Residential Electrical Panel Upgrade Checklist

- ☐ Complete Building Permit Application

- ☐ Plot Plan must include the following - 2 copies
  1. Legal description (parcel # (APN), lot #, subdivision name)
  2. North arrow
  3. Location of existing house, structures, fences, pools, spas etc.
  4. Location of service panels/panel boards to be installed

- ☐ Single Line Diagram – 2 copies
  1. Service point
  2. Conductor location, size, type and number of
  3. Conduit location, proposed burial depth, length of run, size, type and number of

- ☐ Panel Schedule – 2 copies
  1. Before and After panel schedule presentation
  2. Include breaker size, locations and areas of which they serve
  3. Load calculations for subpanel (if applicable)

- ☐ Provide grounding electrode conductor and grounding electrode:
  1. Grounding electrode is a metallic rod driven into the earth.
  2. (2) Ground rods minimum 8’ long
  3. Grounding electrode conductor must terminate on rod with an acorn camp.
  4. Grounding electrode must be a minimum solid #4 AWG bare copper conductor

Or

- ☐ Provide Ufer (concrete encased electrode)
  1. The Ufer shall be 20 feet of solid #4 AWG bare copper conductor in concrete with solid # 4 AWG bare electrode conductor to the service entrance section

- ☐ Bonding
  1. Water Bond – Provide a metallic, minimum #4 AWG bare copper conductor connected with a water bond clamp to the cold water supply at an outside hose bib or at the cold-water piping of the water heater. This must be readily accessible.
  2. Gas Bond – Provide a minimum of #4 AWG bare copper conductor connected on the user side to the gas line with an approved clamp that is readily accessible.

- ☐ **Additional Information**
  1. Keep area clear for 36 inches in front of electric panel
  2. All overhead services must have a point of attachment on the weather head mast.
  3. All breakers inside the service panel must be compatible with the panel cover (dead front) and permanent ink must be used.