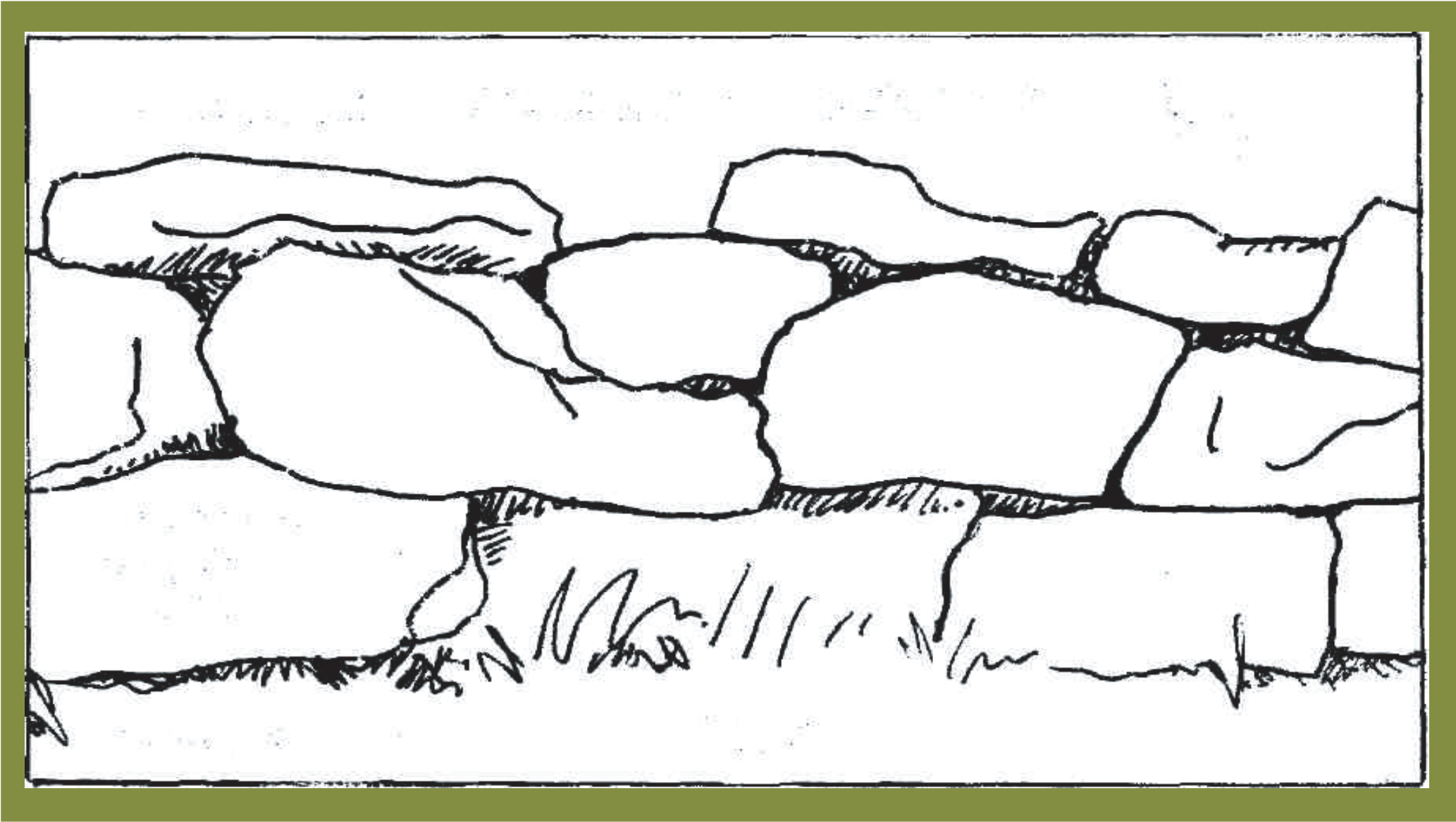


Rock and stone used in foundations

By Joseph D Parrish

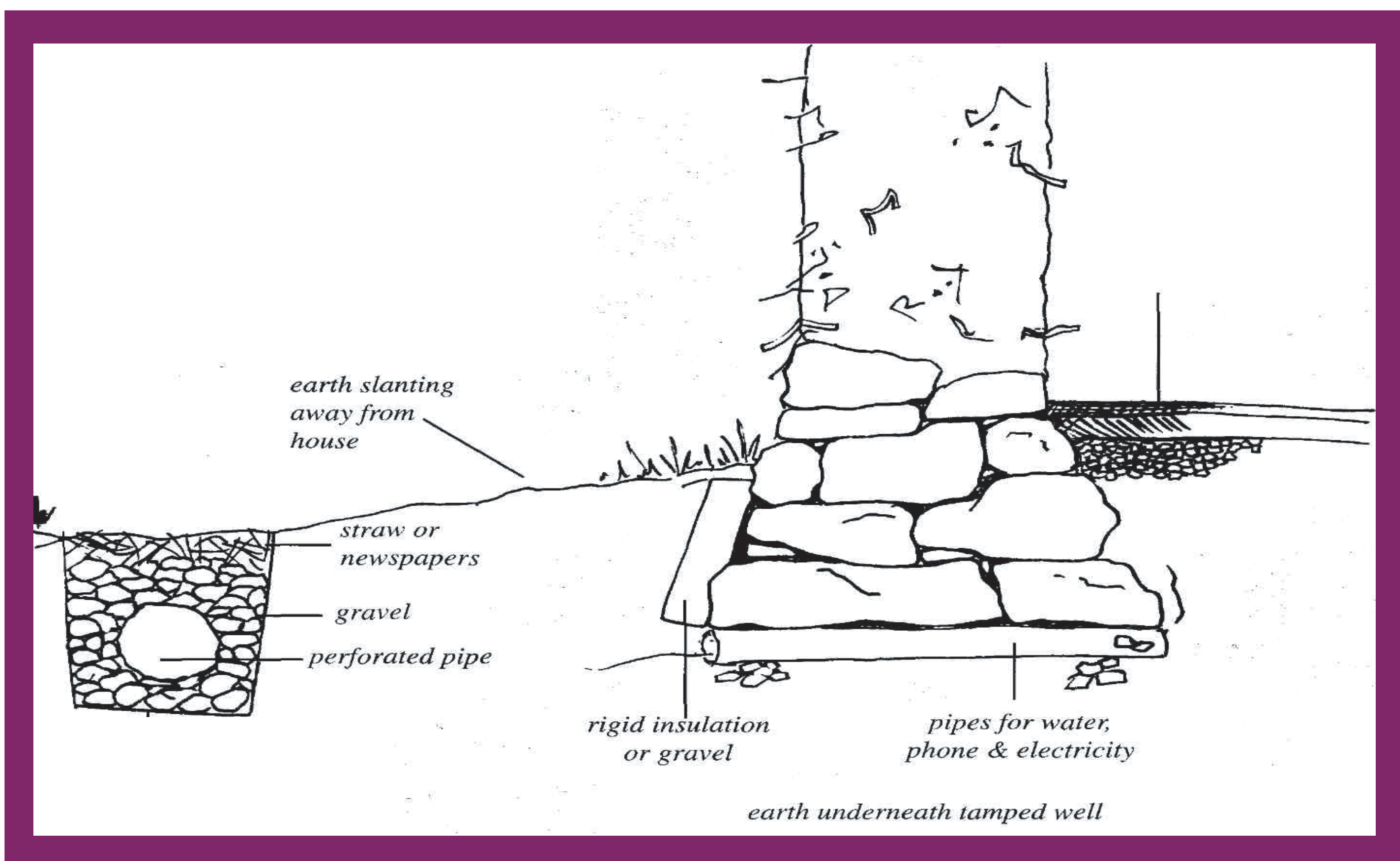


I. Rock or stone foundations, also known as rubble trench foundations, are a good alternative to standard concrete foundations, and are most commonly used in the construction of cob or adobe dwellings. These stone built foundations require intense labor, without the use of a tractor the lifting and hand setting can be difficult.

II. Constructing a foundation starts with a site location that allows for good drainage: an area that is not at a low point but rather a higher area where water can be channeled away from the structure. Two trenches are usually required, one for the rock foundation footings and stem walls which holds up the structure, in this case a small dwelling, and another around the structure located under the eaves to catch the rain fall coming off the roof as well as other surface runoffs do to rainfall.



III. The ground under the stone foundation needs to be compacted preventing it from moving which can crack walls. It is also a good idea to have rocks that have two parallel flat surfaces with many different sizes. Some constructions of the rock foundations use a rubble trench beneath the stem wall back filled with drain rock, instead of a just a rock foundation, to further help with drainage. A insulation on the sides of the foundation is a good idea to further help protect the foundation. It is also good idea to lay a Pipe under the foundation for use of wires and other utilities. It is very important when laying the rock for the foundation to make it sturdy and tight so it can not move easily. Some builders use cement or mud to hold the rocks in place.



IV. The rubble trench around the structure and under the foundation is made of round gravel or small stones compacted tightly. It is 3-4 feet deep and a 1, 1/2 feet wide with a drain pipe or in some cases a wooden, rock or ceramic tunnel below the level of the foundation and below the frost line which is 12 to 18 inches deep (can vary depending on Location). This trench however needs to be wider at the top than the bottom unlike the trench for the rock foundation which is wider at the bottom than the top to help with weight load. Near the surface of the trench will be a barrier of newspaper or straw that will prevent material from filling and stopping the drainage of water. This system is used traditionally in middle east and Frank Lloyd Wright brought this idea to the states in 1902.

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