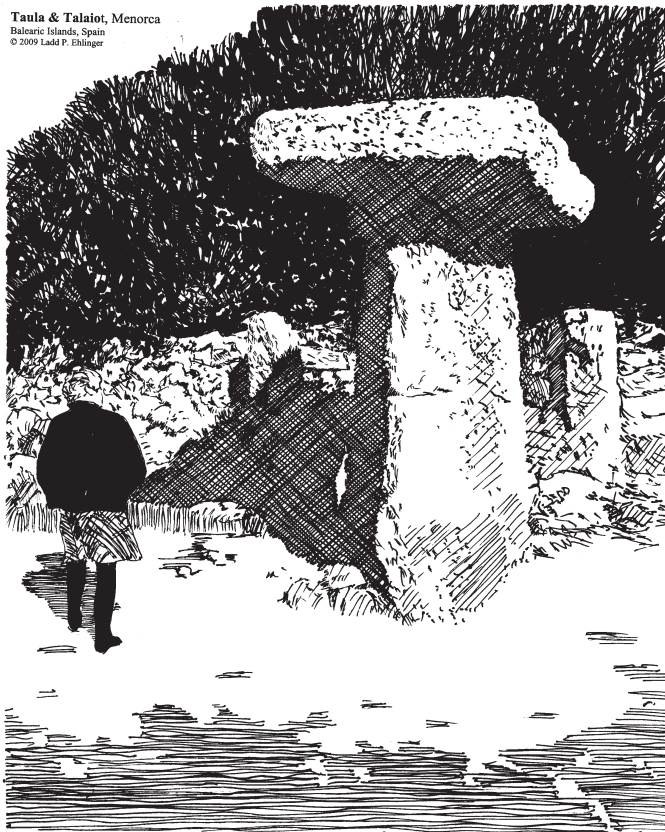




Taula & Talaiot, Menorca
Balearic Islands, Spain
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Taula & Talaiot, Menorca

The Taulas of Menorca are unique to this Balearic Island, a part of Spain. The word “taula” means table in the Catalan language, which is spoken in Menorca, due to its “T” shape with a large flat “table” on the top of a vertical support stone or stones. Also, in Greek mythology Taulas was one of the six sons of Illyrius, the eponymous ancestor of the Taulanti peoples, and it was thought that these megaliths were built by the makers of these myths during the Bronze age about 2,400 to 3,000 years ago.. The naming of these monuments thus came about because of the dual aspects of their appearance and the peoples that built them.

The Taulas are always associated with Talaiots, the wall behind the Taula in the sketch. These megalithic walls were apsidal in plan (like a horseshoe), and 3 to 4 meters in height (10' to 14'). They are thought to be both defensive

in nature and encapsulating of the space about the Taula they are associated with.

The Talaiots are on other Balearic Islands and in Greece as well. There are over 274 Talaiots on Menorca and Majorca, and the Talaiots predate the Taulas. The Taulas are thought to have been built for religious purposes, perhaps funerary in nature, although it is not certain, nor is it certain what the purpose of the Talaiots was.

The particular Taula shown in the print of the

Raised Foundation/ Crawlspace

Raised foundations offer a wide variety of conveniences in construction, like convenient access to plumbing and ductwork for repairs and modifications, as well as protection against flooding. Unfortunately, raised floor construction also comes with a wide variety of problems; mostly humidity and temperature.

Condition Crawlspace.

An alternative to traditional raised floor construction, where there's a ventilated crawlspace, is to fully insulate and condition the crawlspace, and to avoid installing foundation vents at all. The belief is that so long as there is adequate protection against moisture in the space, it is less expensive to insulate the foundation walls and condition the space than it is to insulate the larger area of the floor against wider temperature swings.

“Conditioning” doesn't necessarily mean providing heating/cooling to the crawlspace. It can be a solution as simple as installing a dehumidifier with a sensor. More often, though, a supply vent is simply diverted from a main A/C unit, along with a return-air branch.

Where foundation vents are still required for flooding, there are special insulated flood vents that provide a seal against the weather, but activate during a flood.

Retrofitting an existing crawlspace to an insulated and conditioned crawlspace is not an easy project, and expert advice should be sought.

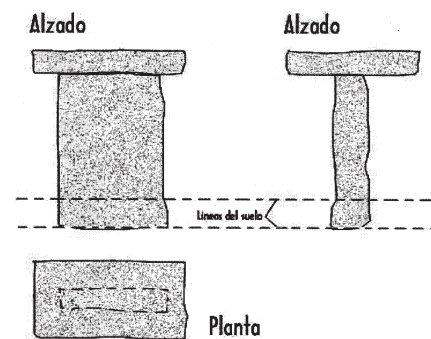
Ground Vapor Barrier.

An important consideration of a raised crawlspace is to keep the ground dry. Moisture coming up from the ground can be a big problem, particularly during seasons with heavy rain.

If the floor of the crawlspace is dirt/clay, then it should be covered with a vapor barrier, to prevent moisture from building up in the crawlspace. This should be sealed at all penetrations, and to the foundation walls.

For most installation, a thick plastic

Taula, Menorca, Balearic Islands.



Flat (Ground and elevations) of a taula model.

sketch by Ladd P. Ehlinger is that of Talatí de Dalt, about 4 km west of Maó, the capital of Menorca. The tallest Taula is about 3.7 meters high (about 12') and the top stone always has canted sides and sits on one, tall pillar, composed of up to three stacked stones, with the top centered in the short direction. Some Taulas have angled stones in the vertical that brace it.

Ladd P. Ehlinger

barrier is used; for better protection, a 2-ply roofing system is often used on crawlspace floors. A concrete slab will also work, and for larger projects where maintenance in the crawlspace is a consideration, it can be worth the expense.

Landscaping and Drainage.

The ground around a raised foundation must be drained properly. Preferably, the floor of the crawlspace should be higher than all of the surrounding soil, but often the site conditions don't allow for this. At the very least, one side of the crawlspace floor should be higher than the surrounding soil, otherwise the crawlspace should be treated as a basement, and be provided with a mechanical back-up drainage system.

Where the exterior grade is higher than the crawlspace floor, it's important that the foundation wall be protected against water intrusion, and subterranean drainage be provided. The foundation wall should be coated with asphalt, or given a bentonite clay barrier, and then a french drain installed.

Floor Vapor Barrier.

In an unconditioned crawlspace of an air conditioned building, there needs to be a vapor barrier and insulation between the crawlspace and the floor above. Without this, in warm temperatures, humidity from the ambient air will condense on the underside of the wood floor deck and on the wood joists, leading to mold and fungus rot. This problem is exacerbated if the floor above is sealed with an impermeable varnish (ex: polyurethane), and can lead to damage and cupping of wood floors as one side is repeatedly wetted and the other remains dry being unable to breathe. This is a classic vapor barrier on the wrong side of the floor assembly.

The traditional method of construction is to install batt fiberglass insulation between the joists, and then to install a

reinforced plastic sheeting beneath them, to both hold them into place and to act as a vapor barrier.

Often, in substandard construction, fiberglass batt insulation is installed without a vapor barrier or even straps to hold it in place. In these conditions, the insulation will first sag from its own weight, allowing air to flow between and above them where moisture from the air will condense on the floor deck above.

The insulation will soak up the condensed water, lose its insulating properties, sag even more from the additional weight, become a medium for mold and mildew growth, and eventually fall out as



Batt insulation without vapor barrier will fail.

the glue dissolves on the paper backing holding it in place. Typically, the insulation will be worthless within months of installation in this scenario.

While plastic vapor barriers over batt insulation can be effective, they are prone to being ripped and punctured, and are difficult to seal at overlaps, edges and penetrations. Another potential problem with them is if there is a leak from within the house: water will get trapped between the floor and the plastic. The better solution is a closed cell foam insulation.

Closed cell foam insulation acts as both insulation and a vapor barrier. Because it is sprayed on, it very effectively seals all openings and penetrations.

Crawlspace Ductwork.

Ductwork in a crawlspace needs to be securely strapped to the structure, and

not hanging loosely. Metal ductwork is the optimum choice; flexible ductwork or board ductwork is prone to rips and punctures, and rodents are particularly fond of nesting in ductwork during the winter. Not only will this be an expensive drain on the utility bills, it can also be a health hazard.

Crawlspace Ventilation.

If a crawlspace is protected properly with vapor barriers both on the soil and against the joists, then ventilation of the crawlspace is a secondary concern, but still an important one. Vents need to be installed securely in place, and screened, to prevent animals and insects from entering the crawlspace.

A newer product is temperature sensitive vents. These vents automatically close as temperatures approach 40°F, and open at about 70°F, and run about \$25-\$30 each. In addition to helping control humidity, this helps prevent freezing of pipes during deep

freezes. Note: if you're in a flood zone, there may be special requirements for your crawlspace vents to be flood foundation vents. Flood vents are available with the temperature controls, as well, but the prices are a bit higher.

If high humidity is still a problem, then another option is mechanically venting the crawlspace with fans. However, fans are not adequate if there are drainage problems in a crawlspace, or if the floors are not insulated with a vapor barrier. In fact, adding fans with existing deficiencies can make a problem worse. For example, if the floor isn't insulated with a vapor barrier, adding a fan to a crawlspace can create a negative pressure zone, where the cold air within the structure is forced into the crawlspace and creates greater condensation problems.

R. Perrin Ehlinger, AIA