

Snow Cave Construction

Beginner's Snow Camping Seminar

Jan. 2007

Advantages of Snow Caves

- Very Warm and Quiet
- Weatherproof
- Can be Roomy
- Fun to be Creative
 - Build furniture, extra rooms, etc.

Disadvantages of Snow Caves

- Takes time and energy to build
 - Not a quick emergency shelter
 - But a great way to sit out a multi-day storm
- Can get cold and wet while constructing
- Risk of problems during construction
 - Hidden obstruction – tree or rock
 - Collapse
- Requires deep and consolidated snow

Snow Cave Construction Tips

- Wear waterproof clothing
 - Keep dry clothing handy for when you are done
- Only one person should be inside the cave at a time during construction
- Second person should be outside and close by at all times
 - Monitor the digger for hypothermia and cave-in
 - Prepare warm drinks and snacks for digger
 - Assist with removal of snow
- Partners should warm up and trade places as needed

Snow Cave Site Selection

- Hillside is better than level ground
 - Can go horizontal to floor of cave
 - Can dump snow downhill
- Consider what is uphill and above you
 - Trees loaded with Snow
 - Avalanche Slope or Cornice
 - Ski Trail
- Consider what is underneath
 - Look for signs of trees or boulders
 - Probe for things below the surface

Snow Cave Construction (1)

- Mark Perimeter with skis, snowshoes, poles
- Start with Entrance Trench
 - Dig into hill, sloping slightly downward at level of cave floor
 - Stop when sides of Open Trench are shoulder high
- Dig Entrance Tunnel
 - Tunnel just high enough to crawl through
 - Once about one foot in, start widening floor area
- Clear out Working Space
 - Dig upward from floor to create space
 - Enough room around shoulders to dig

Snow Cave Construction (2)

- Clear out Main Cave
 - Work inward and sideways from Working Space
 - Shovel all excess snow to floor
 - Partner, outside, removes snow from tunnel entrance and dumps it
- Create Sleeping shelf above floor
 - Large enough for all sleeping bags
- Create Dome shaped Ceiling
 - Enough headroom above shelf to sit up

Snow Cave Interior Decorating

- Smooth out ceiling
 - Should be hemispherical in shape for strength
 - Avoid flat areas
 - Avoid rough spots, esp. points hanging down
- Prepare Sleeping shelf
 - Make it level
 - Pack it down
- Create other features
 - Storage alcoves and shelves

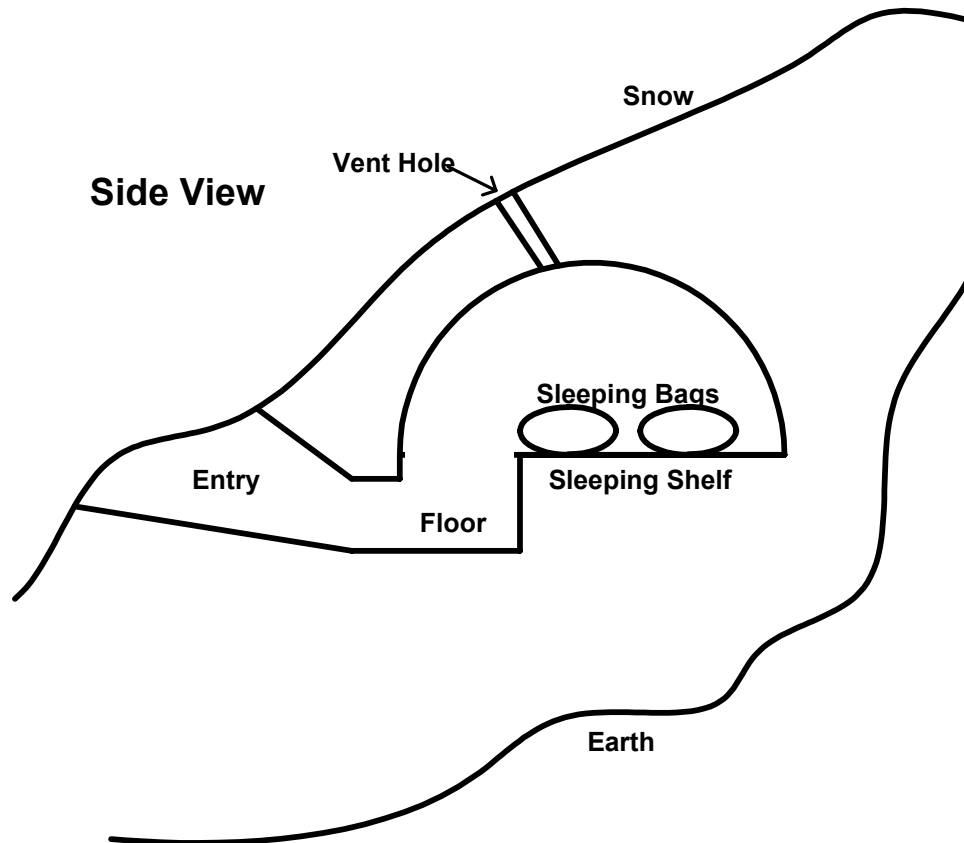
Snow Cave Finishing

- Poke ventilation hole through ceiling
 - Use handle end of ski pole from the outside
 - Leave it in the hole
- Reduce Entrance if needed
 - Should be just big enough to crawl through
 - Top of Opening should be below sleeping shelf
- Let snow consolidate for a while

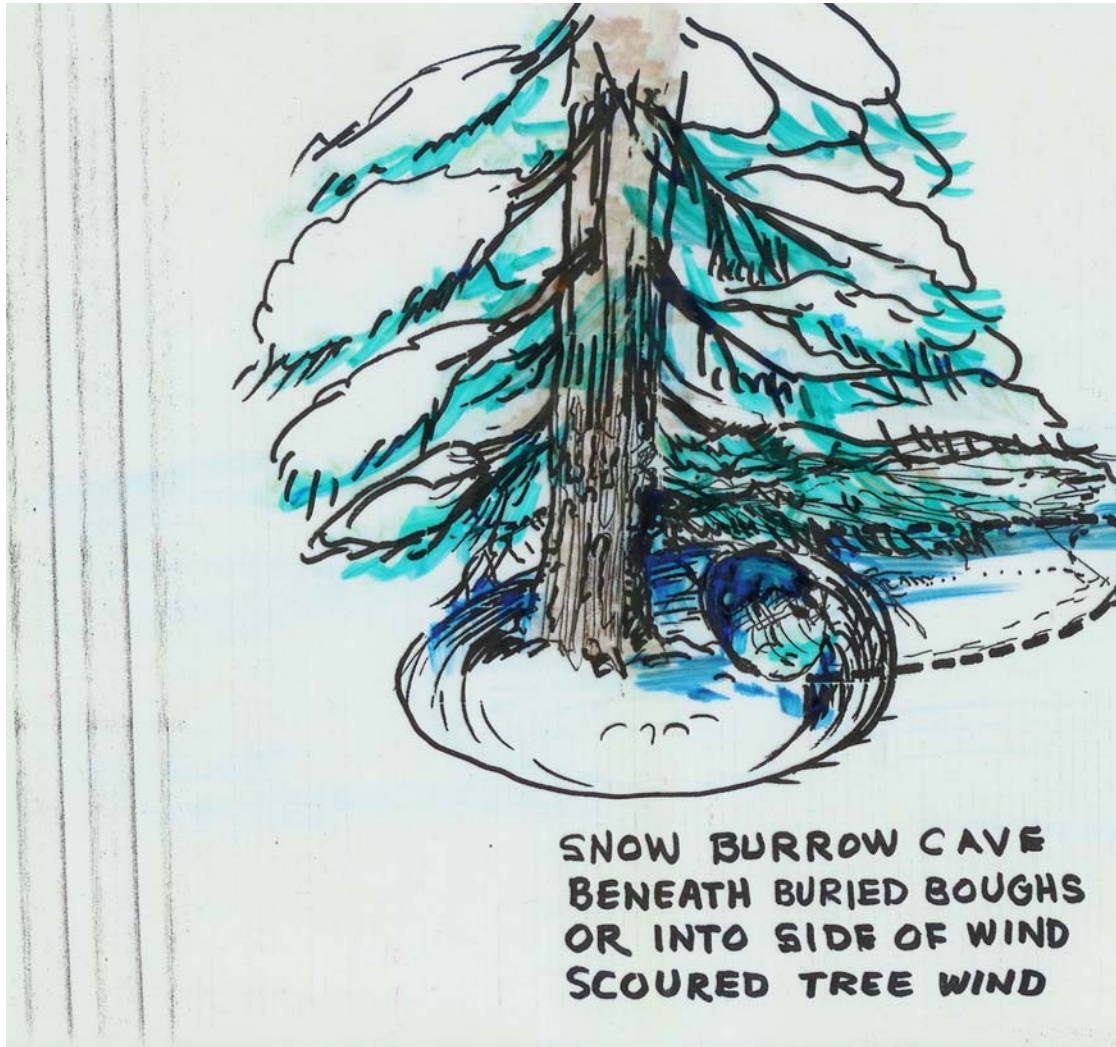
Snow Cave Guidelines

- Minimum Roof Thickness – 1 ft. Entrance should be Low Point
- Sleep on Shelf higher than Entrance
- Roof should be Smooth Dome
- Ceiling should have Vent Hole
- Entrance may be blocked with Tarp or Packs for maximum weatherproofing
- Keep shovels with you, whether inside or outside

Snow Cave Views

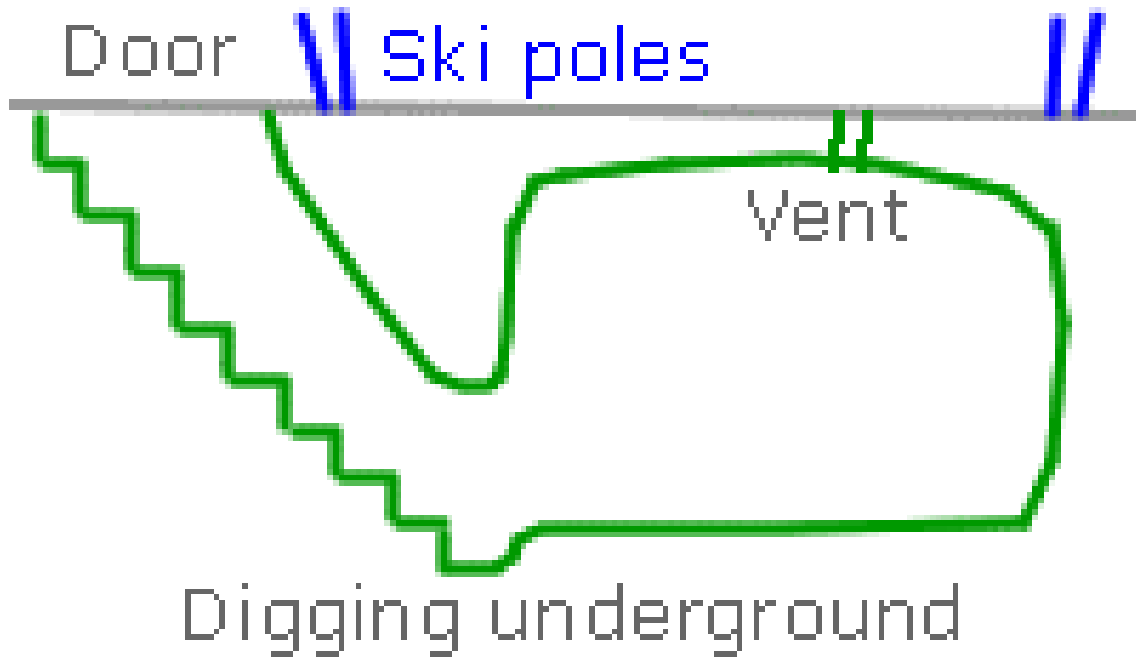


Snow Cave next to Tree

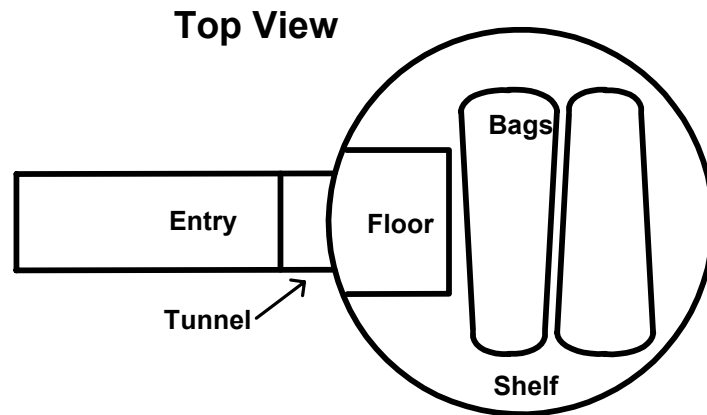


SNOW BURROW CAVE
BENEATH BURIED BOUGHS
OR INTO SIDE OF WIND
SCURED TREE WIND

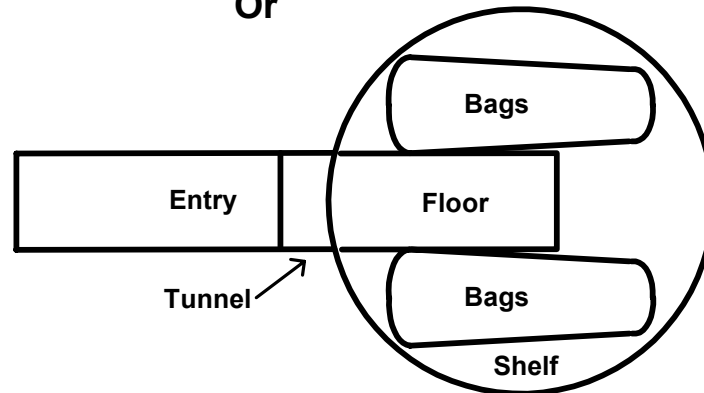
Snow Cave w/o Slope



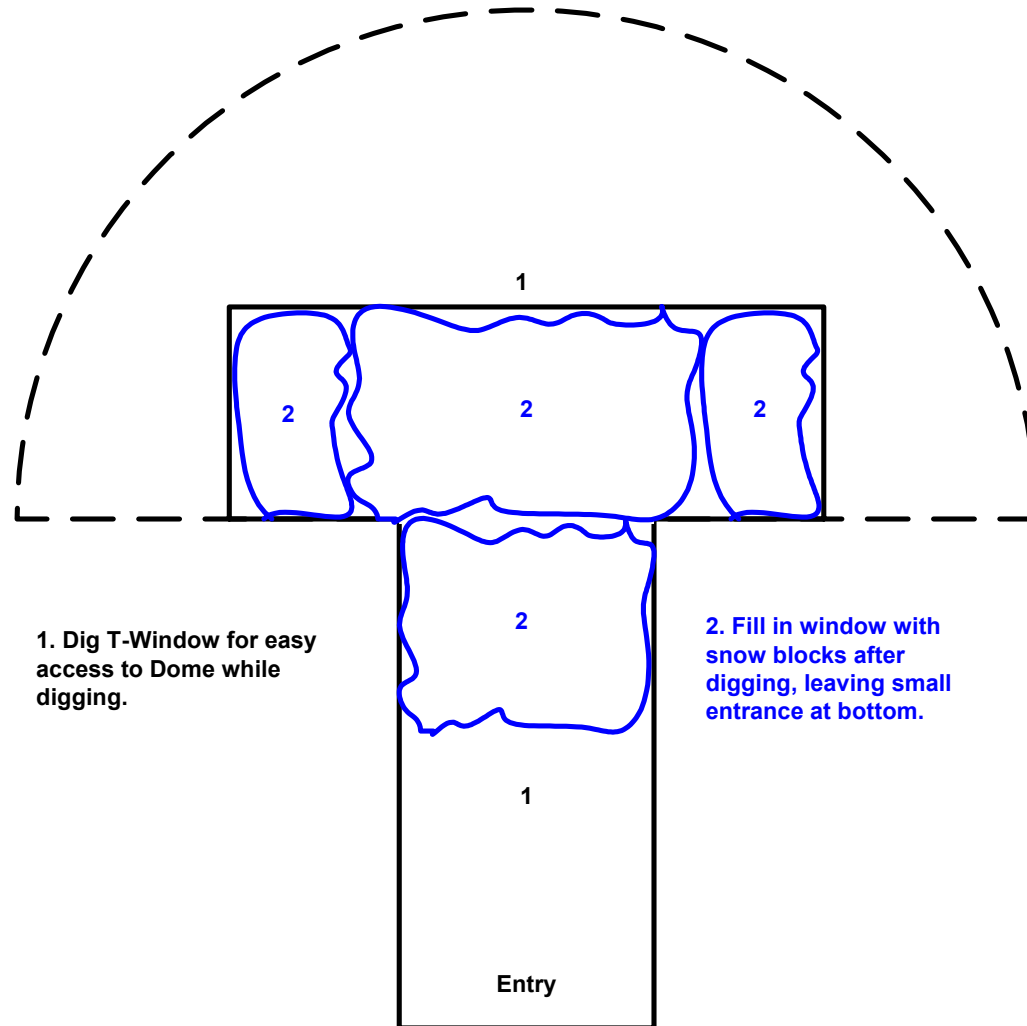
Snow Cave Views



Or



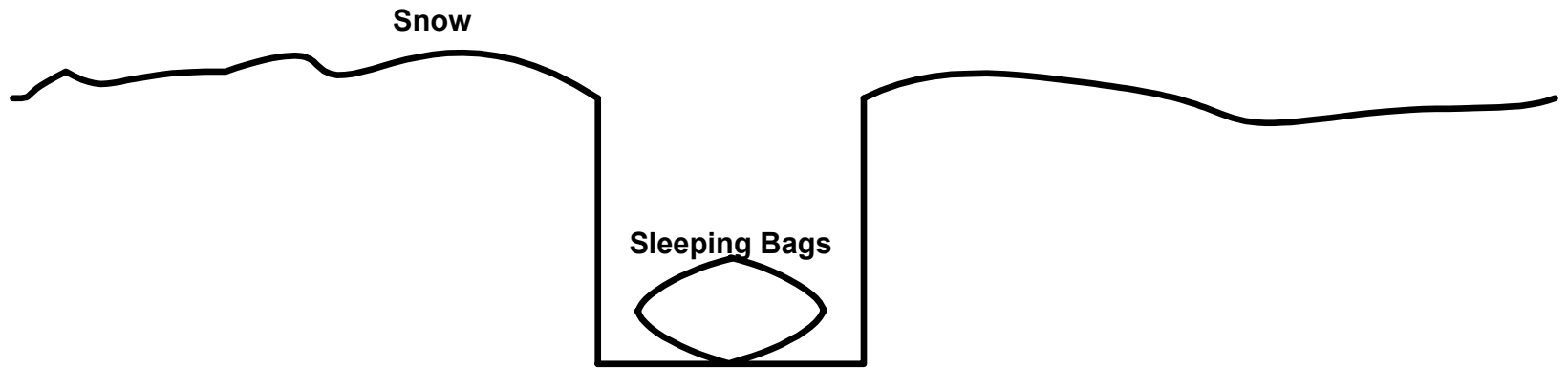
T – Window Access



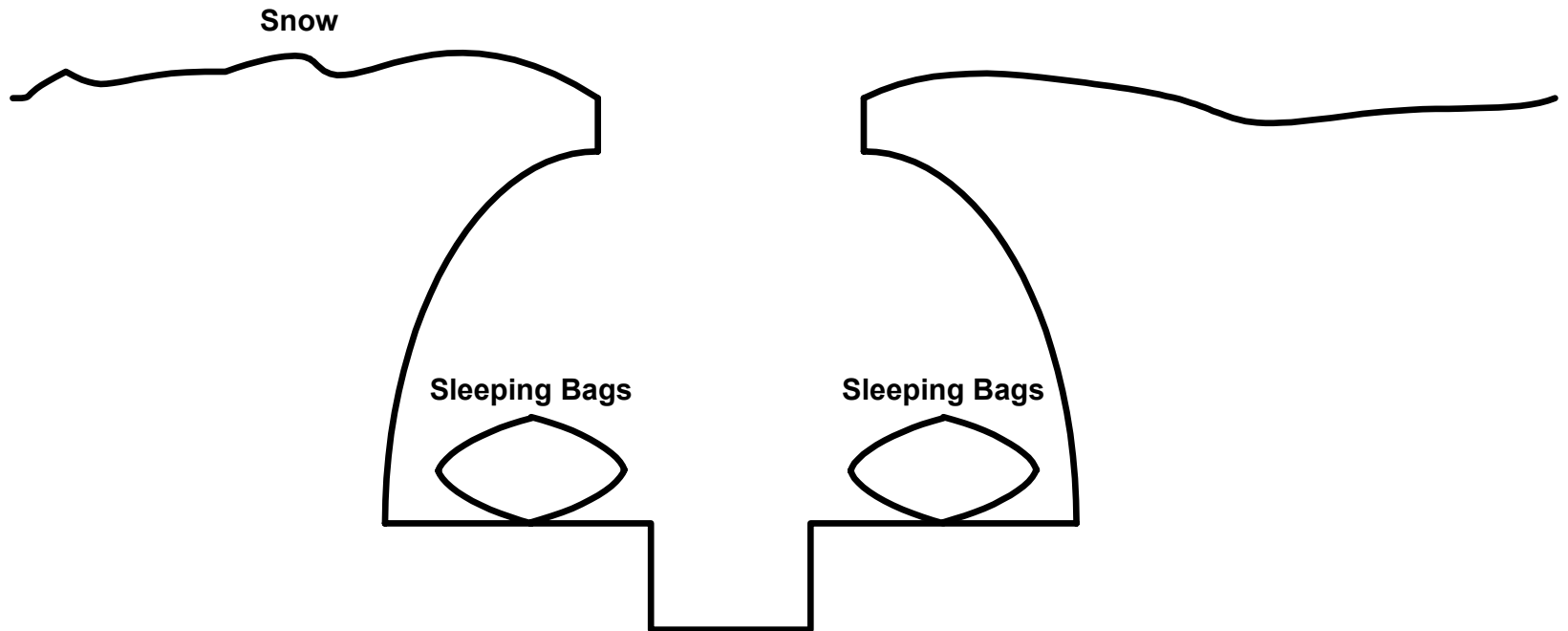
Snow Trenches

- Quicker to Dig
- Stay Drier while digging
- Does not need deep snow
- Not as warm as Cave
- Not as weatherproof as Cave

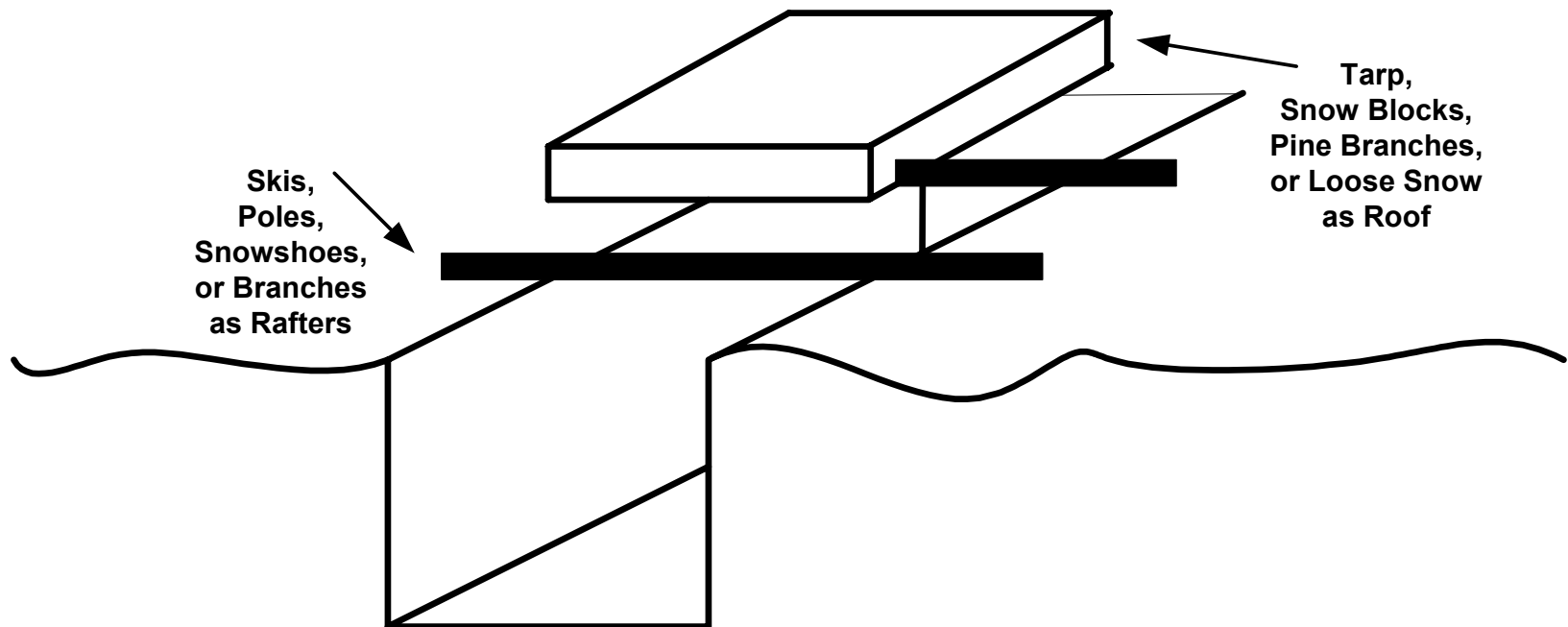
Basic Trench



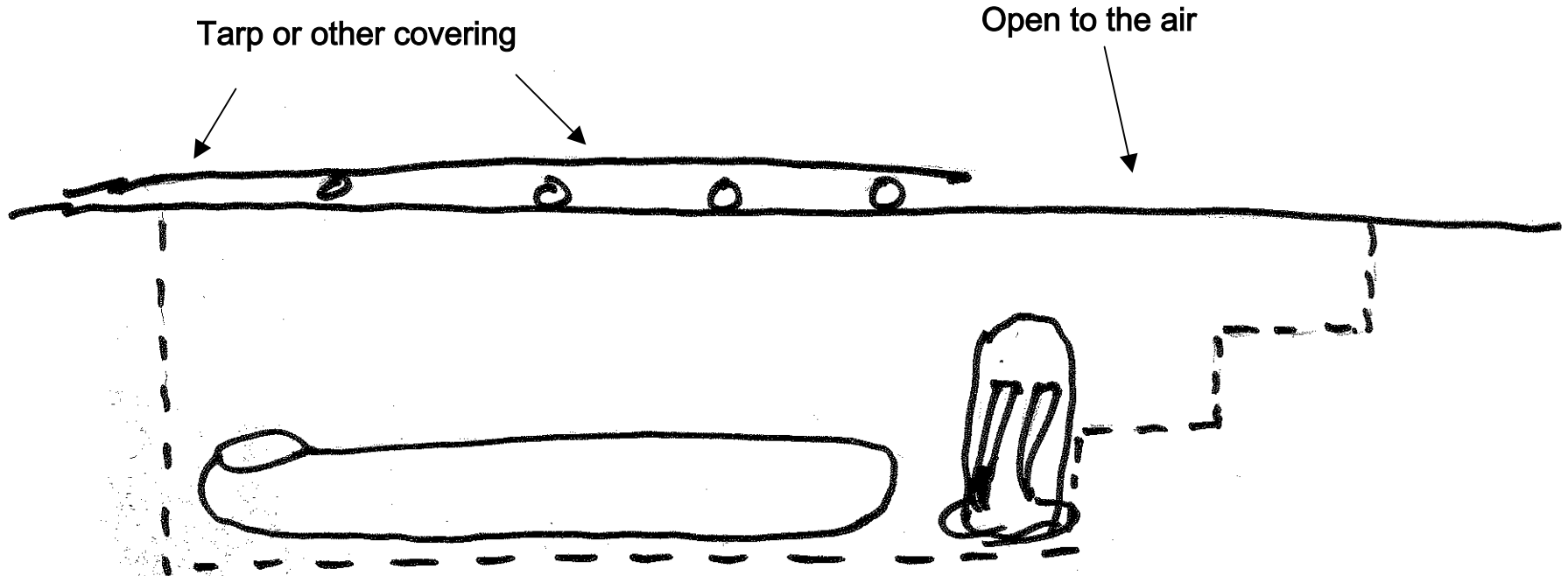
Fancy Trench



Trench Roof



Trench Side View



A-Frame Roof

