CONSTRUCTION STEPS

1. STUDY PLANS AND DETAILS THOROUGHLY.
2. OUTLINE SPACE FOR REFRIGERATOR ON LEVEL CONCRETE FLOOR.
3. CONSTRUCT EXTERIOR WALLS AND FIT BY FASTENING IN PLACE TEMPORARILY. NOTE: WEATHER PROTECTION IS NEEDED.
4. PASTE ANY TWO ADJACENT WALLS PERMANENTLY.
5. CONSTRUCT ROOF; NAIL ON 6 MIL POLYETHYLENE VAPOR BARRIER PAPER ALLOWING 10" OVERHANG.
6. SET ROOF IN PLACE, PILING PAPER AROUND EDGES INTO ROOM.
7. PLACE AND PASTE OTHER WALLS IN POSITION.
8. APPLY VAPOR BARRIERS--ONE WALL AT A TIME. LAP PAPER 6" AT JOINTS USING SEAM FILLER UNDER OVERLAP, SEE CORNER DETAIL.
9. APPLY VAPOR BARRIER TO FLOOR.
10. LAY INSULATION IN FLOOR.
11. TO PROTECT INSULATION, COVER WITH WATERPROOF PAPER.
12. BUILD CONCRETE FORMS FOR REFRIGERATOR FLOOR.
13. POUR CONCRETE AND SET ANCHOR BOLTS FOR INTERIOR WALL PLATE.
14. BUILD INTERIOR FRAMING.--AFTER CONCRETE IS THOROUGHLY SET.
15. INSTALL ELECTRICAL AND REFRIGERANT TUBING DUCTS.
16. INSULATE WALLS AND CEILING.
17. INSTALL INSIDE WALLS AND CEILING.
18. CAKE, PLUMB, AND BOLT DOOR FRAMES IN PLACE.
19. HANG DOORS AND ADJUST LATCHES SO GASKETS WILL EJECT PRESSURE ALL AROUND.
20. HAVE REFRIGERATION EQUIPMENT AND WIRING INSTALLED.
21. INSTALL SHELVES, MEAT RAIL, AND OTHER ACCESSORIES.
22. PAINT ALL WOODEN SURFACES WITH ALUMINUM PAINT. LEAVE DOORS OPEN UNTIL SURFACES ARE DRY.
23. PAINT SURFACES OF ALL CONCRETE FLOORS.

DRAWINGS NOT TO SCALE

Cooperative Extension Service
Agriculture and Home Economics
University of Tennessee Institute of Agriculture
Agricultural Engineering Department
United States Department of Agriculture Coopertive Extension Service

TWO-TEMPERATURE WALK-IN REFRIGERATOR

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NOTES

1. Cost: Investigate the cost and availability of commercially available units before building your own.

2. Insulation: Cork has been widely used but there are now many water-resistant glass slag and polymer insulations that are available in sheet or block form, have better R values, and are as resistant to compression as cork.

3. Vapor barriers: Vapor barrier papers have been largely replaced by polyethylene. A 4-mil. or heavier film is recommended. It should be strong enough to resist tearing. Any tears or nail holes as well as joints and edges near openings should be tightly sealed with asphalt or a vapor barrier sealing tape.

4. Frost upheaval: First can ultimately build up in soil under the freezer and raise the floor. With a concrete floor under the insulation there should be enough winter cold loss to avoid this problem. If freezer floor were made much larger than shown, air ventilation should be provided between floor insulation and soil, i.e., a 4'-0" O.C.

5. Freezer door: Although adequate doors can be constructed on site, purchase of eight wide doors and frames are recommended.

6. Refrigeration system: Seek assistance from an experienced refrigeration contractor. A 3/4 H.P. compressor should be sufficient for freezer room and 1/2 H.P. for chiller. Protocols will be needed for winterizing compressor, condenser, and controls inside of cabinets.

7. Weather protection: This unit needs weather protection (i.e., shelter within another structure).