



The Gravesend Inn: A Haunted Hotel

Light Plot Update

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Entertainment Technology

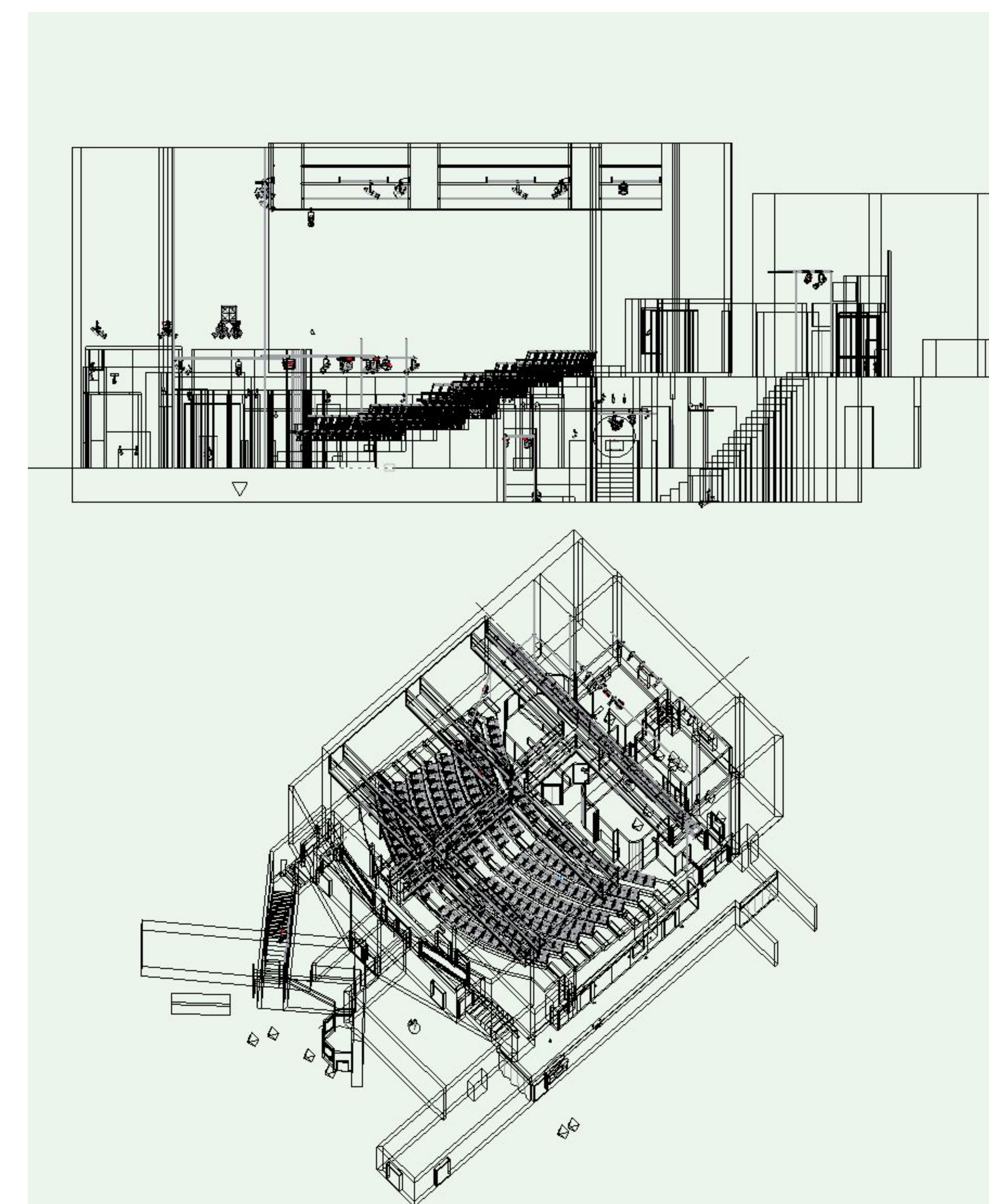
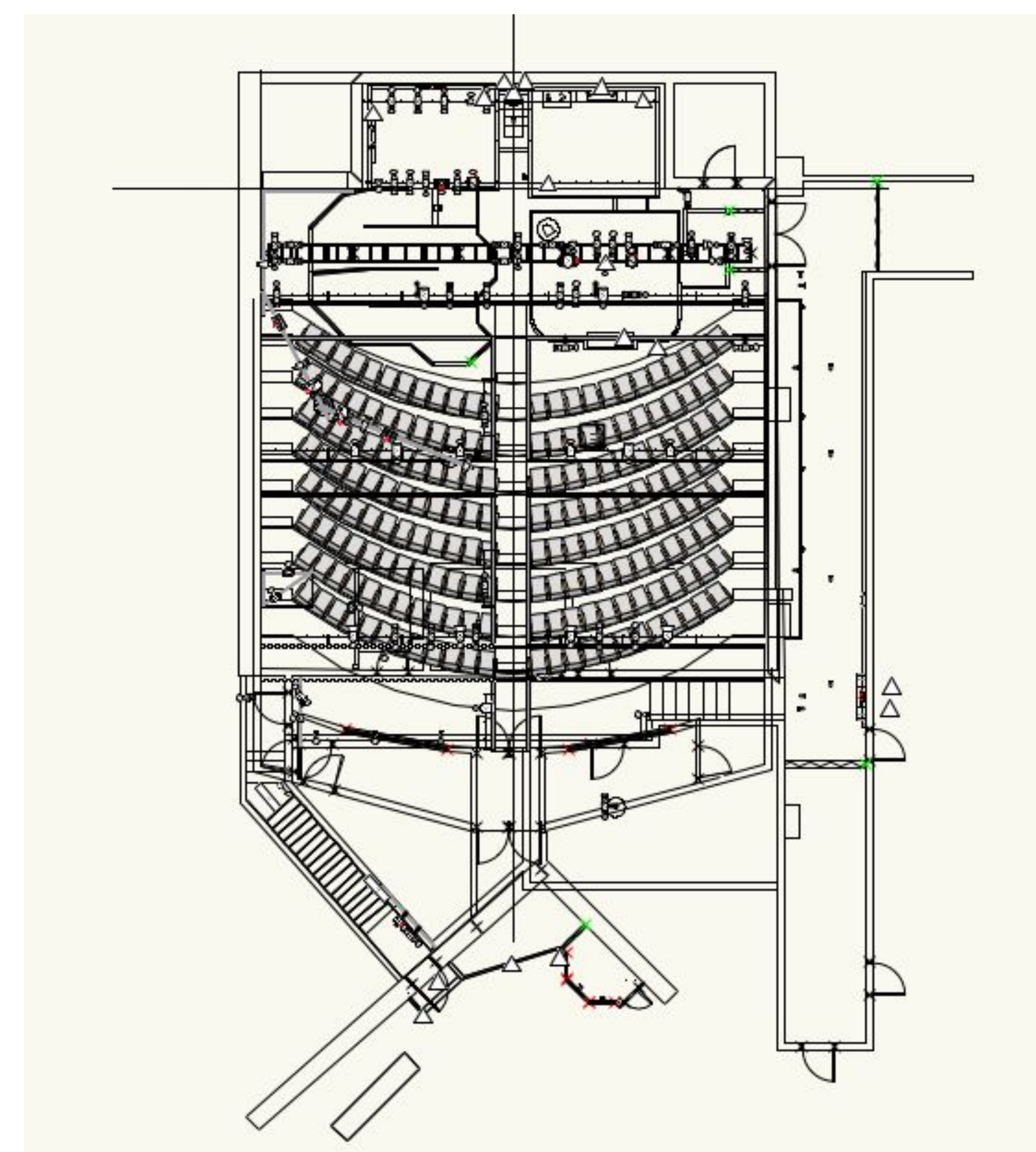


Introduction

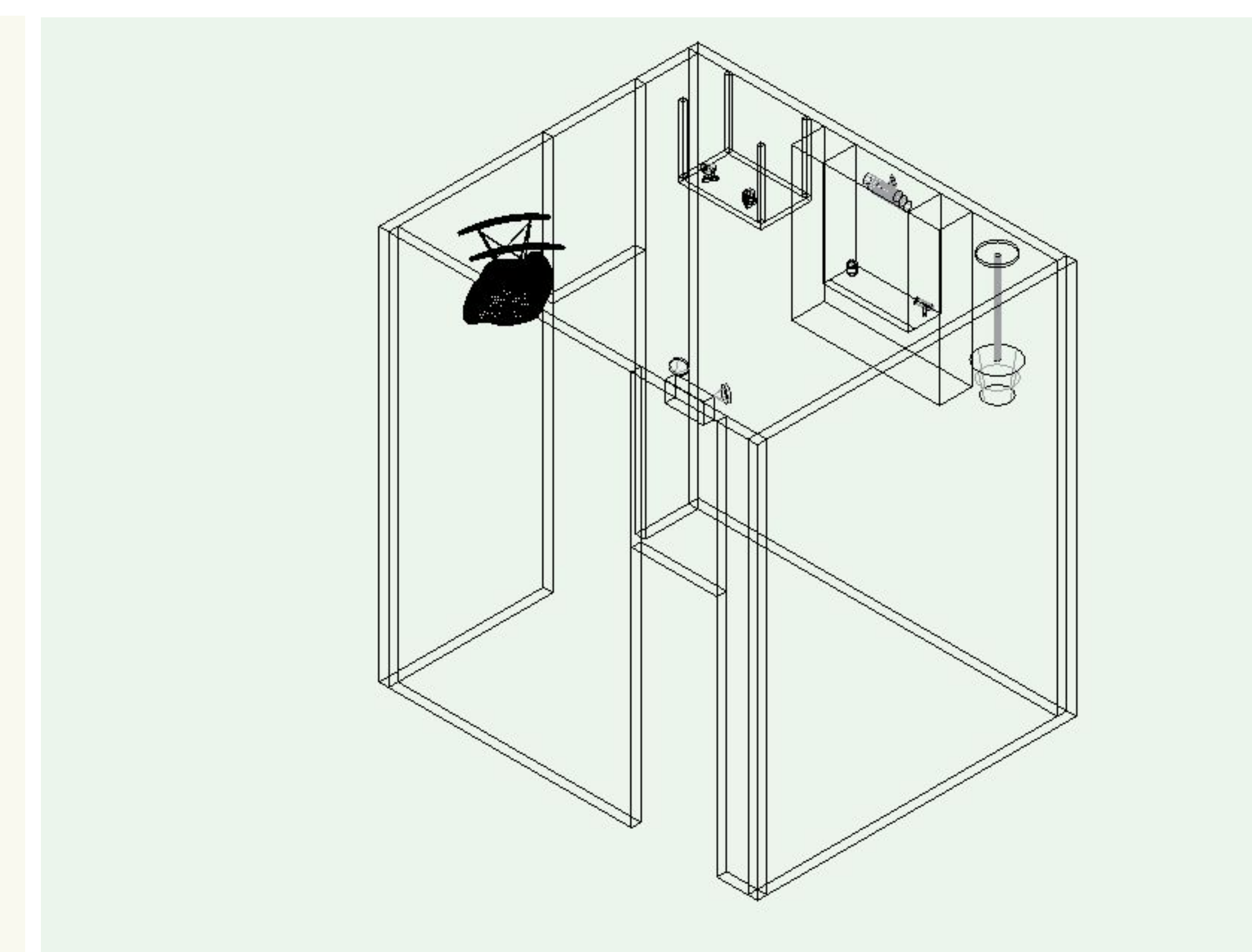
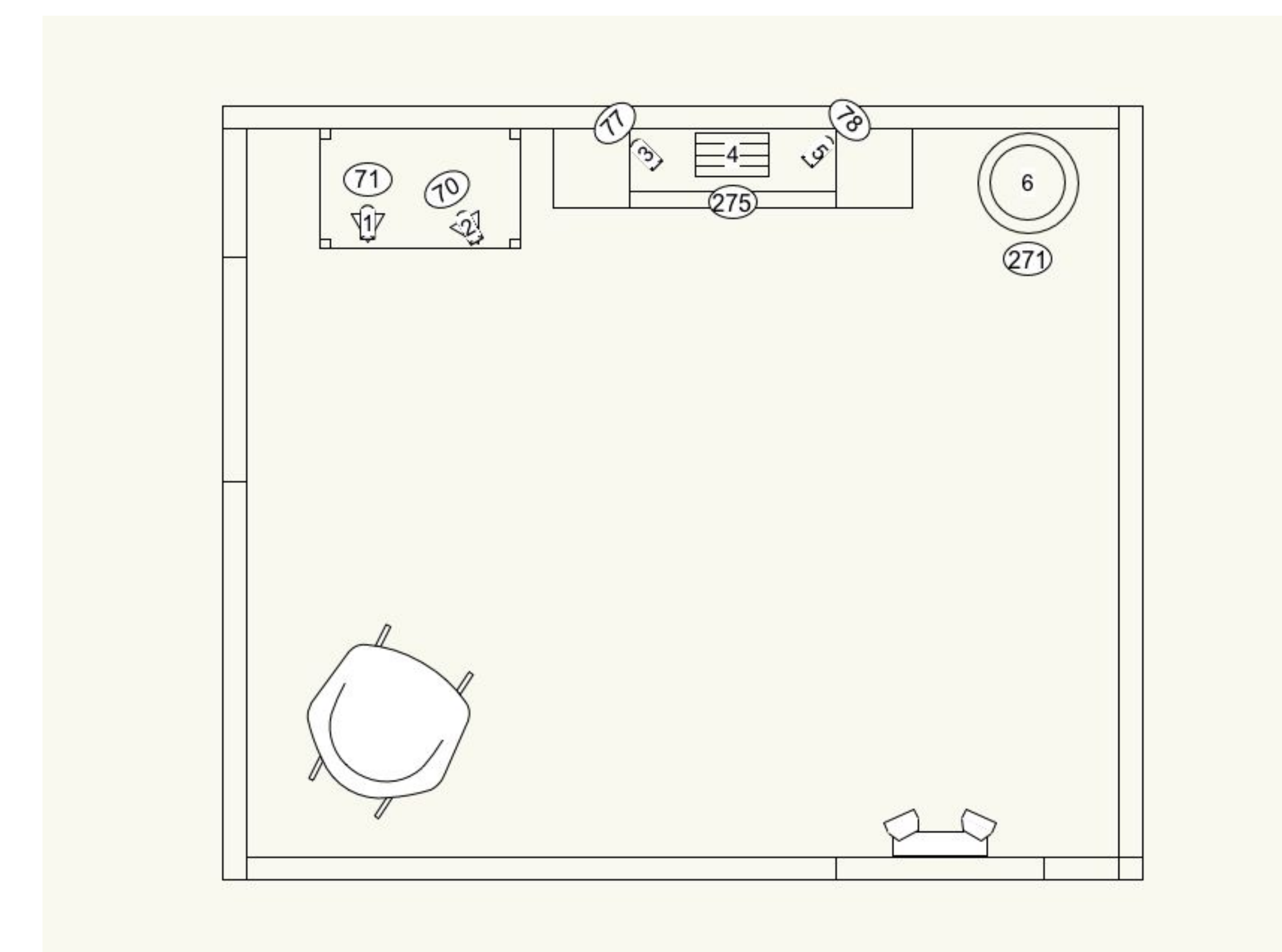
- *The Gravesend Inn, A Haunted Hotel* is a yearly attraction at Citytech. Utilizing many intricate, interactive systems across a variety of mediums requires careful planning and documentation of its setup to ensure repeatability year after year.
- Throughout the attraction's runs, improvements have been made to the lighting system, many of which lack documentation.
- Working as the lighting department's crew head for the past two years has shown me the need for updated paperwork. Similar questions surface yearly regarding the lighting system setup, requiring the production Lighting Designer to clarify.
- A new set of documents for the production's lighting system would express the system in a clear, concise manner, including all of the changes made in recent years.
- While I have some drafting experience, I have yet to complete a project of this scale, which requires careful time management, organization, and communication with the designer. Having managed the system's installation twice in the past gives me the advantage of knowing what isn't expressed in the documents, and changes that need to be made.

Materials and methods

- Install the lighting system again during the attraction's 2019 run, taking notes of any questions that arise and inconsistencies in the existing paperwork.
- Compile and organize every note taken, consider possible solutions and meet with the production's lighting designer to approve of any changes being made.
- Gather existing resources of building dimensions, scenery diagrams, and lighting documentation.
- Set up drafting area; using a second monitor, a number pad, and a desk for reading printouts keeps work moving smoothly.
- Pick symbols, and decide on standards regarding representation of lighting fixture data approved of by the designer.
- Schedule drafting; a large scale draft is a lengthy time investment, requiring plenty of cushioning for unforeseen issues.
- Draft the attraction in 3D, using Vectorworks 2019.
- Populate the draft with lighting fixtures, linking the draft with Lightwright 6, a lighting fixture database software.
- Determine how the draft will be broken up into individual views, and export paperwork for different users (Lighting Designer, Master Electrician).
- Utilize the lighting fixture database to generate supporting documentation (instrument schedules, dimmer hookups).
- Create load in schedule and shop order using new paperwork.
- Upload all files to the lighting department's Haunted Hotel Dropbox.



Top, Side, and 3/4 views. All layers are displayed here, but the actual printed paperwork is broken up by purpose and area.



Without a 3D plot, this area of the attraction was much harder to work on. This room is designed to disorient guests, being rigged upside down. The left is my revision of what was previously the only view we had of Topsy's Parlor. Looking at the right, we see much more detail about where fixtures are placed. Two birches are mounted to the bottom of the table, with two more inside the top of the fireplace, of which both set pieces are hung upside down.

Project Deliverables

- **3D Light Plot:** Attraction drafted in 3D with all lighting fixtures, related devices, and cables documented
 - **Hanging Cards:** Smaller plots of specific areas, used by the crew while setting up the lighting system
 - **Cable layouts:** Map of cable runs throughout the attraction
 - **Scenic Mounted Fixture Elevations:** Section profiles of fixtures mounted inside scenery, or otherwise non-traditionally
- **Fixture Database:** Master list of every fixture being used in the attraction
 - **Instrument Schedule:** List of fixtures grouped by position, ordered by placement
 - **Dimmer Hookup:** List of fixtures ordered by dimmer number
 - **Channel Hookup:** List of fixtures ordered by channel number
- **Shop Order:** List of every piece of equipment needed to set up attraction
- **Load in Schedule:** Order of lighting system setup; after scenery is loaded in, some positions become inaccessible

What I learned:

- Drafting in 3D requires a different workflow than drafting in 2D, and involves careful consideration of the ground plane
- Drafting in 3D eliminates the need for certain "redundancies"; a drafted set piece can be viewed from any angle, and doesn't require more drafting to create section views
- Drafting in 3D is an invaluable tool for lighting design, as a fixture's beam spread can be determined with top and side views
- The end user needs to be kept in mind when creating printouts, as not all information should be included for every user (an electrician placing a fixture shouldn't be bombarded with unnecessary information)
- Time management is key at a project of this scale
 - Memorizing a key command instead of selecting from the toolbar allows for much faster, efficient drafting
 - Taking extra time to set up layers and classes correctly eliminates lots of corrections further down the line
 - Personally, I work better in shorter, more frequent sessions; instead of longer, less frequent bouts.

Acknowledgments

John Robinson- Thank you for all the help, and for tolerating the hundreds of questions I've asked.

Ellie Mallardi- Thank you for being the best Professor a Crew Head could ask for!