

**What Lies Beneath - Player Movement Milestone #1**  
**September 6th, 2022**  
**Milestone 1 - Report #1**

**Introduction:**

It's approaching 1 Week, so here is a report on what has been done since approving the project/milestone.

I plan to have these reports weekly, but if you would like more or less, please do not hesitate and I will do my best to accommodate.

**What Has Been Done:**

It's been great working with some high quality assets to begin with, showing some nice results to begin with. Please see the gif library [here](https://imgur.com/a/XAhMfN8)(<https://imgur.com/a/XAhMfN8>) showcasing some of the results talked about in this document.

Taking the Gas Station picture provided, I traced out and cut pillars, Roof, Gas Stations, and even a balloon to make the world have depth and provide them bodies to stop the player from walking into them.

Player (Ethan) can move around within the boundaries of the level, and automatically go in front of or behind the sprites of the world automatically using YSort.

Ethan can Sprint with either holding the shift button, or pressing the CapsLock button to toggle the run.

Pulling out/Putting back a Gun, Kneeling or Aiming Stops Ethan from moving, and limits options on what can be done. With the gun out, players are limited to walking and unable to run.

Aiming moves around an Ray Cast to match with cursor and a laser pointer line. This will allow for checking for bullet hits in the Combat Milestone. The laser pointer and Ray Cast will collide and stop on the first obstruction/enemy. If Controller Support is wanted, we can try implementing an up/down on the laser pointer.

We currently have implemented a basic shader to create a fog effect. This though can be replaced with pixel art fog as well.

You will see that there is an Interactable Object shown in the last gif, but I won't be marking it completed as I want to standardize/make it a bit more generic for easier implementation.

**Challenges/Lessons Learned**

The laser pointer for the gun colliding with the world has needed to include a separate body for bullets. This allows the laser pointer to hit a pillar, or shoot around a pillar(or between the gas pumps). This though is static and I have tweaked the current bodies to try and compensate for

the perspective shifts, there may need to create a perspective system that updates bodies based off of the position of the player. I do not think that's something to worry about now, but whenever you play around with the build, it's a detail to keep in mind.

**Delivered in Commit 4aec2cb(Player Movement Branch)**

- ☐ General Movement
  - ☒ Walking
  - ☒ Running (Hold-Shift)
  - ☐ Hidden Stamina Bar
  - ☐ Climb Ladder
  - ☐ Fall/Drop
- ☐ Interactions
  - ☐ Push/Pull Box/Climb Box
  - ☒ Kneeling (Looting/Interacting)
  - ☐ Interactable Object (Shimmer)
- ☒ Basic Combat
  - ☒ Aiming (across the walkable axis)
  - ☒ While Aiming you can only Walking
  - ☒ Button to pull out gun
- ☒ Game Camera
  - ☒ Dynamic Camera Primarily on Character