

L HC Refrigerated Panel Structural Engineering

Design Specs:

1. Roof load assumptions: **2400lbs** live load, including (4) workmen @ 200lbs/each, and 1600lbs of equipment (lighting, evaporators, etc.)
2. Soil Enclosure Worst Case Load: 3' x 16' x 16' ½ saturated with water -> weighing 62.25lbs / cu ft, or $62.25\text{lbs} \times 768\text{ cu ft} = 47,808\text{lbs}$ /2 = **23,904lbs**
3. Aim to achieve:
 - a. Minimal cost (see the following)
 - b. Minimal beam depth (i.e W-6 beams or)
 - c. Minimal beam count (i.e (4) beams per side)
 - d. Minimal floor penetrations (for mounting plates)
 - e. Minimal 'roof' structure (i.e. fewer beams at 'roof' as these will be the most difficult to install)
 - f. 6" of working space between all superstructure (i.e. I-beams) and L HC structure (i.e refrigerated panels)