

CONSERVATION DISTRICT USES REFRIGERATED STORAGE FOR TREE AND SHRUB STOCK

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Refrigerated storage facilities for tree and shrub seedlings are used by 49 of 69 conservation districts in South Dakota. The storage facilities are needed to maintain the quality of seedlings which are used in windbreak and wildlife plantings. During 1977 approximately 5,660 acres were planted by districts on 3,035 farms and ranches within the state.

In South Dakota the normal

planting season for bareroot stock varies from approximately 5 to 7 weeks. Often planting operations are interrupted by periods of rain or unseasonably dry, warm weather. These climatic factors plus tree planting workloads of approximately 80 to 240 acres, for most districts, indicate a need for some type of storage other than the conventional heel-in-beds or storage in nonrefrigerated buildings.

The districts that have had funds available have contracted to have new facilities constructed. Where funds have been limited, other arrangements have been made to secure refrigerated storage.

With limited funds, the Ziebach Conservation District headquartered at Dupree, S.Dak., constructed a refrigerated storage facility during 1977.

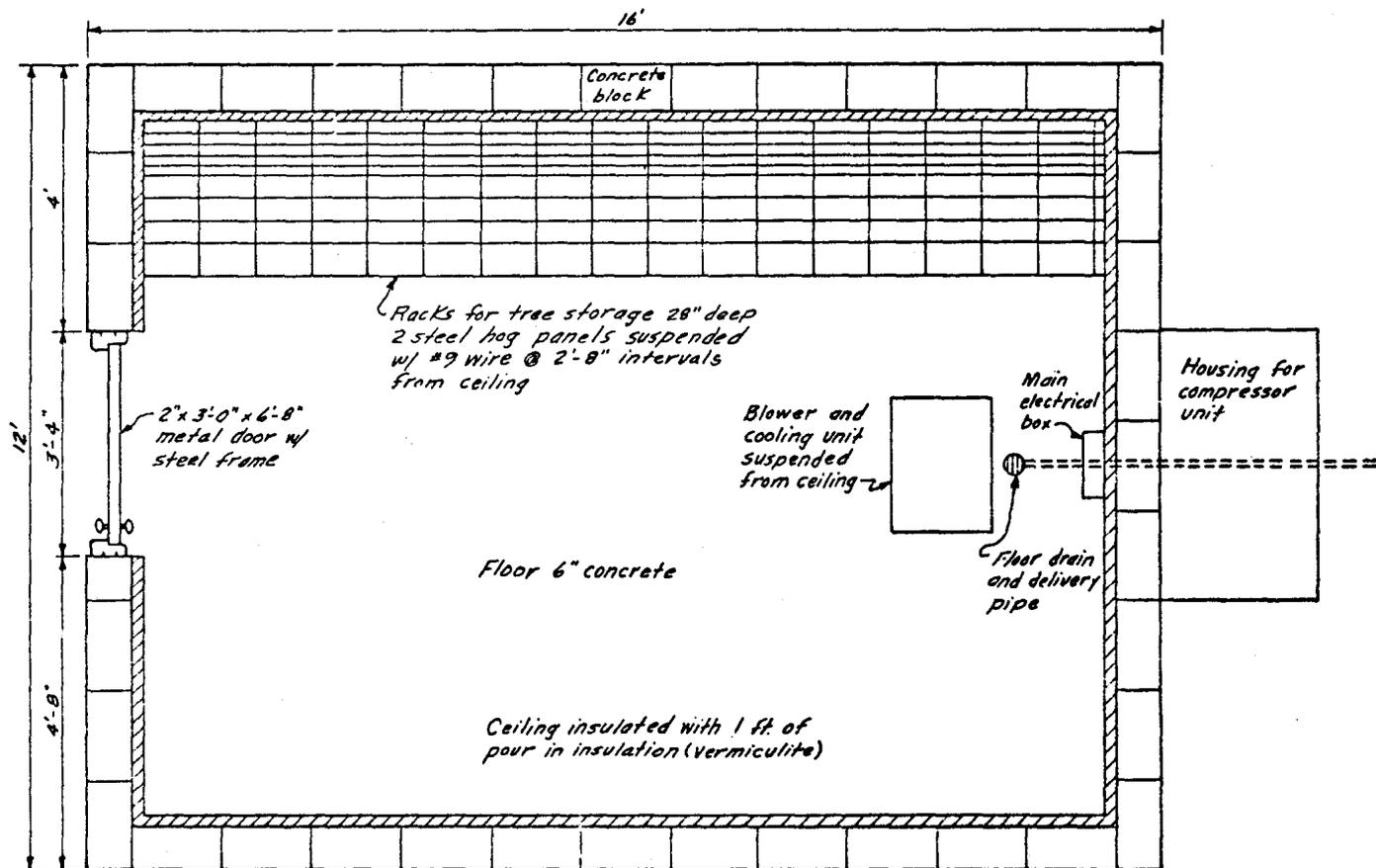


Figure 1.—Plan view of storage facility.

With funds sufficient to cover only the cost of building materials and refrigeration equipment, the district supervisors decided to furnish most of the required labor.

Figure 1 indicates the size of the facility and the types of building material and refrigeration equipment used.

By providing the necessary labor, the Zieback Conservation District constructed a 12- by 16-foot refrigerated storage facility for 50,000 to 70,000 tree and shrub seedlings. The total cost (excluding donated labor) was \$3,494. The acquisition of a 50- by 75-foot lot cost \$500. The 12- by 16- by 8-foot concrete block building with pitch roof cost \$1,817. The refrigeration unit consisting of a used blower and new compressor cost \$1,177.

Figure 2 and 3 show front, rear, and side views of the facility during final stages of construction.

During the 1977 planting season, 640 kWh of electricity were used in 6 weeks. The temperature was maintained between 34° to 40°F and the humidity was kept between 90 to 100 percent.

This type of facility would be too small for some planting programs, but it would be practical and useful for conservation districts, other agencies, or individuals with limited funds and relatively small annual tree planting programs.

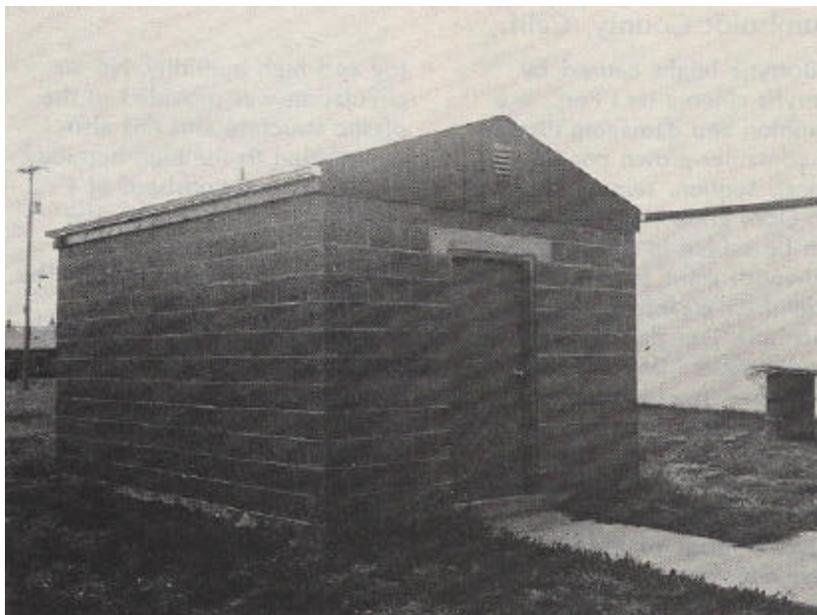


Figure 2.—View of storage facility during construction.

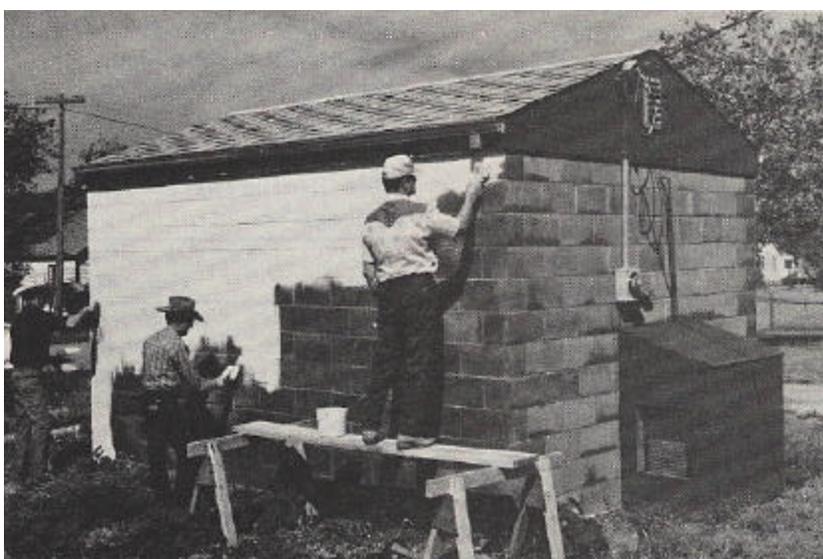


Figure 3.—View of storage facility during final construction.