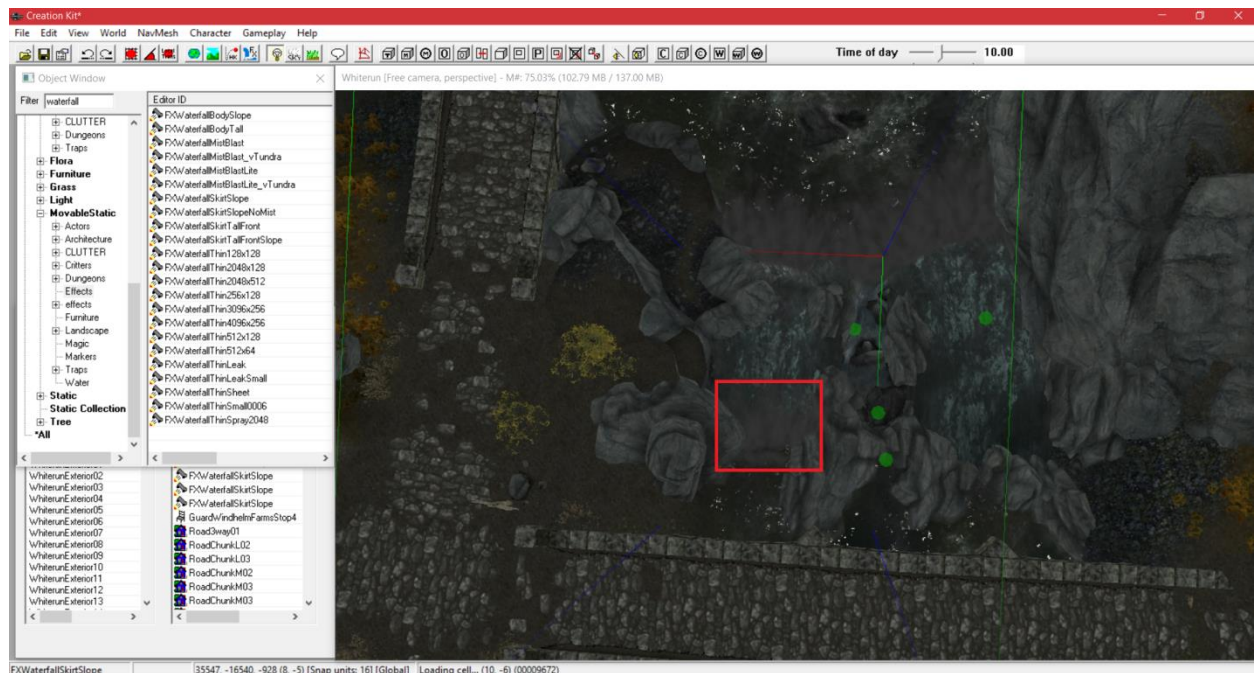


How to Add Waterfalls, Cave Entrances and Doors, and Map Markers

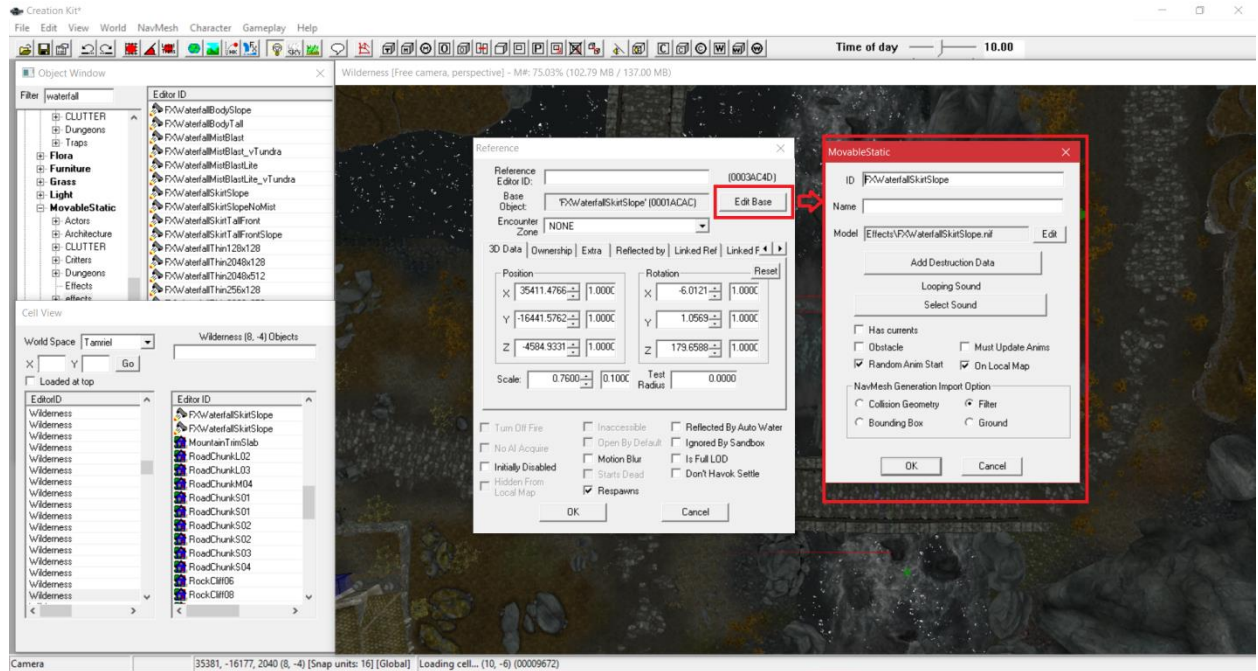
Hello everyone. In this tutorial, I will be teaching you how to add waterfalls, cave entrances, and map markers to the game. For this tutorial, I will be doing something a little different than what I've done in the others. We will largely be studying existing ones in the game (whether it be the vanilla game or my Casavir Romance mod) and I will tell you where to find their required features. By this point, you should already be experienced with dragging, dropping, and positioning models in the render window, so I will not give specific instructions on doing that. Just knowing where to find these objects and how they work together should be sufficient. Plus, it is a good idea to see these things in their natural environments so you can get an idea of how to construct them yourself. Of course, you can still drag and drop features as we go over them if you want, but I will not personally be constructing samples step-by-step with you as I have been.

Part 1

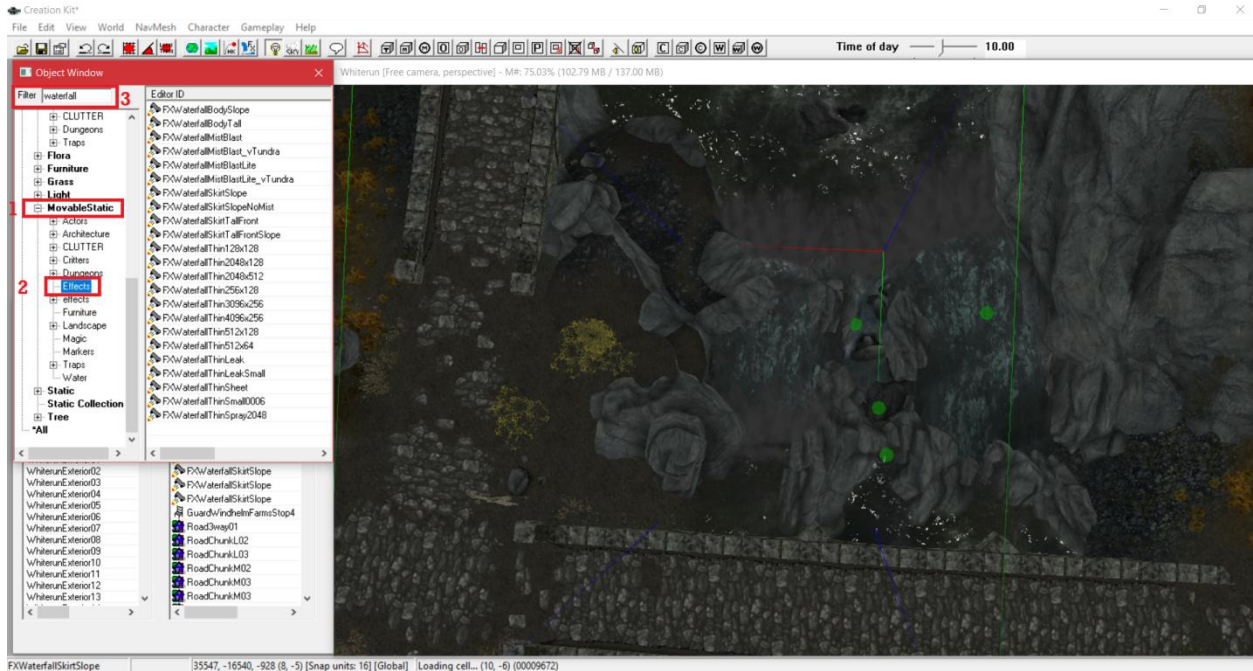
1. Open the CK and load your mod.
2. We will start with waterfalls. Load up the following exterior cell in your "Tamriel" section of the "World Space" drop-down menu in your "Cell View" window.
3. There are two types of waterfall models we will examine. They are both in the exterior cell "Whiterun." Click it to load the cell. Remember to close out any errors that pop up by clicking "Yes to All" or "Retry" or "Ignore."
4. Once the cell is loaded, pan over to horizontal bridge that intersects with the vertical one until you receive a view that is like this one:



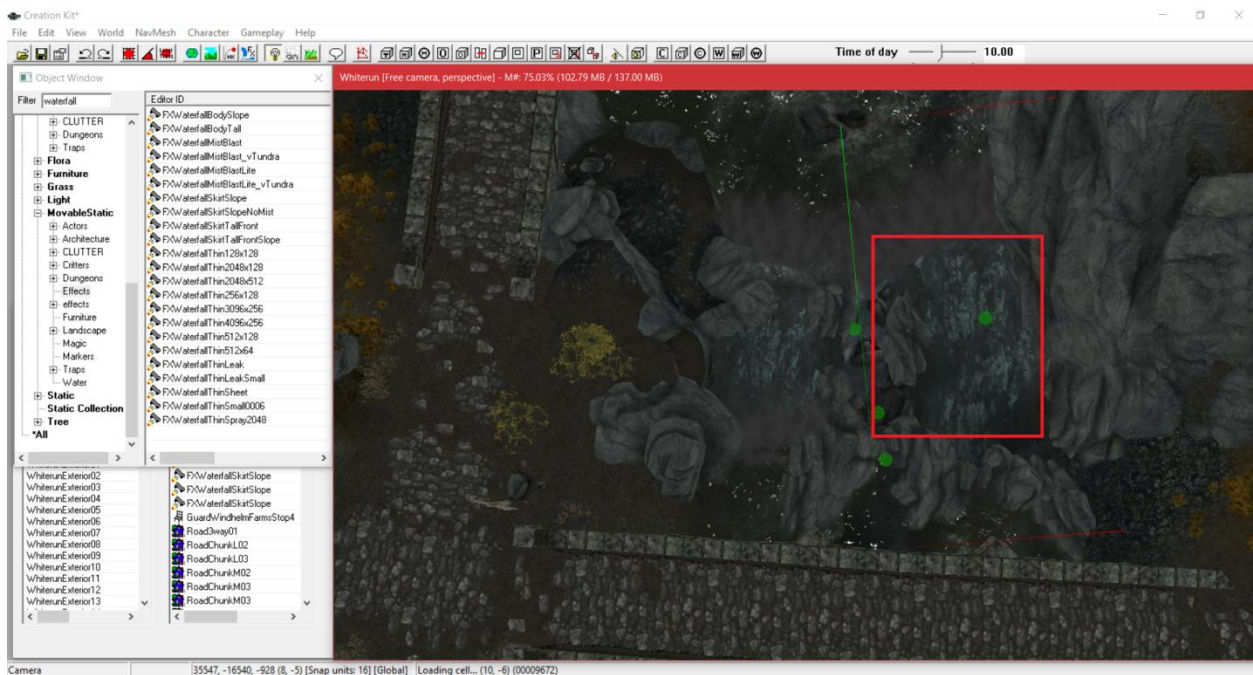
- Take note of my red box. I have clicked on a part of the river (FXWaterfallSkirtSlope) that seems like it is not moving on the left side. It looks like gray smoke/mist. If you double-click the same model and click the “Edit Base” button, you get this:



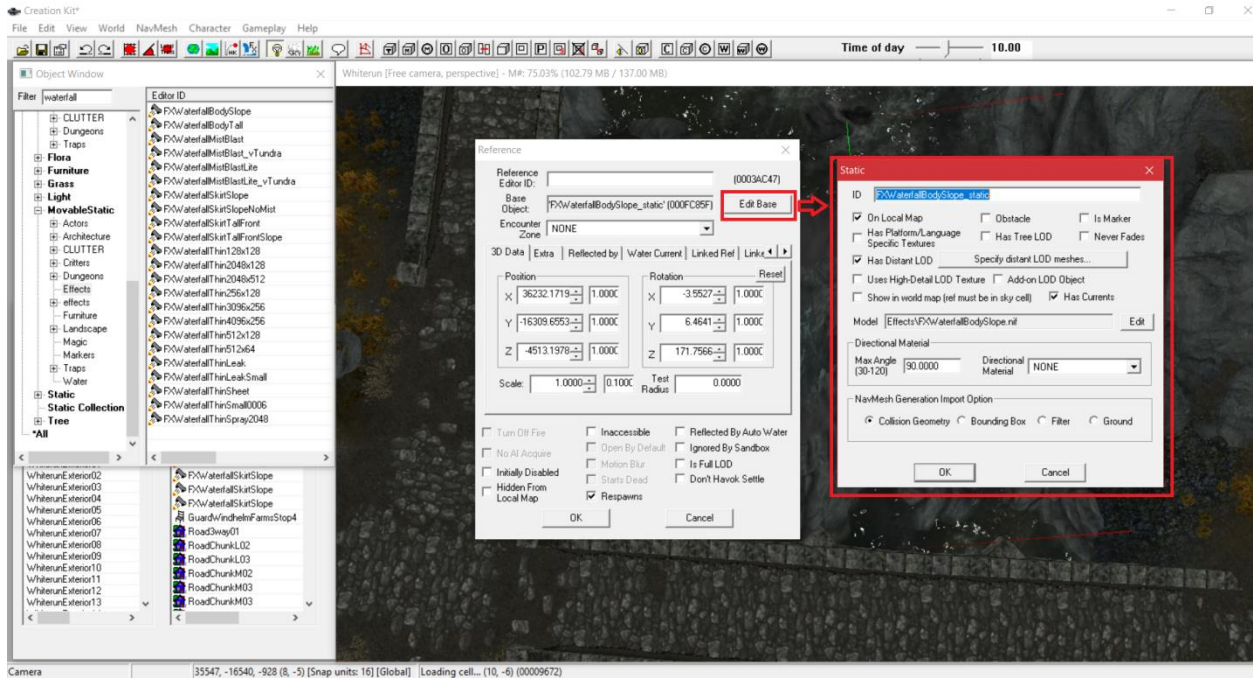
- The reason I have drawn your attention to this is twofold. First, notice how the waterfall has the prefix “fx.” Most, if not all, waterfall models have this (at least the major ones I suspect you will be interested in using). Secondly, notice how this particular type of waterfall mesh is called a “MovableStatic.” A “Movable Static” is an object that stays in the same place, but has some kind of animated quality to it. Remember the banners you come across that are hanging on the walls in castles and dungeons and how they sway gently back and forth with the wind? Those are other examples of this type of object. That said, some normal “Static” objects also have an animated quality. It really depends on the kind of object it is. This waterfall mesh will similarly stay in the same location on or among any rocks or cliffs you place it with. But, in the game, it will look like water that is falling down like a waterfall is supposed to. As such, do not be thrown off by the fact that it looks still in the CK. It does indeed move as you would expect it to in the game. Here, you will see in the “Objects Window” where to find these specific types of waterfall meshes:



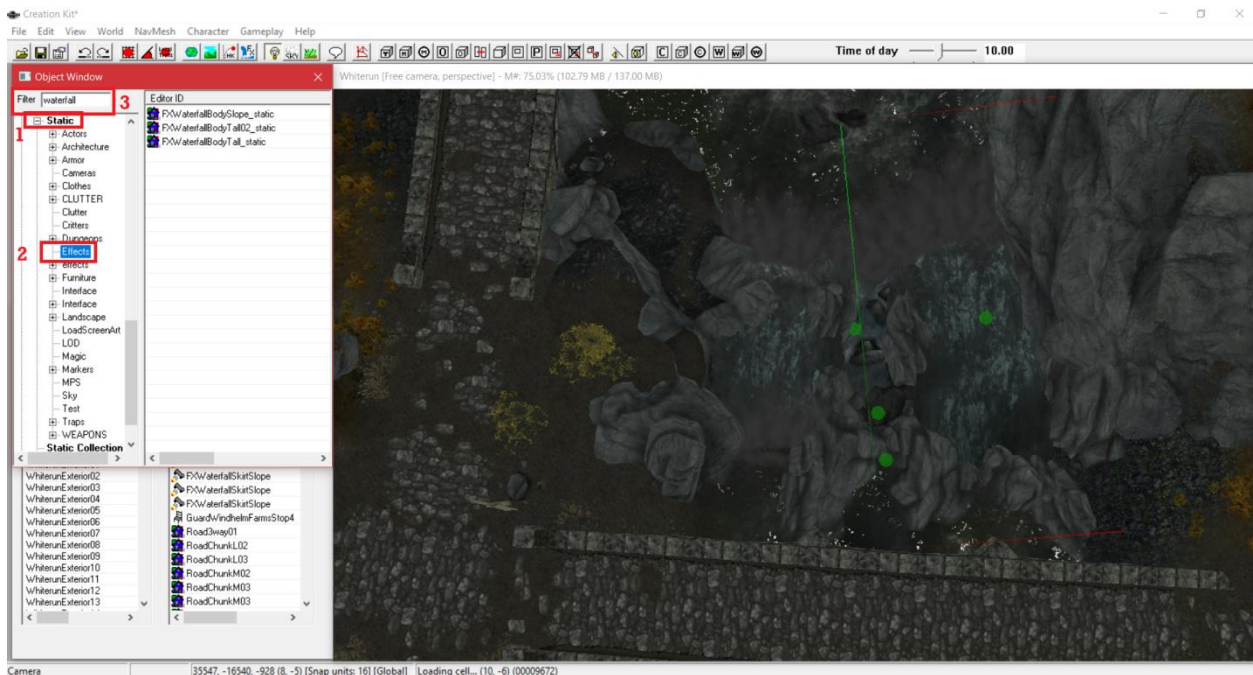
7. It helps to type in “waterfall” in the “Filter” typing field up top like I have in the first red box to help narrow it down to those mesh types. Now, we will find out where to locate the *other* waterfall meshes. Click on the big blue-green blob with white streaks that is beside the black/gray smoke mesh that you originally clicked on. The mesh I am speaking of is this one:



8. Double-click it and click the “Edit Base” button to obtain this dialogue box:



9. As you can see, this is a regular “Static” mesh. You will be able to locate these here:

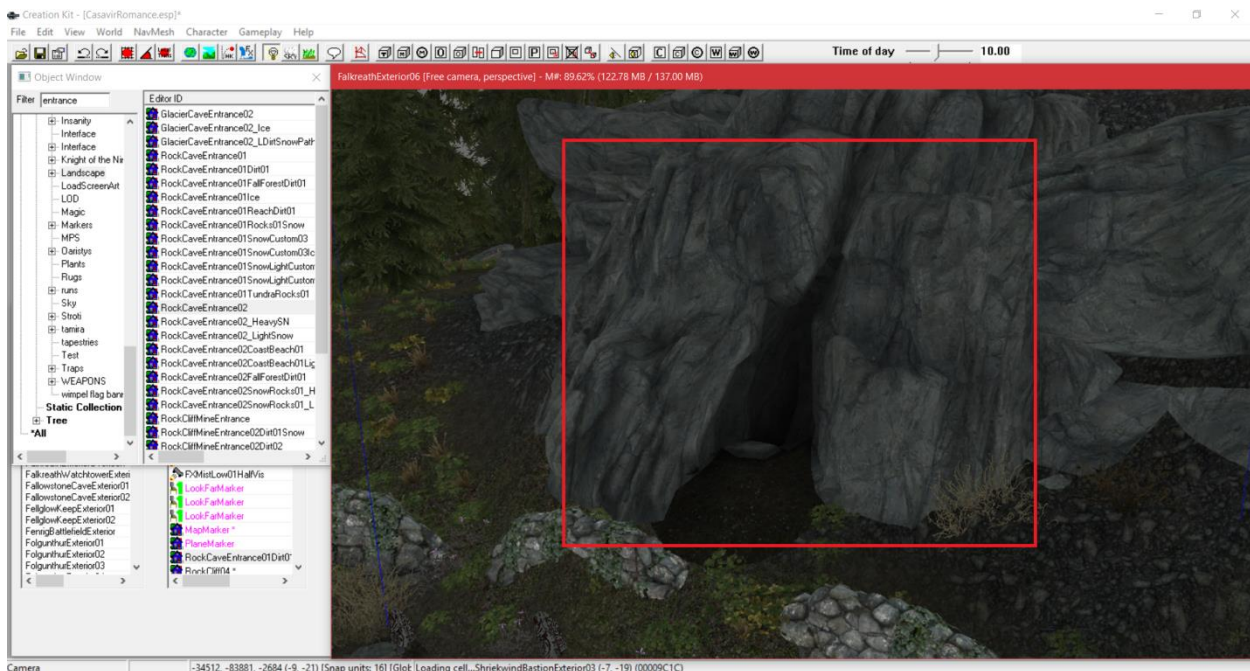


10. Now that we know where these meshes are, I suggest studying the way these meshes are put together and the rock types that are around them. Additionally, you could take this opportunity to study the river by panning and following its direction to see how rapids are constructed, which use similar meshes. If you are curious about where you can find bigger and taller waterfalls, simply explore the lists I have pointed out to you where you

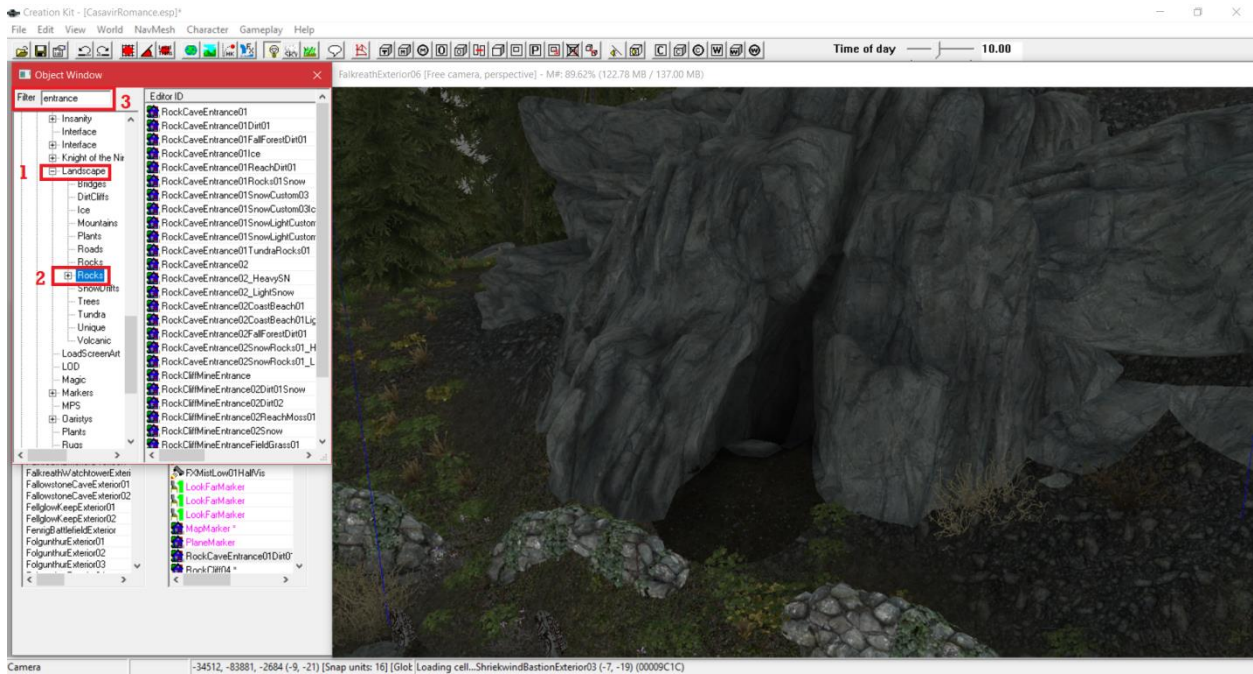
can find the waterfall meshes. There is a wide variety in both lists, so make good use of those *preview* windows that I have discussed previously with you! Now that we know where waterfalls are and how to construct them, let's learn how to construct cave entrances and doors.

Part 2

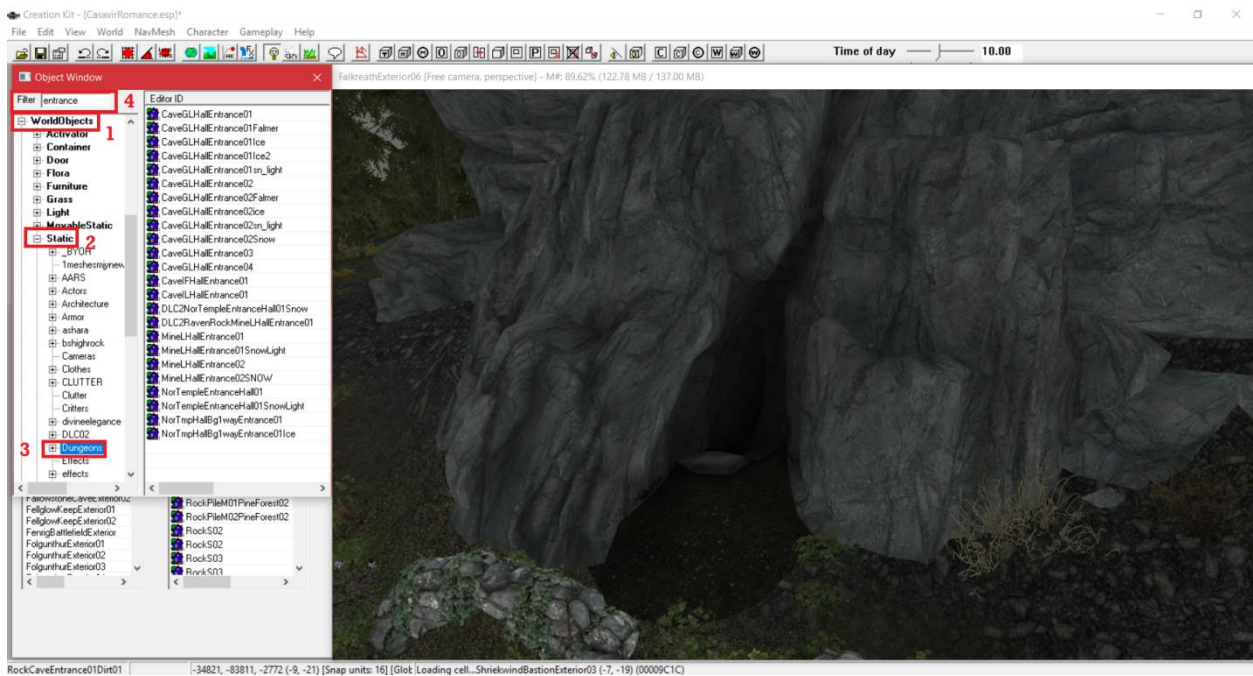
1. For this part of the tutorial, I will use images taken from my mod to show you a cave entrance that I have built from scratch. The first image will be what the exterior cave entrance looks like:



2. Looks great, doesn't it? It looks natural, like it has always been there. That is because it has the same rock texture as the rocks in the area. Remember what we learned in the last tutorial about paying attention to the current environment and building with the existing features in mind? That keeps the aesthetic consistent and this is what I meant by that. Now, let's find out where to find exterior cave entrances like this one and others. Click the **plus-sign (+)** beside "World Objects", then the **plus-sign (+)** beside "Statics" in your "Object Window". Then take a look at the image below (including typing "entrance" in the "Filter" typing field) to find the models:

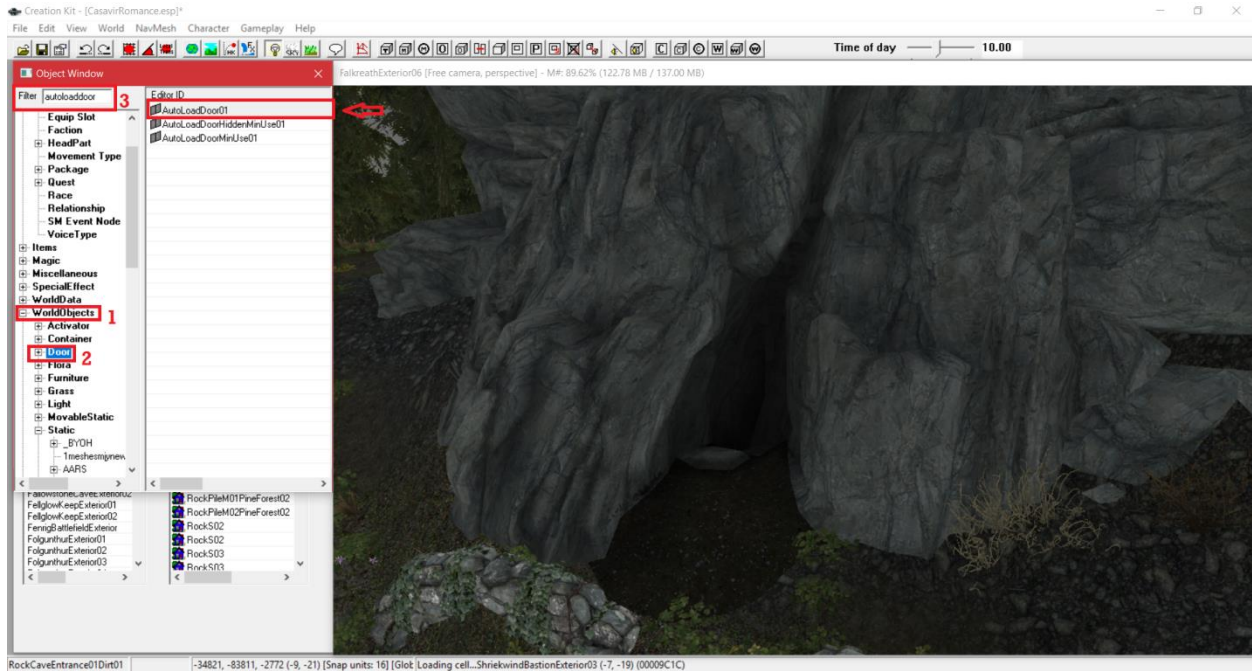


3. As usual, explore the list that generates and make use of the *preview* window to find an exterior cave entrance that you like. Interior cave entrances (what you would want to use in an interior cell where you are building your cave or dungeon and what you will want to connect exterior cave entrances to) can be found here:

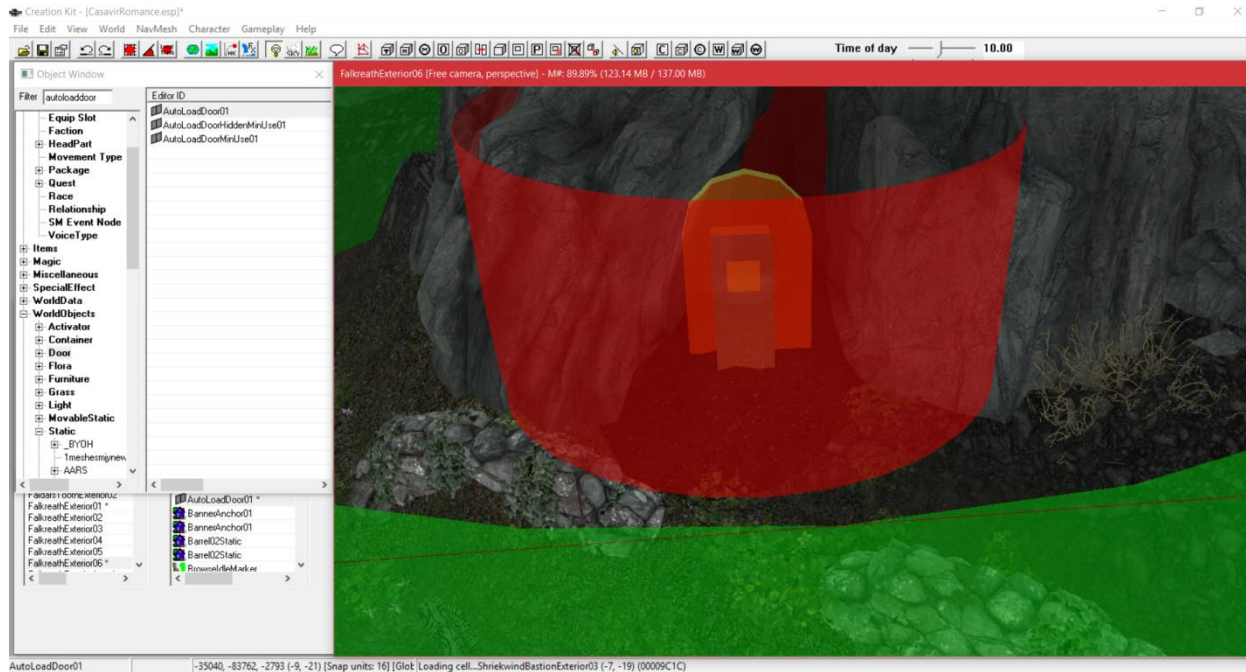


4. Now that we know where these meshes are, it's time to learn how to make a door that will let us go in and out of these entrances. You may notice how when you approach a cave, you automatically get sent inside it the closer you get to it and a loading screen

appears which loads the interior of that cave. There is no physical door like you have on a building or in a hallway, for example. That is because caves (both on the inside and outside) require a special type of door so they can be accessible. That door is called “AutoLoadDoor01.” Let’s find it now before we learn what it looks like and how it functions. Follow the image below in the “Object Window” to find it:



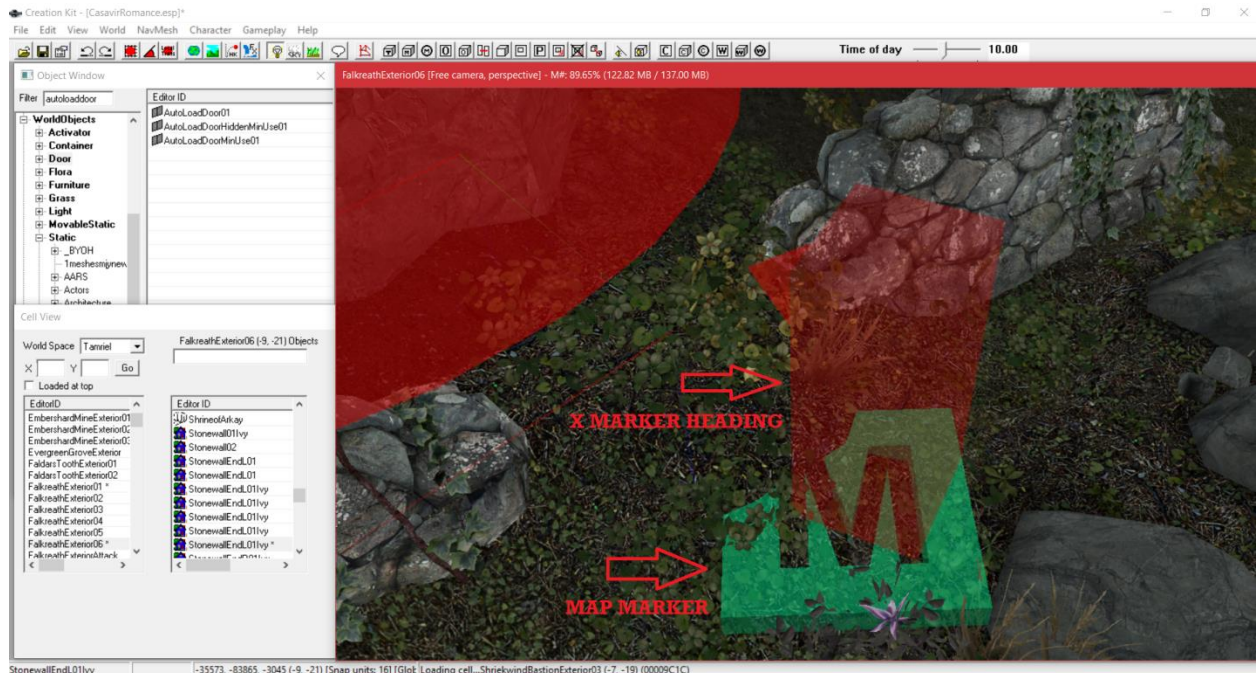
5. If you are choosing to drag and drop it into the render window, you will see that it looks like this. To see it properly, make sure you have your markers turned *on* by hitting the “M” key:



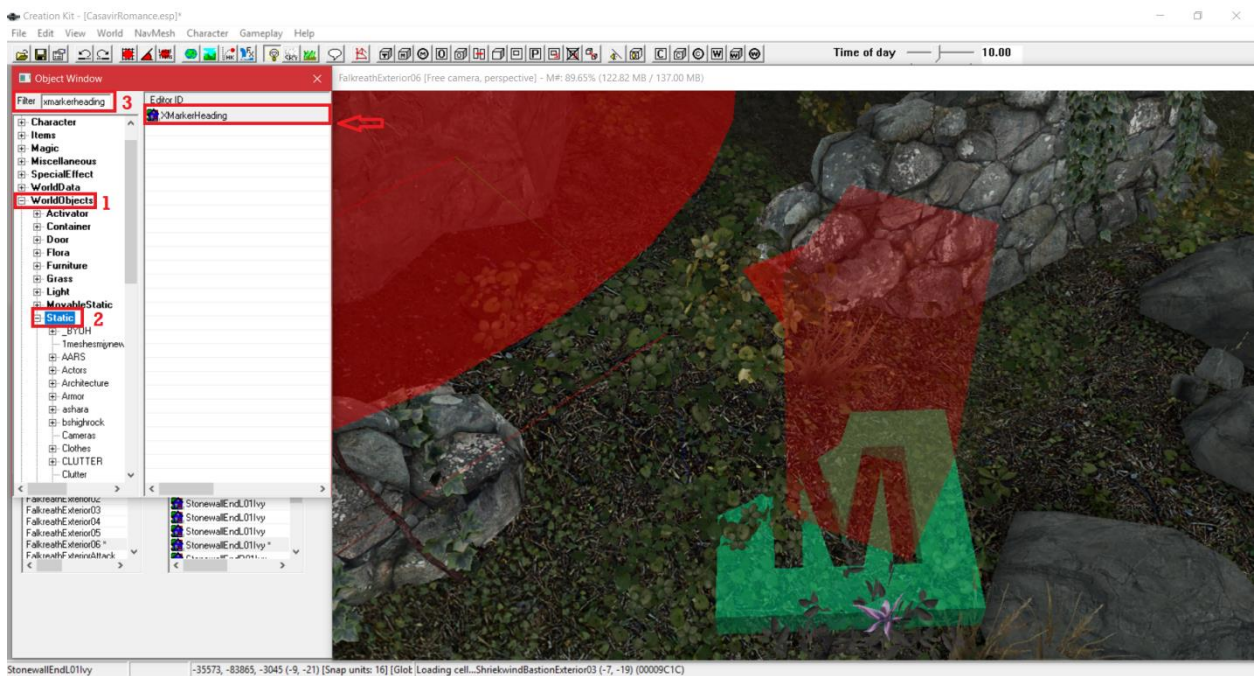
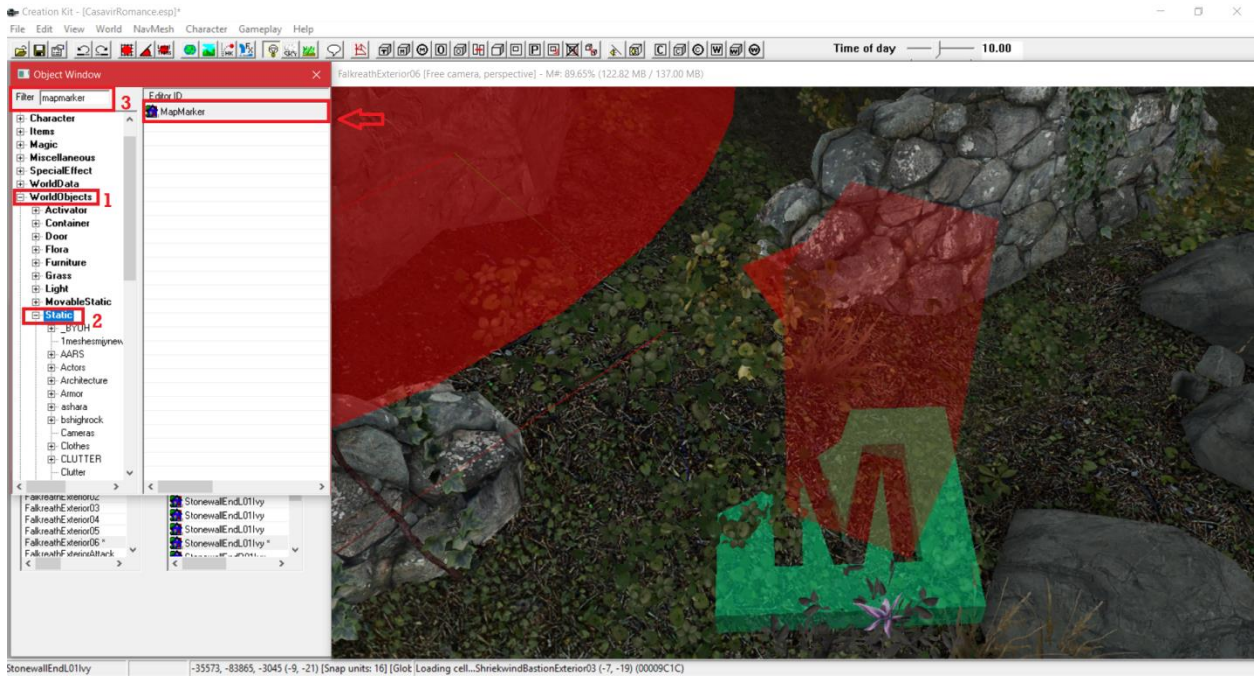
6. Take a breath! I know this might look a little scary. We have a lot of colors going on here. Actually, it is rather simple, though, so let's take it apart piece by piece. You will notice in the middle how we have a door looking yellow figure with a rounded top. That is what you will want to align with the front hole of the cave entrance the way I have it set up here. Next, you will see a yellow rectangular box with a pyramid sticking out the front of it. You may recall from the doors tutorial that this is a *teleport* or *door marker*. I have mine positioned near the door looking yellow figure because that is where I want the player to appear upon their return to the outside of the cave. Next, you will see a tall red ring around both of those features. When the player enters the red ring, they will automatically trigger that load screen I was talking about which will transport them into the interior cell of the cave. Finally, we have the green ring on the most outside portion of the door. When the player enters that green ring, they will get a message that says the name of the cave (which you can and should supply in the interior cell data of your cave). See? It's not so bad after all!
7. To set up the door, remember to repeat this process of dragging and dropping the door in your interior cell of your cave at its entrance that you choose. Then, use the doors tutorial to link them up as you usually would with any other door. It's that simple!
8. Now that we have learned about cave entrances and doors, let's move on to the last part of this tutorial: implementing map markers.

Part 3

1. To implement map markers, there are two things you need. The first thing is the map marker itself and the second thing is something called an “X Marker Heading.” We will discuss both of those features momentarily, but first, let’s find out what they look like and where to find them. Again, make sure you have your markers turned *on* by hitting the “M” key so you will be able to see them. Here is what both look like:

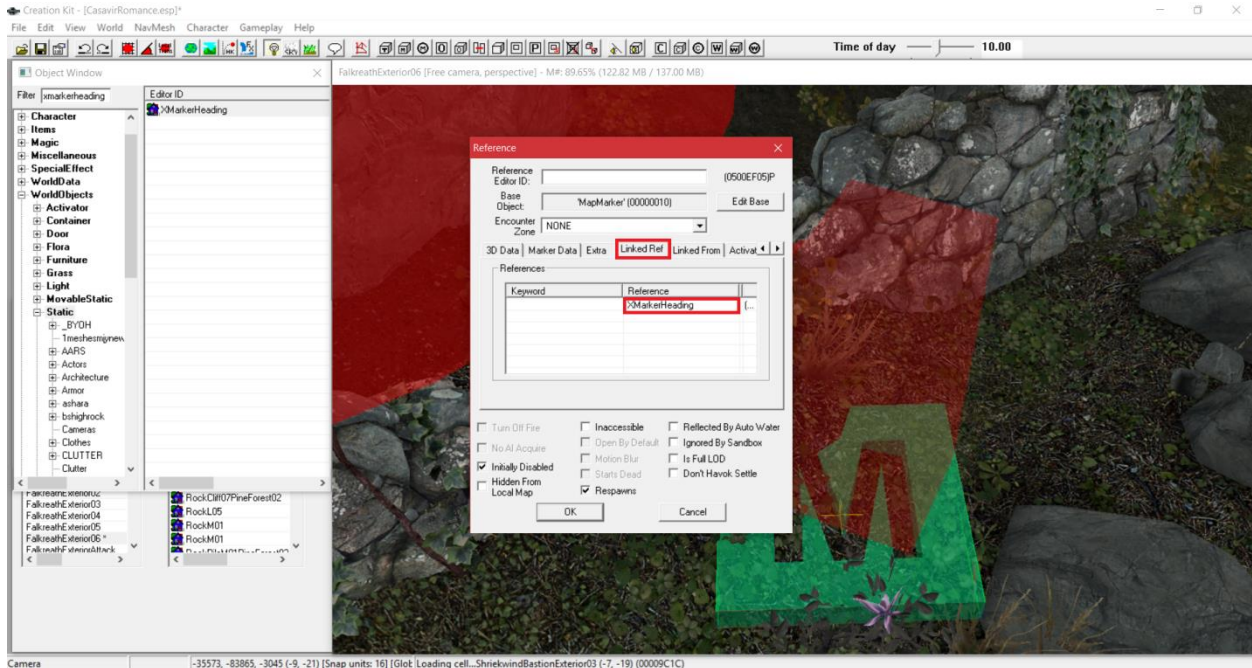


2. The map marker is a big green square with an “M” in the middle. The “X Marker Heading” is a red version of the door markers you are used to seeing. Both of those markers can be found in the locations shown in the below two images:

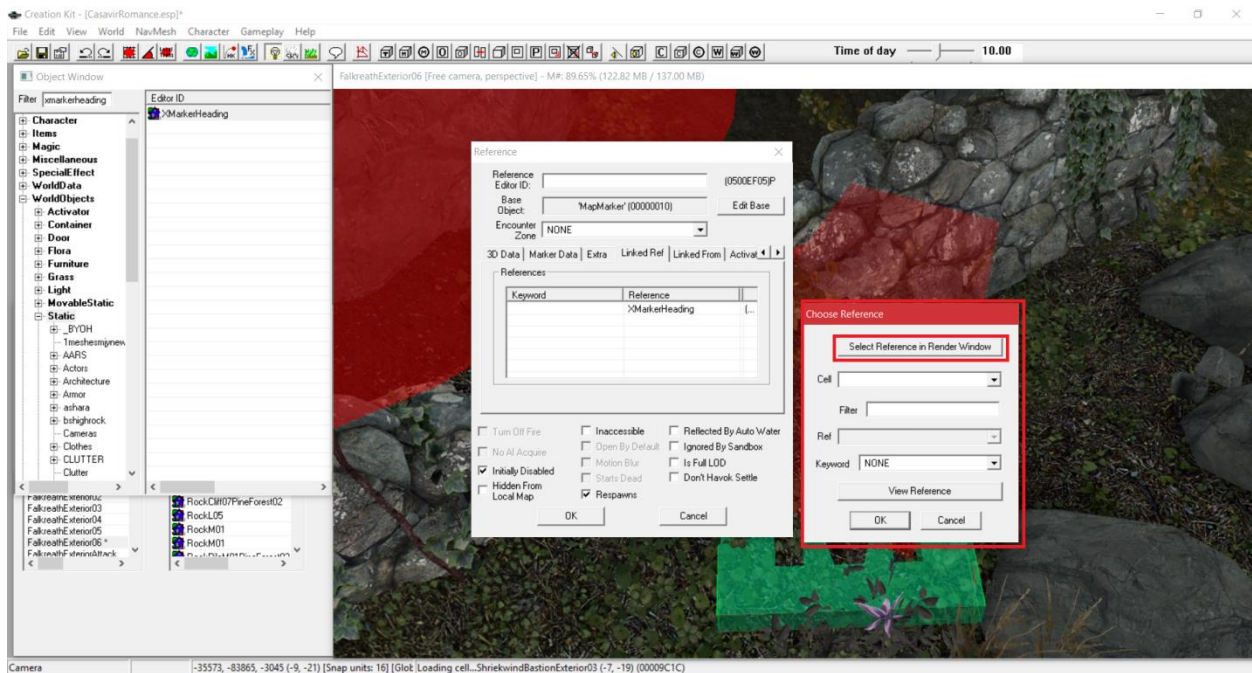


- Since we know where these markers are and what they look like, it's time to discuss what they are. The map marker is what you use to set up the location data on the player's map and the "X Marker Heading" is where the player will be teleported to after they fast-travel to the location. As such, when you bring in and position the "X Marker Heading," it is important to make the arrow (the pyramid that sticks out of it) face in the direction you wish the player to see first upon their entry in the area. Let's connect the "X Marker Heading" to the map marker so that process can take place.

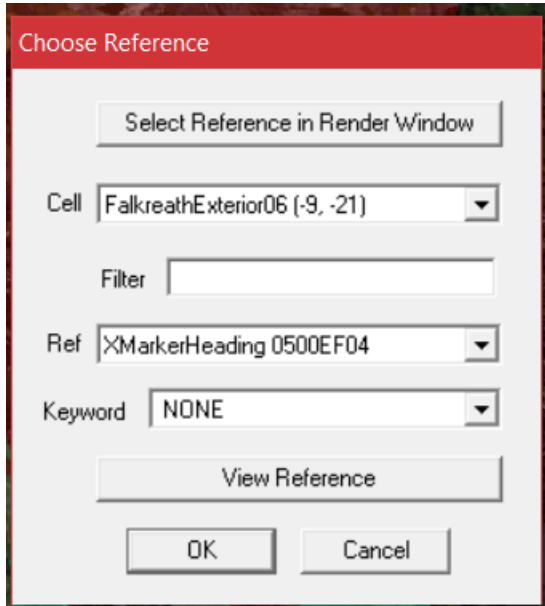
- Double-click the map marker and click on the “Linked Ref” tab. You will see this. I have marked the tab in the first red box:



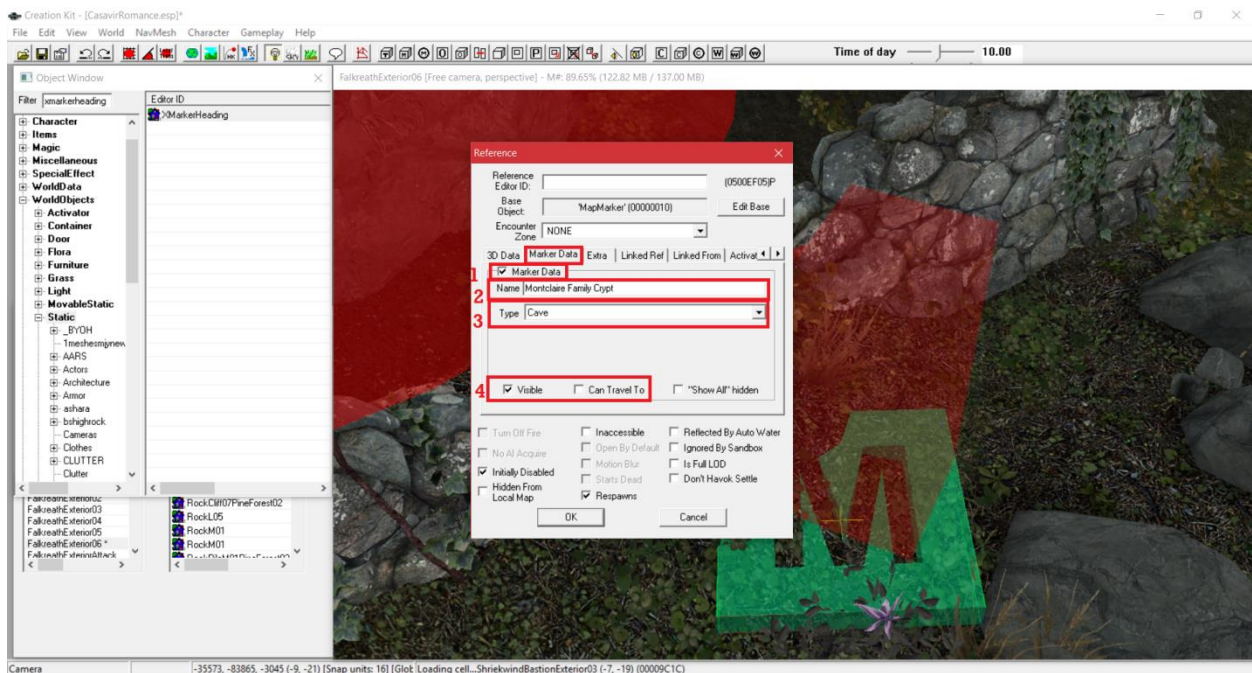
- In the second red box in the above image, you will see I have marked the “X Marker Heading.” To select yours and get it to show up in this white space, double-click any part of the white space under “Reference”. You will get a new dialogue box that looks like this:



- In the second red box, you will see a button that says, “Select Reference in Render Window.” Click it and use the circular crosshair cursor that appears to double-click anywhere on your “X Marker Heading” in the render window.
- You will see it automatically fill out the below fields in the dialogue box like this:



- Hit “Ok” once you are satisfied with the selection. You will be returned to your original map marker dialogue box. Now, we will set it up with the necessary data so the location can either immediately be seen or not on the map and whether the player can fast-travel there or have to discover it first before they can do so. Click on the “Marker Data” tab:



9. Under the “Marker Data” tab, you will see I have 4 other features of the dialogue box marked with red boxes. Let’s go over each of them:
 1. **Marker Data Checkbox:** Checking this box allows you to manipulate the settings in this tab. Make sure it is checked.
 2. **Name:** This will be the name of the location that appears on the map. Set it to whatever you wish the location to be called.
 3. **Type:** In the “Type” drop-down menu, scroll through to find a location type that you think is suitable for the location you have. This setting dictates the icon that gets used to denote the location on the player’s map.
 4. **Visible:** The first check-box item, “Visible”, allows you to decide whether you want the location seen on the map right away (which means checking this box) or if the player has to discover the location as they are walking along to reveal the map’s icon (which means leaving the box unchecked).
 5. **Can Travel To:** The second check-box item, “Can Travel To”, requires the first one (“Visible”) to be checked. Then, when that is checked, this setting allows you to decide whether the player can immediately fast-travel to the location (which means checking this box) or can only see its icon on the map and must travel there manually before fast-traveling is permitted (which means leaving it unchecked).
10. Click “Ok” once you have made all of the setting adjustments you wish to make.
11. Finally, save your mod. Congratulations! You have completed this tutorial and mastered how to add waterfalls, cave entrances and doors, and implement map markers. In my next and final tutorial, I will show you how to add clothing and armor to the game. See you then!