

# **Undercut – Level Design Document**

Olivia Ngo

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## High Level Overview

### Level Goals

#### Design goals

#	Objectives
1	Various routes to get to the objective
2	Balanced map for all classes of TF2
3	Varied chokepoints and good map flow
4	Place cover elements in combat areas to create tactical opportunities

#### Gameplay goals

#	Objectives
1	Fair and balanced gameplay around the capture point
2	Flanking routes to provide alternate paths for players
3	Fast-paced and varied gameplay
4	Verticality for different classes

### Expected player experience

- A constant sense of action with minimal downtime or standoffs
- Use of flanking routes for scouts and spies
- Ensure replayability, aligning with the KOTH dynamics

### Design Considerations

- **Symmetrical Map Layout:** Following regular KOTH map design, ensure the map is symmetrical to provide equal opportunities for both teams
- **Three lane structure:** Utilise a three-lane structure to provide alternate paths to the objective
- Follow the whiteboard test, between *intermediate* and *advanced* levels to follow TF2 conventions
- **Class balance:** Include areas that cater to all class types, such as open spaces for Snipers, tight corridors for Pyros, and high ground for Soldiers and Demomen.

## Map Overview

### Map Structure

The map is designed with the 3-lane structure and connected paths for map flow. The image below is the level design diagram for the final version of *Undercut*.

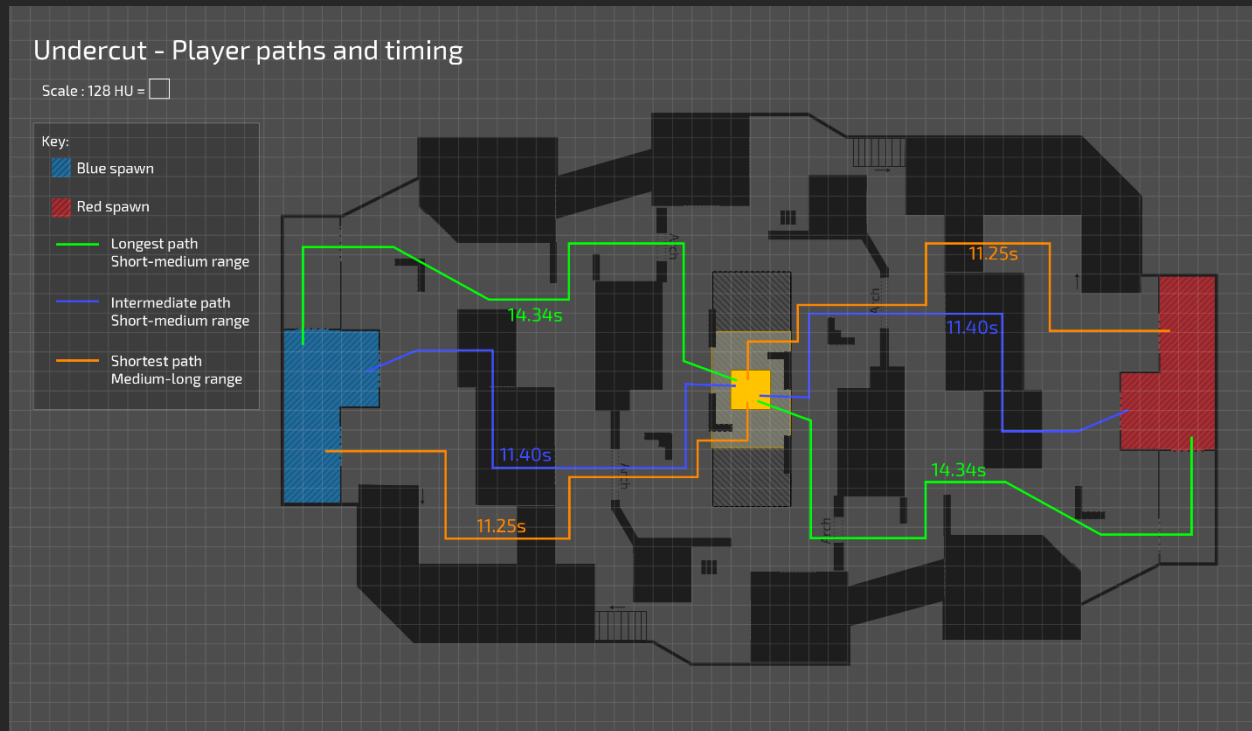


### Player paths

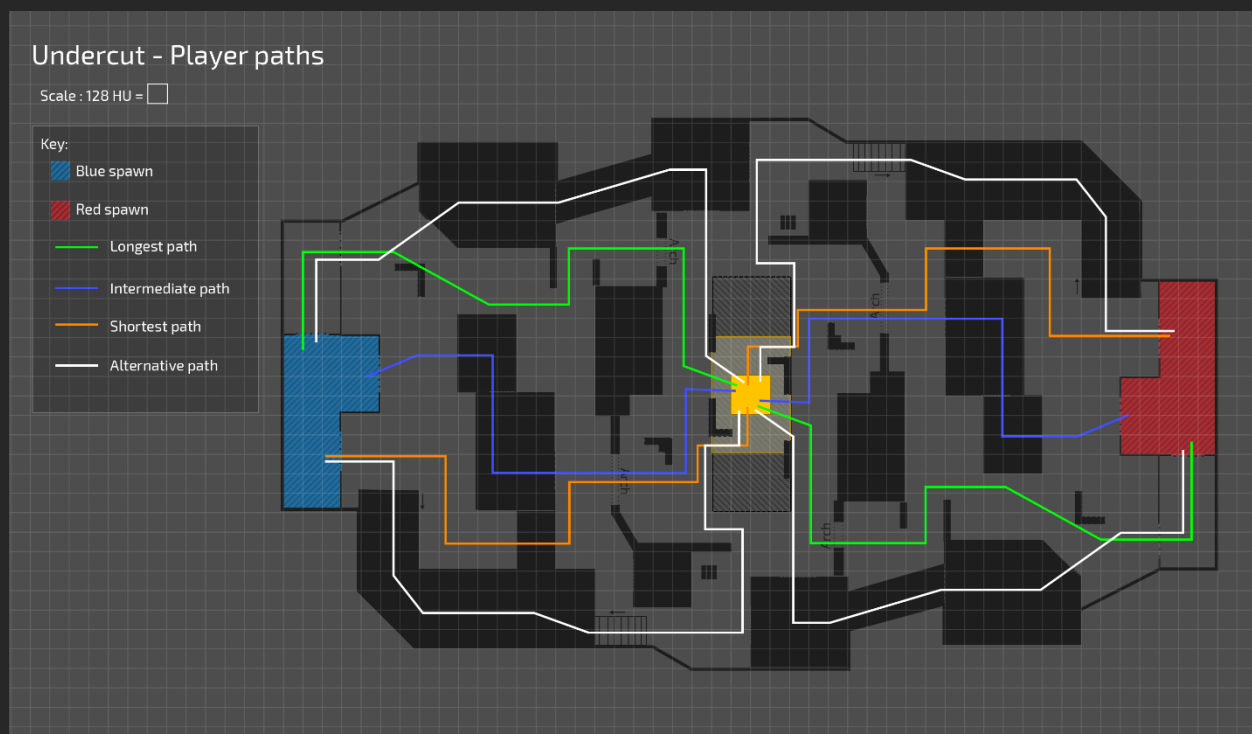
There are 3 primary lanes that players can take, each suitable for short, medium, and long range. Aside from the 3 primary lanes, there are alternate sub-paths that are connected for map flow so that players can switch paths if desired.

I tested each path's timings to ensure alignment with class roles: the longest path favours short-range classes, while the shortest suits medium-to-long-range classes.

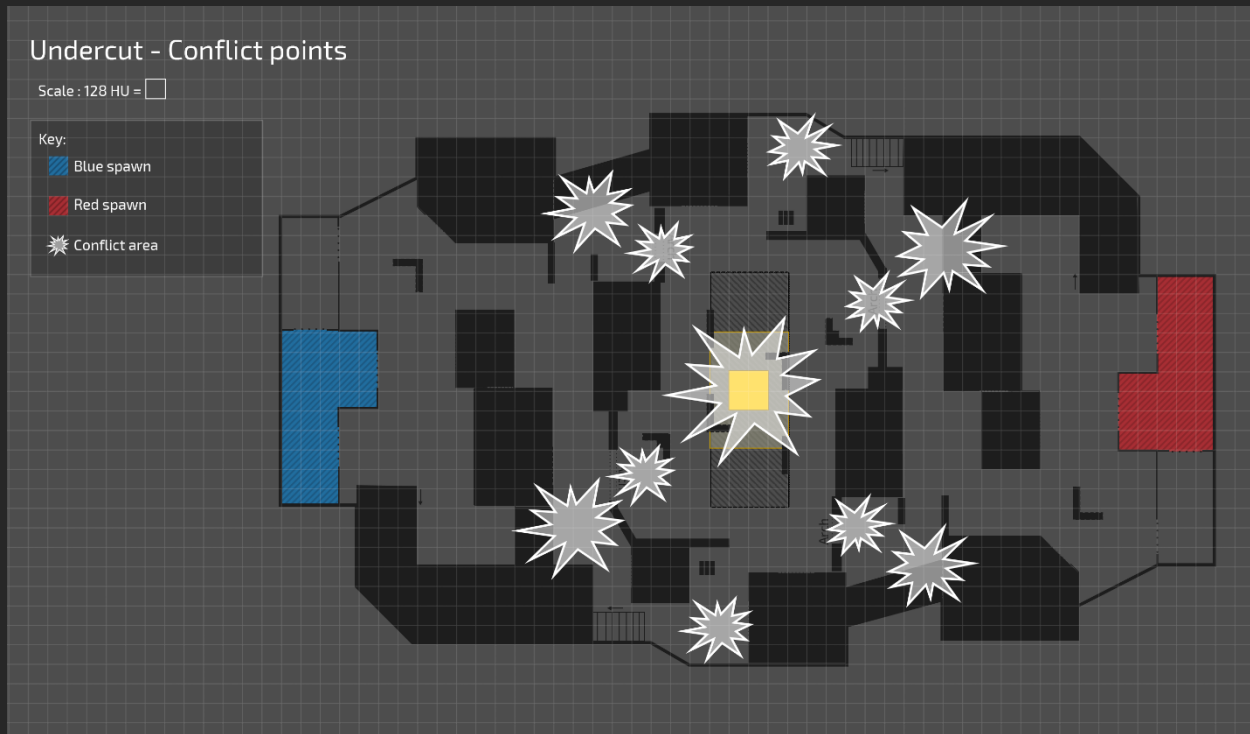
The following image shows the 3 primary lanes illustrated on a simplified level design diagram of *Undercut*.



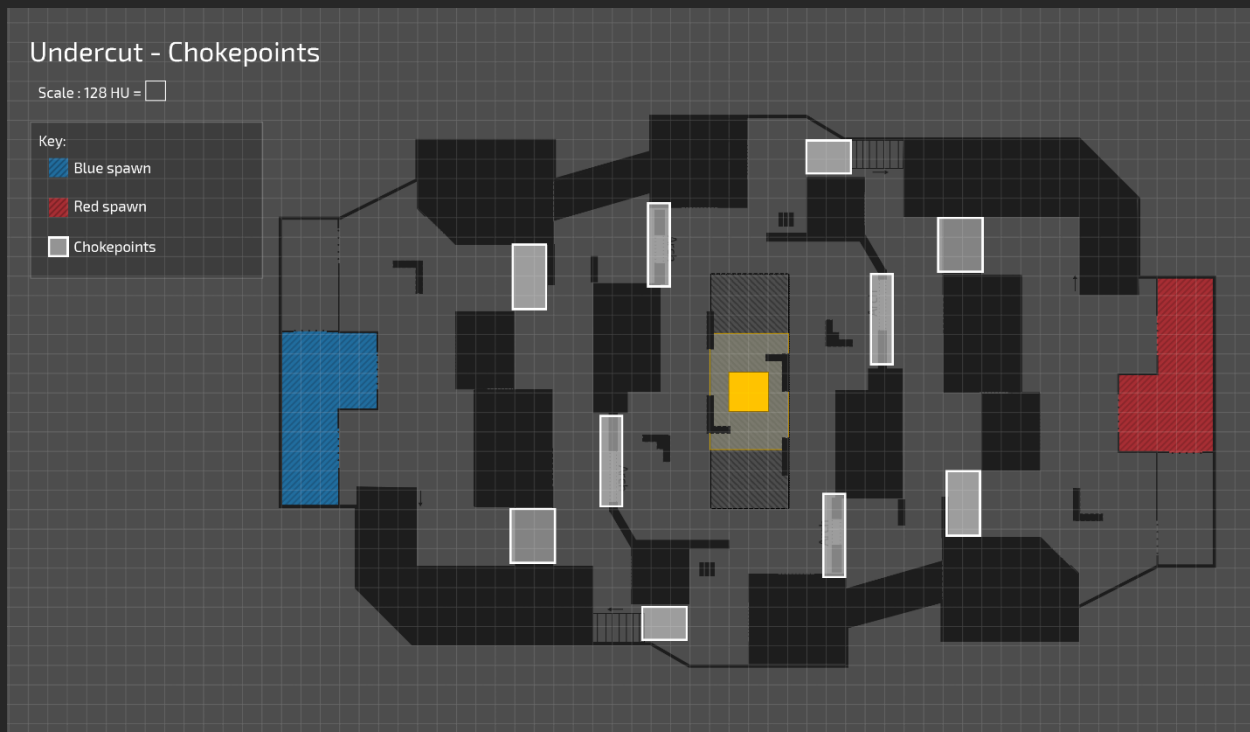
This image illustrates the alternate paths available:



## Conflict points

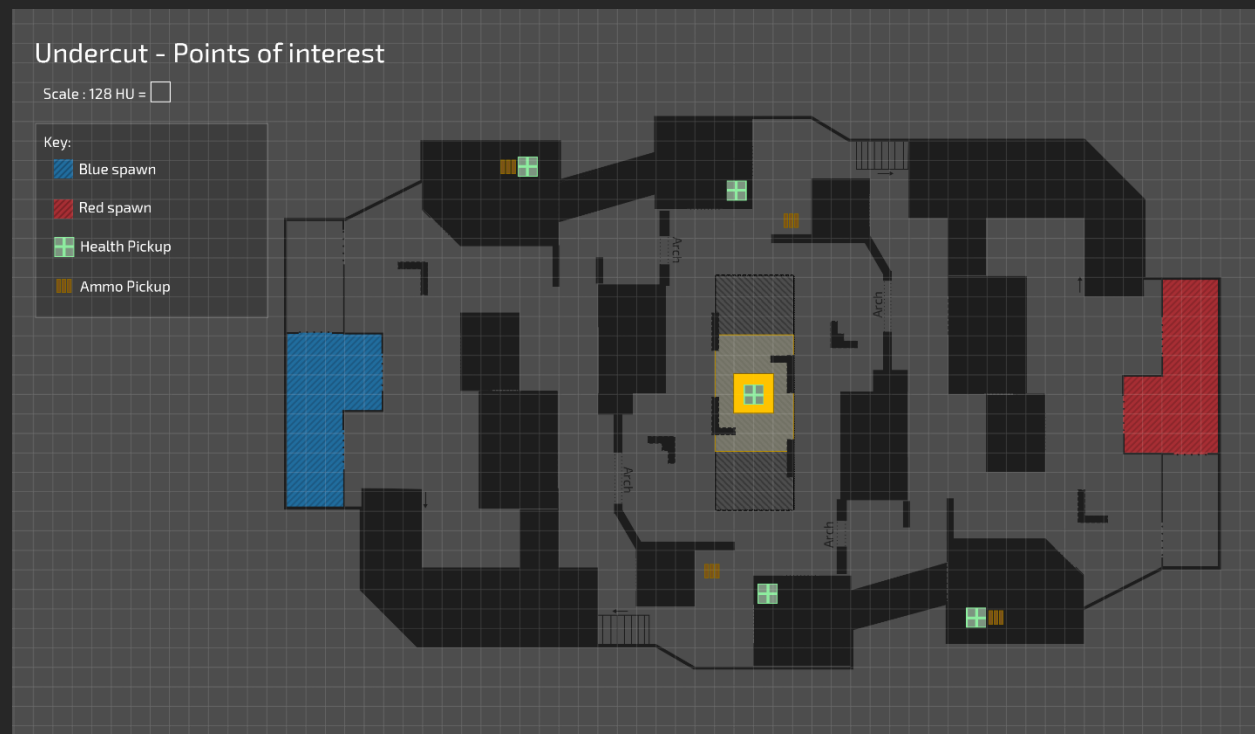
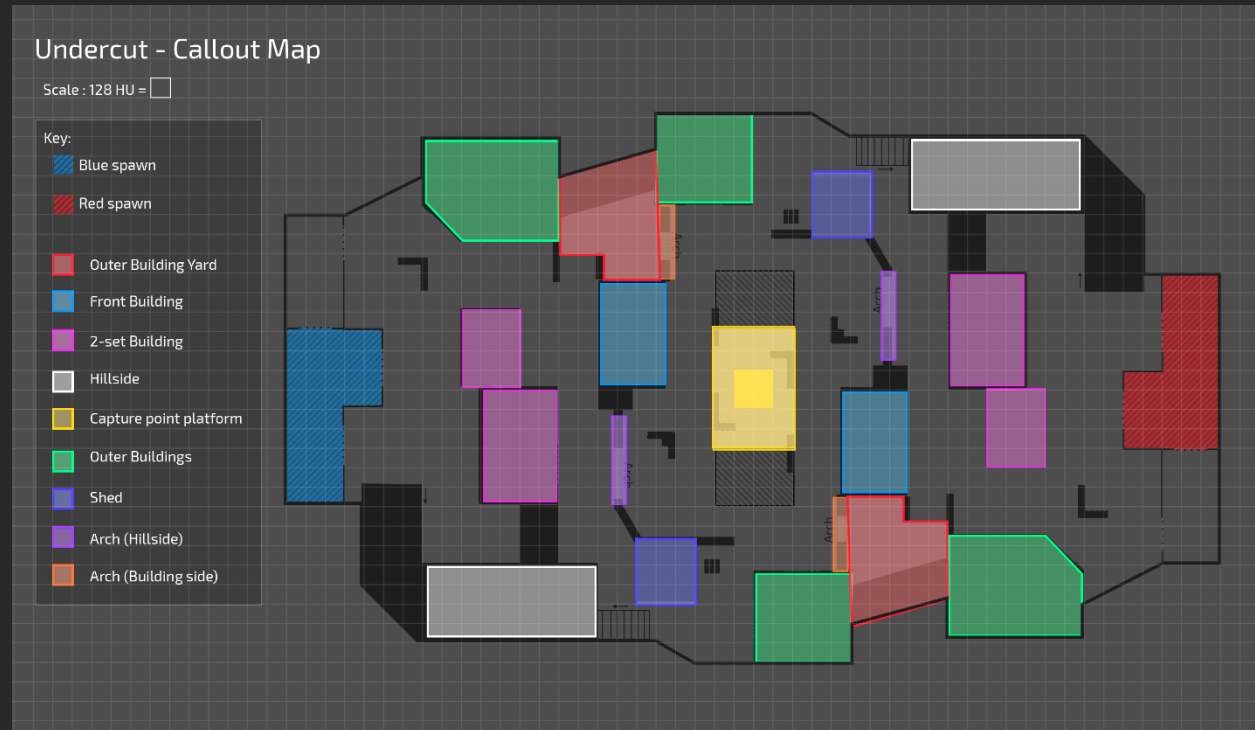


## Chokepoints



## Points of interest

The map features well-defined points of interest, such as the central buildings and yard conflict points, flanking routes, and resource areas, to encourage dynamic gameplay.







- Cover in the different Yards make it suitable for Heavy gameplay
- Cover around the capture point ensures fights for the objective can be balanced

#### Demoman

- Demoman can use elevation with special movement jumps, specifically in the Shed and Arch (hillside) area
- Demoman can use entrances to buildings etc. to spam sticky bombs

#### Engineer

- Engineer has a few niche spots where turrets and setup will be strong, like Shed Yard and Outer Building Yard
- Should make use of cover in these spaces to set up their equipment

#### Medic

- Medic is weaker in open areas, smaller areas or spaces with cover like Front Yard are stronger for Medic as they can kite for combat

#### Spy

- Spies can flank using the flank route past Hillside and Shed
- Open areas are weaker for spies if they engage in combat, so they should use smaller areas like Front Building to sneak past enemies

#### Sniper

- Outer Building and Outer Building yard are strong areas where Sniper should play due to the longer sightlines
- Sightlines from other areas like 2-set Buildings and Shed yard offer weaker sightlines and sniper may struggle due to match-ups against other classes

## Balance

### Expected issues

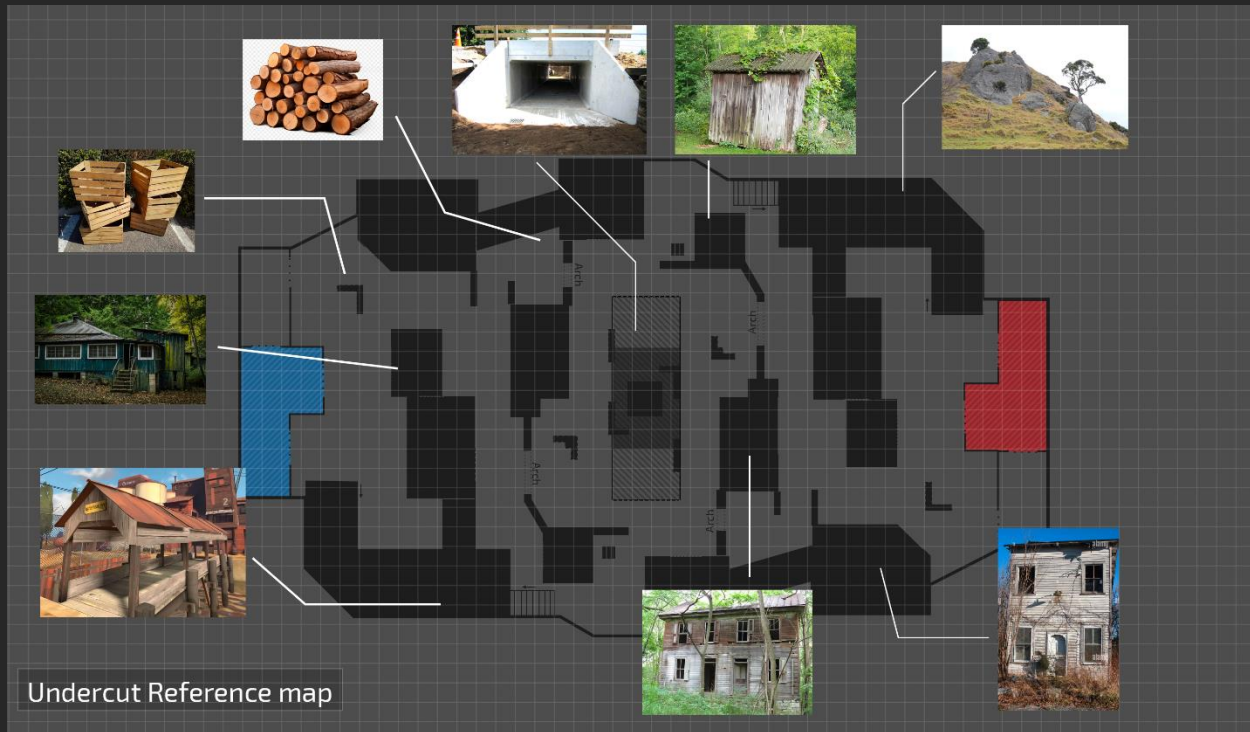
Problem	Problem detail	Solution
Sniper domination	Snipers need open and long sightlines	Add more cover to block long sightlines. Add flanking routes to allow other classes to bypass Sniper
Lack of flank routes	Spies and scouts need to make use of flanking routes to make full use of their character	Create additional side routes that connect areas and paths
Control point domination	One team may have an easier time holding the control point due to cover around the point	Balance cover around the control point to ensure it doesn't favour defense- this has been done over playtesting
Engineer overpower	Engineer turrets can be overpowering if upgraded to Level 3, and put in a hard-to-reach area	Limit defensible areas around the control point and ensure intentional areas for engineers are the primary spots for them
Excessive resource reliance	Too many health/ammo pickups make players reliant on them. Reduces punishment for overextending/mistakes	Balance number of pickups around the map and place them near the edges of the map so that players only get them when retreating or flanking
Spawn camping	Spawn camping can be a huge issue in TF2 if map design lacks transitional spaces	Add multiple spawn doors and add cover or buffers in front of the spawn area

## Aesthetics

### Visual Development

- Visual theme is a setting in the woods or a forest, surrounded by rocky cliffs
- Buildings are to be run-down wooden or concrete buildings
- Taking inspiration from existing TF2 maps like Viaduct and Sawmill for their buildings theme and map setting

## Reference map



## Affordance

- Arrow signs are placed around the map to guide players toward objectives and key areas
- Lighting is used to draw attention to critical locations
- **Navigational Affordance:** The map layout is structured to naturally guide player movement, with pathways and visual cues leading toward key objectives
- **Colour Affordance** in Pickup Decals: Decals beneath health and ammo pickups incorporate colour affordance, using distinct colours to make their purpose and location immediately recognizable to players

