AUTHORITY FOR DETERMINING
THICKNESS OF DAM
COAL MINERS POCKET BOOK - 1928 - 12TH. EDITION

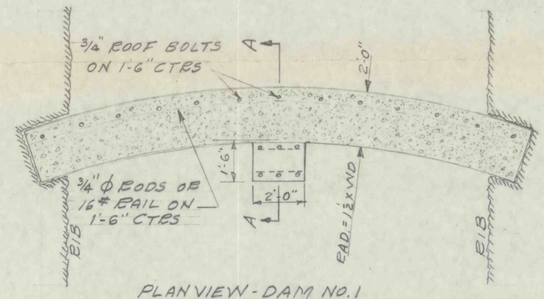
FORMULA:

T = THICKNESS OF DAM IN INCHES
R = SHORTER RADIUS IN INCHES = 1½x2.16' = 324"
W = WIDTH OF OPENING IN INCHES = 216"
S = COMPRESSIVE STRENGTH - CONC. SAFE LOAD = 500 #/□"
P = WATER PRESSURE AT DAM = (14' DEPTH) = 6.08 #/□"

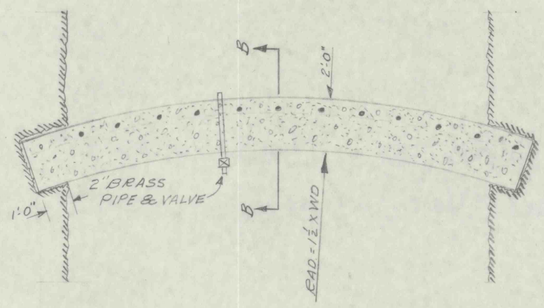
$$T = \frac{PW\sqrt{4R-1}}{4S}$$

$$T = \frac{6.08 \times 216\sqrt{4\times(324-1)}}{4\times500} = 23.64" \text{ OR } 24"$$

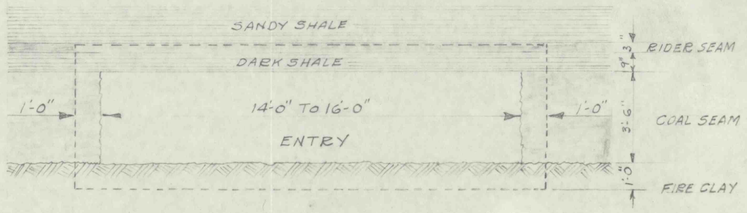
CONCRETE MIX = 1:2:4



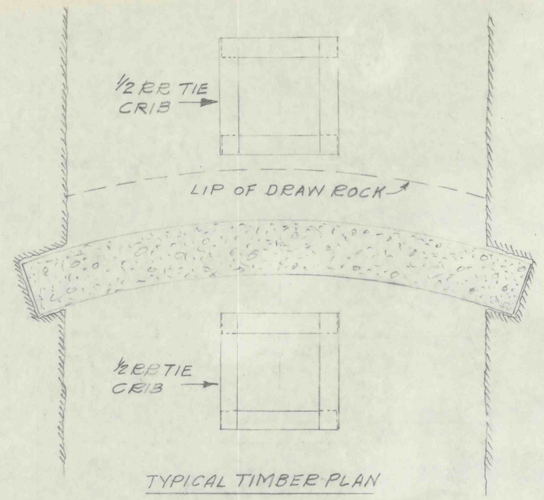
PLAN VIEW - DAM NO. 1
SCALE ¼" = 1'-0"



PLAN VIEW - DAM NO. 2 & 3
SCALE ¼" = 1'-0"

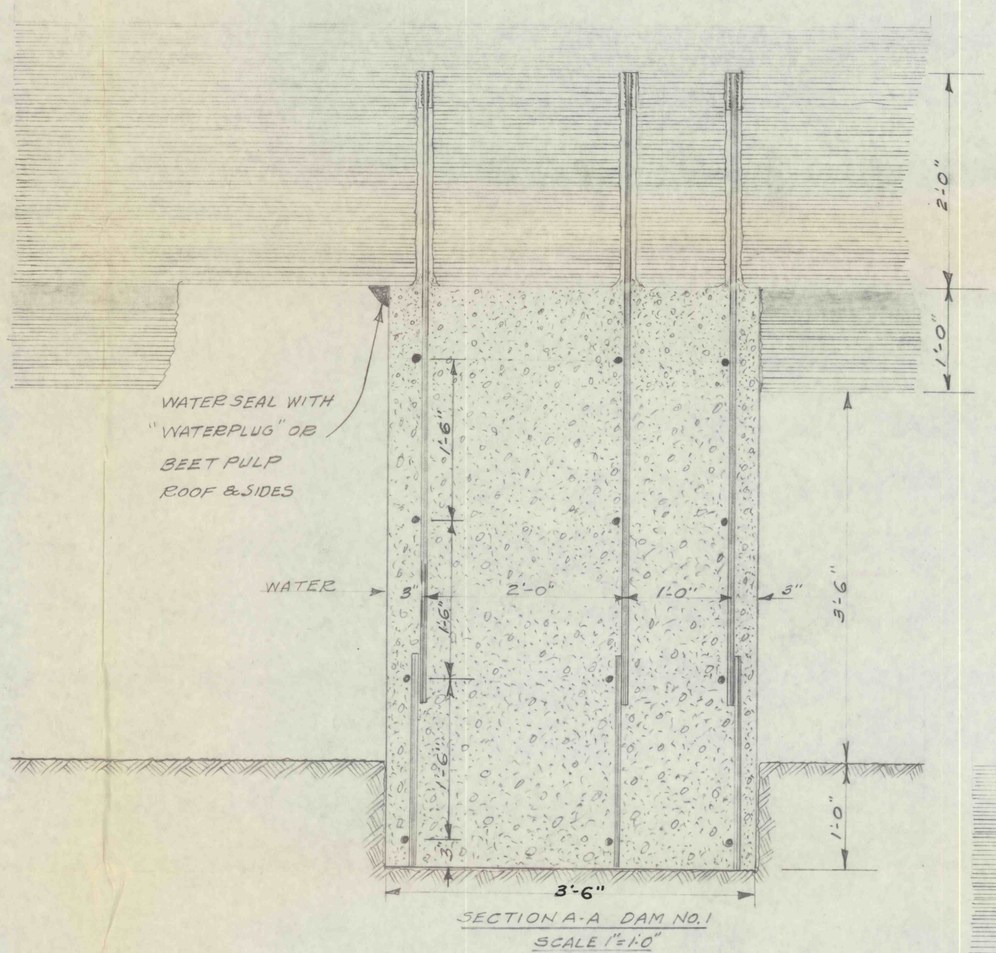


TYPICAL SECTION
SCALE ¼" = 1'-0"

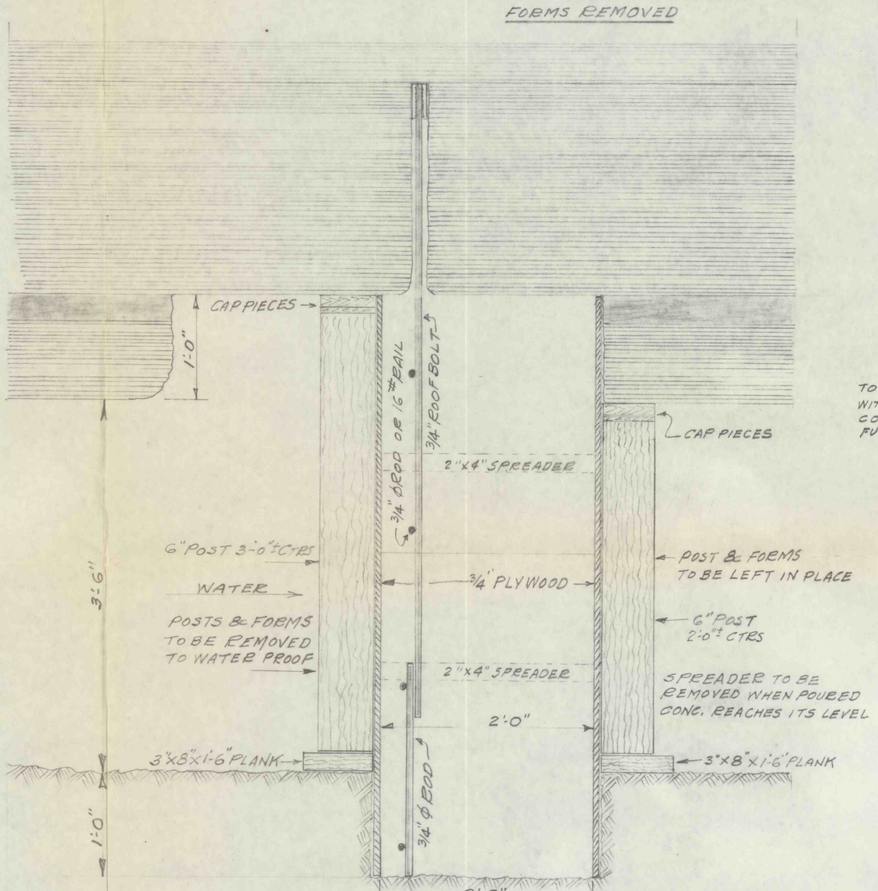


TYPICAL TIMBER PLAN
AT DAM NO. 1 & 2
SCALE ¼" = 1'-0"

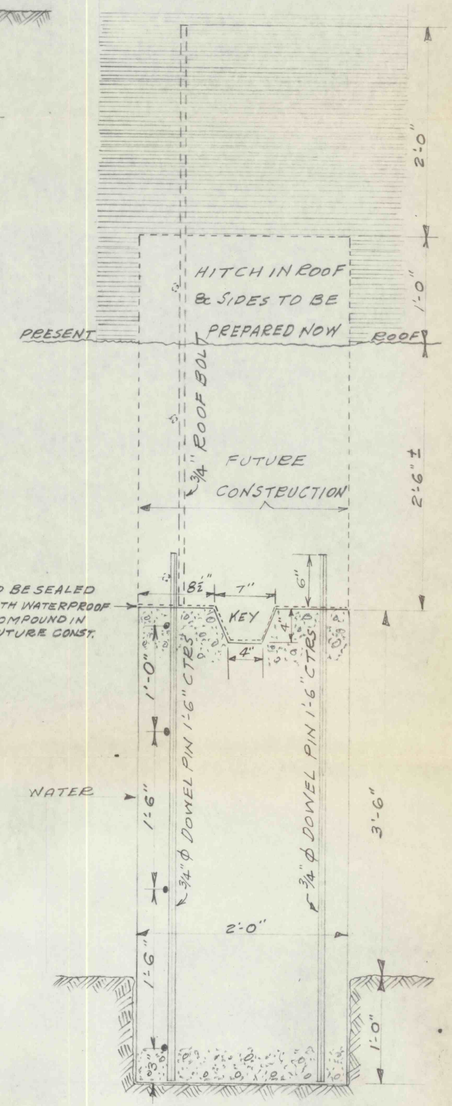
REF. C.



SECTION A-A DAM NO. 1
SCALE 1" = 1'-0"
FORMS REMOVED



SECTION B-B DAM NO. 2
SCALE 1" = 1'-0"
FORMS IN PLACE



SECTION B-B DAM NO. 3
SCALE 1" = 1'-0"
FORMS NOT TO BE REMOVED

PLAN AND SECTIONS
DAMS TO BE CONSTRUCTED
PINE NO. 1 DIP MINE
PINE TWP, INDIANA CO., PA
SCALE AS SHOWN APR. 30, 1963

NOTE:
ALL EXCAVATIONS TO BE MADE WITHOUT SHOOTING