Final exam explanation

After ideation, The H ended up as a lever with intervals of stopping (similar to a car drive stick). This inspired the idea to create a driving sim or flight sim controller using the lever as a creative way to control either the speed of the vehicle of the function of the vehicle (ie drive, reverse, neutral, same as a car stick just a different form). This pushes for the other side of the initial to have more buttons for control to make sure the user is able to direct where to go. After some consideration, I decided to imitate a WASD control layout with the two longer buttons as a space bar and shift. Typically both sets of keys are used in many different games as the movement options, hopefully allowing the controller to port over without any issues.

As for some of the components listed that are not in the CAD drawing but are designed for the controller, the center of the controller has a line right between the R and the H. This divet is designed to hold an LED strip that is supposed to give visual feedback of how far the player is pushing their lever. The strip is designed to be in sections where the bottom third is gree, middle thrid would be yellow, and the top third to be red. This gives the user some indication in their peripheral vision of the usage of the lever.

A similar function is designed with the sound as well. On the top side of the controller where the lever would push in, a speaker is designed to go there. This speaker is also supposed to give feedback on how far the lever has been pushed with the potential to turn the volume off if it disrupted the user.

Both of the feedback components are thereto help the player with how they are using the controller if the game they are playing doesn't provide such feedback throughout the game.