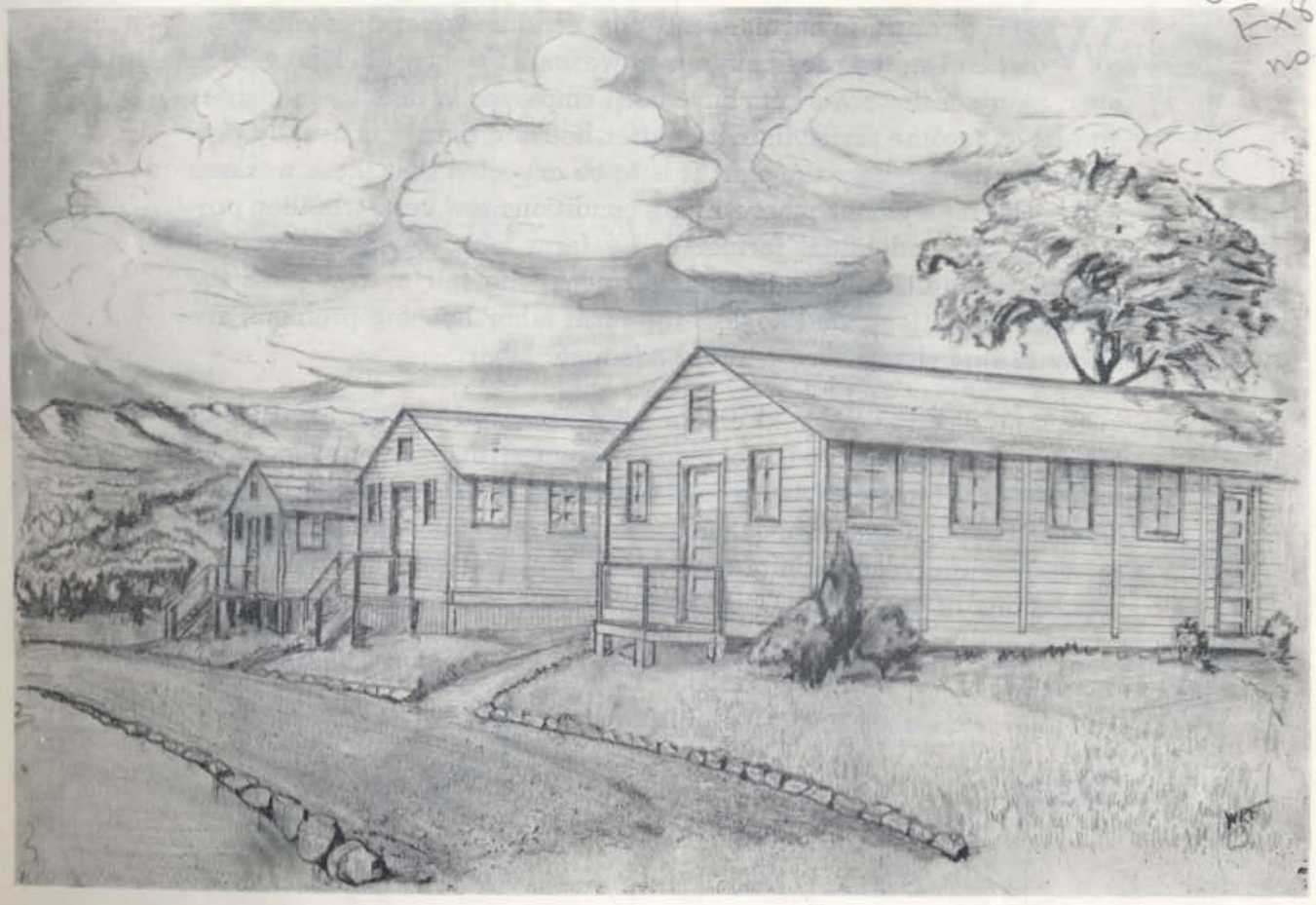
Housing Farm Help



Extension Bulletin 156
May 1946
Agricultural Engineering and
Farm Labor Divisions

University of Idaho
College of Agriculture
C. W. Hickman,
Acting Director

Housing Farm Help

HOBART BERESFORD, D. L. FOURT, W. R. FRIBERG, R. K. PIERSON*

WITH a return to normal peacetime conditions, farmers will again depend on the use of migratory workers for seasonal labor. However, many of these workers have been employed in defense industries and have become accustomed to better housing than was usually provided for them before the war. It is to be expected that these workers will seek employment where living conditions are best, whether provided by the individual farmer or by farm labor camps. Therefore, those communities or individual farmers who fail to recognize the changed conditions, and neglect the farm labor housing problem, are likely to find themselves without adequate labor.

This publication is based on the experiences of several agencies in housing farm labor, and the plans presented may offer suggestions to individual farmers or to groups interested in developing farm labor camps. Of particular importance are the recommendations relating to water supply and sanitation, which are based on standards and regulations of the State Department of Public Health.

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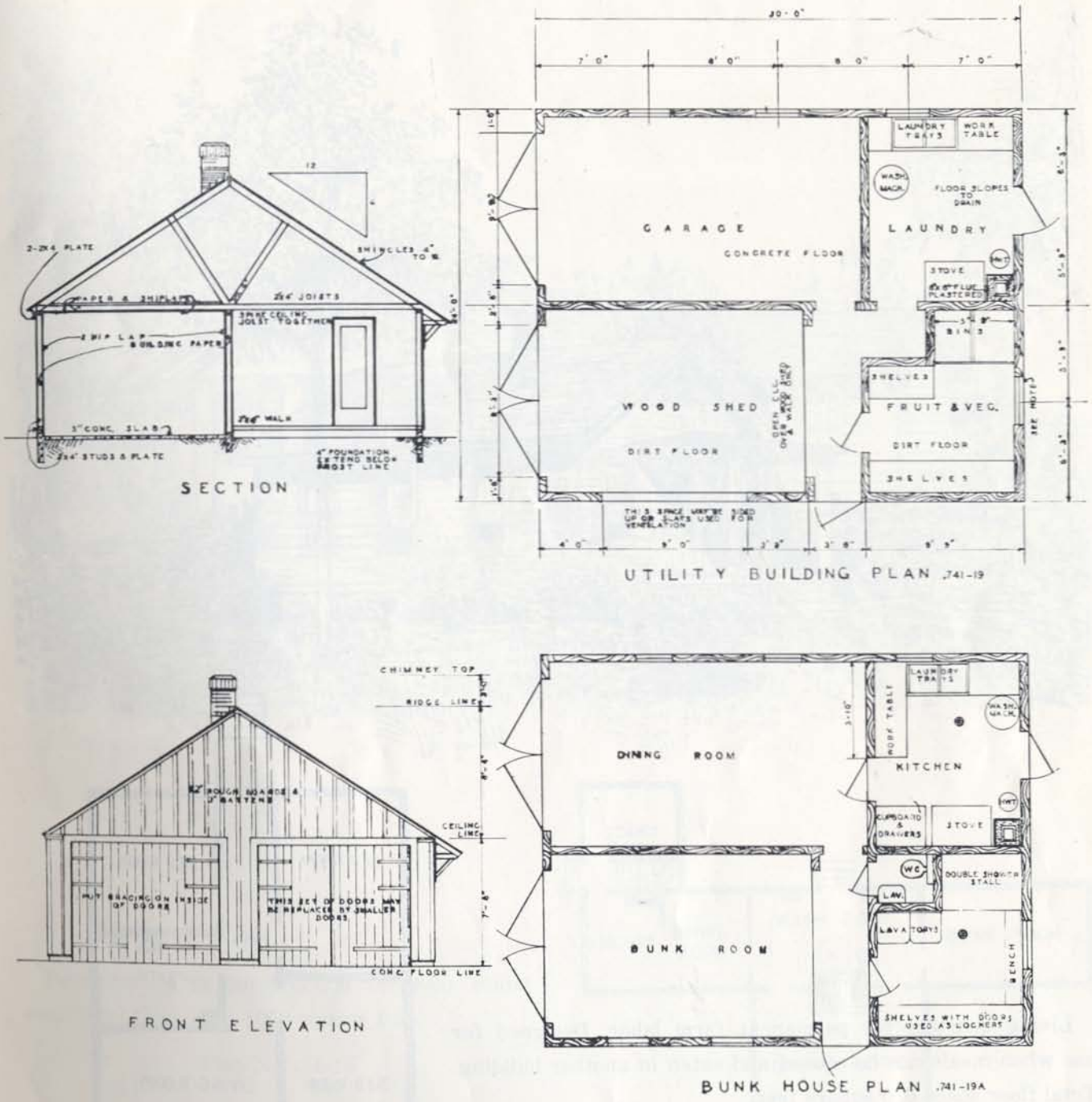
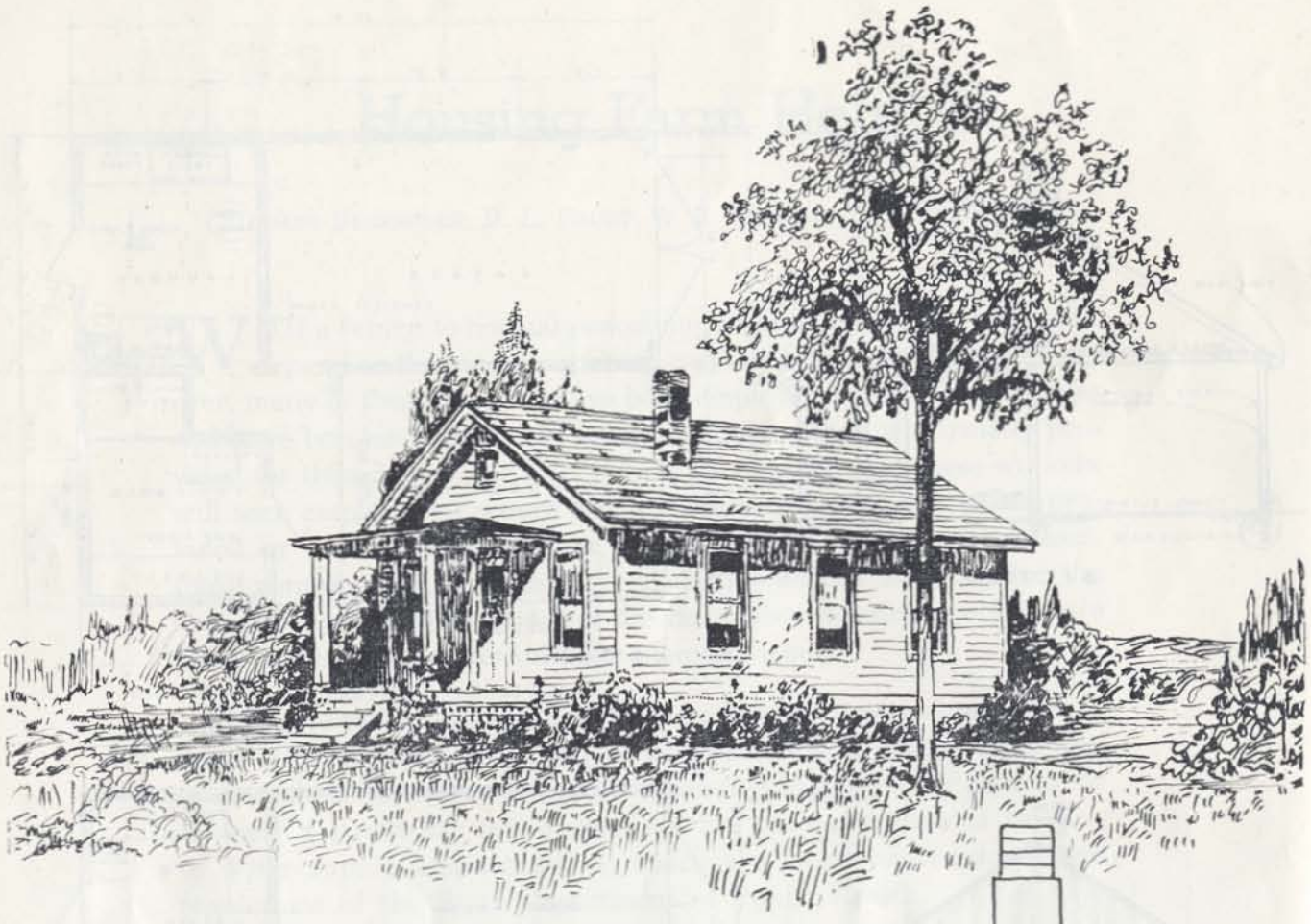
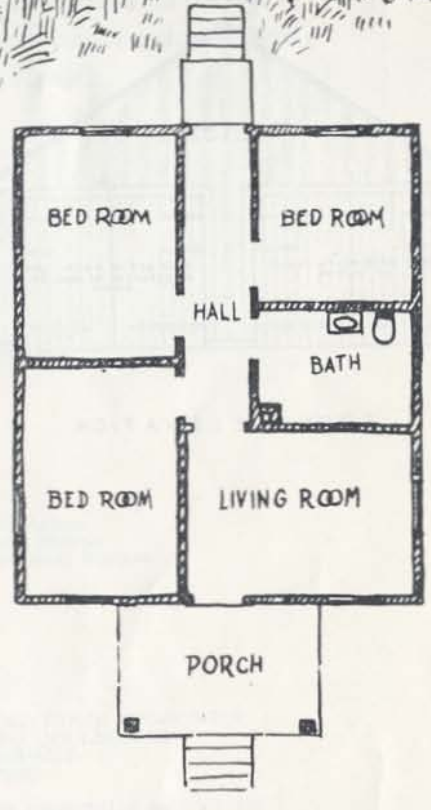
IDAHONIAN, MOSCOW



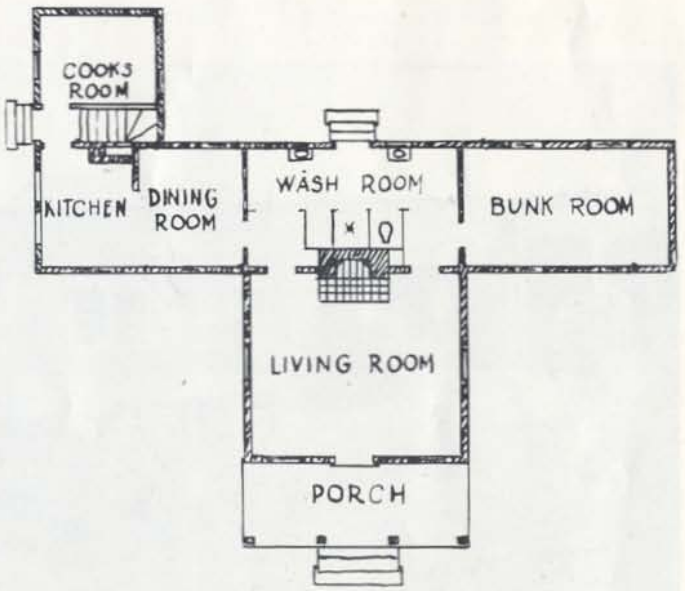
Utility building plan.





Living quarters for permanent farm labor. Designed for use when meals can be cooked and eaten in another building. Total floor space 620 square feet.

Plan No. .71-14



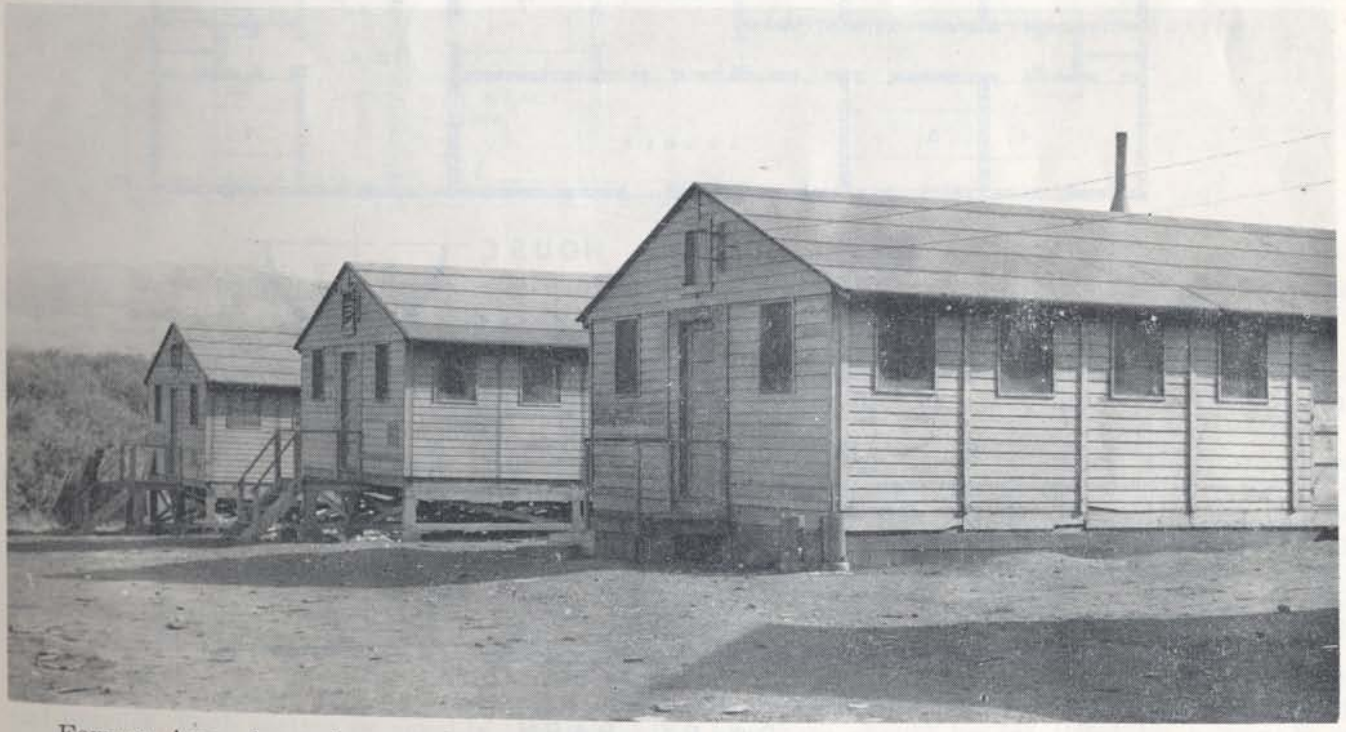
Permanent type construction for year round use. Total floor area 1050 square feet.

Plan No. .71-15

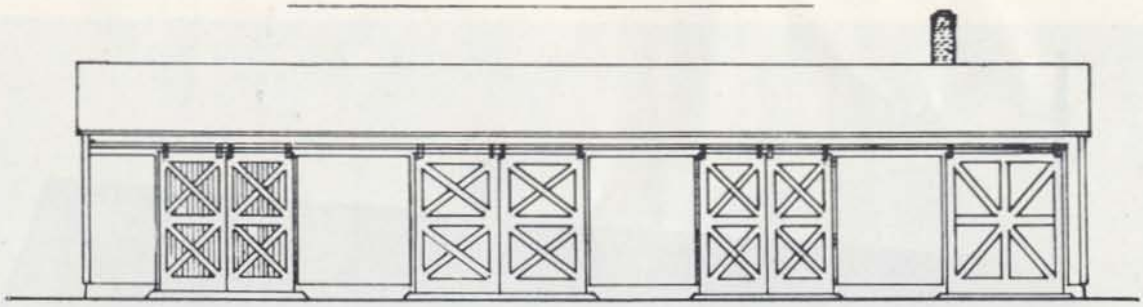
Toilet and shower unit built with panels and other materials from F.P.H.A. war housing units.

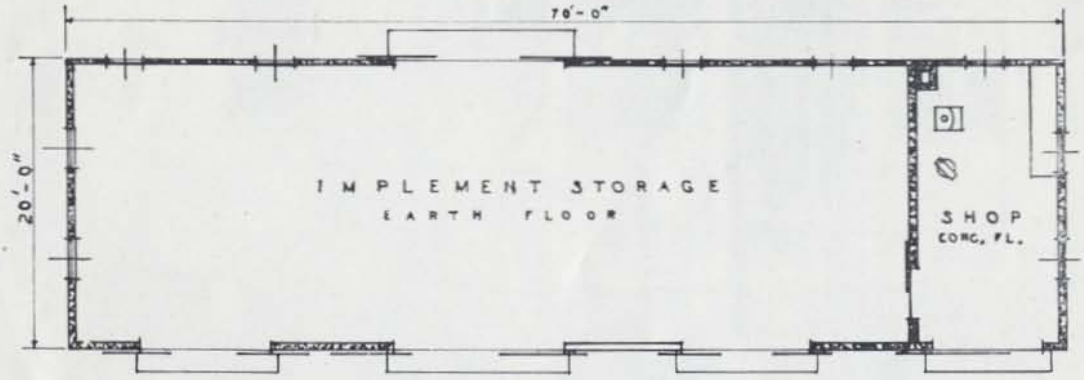
Mess hall and kitchen, F.P.H.A. "War Housing Re-Use Demonstration," Silver Springs, Maryland, 1945.

Three-bedroom farm house built from panels and other material taken from a two-story family dwelling unit at Niagara Falls, New York.

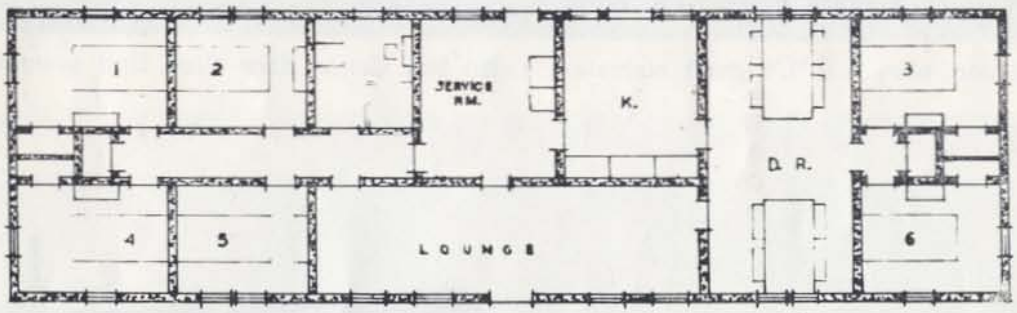


Former Army barracks, panelized and converted to civilian use for housing transient labor.

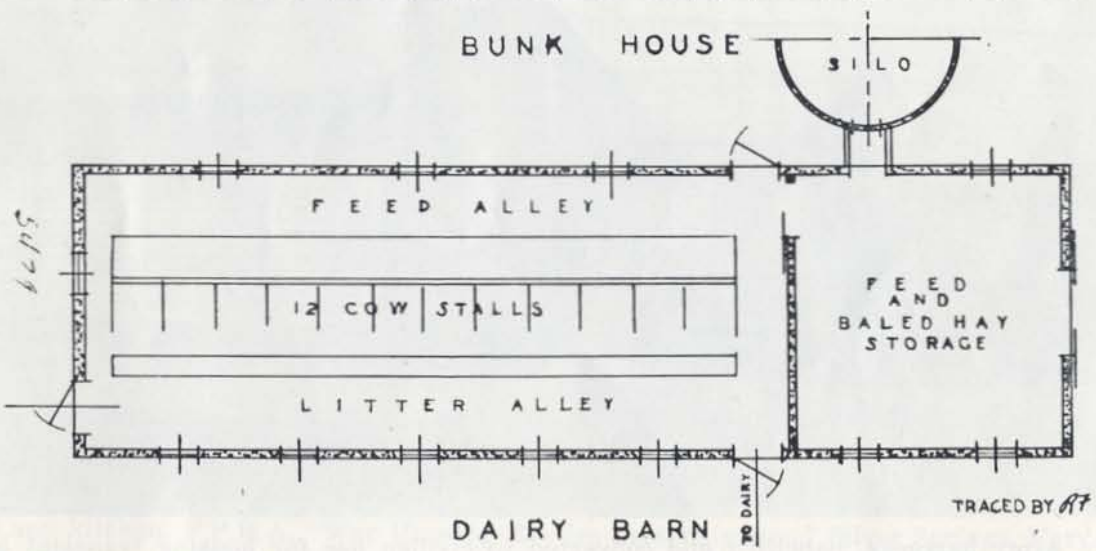




IMPLEMENT SHED AND SHOP

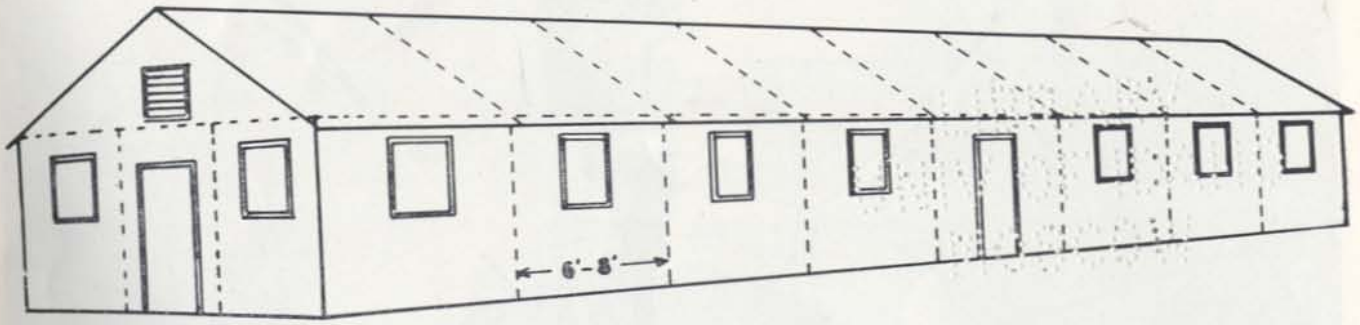


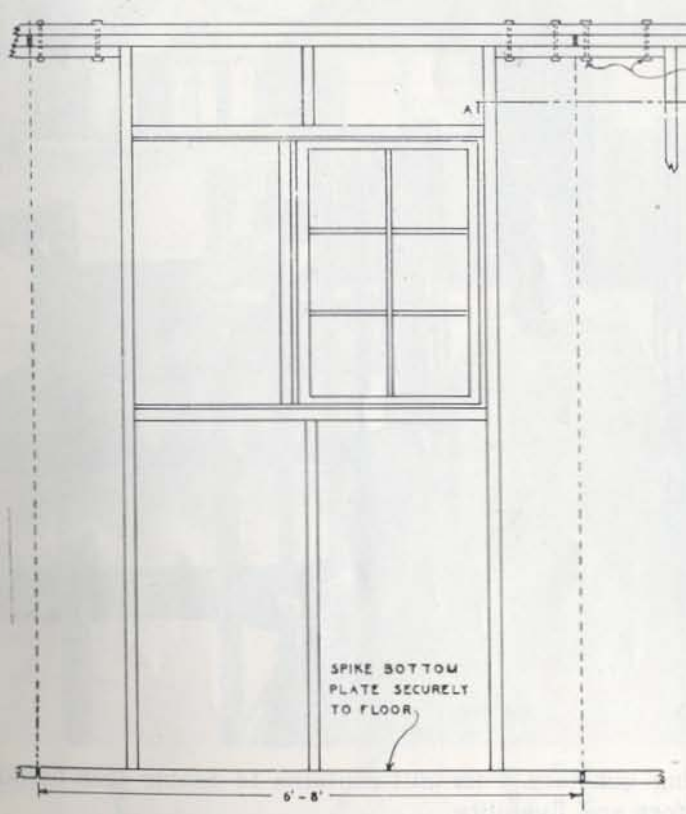
BUNK HOUSE

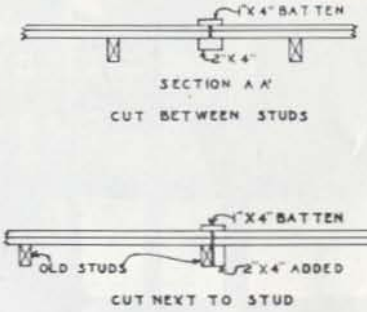


DAIRY BARN

Suggested farm utilization of Army barracks.







ALTERNATIVE METHODS OF CUTTING

Many frame buildings may be moved which were not originally constructed with the idea of moving them in mind. The sketch above shows how such a building may be cut up into panels. Page 7 shows several buildings which have been reconstructed from such panelized buildings.

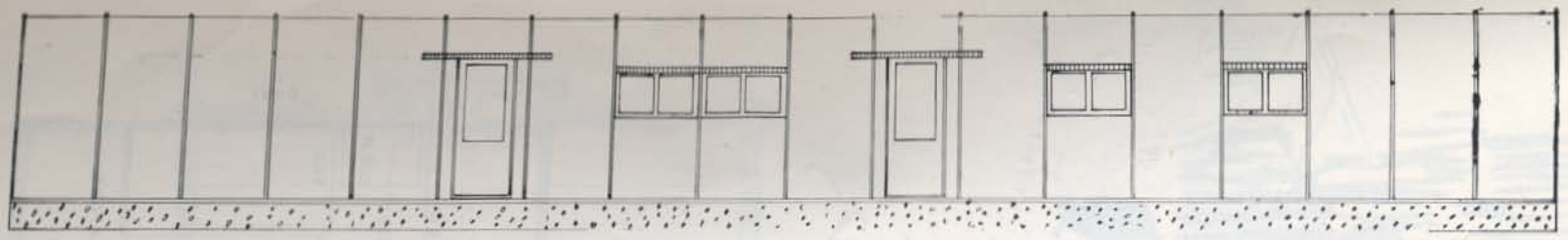
During the war, about 10,000 units were moved in this manner. These were wood frame or frame and composition construction. Experience with railroad freight problems and highway regulations indicates the panel 8′ x 12′ is best suited to shipping.

Power-driven rotary hand saws may be used for rapid cutting up of buildings, which are sliced through like pieces off a cake. The dotted lines in the drawing above illustrate how this is done. A crane or derrick should be used to lift off the roof and truss sections in one piece, so they can be dismantled on the ground. Panels containing windows may be lifted out with the windows intact by means of a cable through the opened windows. Doors should be cut out in separate sections so they can be replaced at any desired place in the new structure. For hauls of 150 miles and less panels may be stacked vertically on trucks. For longer hauls a railroad box car should be used; flat cars are impractical because they expose the material to the weather and require extra bolting and bracing.

Plumbing pipes may be cut with acetylene torch and reassembled in the same order in the new building with new joinings. Plumbing fixtures should be crated and closets and shelving shipped in individual bundles. Each section or panel of the dismantled structure should be identified by a number or symbol so that reassembly can be quickly accomplished at the new site.

"Quonset 20"—48′ long, in use as living quarters. This unit contains 14 double deck bunks and is lined and insulated for maximum comfort and livability.

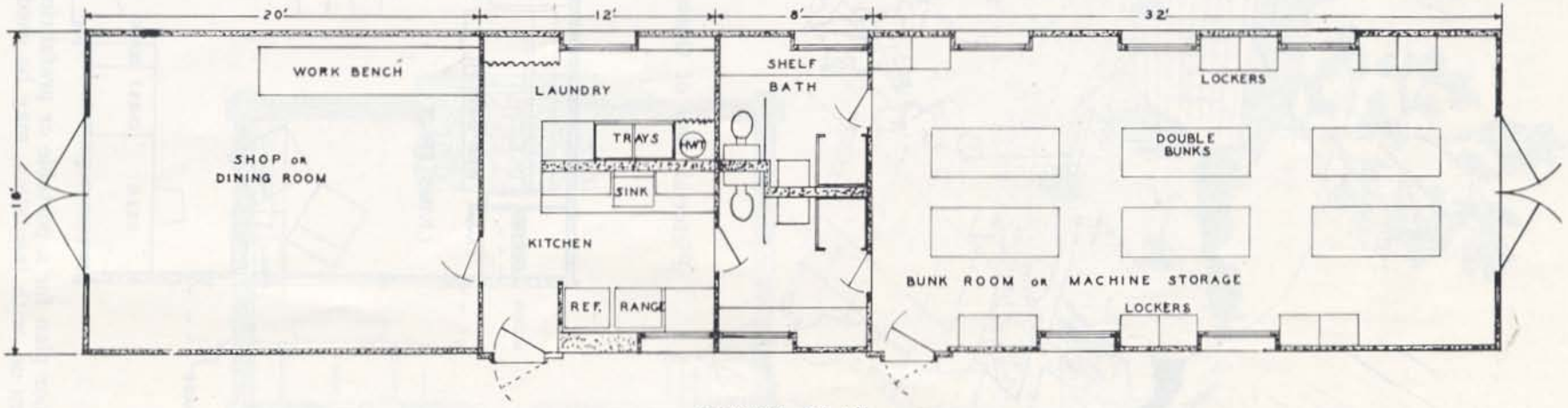
This type of portable shelter was developed and used extensively by the armed forces during the war, and adapted to a range of climate from Iceland to New Guinea. It proved its versatility, serving satisfactorily as warehouse, mess hall, barracks, office, hospital, and machine shop. Thus, the surplus units available can be readily converted into almost any need for building on the farm. There are also several commercial companies manufacturing and selling units closely patterned after the Quonset, but many of them made expressly for various farm uses.



FRONT ELEVATION

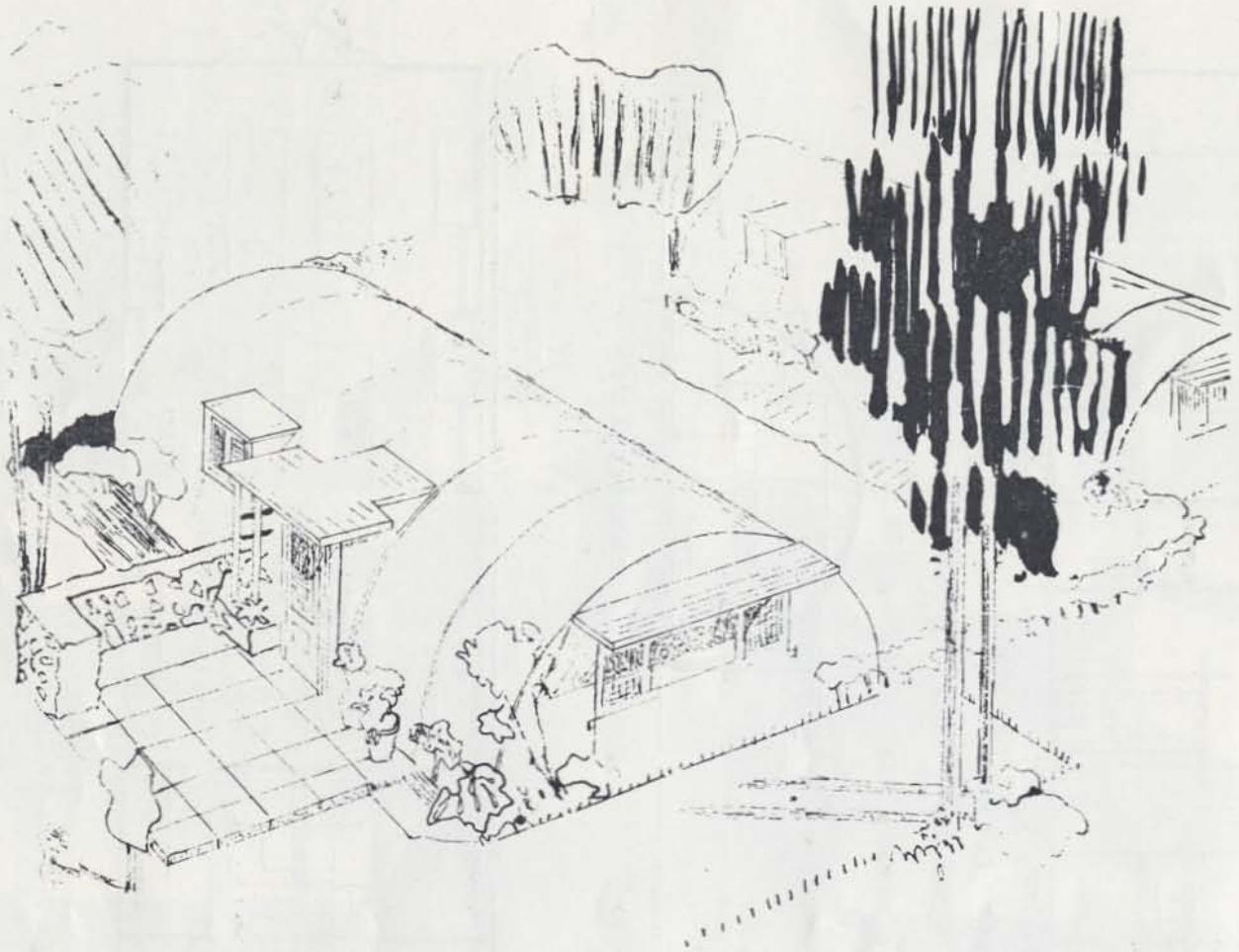
CROSS SECTION THRU
KITCHEN & LAUNDRY

END ELEVATION

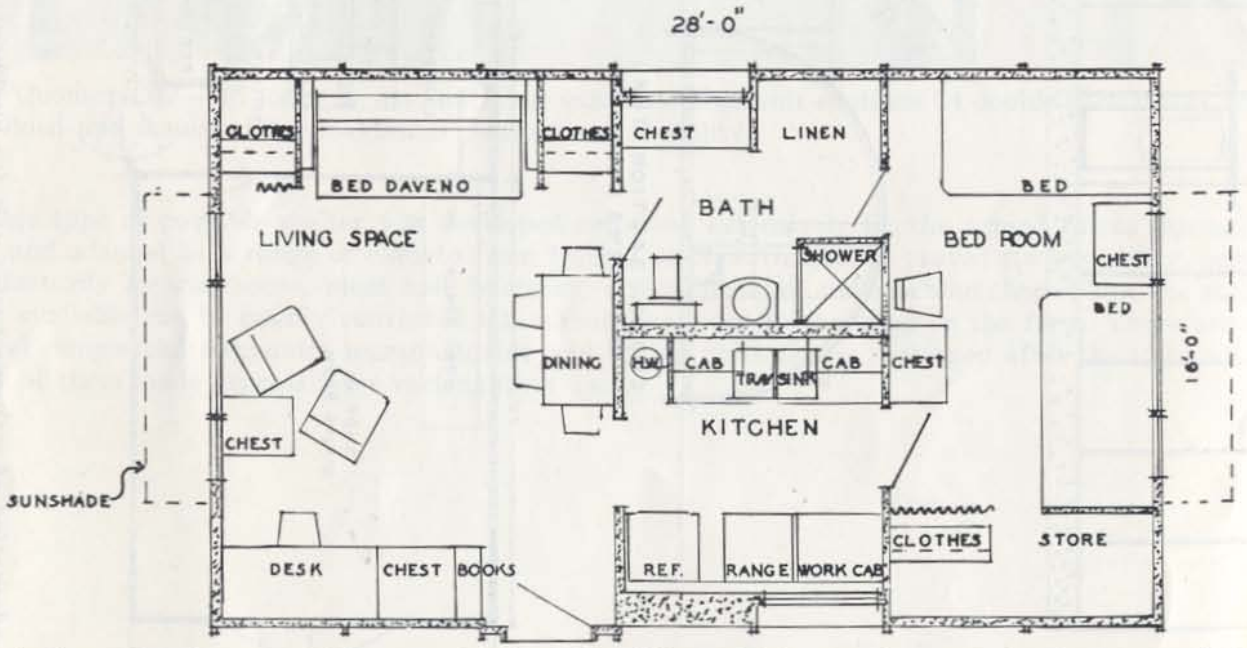


FLOOR PLAN

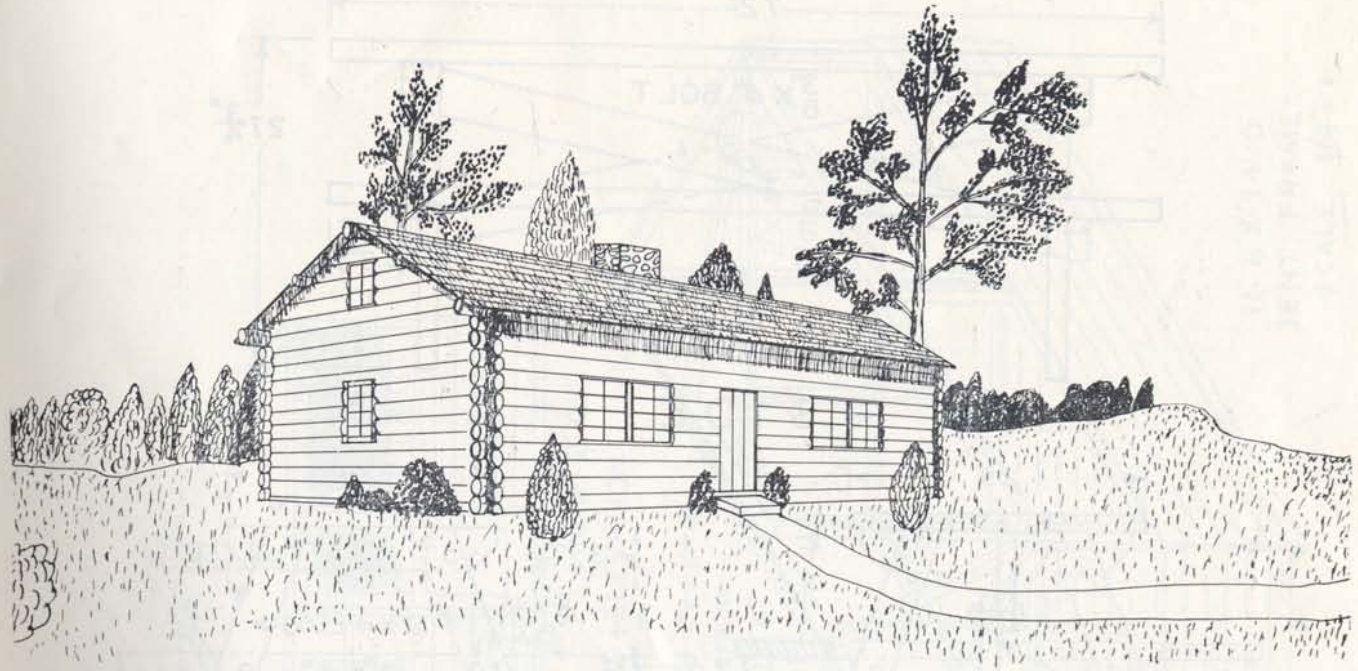
An adaptation of a Quonset-type unit for bunkhouse and dining room. This floor plan also can be used in frame type construction.

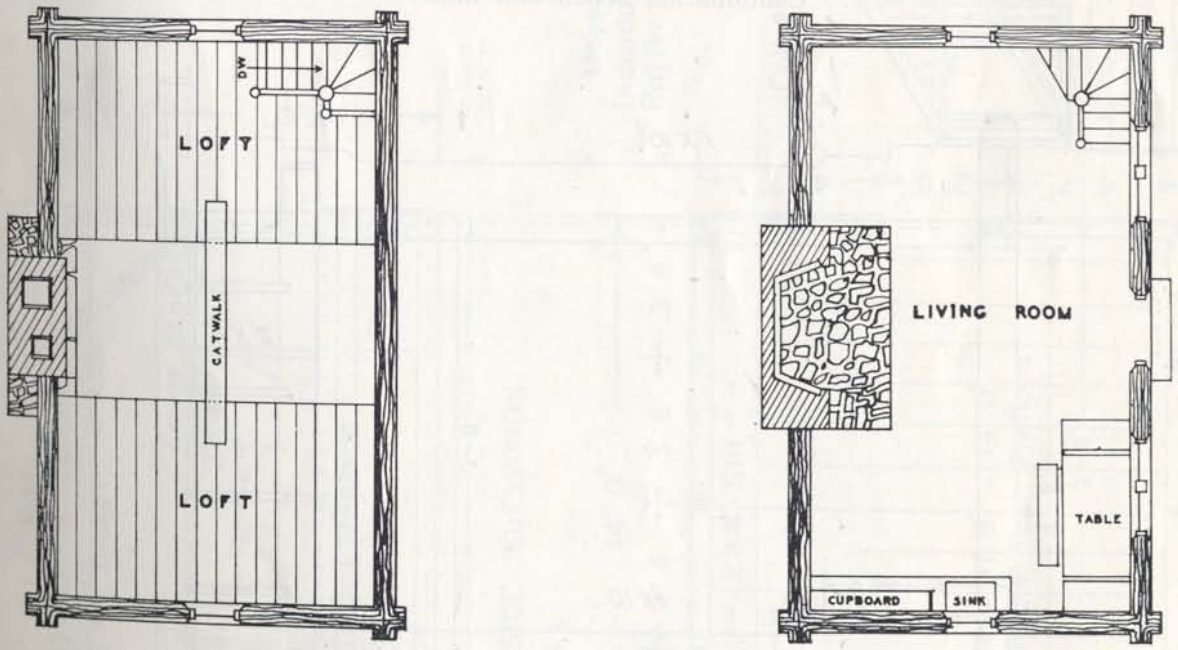


Pictorial view of Quonset-type unit, showing side entrance.

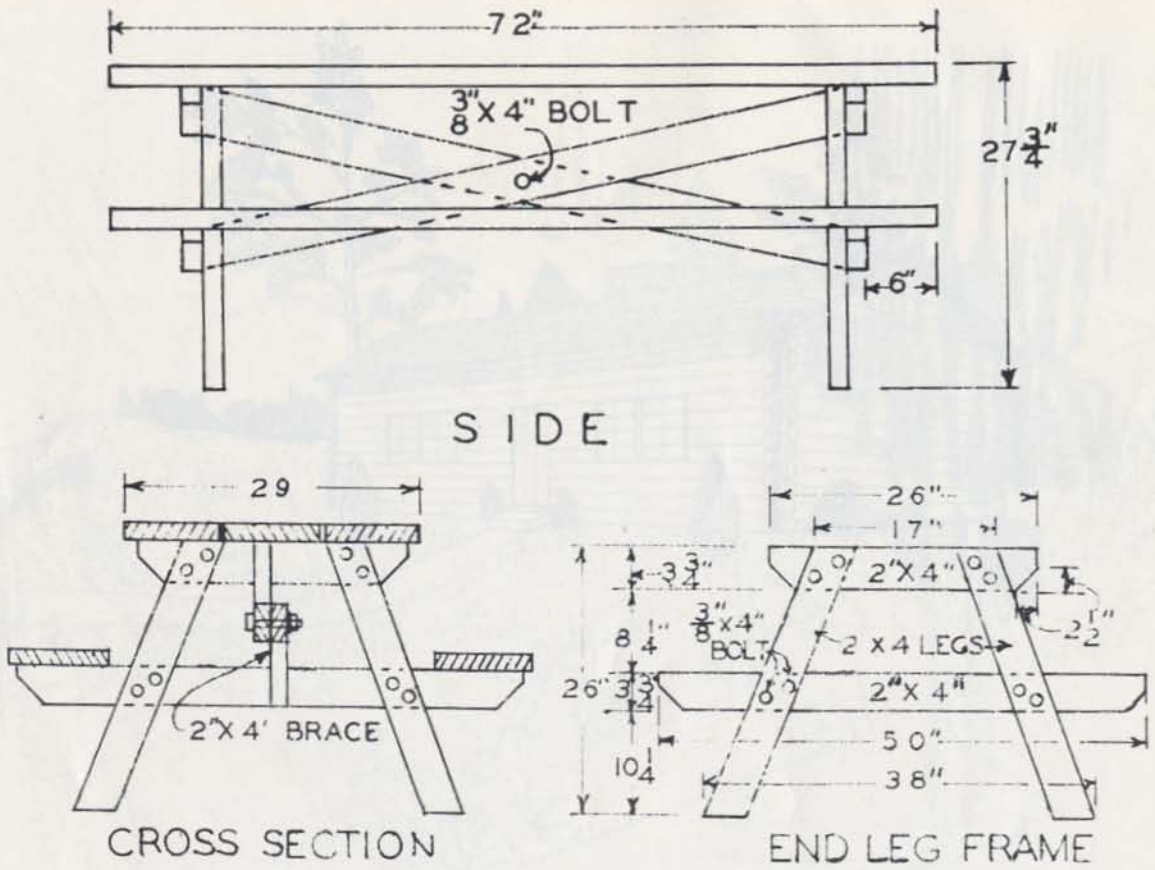


A floor plan for a portable or prefabricated building which may be used for temporary living quarters or, with insulation, may be used permanently.

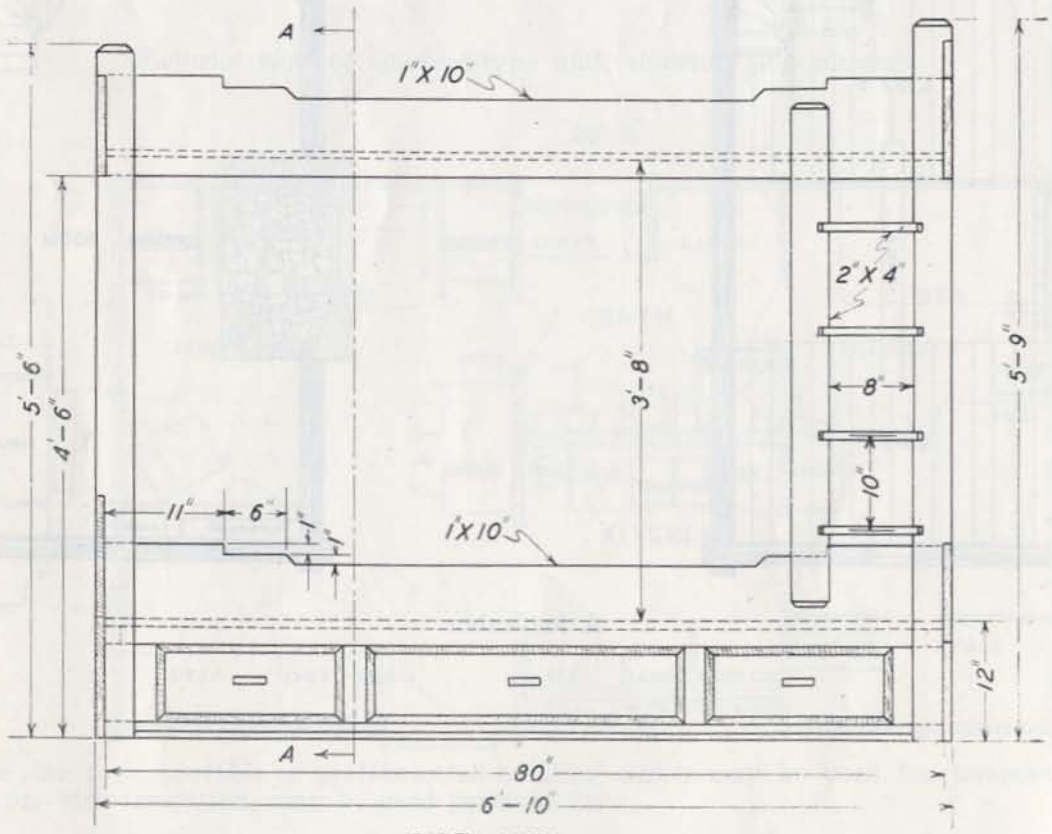




A log cabin.



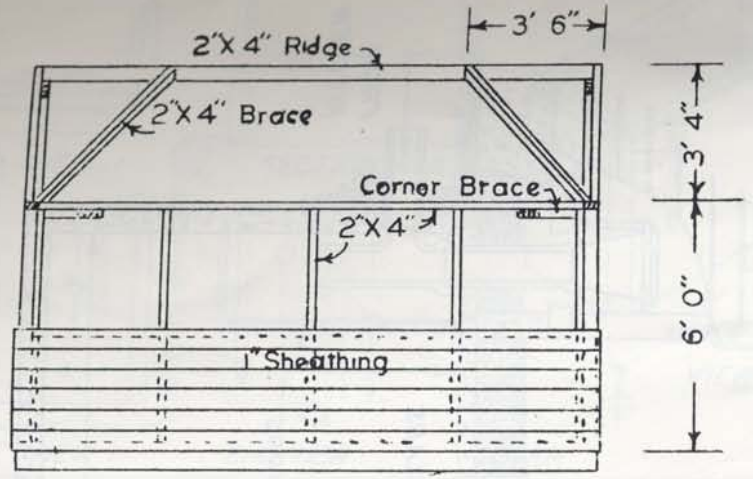
Combination bench and table.



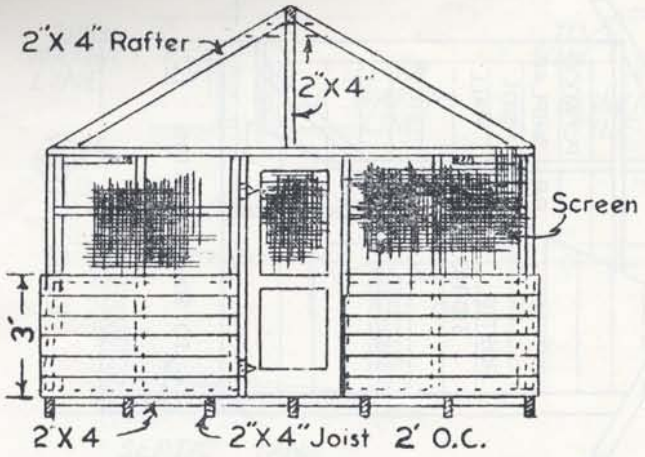
SIDE VIEW

Double-deck bunk.

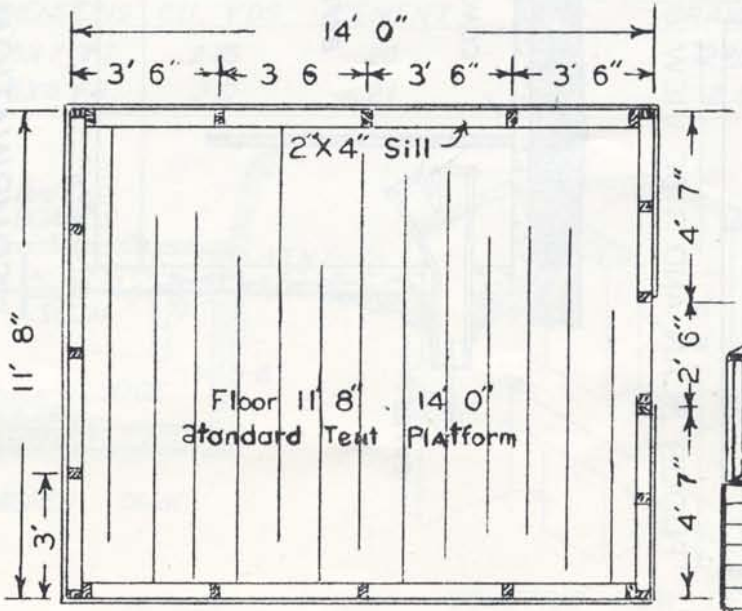
TENT FRAME



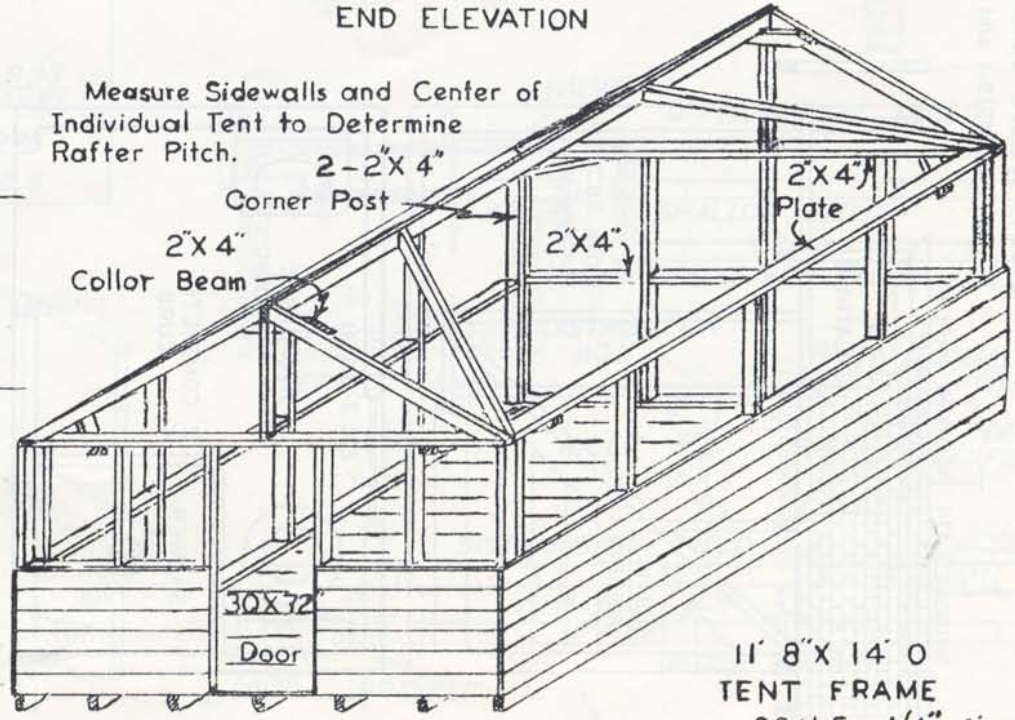
SIDE ELEVATION



END ELEVATION



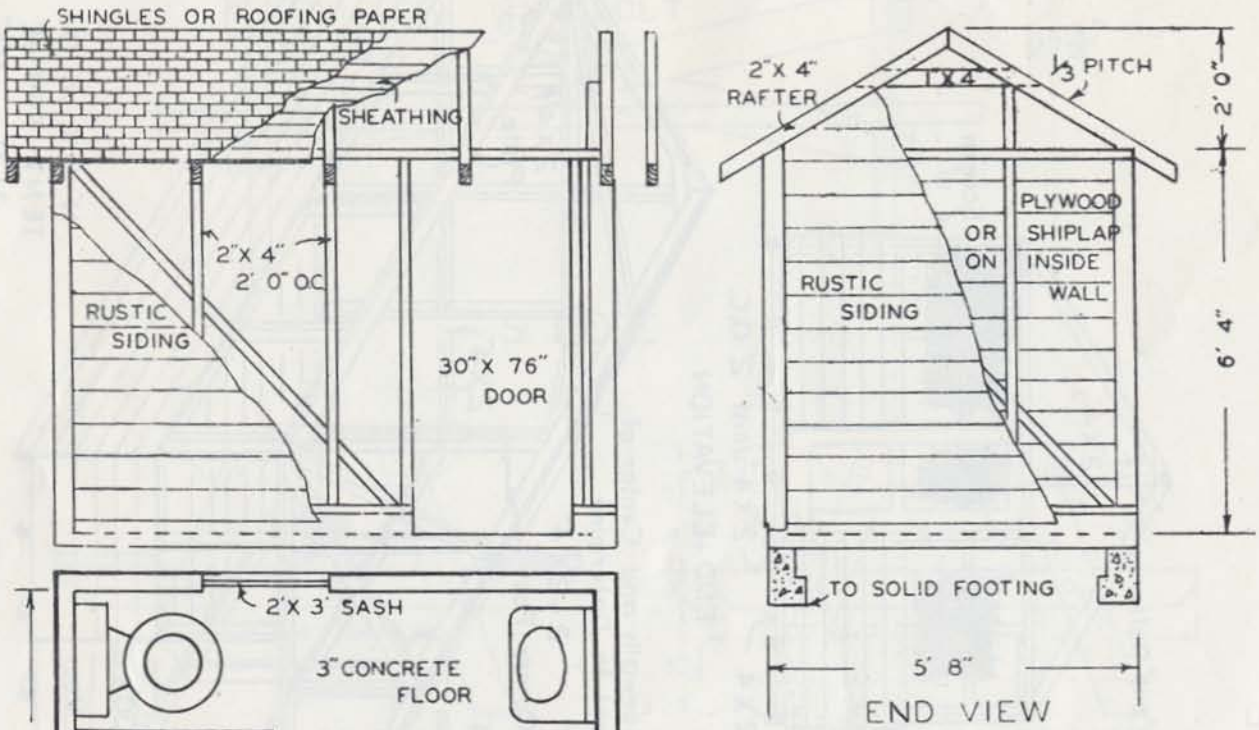
FLOOR PLAN

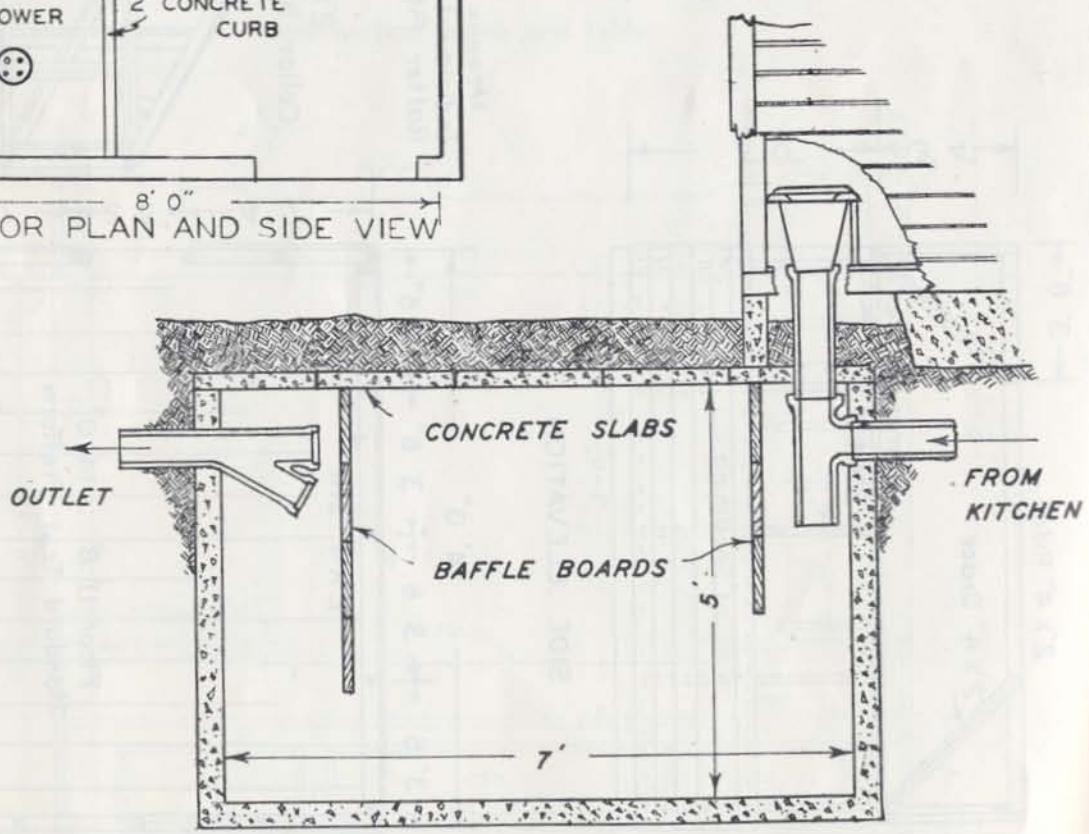


11' 8"X 14' 0
TENT FRAME
SCALE - 1/4" = 1'

SHOWER HOUSE

X Plan .8512-1 and 1A

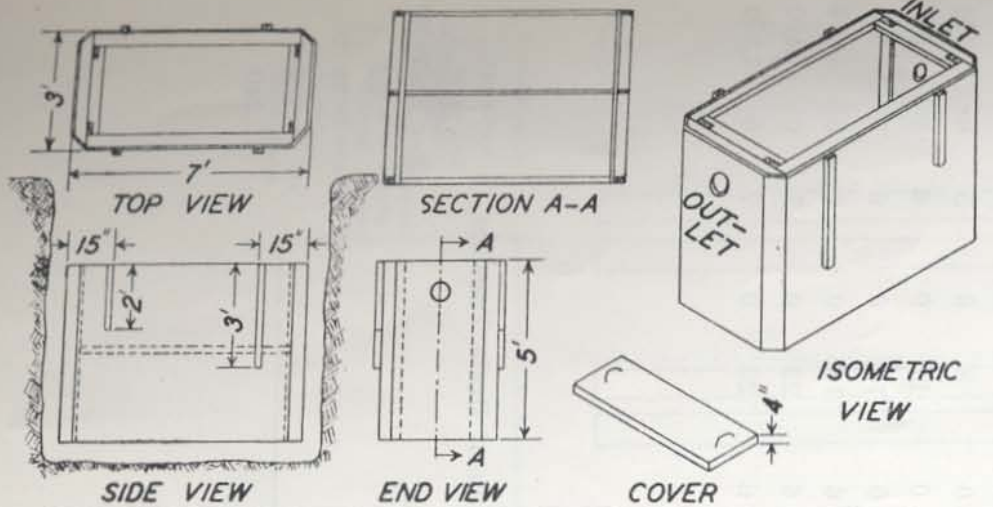




COMBINATION SEPTIC TANK

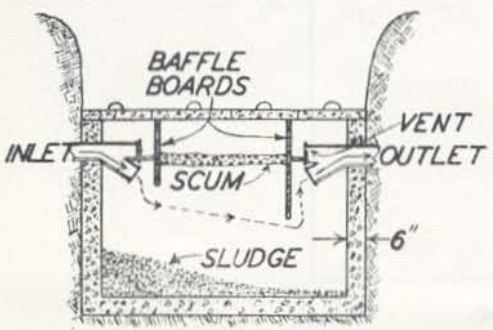
SEPTIC TANKS

Plans No. 8511-6

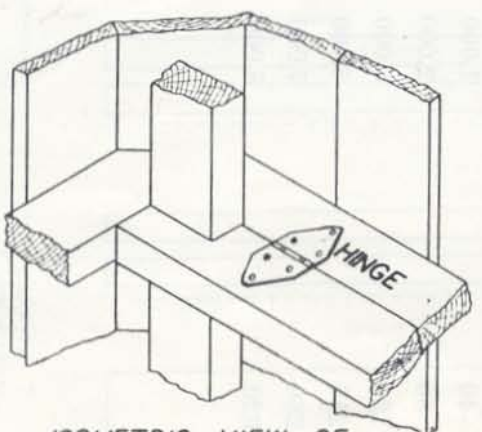


MATERIALS REQUIRED FOR CONCRETE 1-2-3 MIX

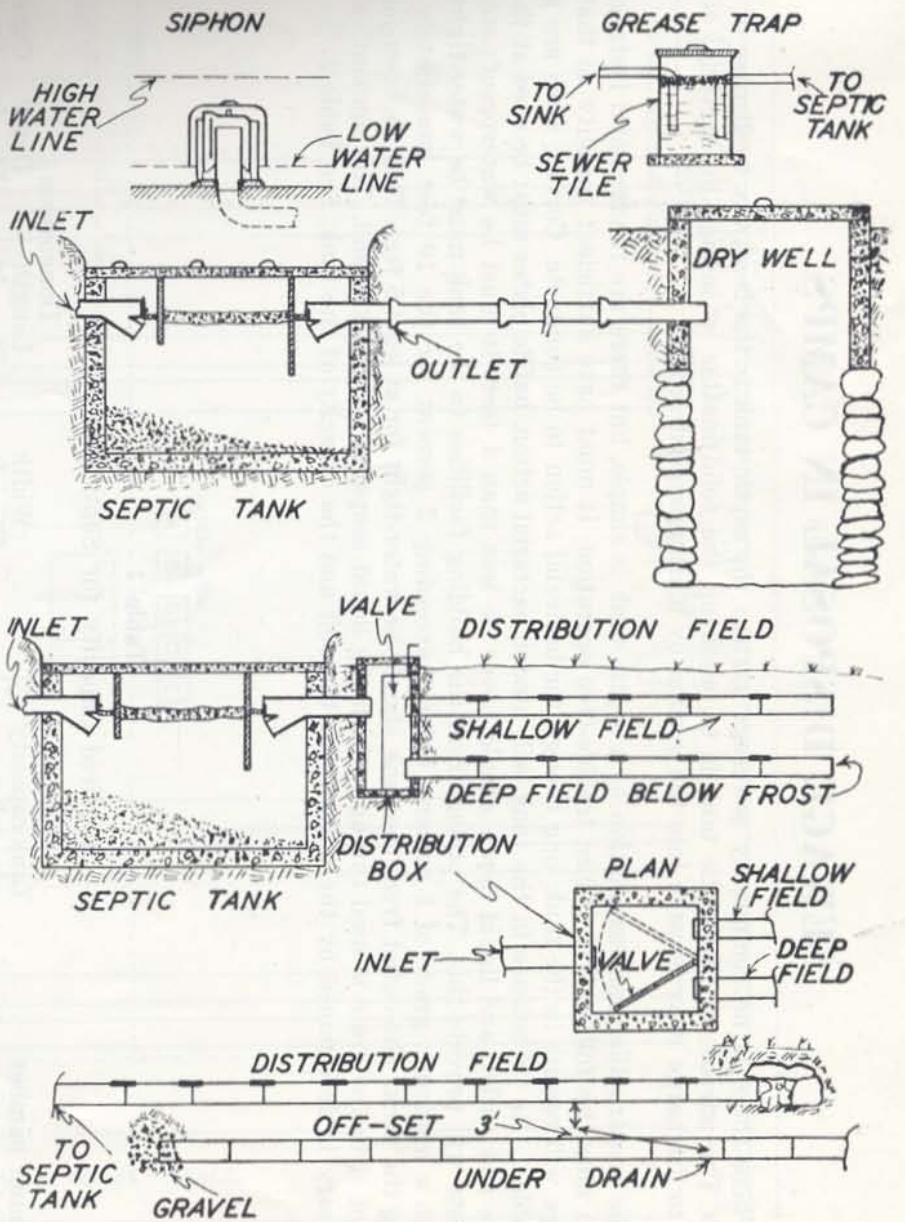
INSIDE DIMENSIONS	CONCRETE CU. YDS.	SACKS CEMENT	CUBIC SAND	YARDS GRAVEL
3X5X7 FT.	2.75	20	1.5	2.25
3X5X8 FT.	3.0	21	2.0	2.5



FINISHED TANK



ISOMETRIC VIEW OF LOCKING DEVICE



SEWAGE DISPOSAL IN CAMPS

Where there is no community sewerage system the septic tank is the best way to dispose of such waste. The purpose of the septic tank is to break up the solid matter in sewage by bacterial action, then to discharge it as seepage into the ground by underground drains.

The construction and installation of a septic tank is simple, but there are fundamental instructions which must be followed to insure trouble-free operation. It must have sufficient capacity so that the sewage will remain in the tank long enough for bacterial action to be complete. Correct sizes are given in Table 1. As turbulence in the tank will hinder bacterial action, baffle plates must be used at the entrance and outlet, and liquid depth should never be less than 4 feet. It must be waterproof; steel or concrete will provide this. The piping from the building facilities to the tank must be water-tight and laid on a minimum grade of 1 percent, but not exceeding 2 percent for the 10 feet immediately preceding the tank. The outlet from the tank should be water-tight for at least 5 feet. Then an open-jointed system of tile or drain is used through which the liquid seeps away into the soil. The amount of tile necessary is determined by the porosity of the soil and the capacity of the tank. See Table 2.

Table 1

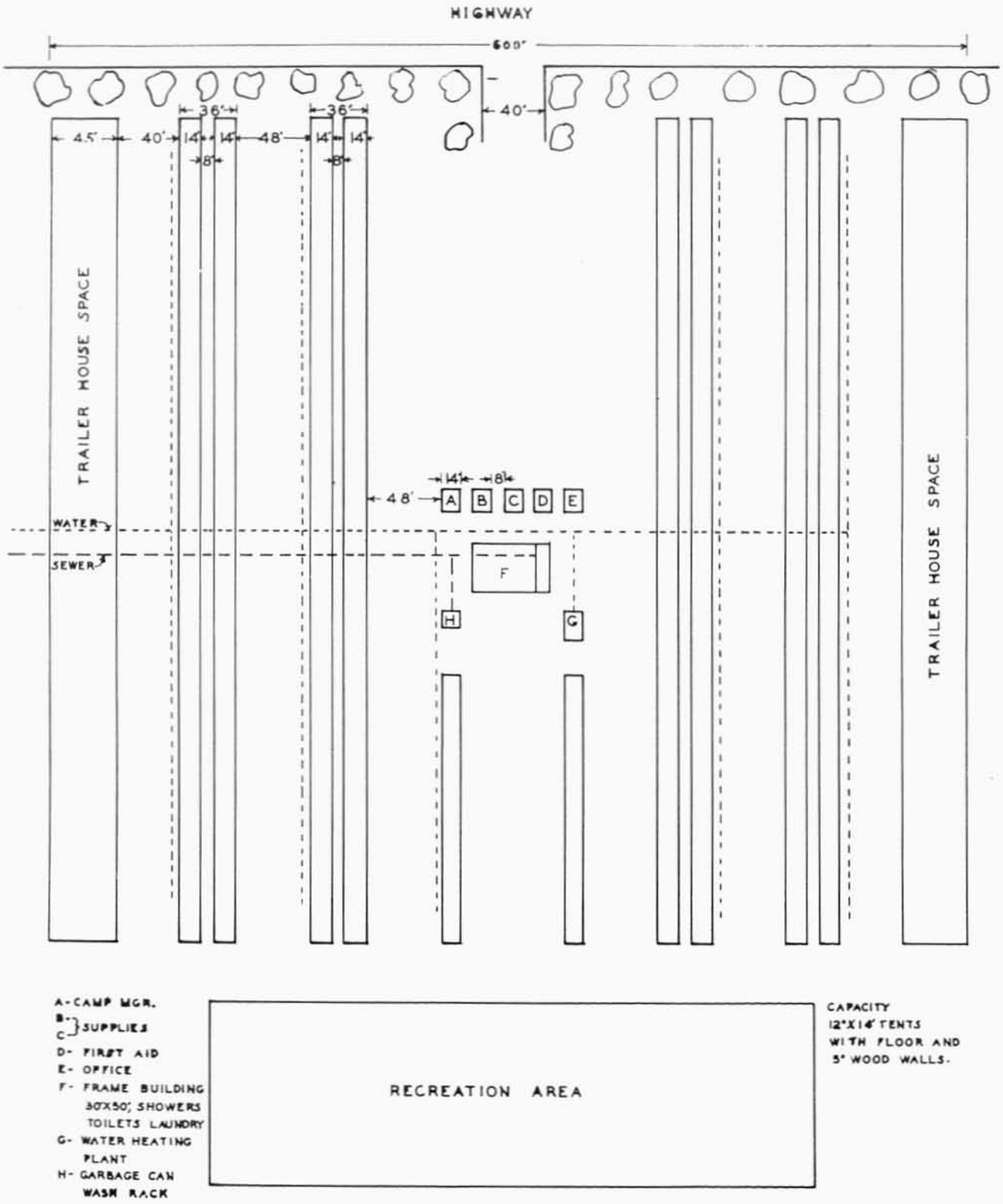
Required Capacity for Septic Tanks

Maximum number served in camp	Tank capacity in gallons	Dimensions						
		Width		Length		Depth		Capacity
		Ft.	In.	Ft.	In.	Ft.	In.	Cu. Ft.
40	1,000	4	0	8	6	5	0	170
80	2,000	5	0	11	0	6	3	345
120	3,000	6	0	13	6	6	3	505
200	5,000	7	6	18	0	6	6	880
280	7,000	8	6	23	0	7	0	1,190
320	8,000	8	6	23	0	7	0	1,370

Table 2

Effective Absorption Area Required in Bottom of Drain Trenches

Soil Type	Camps (Per Person)	Residence (Per Bedroom)
Open Porous	13	52
Average	20	75
Tight	30	125
Very Tight	60	240



Suggested camp layout.

CATALOG OF PLANS

The following are the complete working drawings of the sketches shown in this bulletin:

Utility Building	(Shown on Page 3)	Plan No. .741-19	$0.30
Bunk House	(Shown on Page 3)	Plan No. .741-19A	.30
Sleeping Quarters	(Shown on Page 4)	Plan No. .71-14	.30
Living Quarters	(Shown on Page 5)	Plan No. .71-15	.90
Log Cabin	(Shown on Page 13)	Plan No. .71-20	.30
Double Deck Bunk	(Shown on Page 14)	Plan No. .711-17C	.20

Other plans suggested which are not shown in this bulletin:

Fresh-air Sleeping House	Plan No. .71-83	$0.30
Two-car Garage	Plan No. .741-22	.30
Garage and Shop Combination	Plan No. .741-9	.80
Machine Shed	Plan No. .741-13	.60

Available from

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Moscow, Idaho

Photographs on pages 6 and 7, courtesy Federal Public Housing Authority.
Photographs on page 10, courtesy Great Lakes Steel Corporation.