



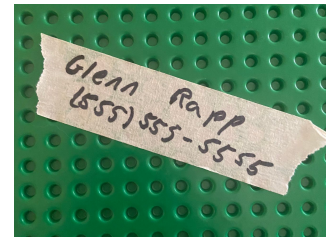
Rochester Lego® User Group Modular City standard

Updated 7/2020

This Modular city standard (the standard) will let our members build separate roads and buildings that can easily put together at a display event to create a massive city. This will make collaboration on large displays much simpler. Over time we will improve and modify the standard to improve our displays.

When building these bases and roads you can use whatever parts you have on hand you do not have to use the exact type of parts shown as long as it still looks right and functions with other sections.

All sections you build should be marked with a label on the bottom of the baseplate with your full name and phone number. This will allow us to always return sections to their true owners. Masking tape or small paper labels work well.



Definitions

Studio - Free software used to design and build in Lego® digitally.

Full baseplate - a 32x32 stud Lego® baseplate

Half Baseplate - a 16x32 stud lego® baseplate

SNOT - Studs not on top

Resources

At this link you can download the most up to date copy of this document and any images and studio files related to this standard.

https://drive.google.com/drive/folders/1tslCyUTrtUDPmYwx_i6PUfp6rygodajT?usp=sharing

Studio is a free Lego® building software that can be downloaded from.

www.bricklink.com



Building sections

Description

The sections for buildings are simple and only have a few minor rules. They come in both full and half baseplates and both sizes can be made into a corner.

Notes on the part colors in pictures and studio files.

Baseplates - can be any available color.

Blue - these are Technic, Brick 1 x 2 with Hole brick link number 3700 / These can be any neutral color like black, grey, brown, or tan.

Brown - parts can be any neutral color like black, grey, brown, or tan.

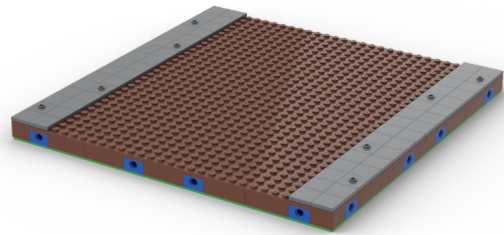
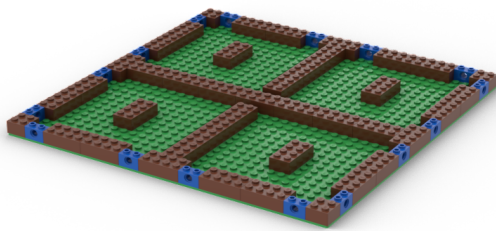
Light and Dark grey - These parts will show and should be the specified color.

Full baseplate

The 1x2 technic bricks with one hole (blue in the picture) are how your modular section will attach to roads and other buildings. The locations for each of them are important. Each side will have four 1x2 technic bricks for a total of 16 for a full baseplate. The spacing is very simple and all four sides are the same. The spacing should look like this.

2 empty studs - 1x2 Technic brick - 8 empty studs - 1x2 Technic brick - 4 empty studs - 1x2 Technic brick - 8 empty studs - 1x2 Technic brick - 2 empty studs

Repeat this pattern on all four sides. After this fill in the outside edges and inside to support the next layer of plate. Should look similar to the image on the left.



After you have filled in the edges and placed support bricks in the center cover the entire section with one layer of plate. Once you have done this use 2x2 dark blueish grey tile with a few 2x2 modified plates with one stud mixed in to “pave” the front four studs on two sides of the section. This will make your front sidewalk and rear alley. The few modified plates will give places to attach minifigs. You should have a section that looks similar to the right image above.

The empty space in the middle is the area you can build your building or whatever else you want to put into the city. You can come all the way up to the edge of the tiled area or you can set your building farther back. If you do not use the whole area use dark blueish grey tile to “pave” over any extra studs.

Half baseplate

The 1x2 technic bricks with one hole (blue in the picture) are how your modular section will attach to roads and other buildings. The locations for each of them are important. Two sides will have four 1x2 technic bricks and two sides will have two for a total of 12 for a half base plate. The spacing should look like this.

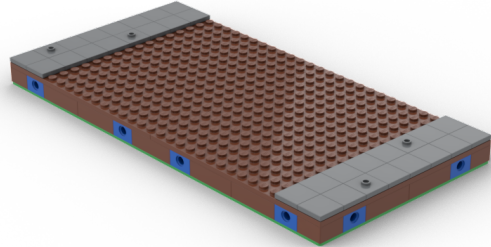
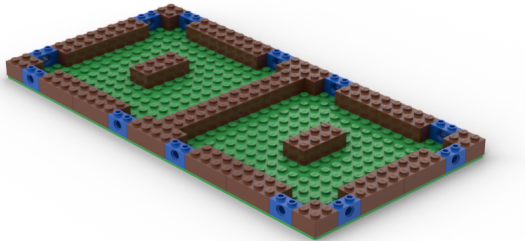
Long sides (32 studs)

2 empty studs - 1x2 Technic brick - 8 empty studs - 1x2 Technic brick - 4 empty studs - 1x2 Technic brick - 8 empty studs - 1x2 Technic brick - 2 empty studs

Short sides (16 studs)

2 empty studs - 1x2 Technic brick - 8 empty studs - 1x2 Technic brick - 2 empty studs

After this fill in the outside edges and inside to support the next layer of plate. Should look similar to the image on the left.

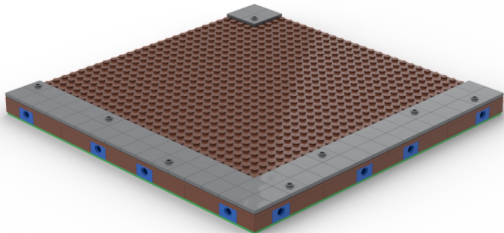
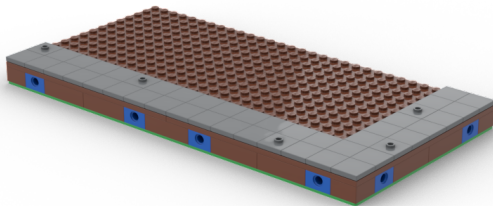


After you have filled in the edges and placed support bricks in the center cover the entire section with one layer of plate. Once you have done this use 2x2 dark blueish grey tile with a few 2x2 modified plates with one stud mixed in to “pave” the front four studs on two sides of the section. This will make your front sidewalk and rear alley. The few modified plates will give places to attach minifigs. You should have a section that looks like the right image above.

The empty space in the middle is the area you can build your building or whatever else you want to put into the city. You can come all the way up to the edge of the tiled area or you can set your building farther back. If you do not use the whole area use dark blueish gray tile to “pave” over any extra studs.

Corner buildings

Corner buildings can be used to end a city block and are a simple modification of the above sections. Build the base exactly the same as you would if you are making a standard half or full baseplate section. Stop after you place the layer of plate.



Decide which two sides of your section will be your street facing sides. "Pave" the front four studs on both of those sides with 2x2 tile and modified plates with one stud in dark bluish grey. If you are doing a full baseplate "pave" at least a 4x4 stud area in the back corner for the alley way. They should look similar to the above images. Your Building does not need to cover all the exposed studs but what it does not should be "paved" with dark bluish grey tile.

What to build on your section

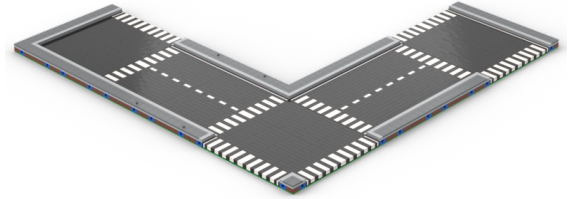
You can build anything you want to add to the city. You can build a little one story shop or a five story apartment building. You don't even need to build a building; it could be a small park or construction site. There are a few rules to follow

- Four studs in front and behind your building need to be "paved" sidewalk.
- Nothing can hang off the section so other buildings can fit next to yours.
- If you build taller than one or two stories your outside walls may be exposed and should be built to show.

Road sections

Description

These sections will let us connect and bring our city to life. The roads will give space to display vehicles other members have built. They will also make our city larger and feel more authentic. If you want to build roads I would start with either the half or full baseplate straight sections. They are the simplest and the sections we need in the largest quantity.



Notes on the part colors in pictures and studio files.

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Brown - parts can be any neutral color like black, grey, brown, or tan.

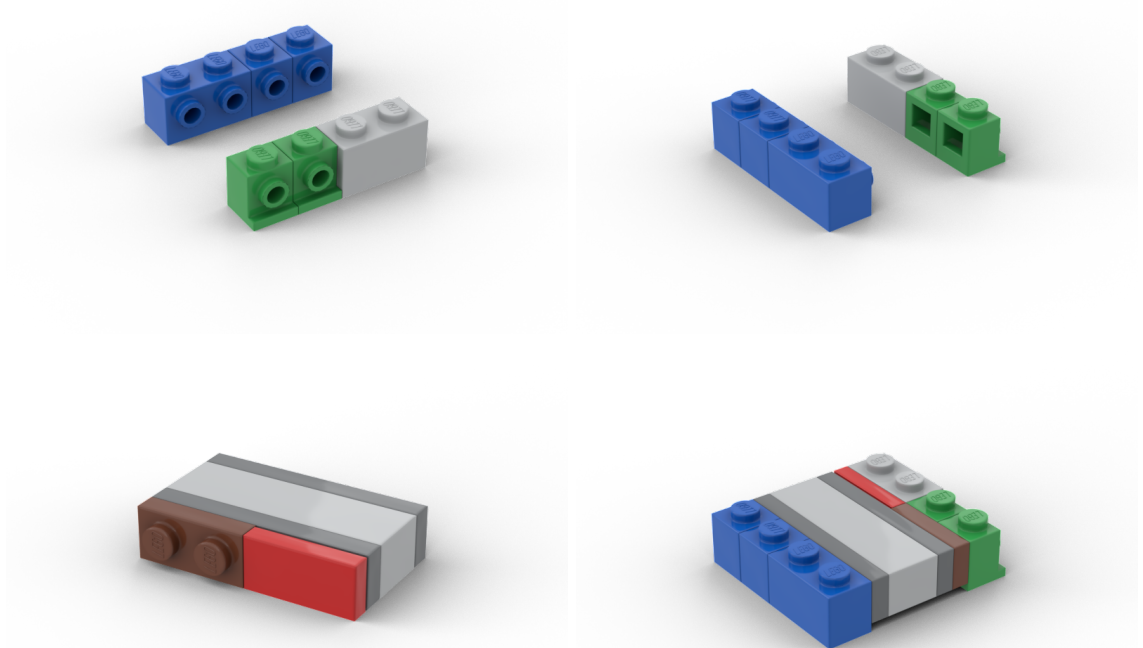
Light and Dark grey - These parts will show and should be the specified color.

Black and white - These parts will show and should be the specified color. As the sides of these parts will be showing please use good condition or new parts.

SNOT road technique

Our roads are built using a simple SNOT technique. This lets us use bricks instead of tiles to make a smooth surface and also allows for narrower lane lines than tiles would allow.

The road is a stack of bricks and plates laid on their side and attached to by modified bricks with studs on one side on the bottom. At the top headlight bricks attach to the top studs and tiles smooth anywhere a headlight brick wont fit. You can vary the modified and head light brick amounts to use less of these parts. Here is an example of the construction.

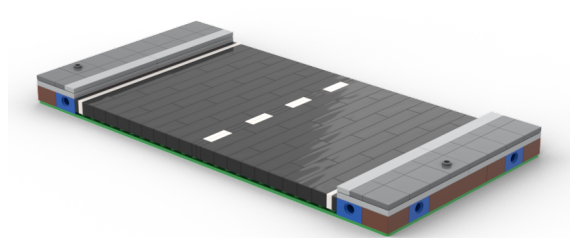
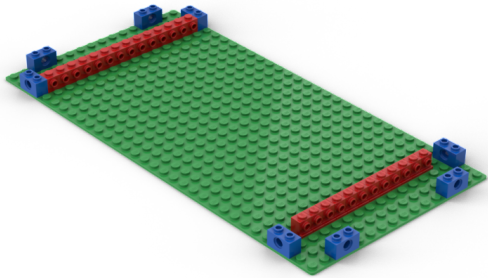
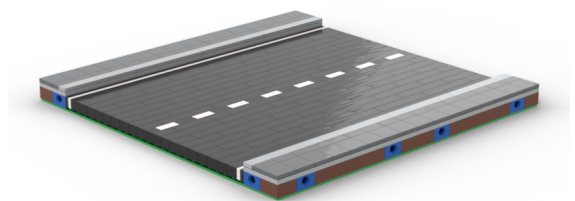
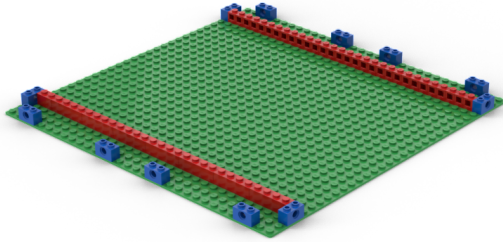


All roads

Below you will find short descriptions of the different road sections. To really see how these are constructed it will greatly help to download Studio and view the models of these roads. I will be updating and elaborating the descriptions as well as adding more variations.

Straight roads

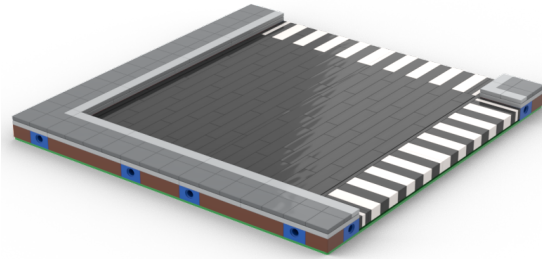
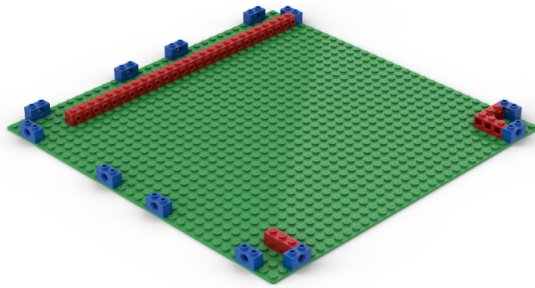
These are the simplest and most sections of road. Each has four studs of sidewalk and a 24 stud wide road. They can be a half or full baseplate sized.



One line of red bricks are headlight bricks and the others are modified bricks with studs on one side. Fill in around the technic bricks to support one layer of dark blueish grey plate and then tile.

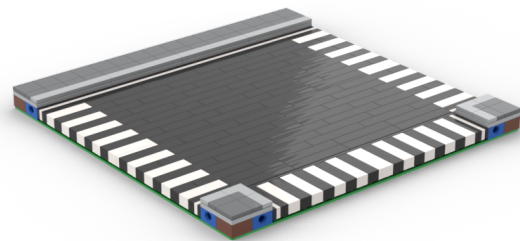
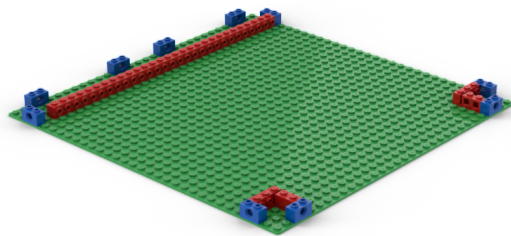
Corner

This section is a less common road but helps to make a dynamic city. It has crosswalks at the corners.



T intersection

The most common intersection. It also has crosswalks at the corners.



Four way intersection

This is the least stable road section and not many are needed for large displays.

