

The Morton Building as a Prototype On-Grid House

by

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The test house has a cast-in-place concrete countertop with a stainless steel sink, with hot and cold running water. The countertop is covered with low-VOC epoxy. The sink cabinet is made with untreated two-by-fours and knotty aspen; no plywood with formaldehyde. No paint or polyurethane has been used in the building. We have basically a bare concrete floor (no additives in the concrete), powder coated steel panels, and natural wood in the building. The amount of man-made chemicals in the building is very minimal.

The building is heated with baseboard electric heaters. These produce a 60 Hz magnetic field above 0.1 milliGauss (mG) only within a distance of three or four feet from the heater, and less elsewhere. My threshold for noticing an effect is somewhere in the range of 2 to 10 mG, so the heaters do not bother me. Those who are more sensitive than I am can turn off all the heat in the building at the breaker box, and let the thermal mass keep the temperature in a reasonable range overnight. With the heaters off and all the lights on, the magnetic field at the middle of the building is about 0.1 mG. This drops to about 0.02 mG when the main breaker is thrown. I believe this will be acceptable to a large majority of those with EHS, although I know people who need even a lower magnetic field to thrive.

The test house was build by Morton Building Corporation. Morton is a nationwide company that has been in operation over a century, specializing in agricultural buildings with metal roofs and metal siding. The site is surrounded by a ‘forest’ of junipers and pinion pines which pose a significant fire risk in dry, windy conditions. It therefore makes good sense to build all buildings with metal roofs and either metal or stucco siding in this environment, independent of any concern for the EHS/MCS individual.

The Morton technology also works nicely for residential houses by simply adding insulation and interior walls and ceiling. They will install drywall wall and ceiling surfaces if requested, but their preference is to use the same metal panels inside as outside. That means that their ‘standard’ house is basically a double-wall Faraday cage. The interior steel paneling shields the occupants from a 60 Hz electric field produced by power cables inside the walls, something ordinary drywall does not do. I cannot tell that I am impacted by a 60 Hz electric field, but I know people who are. For more information, read the document [BodyVoltage.pdf](#).

Morton supplied steel doors, which I think are standard. The seven windows were standard low-e glass, double glazed, half the window fixed in place and the other half that can be opened. The openable half had a fabric screen that was quite transparent to electromagnetic signals, which I replaced with aluminum screen from Home Depot. I bought frame kits and a 3 ft wide roll of aluminum screen from Home Depot and fabricated larger screens that covered the entire window on the outside. These were simply screwed to the metal trim with sheet metal screws. Mine are quite adequate electrically, but if you want the fabrication to look

professional, you should hire a professional! This reduced the cell phone signals coming from outside the house substantially. Distance from the neighbors is adequate such that the WiFi signals are low outside the test house, and undetectable inside.