Elev 785

May 14, 1934 Jam to 4pm

Corewall

50x Grout Mix 1 Batch 5 5x

44x 65x 1:2:5 40 Batches 240 5x

45x 65x 1:2:4 8 Batches 48 5x  
293 5x

45 gallons water 6x7 1/3 = 44

Start 8<sup>00</sup> Finish 2<sup>30</sup> = 5 1/2

1- Mixing Plant

1- Barber Greene & Truck

2- Blaw Knox Truck Mixers

1- No 10 Crane

1- General Foreman

1- Mixer man

3- Men

Con. Del. 2- Truck Drivers

Plant Op. 1- Crane Operator

1 " Oiler

2- Laborers

Log Supply 1- Truck Driver

Sta 3006 to 3048  
Elev 738 to 750



✓  
May 14, 1934

Spillway Excavation

- 1- Compressor
- 1- Jackhammer
- 1- Foreman
- 1- Driller
- 4- Muckers
- 2- Muckers 2<sup>30</sup> to 4<sup>00</sup>

✓  
May 15, 1934 7am to 4pm

Spillway Excavation

- 1- No 7 Shovel
- 2- Dump Trucks
- 1- Compressor
- 2- Jackhammers
- 1- Foreman
- 1- Shovel Operator
- 1- " Oiler
- 2- Truck Drivers
- 2- Drillers
- 3- Muckers



May 15, 1934

Rock to up Stream Embankment

Time	Truck No.	Capacity No 20	cu yds.	Time	Truck No	cu yds.
7 <sup>30</sup> am	23	4		1 <sup>00</sup> pm	20	3 $\frac{1}{2}$
8 <sup>00</sup>	20	4		1 <sup>15</sup>	23	3
8 <sup>15</sup>	23	4		1 <sup>30</sup>	23	4 $\frac{1}{2}$
8 <sup>25</sup>	20	4		1 <sup>35</sup>	20	4 $\frac{1}{2}$
9 <sup>00</sup>	23	4 $\frac{1}{2}$		1 <sup>45</sup>	23	4 $\frac{1}{2}$
10 <sup>45</sup>	23	4		2 <sup>18</sup>	20	$\frac{11.0}{2}$
10 <sup>50</sup>	20	3 $\frac{3}{4}$				7 $\frac{1}{2}$
		28 $\frac{1}{2}$				
		24				
		52.5				
		21				
		52.5				
		3675				
		27.275				

Memo from Field Book No 457

Capacities of Sterling Rhodes Trucks

# 1	6.7	# 39-33	4.1
# 2	6.5	?	4.6
# 3	6.4	# 34	4.2

Handed average  
5.0 from  
quarry  
field

Constant  $K = 0.71$  to reduce  
to solid rock measurement.

May 15, 1934 Jam to 4 pm

Crew all

Forms & Chipping Conc.

1 - General Foreman.

1 - Carpenter Foreman

2 - Laborers



✓

May 16, 1934 Paul to 4 pm

Spillway Excavation

2 Compressors

Jackhammers

1 Foreman

2 Drillers

5 Muckers. 7<sup>00</sup> to 9<sup>00</sup> 9<sup>00</sup> to 4<sup>00</sup>

3 Muckers. 9<sup>00</sup> to 2<sup>00</sup>

Moved to <sup>D.G. Dump</sup> Shop. 7<sup>00</sup> to 9<sup>00</sup>

No 7 Shovel

1 Operator & Oiler

1 Cat & McMillan 12<sup>30</sup> to 1<sup>30</sup>

1 Operator

Building Road for Contractor

1 Cat & McMillan 7<sup>00</sup> to 11<sup>30</sup>

1 No 7 Shovel 1 Dump Truck

1 Shovel Operator & Oiler 2<sup>00</sup> to 4<sup>00</sup>

1 Truck Driver 2<sup>00</sup> to 4<sup>00</sup>

52

✓

May 16, 1934 Paul to 4 pm

Crewall So Abt Stripping

Formis 7<sup>00</sup> to 9<sup>30</sup> = 2 1/2 hrs 1<sup>30</sup> to 4<sup>00</sup> = 2 1/2 hrs

1 General Foreman

1 Carpenter Foreman

1 Mixer man 7<sup>00</sup> to 9<sup>00</sup> = plus 2<sup>00</sup> to 4<sup>00</sup> = 4 hrs

2 Laborers

1 Faged Truck 8<sup>00</sup> to 4<sup>00</sup> = 2 hrs

1 Welding outfit & welder

Cutting Steel 2 hrs.

Mixing Plant Cleanup

1 Mixer man 7<sup>00</sup> to 9<sup>30</sup> = 2 1/2 hrs 1<sup>30</sup> to 2<sup>00</sup> = 1 hr

1 Man

1 Crane Operator & Oiler

2 Truck Drivers



May 16, 1934 7am to 4pm

Corewall So. Mt.

Sta 3040 to 3056 Elev. 738 to 744

3040 to 3048 Elev 744 to 750

3008 to \*3032 Elev 750 to 756

3032 to 3040 Elev 750 to 754

\* Flame included from Sta 3015 to 3019

Elev 755.74 to 751.24

55x Mix 1:2 Grout 2 Batches. 10 sy

75x Mix 1:2 20 Batches. 140 sy

65x 1:1 1:2 4 Batches. 150 sy

Start 9:30 Finish 3:30 Delays at other

1. Mixing Plant. Barber Green & Truitt

2. Blaw Knix Truck Mixers.

1. No 10 Crane.

1. General Foreman. 1. Mixerman

Core Del. 2. Truck Drivers.

Placing Core 1. Crane Operator & Oiler

2 Laborers.

Agg Supply. 1. Truck Driver

26' copper

48 gallons  
77 = 49

May 17, 1934 7am to 4pm

Spillway Excavation

1. Compressor } 8 hrs.

2 Jackhammers

1. Cat & Mo. Milton 7:00 to 10:30 = 3 hrs

1. Foreman 8 hrs.

2 Drillers 8 hrs.

5. Muckers. 7:00 to 11:30 = 4 1/2

1. Cat Operator. 7:00 to 10:30 = 3 hrs.

3. Muckers. 12:30 to 4:00 = 3 1/2

1. Shovel Operator & Oiler  
idle

2. Dump Trucks 2:00 to 2:30 = 1/2 hr  
working

2. Truck Drivers 9:30 to 4 = 1 1/2 hr.

1. No 8 Shovel. delay in moving  
7:00 to 2:30 = 6 1/2 hrs.

Rock to Up Stream Embankment

Time	Truck No	cu. yds.	Time	Truck No	cu. yds.
2:30	20	3 1/2	3:40	17	4 1/2
2:50	20	4.0			25
3:00	17	4 1/2			29 1/2
3:05	20	4 1/2			
3:15	17	4 1/2			
3:25	20	4.0			

295  
- 071 = 224  
295  
- 1065 = 209



✓  
May 17, 1934 Jam to 4 pm.  
Corewall So. Abt.

Forms

- 1- General Foreman
- 1- Carpenter Foreman
- 1- Mixerman 7<sup>00</sup> to 11<sup>30</sup> = 4<sup>1/2</sup>
- 2- Laborers.

- ✓
- 1- Barber Greene & 1 Truck
  - 1- Truck Driver 7<sup>00</sup> to 2<sup>00</sup> = 6 hrs

Drain water out of concrete flume  
on May 20<sup>th</sup> for repair of  
transition section

54  
Work Order # 27

Flume Crossing

Forms for 2-6" pipes

May 17  
am 1- Carpenter 1/2 hr.

pm

May 18 1- Carpenter 1 1/2 hr.



✓  
 May 18, 1934 7am to 4pm  
 Cornwall 7<sup>00</sup> to 10<sup>00</sup> 2<sup>30</sup> to 4<sup>00</sup>  
 = 2 1 1/2 = 4 1/2  
 Forms.

- 1- General Foreman
- 1- Carpenter Foreman
- 2- Laborers

Mixing Plant Clean Up 9<sup>30</sup> to 10<sup>00</sup> 1/2 hr  
 1- Mixer man 2<sup>30</sup> to 3<sup>00</sup> = 1/2 hr  
 2- Men

May 18, 1934  
 (a) 55x Batch 112 1/2 Batches 2.5x  
 Cornwall (b) 75x Mix 1:2:4 15 Batches 10.5x  
 (c) 65x Mix 1:2:1.5 8 Batches 4.8x  
 Sta 3008 to 3032 Elev 756 to 760 55x

3008 to 3024 Elev 760 to 764  
 2994 to 3008 Subgrade to 760

Start 10<sup>00</sup> Finish 2<sup>30</sup> = 3 1/2 Delays

- 1- Mixing Plant
- 2- Blaw Knox Truck Mixers
- 1- No 10 Crane

45 spades

- 1- General Foreman
- 1- Mixer man
- 2- Men
- Con. Del. 2- Truck Drivers
- Placing Car 1- Crane Operator
- 1 " Oiler
- 2 Laborers



✓  
May 18, 1934 7am to 4pm

Spillway Excavation

- 1- No. 8 Shovel } 7<sup>00</sup> to 10<sup>00</sup> = 3 hrs  
 2- Dump Trucks } 2<sup>30</sup> to 4<sup>00</sup> = 1 1/2  
 1- Compressor & 30 Cat.  
 2- Jackhammers.

1- Foreman 8hrs.

1- Shovel Operator

1- " Oiler } 7<sup>00</sup> to 10<sup>00</sup> = 3 hrs.

2- Truck Drivers } 2<sup>30</sup> to 4<sup>00</sup> = 1 1/2 hrs.

2- Drillers 7<sup>00</sup> to 4<sup>00</sup> = 8

2~~3~~- Muckers 7<sup>00</sup> to 11<sup>30</sup> = 4 1/2

1- Mucker 7<sup>00</sup> to 4 = 8

2- Muckers 2<sup>30</sup> to 4<sup>00</sup> = 1 1/2 hrs.

Rock to Up Stream Embankment

Time	Truck	Cu. yds.	Time	Truck	Cu. yds.
7 <sup>30</sup>	20	4 1/2			
8 <sup>20</sup>	23	4.0			
8 <sup>40</sup>	23	3.0			
		11 1/2 x .71 = 8.2			

✓  
May 19, 1934 7am to 4pm

Spillway Excavation

- 1- No 8 Shovel  
 2- Dump Trucks No 23 & 24  
 1- Compressor 2- Jackhammers 7<sup>00</sup> to 2<sup>30</sup>  
 1- Cat 30  
 1- Cat & Bulldozer 12<sup>30</sup> to  
 1- Cat & Mc Miller 12<sup>00</sup> to

1- Foreman + 2 " anchor Holes ?

1- Shovel Operator

1- " Oiler

2- Drillers 7<sup>00</sup> to 2<sup>30</sup>

5- Muckers \* Rock to large

1- Cat Operator 12<sup>30</sup> to

1- Cat Operator 12<sup>00</sup> to

Rock to Up Stream Embankment

Time	Truck	Cu. yds.	Time	Truck	Cu. yds.
7 <sup>30</sup>	23	2.0	10 <sup>50</sup>	24	4 1/2
7 <sup>50</sup>	23	4 1/2	12 <sup>40</sup>	24	4 1/2
8 <sup>00</sup>	24	3.0	2 <sup>45</sup> * out	24	<del>4 1/2</del>
8 <sup>15</sup>	23	4 1/2			
8 <sup>35</sup>	23	2.0			
8 <sup>50</sup>	24	4.0			
					29 2
					71 8
					29 7
					203
					20.59



N

May 19, 1934 Jam Loppin

Corewall So. Abt

Forms 7<sup>00</sup> to 4 = 8

- 1- General Foreman
- 1- Carpenter Foreman
- 2- Laborers.

✓

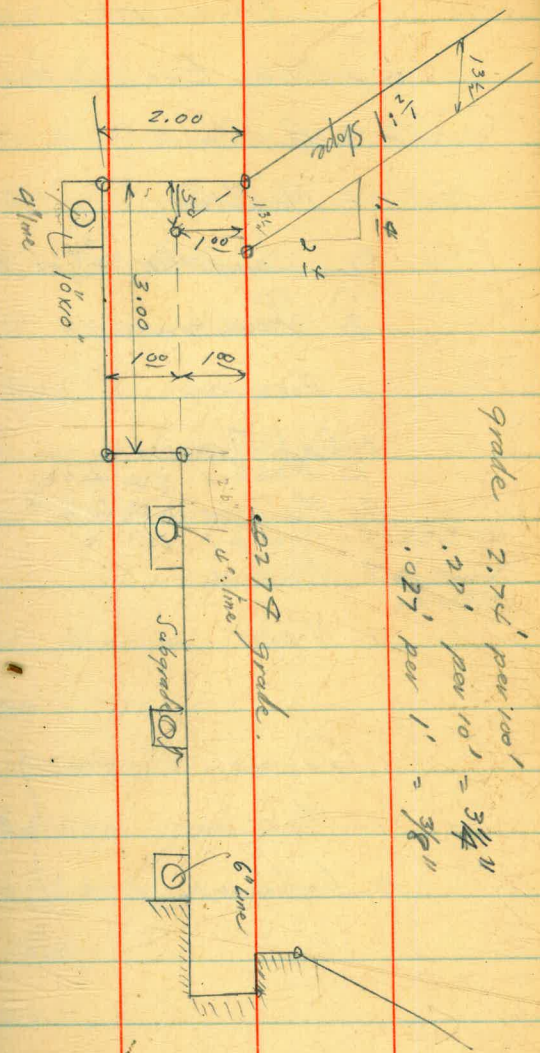
Mixing Plant Clean Up & Repair 7<sup>00</sup> to 11<sup>30</sup> = 4<sup>30</sup>

- 1- Cat & Mo Miller
- 1- Foreman
- 1- Laborer.

Spillway Lining

Drilling Anchor Holes 2<sup>30</sup> to 4<sup>00</sup> = 1<sup>30</sup>

- 1- Compressor 1- Jack Hammer
- 2- Drillers



grade 2.74' per 100'  
 .27' per 10'' = 3 1/4''  
 .027' per 1'' = 3/8''



May 21, 1934 Jam to open

### Spillway Excavation

- 1- Bulldozer
- 1- McWilliam
- 1- Compressor & Cat 30
- 2- Jackhammers
- 1- Foreman
- 1- Cat Operator
- 1- Mucker 7:00 to 11:00
- 2- Muckers 11:00 to 11:30
- 3- Muckers 12:30 to
- 2- Drillers
- 1- Nipper

- 1- General Foreman
  - 1- Mixerman
  - 2- Laborers
- } 2:30 to 4:15

May 20, 1934 ✓ Sunday wetting Conc  
1- Laborer

May 21, 1934

### Corewall So. Abt.

Sta 2994 to 3010 Elev. 764 to finish

65x 1:2:4 Mix 17 Batches 1025x

55x 1:2 Grout  $\frac{3}{5}$  Batches 3 5x

Start 700 Finish  $\frac{1100}{1045}$  5x

- 1- Mixing Plant
- 1- No 10 Crane & wheel barrows
- 2- Blaw Knox Track Mixers

232 5x  
on hand  
in whse.

- 1- General Foreman
- 1- Mixerman
- 2- Men

Comp. Del. 2- Track Drivers

Heavy Conc 1- Crane Operator

1- Cider

2- Laborers

1- Carpenter Foreman



✓  
May 25, 1934 7am to 4pm

Drilling Anchor Holes.

Spillway Sidewall. 700 to

1- compressor

1- Jackhammer

2- Drillers.

✓  
May 26, 1934

Corwall So. Abt.

Stripping <sup>11:00</sup> to ~~10:00~~ to.

1- Carpenter Foreman

1- Laborer.

Work Order. Wash Rack Floor.

11:00 11:30 12:30 to 2:30

~~10:00~~ to

Screeds.

1- General Foreman

1- Carpenter Foreman 12:30 to

1- Laborer.

Concrete.

1- Mixing Plant.

1- Blaw Knox Truck Mixer

1- Mixerman

1- Laborer ✓

1- Truck Driver

5- Batches. 65x 1:2:5 Mix = 30 5x



✓  
May 22, 1934 7am to 4pm

Spillway Excavation

- 1- Mc Millan
- 1- Compressor
- 2 Jackhammers
- 1- Breaker.
- 1- General foreman
- 1- Foreman
- 1- Mixerman
- 1- Cat Operator 2 hrs.
- 2- Drivers to ~~7<sup>30</sup>~~ to 4
- 2- Muckers.
- 1- Driller - ~~1<sup>30</sup>~~ to 3<sup>00</sup>

60

✓  
May 22, 1934

Crewall So. Abt.

Stripping 7<sup>00</sup> to

1- Carpenter Foreman.

App. Supply 7<sup>00</sup> to 4<sup>00</sup> = 8 hrs.

1- Barber Greene & 1 Truck

1- Truck Driver



✓  
May 22, 1934 7am to 4pm

Spillway Floor

Drilling Anchor Holes 1<sup>30</sup> to

1- Compressor

1- Jackhammer

1- Driller 1<sup>30</sup> to 4<sup>00</sup> = 2 1/2

1- Driller 3<sup>00</sup> to 4<sup>00</sup> = 1 hr  
3/4

Dram File

61  
✓  
May 23, 1934 7am to 4pm

Spillway Excavation

1- Compressor

1- Jackhammer

1- Breaker

1- General Foreman

1- Foreman

1- Mixer man or Cat Operator

2- Drillers 7<sup>00</sup> to 10<sup>00</sup> = 3

1- Driller 10<sup>00</sup> to 4 = 5

1- Powderman

5- Muckers 7<sup>00</sup> to 10 = 3

3- Muckers 10<sup>00</sup> to 4 = 5

1- Candy Wagon & Driver 4 hrs



✓  
May 23, 1934 7am to 4pm

Spillway Floor

Drilling Anchor Holes 7<sup>00</sup> to 10<sup>00</sup> = 3

1- Compressor

1- Jackhammer

1- Driller

Spillway Sidewall

1- Compressor - 1- Jackhammer

2- Drillers 10<sup>00</sup> to 4 = 5

Reinif Steel

1- Fageol Truck 7<sup>00</sup> to 4

1- Steel worker

1- Helper

2- Labourers 2<sup>30</sup> to 4 = 1½

Setting Forms 10<sup>00</sup> to 11<sup>30</sup> = 1½

2- Labourers

Laying Drain Tile 12<sup>30</sup> to 2<sup>30</sup> = 2

2- Labourers

4" Line Sta 0+00 to 0+39 = 40'

6" Line Sta 0+00 to 0+39 = 40'

✓  
May 23, 1934 7am to 4pm

Spillway Excavation 7<sup>00</sup> to

1- No 8 Shovel at Sta 5+50 to 6+00  
North Side of  $\phi$

2- Pump Trucks 7<sup>00</sup> to 11<sup>30</sup>

3- Pump Trucks 11<sup>30</sup> to

1- Shovel Operator

1 " Oiler

2- Truck Drivers 7<sup>00</sup> to 11<sup>30</sup>

3- Truck Drivers 12<sup>00</sup> to

3<sup>15</sup> Cat jumped track & blocked road  
gave permission to use old dump.  
between E 42<sup>00</sup> N 45 40  
E 41 75 N 46 05 and to

E 41 85 N 46 40



✓  
May 24, 1934 7am to 4pm  
Spillway Excavation 7<sup>00</sup> to  
1- Mc Millan & Cat. 7<sup>00</sup> to 9<sup>00</sup>  
1- Compressor 9<sup>00</sup> to  
+ General Foreman 11<sup>00</sup> to  
1- Foreman  
1- Powderman  
1- Driller } 7<sup>00</sup> to  
7<sup>00</sup> to 1<sup>00</sup>  
2- Muckers.  
2- Laborers. 11<sup>00</sup> to 11<sup>30</sup>  
1- Cat & Mc Millan 1<sup>00</sup> to 2<sup>00</sup>

Drilling Anchor Holes. Side Lining  
1- Compressor  
1- Jackhammer  
2- Drillers

Placing  
~~Form~~ & Reinf Steel Side Lining  
1- Carpenter Foreman 7<sup>00</sup> to 8<sup>00</sup>  
2- Laborers.

63  
✓  
May 24, 1934 7am to 4pm.  
Spillway Floor: 1- 5SA Batch Grout  
Grouting Anchor Holes 7<sup>00</sup> to 8<sup>00</sup>  
1- Blaw Knox Truck Mixer  
1- Mixer man  
1- Truck Driver  
2- Laborers  
1- General Foreman  
2- Laborers.

Placing Reinf Steel 12<sup>30</sup> to 4 = 3<sup>1/2</sup>  
1- Steel worker  
2- Laborers.

Heat Process.  
1- Laborer. 12<sup>30</sup> to 2<sup>30</sup>



✓  
May 24, 1934 7 am to 7 pm.

Spillway Floor-

Sta ~~0+05~~ to 0+39

from O.G. Toe to 24' N to Sta 0+39

from O.G. Toe to 38' N

36 - Batches  $68 \times 12.4 = 2168x$

Start 8<sup>00</sup> Finish 11<sup>00</sup>

1 - Mixing Plant 15k leftover 14  
1 - Barber Greene & 1 Truck 12<sup>30</sup> to. 145c. whse.  
2 - Blaw Knox Truck Mixers

1 - No 10 Crane

1 - General Foreman

1 - Mixer man

2 - Men

Conc. Del. 2 - Truck Drivers

Placing Conc 1 - Crane Operator

1 - " Oiler

9 - Laborers 8<sup>00</sup> to 11<sup>00</sup> = 3

Finishing  
1 - Carpenter Foreman 8<sup>00</sup> to 11<sup>30</sup> = 3 1/2

Agg. Supply 1 - Truck Driver 12<sup>30</sup> to 4 = 3 1/2

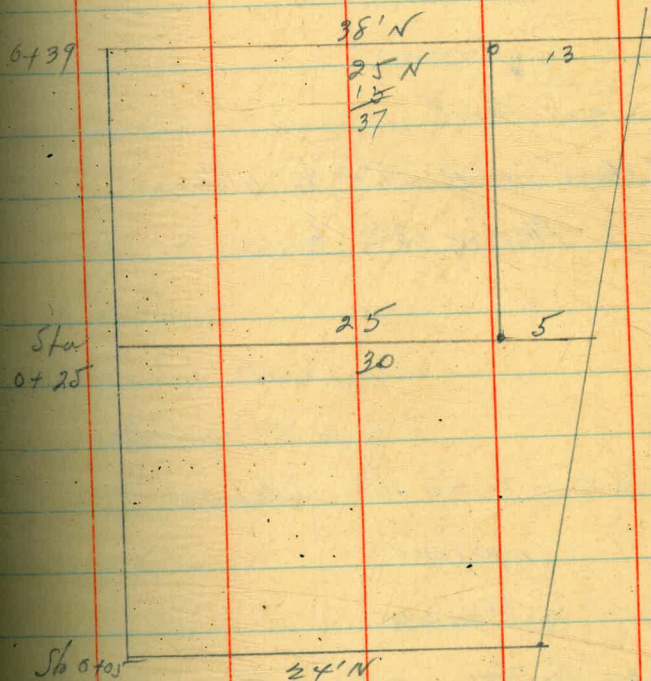
✓  
May 24, 1934

Drilling Anchor Holes Spillway Floor

1 - Compressor 1<sup>00</sup> to 4 = 3 1/2

1 - Jack Hammer

1 - Driller



Sta 0+05 from O.G. Toe to 24' N

to Sta 0+25 from O.G. Toe to 30' N

Sta 0+25 from O.G. Toe to 25' N

to 0+39 from O.G. Toe to 25' N



✓  
May 25, 1934 Saw to 4 pm

✓ Spillway Excavation

- 1- Compressor & Cat 30
- 1- Sackhammer 1- Breaker
- 1- General Foreman 7<sup>00</sup> to 11<sup>30</sup>
- 1- Foreman ✓
- 1- Powderman ✓
- 1- Driller ✓
- 3 ~~4~~ Muckers 7<sup>00</sup> to 11<sup>30</sup>
- 1 Mucker 12<sup>30</sup> to

✓ Drilling Anchor Holes. Sidelining

- 1- Compressor
- 1- Sackhammer
- 2- Drillers

✓  
Moving No. 8 Shovel 7<sup>00</sup> to 8 <sup>Excavation</sup> 8<sup>00</sup> to 10<sup>00</sup>  
1- Shovel Operator  
1- " Oiler  
2- Trucks & Drivers

65  
May 25, 1934 Saw to 4 pm

✓ Spillway Floor  
Placing Reinf Steel 7<sup>00</sup> to

- 1- Fagool Truck 2 hrs
- 1- Steel worker 7<sup>00</sup> to <sup>100</sup> 7<sup>30</sup> = 5
- 2- Helpers 7<sup>00</sup> to 10<sup>00</sup> = 3 hrs  
3<sup>30</sup> to 4<sup>00</sup> = 1/2 hr.

May 26, 1934  
Hauling & Unloading Cement 12<sup>30</sup> to 4<sup>30</sup> 4

- 1- Sterling Truck Trailer 500 sx
- 1- Truck Driver
- 2- Laborers

Unloading May 25, 1934

- 1- Mixerman 7<sup>00</sup> to 8<sup>30</sup>
- 1- Cat Operator
- 1- Laborers
- 1- Truck Driver

Hauling 8<sup>30</sup> to 2<sup>00</sup> =

- 1- Sterling Truck & Trailer
- 1- Truck Driver
- 1- Cat Operator
- 2- Laborer

Cleaning 5x  
1- Mucker  
8<sup>30</sup> to 11<sup>30</sup> = 3 hrs



✓  
May 25, 1934 7am to 4pm  
Laying Drain Tile

2 Laborers. 10<sup>00</sup> to 11<sup>00</sup>

4<sup>th</sup> Line Sta 0+39 to 0+59 at 4

6<sup>th</sup> Line Sta 0+39 to 0+59 At 0.6 to.

Forms

2 Laborers. 11<sup>00</sup> to 11<sup>30</sup>

✓  
May 25, 1934 7am to 4pm  
Creating Anchor Holes

12<sup>30</sup> to 1<sup>00</sup> 1 - Batches. 3 sy

1 - Blaw Knox Truck Mixer

1 - General Foreman.

1 - Truck Driver

2 - Laborers

✓ Cleaned 1500 sy

✓ Reclaimed 13 sy

✓  
Test Samples

Spillway Floor

Sta. 0+25 to 0+39. 20' N of 0.6.

Cylinder No 2794-95-96

12.4.41

65# cement

about 5" Stamp

1400 # Sand.

Sufficient

1340 # 1 1/2"

free mortar

680 # 3/4"

for finishing

200 # pea

42 gallons water.



✓  
May 25, 1934 7am to 4pm  
Spillway Floor 65xMx<sup>35</sup> Patches 2105x

Sta 0+25 from 25'N to 36'N  
to Sta 0+39 from 25'N to 38'N  
Sta 0+39 from O.G. toe to 38'N  
to Sta 0+59 from O.G. toe to 46'N  
Start re Finish 3<sup>30</sup> = 2 1/2

1- Mixing Plant  
2- Blaw Knox Truck Mixers  
1- No 10 Crane

1- General Foreman  
1- Mixerman  
9- Men

Conc Del. 2- Truck Drivers  
Placing Conc. 1- Crane Operator } 12<sup>30</sup> to 3<sup>30</sup> = 3 hrs.  
1- " Oiler }  
2- Laborers.

Finishing 1- Carpenter Foreman 1<sup>00</sup> to 4. 3

✓  
May 26, 1934 7am to 4pm

Spillway

✓ Hunt Process 1/2 hr.  
1- General Foreman  
1- Laborer.

Placing Reinf Steel.

1- Steel worker } 7<sup>00</sup> to 7<sup>00</sup> = 8 hrs.  
2- Helpers. }  
1- Helper 11<sup>00</sup> to 11<sup>30</sup> = 1/2 hr.

Drilling Anchor Holes Side Lining

1- Compressor 7<sup>00</sup> to 9<sup>00</sup> = 2 hrs.  
1- Sack Hammer  
2- Drillers

Forms

1- General Foreman 12<sup>30</sup> to 1<sup>30</sup> = 3 1/2 hrs.



✓  
May 26, 1934 from to 4pm

Spillway

Excavation 7<sup>00</sup> to 11<sup>30</sup>

1- compressor

1- Sack hammer } 7<sup>00</sup> to 9<sup>00</sup> = 2 hrs.

1- Breaker }

1- Powderman

1- Driller

2- Muckers 7<sup>00</sup> to ~~10~~<sup>8</sup><sup>00</sup> = 1 hr.

1- General Foreman 7<sup>30</sup> to 11<sup>30</sup> = 4 1/2

1- McMillan 10 to 11<sup>30</sup>

68

✓ May 26 1934

Spillway 1- 55x Batch.

Grouting Anchor Holes Sidelineing 10<sup>00</sup> to 11<sup>00</sup> = 1 1/2

1- Blaw Knox Truck Mixer

1- Mixerman

1- Truck Driver

3- Labourers.

14 poles  
per day

Laying 4" Drain tile under wall.

2 Labourers. 8<sup>00</sup> to 10<sup>00</sup> 10<sup>00</sup> to 11<sup>30</sup> } = 2 1/2

East wall 30 feet

Sta 0+00 to 0+50 = 50 feet

Agg Supply

1- Baker Green = 1 Truck

1- Truck Driver



✓  
May 28, 1934 rain to 4pm

Spillway

Forms

1- General Foreman

1- Carpenter Foreman

3- Laborers. 7<sup>00</sup> to 2<sup>00</sup>

1- Laborer 2<sup>00</sup> to

✓  
May 28, 1934 rain to 4pm

Spillway Side lining Grouting

2- Laborers. 2<sup>00</sup> to

25x cement

$$\frac{2}{3} \times 1000 = 400\# = 45x \text{ sand.}$$

$$\frac{2}{3} \times 95 = 14 \text{ gallons}$$

$$4 \text{ Rows} \times 12 = 48$$

used 12x cement.



✓  
May 29, 1934  
Spillway Sidelining  
Forms 700 to

1- General Foreman

1- Carpenter Foreman

3- Laborers

1- Faged Truck

✓  
May 29, 1934 7am to 4pm

Spillway Excavation 700 to 920 = 2 1/2 hrs.

1- No 11 Crane No Rock hauled

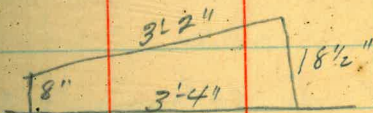
1- Dump Truck to Dam.

1- No 11 Crane Operator

1- " " Oiler

1- Truck Drivers

So Abutment  
Extra Concrete for 2 pipes <sup>8" dia</sup>



End Area

Height - Elevation <sup>764.00</sup> 755.75 to 764 = 8.25



✓ May 30 Holiday 1 Foreman  
 May 31, 1934 2 hrs. setting Conc.  
 Spillway Sidelining  
 Forms. 12<sup>00</sup> to 1-3<sup>1/4</sup> ✓  
 1- General Foreman 7<sup>00</sup> to 8<sup>00</sup> 1hr  
 1- Carpenter Foreman 7<sup>00</sup> to 8<sup>00</sup> 9<sup>00</sup> to 4  
 3- Laborers. 7<sup>00</sup> to 8<sup>00</sup>, 12<sup>30</sup> to 4

Grouting Anchor Holes. 15k cement  
 1- Carpenter Foreman } 8<sup>00</sup> to 9<sup>00</sup>  
 1- Laborer.

Seawall S. Abt.  
 ✓ 2- 12' 2" pipes for grouting

1369713

71

✓ ✓  
 May 31, 1934 7am to 4pm  
 Spillway Sidelining 2 5x extra  
 75x 1:2:4 Mix 20<sup>22</sup> Batches 140 5x154  
 65x 1:7:4 Mix. 3<sup>1/2</sup> Batches. 33 5x<sup>21</sup>  
 Start 8<sup>00</sup> Finish 11<sup>30</sup> Balays more  
 17<sup>35</sup>

1- Mixing Plant  
 2- Blaw Knox Truck Mixers  
 1- No 10 Crane

1- General Foreman

1- Mixer man

2- Men.  
4- Men 9<sup>00</sup> to

One, Del. 2 Truck Drivers

Placing Conc. 1- Crane Operator

1- " Oiler

2- Laborers

1- Laborer 9<sup>00</sup> to

Agg. Supply from Washing Plant Stock Pile

1- Barber Greene & 3 Truck 12<sup>30</sup> to 4-3<sup>1/2</sup>

1- Barber Greene Operator

3- Truck Driver

59  
13  
46

North Sidelining  
Sta 0+10 to Sta 0+46 Subgrade to  
East End wall Elev 738

Sta 0+00 to 30' N ✓ ✓



June 1, 1934 7am to 4pm

Spillway

Forms 1-Craze & Operator 3<sup>00</sup> to 4<sup>00</sup>

1- General Foreman 7<sup>00</sup> to 11<sup>30</sup> <sup>4 1/2</sup> <sup>3<sup>00</sup> to 11<sup>00</sup></sup>

1- Carpenter Foreman 7<sup>00</sup> to 11<sup>00</sup>

3- Laborers 7<sup>00</sup> to 10<sup>00</sup>

1- Laborer 10<sup>00</sup> to 11<sup>30</sup>

4- Laborers 3<sup>00</sup> to 4<sup>00</sup>

Aggregate Supply 7<sup>00</sup> to 11<sup>30</sup> = 4 1/2

1- Barber Greene

3- Trucks

3- Driver

1- Barber Greene Operator

Corewall So Abt.

Stripping

1- Carpenter Foreman 12<sup>30</sup> to 3<sup>30</sup> = 3hrs.

2- Laborers 10<sup>00</sup> to 11<sup>30</sup> = 1 1/2

1- Fagool Truck

Aggregate Samples

1 1/2" Canyon Rock Co. 2797

3/4" " " " 2798

Pea " " " 2799

June 1, 1934 7am to 4pm

Spillway

Sta 0+00 to 30' N Elev. 738 to 744

Sta 0+10 to 0+46 Elev. 738 to 744

6.5x Mix 1:2:4 18 Batches 108.5x

3.5x Grout 1:2 1- Batches 5.5x  
113x

Start 12<sup>00</sup> Finish 3<sup>00</sup> Delays  
= 2 1/2 hrs.

1- Mixing Plant

1- Barber Greene & 1 Truck 12<sup>00</sup> to 3<sup>00</sup> = 3hrs.

2- Blaw Knox Truck Mixers

1- No 10 Crane

1- General Foreman

1- Mixer man

2 Men

One Del. Truck Drivers

Placing Con. 1- No 10 Crane Operator

1 " " Oiler

2- Laborers

Agg Supply 1- Truck Driver 1- Barber Greene Operator  
12<sup>30</sup> to 3<sup>30</sup> = 3hrs.



North Spillway Side Lining Anchors

Sta	Sta	Sta	Sta	Sta	Sta
-06	0+00	0+06	0+12	0+18	0+24
#1	#2	#3	#4	#5	#6
	1 } 2 } 3 } 4 } way ✓ 5 } 23 ✓ 6 } 23 ✓ 7 }	1 } 2 } 3 } way ✓ 4 } 23 ✓ 5 } 23 ✓ 6 } 7 }	1 } 2 } 3 } way ✓ 4 } 24 ✓ 5 } 24 ✓ 6 } 7 }	1 } 2 } 3 } way ✓ 4 } 24 ✓ 5 } 24 ✓ 6 } 7 }	1 } 2 } 3 } way ✓ 4 } 24 ✓ 5 } 24 ✓ 6 } 7 }

0+60  
#13

1
2
3 } ✓
4 } way 26
5 } way 26
6 }
7 }

North Spillway Side Lining

Sta	Sta	Sta	Sta	Sta	Sta
0+28	0+34	0+40	0+46	0+50	0+54
#7	#8	#9	#10	#11	#12
2 } ✓ 3 } way ✓ 4 } 25 ✓ 5 } 25 ✓ 6 }	2 } 3 } way ✓ 4 } 25 ✓ 5 } 25 ✓ 6 }	2 } 3 } way ✓ 4 } 25 ✓ 5 } 25 ✓ 6 }	2 } 3 } way ✓ 4 } 25 ✓ 5 } 25 ✓ 6 }	2 } 3 } way ✓ 4 } 25 ✓ 5 } 25 ✓ 6 }	2 } 3 } way ✓ 4 } 26 ✓ 5 } 26 ✓ 6 } 26 ✓ 7 }



July 13, 1930

Sideway North Sidewall  
Forms.

- 1- General Foreman
- 1- Carpenter Foreman
- 5- Laborers.

- copied to #469

Side Shoring

- 1- Compressor
- 1- Sash hammer
- 1- General Foreman
- 1- Driller
- 1- Powderman
- 3- Muckers.



## Spillway Floor. Anchors

Sta	Sta	Sta	Sta	Sta	Sta	Sta
0+06	0+10	0+14	0+18	0+22	0+26	
1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	
2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	
3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	
4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	
5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	
6 ↓	6 ↓	6 ↓	6 ↓	6 ↓	6 } 24	
		7 ↓	7 ↓	7 ↓	7 ↓ 24	

1  
2  
2

Sta	Sta	Sta	Sta	Sta	Sta	Sta	Sta
0+30	0+34	0+38	0+42	0+46	0+50	0+54	0+58
1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓	1 } May 22 ✓
2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓	2 } May 22 ✓
3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓	3 } May 23 ✓
4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓	4 } May 23 ✓
5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓	5 } May 23 ✓
6 } May 23 ✓	6 } May 23 ✓	6 } May 23 ✓	6 } May 23 ✓	6 } May 23 ✓	6 } May 23 ✓	6 } May 23 ✓	6 } May 23 ✓
7 } May 23 ✓	7 } May 23 ✓	7 } May 23 ✓	7 } May 23 ✓	7 } May 23 ✓	7 } May 23 ✓	7 } May 23 ✓	7 } May 23 ✓
8 ↓	8 ↓	8 ↓	8 ↓	8 ↓	8 } way 25 ✓	8 } way 25 ✓	8 } way 25 ✓
					9 } way 25 ✓	9 } way 25 ✓	9 } way 25 ✓
					10 } way 25 ✓	10 ↓	10 ↓
							11 ↓

16/1  
48



## Sta 0+00 Spillway Side Lining

## Anchors.

## Tier Numbers.

No 1	No 2	No 3	No 4	No 5	No 6	No 7
1		1	1	1	1	1
		2	2	2	2	2
		3	3	3	3	3
4 ✓	4 ✓	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9 ✓	9 ✓	9 ✓	9	9	9	9
			10 ✓	10 ✓	10 ✓	10 ✓

May 19 ✓

May 19 ✓

May 19 ✓

May 21 ✓

May 21 ✓

May 21 ✓

May 21 ✓



Notes from Compressed Air April 1934

Boulder Canyon Dam

Water Cement Ratio of .53

using 1661 of cement per yd

& 3" slump.

Water cement content

only 2% greater than the void spaces in the dry rodded aggregates. This concrete containing 3.96 cu ft. <sup>of water</sup> per yd. tests 3,200# at 28 days.

Note per 6sq batch.

water cement ratio =  $\frac{\text{vol of water}}{\text{vol of cement}}$

$$.53 = \frac{x}{6} \quad x = .53 \times 6 = 3.18 \text{ cu ft}$$

$$3.18 \text{ cu ft} \times 7.5 = 23.85 \text{ say } 24 \text{ gallons}$$

Aggregate Test Samples

1.2 1/2 Mix	K	lbs
1300 # Sand	.360	.72.0
1340 # 1 1/2"	.370	.74.0
780 # 3/4"	.215	43.0
200 # pea	.055	11.0
		200 #
3620		

	1 1/2" Mix			Water To Fill
Weight	1 1/2"	3/4"	pea	Voids
1	(1340)	(780)	(200)	
cu. Ft	74	43	11	

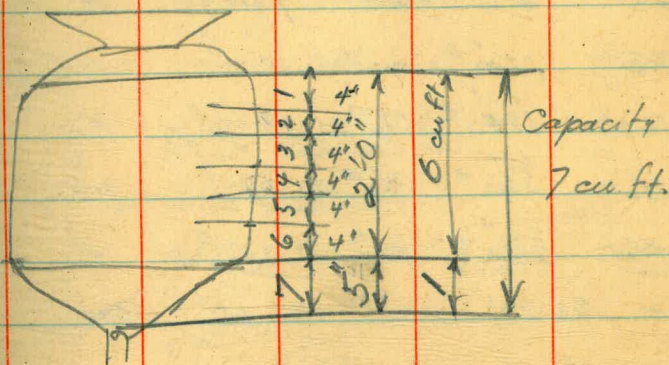


# Aggregate Test Samples

1:2:4 Mix	K	
1500# Sand	.412	82.5
1340# 1/2"	.370	74.0
560# 3/4"	.152	30.4
220# pea	.066	13.2
3620# Total	1.000	200# Total.
		(used 97.5 of Rock)

	weight	Mix	To Fill Voids
	1-cu. Ft.	1 1/2" 3/4" pea	water
No 1	97.5#	1340# 560# 220#	25.5#
No 2		use 10% <sup>of 3620# or 200#</sup> more 1 1/2" Rock + 20# = 94#	
		7% less 3/4" = -14 = 16.4	
		3% less pea = -6 = 7.2	
	98.3		25.7#
No 3		use all 1 1/2" rock Local Washing Plant	
	93.5#	3620 None None	28.0#
No 4	95.0#	use all Sand	23.0#
No 5	93.5#	use all 1 1/2" Rock Downy Plant	26.0#

# Pressure Grout Tank



$$25.5 \text{ # water} = \frac{25.5}{62.35} = .49 \text{ cu. ft.}$$

$$.49 + 10\% = .54 \text{ cu. ft. Sand}$$

$$1 \text{ cu. ft. Sand} = 95 \text{ #}$$

$$\text{Sand required} = 95 \times .54 = 51.30 \text{ #}$$



## Batch Measures.

March 10, 1934 1:2:4 Mix yield .99  
 For Local 1 1/2" Rock  
 Original for floor & S. wall for S. wall.

65x	65x cement.	yield .99	75x cement	yield 1.03
1250	1500# Sand	1400#		
1340	1240# 1 1/2"	1340#		1340
	6150# for Canyon Rock Co. River Rock.			1400
830	560# 3/4"	680#		2640
	1030# for Canyon Rock Co. Grinded Rock.			680
200	200# pea	900#		3420
				200
3620	3620	3620	3620	3620

✓ used on Sidewall

water limits

6x7 = 42 gallons.

water limits

7x7 = 49 gallons.

1:2:4 Mix for 1 1/2" Rock from Santee.

North Sidewall 1 1/2" Rock from Santee

Not used

1100# 1 1/2"	1340	} for workable mix
1740# Sand	1500	
	2840	
	1100	
560# 3/4"	2720	
220# pea.		

36 gallons to 40 gallons. additional water.

use 65x cement for Spillway floor etc. yield .99

use 75x Cement for 18" walls. yield 1.03

## Batch Measures.

79

March 20, 1934 1:2:5 Mix yield 1.12  
 Original modified Modified Diff.  
 for Local 1 1/2" Rock for 1 1/2" Rock from Santee.

61x cement	65x cement.	65x cement.	
1250# Sand	1400	1500# Sand.	+ 250#
850# 2 1/2"	850.	850# 2 1/2"	0
970# 1 1/2"	970.	900# 1 1/2"	-70
770# 3/4"	420#	390# 3/4"	} -180
	620		
3840	700	200# pea	
	3840	3840	

1:2:5  
 use 1 for 6' Corewall Sections

## Pressure Grout

55x cement yield 7cuft Grout.  
 35 gallons water

## 1:2 Grout or Mortar Mix

55x cement yield 4 cu. yd.  
 1000# Sand  
 35 gallons water



Rental of Equipment

Crane 90 to 120 HP Rental 6<sup>00</sup> per hr.

60 Caterpillar Rental 6<sup>00</sup> " "

75 Caterpillar Rental 8<sup>00</sup> per hr.

Cost \$9000

Life 200 hrs. for complete overhaul

\$1600

Le Tourney Scraper \$3000 to \$4000

Rental 4<sup>00</sup> per hr.

Cost of 2 - 1 cu yd. Mixers 1 - 300 Ton

5 - compartment hopper = \$12000

Rental 5<sup>00</sup> per hr.

Dump Trucks



