

CASTLE MILS MODULES WATER

By Jetro de Château

MILS has been around for quite some time. As a matter of fact, for a little over a decade already. The fact that it appeared when it did wasn't entirely coincidental either. Several factors contributed to its development and in this article, I will give you a peek into my personal relationship with the system and how I came to embrace it.

There is a strong connection between the development of MILS and the LEGO Castle theme. As a kid, most of my LEGO sets were Space—until I discovered Technic as a preteen and almost entirely forgot about System themes. But every time I got my hands on a catalogue and saw the Castle theme it captured my imagination. Unfortunately, there was a small budget for LEGO sets and while Castle and Train most certainly had my attention none of the sets of those themes ever made it into my hands.

All of that changed when Castle was graced with a 10000 set—a series number that indicates the set was specifically aimed at adults—even if “Adults Welcome” wasn't officially a thing back then. 10193 Medieval Market Village drew me back towards Castle which, at the time, was still very much in the fantasy era fighting trolls and the like, something that didn't appeal to me at all. However, that was about to change as well with the new subtheme, Kingdoms, of which the Medieval Market Village appeared to be a precursor.

As an AFOL my available LEGO budget was

considerably more substantial than what I had as a kid—and this was a set I just had to get. When the more traditionally Castle-y theme “Kingdoms” followed in 2010, I had to get it all. That wasn't too hard to do either as there were only seven sets in 2010, four in 2011 and one in 2012 (not counting promotional sets, polybags and battle packs).

The largest and most exciting set from the first wave was the King's Castle (7946). I loved the fact that it was a modular setup, with each tower and each wall section built on its own base and then joined with Technic pins. While I really liked the castle, I felt the walls were too low and decided to use it as the basis for a taller castle while preserving the modular approach. And while I was at it, I wanted some landscape around the castle... including a proper moat for starters, as depicted in the box art. That presented two interconnected problems: making the water level lower and making the land level higher. I could already see this project was going to take up at least four 32x32 baseplates, meaning it would be too large to store as a whole.

I decided that to preserve the modularity of the castle and be able to store the landscape in sections, those four baseplates would be easily separable sections of landscape atop which I could place the castle. I didn't want to use too many pieces so I decided the moat level would be as vertically close to the baseplate as possible. The moat ended up being assembled from blue, dark blue, and white plates (the green of my baseplates didn't really fit with my idea for water) covered with transparent clear, light blue, and

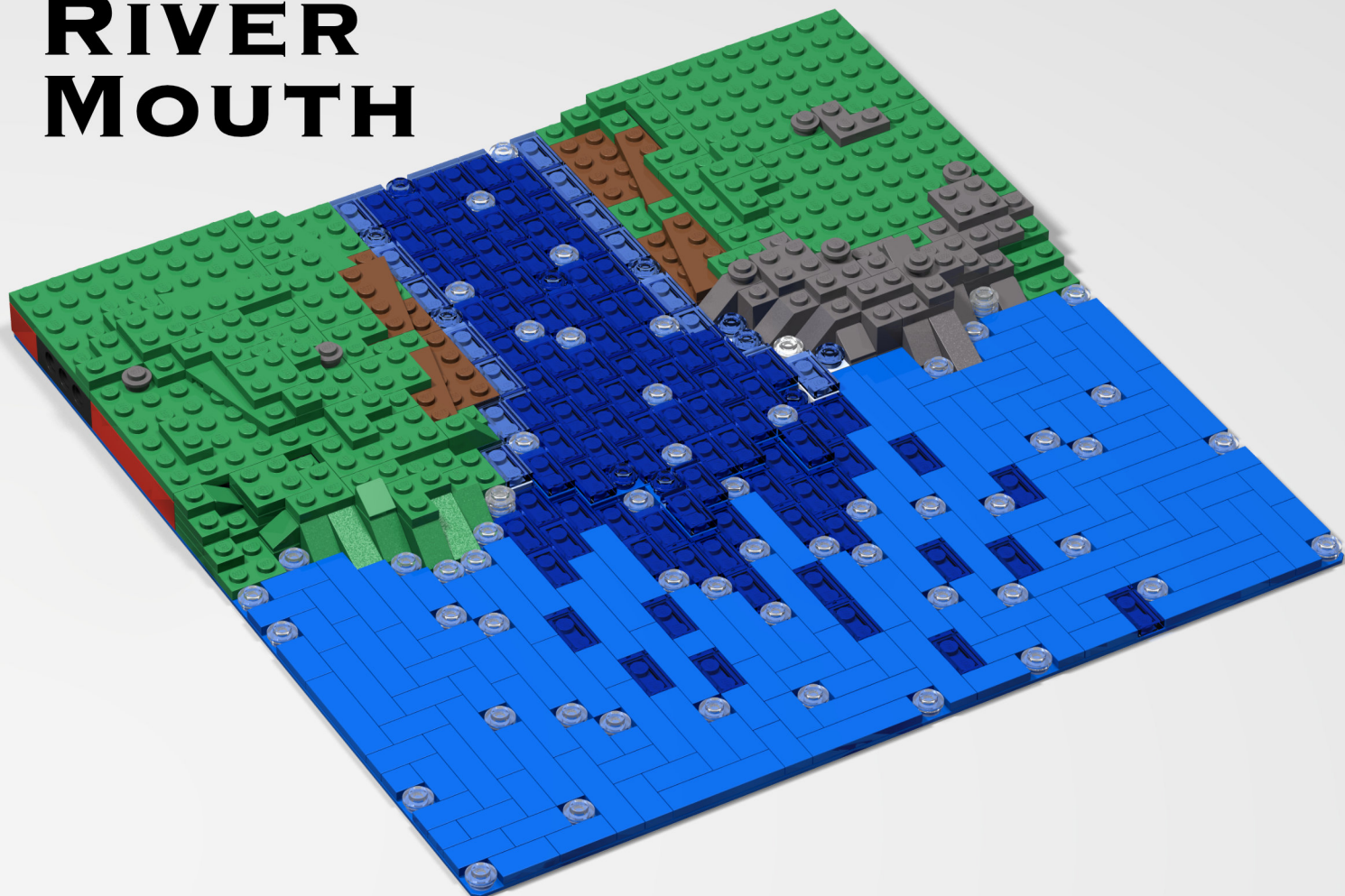
dark blue plates to create different shades in the water. The easiest way to make the surrounding land a little higher was placing bricks around the moat and putting green plates on top of those to represent grassy land.

I had been sharing some of my progress on the HispaBrick Magazine forum we then used, and it was around this time that fellow HispaBricker Antonio said “wait a minute! This looks a lot like an idea I'm working on for a modular standard.” To be honest, I was only concerned with making some landscape for my castle and had never considered the much broader possibility of making this into something more standardised and usable in different configurations. That idea really sparked my imagination.

At that point, Antonio took the lead in laying out the general rules for a broader standard. I then concentrated on what had captured my imagination in the first place: having water (from a moat, a river, or the sea) at a lower level than the ground, while at the same time making sure my large(ish) displays could be easily stored in my small apartment.

So what happened to my King's Castle and its moat? Well, it got cancelled. I was unhappy with how the castle looked as I made it taller and decided to build something from scratch. The moat never made it past the planning and testing stages. But I stuck with the idea of incorporating water into my landscape and I want to show you a few of the ways I have done that, to give you some ideas of how you can include them in your MILS displays as well.

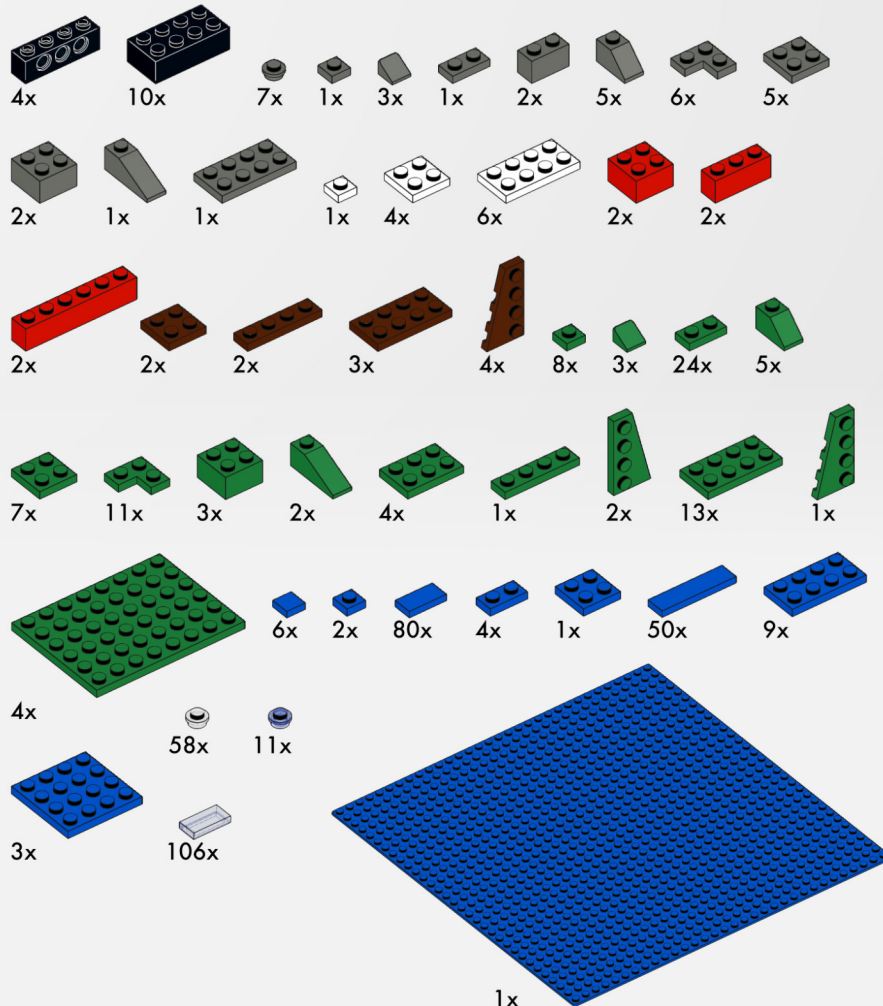
RIVER MOUTH











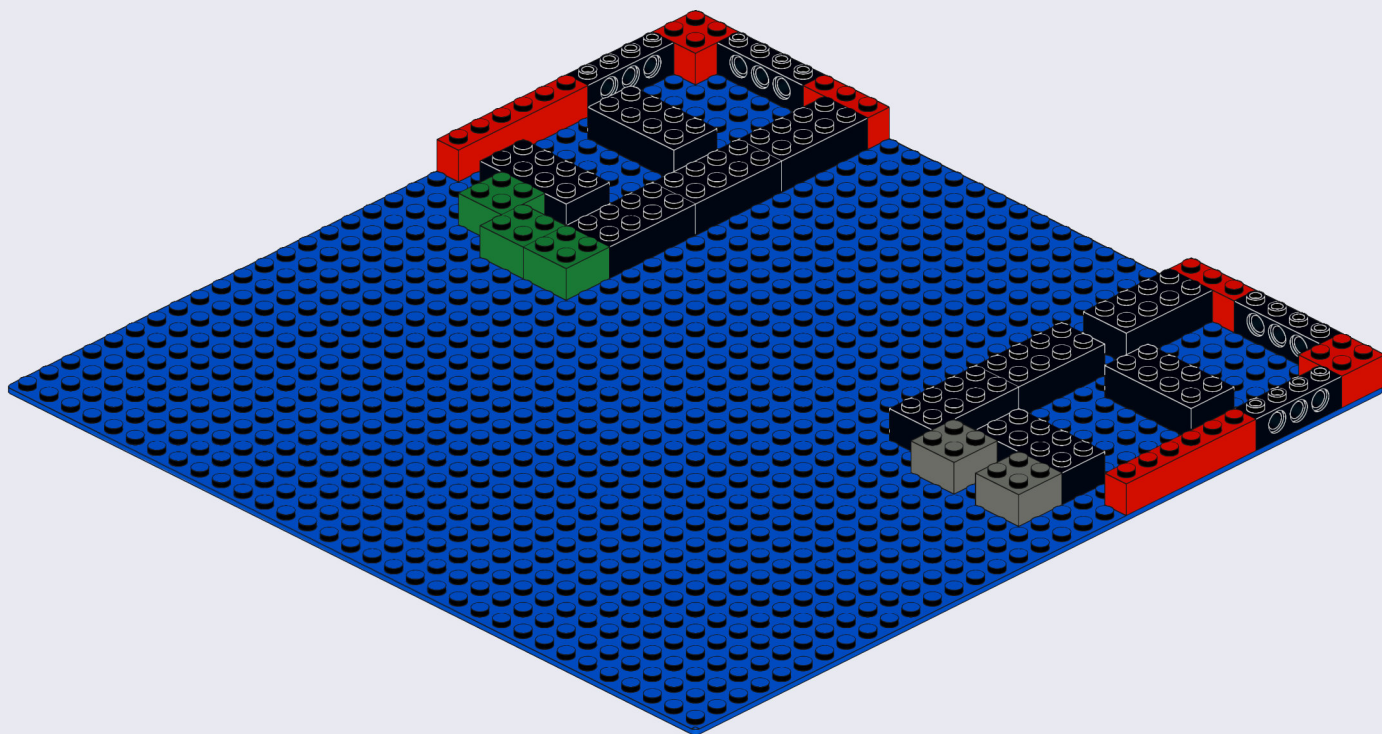
Every river has an end. And eventually all that water flows out into a lake or a sea. That means it can reasonably be expected that those bodies of water have a slightly lower level than the river itself. For MILS sea-level is defined as one plate above the baseplate. Some people don't want to tile over the entire surface of their sea. That is of course a very personal decision – and possibly cost driven. Of course, a choppy sea is not perfectly flat, so go with whatever you feel works best for you.

In this module I wanted to let my river run into the sea and show how the waters mix. To this end I placed some trans dark blue tiles from the river in the area that represents the sea and I placed them in the direction of the flow of the river. Since the river is a plate higher than the sea I decided to make an uneven break between the river mouth and the sea.

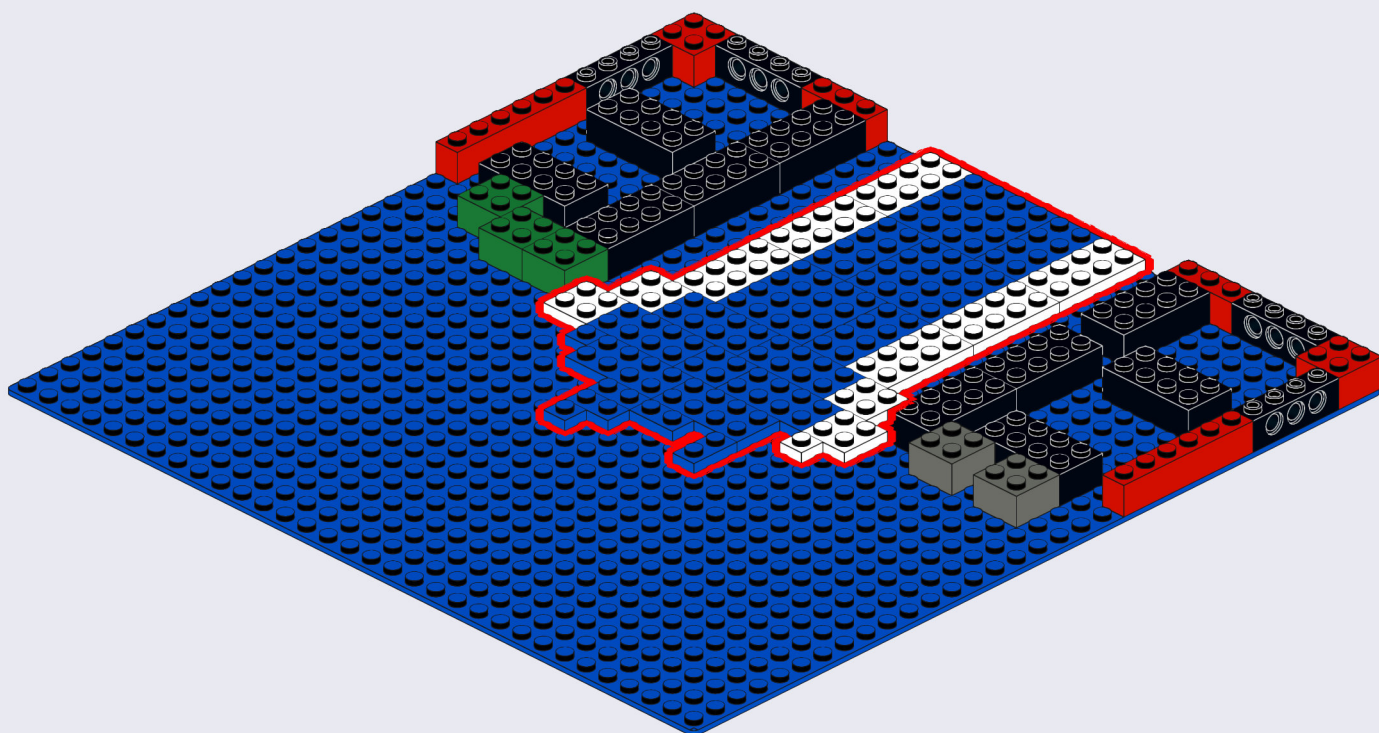
While you can see transparent plates round 1x1 on the front corners of the digital model, I don't normally place any plates there. I use the empty corners to connect the module to adjacent modules with blue tiles, both for stability and to prevent the corners of the baseplate from curling up.



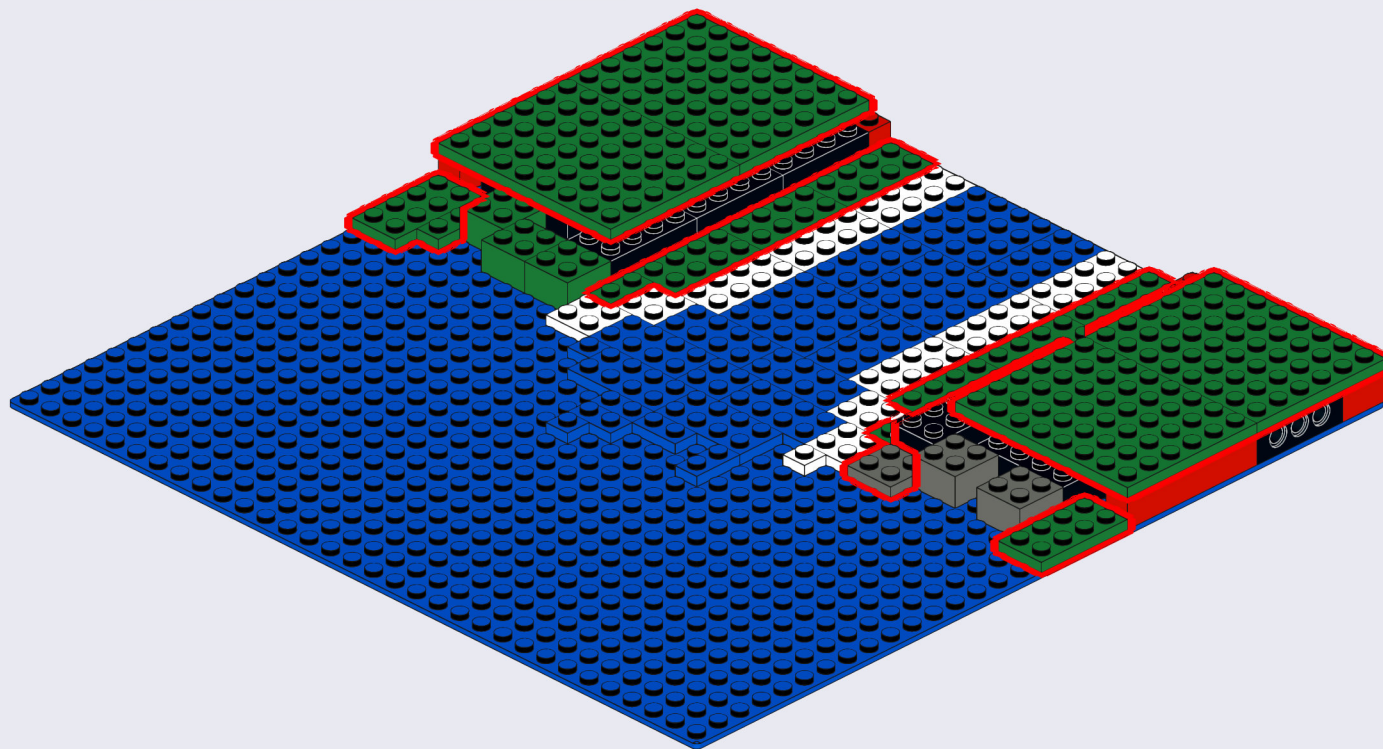
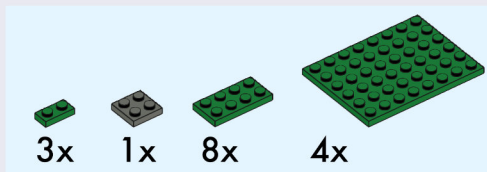
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  2x
  2x
  4x
  10x
  2x
  1x



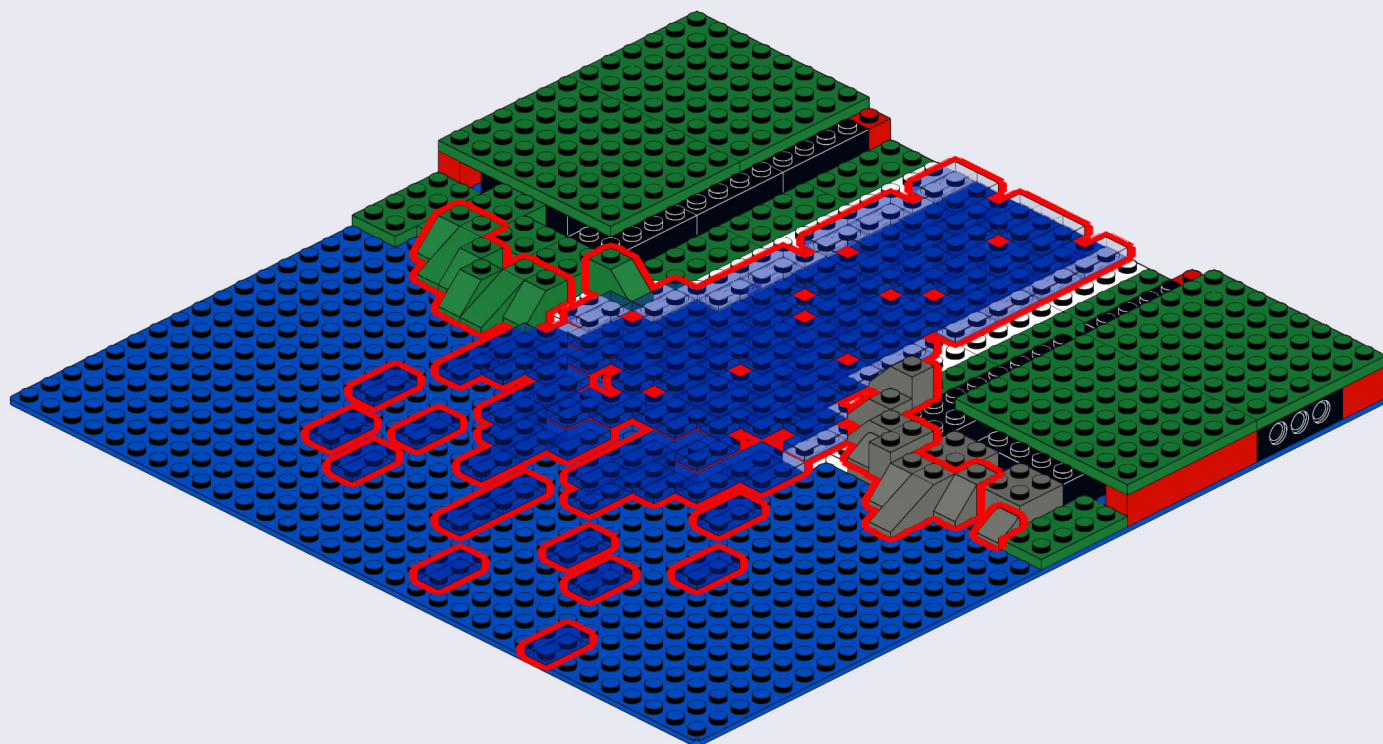
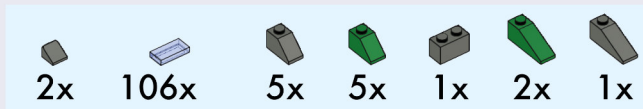
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  1x
  4x
  9x
  6x
  3x



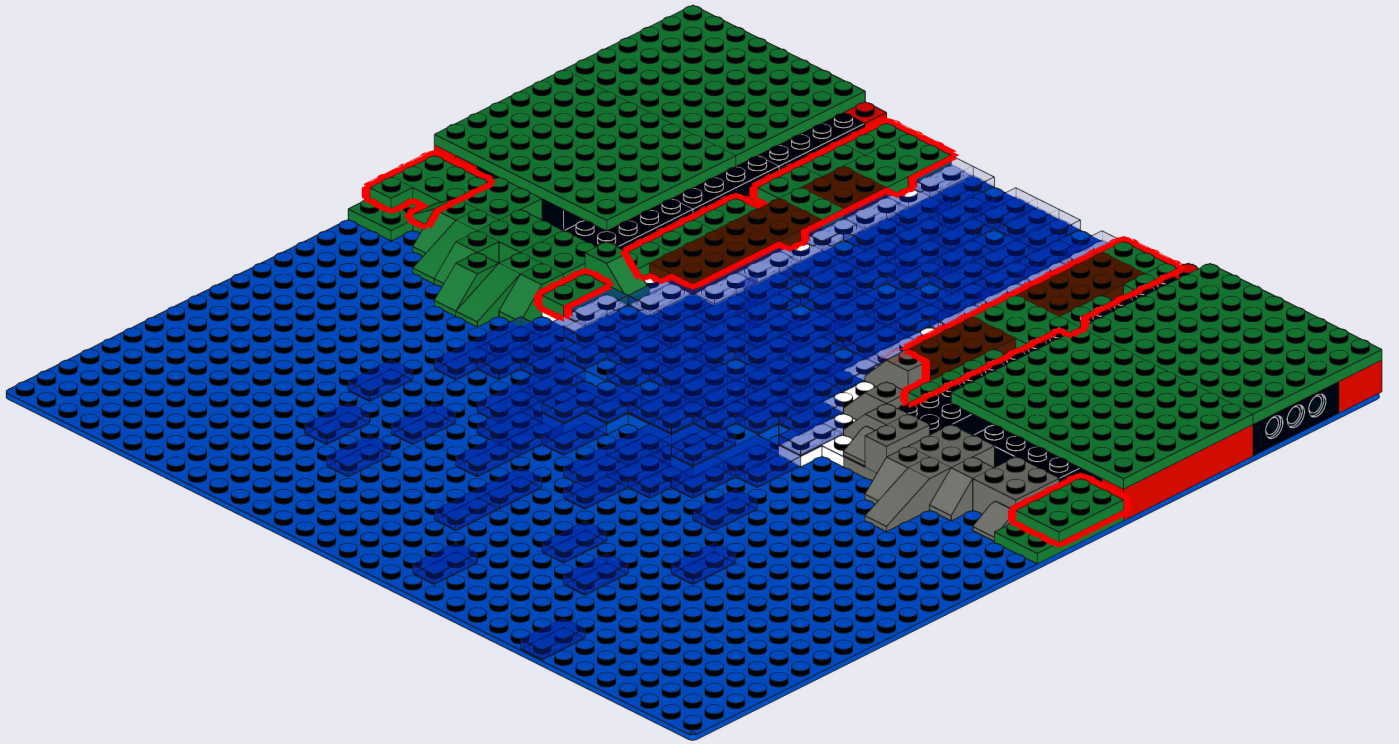
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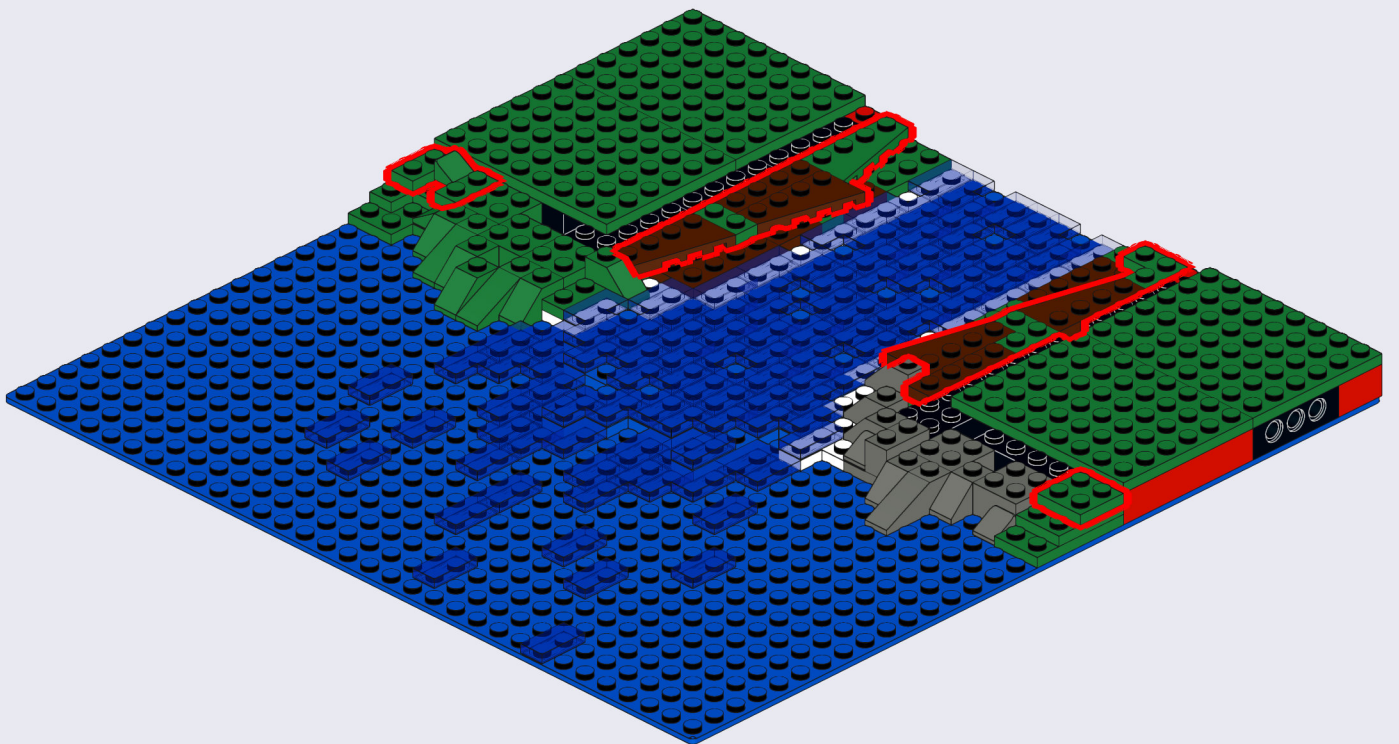
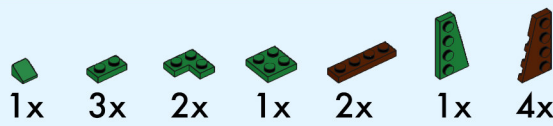
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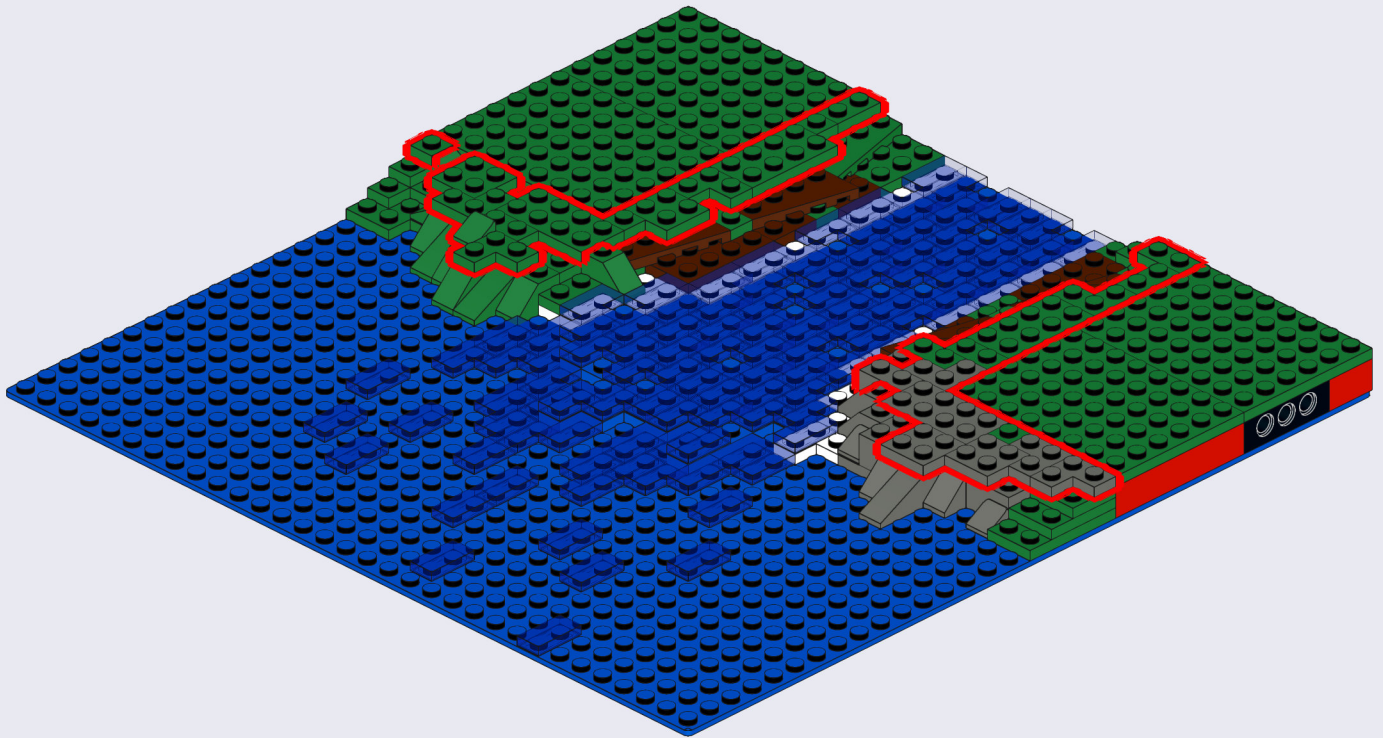
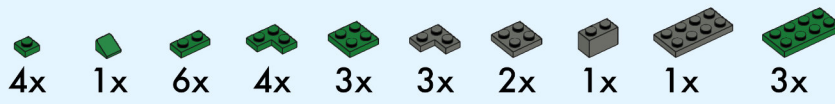
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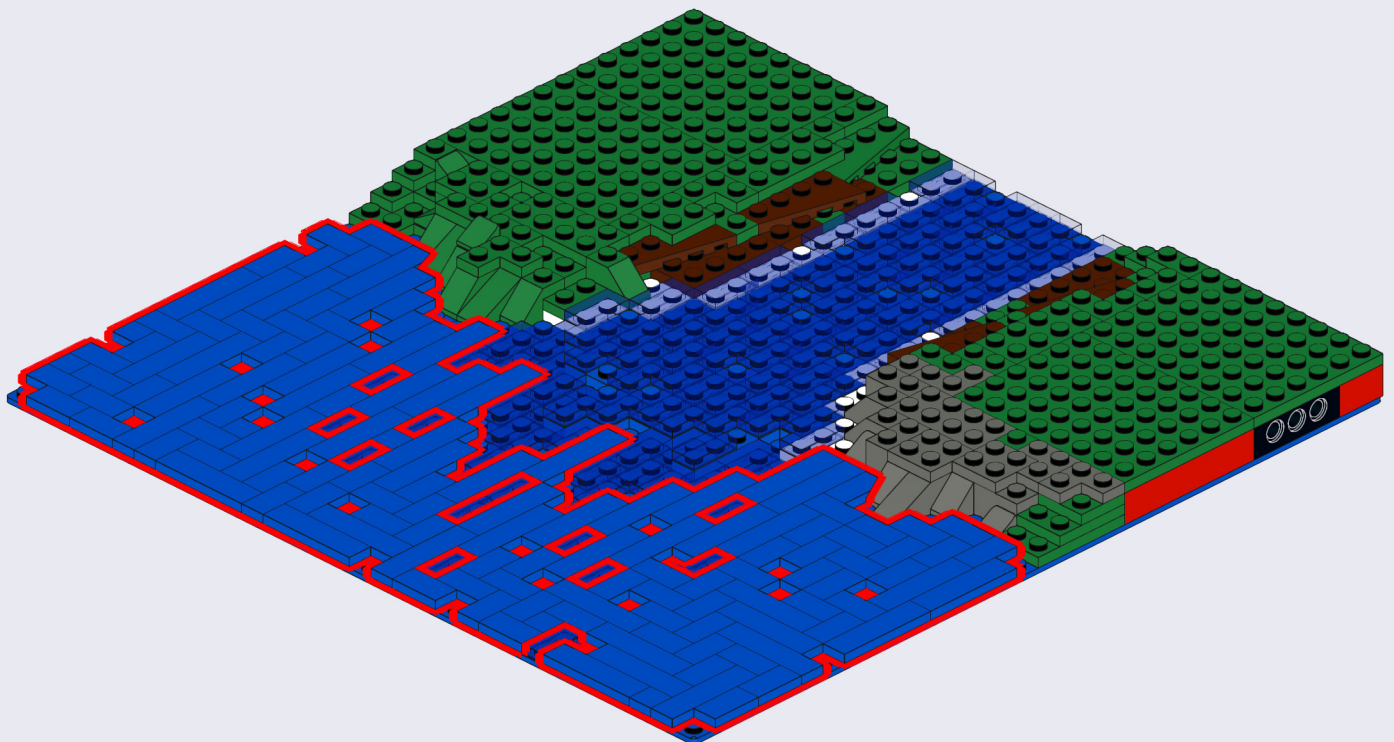
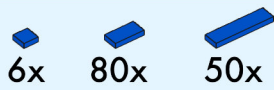
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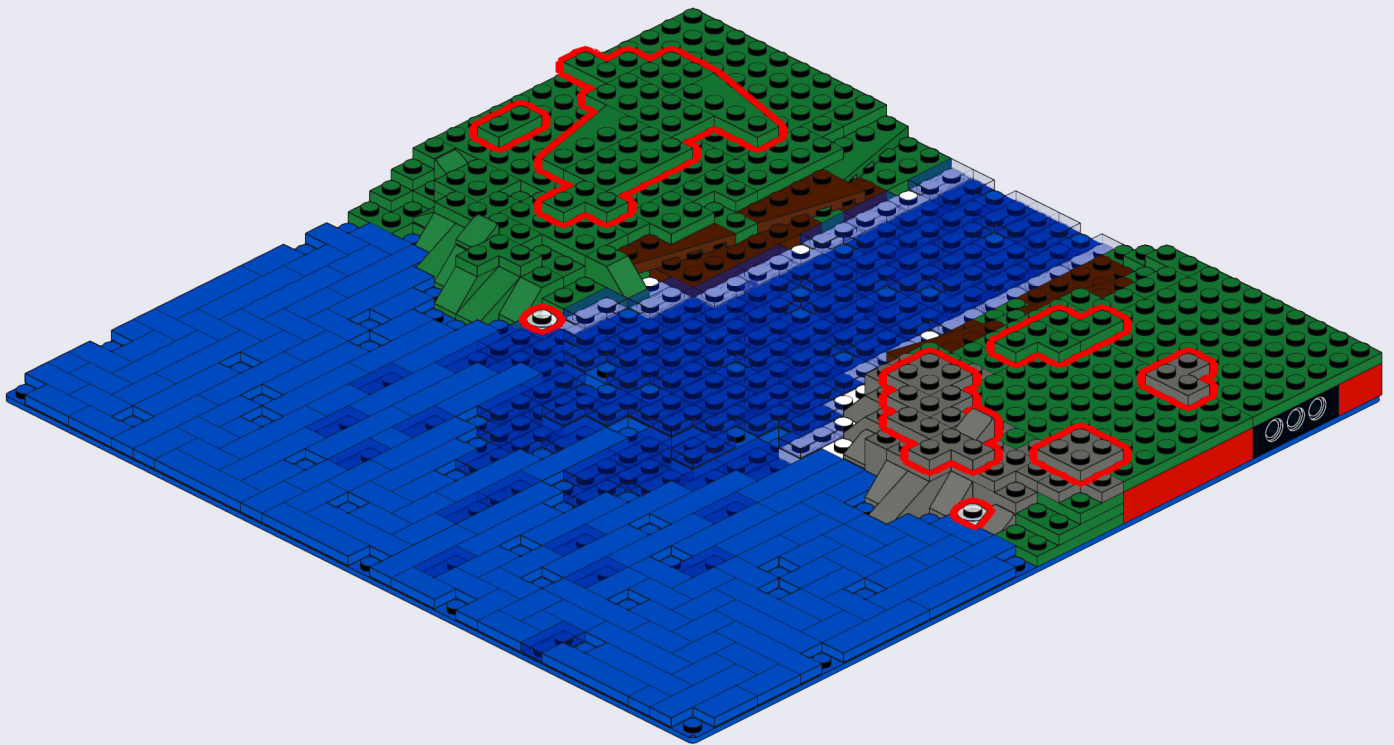
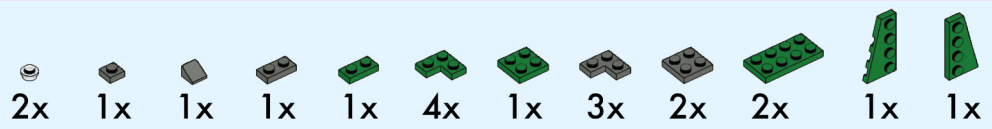
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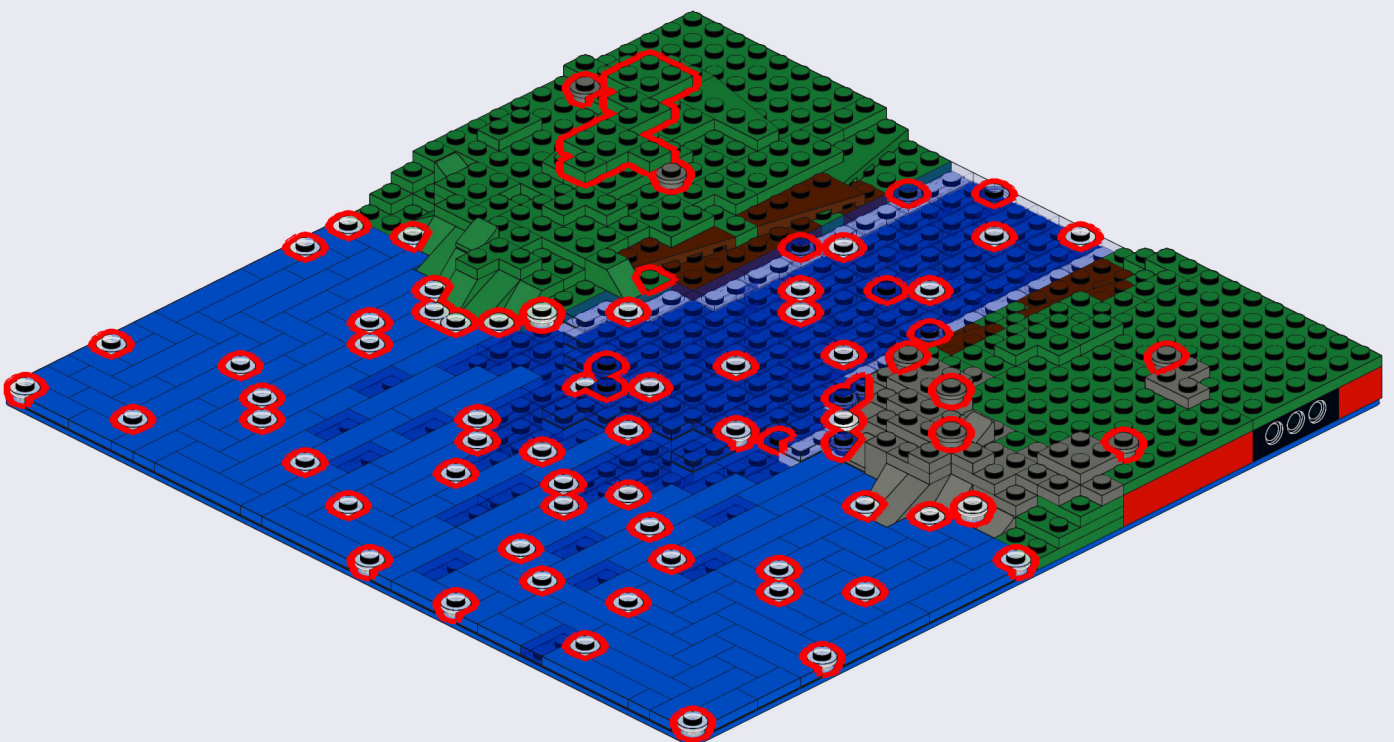
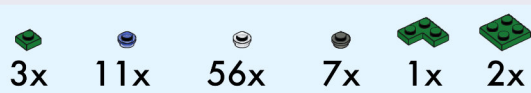
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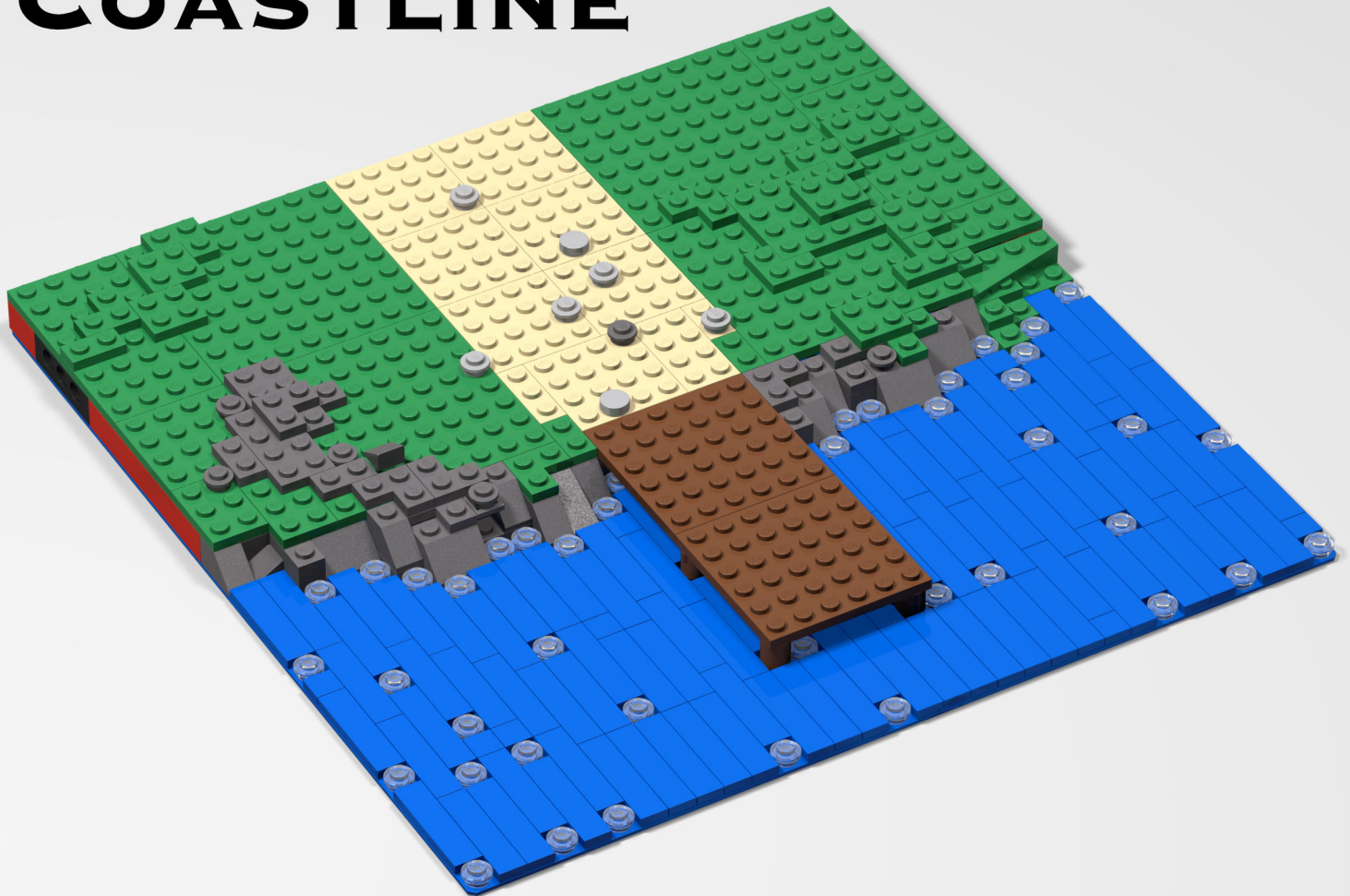
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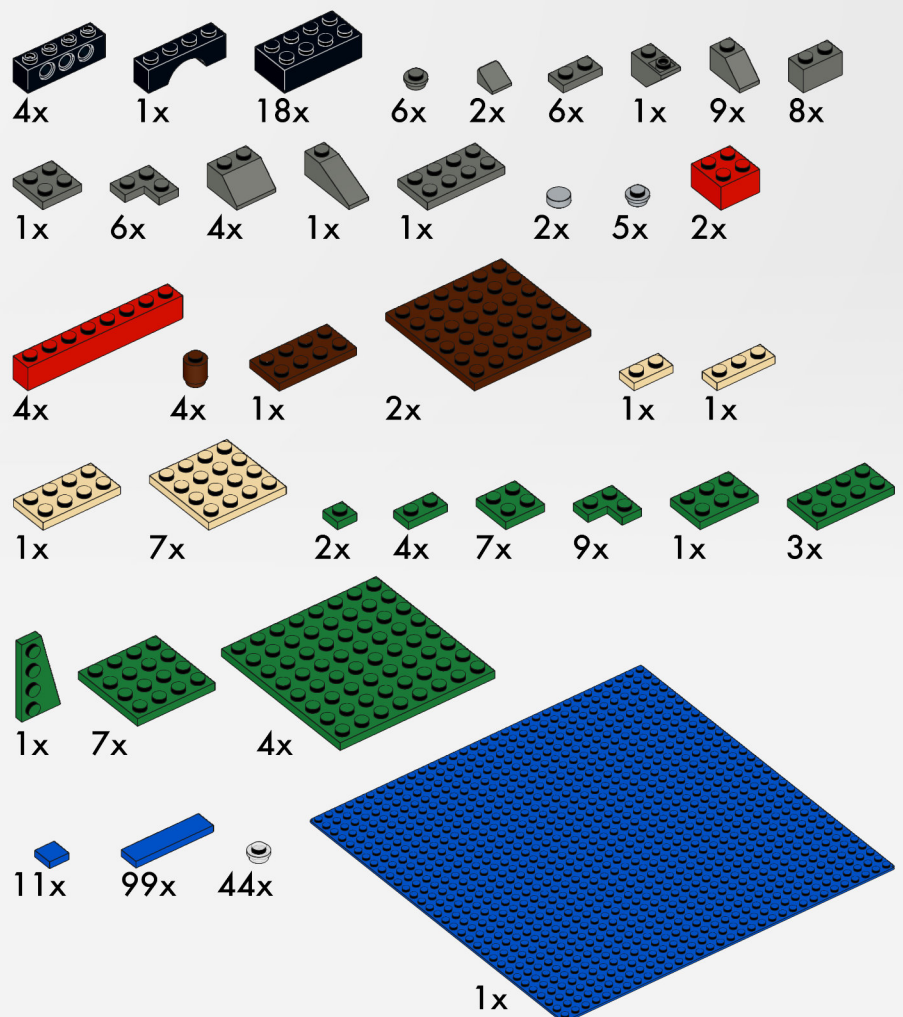


COASTLINE

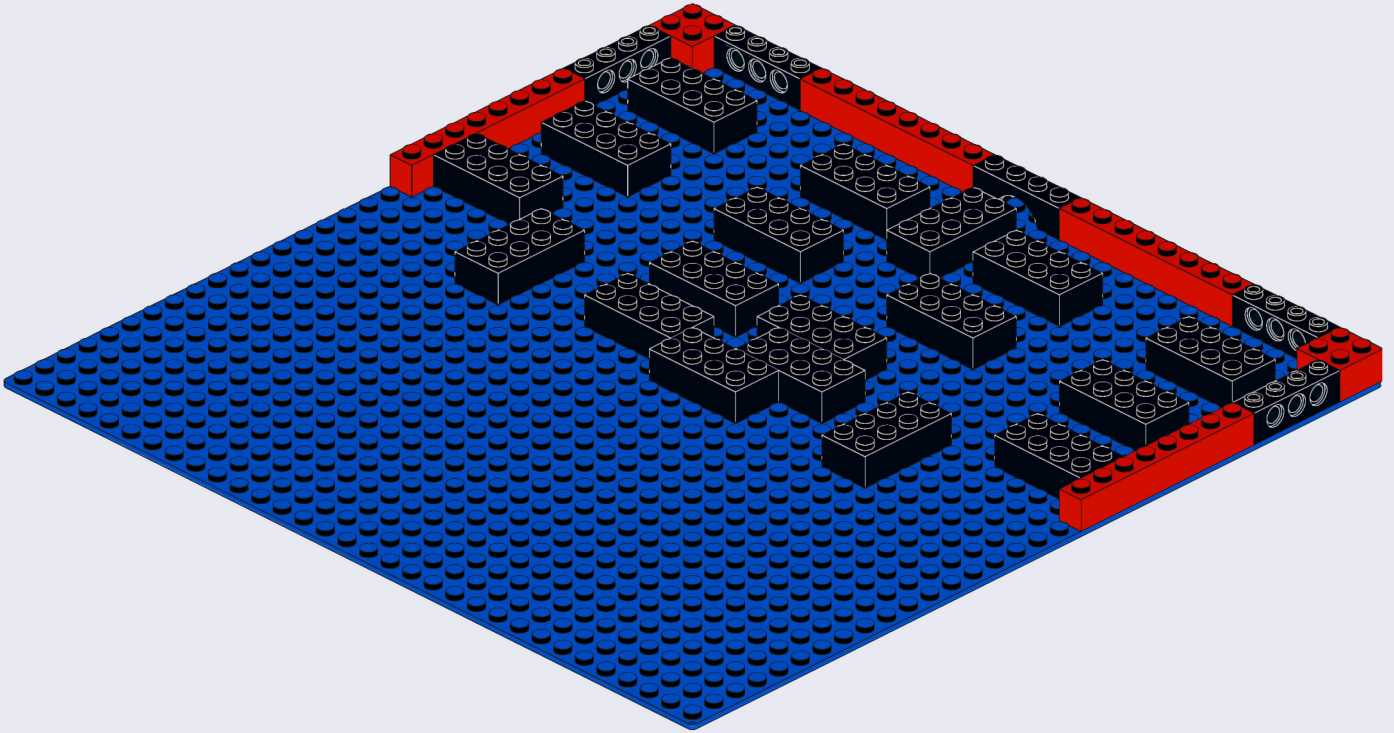
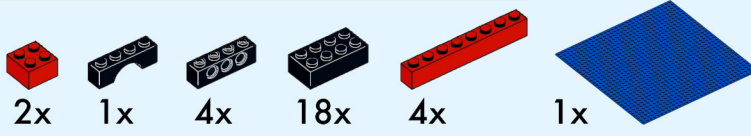


The rules for the coastline itself are very similar to those of the riverbanks: starting at the level of the water you go up one plate for each stud of separation until you reach the desired height of a brick plus a plate, again with a margin of plus/minus one plate. This rule applies to the external face of your module only. Inside your module you can use any inclination you like. In the coastline module you will find below I have used ascending plates in one corner, but for most of the coastline I chose to use slopes. The position for the start of the coastline on the external faces of the module is halfway along the baseplate: 16 studs in.

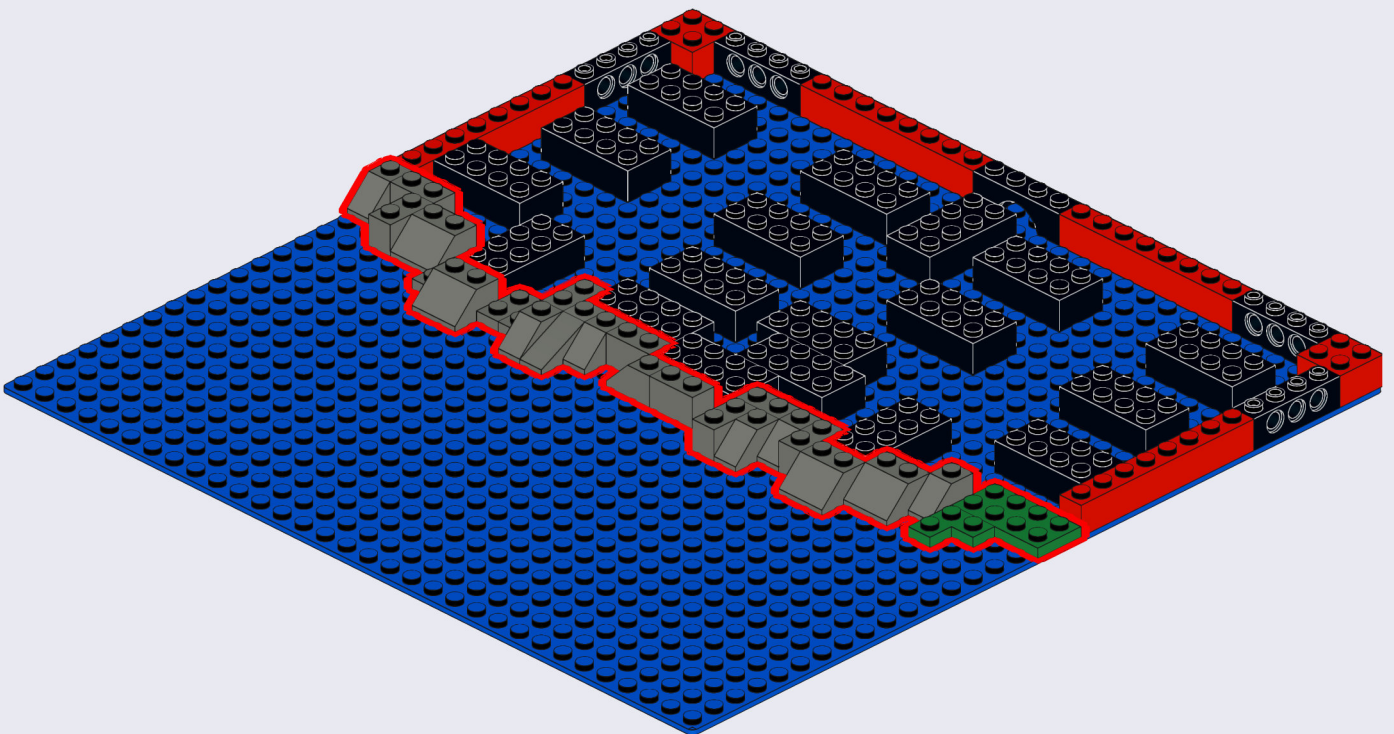
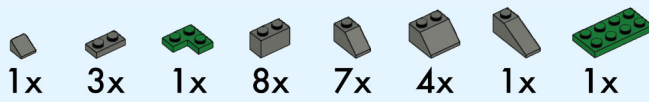
This module again includes a piece of trail that ends in a landing or pier. You can of course also just make a stretch of "straight" coast or include a beach or some other feature. As long as the external faces of your module conform to the standard anything goes.



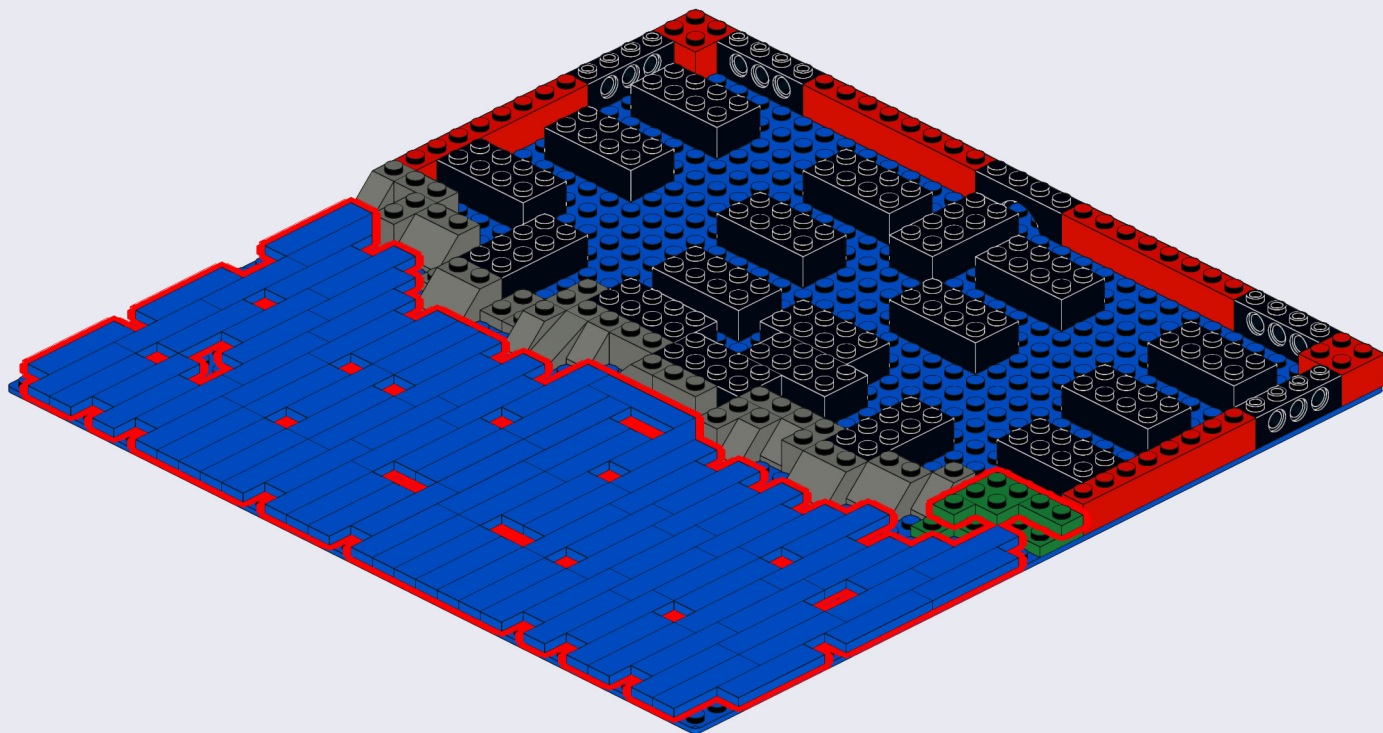
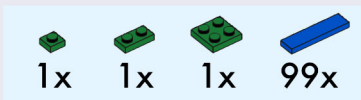
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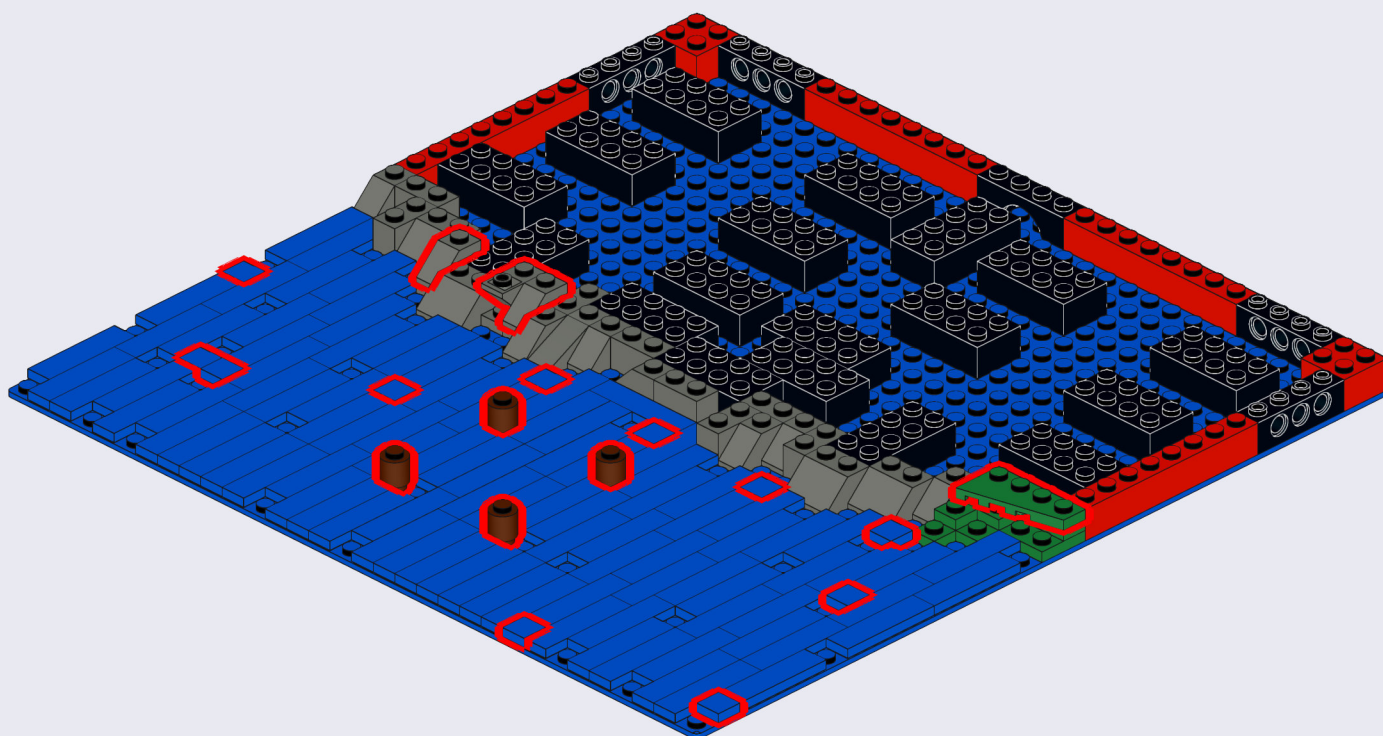
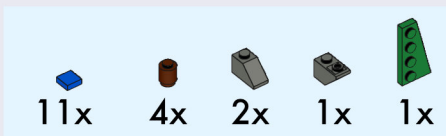
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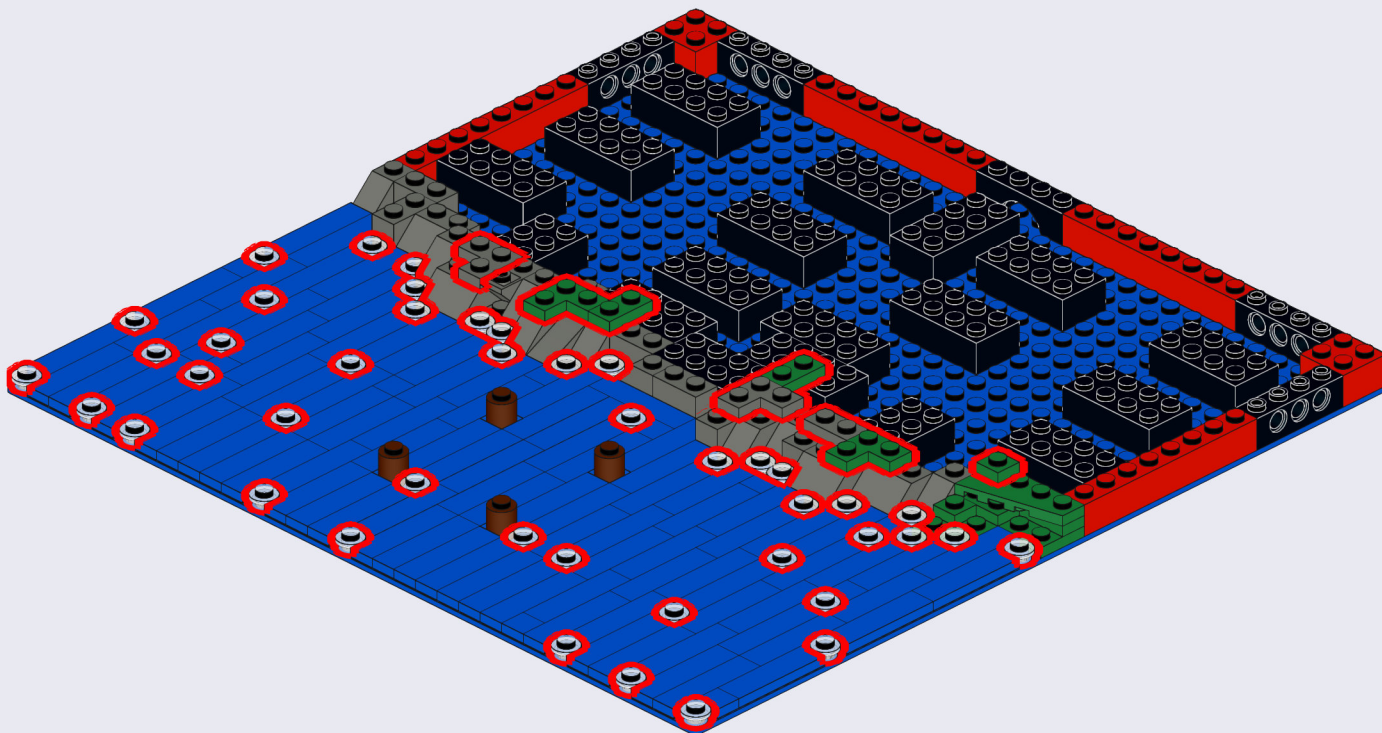


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

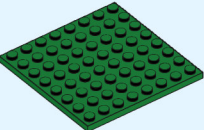


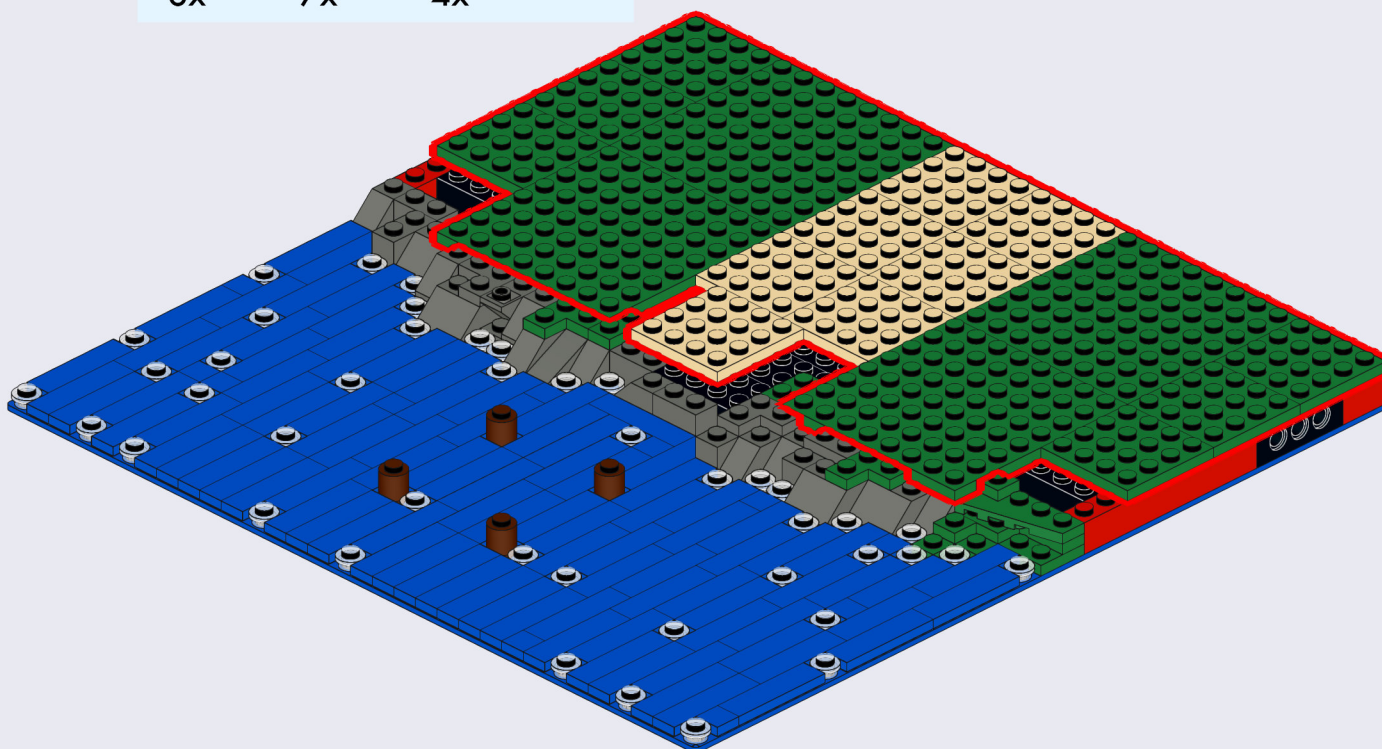
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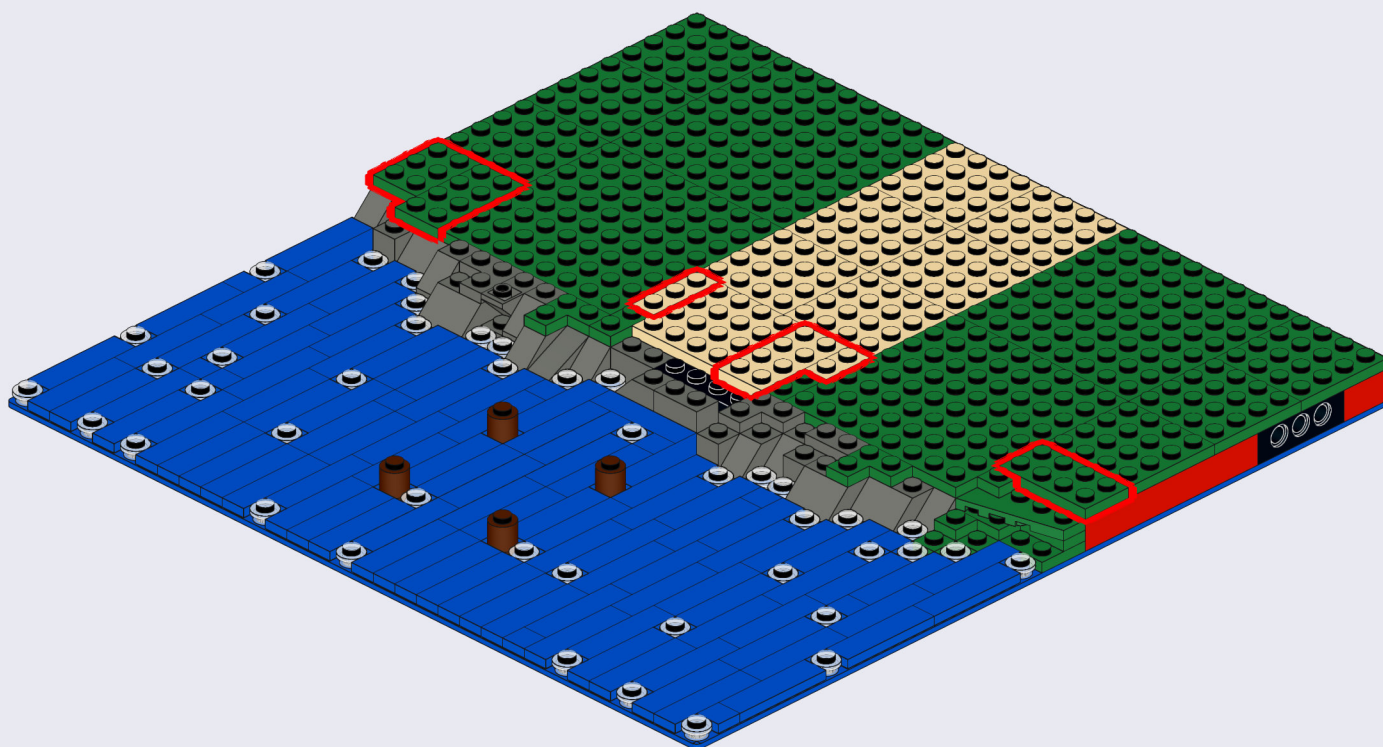
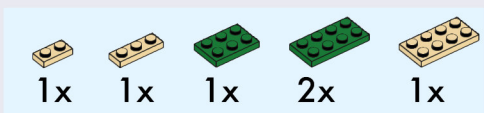


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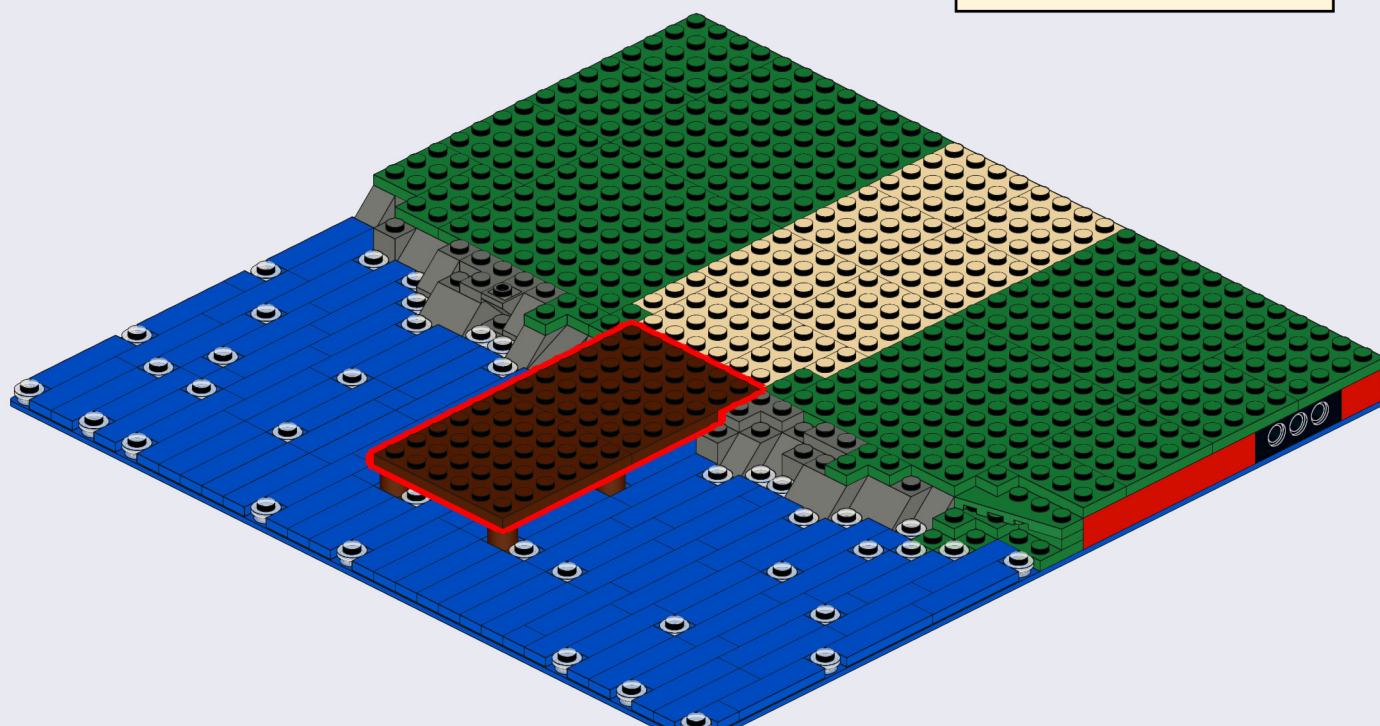
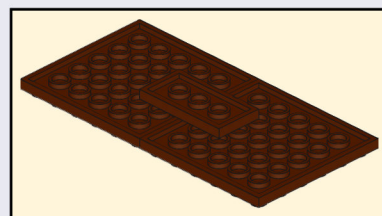
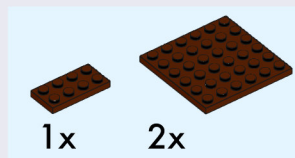
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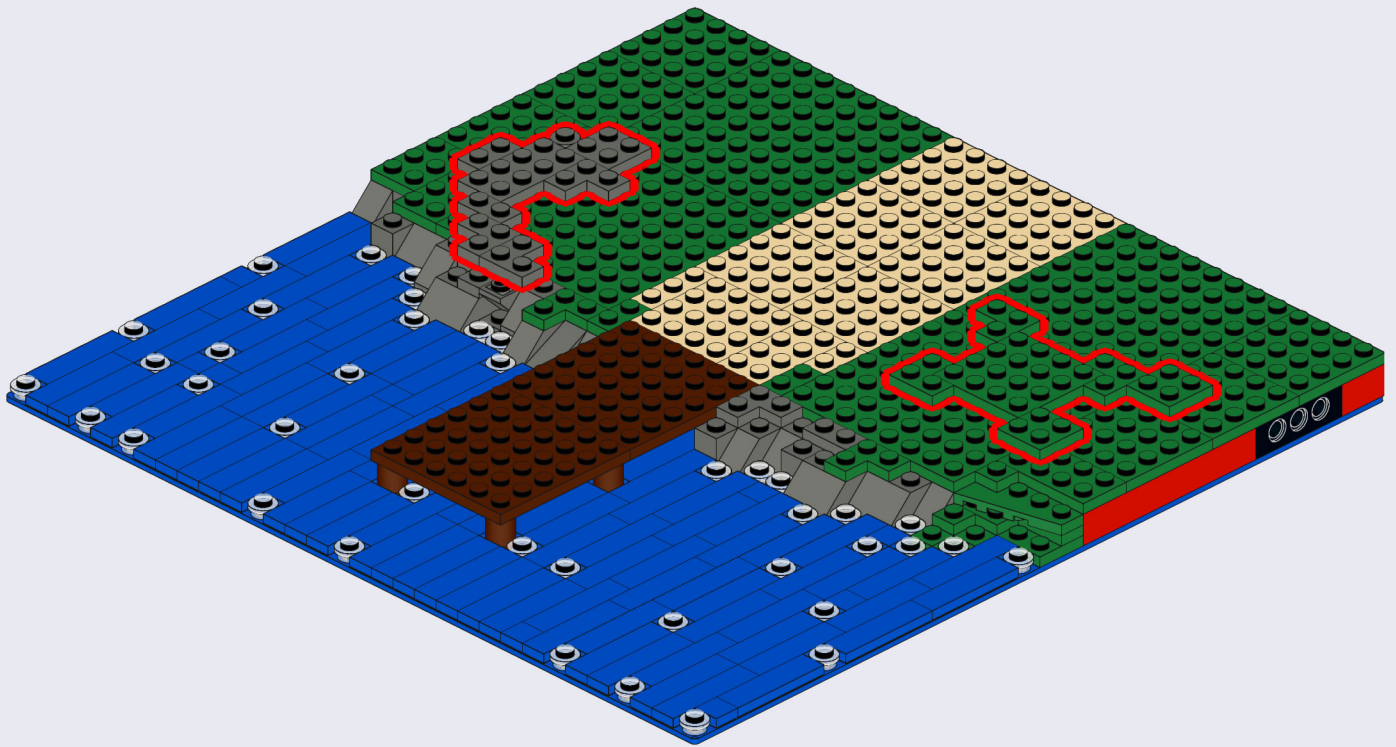
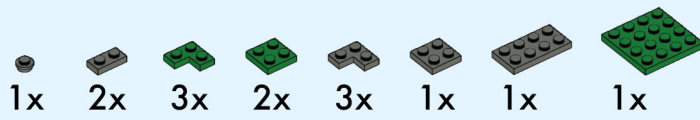
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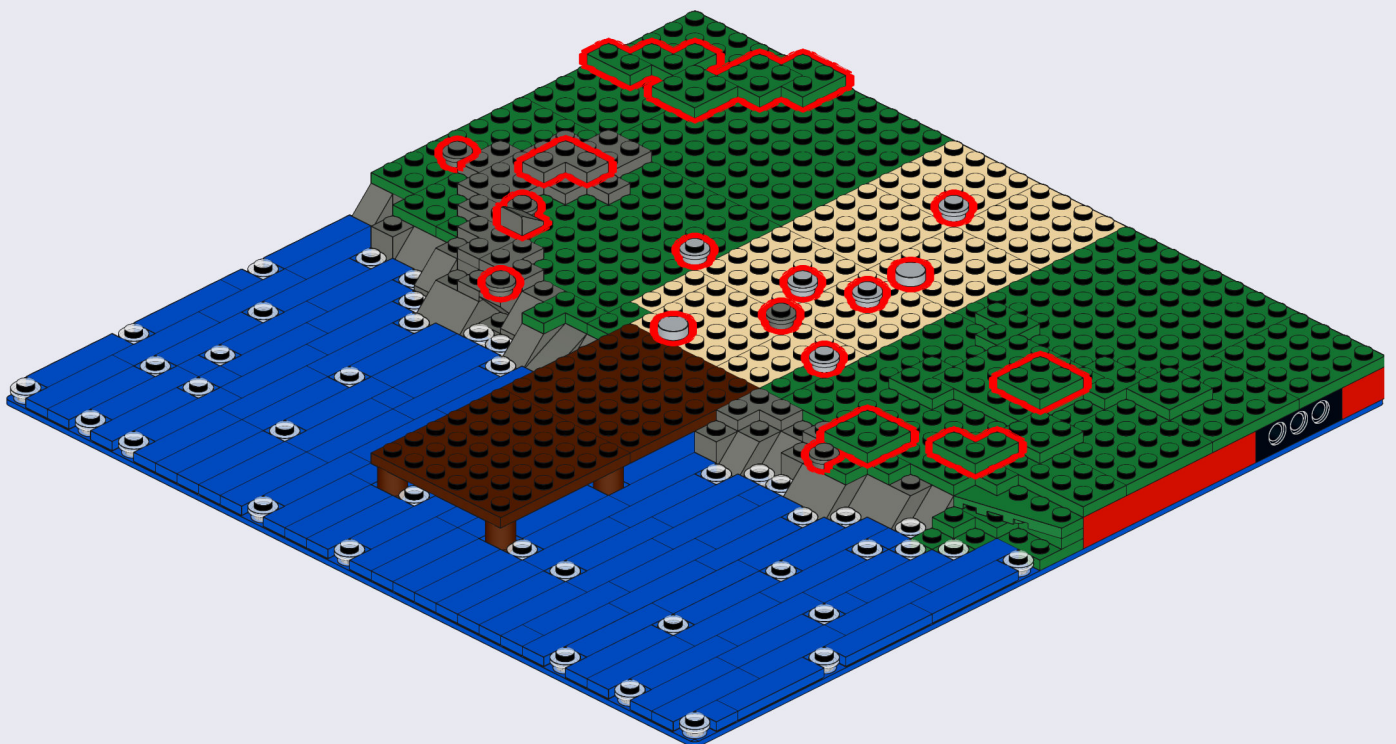
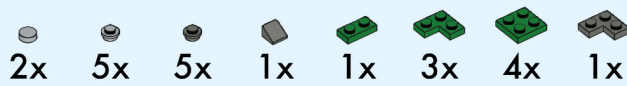
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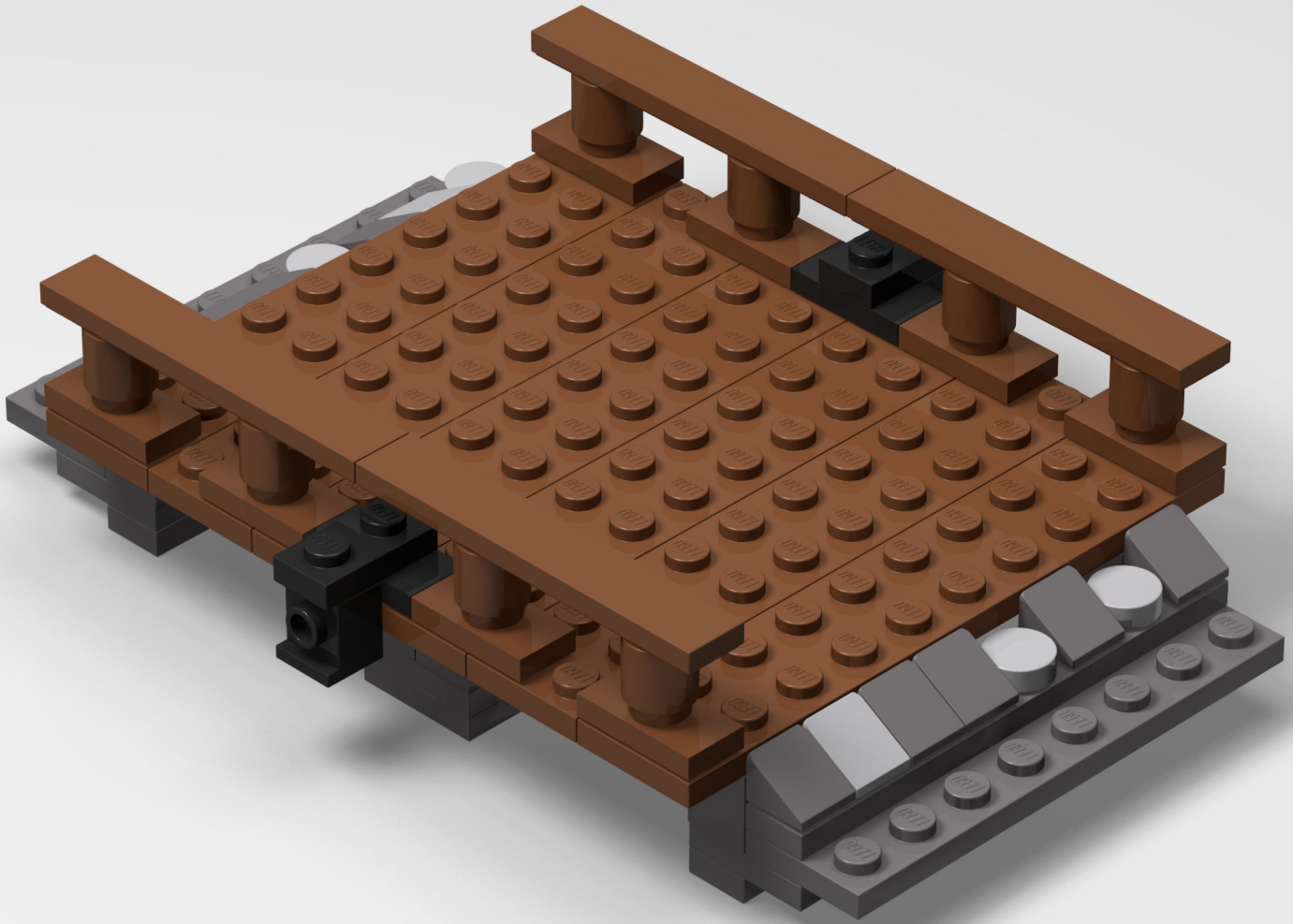
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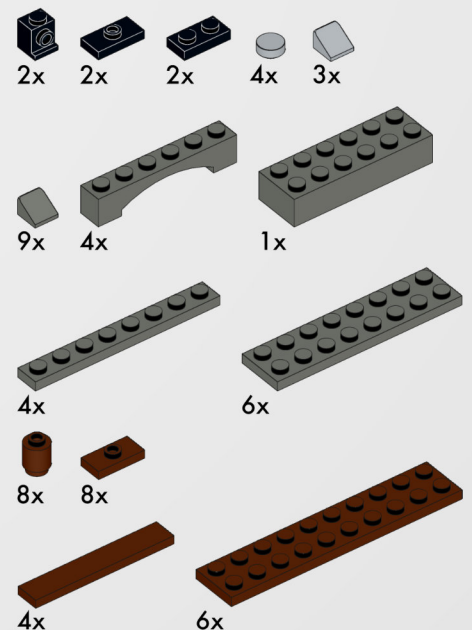
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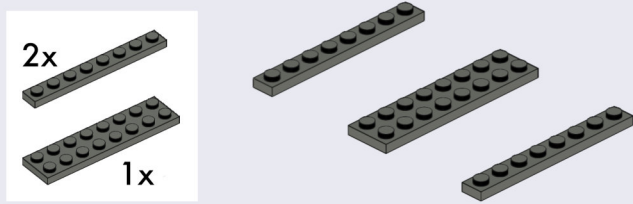
BRIDGE



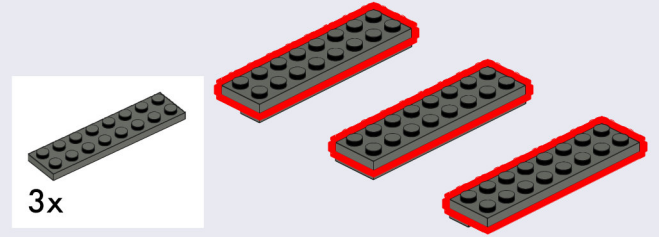
How do you cross a river? You might throw a tree trunk over it and hone your balancing skills. You could also find a ford and wade through, then dry your boots on the other side. Maybe you can find a beaver dam and use that to cross. Your safest option though, is a bridge. When I built this module I wanted to build something simple, but nice. And I wanted to use the relatively limited parts I had available. I ended up building an 8-stud wide bridge. With the railing taking up one stud on either side that meant a six-wide cart should be able to cross, right? It turns out the answer is no. Cart wheels take up a little extra space and driving the cart across the bridge will either get the cart stuck or do some serious damage to the railings. By the time I realised that I tried widening the platform but it just didn't look right to me. And then LEGO presented 7188: King's Carriage Ambush—a six stud wide carriage plus wheels. That was going to require a bridge that was at least ten studs wide, not counting the railing. I decided to give up. The king was not welcome on my bridge and for now I'm sticking with my eight-wide pedestrian approved bridge.



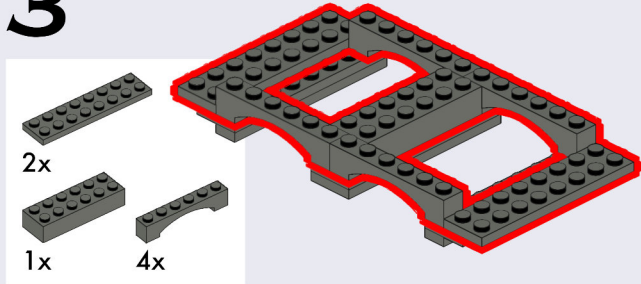
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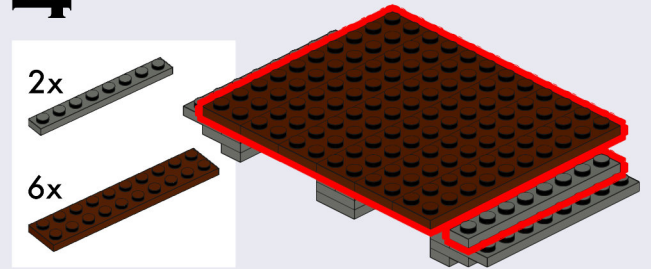
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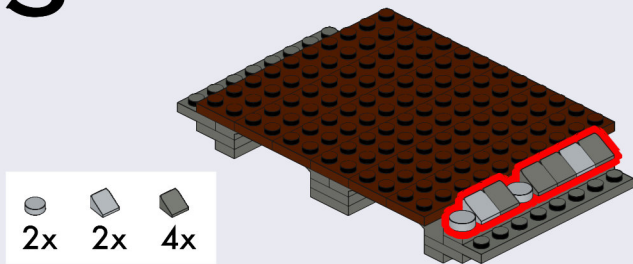
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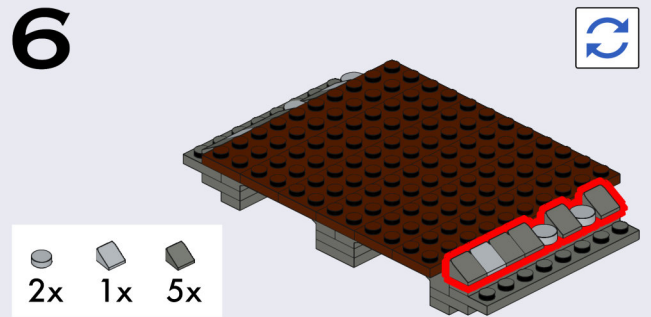
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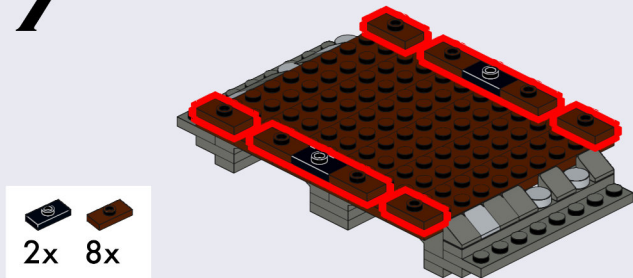
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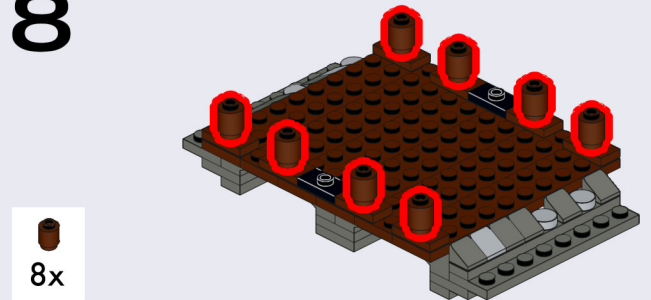
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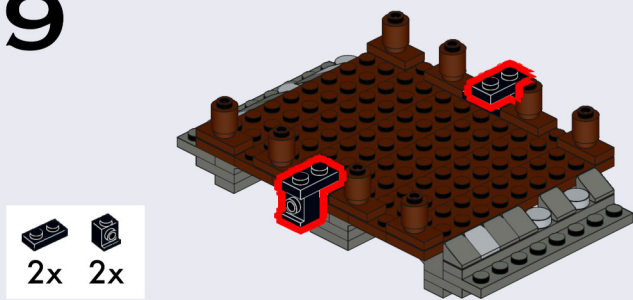
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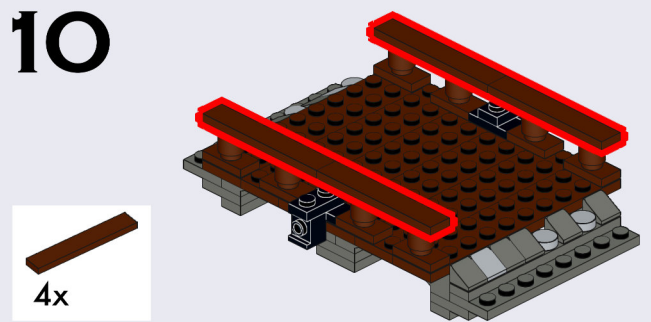
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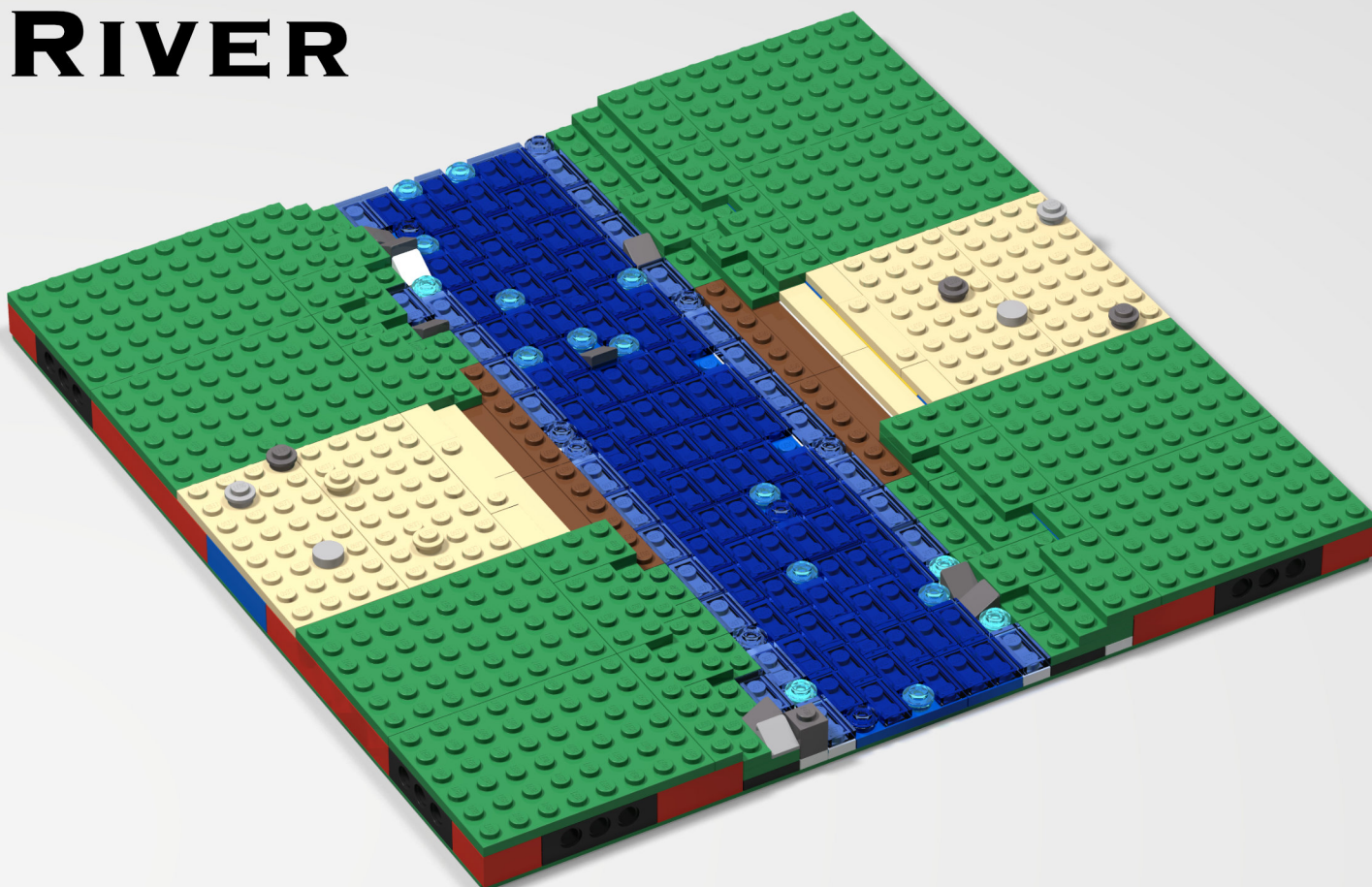
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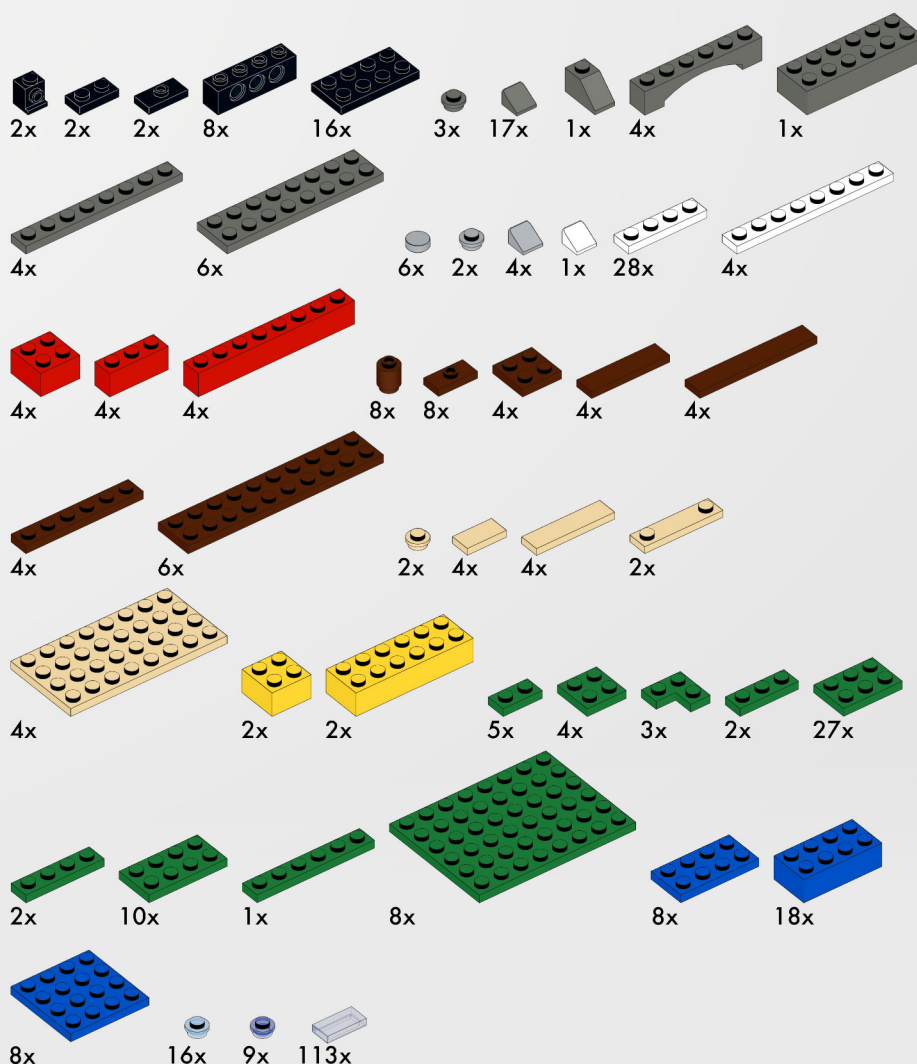


RIVER



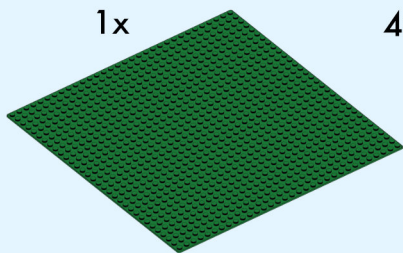
One idea I took from my earlier tests on the moat was to not use just a single color for the riverbed. Although it was never explicitly stated or explained, already in the second tutorial (in HispaBrick Magazine 014) you can see that the underlying colour on the sides of the river is white where the centre of the river uses blue. The idea here is that a lighter colour indicates the water is less deep while a darker colour (including dark blue) indicates deeper parts of the river. As the standard explains, the external faces of a MILS module with a river section need to follow specific rules. The river should be in the middle of the external side and be 8 studs wide. This is the same with roads. The river should be one plate and one tile above the baseplate. The riverbanks should increase one plate per stud as you move away from the river. There is some margin here (give or take a plate) so you can put a boulder on the side of the river or use slopes instead of ascending plates.

In the model instructions you can find below you can see how I have combined a river with a trail. Since the bridge makes the module tall and therefore harder to store, I built it in such a way as to be able to easily remove the bridge and store it separately. Of course, that means you could also substitute the bridge with a ford, a dam, or some other way to connect the trail on either side.

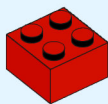


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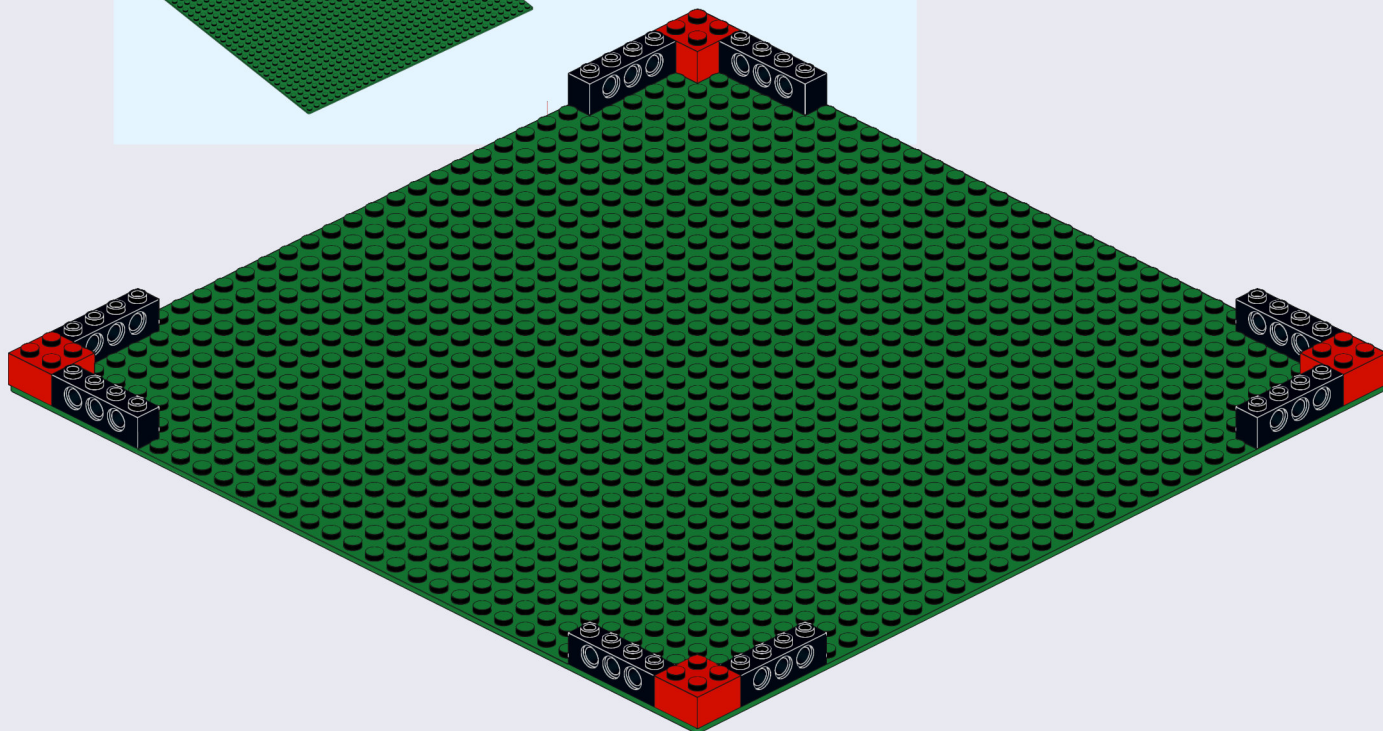
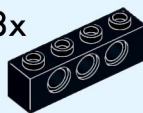
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2

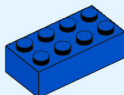
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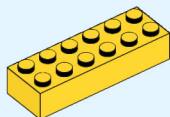
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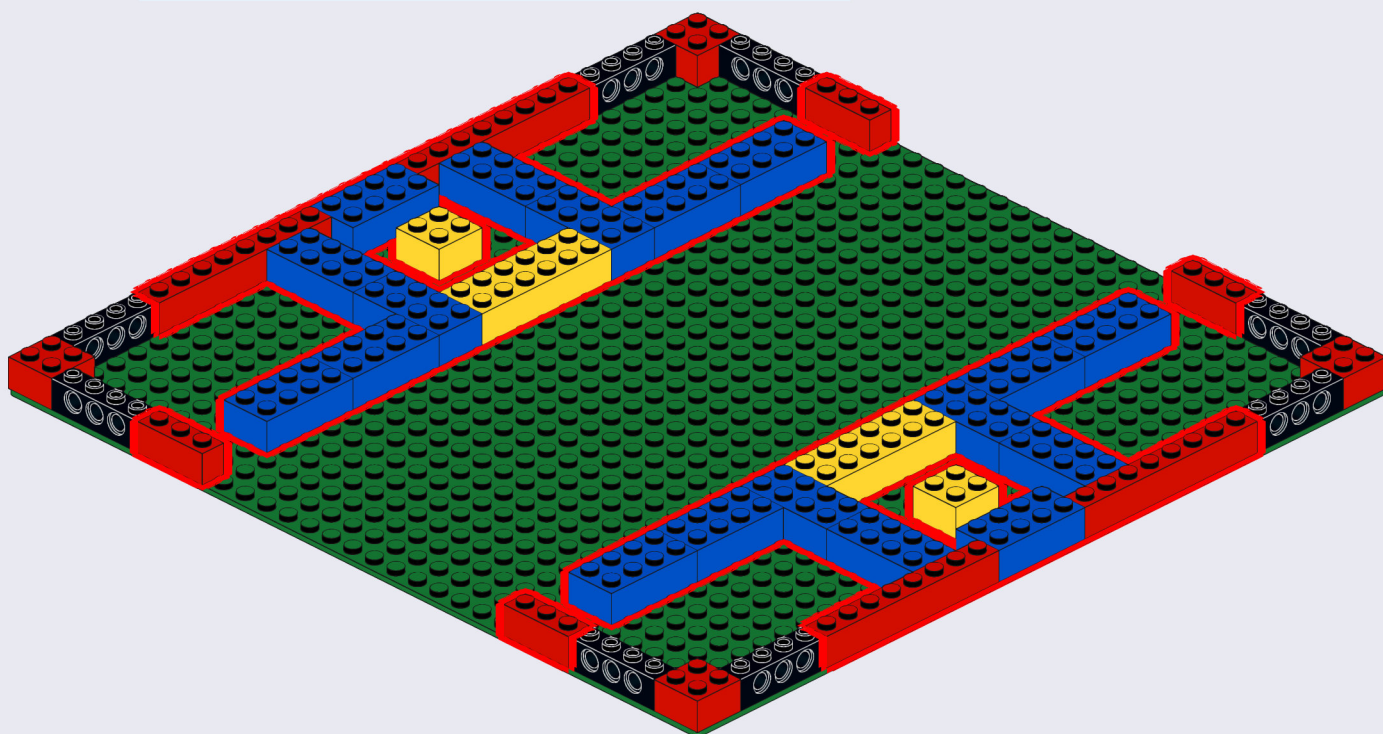
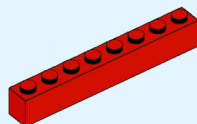
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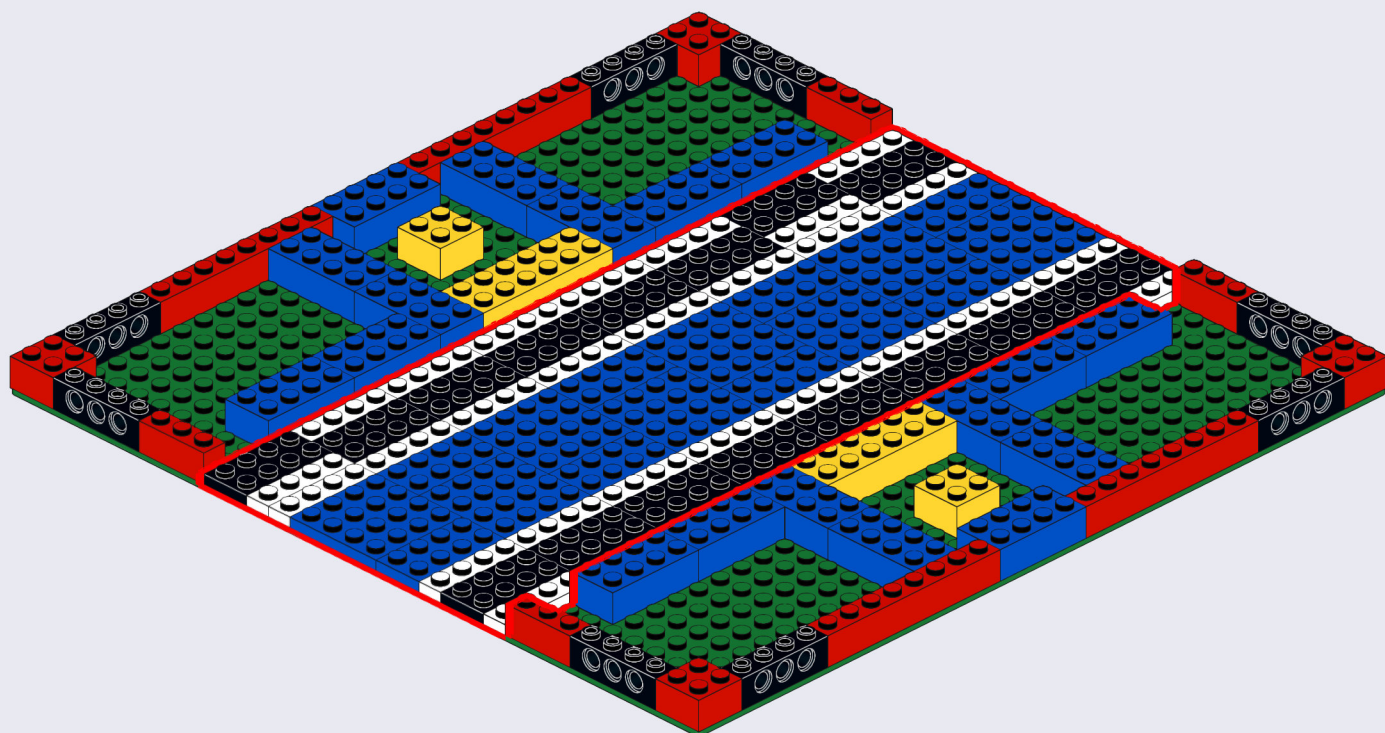
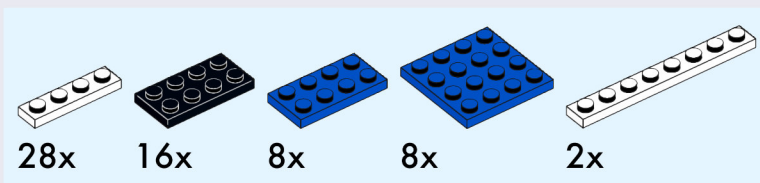
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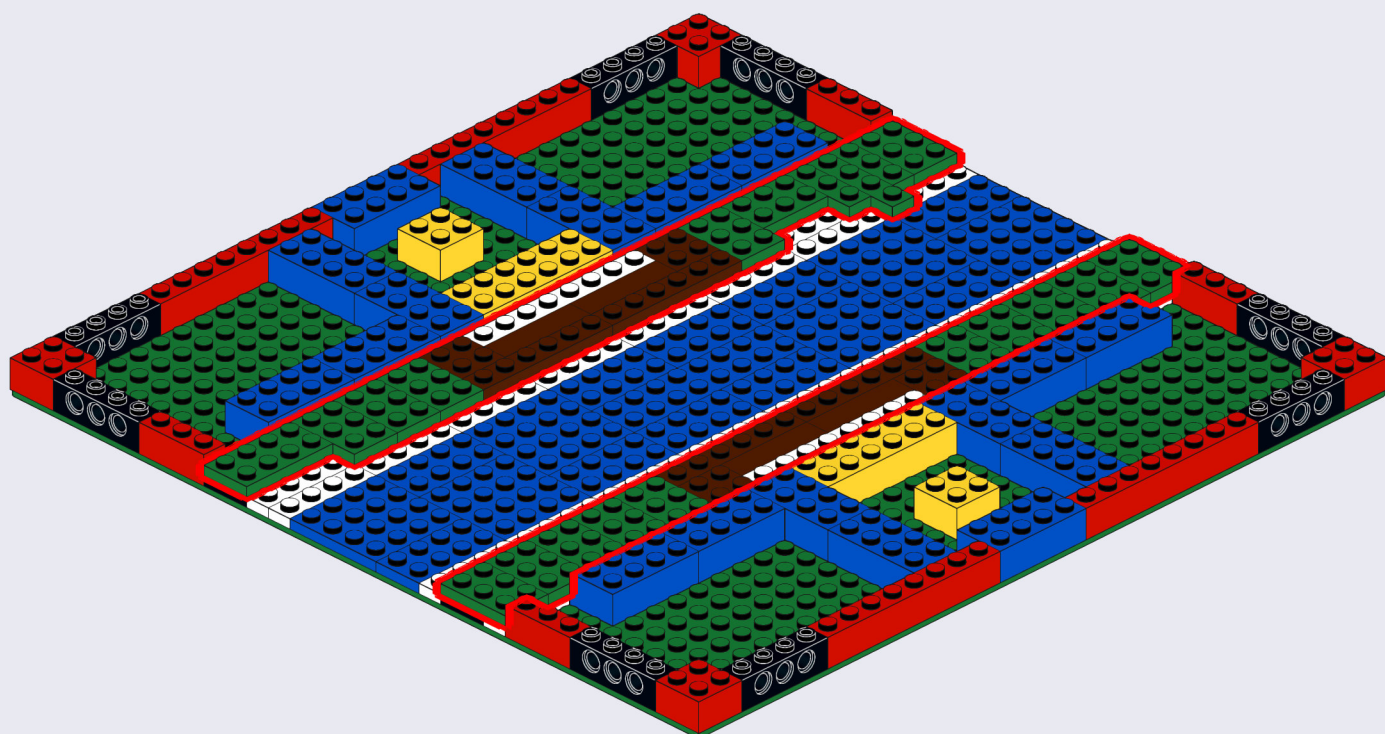
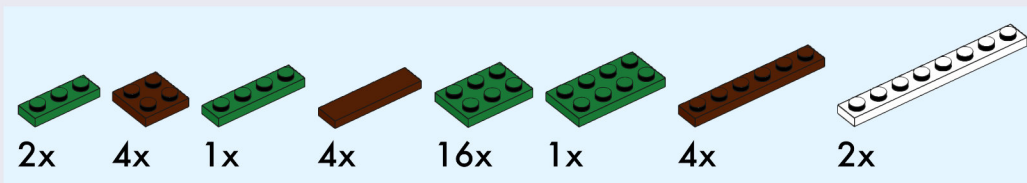
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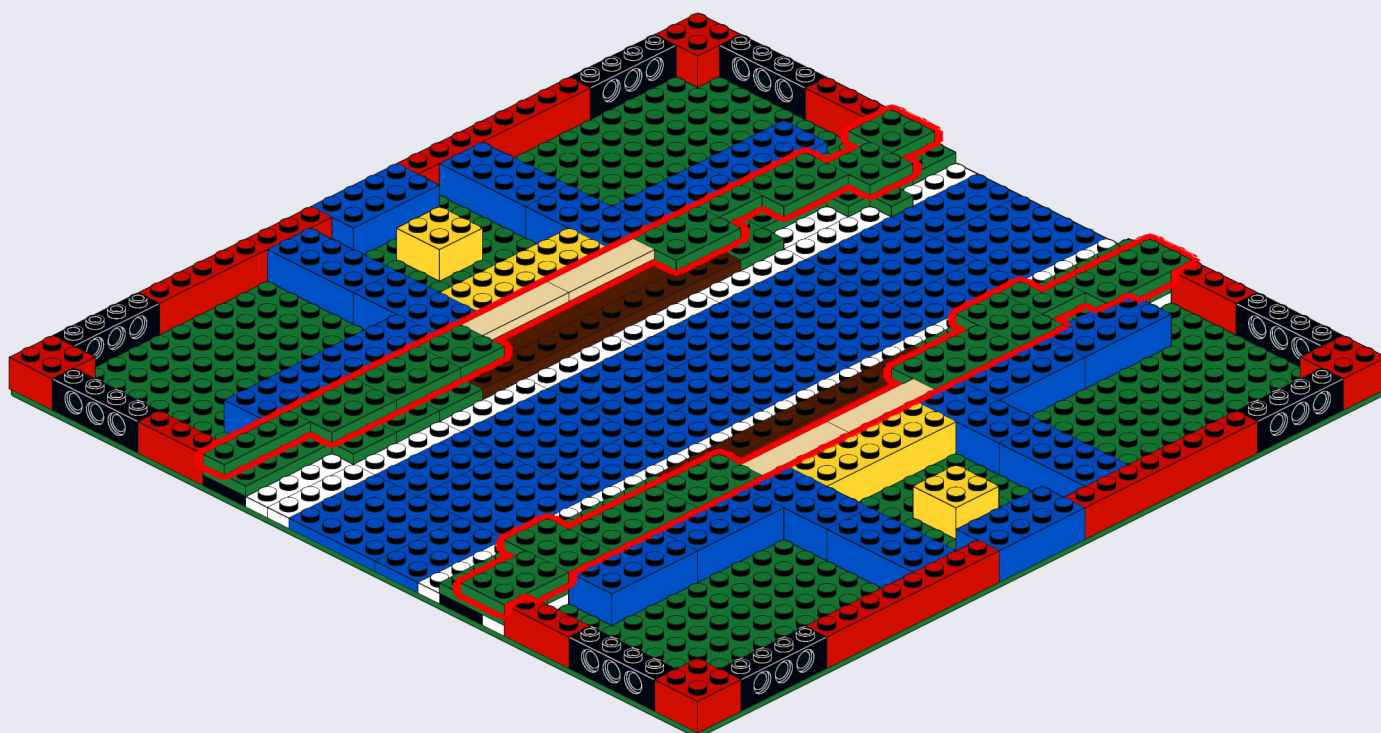
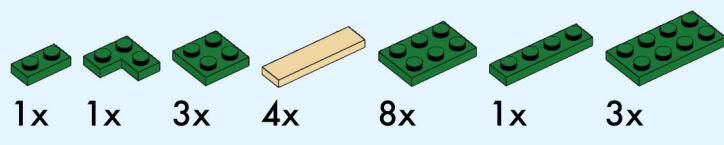
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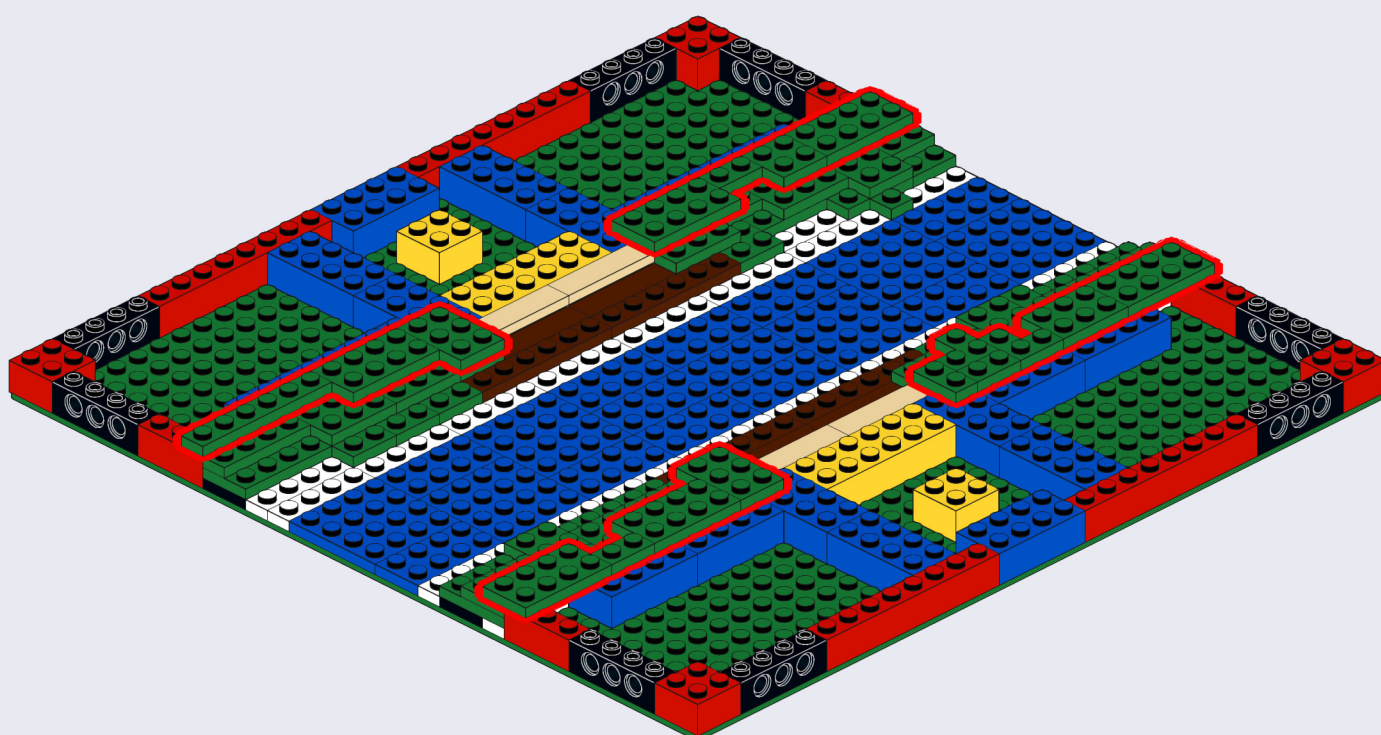
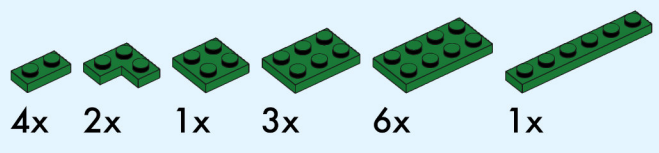
4



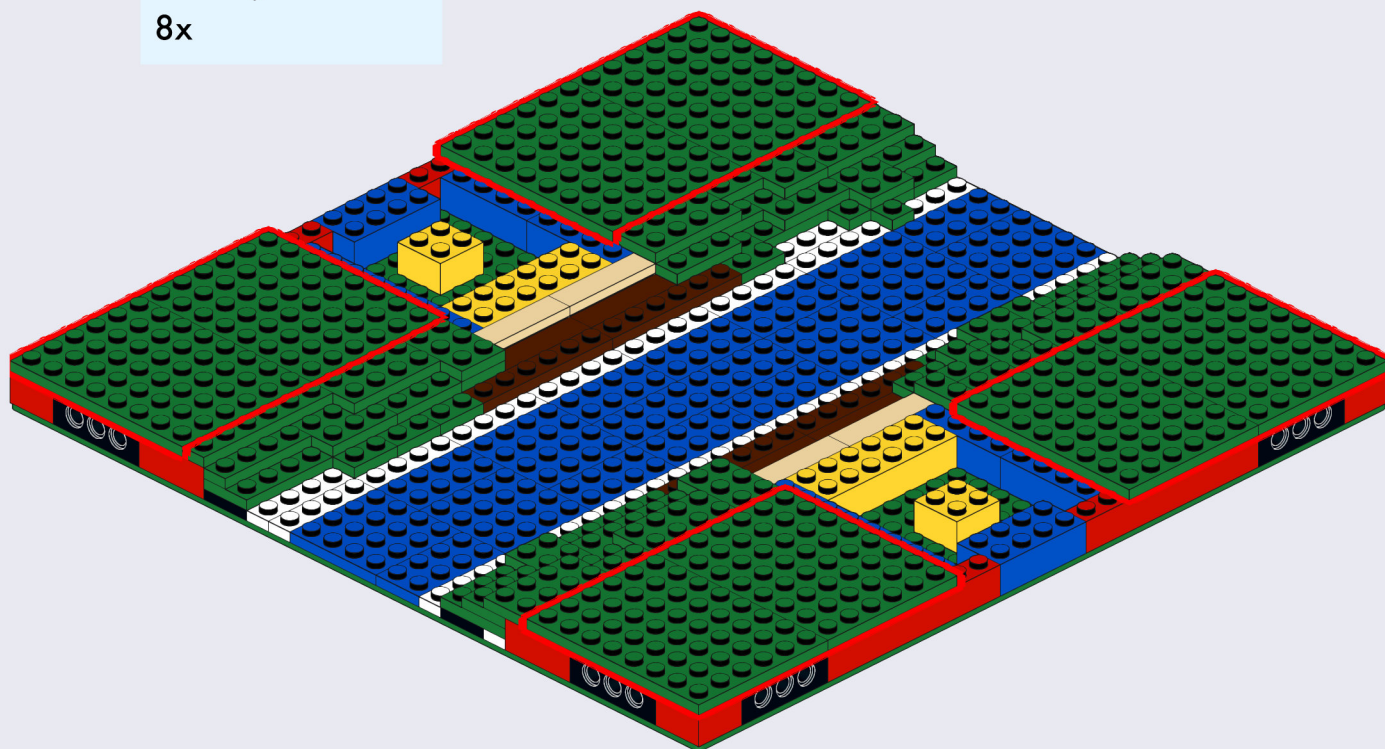
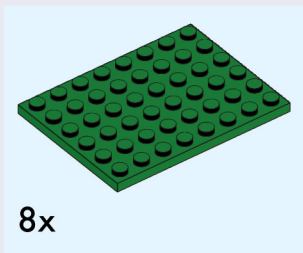
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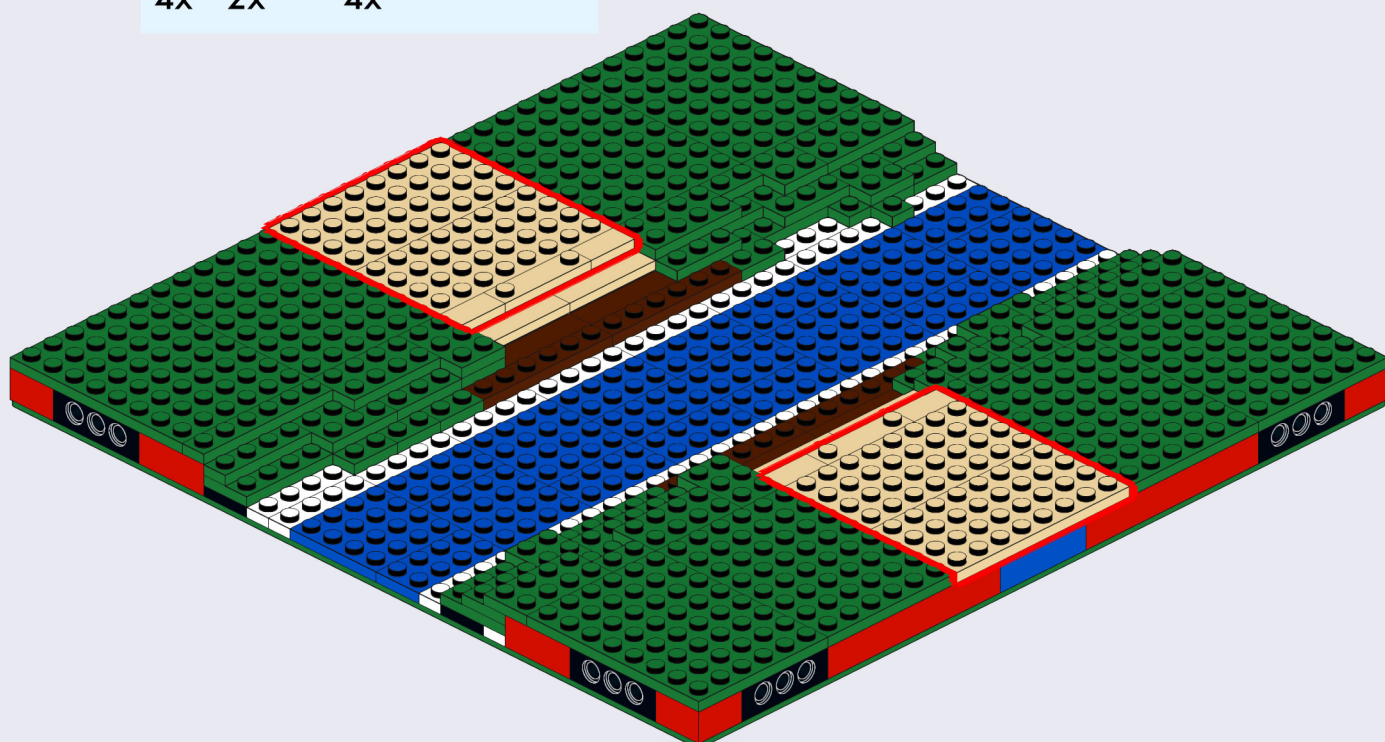
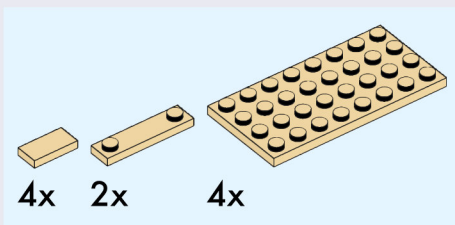
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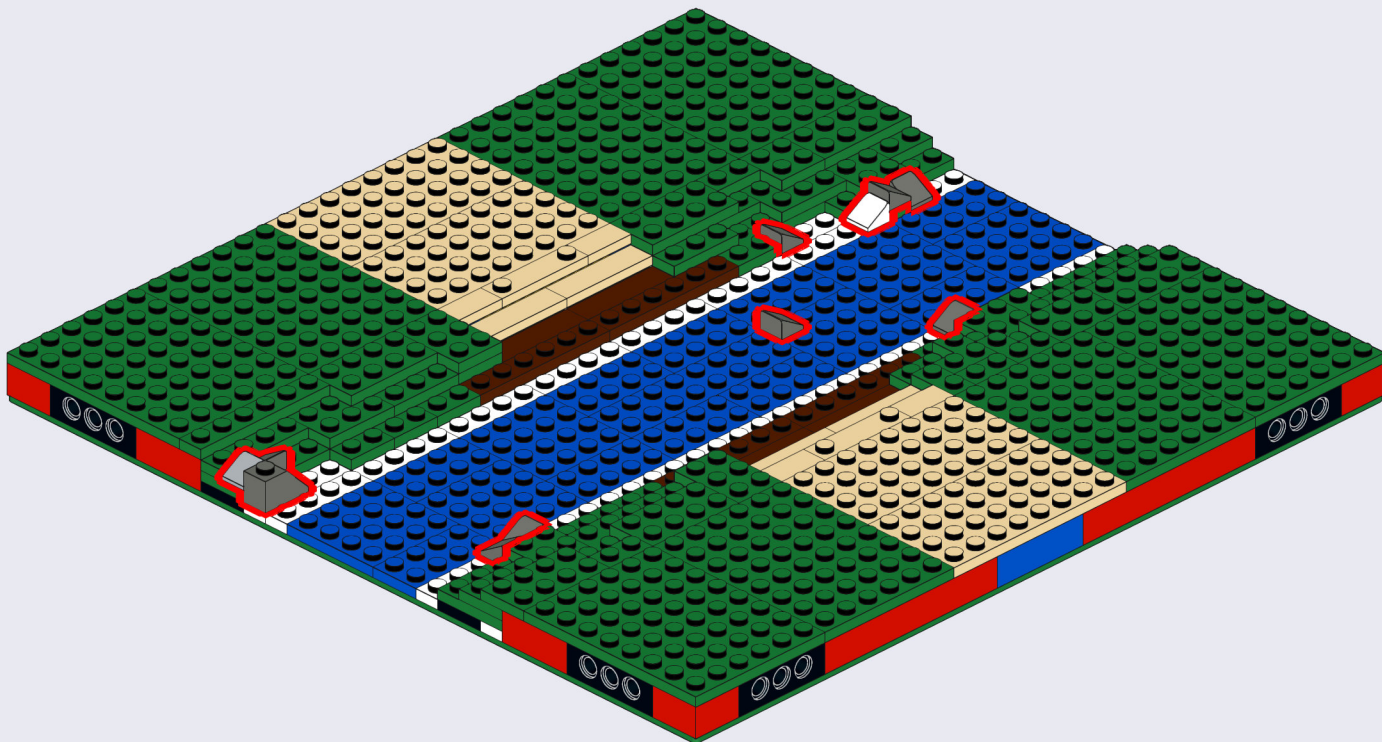
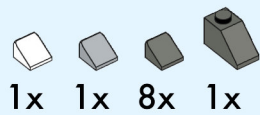
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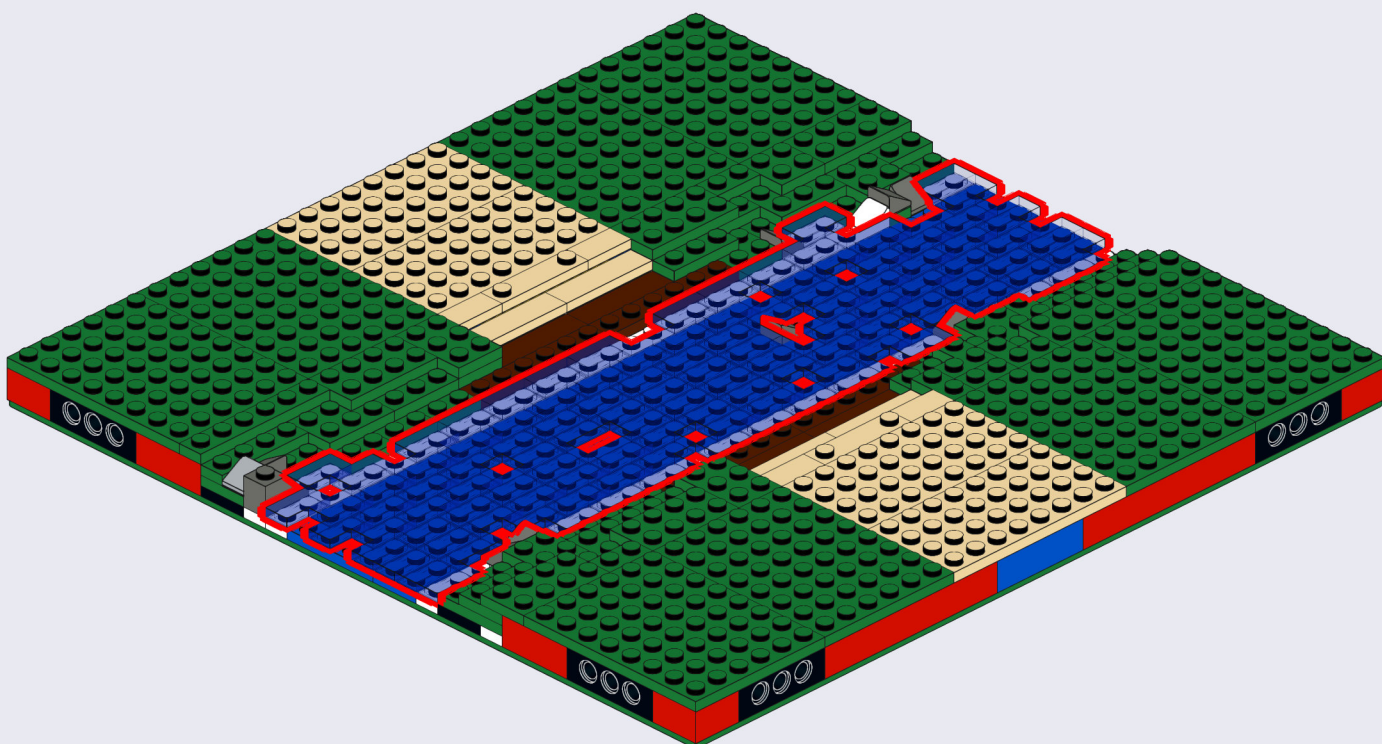
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9

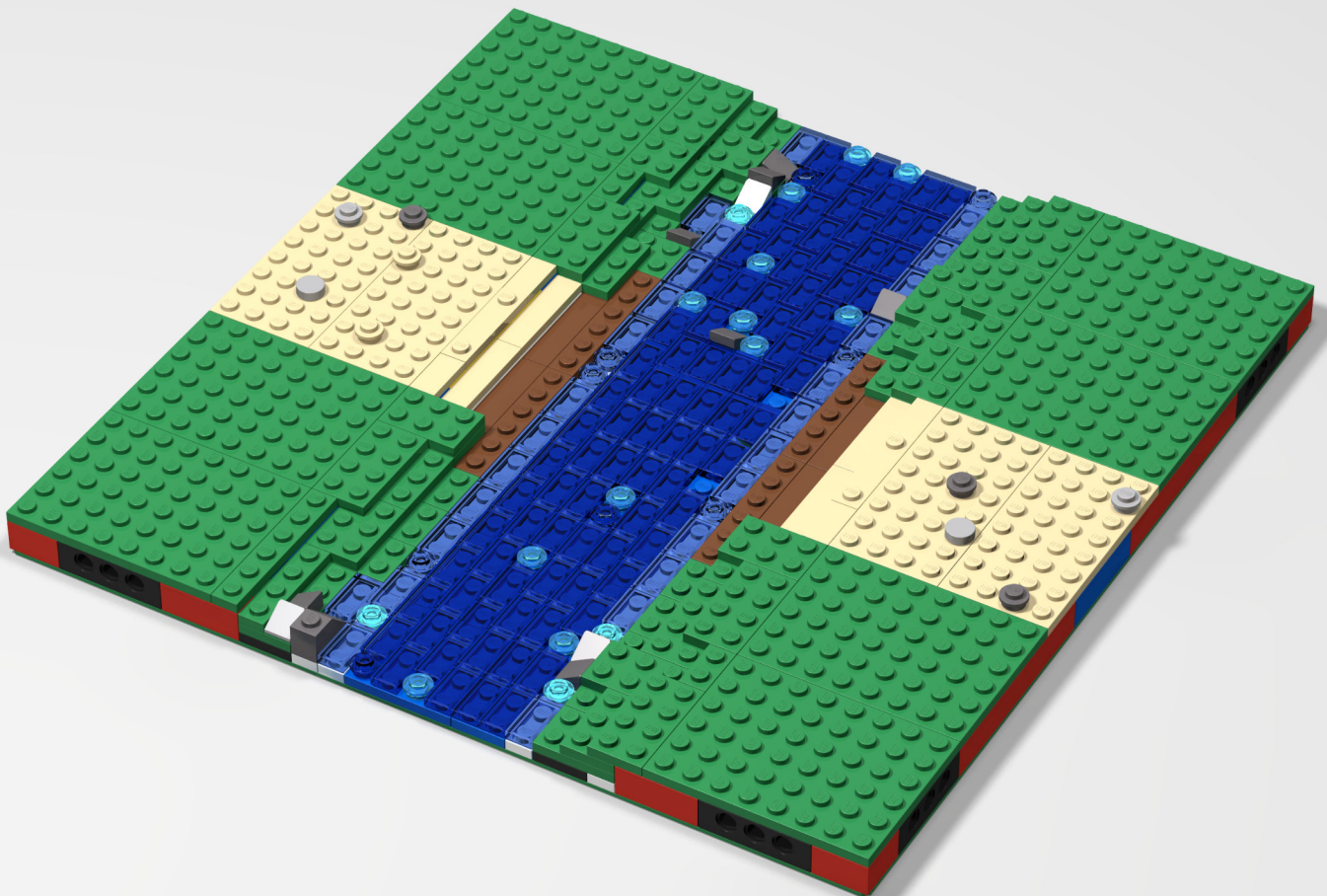
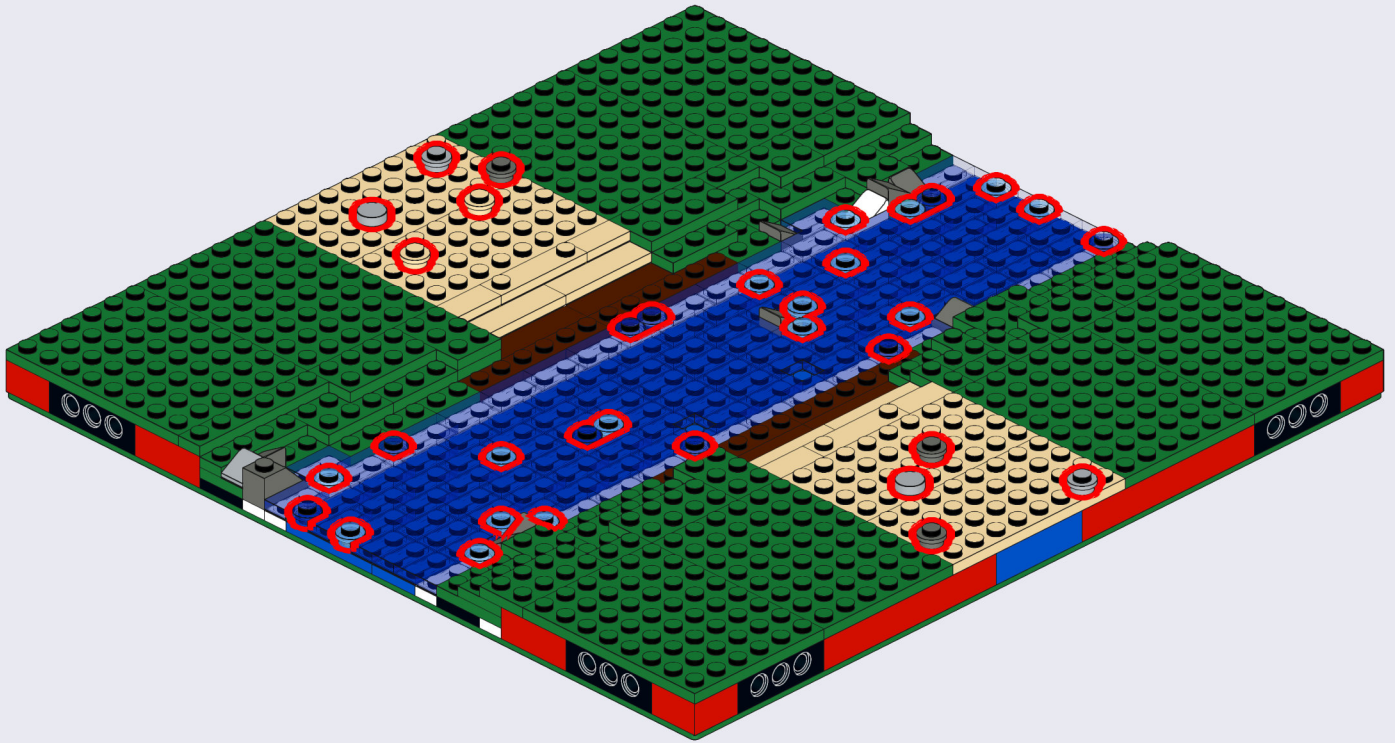


10



11

 2x
  2x
  9x
  2x
  3x
  16x



12

