## **Suburban Assets Pack - Unity Documentation**

By Nosense Studio

### Introduction

This pack is designed around a **512 cm grid (5.12 meters in Unity units)** to ensure seamless modular construction. It includes modular meshes, props, vegetation, and custom shaders for easy color/material variations.

## Render Pipeline

The pack is designed to make switching between Unity Render Pipelines as simple as possible.

By using **custom shaders**, materials can seamlessly switch between **URP** and **HDRP** without extra setup.

#### **URP / HDRP**

- All shaders are fully supported.
- No manual changes are required when switching between URP and HDRP.

### **Built-in Pipeline**

Most shaders will work correctly in the Built-in Render Pipeline.

However, some foliage shaders require manual material changes:

- Replace all materials using:
  - Nosense Studio/NS\_Foliage → Nosense Studio/NS\_Foliage\_BuiltIn
  - Nosense Studio/NS\_Grass → Nosense Studio/NS\_Grass\_BuiltIn
- This ensures correct rendering of foliage and grass in the Built-in pipeline.

# **Building Workflow**

## **Grid Sizing**

To ensure correct placement in Unity:

- 1. Open Grid Snapping
- 2. Set the **Grid Size** to a power-of-two(e.g., **0.32 / 0.64 / 1.28 / 2.56 / 5.12**)
- 3. Open Increment Snapping
- 4. Set the **Move** value to the same power-of-two

When placing assets in your scene, always snap them to the grid to avoid gaps or misalignments:

- Open Grid Snapping, and use the button All axes
- Or Use CTRL \ with the object selected

#### Rotation

When placing modular pieces, make sure their **rotation values are aligned to the grid** (multiples of 90°).

- Use Increment Snapping (set Rotation to 90°).
- Keep walls, floors, roofs, and props rotated in 90° increments to avoid gaps or misalignment.

This ensures all modular meshes connect seamlessly without floating edges or overlaps.

### **Materials & Shaders**

The pack uses its **own custom shaders** to ensure full compatibility with **all Unity Render Pipelines** (Built-in, URP, and HDRP).

Most shaders are based on an **ORM texture workflow** (*Occlusion, Roughness, Metallic packed into a single texture*), which improves performance and saves texture memory.

#### **HSL Shader**

The **Mailbox** uses a custom shader that allows you to change its color.

- To create variations, duplicate the existing material and adjust the shader parameters.
- You can modify:
  - Hue
  - Saturation
  - Brightness
  - Contrast

### Alpha Mask

Some wall materials (such as plaster, plaster baseboard, plaster baseboard crown, paint, paint baseboard,) use an Alpha Mask Shader.

- This shader lets you recolor the surface without editing the texture.
- You can adjust:
  - Color
  - Color Intensity
  - Saturation

#### Brightness

This allows you to quickly create material variations while keeping texture usage optimized.

## **World Aligned Material (Triplanar)**

A set of tiling materials with Triplanar Mapping is included in the pack.

- These materials automatically project textures based on the object's world position, ensuring seamless continuity across modular meshes.
- Use them when building houses with pieces such as wall\_05x1 (or other smaller modular piece) to avoid visible seams or UV stretching.
- You can find these materials in the Materials/WorldAlign folder.

### **Folder Structure**

The pack is organized to make navigation and asset usage as simple as possible. Below is an overview of the main folders:

```
NosenseStudio/SuburbanStylizedPack/
 - Materials/
   — Meshes/ → Materials assigned to props and unique meshes
   — Shaders/ → Custom shader files
   — Tiling/ → Reusable tiling materials (walls, floors)
    — Trimsheet/ → Materials that use trimsheets for detail optimization
    — Utility/ → Helper materials (glass, placeholder, etc.)
    — Vegetation/ → Materials for trees, bushes, and grass
   ── WorldAlign/ → → Materials using world-aligned (triplanar) projection
— Meshes/
   ── Modular/ → Modular architecture meshes (walls, roofs, floors, trims,
windows)
   — Props/ → Furniture, appliances, exterior details
   ─ Vegetation/ → Trees, bushes, grass
- Prefabs/
   — Modular/ → Prefabs of modular house pieces
    — Props/ → Ready-to-use props
   ─ Vegetation/ → Prefabs for vegetation placement
├─ Scenes/
   — Demo/ → Example scene showcasing the pack
   — Overview/ → Example prefab layout and usage
 — Utils/
```

```
L— Documentation/
L— README.md → This documentation file
```

★ Each category is separated to help you quickly find modular pieces, props, vegetation, and materials.

## **Support & Updates**

## **Support**

If you encounter any issues or have questions about using the Suburban House Modular Pack, **Nosense Studio** is here to help.

Email: contact@nosense.studio

## **Updates**

This pack is currently in **Early Access**, and more content will be added over time.

- Planned Additions:
  - Additional modular pieces for more house variation
  - New props for interiors and exteriors
  - Extra materials and shader variations
- **Free Updates:** All bug fixes, content additions, shader improvements, and compatibility updates are provided at no additional cost.
- Changelog: Each update includes a detailed changelog.
- → Tip: Always back up your project before updating the pack to avoid overwriting any custom changes.