

## **Agenda for iLocator Electrical Needs and Tasks**

**Google Drive (for documents etc.):**

[https://drive.google.com/drive/u/1/folders/13x8tUFwPO7dHCTITzIE1Qsd7sNoI7K\\_1](https://drive.google.com/drive/u/1/folders/13x8tUFwPO7dHCTITzIE1Qsd7sNoI7K_1)

If you don't have access to the share, please go request it either directly, or email to Jonathan or Mark SW.

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### **Notes from Friday Design Review held Feb 2 2024**

#### **Electrical**

Primary blocker is assessing if the current 350A panel (~90A used) is sufficient to power both the "dirty-UPS" and "non-UPS" loads. This is particularly important for after an outage when the UPS will have a higher current use

**ACTION 1 [LBT - Jay/Dan R]:** LBT to provide specifics on the three breaker panels inside 3L and capacities **[Fri 9 Feb]**

**ACTION 2 [OSU - Dan P/Jonathan]:** OSU to provide list of loads (typical and maximum) and when items are used. **[Fri 16 Feb]**

**ACTION 3 [OSU - Dan P/Jonathan]:** OSU to update circuit physical layout (using Rahmer\_V6) matched up to which to loads listed above **[Fri 16 Feb]**

**ACTION 4 [AI]:** All documents relating to electrical to be consolidated (into a single rev controlled doc):

Typical/full loads

Circuit schematic

Outlet locations

**ACTION [Jay/Pat]:** Grounding scheme - Need to confirm plan.

**FOLLOW-UP MEETING 1 [Finalizing Electrical]:** Confirm plan for electrical, with clarity on and if current capacity exists. [Dan P, Dan R, Jay, Peter, Jonathan, Mark SW, AI {David} - by Fri 23 Feb]

**Chair: Mark SW**

### **AGENDA**

1. Review what is the current status of the install (**ACTION 1**)
2. Finalize the decision to add or not add further “spare conduit to areas that will become inaccessible once the enclosure has been installed.
3. Discuss what wires/cables must be purchased (size and length) and agree on who is to purchase them and when.
4. Determine if we have enough capacity with the installed breaker boxes (**ACTIONS 2 and 3**)
  - a. Need all of the loads in a spreadsheet (Jonathan/Dan)
  - b. Need the ratings for the three installed panels and the source that feeds them (Jay)
  - c. Get a signoff from Sabina if necessary to show that the loads are safe with the panels that we have
5. Determine what kind of power is needed for the various sensors and monitors that we are proposing (110V where and how much?)
  - a. Safety sensors
  - b. Lights
  - c. Valves
  - d. Pressure or flow sensors
6. Determine what kind of power is needed and where for test loads during HVAC control experiments and tuning
7. Determine what the process will be for using (starting/stopping/resuming UPS backup) for the cryostats), this will possibly indicate other electrical needs.
8. Determine what type of grounds (two?) and how they will be created and where
9. Determine what needs to be in place in order to help fill in interdependencies in the overall schedule.
  - a. Test the glycol system
  - b. Install the room
  - c. Run the HVAC system and start testing
  - d. Conduct tests of safety equipment