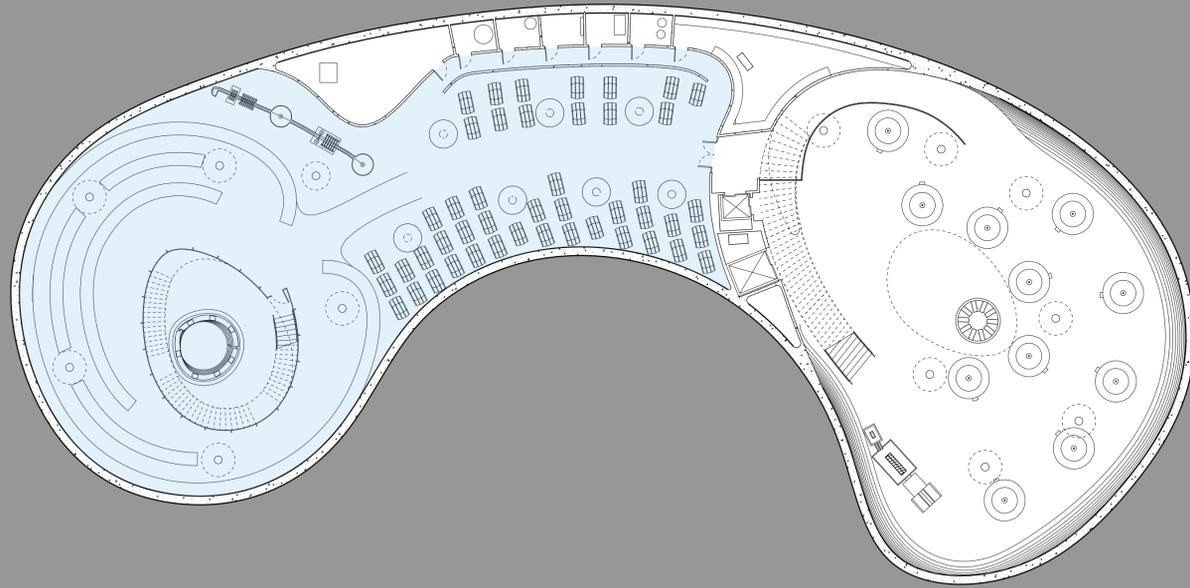
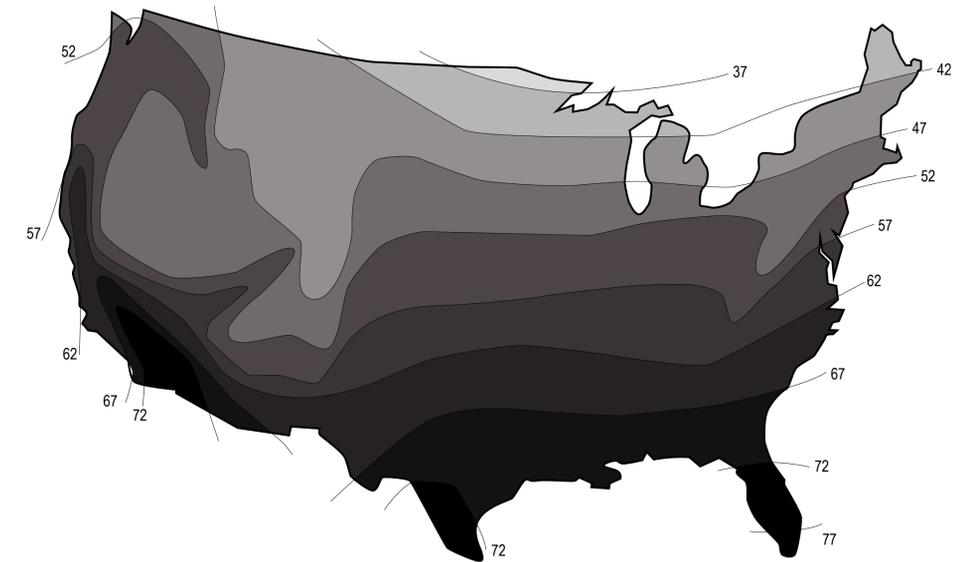


Production Zones



Our production facilities will be divided into two major zones. The fermentation tanks can be kept at an average temperature because they are self regulating. Our barrel and bottle vault, on the other hand, must be kept at a constant 55 degrees F. To help facilitate this cooling process we have all of our vaults underground. In our location of California, the ground temperature at 20' below grade is an average 56 degrees year round. This will drastically lower cooling efforts.

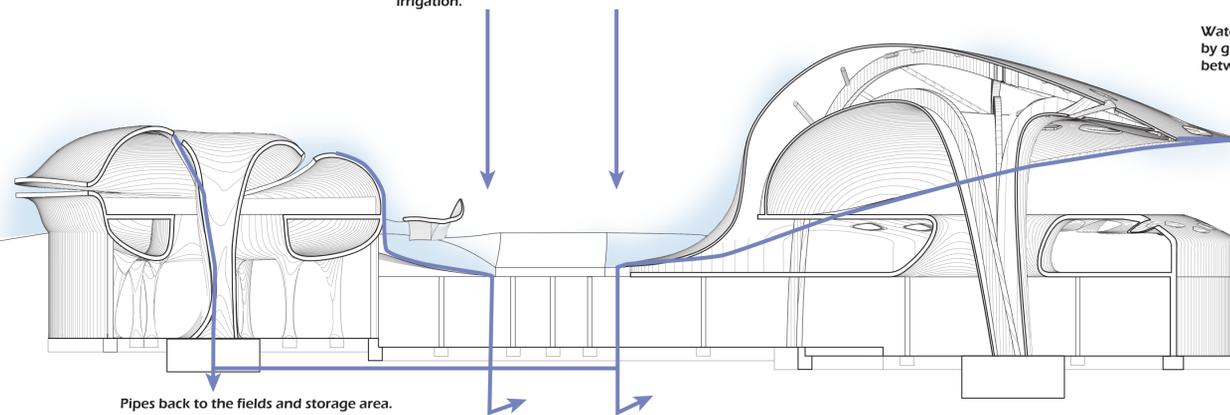
Average US Ground Temperatures



Rainwater Collection

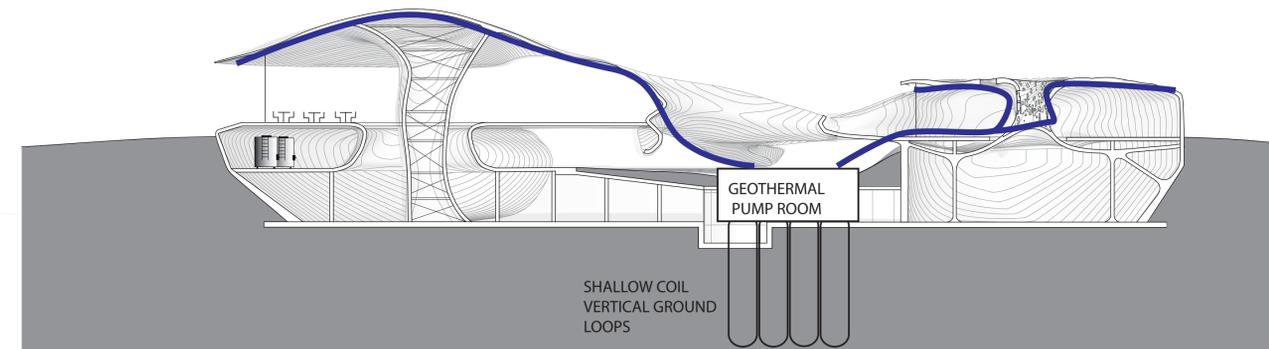
Our site has a natural collection location. We will install drains on either side of our road and the collected rain water will be stored as gray water or distributed back into the fields as additional irrigation.

Water collected on the roof will travel by gutters to the main collection area between the two buildings.



MEP STRATEGY

Overall strategy is to use subterranean storage to reduce cooling load. Thermal mass of surrounding earth ensures that the cave-like barrel and bottle vaults will stay cool with minimal system intervention. A geothermal system for cooling the roof on sunny days minimizes the building solar load, effectively infinitely increasing the thermal mass of the roof as an envelope load reduction strategy. Other strategies employed include orienting the building shell openings to utilize prevailing winds to circulate cool air in the warm season and hot air in the cool seasons. Use of the several strategies



Environmental Strategies