Overstream Level Design Documentation

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High Level Overview

Level Goals

The goal with the level is to create a balanced *Team Fortress 2* map with a strong focus on an open space around the point that the action is funnelled into. To compliment the open space idea of the design, a goal is to include multiple branching paths that players can use to get to the central conflict zone, with different ones being better for different classes. The intention is to make a map that while being open is on the smaller side of *Team Fortress 2* levels to make the map more fast-paced and making it easier to get to the point. To contribute to the open feeling, the intention is to have the map follow the 3-path structure, but give players different options along those paths to change up the gameplay style and accommodate for the classes in more ways.

Design Considerations

To make the map design balanced, the normal playstyles of each class need to be considered.

Scout

Scout is a class that works best at attacking the enemy team, especially using the flanking paths to get around their defensive line and pick them off one by one. They are also very good at rushing the point, as they have double the capture rate of any other class. *Scouts* excel with larger areas that they can traverse through quickly using their high speed, and can use their *Double Jump* to access areas most classes wouldn't be able to. However, they are one of the classes with the least health, so don't do well in areas containing little cover and ones they can't easily escape from. They also are required to get closer in to be most effective, as their main *Scattergun* weapon is only useful close to the target.

Soldier

Soldier is an offensive class that is very good at attacking the point with the powerful rocket projectiles they can fire. *Soldier* is a fairly slow moving class, but can rocketjump to get very high up, taking some explosion damage in the process. Because *Soldier* can rocketjump, they excel at maps that have changes in elevation to take advantage of their rocketjumping ability. They can also be good at defending by firing onto the point. A specific design consideration with this ability for *Soldier* is to make sure all the roofs of the buildings are inaccessible, so *Soldier* cannot get on top and have a huge advantage. With the rockets being projectiles, they also do better in areas that are more open.

Pyro

Pyro is best suited to ambushing enemies using their *Flamethrower*, being able to damage enemies and leave them on fire afterwards. They aren't well suited to

attacking enemies directly as they don't have any good ranged attacks and will be picked off before being able to be effective. Due to this, to make sure *Pyro* can be an effective class on the map it needs to be designed with more closed in areas for the class to make use of. *Pyro*'s *Flamethrower* can airblast, being able to reflect projectiles back in the direction they are coming in.

Demoman

Demoman revolves around using explosive projectiles to defend, as well as being able to set up stickybomb traps. Traps are best used on doorways to catch enemies off-guard, and they also can be useful to set up on the control point. *Demoman* can be countered by *Pyro*'s airblasts, and stickybombs can be shot at and exploded from a distance if they are noticed. Making sure the point has good cover will be something that makes *Demoman* useful on the map, as they can also use them as a wall to bounce the physics-based grenades off. *Demoman* is also good at melee combat, so would benefit from areas that are more close-quarters.

Heavy

Heavy has very fast fire speed and high health, making them very powerful at applying pressure and wiping through teams. They are a class that is very good at defending the point from enemy pushes, and can benefit greatly from maps that have chokepoints near the control point area. The class's slow movement speed makes them not very well suited for attacking without working with support classes like *Medic*.

Engineer

Engineer is best suited towards defending a captured point, being able to bolster the team's coverage using their sentry gun. They can also build *Dispensers* to heal their team, and *Teleporters* to get players closer to the action quicker. *Engineers* require metal to build with, so are best suited to covered in areas they can set up in and have easy access to an ammo pickup.

Medic

Medic is the healer of the team, being able to support the playstyles of the different classes. Typically best paired with high-powered, but slow-moving classes like *Soldier* and *Heavy*, *Medic* can constantly heal with their *Medi Gun* making teammates much more of a threat. They can also make themselves and the healed teammate invulnerable for a short time using their *ÜberCharge* ability. The downside of *Medic* is not having very good weapons themselves, making them easy to deal with when on their own. *Medics* work best when there is some cover to use when they are healing others, but it could be unbalanced depending on how/where said cover is implemented on a map.

Sniper

Sniper plays best from afar, nesting in a good sightline that is well defended, and firing down onto the action. They don't have many good close-quarters options, so are susceptible to being flanked. The map will need specifically designed spots for *Sniper* to make use of without being completely overpowered, so long sightlines will need to be accounted for using cover elements.

Spy

Playing *Spy* completely revolves around flanking around the enemy's defensive line to attack from behind. They can turn invisible and disguise as a player on the other team, and backstab with their *Knife* to get an instant kill. *Spies* also have an *Electro*-Sapper, which is used to disable *Engineer's* sentry guns. For *Spy* to be useful on the map, there will need to be covered in places where they can turn invisible/disguise to attack. They can

Expected Player Experience

The intended player experience is to focus the gameplay on the centre of the map, with most of the fighting being centred on the control point. It shouldn't feel unbalanced between the 9 playable classes with one being much more dominant than the others, and the different paths to the point should be balanced such that there isn't one that is obviously better than the others.

Class Research

Scout

⊕ 125 | Overheal: 185

» 133% (17mph)

Abilities
- Captures point double the normal speed
- Can double jump in mid-air

Primary Weapon: Scattergun
Pellets Per Shot: 10
Damage (per pellet): 6
Ammo Per Clip: 6
Full Ammo Count: 32

- High damage at close range, but high amount of damage falloff
- Lots of bullet spread

Secondary Weapon: Pistol
Pellets Per Shot: 1
Damage (per shot): 15
Ammo Per Clip: 12
Full Ammo Count: 36

- High damage at close range, but high amount of damage falloff
- Lots of bullet spread

Melee: Bat
Damage: 35
Attack Speed: 0.5s

Soldier

⊕ 200 | Overheal: 300

» 80% (10.2mph)

Abilities
- Can rocket jump to gain lots of speed and height

Primary Weapon: Rocket Launcher
Shot Type: Rocket Projectile
Damage (per projectile): 90
Ammo Per Clip: 4
Full Ammo Count: 20

- Explodes on contact, dealing area damage

Secondary Weapon: Shotgun
Pellets Per Shot: 10
Damage (per shot): 6
Ammo Per Clip: 6
Full Ammo Count: 32

- High damage at close range, but high amount of damage falloff
- Lots of bullet spread

Melee: Shovel
Damage: 65
Attack Speed: 0.8s

Pyro

➕ 175 | Overheal: 260

➡️ 100% (12.8mph)

Primary Weapon: Flamethrower

Shot Type: Fire Particle
Damage (per second): 130
Ammo: 200

- Particles set enemies on fire, dealing burn damage
- Can airblast to reflect projectiles

Secondary Weapon: Shotgun

Pellets Per Shot: 10
Damage (per shot): 6
Ammo Per Clip: 6
Full Ammo Count: 32

- High damage at close range, but high amount of damage falloff
- Lots of bullet spread

Melee: Fire Axe

Damage: 65
Attack Speed: 0.8s

Demoman

➕ 175 | Overheal: 260

➡️ 93% (11.9mph)

Primary: Grenade Launcher

Shot Type: Explosive Projectile
Damage (per shot): 100
Ammo Per Clip: 4
Full Ammo Count: 16

- Grenades detonate on contact or after 2.3 seconds, causing splash damage

Secondary: Stickybomb Launcher

Shot Type: Explosive Projectile
Damage (per shot): 120
Ammo Per Clip: 8
Full Ammo Count: 24

- Stickybombs stick to whatever surface they hit
- Explosion controlled with ALT Fire

Melee: Bottle

Damage: 65
Attack Speed: 0.8s

Heavy

➕ 300 | Overheal: 450

» 77% (9.8mph)

Primary Weapon: Minigun

Shots per Second: 10
Damage (per shot): 9
Ammo: 200

- Has a 0.87 second wind up period before firing

Secondary Weapon: Shotgun

Pellets Per Shot: 10
Damage (per shot): 6
Ammo Per Clip: 6
Full Ammo Count: 32

- High damage at close range, but high amount of damage falloff
- Lots of bullet spread

Melee: Fists

Damage: 65
Attack Speed: 0.8s

Engineer

➕ 125 | Overheal: 185

» 100% (12.8mph)

Abilities
- Can use Construction PDA to build sentry guns, dispensers and teleporters

Primary Weapon: Shotgun

Pellets Per Shot: 10
Damage (per shot): 6
Ammo Per Clip: 6
Full Ammo Count: 32

- High damage at close range, but high amount of damage falloff
- Lots of bullet spread

Secondary: Pistol

Pellets Per Shot: 1
Damage (per shot): 15
Ammo Per Clip: 12
Full Ammo Count: 200

- High damage at close range, but high amount of damage falloff
- Lots of bullet spread

Melee: Wrench

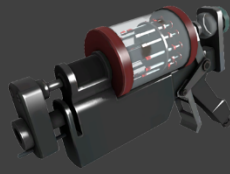Damage: 65
Attack Speed: 0.8s

- Can be used to repair buildings

Medic

➕ 150 | Overheal: 225

》 107% (13.6mph)

Primary Weapon: Syringe Gun

Shot Type: Projectile
Damage (per shot): 10
Ammo Per Clip: 40
Full Ammo Count: 150

- Weak shots that at a fast rate
- The fired projectiles are very slow, making it back at range

Secondary Weapon: Medi Gun

Base Heal Rate: 24 per second
Out of Combat Heal Rate: 72 per second

- Overheals allies to 150% of base health
- Has a chargeable ÜberCharge ability that makes player and currently healed ally invincible for a short time

Melee: Bonesaw

Damage: 65
Attack Speed: 0.8s

Sniper

➕ 125 | Overheal: 185

》 100% (12.8mph)

Primary Weapon: Sniper Rifle

Damage (per shot): 150
Critical Damage: 450
Ammo: 25

- Can scope to zoom in on far away targets
- Guaranteed critical hit on every headshot

Secondary Weapon: SMG

Shot Type: Hitscan Bullet
Damage (per shot): 8
Ammo Per Clip: 25
Full Ammo Count: 75

- Fast fire rate that gets more inaccurate the longer the gun is shot

Melee: Kukri

Damage: 65
Attack Speed: 0.8s

Spy

➕ 125 | Overheal: 185

»» 107% (13.6mph)

Abilities
- Can turn invisible for a short time

Weapon: Revolver

Shot Type: Hitscan Bullet
Damage (per shot): 40
Ammo Per Clip: 6
Full Ammo Count: 24

- Slow fire rate and reload time

Melee: Knife

Damage: 40
Attack Speed: 0.8s
Backstab Damage: 600% of target's health

- When used from behind, a backstab is performed
- No random critical hits

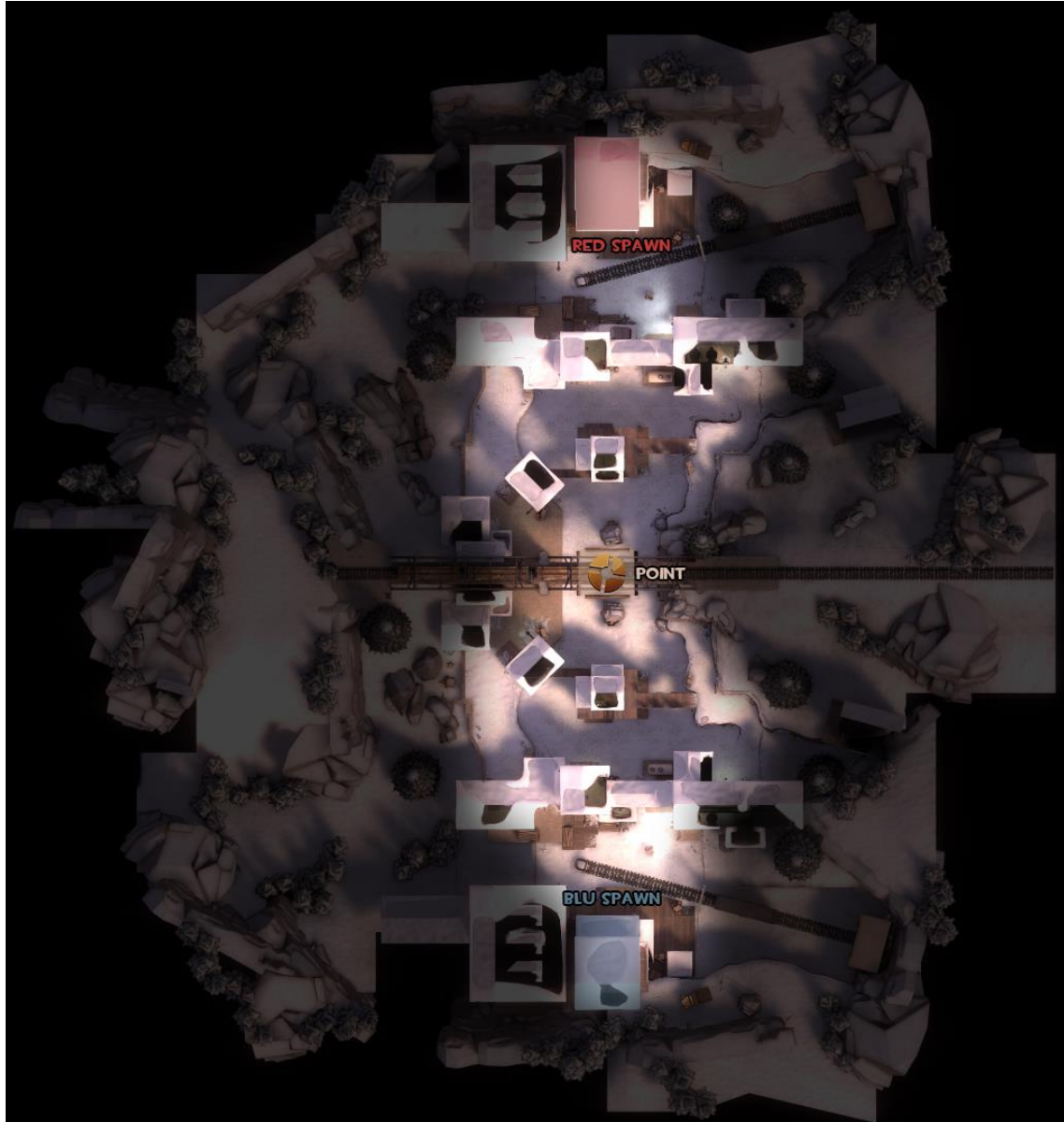## PDA: Disguise Kit

- Allows Spy to disguise as another class
- Can pick any class and either team
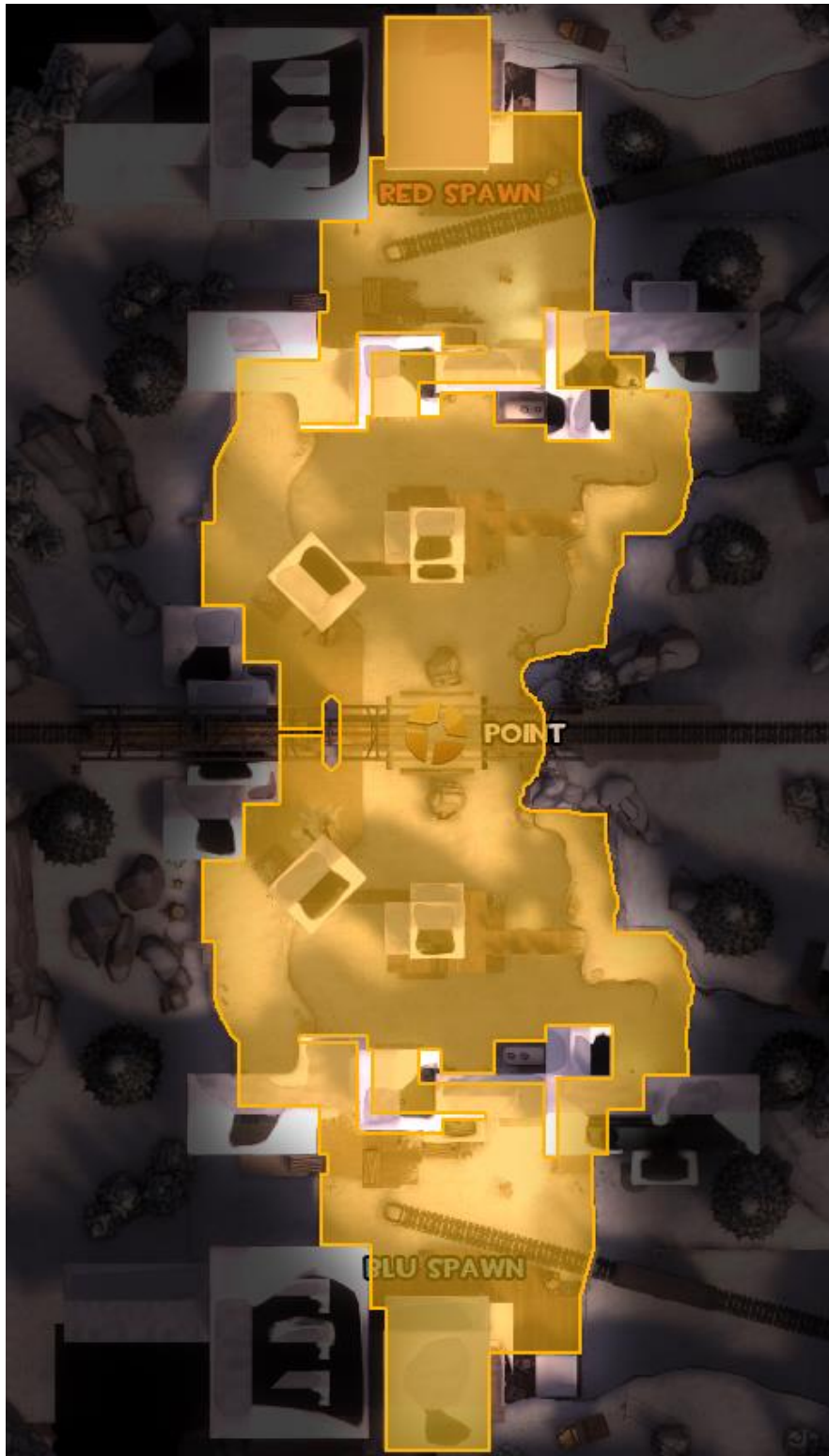- Disguise disappears on dealing/taking damage

# Map Analysis

Team Fortress 2 – Viaduct

Playable Area

- Horizontal reflectional symmetry

- o Doesn't affect game balance for either team while still making the map distinct
- Follows Network structure
  - o The entire map is accessible from any other point
  - o Action centralised in the centre on the control point
  - o Smaller conflict areas around the map
  - o 3-lane structure funnelling in at the control points

Cover Buildings
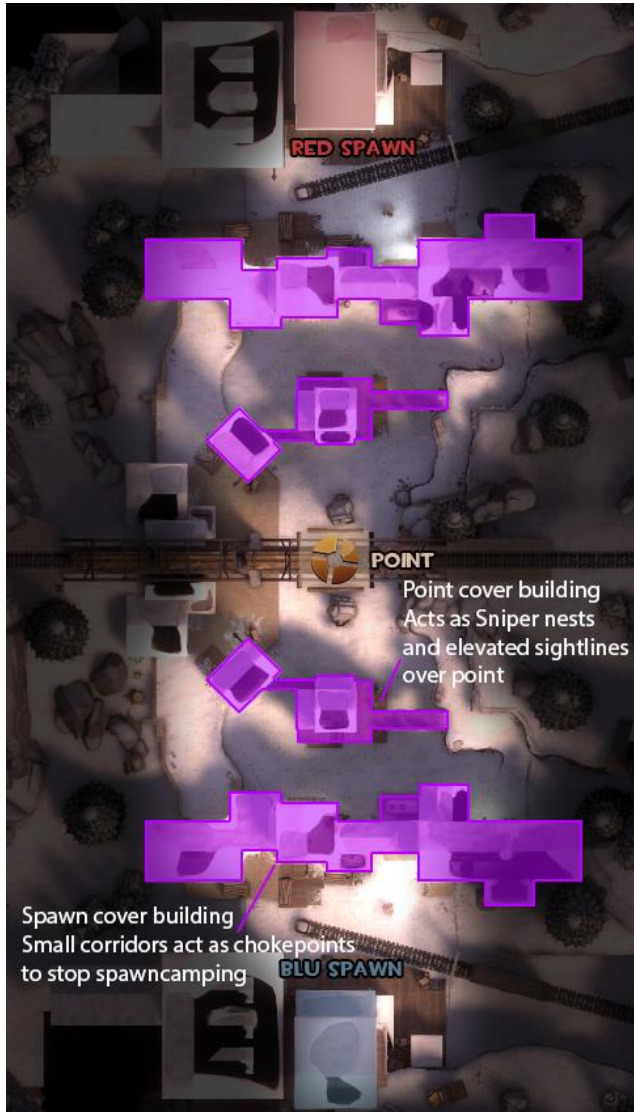
- Second building is near to the point
  - o Has raised bridges that act as *Sniper* nests over the point with good sightlines and cover
  - o Gives players multiple options to break up paths to attack the point

- o   Funnels enemies down specific paths making it easier to defend against them encroaching into team territory

Map Scale

Time to run from spawn to centre point using the shortest path, measured in seconds.

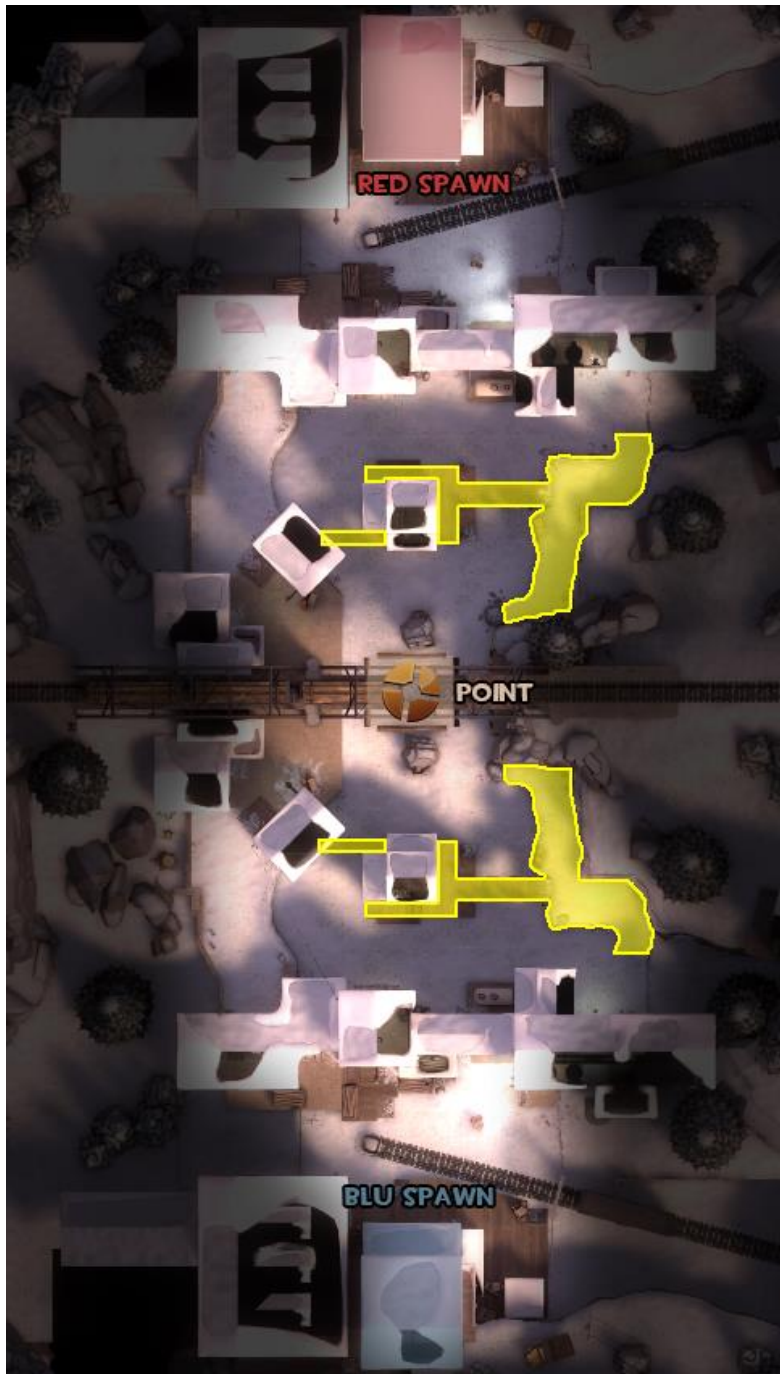| Class	Run 1 (s)	Run 2 (s)	Run 3(s)	Average Time (s)
Scout	9.24	9.03	9.04	9.103
Pyro	12.25	12.18	12.38	12.270
Heavy	16.16	16.22	16.21	16.197
			Total Average	12.523

Player Paths

- Left path (bottom to top) is the most covered to the point
    - Good for weaker offensive classes to quickly rush in and deal damage
    - Direct path also works well for slow classes like *Heavy*
    - Has good, covered sentry spot for *Engineer* near the point, with an ammo pickup close by
- Middle path has a more exposed approach going underneath a bridge
    - Quicker to point but directly in sightlines of the point
- Right path is the longest and most out of the way
    - Good access to *Sniper* battlements, and useful for *Soldier* to fire down onto the point
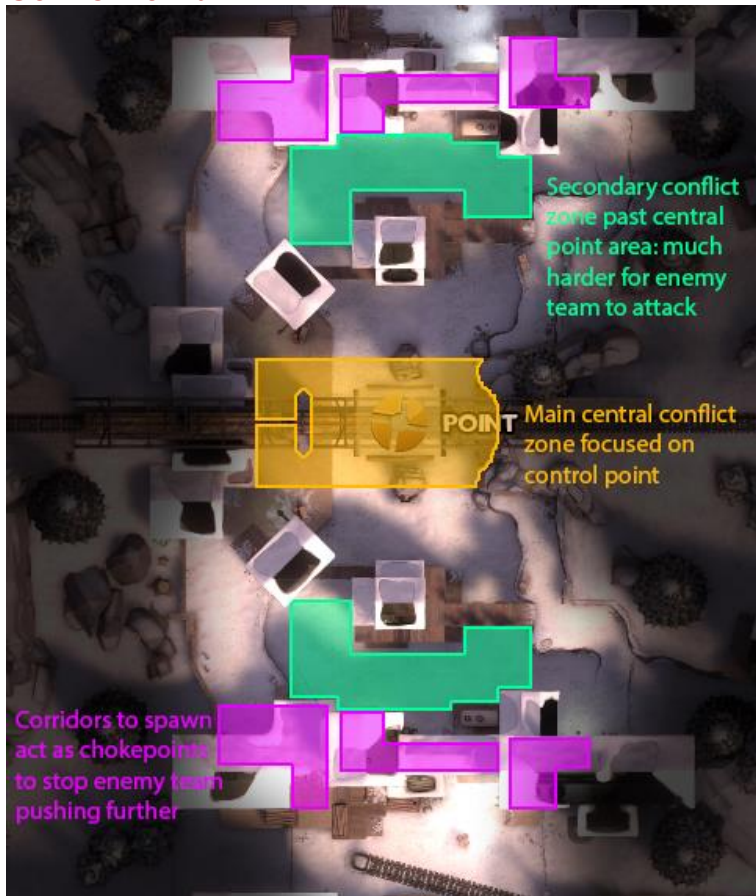
The map focuses the action on the control point by funnelling each of the player paths into the same area in the centre. There aren't any direct paths to flank around but it still is possible, especially for classes like *Spy* that can simply go invisible and move around the outside.

The entire map takes place on an incline up to the control point, so elevation has been defined as anything above the current terrain level.

Conflict Points

Secondary conflict zone past central point area: much harder for enemy team to attack

Main central conflict zone focused on control point

Corridors to spawn act as chokepoints to stop enemy team pushing further

Central Conflict Point

Raised area with sightlines over most of the point

Bridge containing cover and great Sniper sightlines

Raised covered area only accessible by Soldiers, Demoman and Scout

Control point area with minimal cover
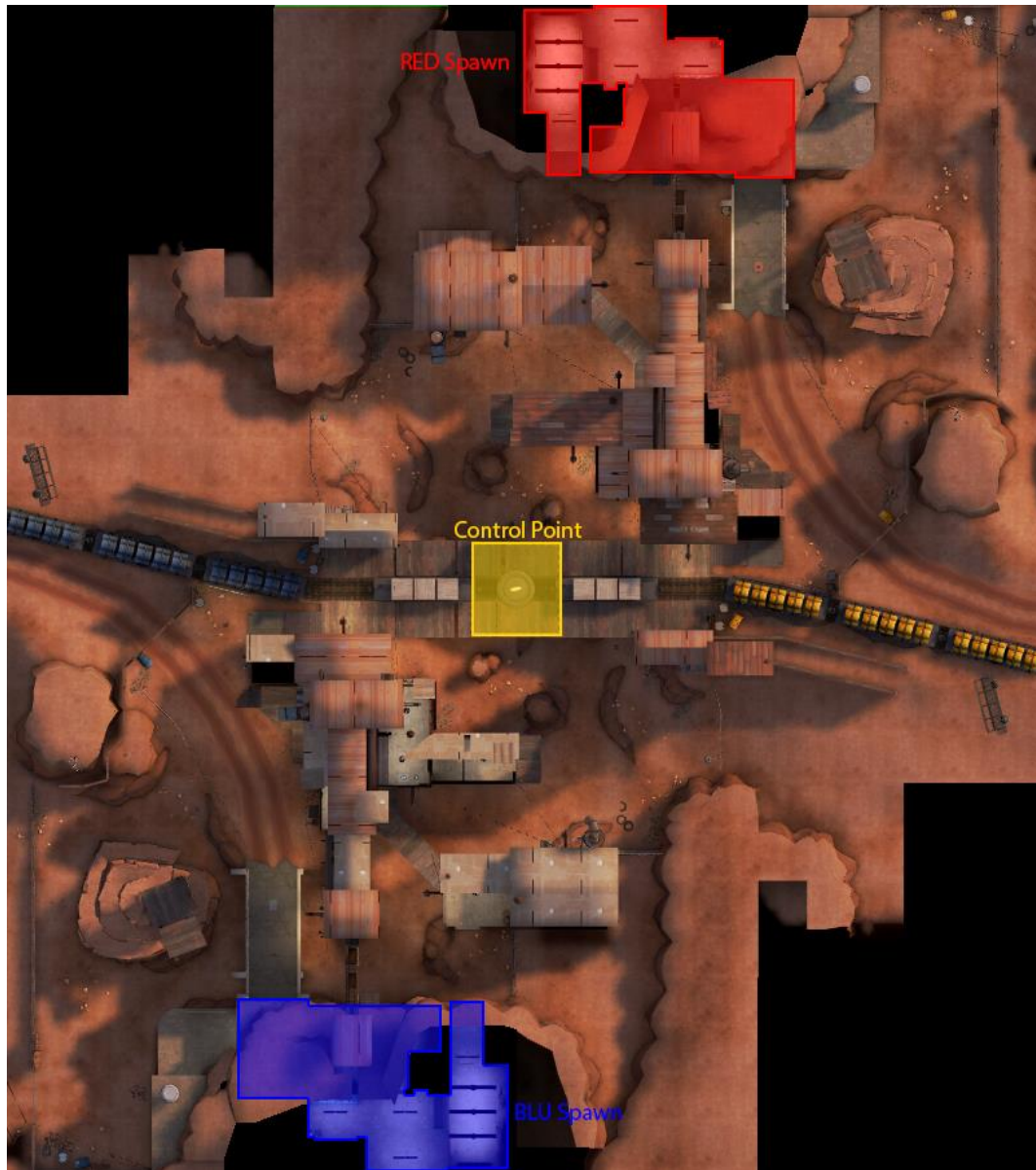
Direct path to point

- Point area mostly open, with multiple different sightlines across the map
  - Benefits classes that can attack at more of a distance like *Sniper*, *Soldier* and *Heavy*
  - Close-quarters classes like *Scout* and *Pyro* can struggle to defend the point against attacks but good for quickly rushing into the point cover
  - Multiple paths with cover give good positions for *Engineer* to set up and for *Spy* to flank around the point and into enemy territory

Small Health Kit (+20.5%)
Medium Health Kit (+50%)
Large Health Kit (+100%)
Small Ammo Pickup (+20%)
Medium Ammo Pickup (+50%)
Large Ammo Pickup (+100%)

RED SPAWN

Supports
optimal
sentry points

POINT

Map Structure

- *Badlands* has 180° rotational / diagonally reflected symmetry
  - Only visuals differ between both sides
- Network structure
- Raised capture point that is only accessible going along the bridge with little cover
  - Lack of cover means the point is hard to defend, makes map more balanced towards attackers
  - Railcars on bridge can act as cover, but the bridge is so easy to access that it doesn't offer much outside of being out of the *Sniper* nest sightlines

- o Elevation change blocks attacks from beneath the bridge
- Map is very open, particularly around the point
    - o Not many good places for *Sniper* to nest
    - o Map prioritises quick movement through the open areas with *Scout*
    - o Also good for classes that can apply pressure onto the enemy team and point like *Pyro*, *Heavy* and *Soldier*
- Main building for each side that overlooks the capture point
    - o Proximity to the point makes it useful for *Spy* to cloak and flank around the enemy defence line
    - o Battlement room is the *Sniper* nest area of the map, good sightlines of the point bridge

Player Paths

Spawn has multiple different exits that prioritise separate playstyles

- Left exit has direct path to the control point bridge with lots of cover leading up to the point
    - o Good for
- Right exit puts players in the defensive areas of the main building
    - o Good for *Sniper* to access Battlements and *Engineer* to quickly set up
    - o Trade-off is the path to the point is more winding and exposed
- Middle exit provides quickest path to the point, with the drawback of taking some fall damage in the process
    - o Good for when pushing to the point is needed
   - o Particularly good for *Scout* as double jump negates the fall damage
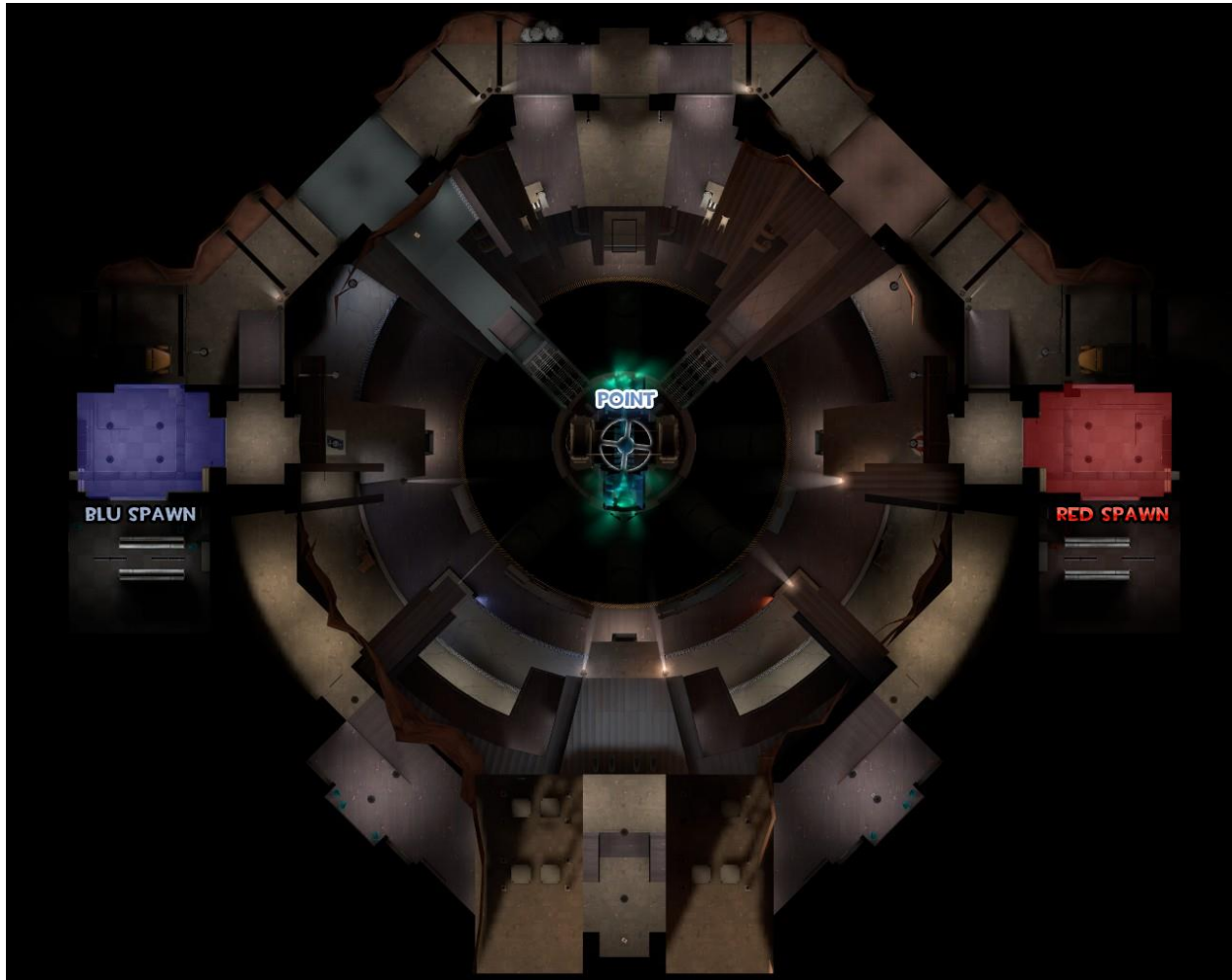
Map Structure

- *Nucleus* is smaller than other *King of the Hill* maps in the game
- Vertically reflected symmetry
- Map is structured as a full circle (follows Loop level structure) with the point isolated in the centre
  - Point is very exposed, only accessible by small walkways over a death pit that have no cover
  - Circular layout makes it very easy for *Spy* to sneak into the enemy's territory and flank
- Multiple elevation levels, but most of them are below the point
- Very *Sniper*-dominated map as they have huge sightlines over the entire point area
  - Long sightlines also work well for *Soldier* and *Heavy*
- Control point is very hard to capture, whichever team gets there first will typically be able to stop the other team from capturing

Team Fortress 2 – Lakeside
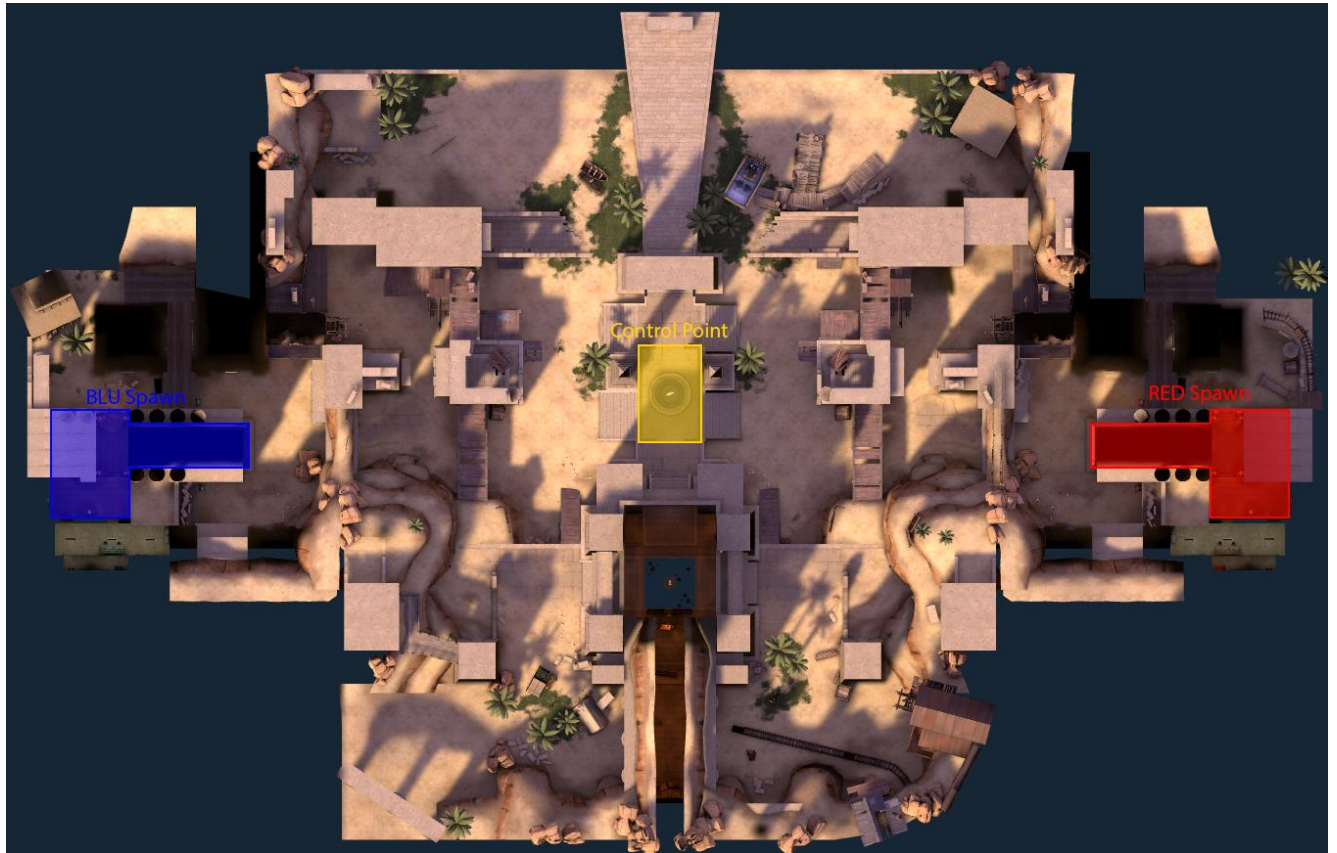
Map Structure
- Vertically symmetrical layout
- Network map structure
- Raised control point that is the focal point of the conflict area
  - Flanking room next to the point that can be used to bypass the main fighting entirely

Covered building, with a more exposed higher floor that offers good sightlines of the point

Capture point, covered on one side but exposed on the other

Room containing health pickup and water

- Capture point mostly open and in sightlines of the raised battlements area
  - Small amount of cover stops sightline from covering the entire point
  - Players on battlements are also very exposed with little cover of their own
- Flanking room on right can be used to formulate a covered rush on the point
  - Full heal pickup surrounded by a jump into water, adding a small risk vs. reward element that makes the map more memorable
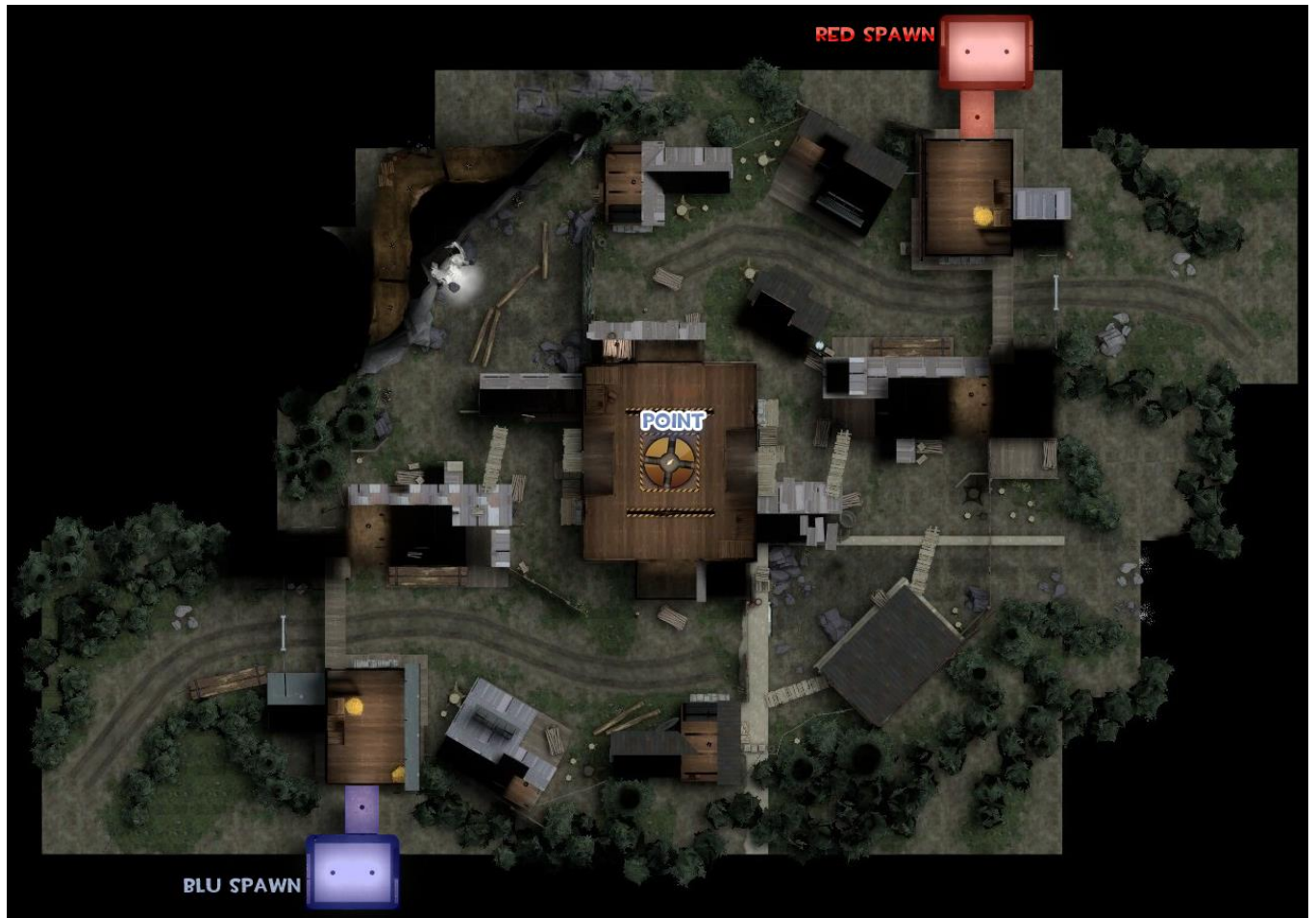
Map Structure

- 180° rotational / diagonally reflected symmetry, but with unique elements in the corners
  - Makes the map stand out as the core parts are still balanced but elements change depending on team
  - Also makes traversing the map more interesting
- Control point inside its own closed-off building
- Map is very wide, lots of opportunities to flank around the control point building

Player Paths

- Multiple different paths that players can choose from when they leave the spawn buildings
  - Stops the central building from being a chokepoint by letting players enter from multiple different directions

The central conflict zone around the control point is in a building on the centre of the map.

- Closed-in building means there aren't great *Sniper* sightlines and positions
  - Balanced around offensive classes that can rush the point like *Scout*, *Soldier* and *Pyro*
  - Multiple different covered areas for *Engineer* sentry guns
  - *Heavy* and *Demoman* can use the elevation changes to defend a captured point
- Moving sawblades adjacent to the approach to the point
  - Moving element makes the map stand out from other maps in the game
  - Makes fighting over the point more interesting

Map Structure

- 180° rotational / diagonally reflected symmetry
- Follows Network map structure
- Wide, open map built around the two large team buildings facing the point
    - *Soldier* very dominant as they can rocketjump and use the roofs for particularly good sightlines
    - Roofs are shaped such that players on the ground can still shoot up at enemies
- Control point being enclosed helps balance the huge sightlines that would look over the entire map
    - Large doorways on either side that don't offer much cover for players capturing the point
    - Hole in roof gives another potential attack option
    - *Engineer* can place a sentry inside the cover and make the point very hard to capture

- Team spawn building directly in the sightlines of the roof, making it very easy to flank and spawncamp

- Right path is wide and open, quickest route to control point but directly in enemy sightlines
  - Can use the small outbuilding for pickups and cover
  - Also has a flanking option for attacking the enemy's building
- Left and middle routes both go through the team building
  - Left has a wide flank to the doorway at the edge of the map, as well as stairs to the higher level
  - Middle path is quicker and puts players out adjacent to the point, better for players wanting to quickly rush the point without risking being damaged (*Heavy*, *Demoman*)

Central Conflict Point

Team Fortress 2 – Kong King

Kong King is a King of the Hill map in *Team Fortress 2* that was made by the community and picked by the developers to be added into the main roster of maps in the game.

## Map Structure
Playable Area

- *Kong King* has 180° rotational symmetry
  - Flipped diagonally so the map is the same on both sides

- Follows Network level structure
- Map is built around verticality, having two interweaving levels of elevation
  - Benefits more mobile classes
  - Lots of small signs that can be rocketjumped onto for better sightlines
- Has 3-lane level structure prioritising different classes
- Distinct visual aesthetics compared to other maps

The map fits very well with *Team Fortress 2*'s design conventions. Outside of lacking a very strong *Sniper* nest position, it is balanced between the different classes.
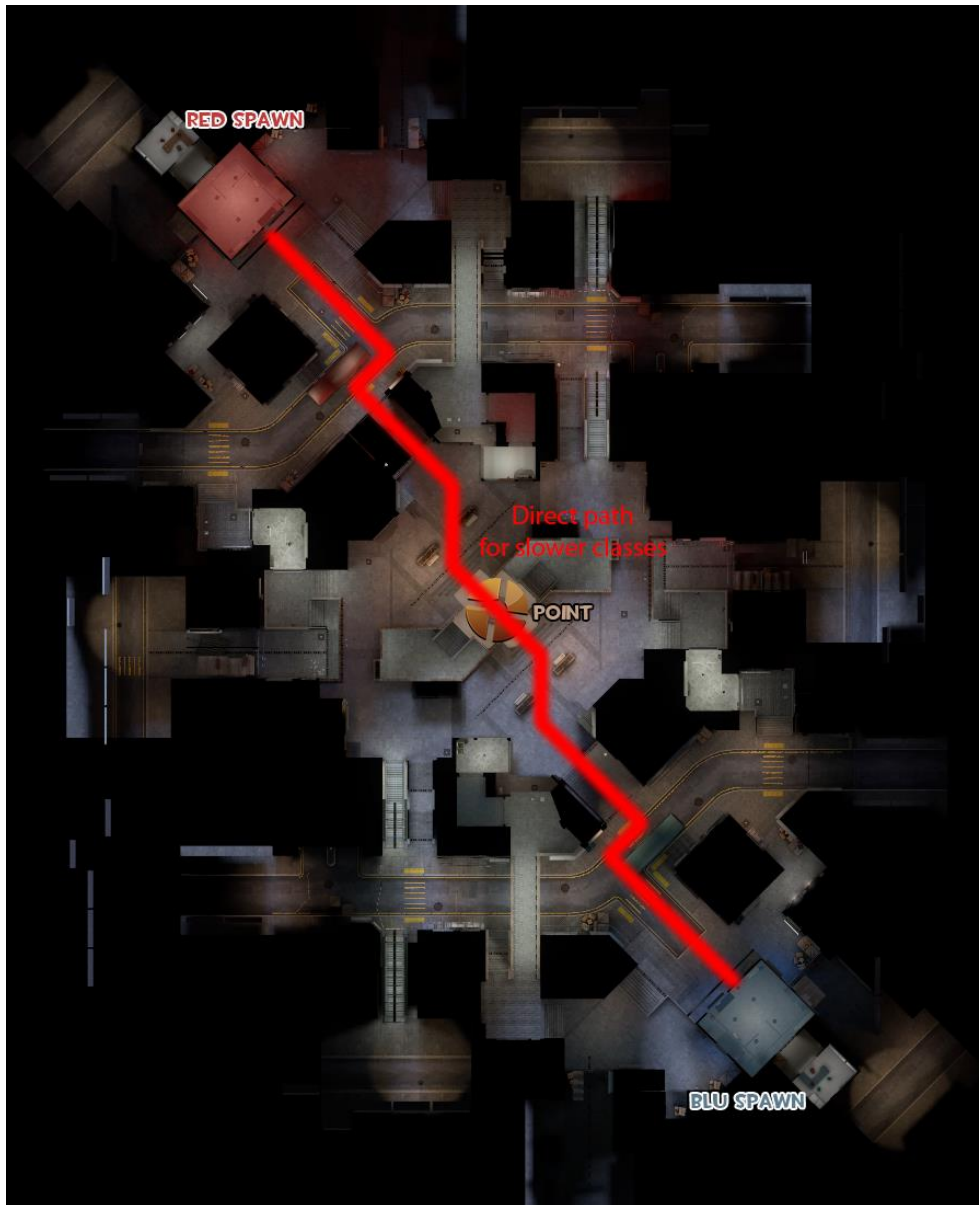
Elevation
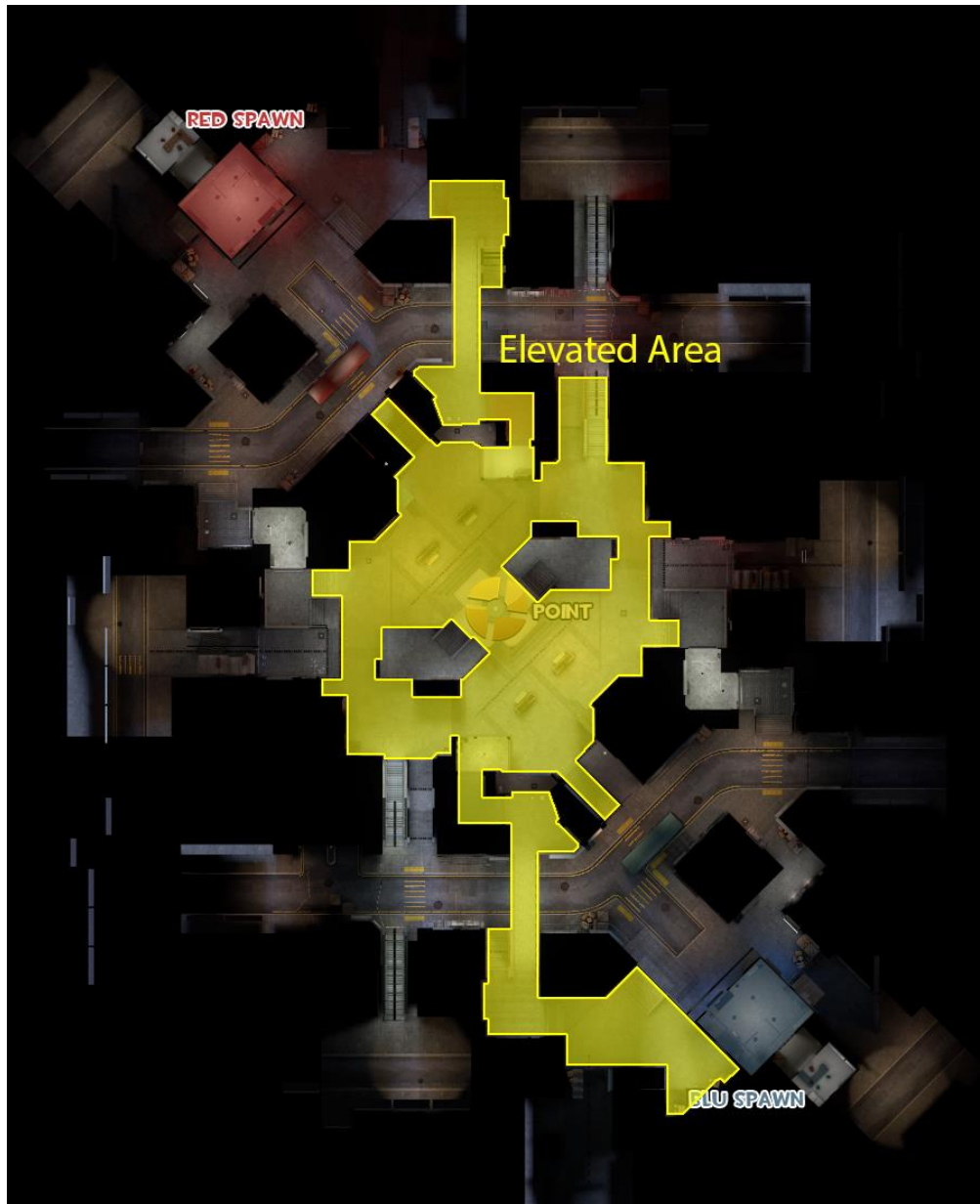
Central Path

- Most direct path to the capture point
- Works well for slow classes like *Heavy*
- Also useful when offensive classes need to apply pressure to the point
- Elevation doesn't change until players get very close to the point

Left Path

- Slightly longer than the central path
- Has good elevation changes
 - Benefits mid-speed classes like *Soldier* and *Demoman*

- Much more covered, better for attacking the point
- Has a forked, flanking path
  - Can be used by *Spy* to sneak past the enemy line
  - Can also apply pressure on the point from multiple angles

Right Path

- Longest path with most cover
  - Better suited for the fast, weaker classes like *Scout*
- Good, covered *Engineer* spots

- Good for quick attacks on the point / blocking enemy capture
  - Path brings players out on the lower elevation level, with steps up being right on the point
- Decent *Sniper* sightlines
  - Can cover both elevation levels
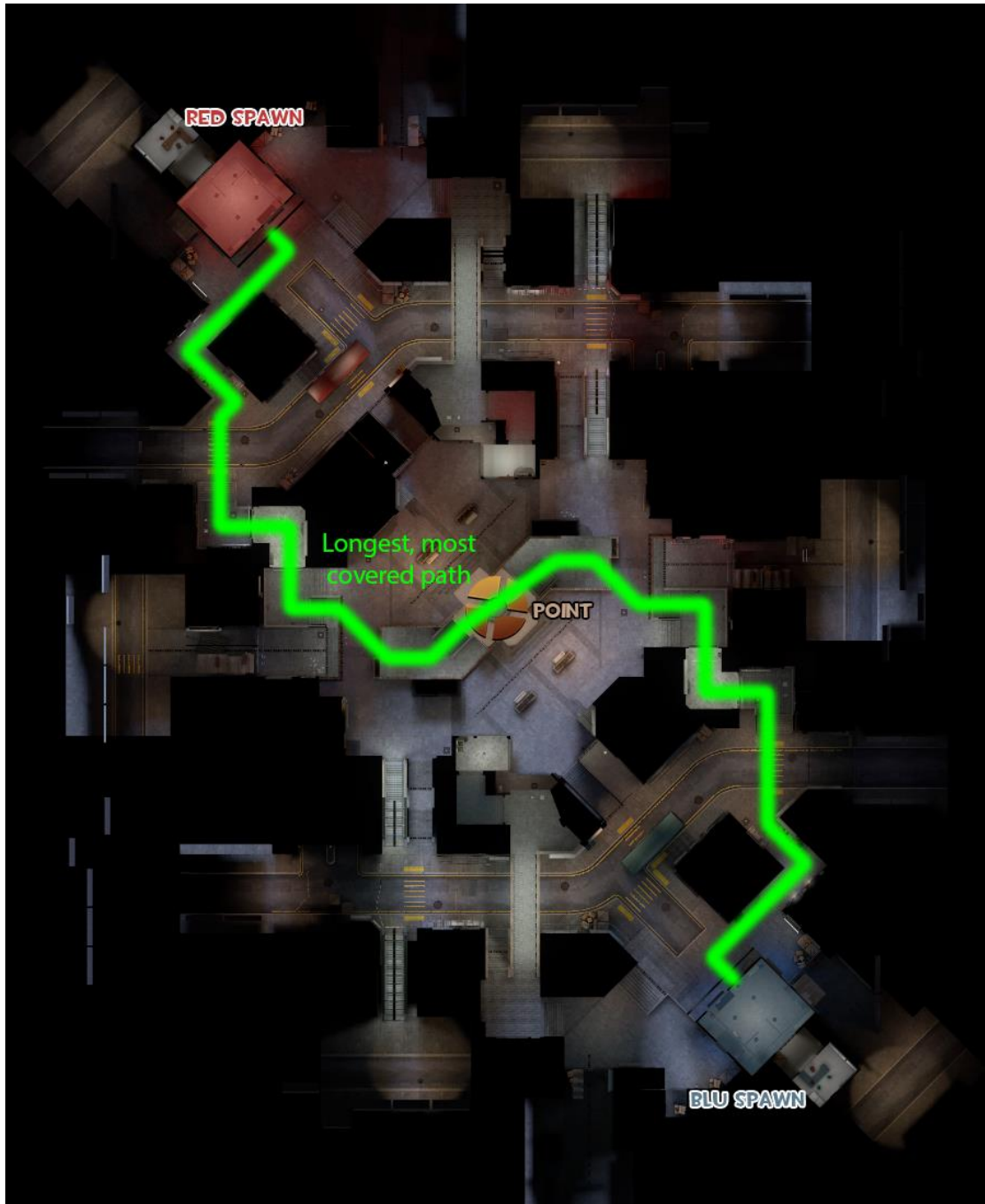
Team Fortress 2 – Overall Map Design Observations
- Always contain multiple paths, almost always adhering to the 3-path structure

- - Usually have different lengths, elevation and cover to tailor them to different playstyles and classes
  - A lot of the maps had a long, covered option to contrast the much shorter, but much more exposed path
- Often has a building after spawn that acts as cover and elevation, creating a buffer zone to stop spawncamping
- Cover used more towards player spawns to make it harder to attack but easier to defend
  - Inverse is true for the control point area
- Always has multiple levels of elevation to keep the maps interesting
- Specific flanking option or wider path that can act as a flank
- *King of the Hill* maps are always symmetrical
  - Sometimes perfectly symmetrical, but sometimes tweaking elements to make it more interesting

Splatoon 2 / Splatoon 3 – Manta Maria

Manta Maria is a map in both *Splatoon 2* and *3*. *Splatoon* is a 3rd person shooter but follows similar map design conventions to *Team Fortress 2* with its *Splat Zones* game mode being very similar to *King of the Hill*, and all maps being playable on any game mode with only minor variations.

Splat Zone Gameplay

- Two *Splat Zones* near the centre of each map
- Each team starts at 100 points and loses them by having control of a *Splat Zone* area
  - Faster if both zones are controlled
- Win condition is whichever team reaches 0 first

Map Overview of *Manta Maria* as it appears in *Splatoon 3*
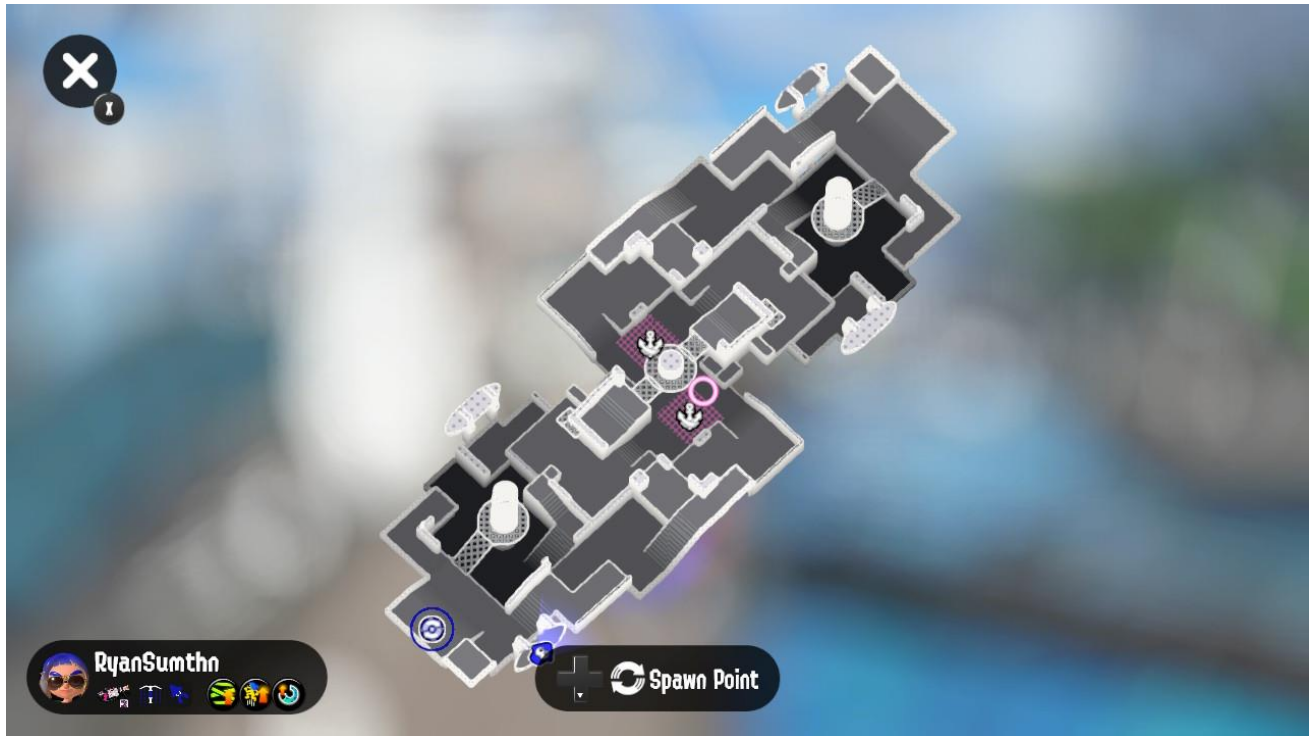

Map Structure
Playable Area

Top-down view of the map is from *Splatoon 2*

- Has 180° rotational symmetry
  - Means the map is completely balanced between either side
 - Makes it more interesting when pushing into enemy territory

- Mostly follows the Network structure
    - Only distinction is area around player spawns is only accessible by the team when they spawn in
        - Gives a protected buffer zone that counters spawncamping
    - Multiple different conflict points around the map, centred around the large open area
- Main area is very open, making it hard to defend but easier to attack
- Has multiple different changes in verticality
    - Complements *Splatoon*'s character movement options well
- Follows 3-path structure towards centre of map
    - Because of Splatoon's gameplay mechanics, the paths are less defined as players can move around very easily
    - Only change based on effectiveness of weapon class, players always have same movement options no matter what

Elevation
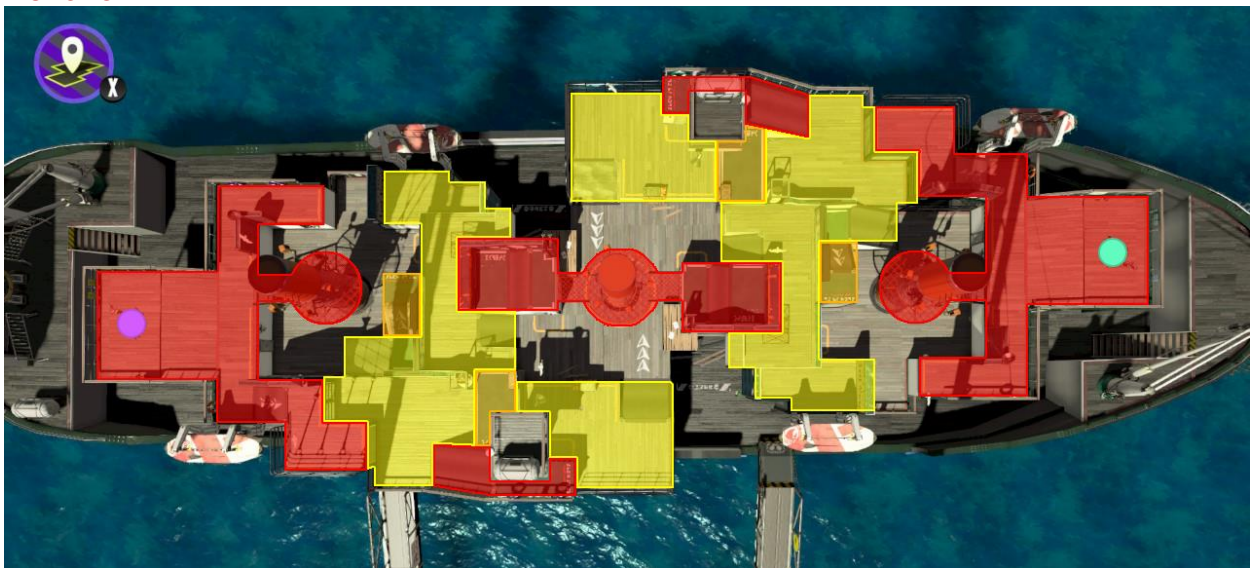
- Central pillar is both a movement option as well as placed to block dominant sightlines across the map
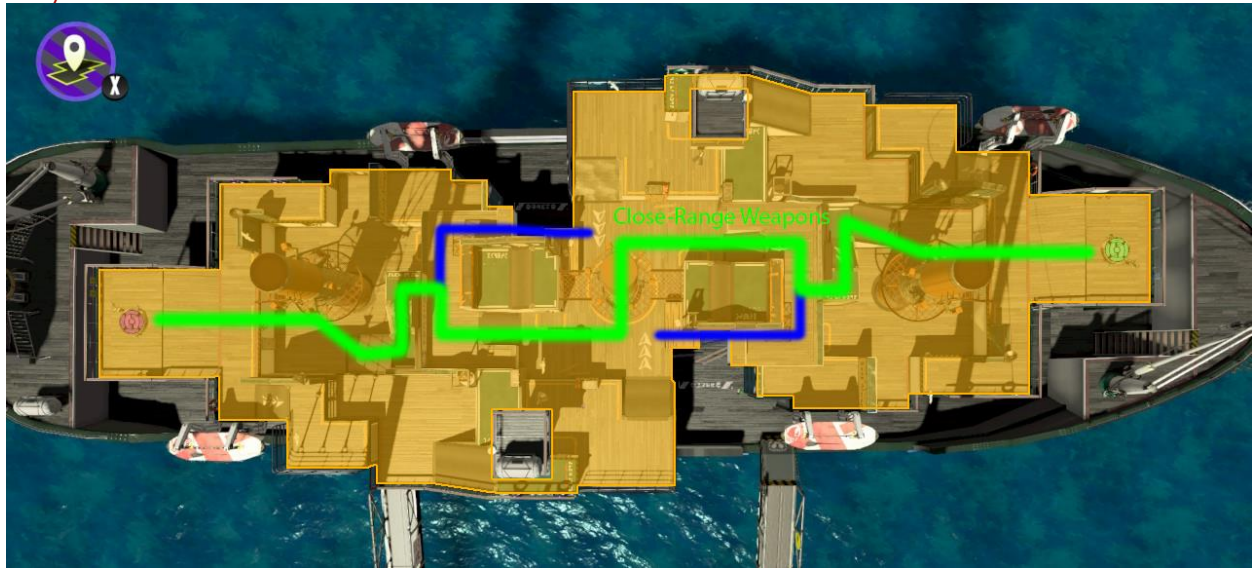
- Middle path is the "main" way to the centre of the map, with players being guided using ramps and walls to the middle
- Not the quickest way but best utilised by close-ranged weapons that can take advantage of the tighter paths
- Optional flank is the quickest path to the point but requires a tight jump over a death pit, right in the sightlines of the optimal *Charger* (*Splatoon* equivalent for Snipers) spot
- Flank can also be taken in reverse by the enemy team to get around the defensive line

- Top path is slower, but best suited for long range weapons
- Goes through elevated area with good sightlines of the centre of the map

- Access to raised grated path that can be dropped through to attack the enemy from above
  - Players on the grated path will fall through if they try to enter *Squid Form*, and can still be shot from underneath
  - Interesting way to challenge vertical advantage

Mid-Range Weapons

- Bottom path best used for mid-range weapons
  - Good sightlines of the middle so useful for long range weapons as well, but central pillar blocks a lot of the sightline
- Has height advantage before being exposed in the middle of the map

Updates to Map Design Between Games

Because *Manta Maria* has appeared in both *Splatoon 2* and *3*, it's a good example of how to tweak a map design to iterate and improve.

- Area around team spawns has been expanded, area on separated boat has been added to give more inking area around base
  - More effective for the game's main mode *Turf War*, but still offer extra buffer area in *Splat Zones*
  - Ties into the game's new spawning mechanics, with players now jumping into the map rather than spawning in a single spawn point
- Widened the area behind raised platforms overlooking central point
  - Makes them a better conflict point by giving players more room to fight
  - Makes it less of a bottleneck and chokepoint where the attacking team can be held back in

Overwatch – Oasis
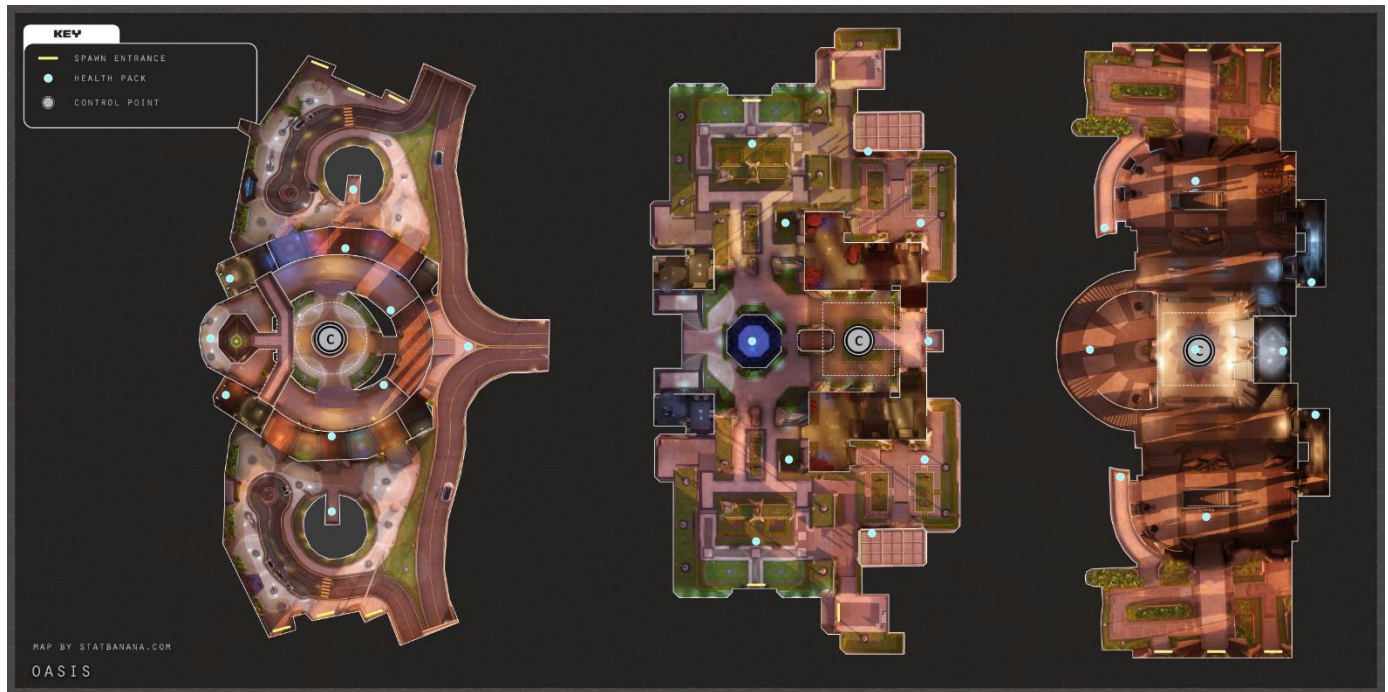
- Map for the *Control* game mode, which is a 3-part *King of the Hill* game mode which plays out as a best-of-three format
- Each map section has horizontal reflection symmetry
  - o Map is kept interesting through the multiple different sections, so doesn't need to do much unique with the map designs to make it more engaging
- Each section follows the 3-path structure, with some additional flanking options

First (Left) Map Section

- Point is perfectly centred in the middle of the map
- Smaller, satellite conflict zones to the left and right of the point
  - Keeps most of the fighting centralised but not entirely in one room to avoid complete chaos
- Large open areas between spawn and control point, acting as a large secondary conflict zone

Player Paths

- Most direct path goes straight through the middle, best for slower Tank classes to get to the point
  - Has death pit that needs to be moved around to make the map more interesting, includes a health pack for a risk vs reward element
  - Adds an extra gameplay dynamic if the enemy team try to push past the control point, useful for classes that have abilities to push other characters
  -
- Left path is slightly longer, better for mid-speed characters that don't need to rush the point as quickly
  - Has an elevated section overlooking the point that makes it good for sniper/long-range characters to have a good vantage point
- Right path is the longest, but best for the faster and weaker characters
  - Most separated from the action, has lots of cover

- Optional flanking path around the control point, risky due to lack of cover and long sightlines

Second Map Section

- Control point in the middle but slightly off-centre
  - Changes up standard layout from the other two sections, making it more interesting and switching up the player path dynamics

  Player Paths

- Shortest path goes along the right, best for slow and short range characters
  - Optional flanking path, interesting to put on this route but changes up playstyles and means that powerful classes can easily get around enemy defences
  - Elevation change good for long-range characters to get a vantage point
- Middle route is best for mid-speed characters
  - Reaches the point at a different angle to first path, so can be used to co-ordinate a multi-directional attack on a defending team
- Left path is the longest but also the most covered
  - Much longer so only good for faster characters
  - Cover makes it a very powerful flanking route that is far away from the point

The second section is very much focused on breaking up the normal gameplay dynamics through the map designs, using the paths to encourage different playstyles like tank characters flanking around enemy defences.

Third Map Section

- Final section only played as a tiebreaker situation when both teams have won a round
  - Much more straightforward, convention design to really focus in on player skills and increase the intensity of the match
- Much less separated out and more open, gives players more movement options but also makes map feel narrower
  - Funnels the action towards the main conflict area around the point
  Player Paths
- Left path is the longest
  - Has good elevation for long-range classes to make use of
  - Offers a good flank for fast classes to make use of
- Middle and right paths follow similar pattern through the map
  - Right slightly longer, but also more covered

- Paths meet up multiple times allowing players to change strategies on the fly, likely intentional to account for higher stakes and intensity of final round

The structure of the third and final section really pushes the intensity of the final round into the gameplay by focusing the players into a smaller and singular conflict point above all else.

Map Idea Development / Iterations

To more quickly formulate the map design ideas, they started as initial paper sketches before being iterated on as a squared paper drawing and then as a Photoshop map to flesh them out more.

Design Idea 1

- Focus on establishing a 3-path structure towards the point
- Included some elements of verticality
    - Small battlement area that can be used by *Sniper*
    - Raised capture point like on *Lakeside*
- Conflict focused on the point area, like on *Viaduct*
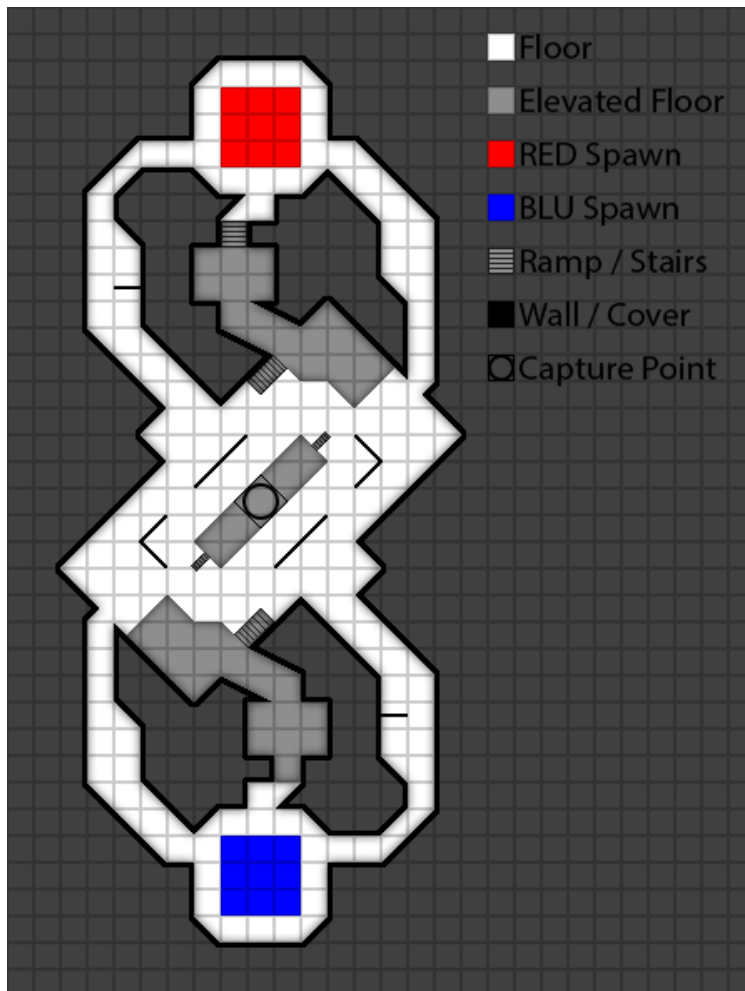
Initial Sketches
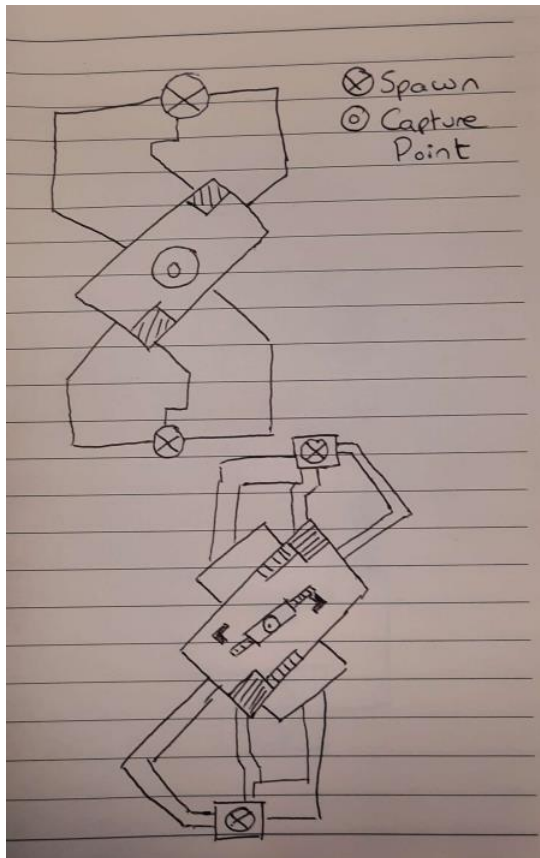
- 3 separate paths to the central control point area
- Raised point area to make the main area more interesting

Refined Design Idea
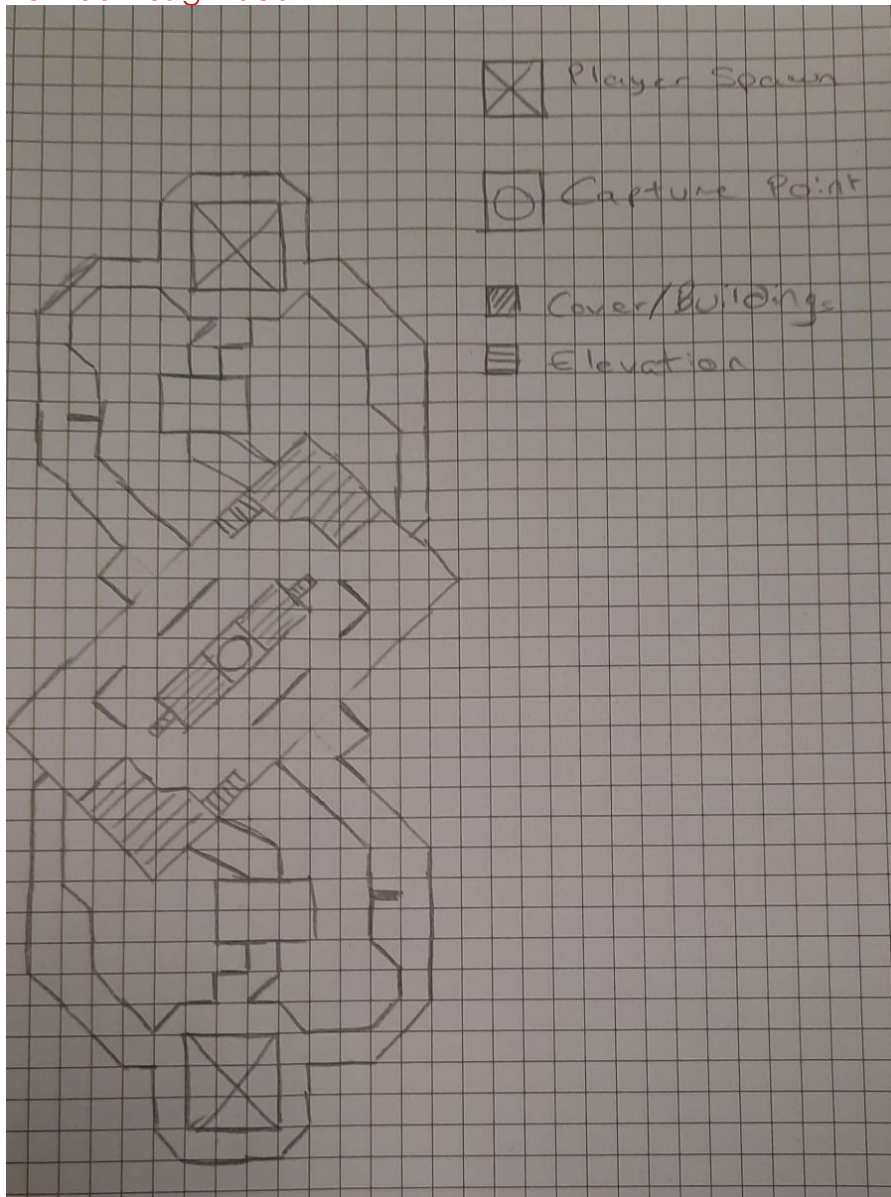
- More defined structure of the paths to the central area
- Added some extra cover to account for potentially long and powerful sightlines

Photoshop Map Translation

The map might also be too dominant for *Snipers* and *Engineers* with the raised buildings overlooking the control point due to the clear sightlines between them.

Another issue would likely be the lack of a proper buffer area between the spawn and central conflict zone. The corridor paths would have a similar chokepoint / funnelling effect as *Viaduct*, but because players spawn directly at the end of them it would potentially become very easy for a team to get spawncamped by the team defending the point due to the sightlines available in the middle section.
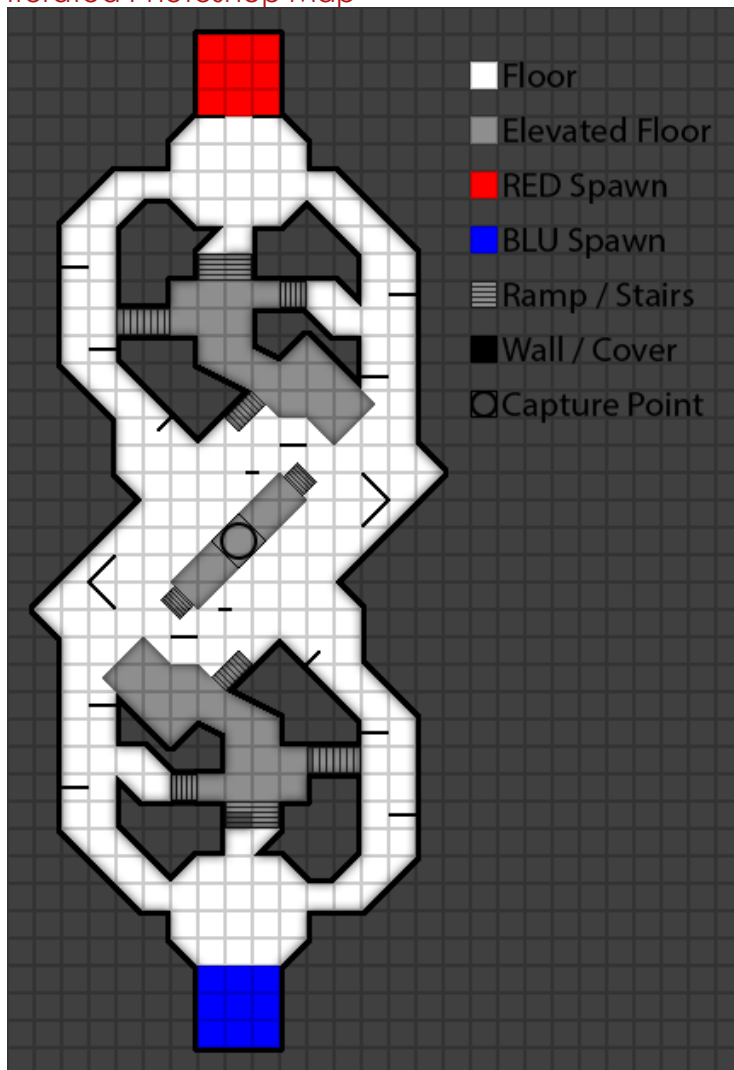
Changes to Map Design

- Extended spawn areas to add designated spawning rooms
    - Made it feel less cramped and lets players think before choosing what path to pick
    - Feature that appears on some *Team Fortress 2* maps like *2Fort*
- Widened the pathways from spawn to the central area
    - Makes them better as potential conflict points
    - Also adds extra cover to make them act more as chokepoints for players pushing into enemy territory
- Complemented path changes with movement options between the paths
    - Makes the map feel more connected and less like a set of broken-up corridors
- Widened access to the control point

- Makes point easier to access and incentivises more close quarters fighting over the point
- Added more cover to the point
    - Breaks up dominant sniper sightlines from the raised areas
    - Balances more towards attacking teams rather than defending ones

This first design idea has some interesting elements that could make for good gameplay like the raised control point, but doesn't seem like it will be that fun to play. The corridors would likely act as strong chokepoints even with 3 separate options, making it relatively easy for a team to defend the point especially with the current sightlines that it has.
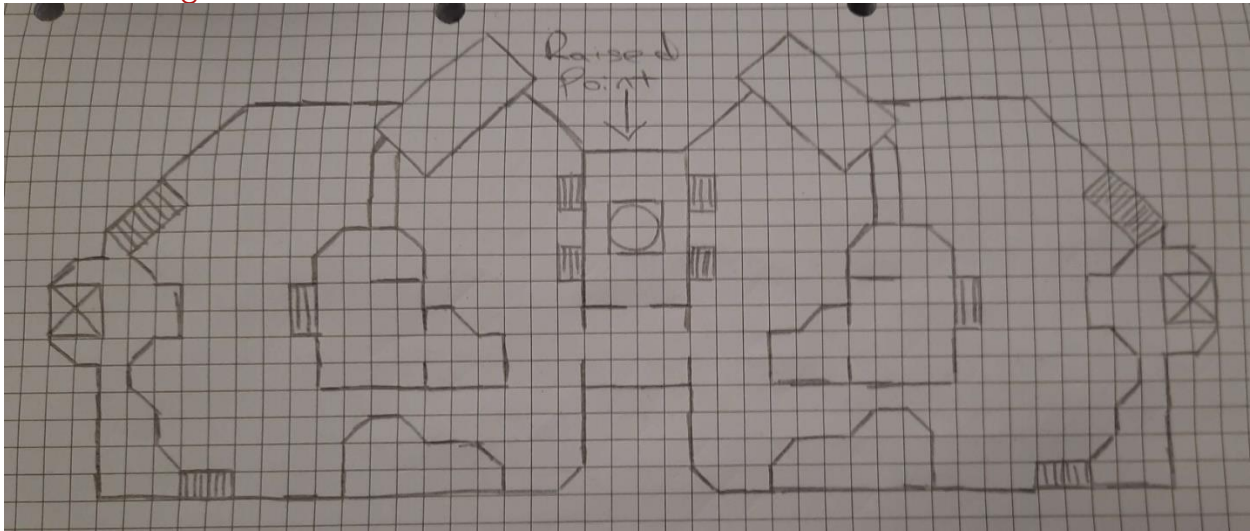
Design Idea 2
- This design idea attempted to emulate a standard symmetrical design similar to *Lakeside*
- Raised buildings adjacent to a raised point
- Sniper nest battlements giving good sightlines
- Flanking option that goes around the point
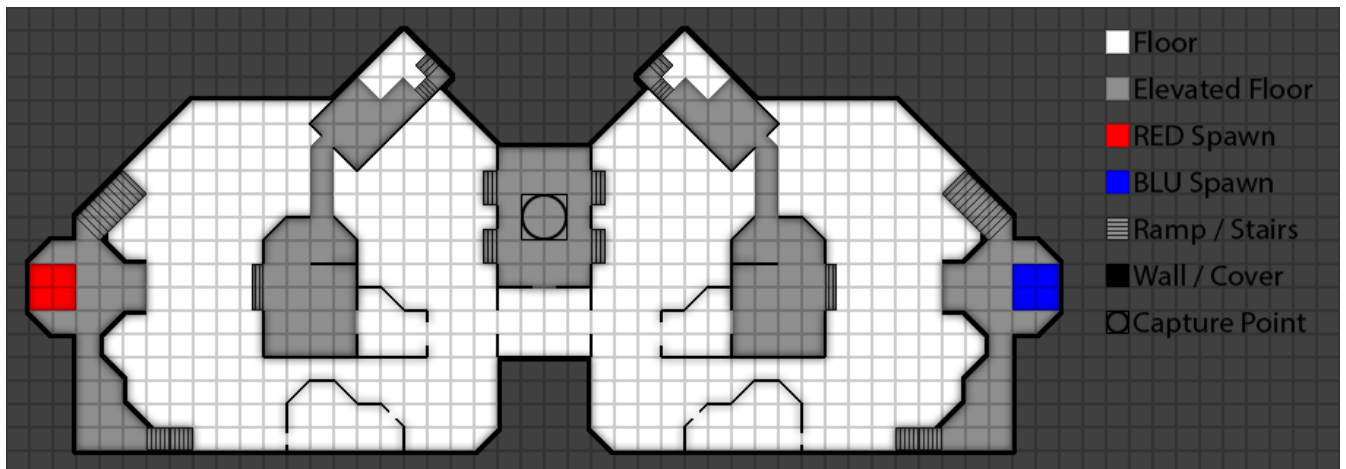
Initial Sketch
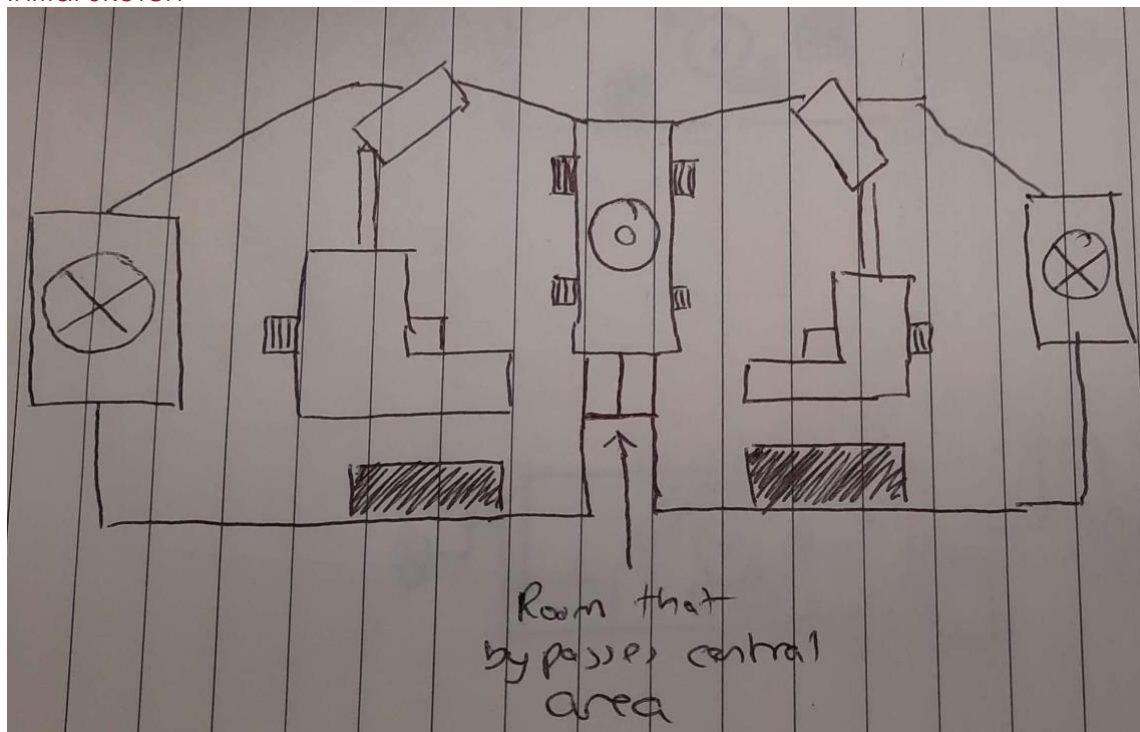
- Developed design for the cover options in the buildings
- Added multiple exits to the spawn area

Photoshop Map Translation

The path options for this design are focused on being balanced around the different playstyles of the classes, by each one having different trade-offs depending on what is taken. A concern is that the approach to the point is very exposed, making it very much balanced towards the defending team on the point rather than the attackers.
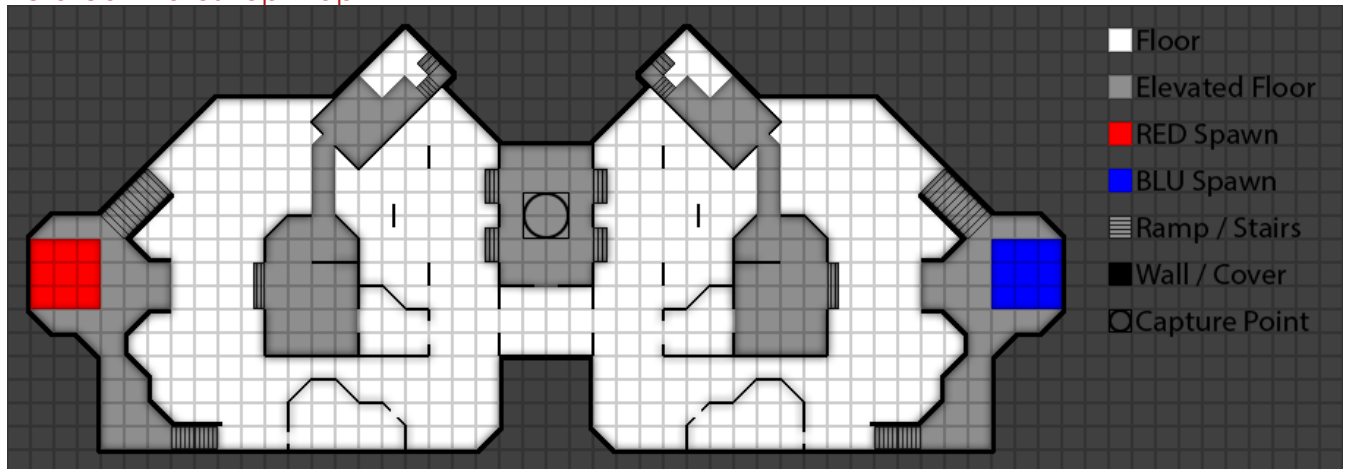
Changes to Map Design

- Increased the size of the spawn areas
- Extended spawn walls to add extra cover to players leaving spawn
 - Breaks up sightlines, reducing the chance of being spawncamped on all exits from spawn
  - Gated spawn doors placed at the end so they will be
- Added extra cover on approach to the point to make it easier to attack through the elevation change
  - Also breaks up the sightlines over the large open area

This design idea could be a good one to take forward, but with so much inspiration from a single map, *Lakeside*, there's the concern of it just becoming a cheap knock-off version of that map's design. It might be good to follow on from the ideas of this in another chosen map design instead of taking this one further.
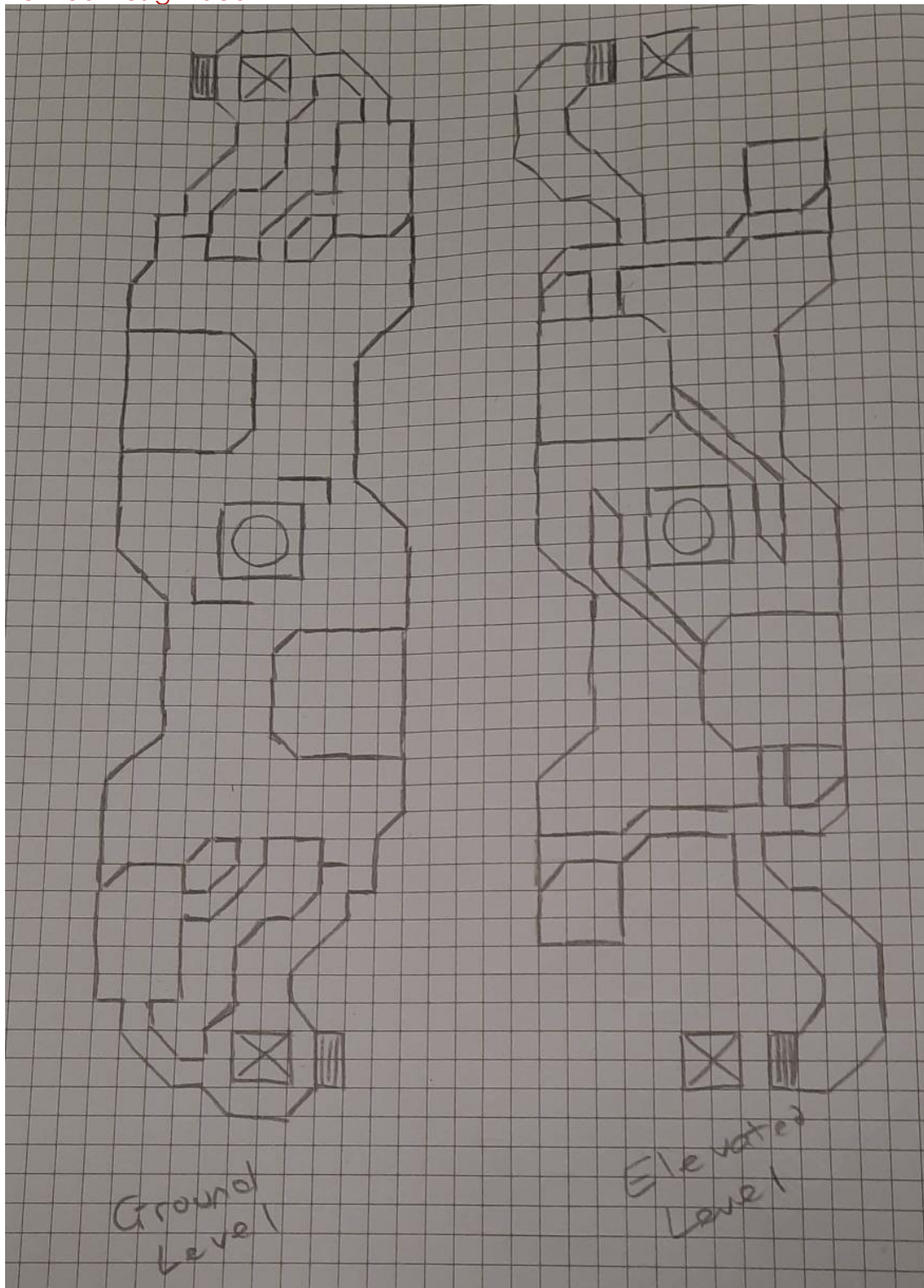
Design Idea 3
- Design idea exploring two distinct elevation levels, rather than just having one singular level that had some elevation in it
- Large area to fight in that moves between the multiple levels
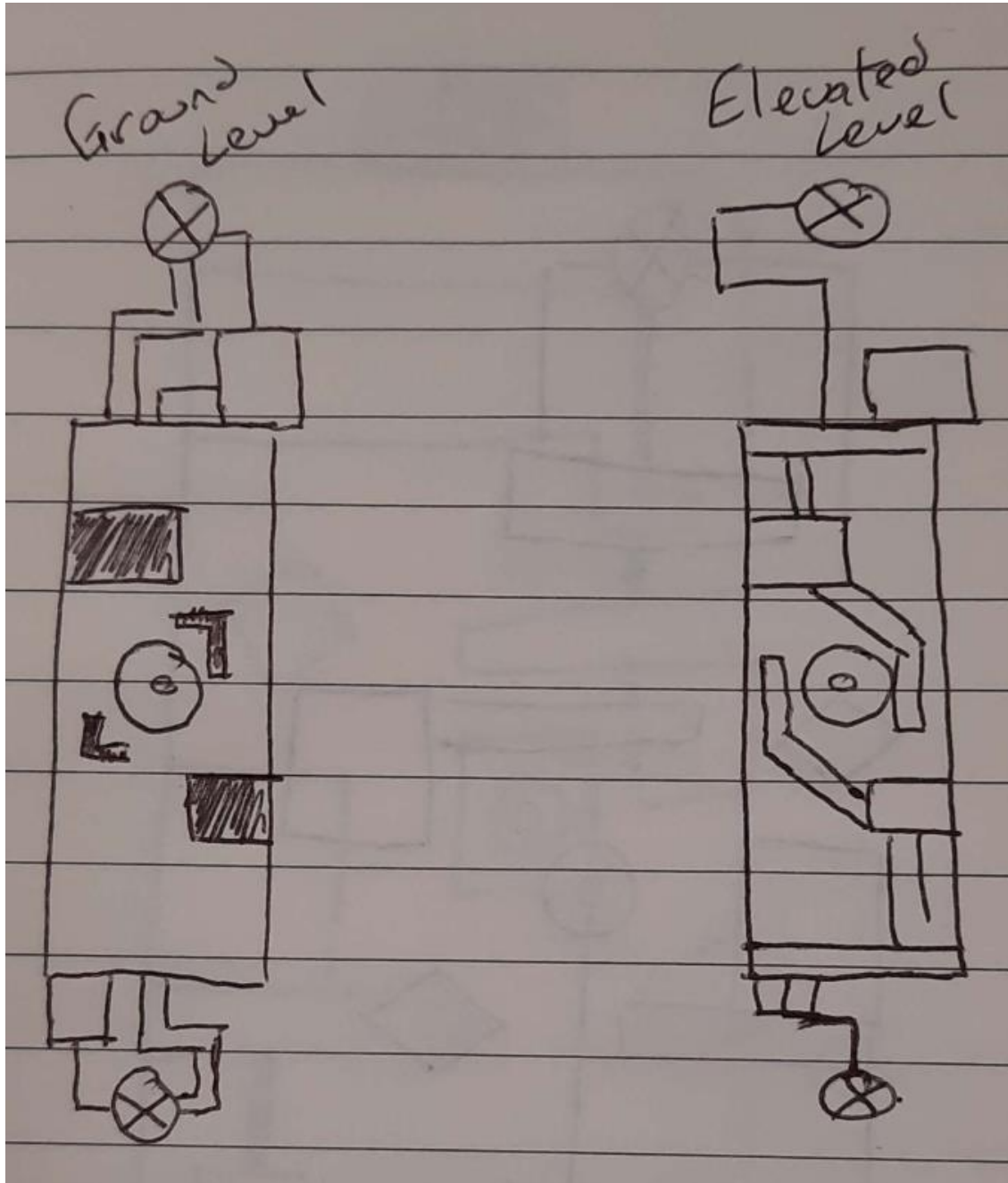
- Used the cover buildings to properly break up some of the longest potential sightlines
- More strongly established the paths from the point

Photoshop Map Translation

Floor
Elevated Floor
RED Spawn
BLU Spawn
Ramp / Stairs
Wall / Cover
Capture Point

Ground Level   Elevated Level
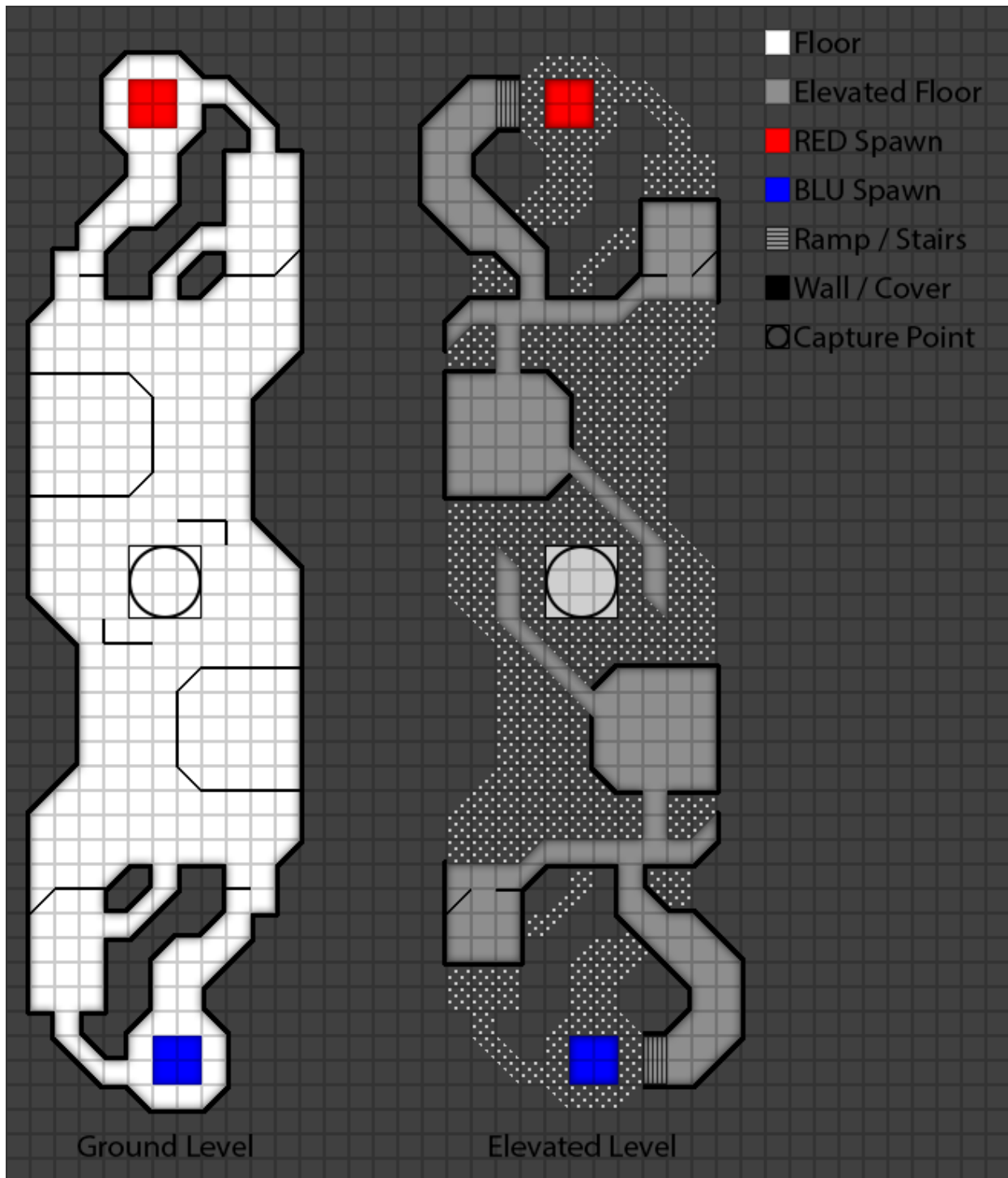
This map design could be very interesting with the interlinking elevation levels, but as of right now the sightlines available are likely too strong for players on the top level as they can just fire down directly on the point. This design also suffers from the same issue that the first design iteration did, with their not being a proper buffer zone between the

player spawn and central conflict area; it also doesn't offer much in the way of extra conflict points outside of the main point, which might just lead to players being pushed into spawncamping.

Iterated Photoshop Map
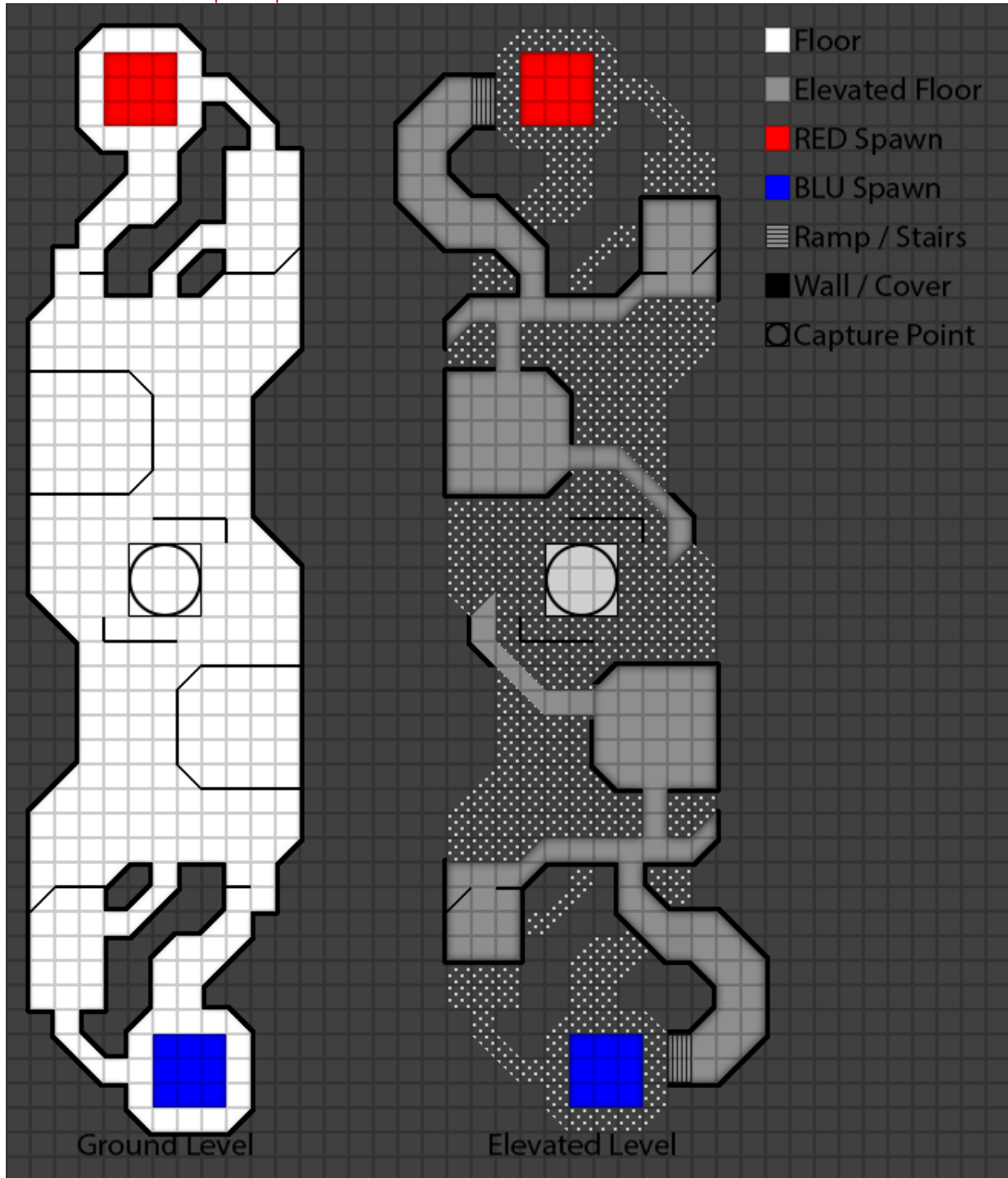
Changes to Map Design

- Spawn point size adjusted to make it bigger
  - Accommodates for more players and won't feel cramped with large team sizes
- Height of the cover surrounding the point has been extended to break up elevated level sightlines
- Shape of the overhanging platforms changed to conform to new cover to make them less dominant over the point

The third design idea has a very long central conflict section, but doesn't really have anything outside of that. It might cause issues with game balance with most of the map not being broken up by anything other than some small cover, as *Snipers* could be very dominant without proper balance, especially with the different elevation levels. The interlocking elevations are an interesting idea that could be explored further, but possibly not with this map design.

Design Idea 4
- Concept of combining a strong 3-path structure somewhat with the multiple elevation levels to create a cohesive *King of the Hill* map design
- Designed to be a more "standard" map within the design considerations of *Team Fortress 2*, inspired by the map design of *Viaduct*
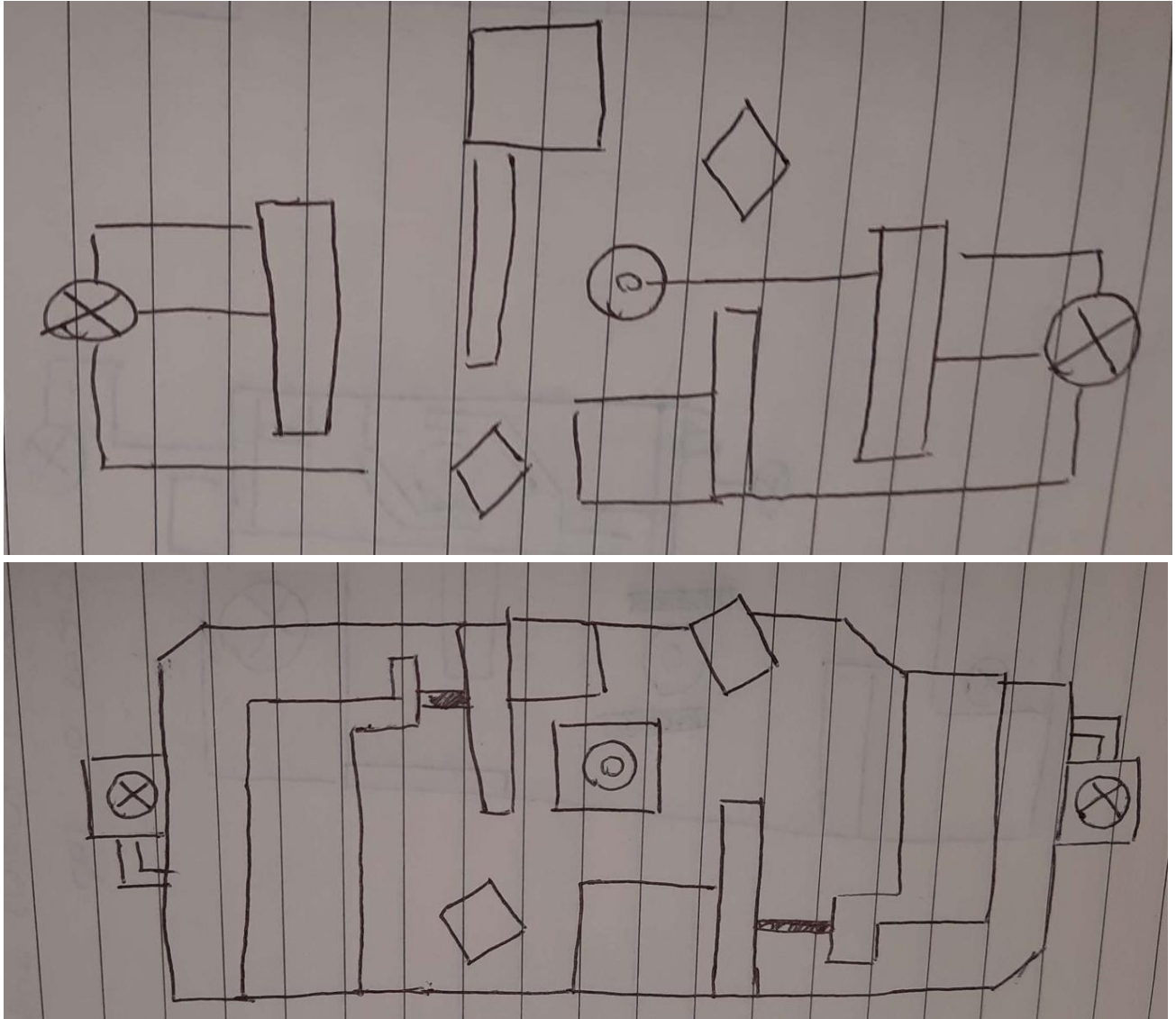
- Quicker path running through the buildings along the upper level, across the elevated bridge
- Another that cuts straight through the first to the point, very exposed
- Much longer but also much more covered path that goes almost the entire way to the point

This kind of path structure is very common in *Team Fortress 2*, so it's one element that was really focused on in the map design.
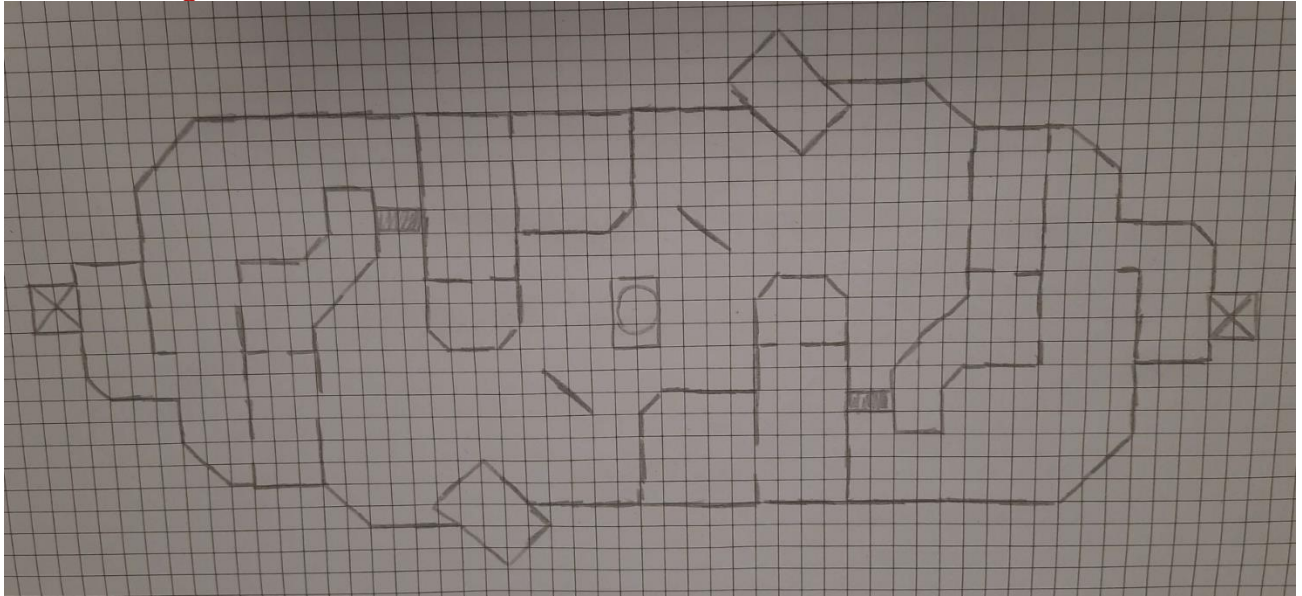
- Solidified the basic scaling of the map and where the different buildings would be placed
- Includes a large, open centre point that is the focus of the combat
- Only two paths between the centre point and spawn, acts as a funnelling chokepoint for a defending team pushing past the point as they are very limited in the direction they can take

Photoshop Map Translation
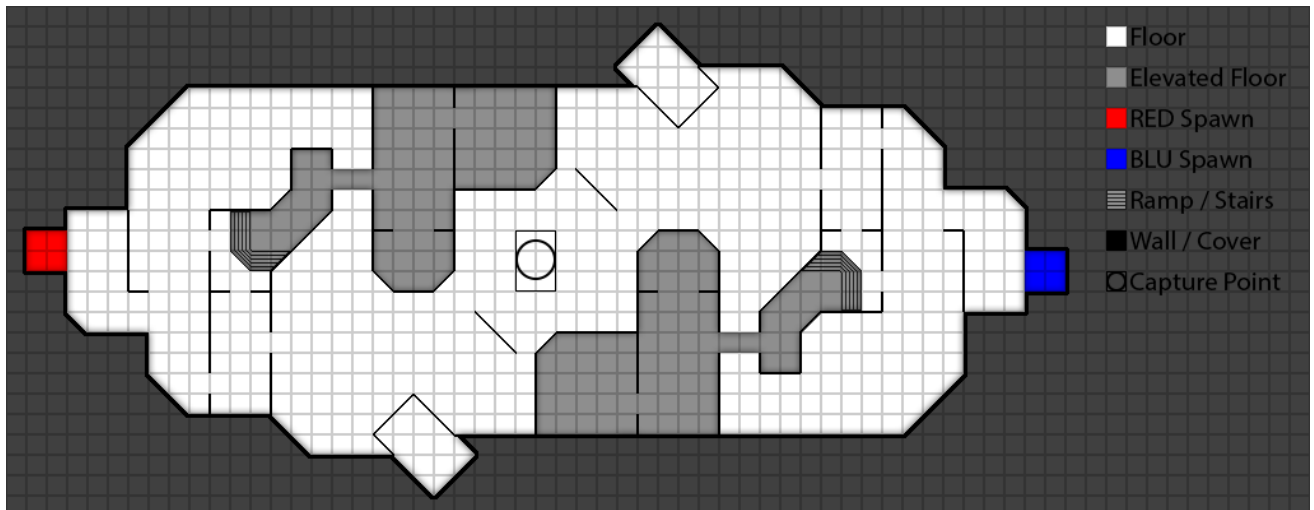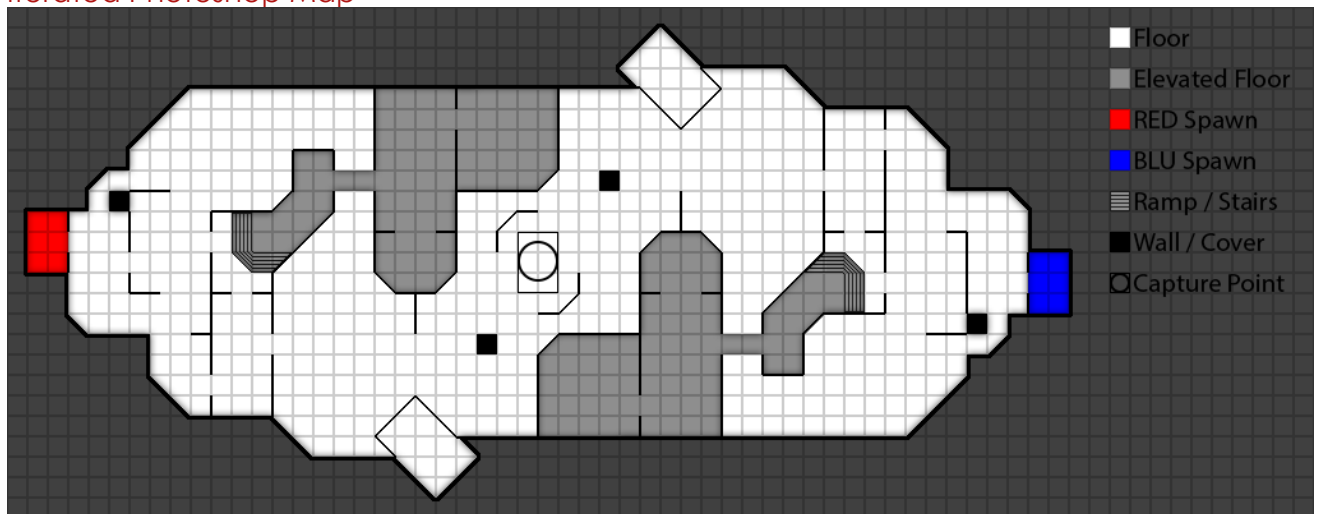
Changes to Map Design

- Added a separated spawn room
- Increased the size of the general spawn area, adding multiple different exits
    - Includes extra cover elements that break up the sightlines for players
    - Stops the original single exit from spawn from being a spawncamping chokepoint
- Added more cover to start to break up some of the sightlines in the large open areas
- Changed the cover surrounding the point to make the building sightlines less dominant

This map design has a very strong 3-path structure and a large open centre, meeting multiple of the established level goals. With some more iteration, more branching paths could be added to further refine the level to achieve the desired play experience.

Design Idea 5
- Experiment with different style of symmetrical design
- Both approaches to the point are the same layout but perpendicular to each other, making the centre point feel unique
- Control point area inspired by the large sightlines of *Nucleus*, with the attempt to make it much more balanced of an experience
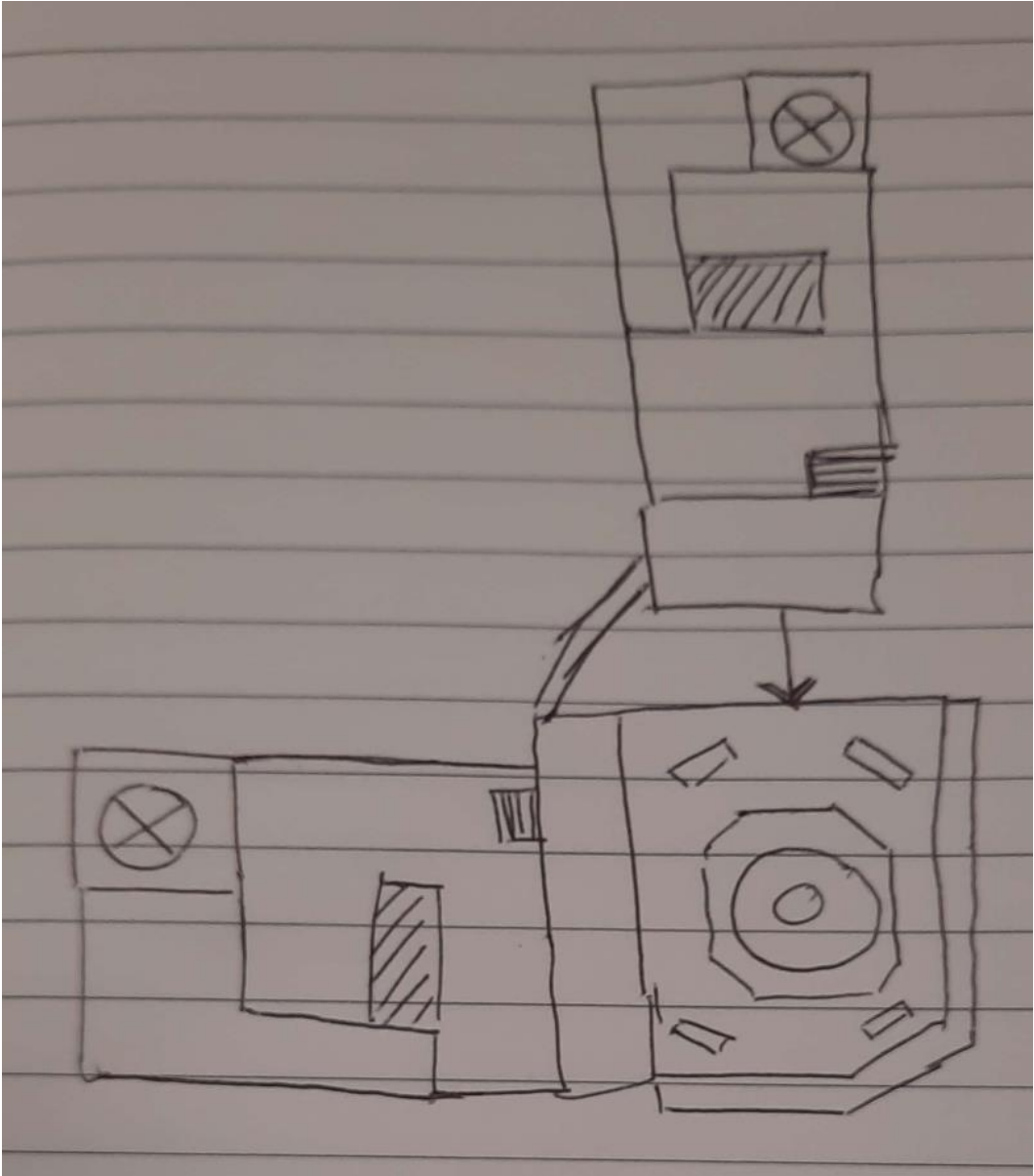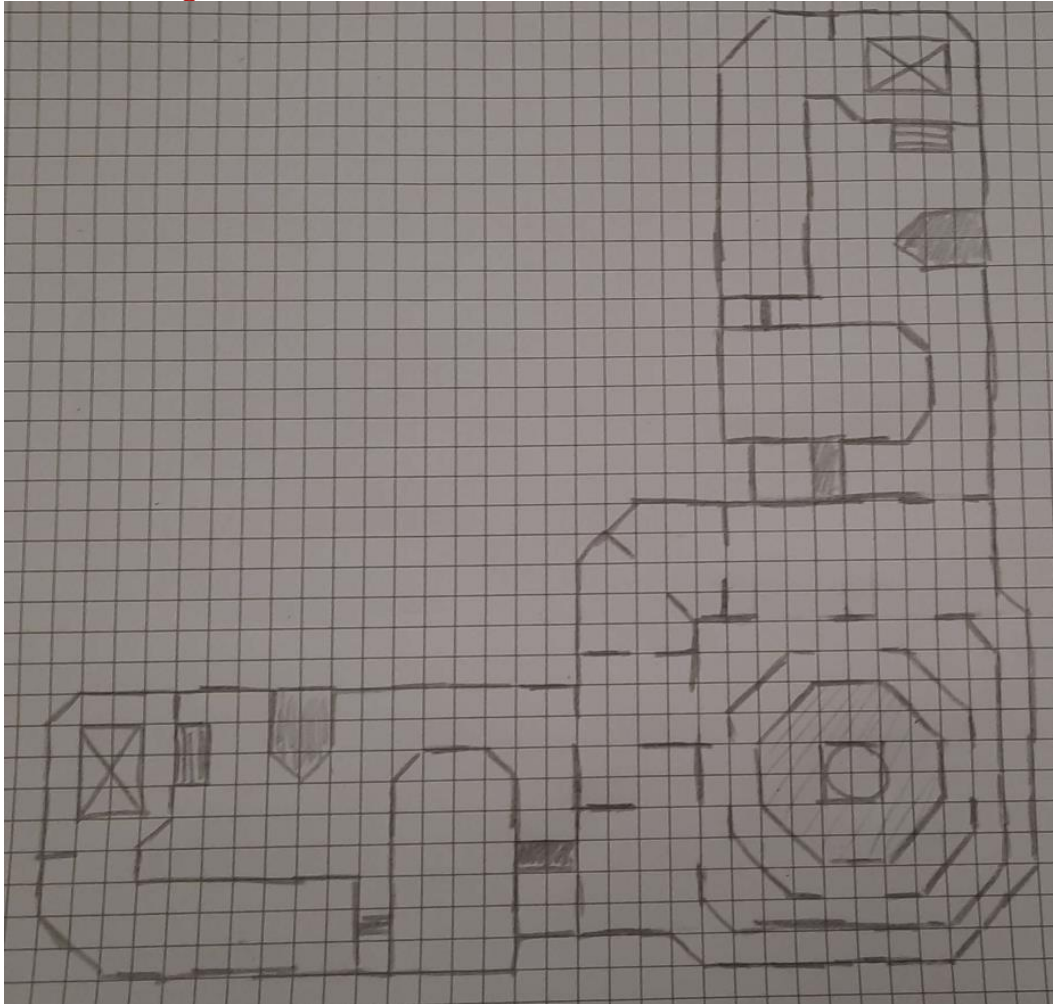
- Refined by establishing the cover options that are located around the point
- Added an elevated area, which will extend around the point for good *Sniper* sightlines
- Implemented a second exit to the spawn area, countering easy spawncamping

Photoshop Map Translation

Legend:
- Floor
- Elevated Floor
- RED Spawn
- BLU Spawn
- Ramp / Stairs
- Wall / Cover
- Capture Point
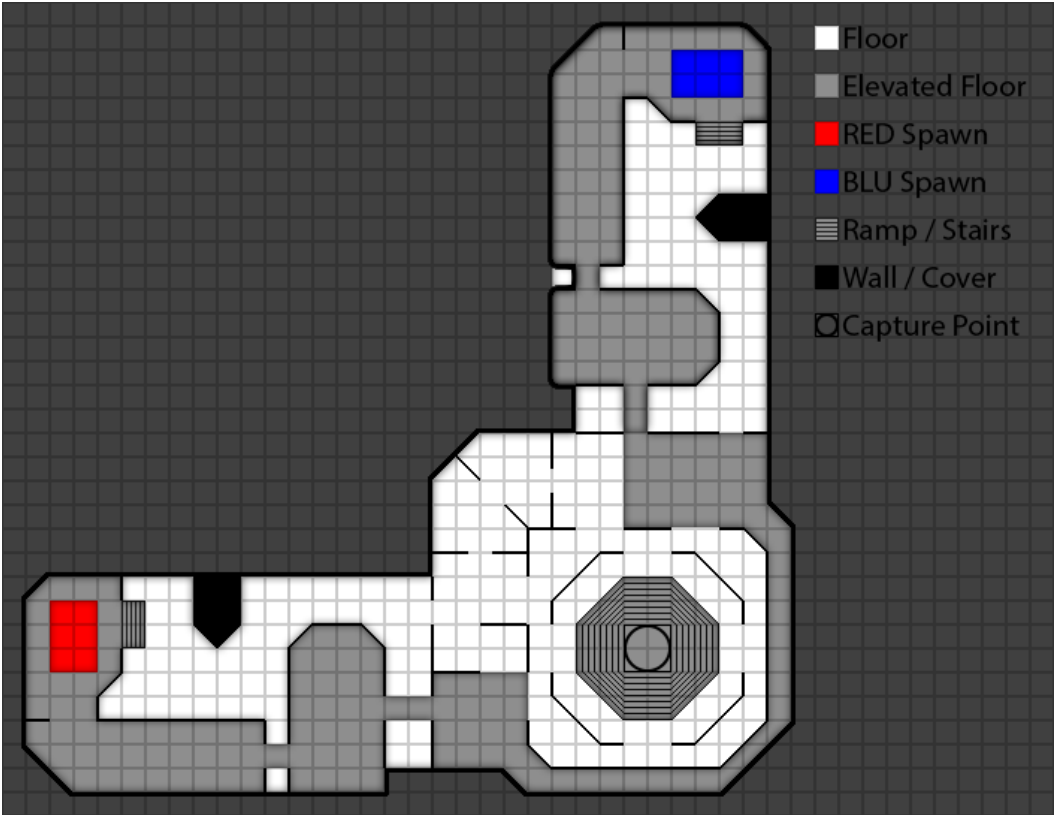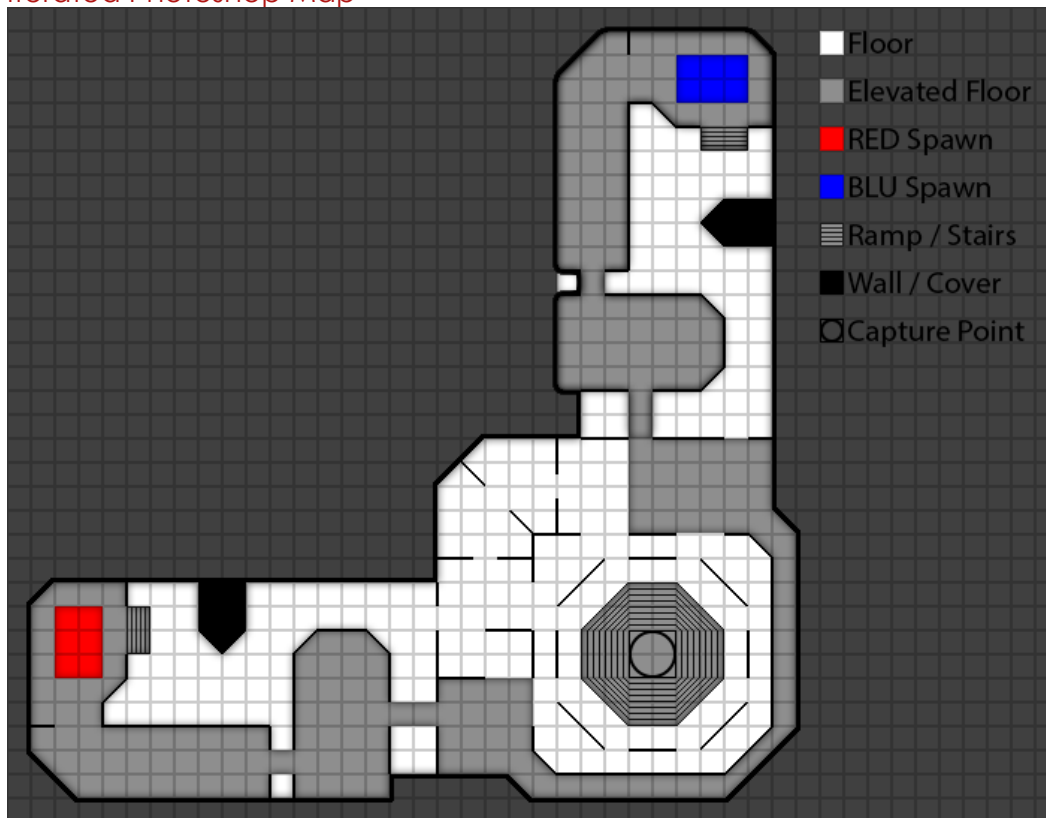
Changes to Map Design

- Altered how the control point is covered, considering sightlines from the surrounding raised area
    - Blocks ones that go straight across the entirety of the point, adds ones that show a specific angle for *Snipers* to use

This map design was an interesting experiment into a completely different style of map designs compared to the other design ideas, but the control point area is a point of contention that feels like it will be quite unbalanced. The idea was to experiment with *Nucleus'* design and see if it could become much more balanced, but the cover walls still have sightlines that cross the entire point. It effectively turns the point into a cross between *Nucleus'* and *Harvest*'s points.

Chosen Map Design

The map design that is going to be used as a base for the final design is Design Idea 4, taking influence from some elements of the other designs to make a more cohesive map design. Idea 4 appeared to be the most balanced, and already met quite a few of the level goals that had been set out. Going forward, the map can be iterated to refine it further to meet more of the goals and keep it interesting for players.

Design Iteration
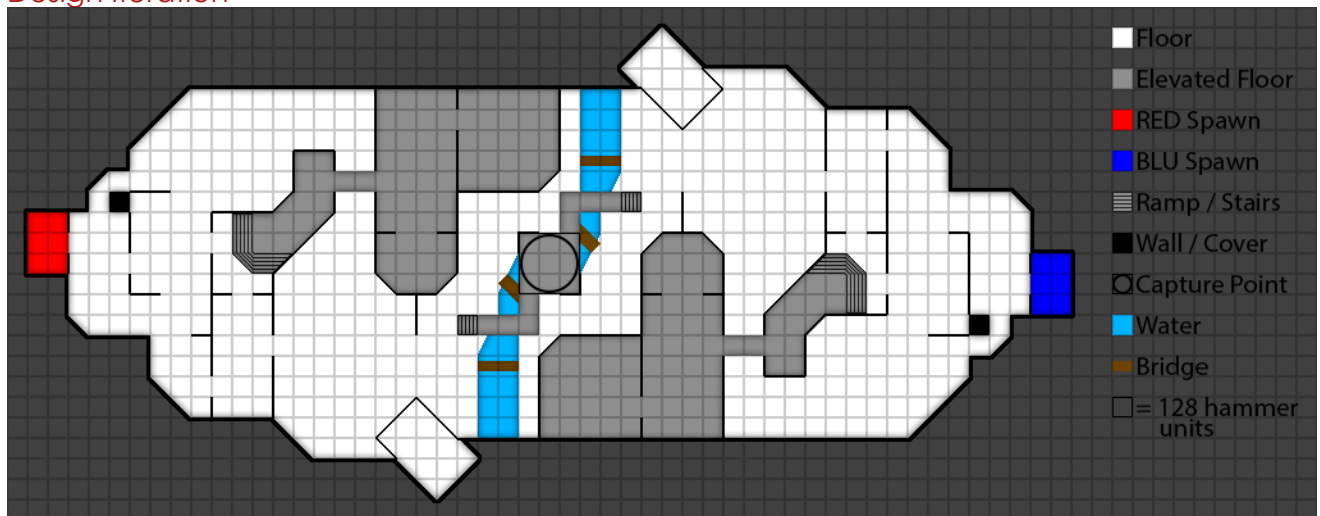
- Added raised control point idea from Design Idea 1 and the map *Badlands*
- Included a river of water to break up gameplay and make it more interesting
    - Will be able to jump down from the point into the water
    - Faster classes will be able to go over it entirely while slower classes will need to use the multiple bridges
    - Will include a reward pickup like the side room in *Lakeside*
    - Added as a way to make the map more memorable and interesting
- Removed cover pillars in the approach to the spawn point

Map Overview

Map Layout
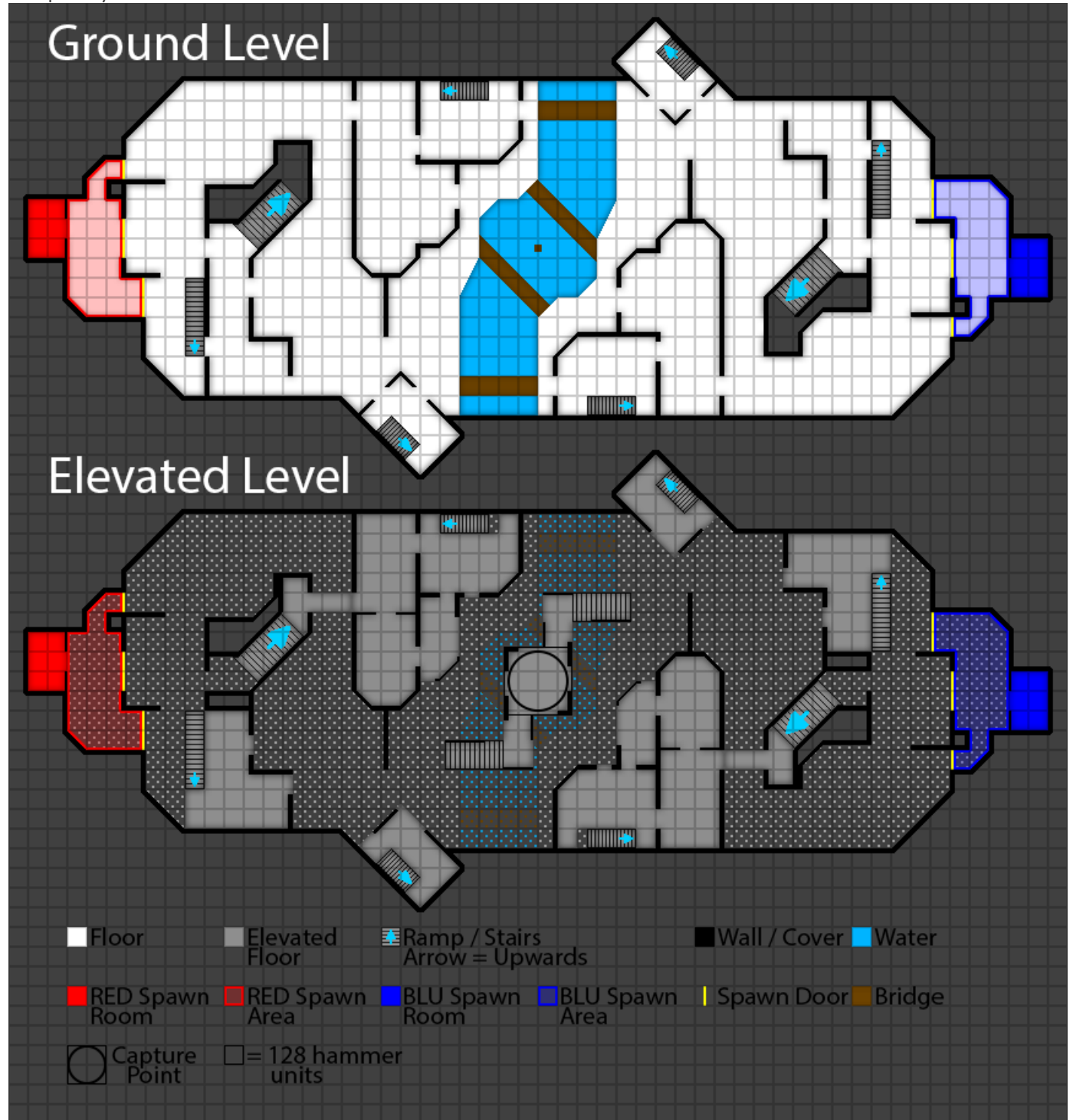
Map Scale
Time to run from spawn to centre point using the shortest path, measured in seconds.

Class	Run 1 (s)	Run 2 (s)	Run 3(s)	Average Time (s)
Scout	9.76	9.75	9.93	9.813
Pyro	13.03	12.82	12.30	12.717
Heavy	16.74	16.81	17.07	16.873
			Total Average	13.134

Player Paths
General Paths

Quickest Path
- Good for quickly attacking point
- Open and exposed path

Option to take a quick flank into enemy territory

Can choose to go to upper level instead

Optional secondary path to the point

Medium Path
- Good for mid-speed classes
- Path to the point is longer but much more covered approach to the point

Path splits for both sides of battlements

Quick access to point for Scout's doublejump and Soldier's rocketjump

Attacking the point needs jumping off the building and going to ramp

Path to control point battlements
- More useful for attacking players on point
- Much longer to get to capturing the point
- Good for classes like Soldier and Demoman to defend the point

Scout

Flanking Path
- Covered approach, exposed in enemy territory

Double Jump to point and into enemy building

Quick Rush to Point
- Fastest path, but quite exposed
- Has option to flank into enemy territory

Flank behind/under main enemy defence

Longer, upstairs Path
- Offers risk vs reward approach to point
- Much more covered until centre of map
- Double jump needed to land on point, can surprise enemy but may miss and fall in water

Soldier

Defensive position to stop enemy approach

Main path to point battlements
- Gives Soldier good sightlines to attack point
- Can rocketjump to land and capture the point, with sightlines of enemy battlements

Second path option to more directly attack point
- More open path than battlements
- Better sightlines of enemy territory
- Can get to the point faster and without taking rocketjump damage

Pyro

Path into enemy building flanking underneath point for cover

Covered path towards centre area
- Quickly move into close quarters building
- Path outside to point is mostly blocked from enemy sightlines by the point platform

Second path into enemy building
- Lets Pyro attack battlements in close quarters
- Cover from long-range classes
- More exposed entry but quicker to enemy battlements

Demoman

Side windows have worse sight angles but more protection from enemy fire

Can use further away side Sniper battlements to protect point from a distance
- Can fire grenades onto the point area
- Out of range to set stickybomb traps

Path to point battlements
- Can fire grenades to defend the point
- Set up stickybomb traps either directly on the point or on sides of the cover blocks

Demoknight Attack Path

Heavy

Shortest path to the point
- Heavy's fast firing speed good for clearing the point
- Cover can be used to block some enemy fire on the point, but still quite exposed
- Better sightlines of the enemy building than on the centre battlements

Slower path up to the centre battlements
- Can get good sightlines on the point to counter enemy attacks
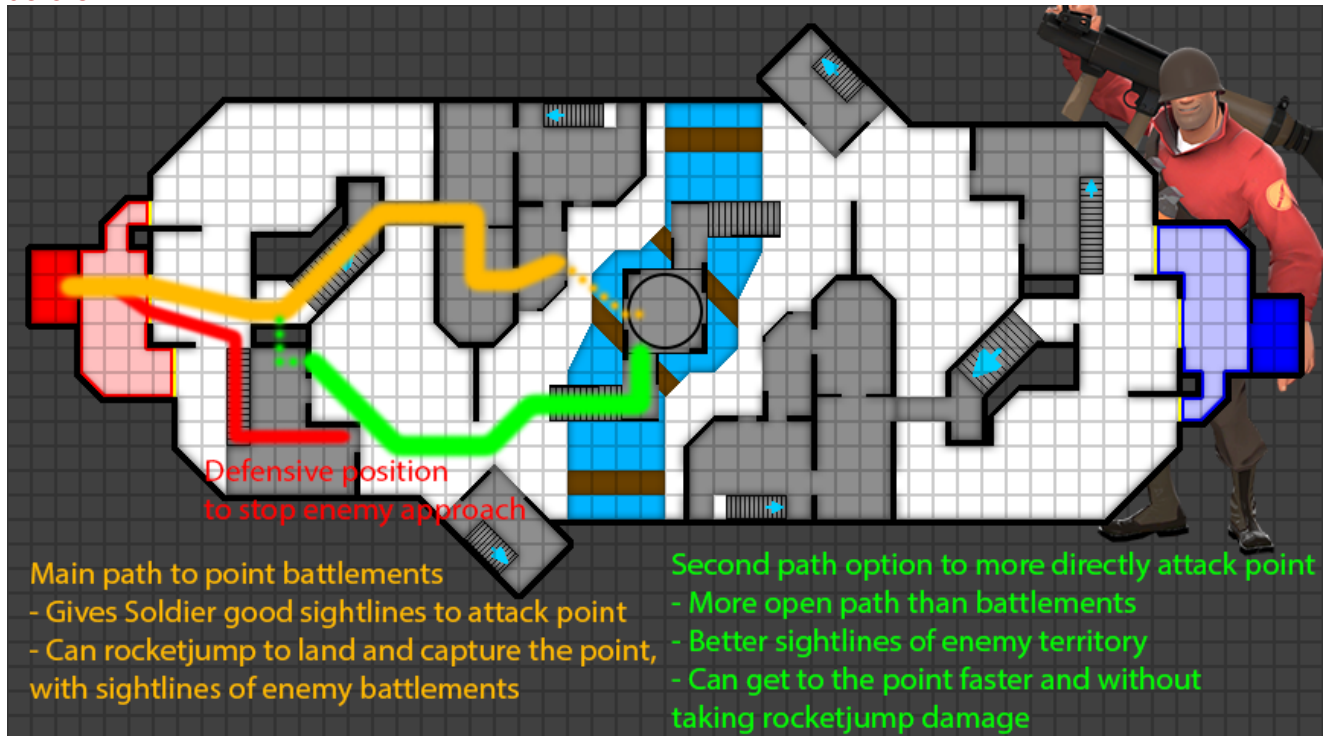- Heavy's slow speed means it isn't easy to try and push for the point from here
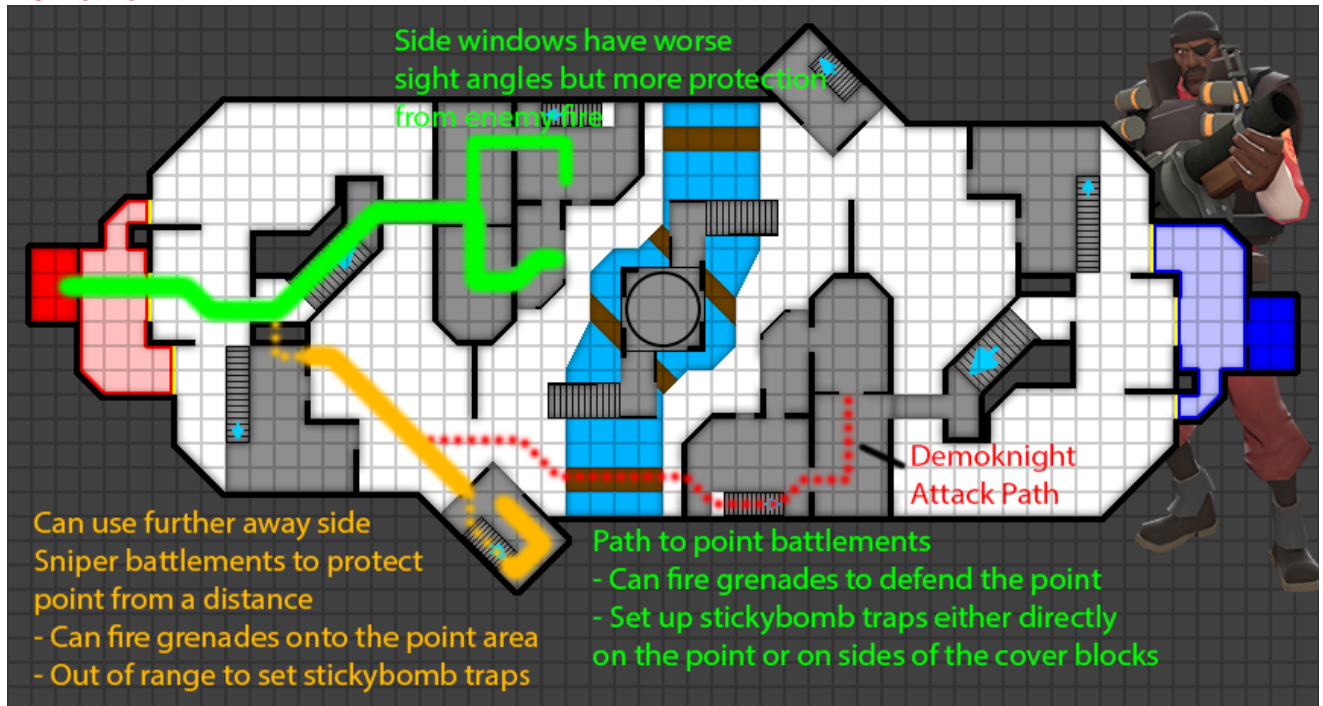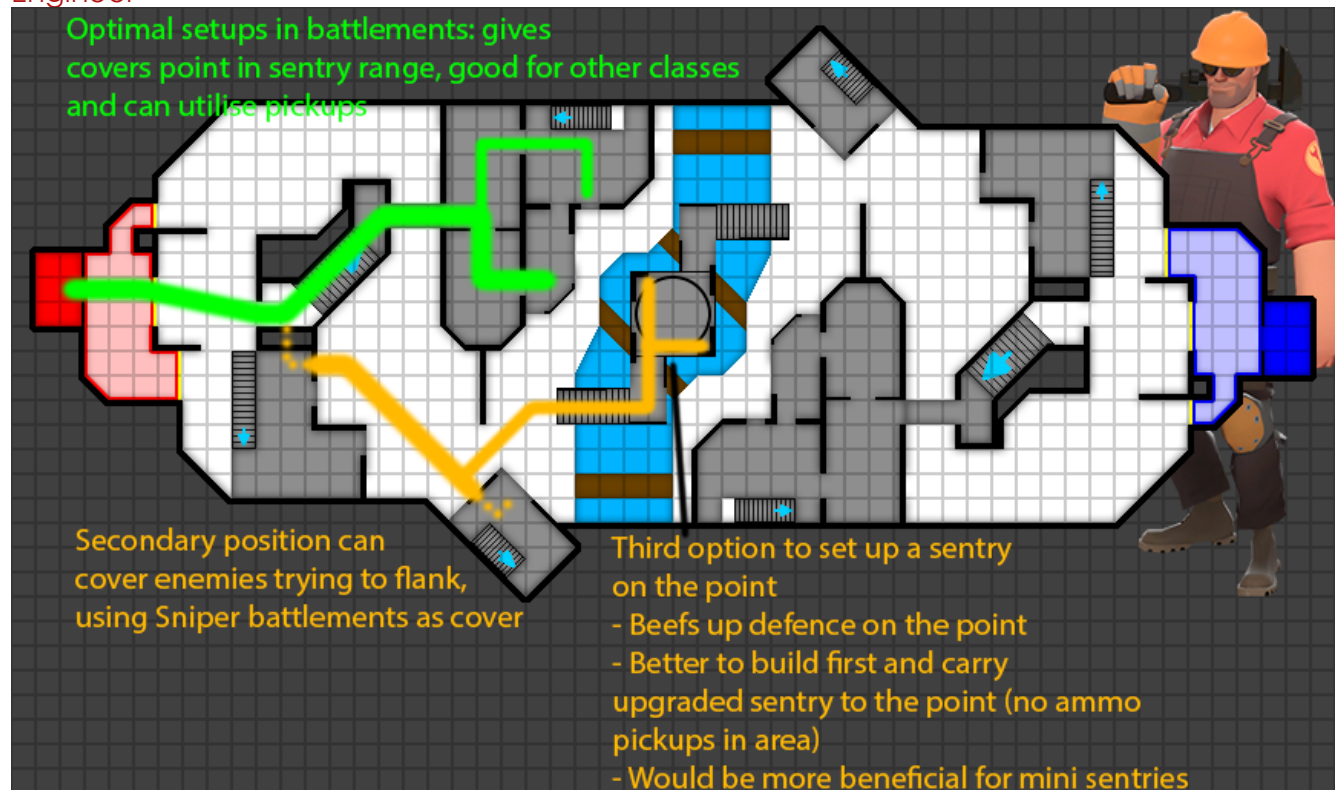
Engineer

Optimal setups in battlements: gives covers point in sentry range, good for other classes and can utilise pickups

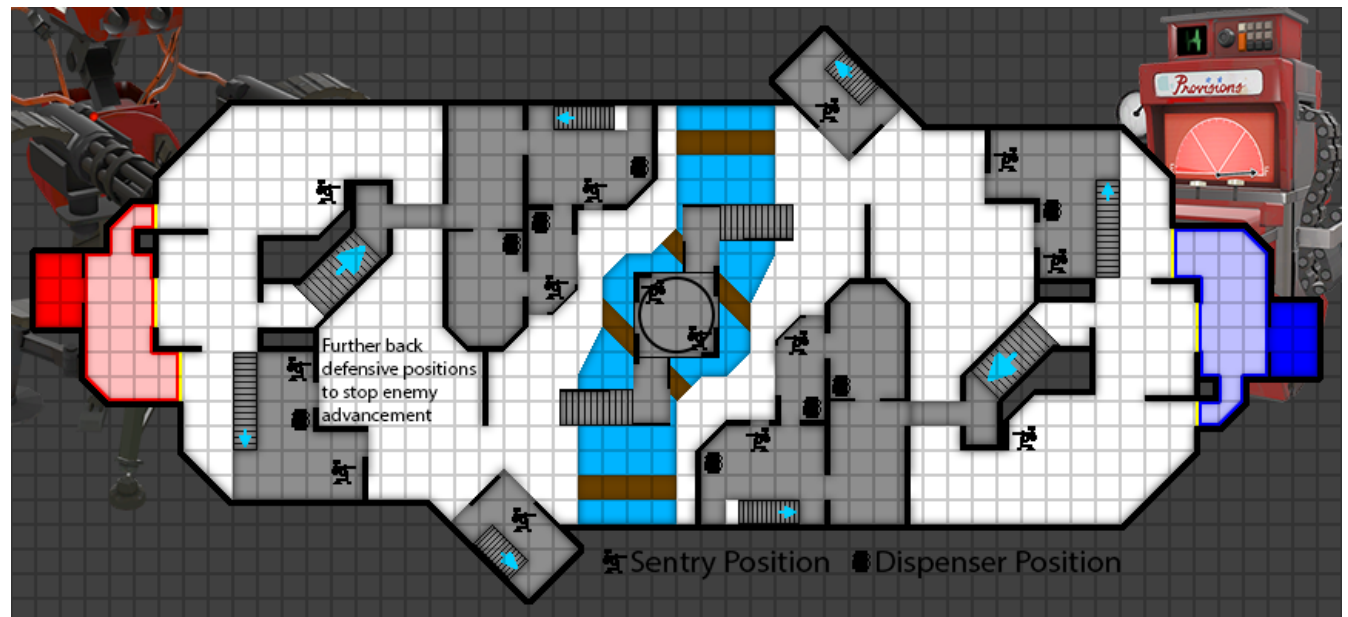Secondary position can cover enemies trying to flank, using Sniper battlements as cover

Third option to set up a sentry on the point
- Beefs up defence on the point
- Better to build first and carry upgraded sentry to the point (no ammo pickups in area)
- Would be more beneficial for mini sentries

Sentry / Dispenser Positions

Further back defensive positions to stop enemy advancement

Sentry Position   Dispenser Position

Teleporter Positions

Teleporter Entrance ● Teleporter Exit

Attacking the Point

Medic acting as support
to characters pushing to the point
- Can either follow the more covered, but longer path or take the quicker and more exposed path
- Also a strong path for Battle Medic to fight off opponents

Defending the Point

Support for the defending classes
on the battlements

Push up and past the point with
offensive classes into enemy territory

Can use closer building battlements, not great
as they don't have optimal range from point

Close to spawn battlements
- Good for defending against
enemy team pushing past point
- Sightline towards enemy building
- Can't be used for point defence

Quick path to side Sniper battlement nest
- Has multiple views over most of point
- Can see around and underneath it
- Ammo pickup to reload
- But not overly hard for enemy to attack

Spy

Can break off and attack Sniper battlements or flank further into enemy area

Goal of Spy is to flank around enemy
- Best option is to flank under the point, where Spy will also be covered from most sightlines by point platform
- Get around defence line and then attack battlements

Open centre needs to be taken invisible, and then disguised once covered in enemy territory

Conflict Points

Conflict zone for enemy team pushing past the point

Main Conflict Point around Capture Point

Extra conflict point inside team's point building
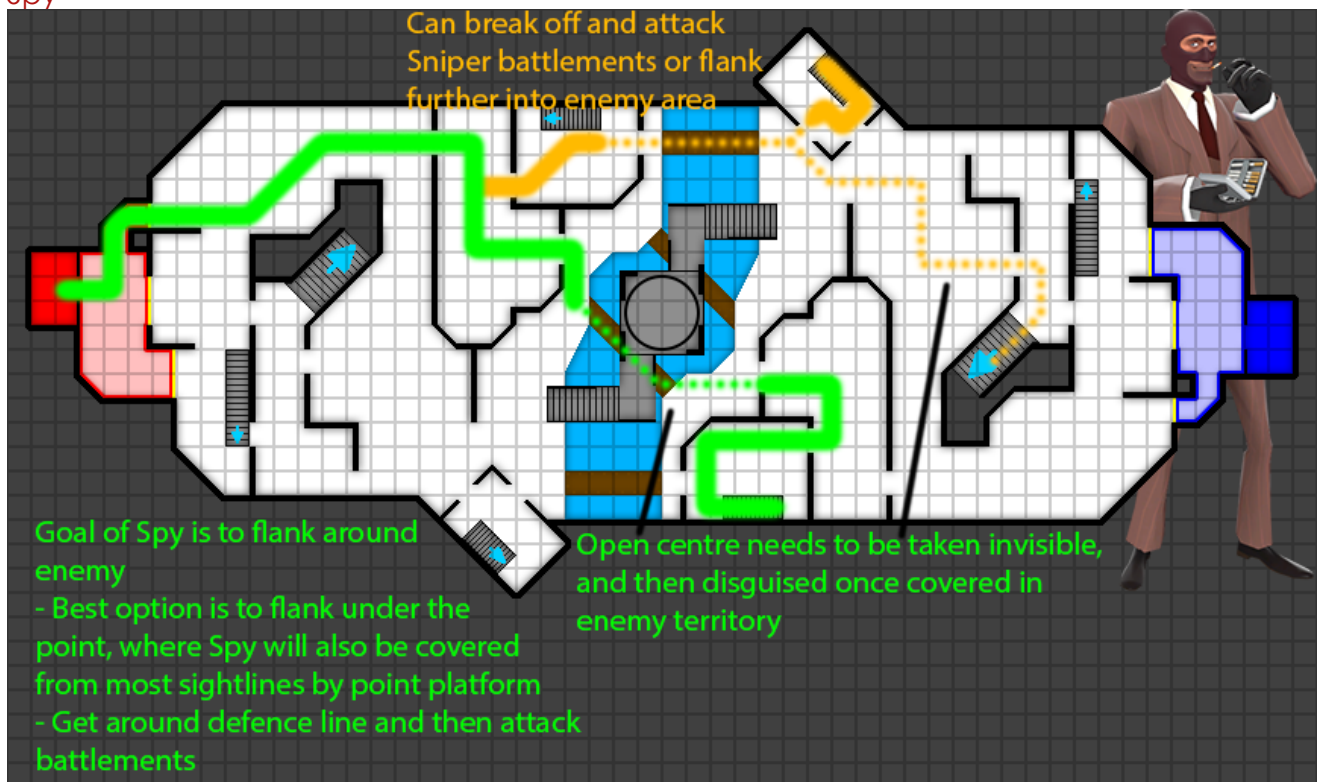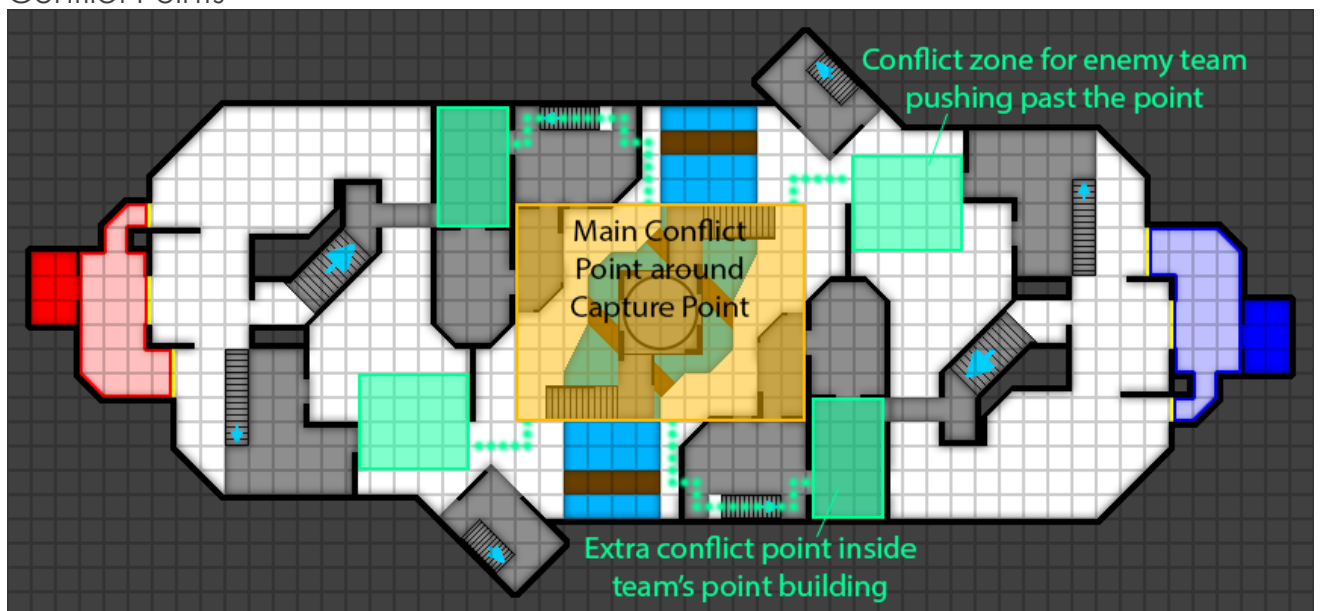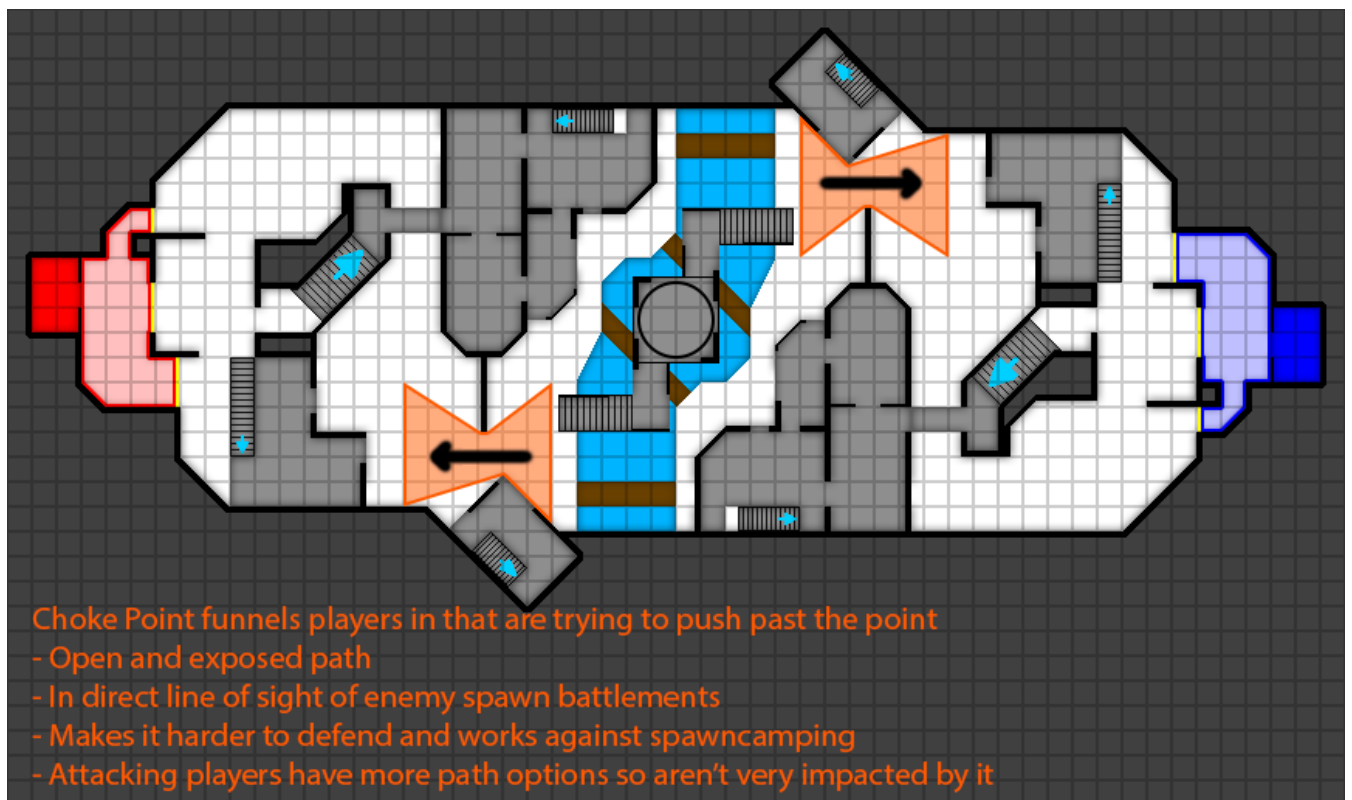
One of the initial goals with the level was to have the play experience be mostly focused on the control point. To achieve this, all the different paths in the map only converge in the centre area, and all of the battlement and clear defensive positions are localised around this point as well.
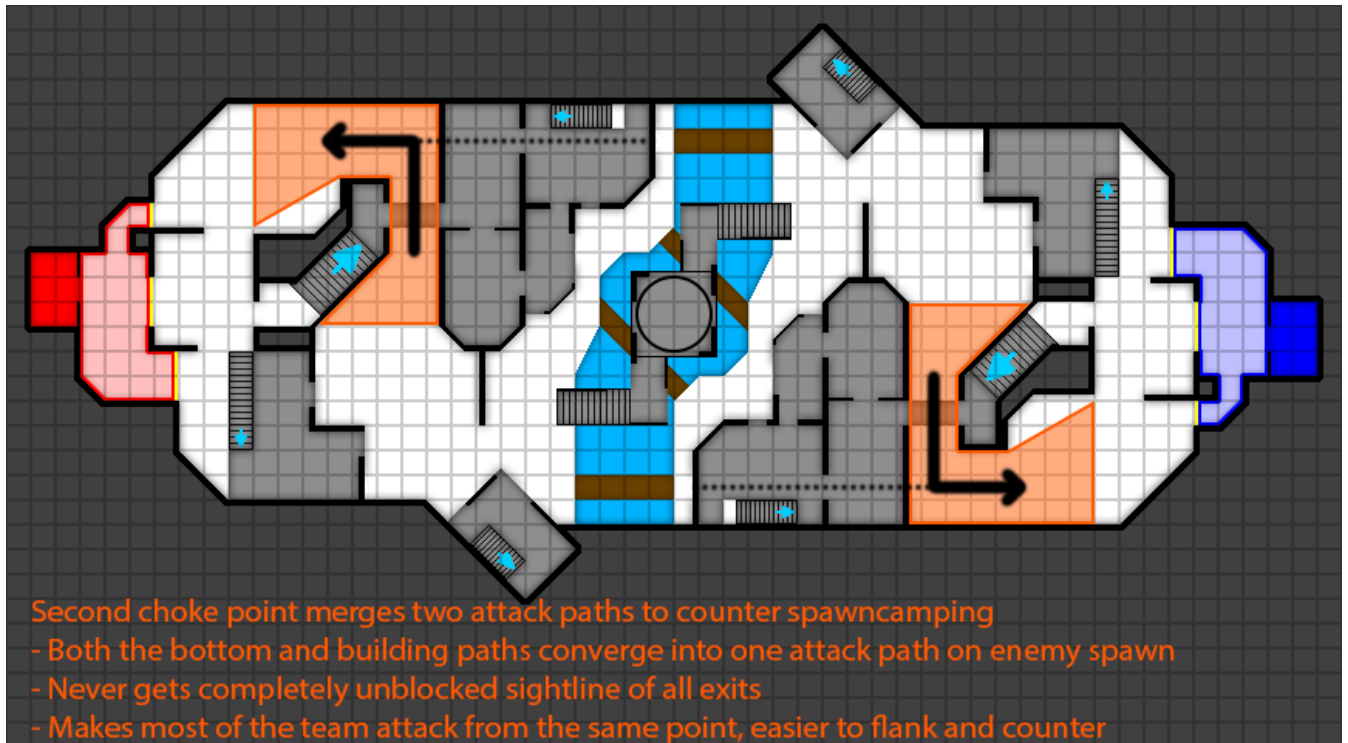
The satellite conflict points exist for teams that are willing to push further upwards once they have control of the capture point. These points are smaller, and because of their proximity to the player spawns they are much easier to defend than attack in. The building conflict points are part of the flanking options of the map that bypass the main conflict zone entirely and are the best ways for *Scout* and *Pyro* to attack from inside the enemy lines. Much like the other secondary conflict points, because of how quick it is for the defending team to get there, it is much easier to defend than attack.

Choke Points

The choke points of the map are built so that they are detrimental to the defending team / team pushing past the point, but not much to the attacking team, which normally has more path options they can take to counter it.

Choke Point funnels players in that are trying to push past the point
- Open and exposed path
- In direct line of sight of enemy spawn battlements
- Makes it harder to defend and works against spawncamping
- Attacking players have more path options so aren't very impacted by it
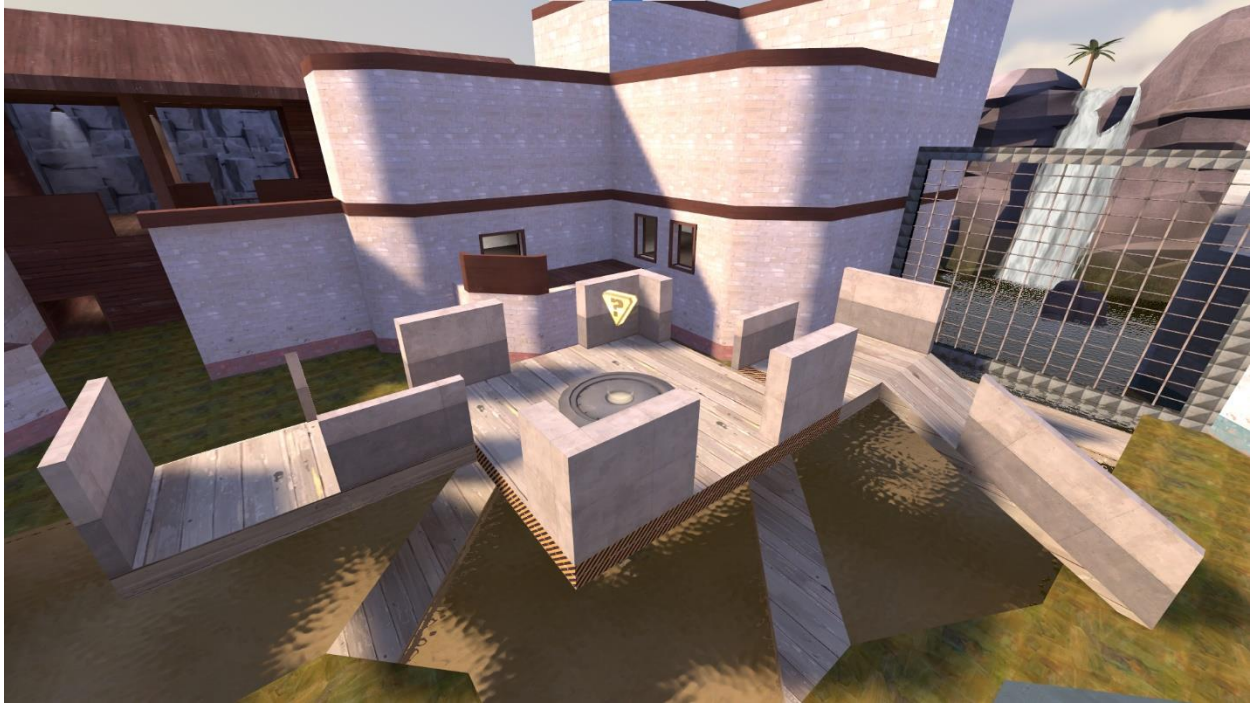
The cover wall from the main point building works in conjunction with the side battlements to funnel most of the players through this small gap. Because of how open it is on the control point side, it's hard to get a good position to control the choke point from, and the attacking team can use the elevation to simply go around the defensive line to the control point. But, because of the battlements and the smaller area, it is a much stronger choke point on the other side. A team pushing towards the player spawn does have more options to attack from than this, but that would require going through the more close-quarters building and running into enemies.

Second choke point merges two attack paths to counter spawncamping
- Both the bottom and building paths converge into one attack path on enemy spawn
- Never gets completely unblocked sightline of all exits
- Makes most of the team attack from the same point, easier to flank and counter

The second chokepoint acts as a funnel to stop spawncamping much like the first one, only really acting in one way because of the multiple options the defending team have to leave their spawn. They also have an elevation advantage This chokepoint brings two different attacking paths together, into one small gap near the team spawn.
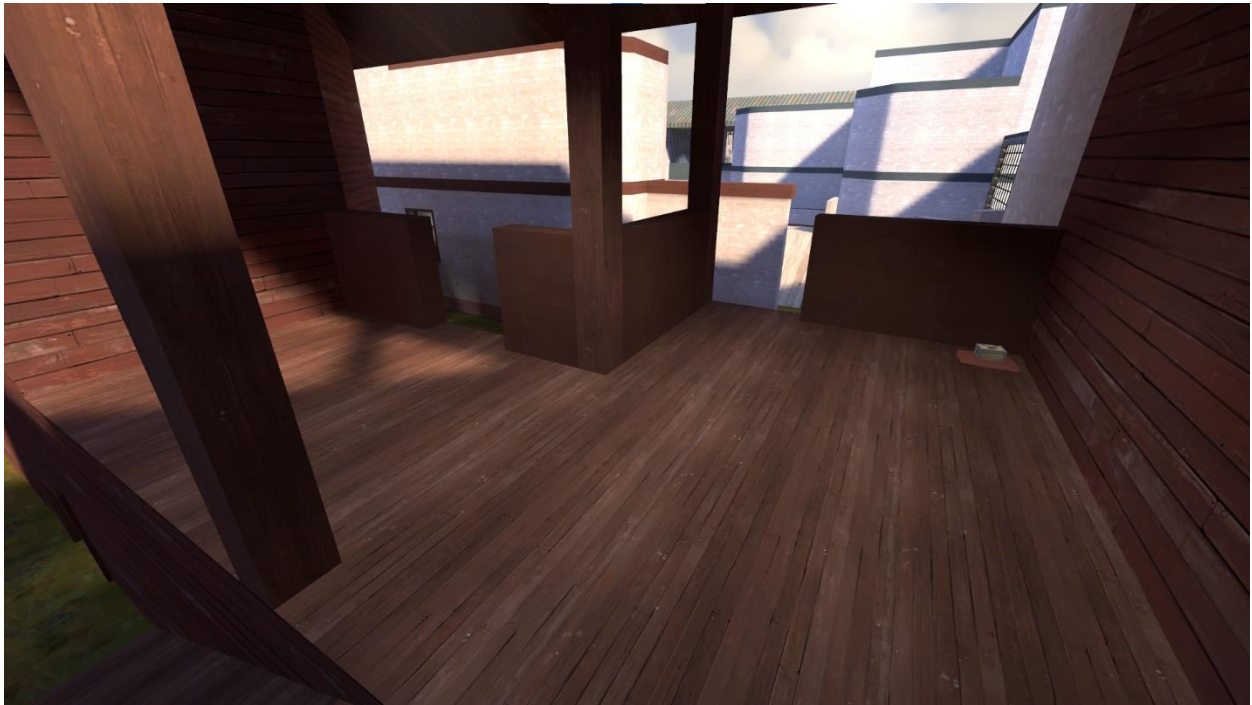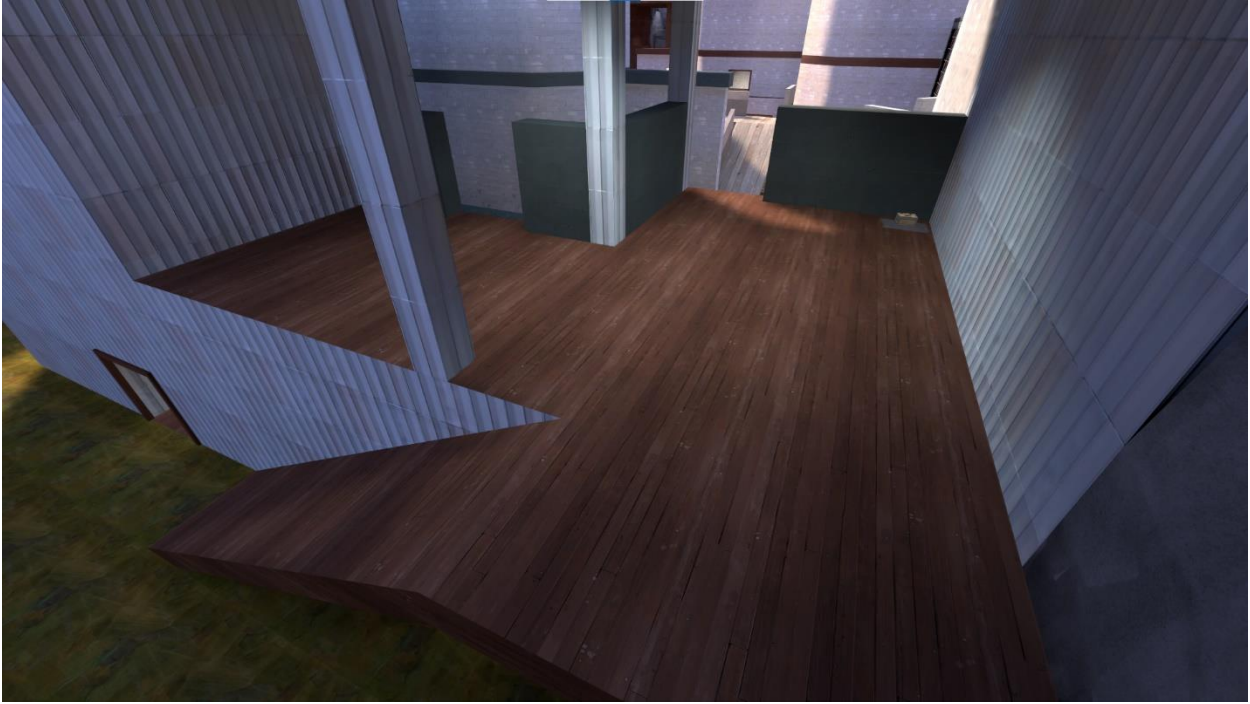
Points of Interest
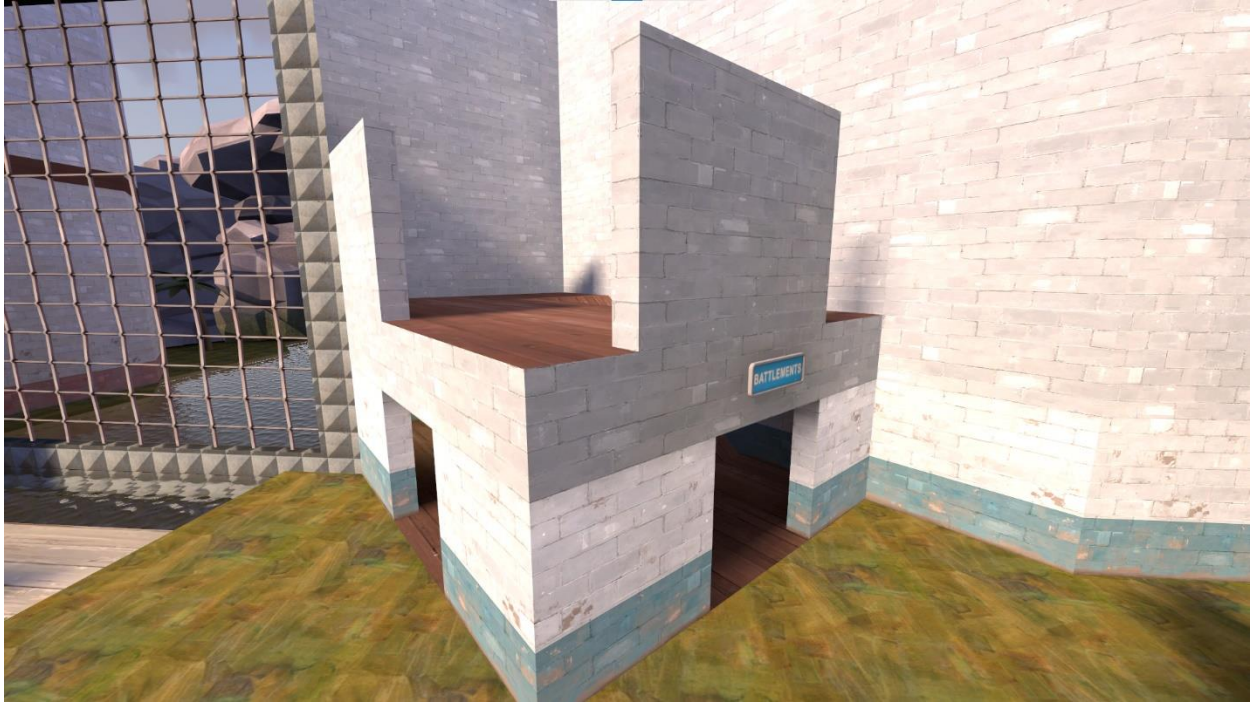**Main Control Point**

Control Point Team Building

Spawn Battlements

Side Sniper Nests

Pickups

Small Health Kit (+20.5%)
Medium Health Kit (+50%)
Large Health Kit (+100%)

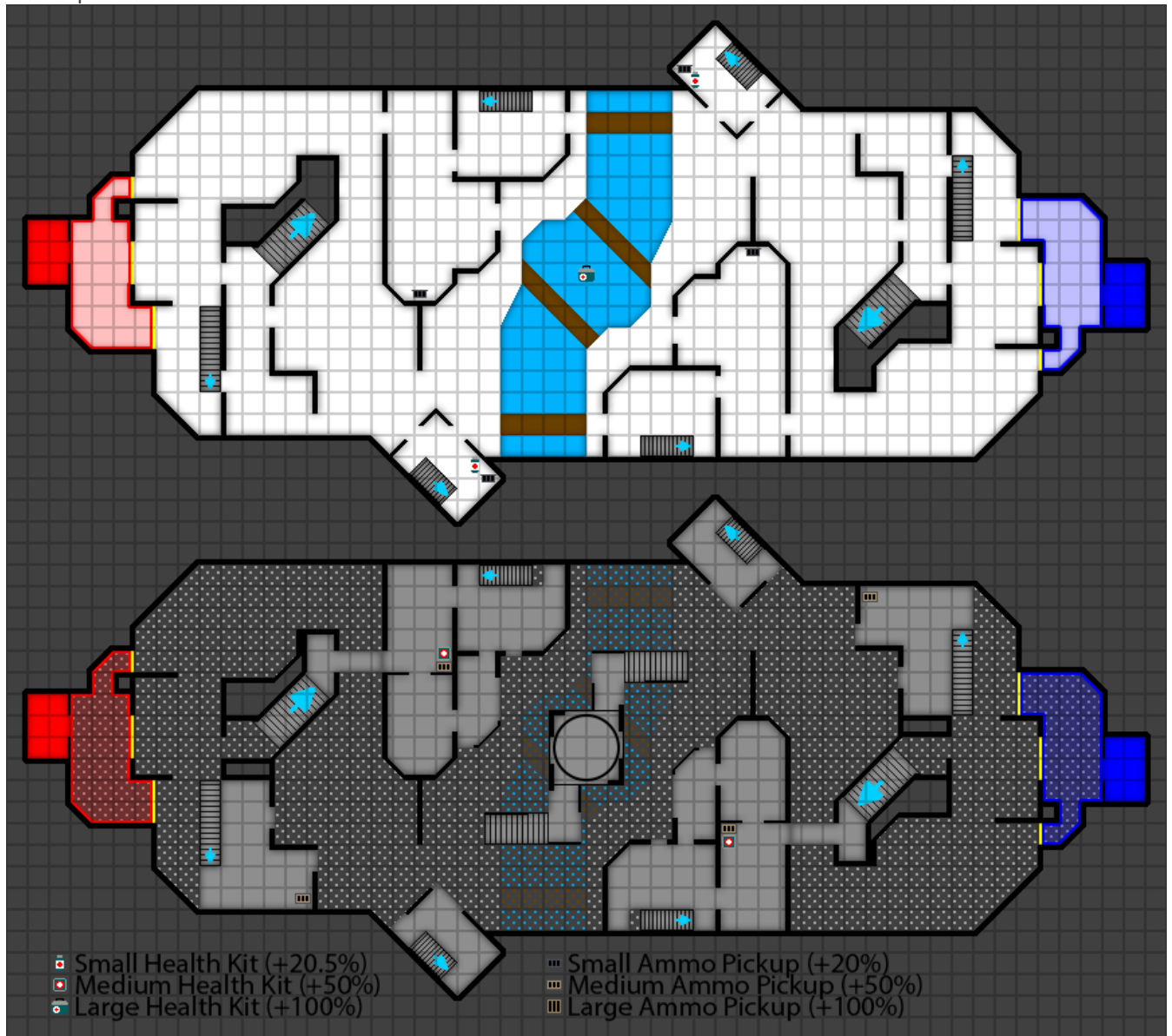Small Ammo Pickup (+20%)
Medium Ammo Pickup (+50%)
Large Ammo Pickup (+100%)

Aesthetics

Setting

The setting for the map is focused around being a built-up area around a large area. The idea is that the map will evoke a more tropical-style setting, using some palm trees and the natural features to get that across. The juxtaposition of the concrete and wood of the buildings with the bright grass and tropical trees should make an interesting visual contrast for players. Most maps in *Team Fortress 2* normally take place in areas that don't appear to be very populated, so that will be reflected in this map by not including any other buildings outside of what is already built up in the map. Where there

aren't any walls from the buildings that are in the area, cliff faces will be used to showcase that the map is set in an area that doesn't have much around it outside of what the player can see.

The river running through the middle of the map will connect to a waterfall on one end, to give it a realistic source, and go into a rock face on the other side. This will be used to further the idea that the area the players are fighting in is rather isolated.

Affordance
Because the map is symmetrical, colour theory will be used to show which side of the map players are on at any time. The area around the spawns will use lots of Red and Blue respectively for each team, which will be gradually reduced the closer to the point the player gets until there are only minimal coloured elements on the structures by the point. This is a convention of most *Team Fortress 2* maps because it stops players from being confused.

Another small element of affordance is the border of the control point area will be textured on the mesh. It takes up the entirely of the middle platform anyway, but it is another *Team Fortress 2* convention and having a little bit of extra affordance will make it clearer to players and avoid any potential confusion.

Affordance has also been utilised for the placement of pickups. All ammo pickups are marked on the ground with a paint decal so even when the pickup isn't there and waiting to respawn, it will still be obvious to players where the pickups will be spawning. The only exception to this rule is the large health kit underneath the point, as it has it's own specific platform that it sits on.

Balance

Considerations
One of the major considerations for the balance of the map was the different paths being balanced with each other. While they were supposed to have different pros and cons, one can't be a direct improvement over the others. Thus, I made sure that each was fairly balanced, with the forking paths giving players more options depending on what class they were playing.

Expected Issues
With the more open design of the map that I've gone with, it is expected that there may potentially be issues with *Sniper* sightlines. Lots of work has gone into making sure the ones that do exist are balanced and don't control a lot of the map, and through playtesting the problematic ones have been altered or removed entirely.

Another expected issue is also with the sightlines of the buildings on the point, but with *Soldier*, *Demoman* and *Engineer* being able to trap and completely cover the point with their projectiles. This was raised in testing, so the cover was adjusted so that there is no one single sightline that covers everything.

Testing Plan
The plan for testing is to run multiple sessions of playtesting to get feedback and suggestions from players about the design of the map, which can then be acted on to improve the map in more iterations. Bot testing will also be used for general gameplay testing, but it's unlikely that any design changes will be considered based on that alone.