Convenience Store

With modular building parts

Version 1.1

With this set you can build convenience stores from scratch, or dress up existing gas stations, super markets etc.

I tried to make this package as easy as possible, for fast level building. So it contains a lot ready-to-use Construction Blueprints and a few tweakable Material Instances.

For any questions or help, please feel free to contact me here *melonsodalove@gmail.com*

Updates:

Version 1.1
By popular request, all products are now available as seperate models, which can be found in the „Product_Meshes“ Folder.

User Guide

1. Modularity

The Modular pieces work all on Unreal Engine's 10cm Grid. Make sure you have Grid snapping enabled when placingthe assets. If you want to move bigger pieces faster, bigger grid snapping numbers like 100 work fine too.

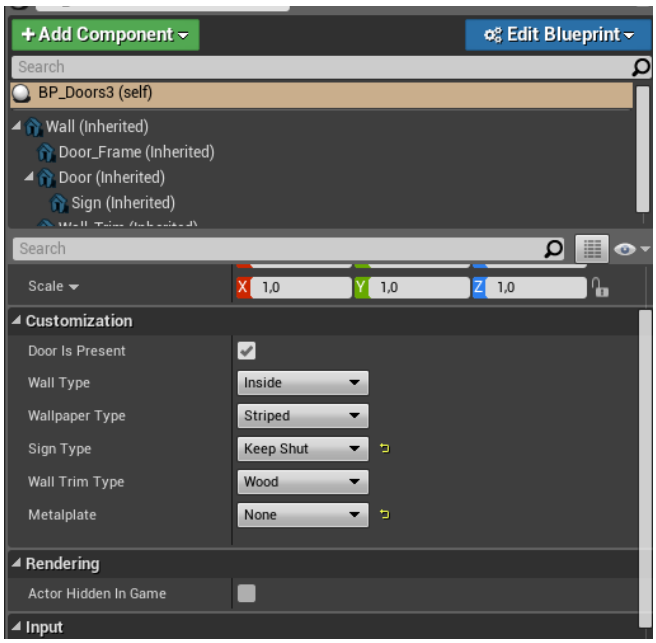
A couple of wall pieces are specifically made to connect with the glass store front. These ones have smooth beveled edges at the end, so they don't look like cut-off, unlike the regular walls.
For example, if you have a front glass corner for the left side, you should choose the wall type „Front Left B“, or „Front Left A in the customization option of the Wall Blueprint (see next section)

2. Blueprints

I've made 23 Construction Blueprints, that you can simply drop into your map. The majority of these, are modular assets for building the store structure.
You find them in the folder called „Blueprints“

Most of them have customizeable options, that let you change the appareance of the asset.

These options are available as drop down list in the Details Panel of the Blueprint under „Customization“



BP_Bollard has no customization, but rotates randomly around the Z axis, to prevent that the bollards look exact the same when placed next to each other.
The Sidewalk Blueprints have also two slight variations to break up a tileable look.

Please be aware that the static Mesh components of the Construction Blueprints are set to static by default. Exceptions are moveable parts like doors, the cash drawer etc and the bollards.
You can change the mobility in the Blueprint's viewport, if necessary.

Material Instances

They all have the MI_ Prefix and can be found in the Materials subfolder „Material_Instances'
You can change the emissive power for Material Instances that have any kind of emission in it.

The following Material Instances let you also choose a color to your liking;

MI_Shopping_Basket
MI_Store_Trim
MI_Top_Piece
MI_Shelves

Static Lighting(Lightmapping)

If you make use of full static lighting, you have to tweak the Lightmass settings a bit to get rid of the typical seams, that modular assets produce.
Please take a look at the lighmass settings of the sample map to get a idea. Basically the ***Static Lighting Level Scale*** should be lowered and the ***Indirect Lighting Quality*** should be higher.
But most important, in my experience, only the production quality level of the lighting build will give you desireable results for modular Maps.

You should also place ***Lightmass Portals*** at the glass front windows, to prevent blotchy lightmap artifacts. Especially if your map features a bright sunny day, where the sun shines directly into the store.

There is a great guide for further reading, which you can find here:
https://wiki.unrealengine.com/LightingTroubleshootingGuide

Decals

There are a couple of decal materials in the Materials subfolder „Decal_Materials“. You can simply drop them into a Decal's material slot. Please see the sample map to see how I utelized these.

Vertex Paintable Materials

The Asphalt and the Sidewalk Materials can be vertex painted. There are two channels available. Green for dirt (old chewing gums) and red for wetness.
Make sure you use the high-res option of the Asphalt Blueprint for vertex painting. It has a lot more vertices to paint on.
The Wetness uses also a height map, that is already packed into the alpha channel of the BaseColor texture.
You can also control the blend contrast of the water and the tiling amount of the asphalt.

Additional Notes

For performance reasons, most products that are displayed in the shelves and coolers are single meshes that use texture atlases.
The other reason behind this is, that it makes it easy to populate your shelves in a matter of seconds, rather than placing all by hand.
As of version 1.1, all products are also available as single meshes for hand placement. These can be found in the „Product_Meshes“ folder.

The clear liquid bottles in the walk-in cooler are using a material, that fakes transparent refractions.
This has almost no impact in performance, compared to a really expensive translucent material with refraction, which uses forward rendering (see the shader complexity mode).
The bigger performance hit here, is the high vertex count, due to the big amount of bottles displayed. So I created LOD's for those and carefully adjusted the LOD distance, to balance performance vs. best look.
The same goes for the other product shelves.

In the full screen editor viewport. I get always over 60FPS (between 70-120FPS) with all effects enabled and in lit mode.
My GPU is a standard GTX 970

The overall texel density of this pack is set to 10.24 px\cm, if you use the full resolution of the textures in this pack.
Some assets feature a higher texel density, where I think it makes sense. For example the cash register, that has a lot detailed keys.
But you can always lower the in-game texture resolution, to fit your needs.

Thank you and happy building
David