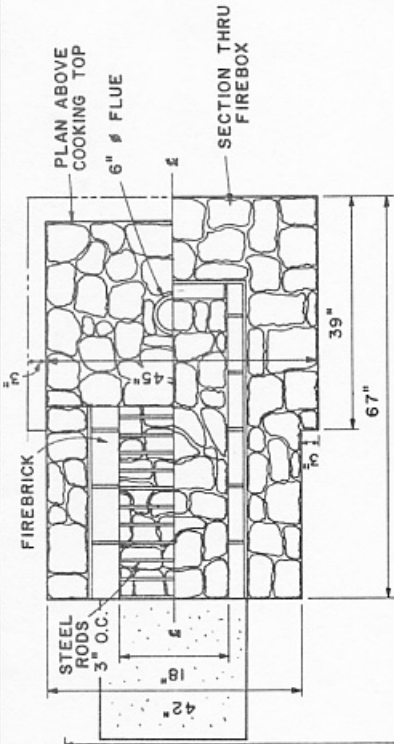
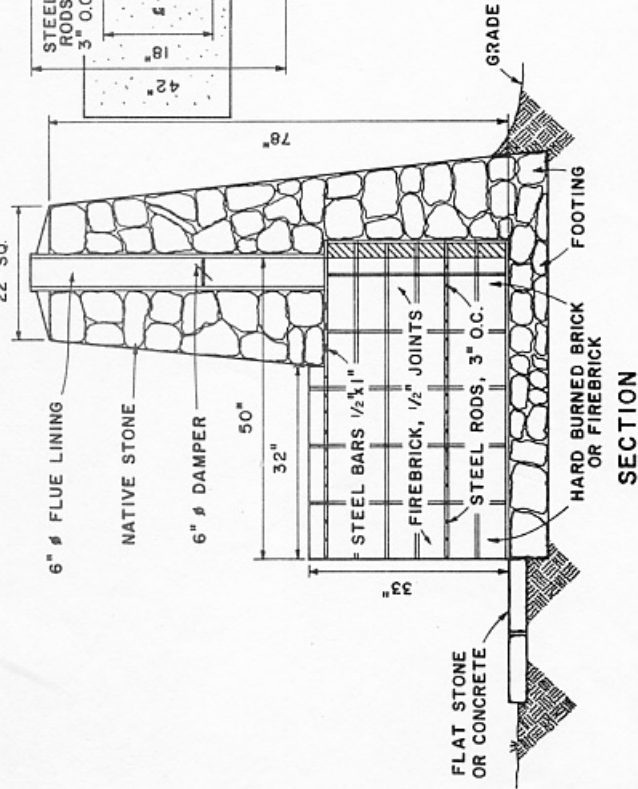




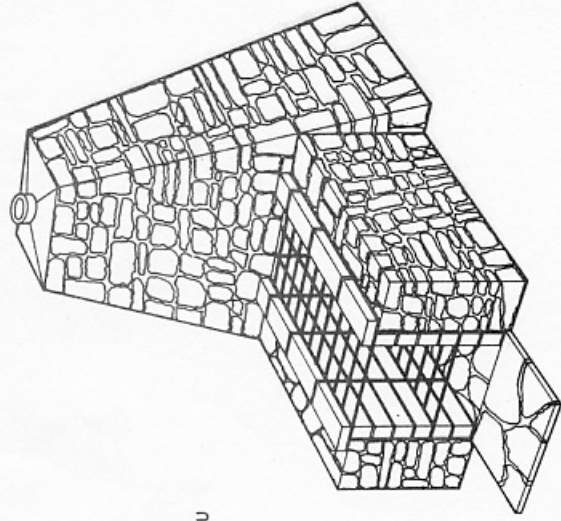
PLAN

BILL OF MATERIALS

STONE CONSTRUCTION	
50	CU. FT. NATIVE STONE
	MORTAR: 1:3 MIX
5	BAGS CEMENT
11	CU. FT. SAND
98	FIREBRICK $\frac{1}{2} \times \frac{1}{2} \times 22"$
3	STEEL BARS $\frac{1}{2}" \phi \times 22"$
28	STEEL RODS $\frac{1}{2}" \phi \times 22"$
1	FLUE LINING OR TILE 6" $\phi \times 50"$
1	DAMPER 6" ϕ

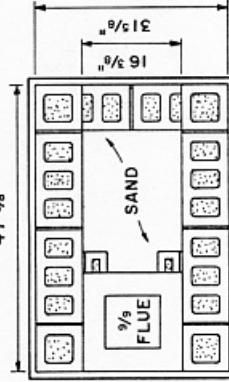


SECTION



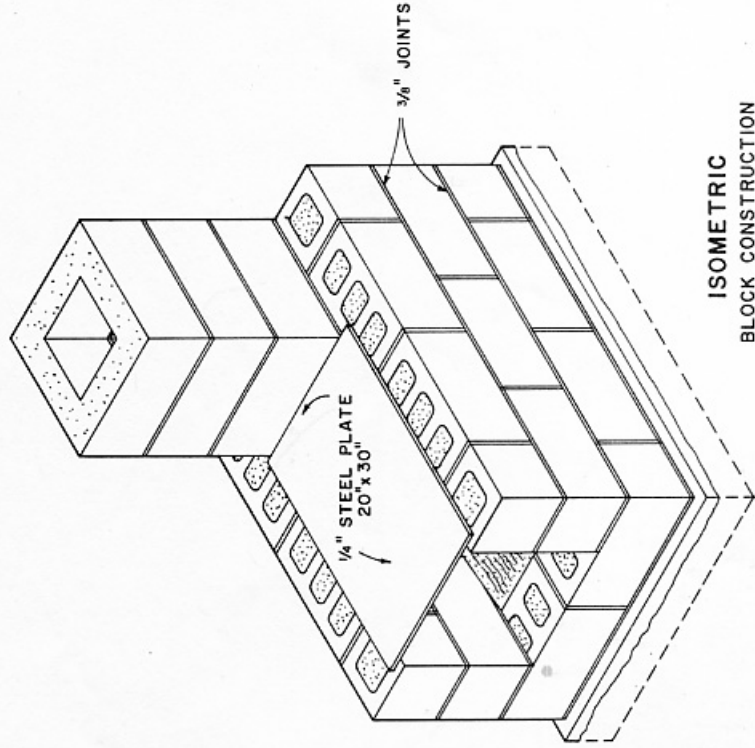
PERSPECTIVE

47 $\frac{5}{8}"$



PLAN

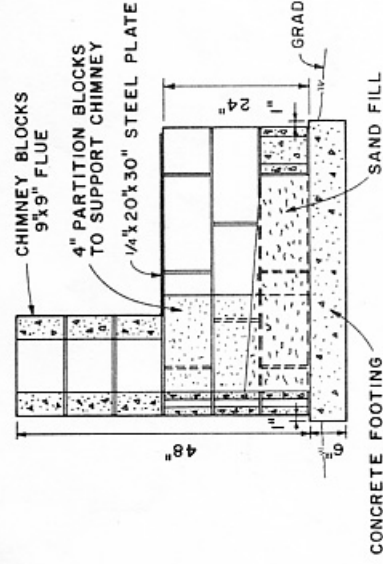
STEEL PLATE NOT SHOWN



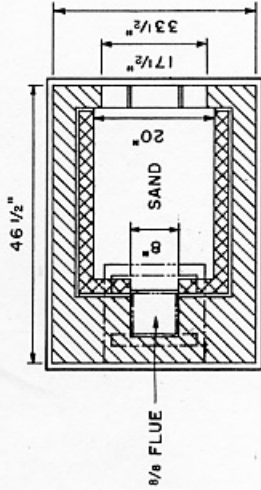
BILL OF MATERIALS

CONCRETE BLOCK CONSTRUCTION	
16	REGULAR BLOCKS 8" x 8" x 16"
6	HALF BLOCKS 8" x 8" x 8"
9	PARTITION BLOCKS 4" x 8" x 16"
3	CHIMNEY BLOCKS (9" x 9" OPENING 17" x 8" x 17")
1	STEEL PLATE 1/4" x 20" x 30"
	MORTAR:
1	96 LB. SACK PORTLAND CEMENT
	100 LB. HYDRATED LIME
	300 LB. MASON SAND
2	CONCRETE BASE:
	96 LB. SACKS OF PORTLAND CEMENT
	400 LB. SAND
	500 LB. GRAVEL OR STONE

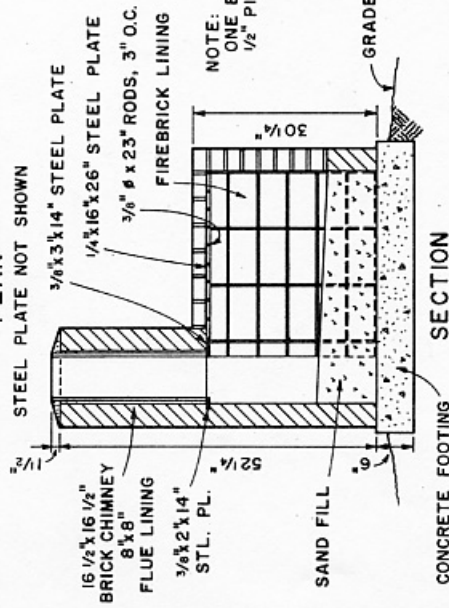
BASED ON: OREGON, VIRGINIA AND NATIONAL PARK SERVICE PLANS.



SECTION



PLAN



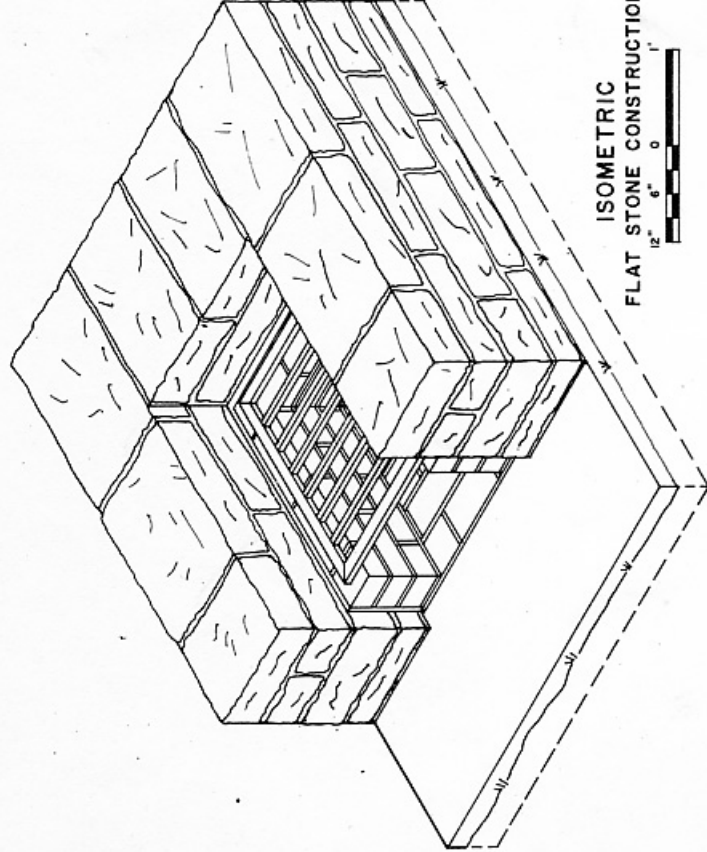
NOTE:
ONE END OF 3/8" ϕ RODS IS PLACED IN
1/2" PIPE TO ALLOW RODS TO EXPAND.

BILL OF MATERIALS

BRICK CONSTRUCTION	
325	BRICK (COMMON OR FACE)
44	FIREBRICK
1	FLUE LINING 8"x8"
9	RODS 3/8" ϕ x 23"
1	STEEL PLATE 3/8"x2 1/4"x14"
1	STEEL PLATE 1/4"x16"x26"
9	PCS. OF 1/2" PIPE 3' LG.
MORTAR:	
2	96 LB. SACKS PORTLAND CEMENT
200	LB. HYDRATED LIME
800	LB. MASON SAND
CONCRETE BASE:	
2	96 LB. SACKS PORTLAND CEMENT
400	LB. SAND
500	LB. GRAVEL OR STONE

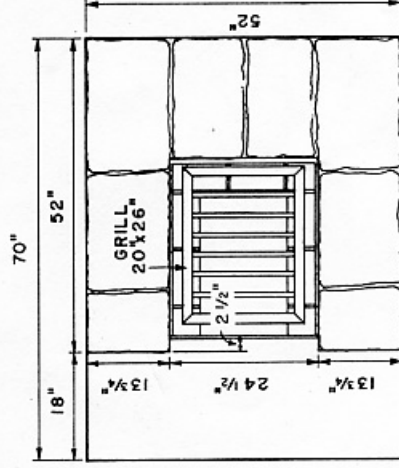
ISOMETRIC

BRICK CONSTRUCTION
12" 6" 0 1'

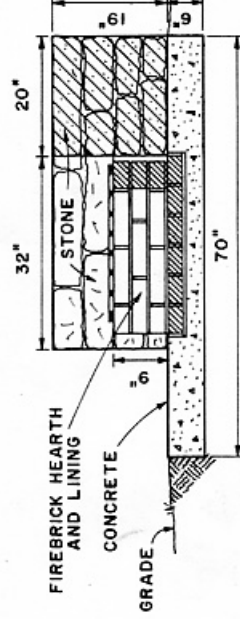


ISOMETRIC

FLAT STONE CONSTRUCTION
12" 6" 0 1'



PLAN



SECTION

BILL OF MATERIALS

FLAT STONE CONSTRUCTION

37	FIREBRICK (9"x4 1/2"x2 1/2")
20	CU. FT. FLAT STONE
2	CU. FT. MORTAR (1:3 MIX)
1	GRILL 20"x26"x3/4"
MADE FROM 3/4"x1 1/2"	
STEEL FRAME & 3/4" SQ.	
BARS COMPLETELY WELDED	
FOUNDATION: 1:2 1/4:3 MIX	
CEMENT-3 SACKS	
SAND-7 CU. FT.	
GRAVEL-11 1/4 CU. FT.	

12" 6" 0 1'

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

STATE OF TENNESSEE

UNIVERSITY OF TENNESSEE

AGRICULTURAL ENGINEERING DEPARTMENT

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

OUTDOOR FIREPLACES

USDA '76

6261

SHEET 2 OF 2