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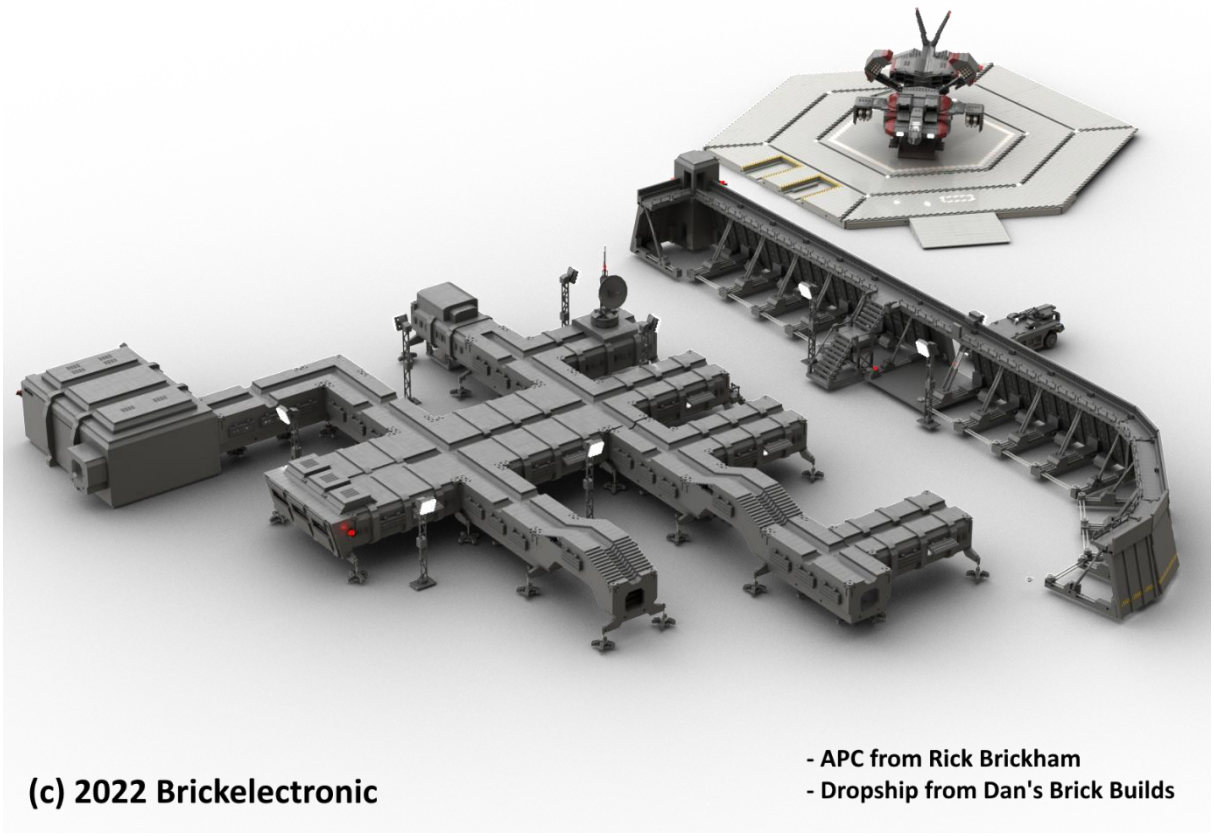
Modular Colony Station

Weyland-Yutani Colony Station Concept with LEGO(R)



Inspired by the game "Aliens: Colonial Marines", which was released by the publisher Sega in 2013, and the film Aliens - The Return from 1986, I have developed a modular system for the construction of a colony station with clamp bricks, which allows individual station layouts with different modules.

Colony stations on planets first appear in the Alien universe in 1986 in Aliens - The Return in the form of Hadley's Hope, which takes care of terraforming the inhospitable planet LV-426. In the computer game Aliens: Colonial Marines and the expansion Aliens: Colonial Marines: Stasis Interrupted, a new base is built around the crashed alien spaceship, which is brought to the planet in the form of individual modules with the help of large UD-24 transport dropships.

Fig 1: Dropship UD-24 drops station modules in the game "Aliens: Colonial Marines" (Gearbox Software).

The game was developed by Gearbox and the concept designer Lorin Wood has published some interesting sketches that also show parts of the station (https://lwoodesign.com/aliens). Should you buy the game, which is still available via Steam, I definitely recommend the Aliens Colonial Marines Overhaul by TemplarGFX (https://www.moddb.com/mods/templargfxs-acm-overhaul), which improves the visuals considerably..

Actually, while tinkering with the UD-24 dropship, I imitated a module from the game as a transport item in order to attach it to the suspension/load receptor of the crane in the dropship.

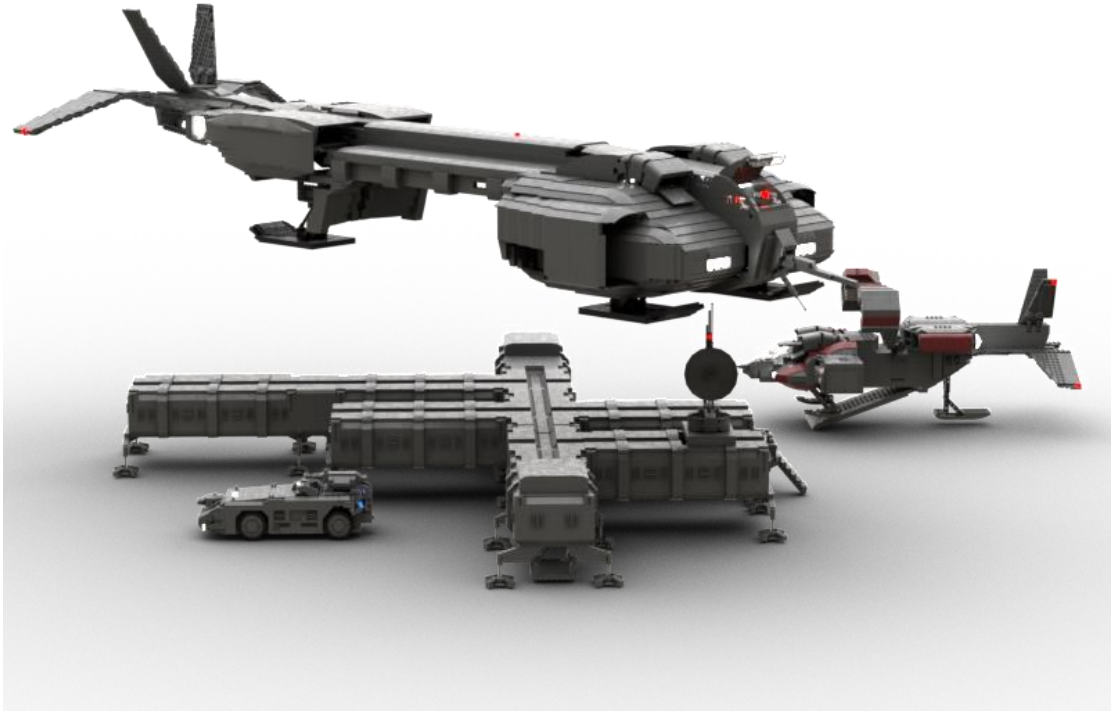


Fig 2: Early stage of development of the huge Heavy Dropship DU-24

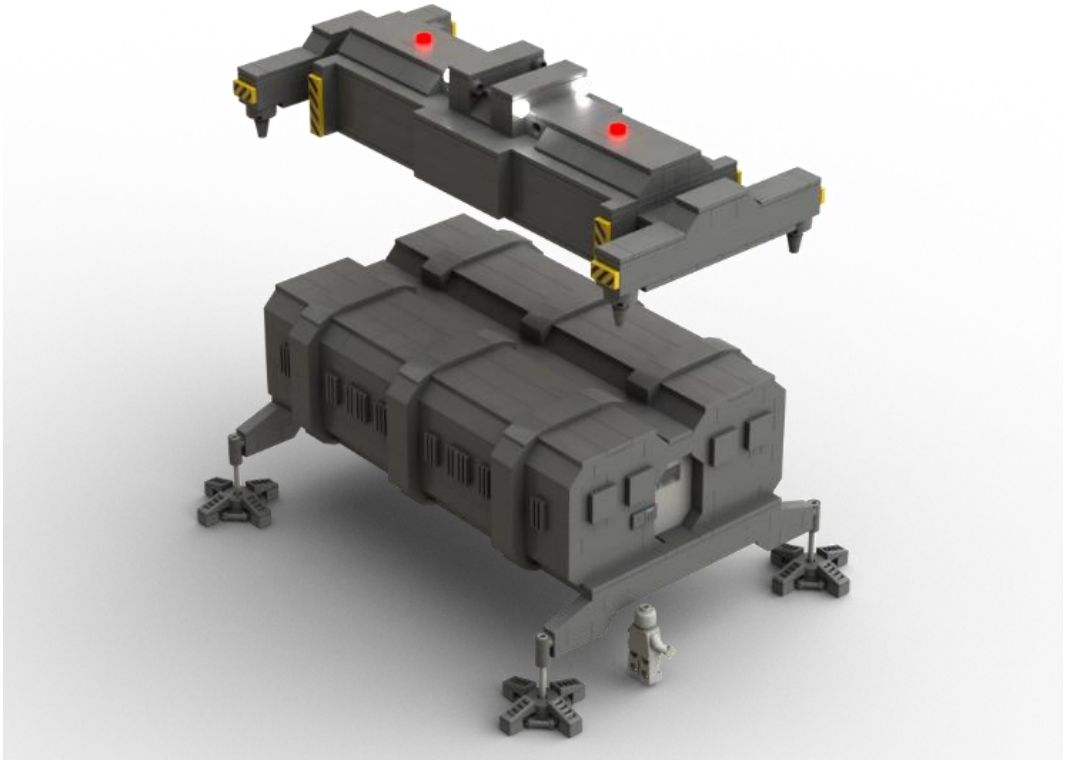


Fig 3: Crane load receptor and station module

But during the work somehow the idea of the modular concept came up and as a result many hours of work went into different modules and components. Accompanied by the fan design of the APC by Rick Brickman (https://www.rickbrickham.com) and the UD-44L dropship by Dan's Brick Builds (http://dansbrickbuilds.com), the landing platform and the garage module were also created.

A station for colonising a planet has to fulfil various requirements. Not every planet has a life-friendly environment and atmosphere to begin with. So the modules should be connected in such a way that they can be used independently of the planet's atmosphere. Since the planet surface or the installation sites are not always flat, the modules have supports that can be adjusted in height by hydraulics. For playability and insights into the inner workings, all modules should have an easily removable roof - as with the Modular Buildings from LEGO®. In addition, the modules have Technic bricks at the corners that allow vertical insertion of axles for connection to the crane suspension of the UD-24.

1. Standard Module

The standard module is compact and can serve various purposes, such as living units, research/laboratory, workshop, warehouse, cold storage or armoury. You can determine the contents yourself. As an example, I have set up a living unit for 2 people with two beds, a dining table, shower and toilet as well as a workplace with a computer terminal. The module with this interior requires 1081 parts. The empty module uses 858 parts.

Each long side has two windows, which have been supplemented with hinged protective covers. These are closed in any case during transport from orbit to the planet. In the event of an alien attack or uncomfortable weather conditions, the covers should also be closed.

The roof is removable to show or play with the interior.

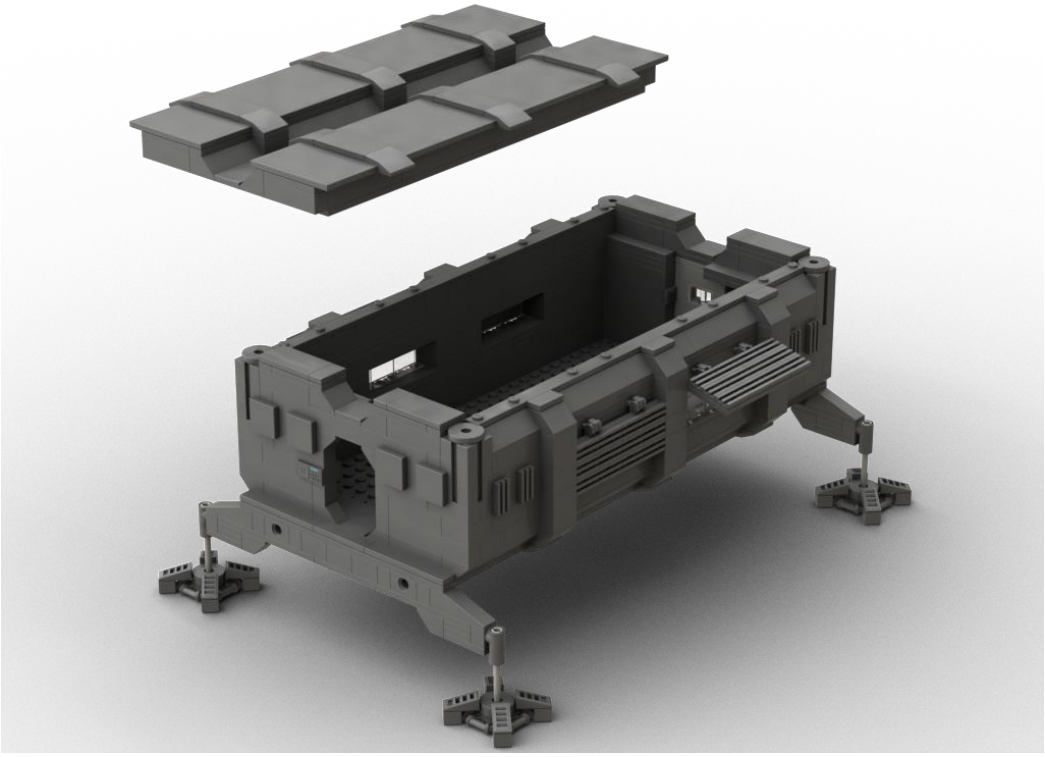


Fig 4: Standard station module

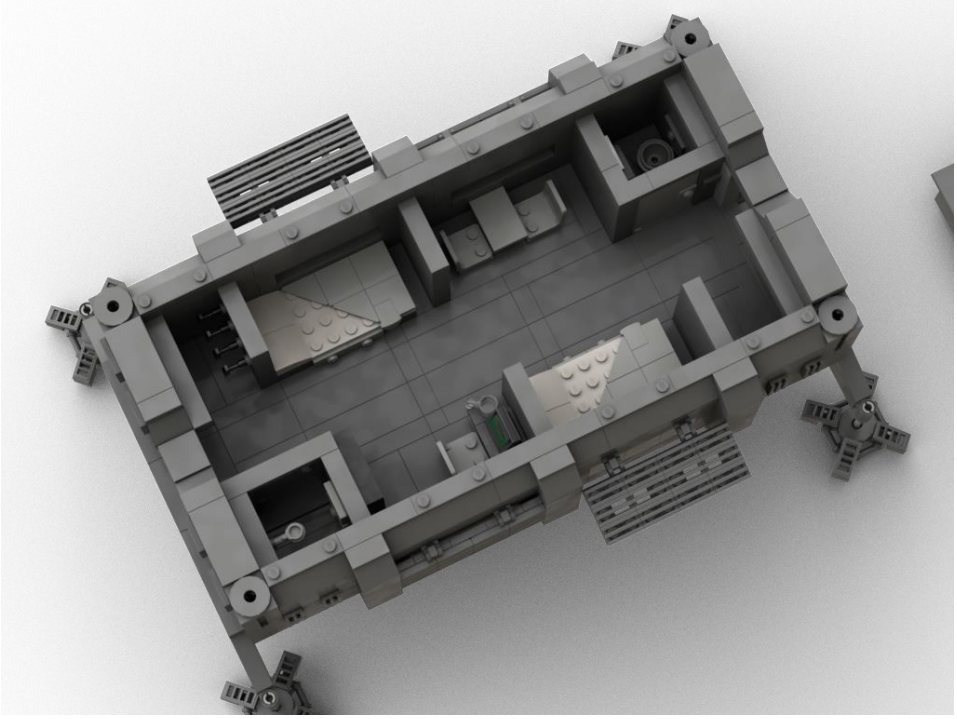


Fig 5: Example of a living unit with two sleeping places, shower, WC, workplace and dining place

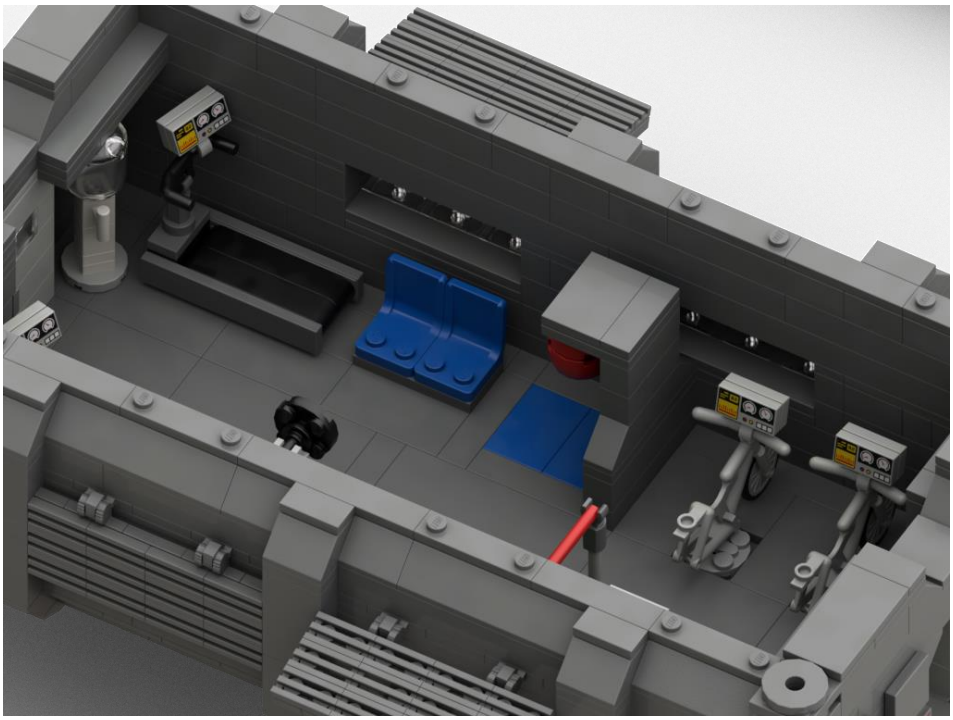


Fig 6: Example of a fitness room

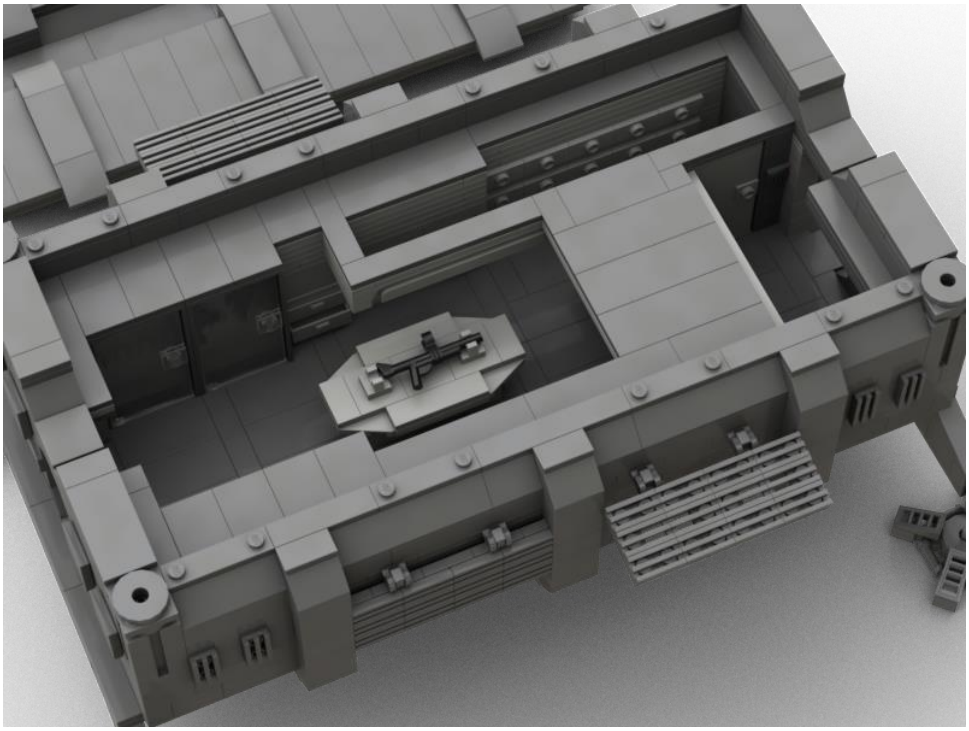


Fig 7: Example of a weapons depot with output

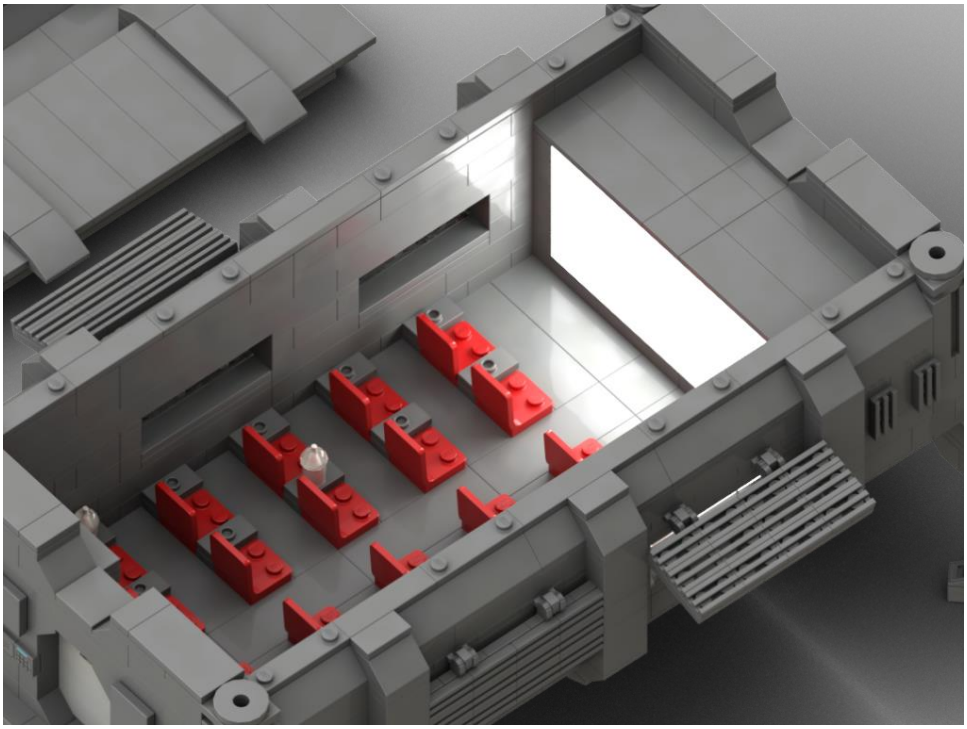


Fig 8: Example of a cinema

1.1 Communication Module

Important for communication between base and communication satellite or spacecraft in orbit or airspace. in orbit or in airspace is this module with rotating dish and antennas. Inside, there are four workstations with rotating chairs and corresponding consoles and screens. For maintenance purposes, there is access to the satellite controls.

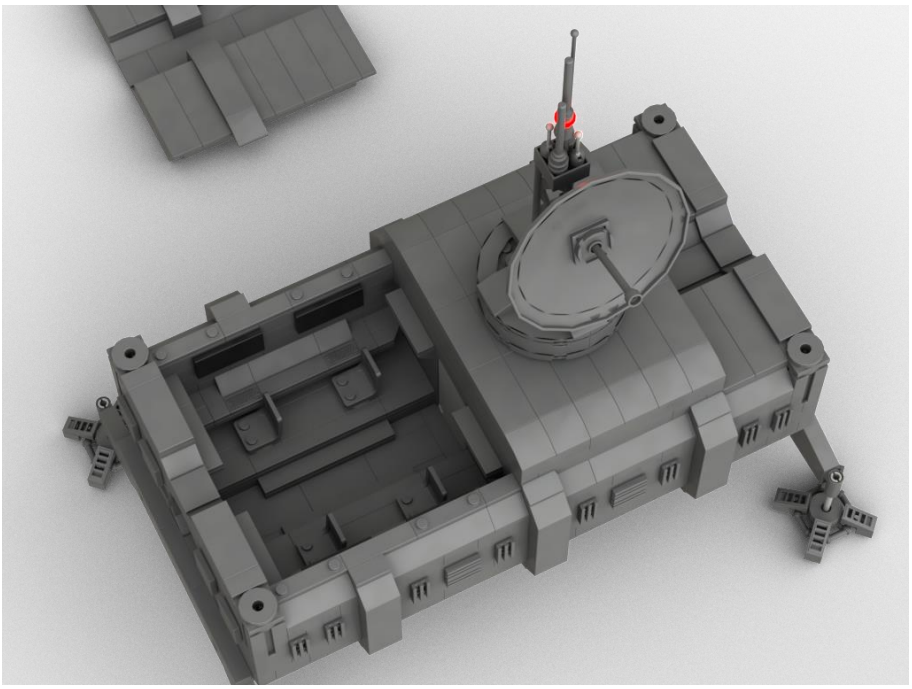


Fig 9: Communication module

2. XL Module

The large module is designed for functional units that need a little more space. Research/laboratory units, medical care, kitchen/canteen or storage can be accommodated in it. And of course you can also install a bar, cinema, kindergarten/school or other leisure facilities here. It also has four windows with movable covers and sliding doors at the ends - but here two-part sliding doors are fitted.

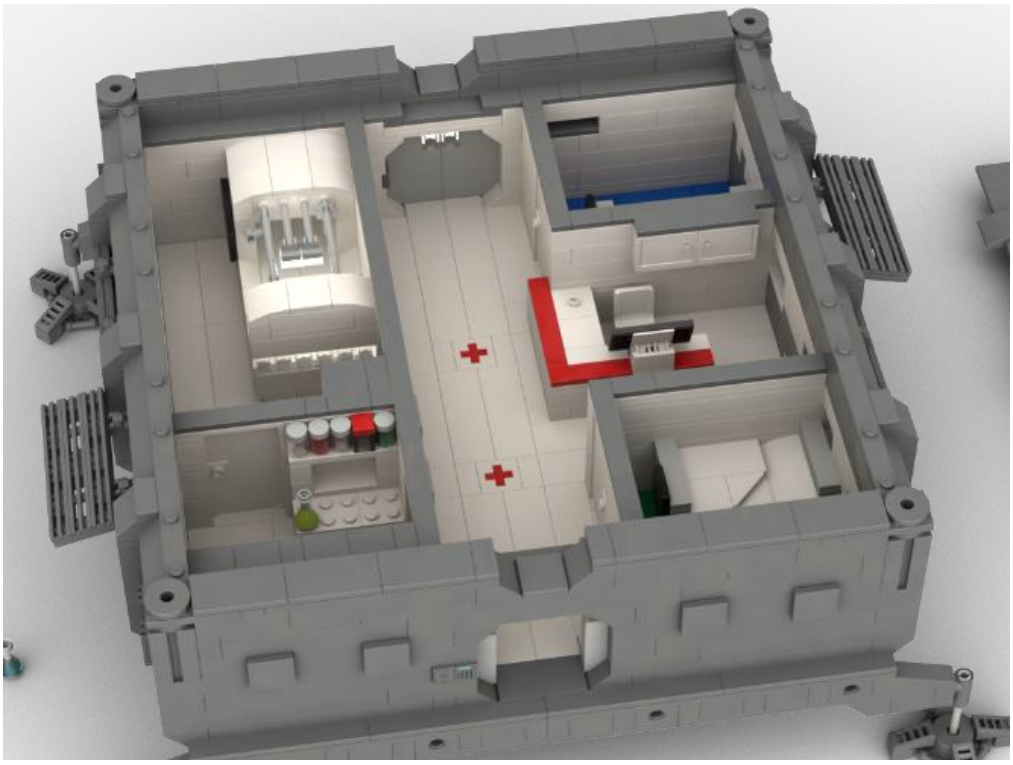


Fig 10: Example of a medical care unit

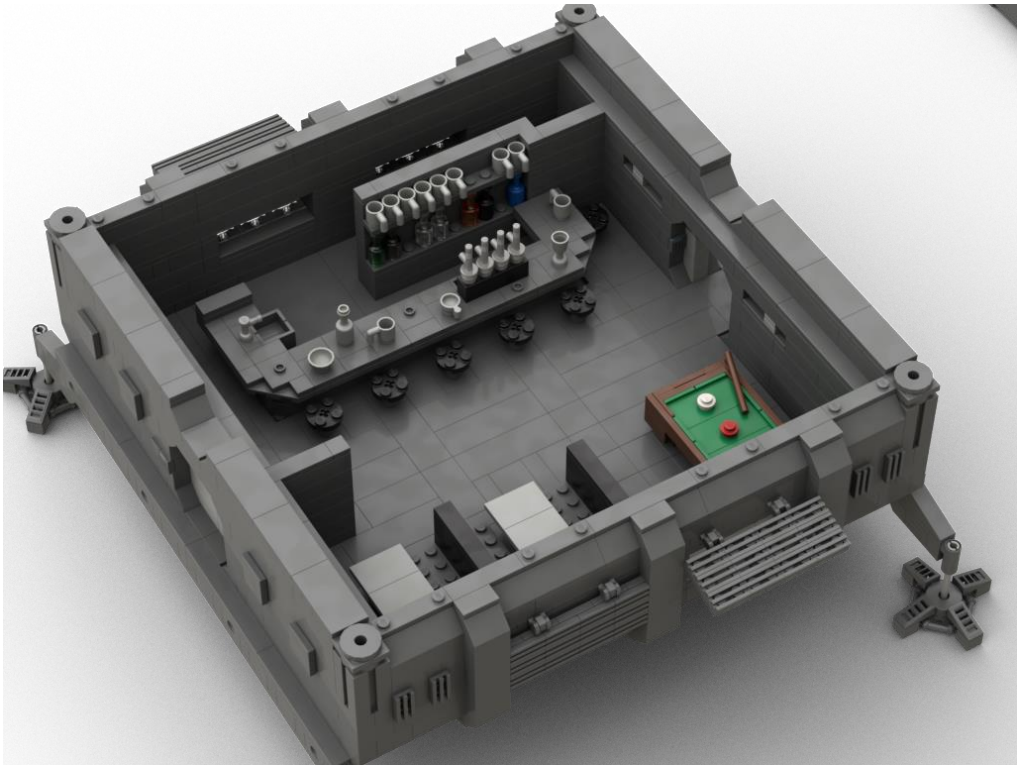


Fig 11: Example of a bar

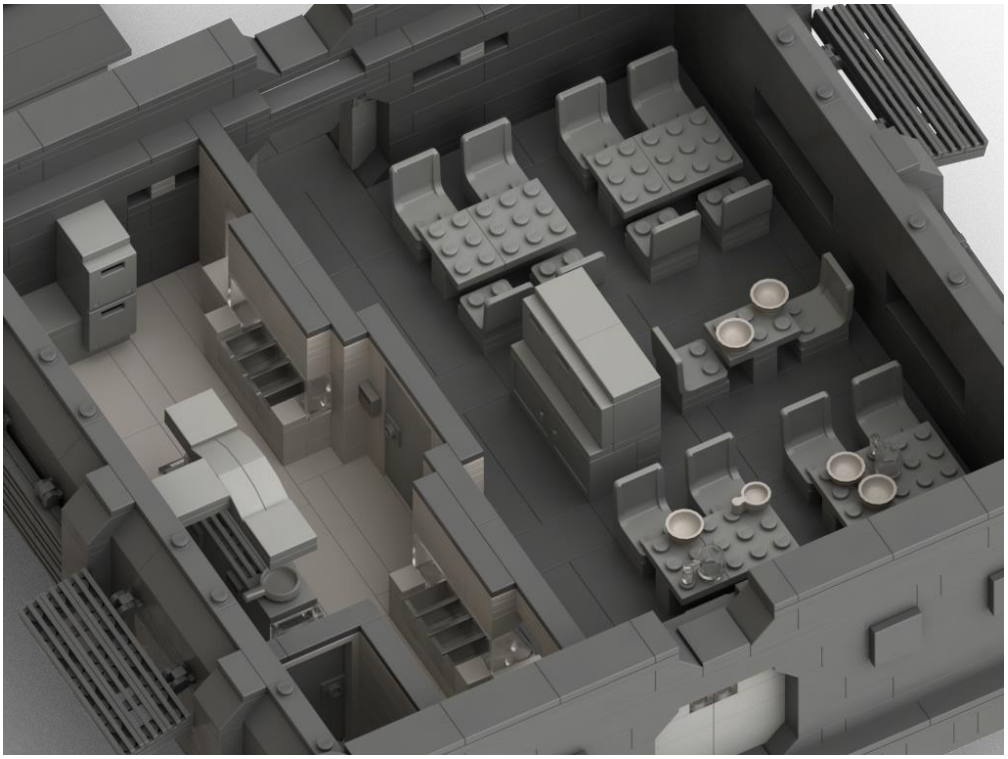


Fig. 12: Example of a canteen with kitchen and food counter

Fig. 13: Example of a hydroponic garden for growing plants

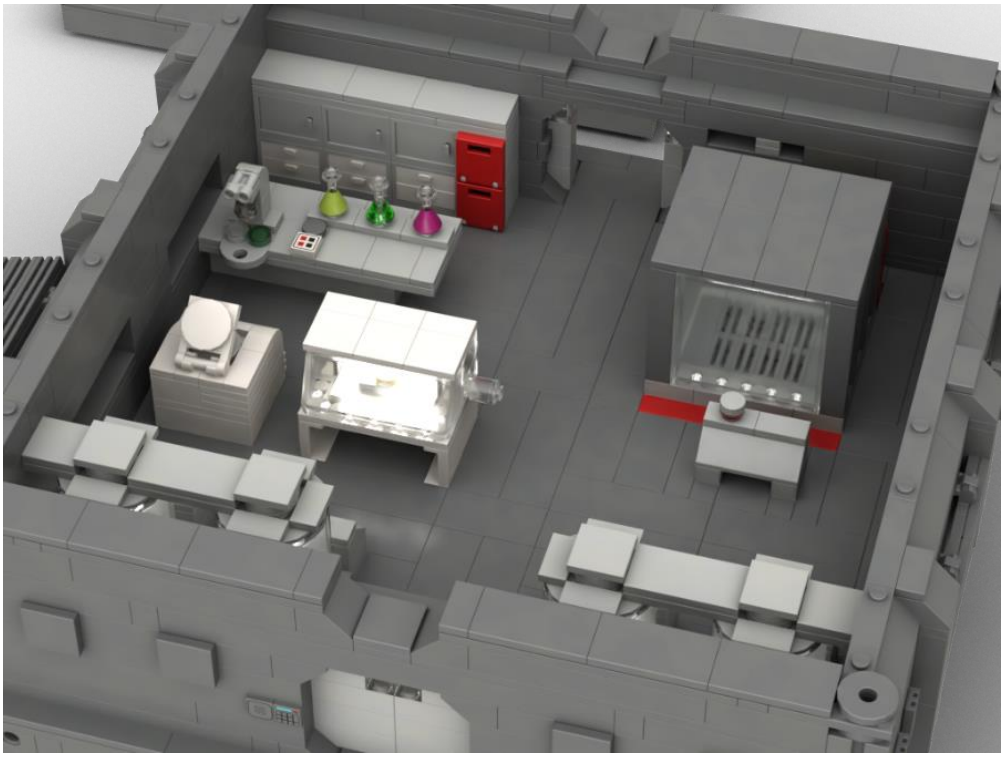


Fig. 14: Example of a laboratory for the study of extraterrestrial organisms

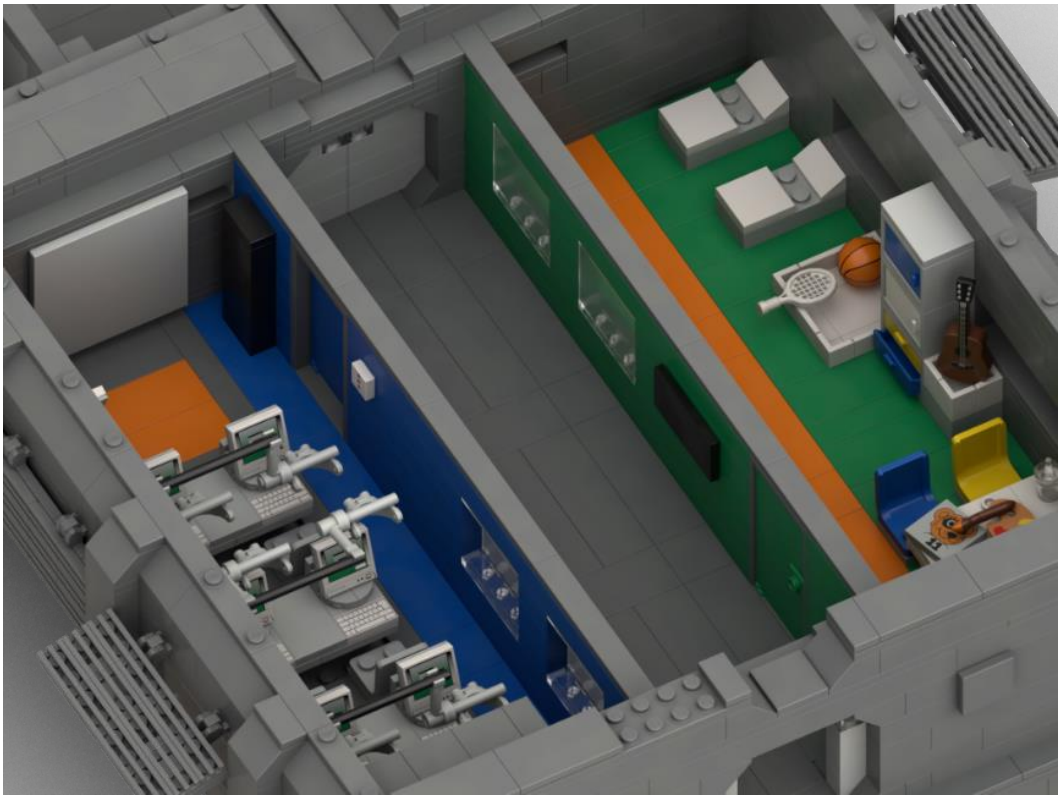


Fig. 15: Example of a module with school and kindergarten

2.1 Command Center Module

A special variant of the XL module is the command center, which as a special feature has a sloping front side with windows. These can be protected by roller shutters. The shutters are designed with roller shutter elements that can be raised or lowered via attached cords. For this purpose, there are guides for the cords that end in the attachments on the roof, where they can be operated by micro-motors, for example.

Fig. 16: Command center module

Inside there is a command platform with three workstations. A tactical table is installed in the front area, which can project satellite images. At the windows there are more workstations and distributed throughout the room are server units.

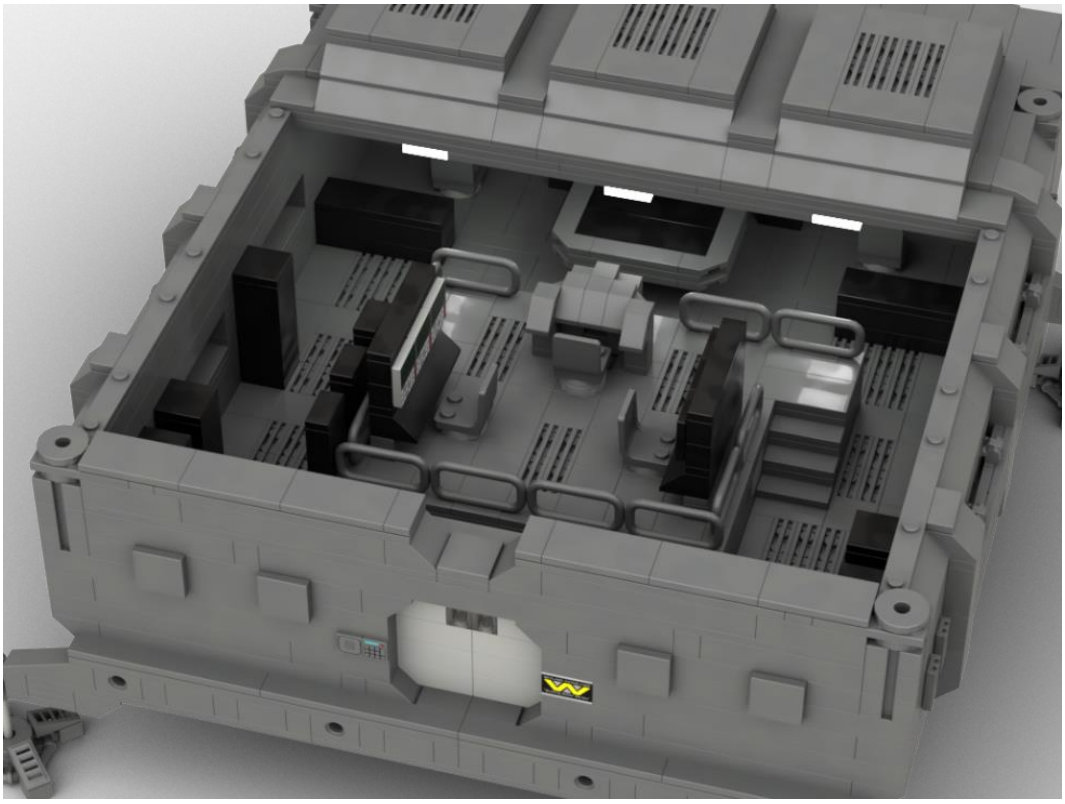


Fig. 17: Insight into the command module

2.2 Toilet extension for XL module

Some XL modules should provide toilets (e.g. to the canteen or kindergarten/school). The module can be plugged to the sides of an XL module and a corridor module can be added afterwards. For e.g. mine colonies, several of these units can be connected in series to integrate several showers and toilets for the mine workers at the same time to a changing room module.

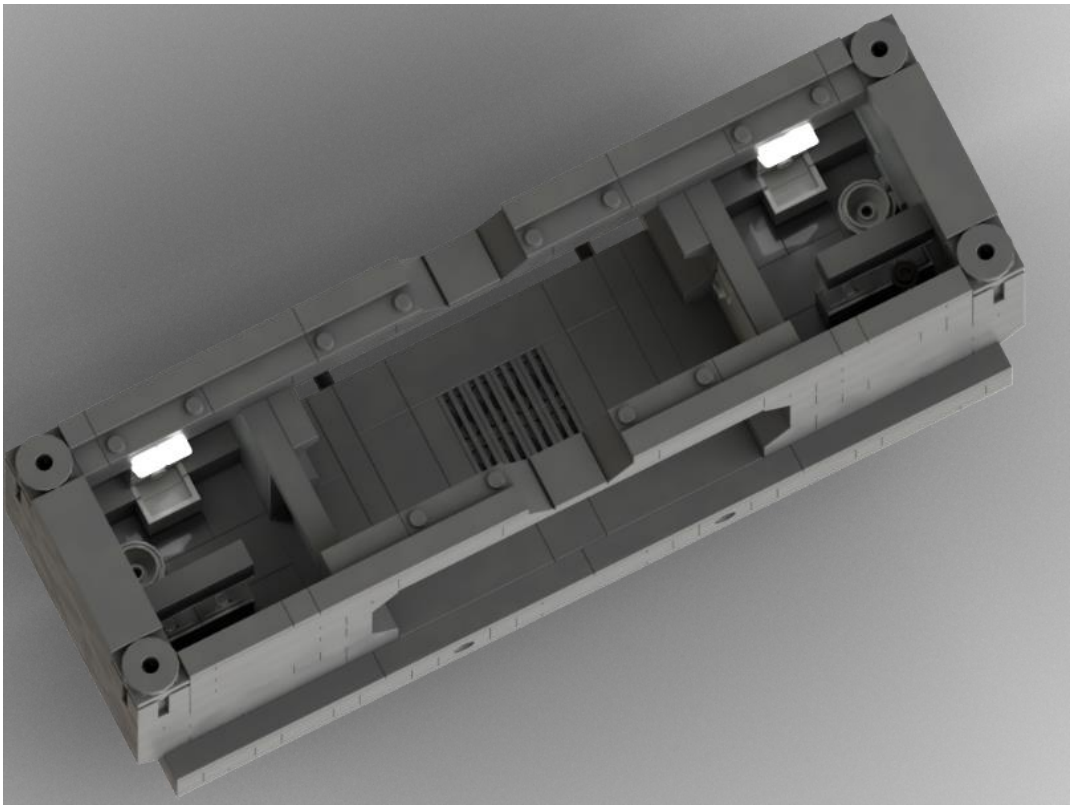


Fig. 18: Extension module with two toilets/showers

3. Connecting modules (corridors)

To connect the individual modules and form a structure, connecting modules are important elements. The front sides are always intended to connect the corridors with each other, while on the side either one module or two modules can be connected. Therefore, there are two variants with one or two openings, as well as a variant without lateral openings for pure corridor connections.

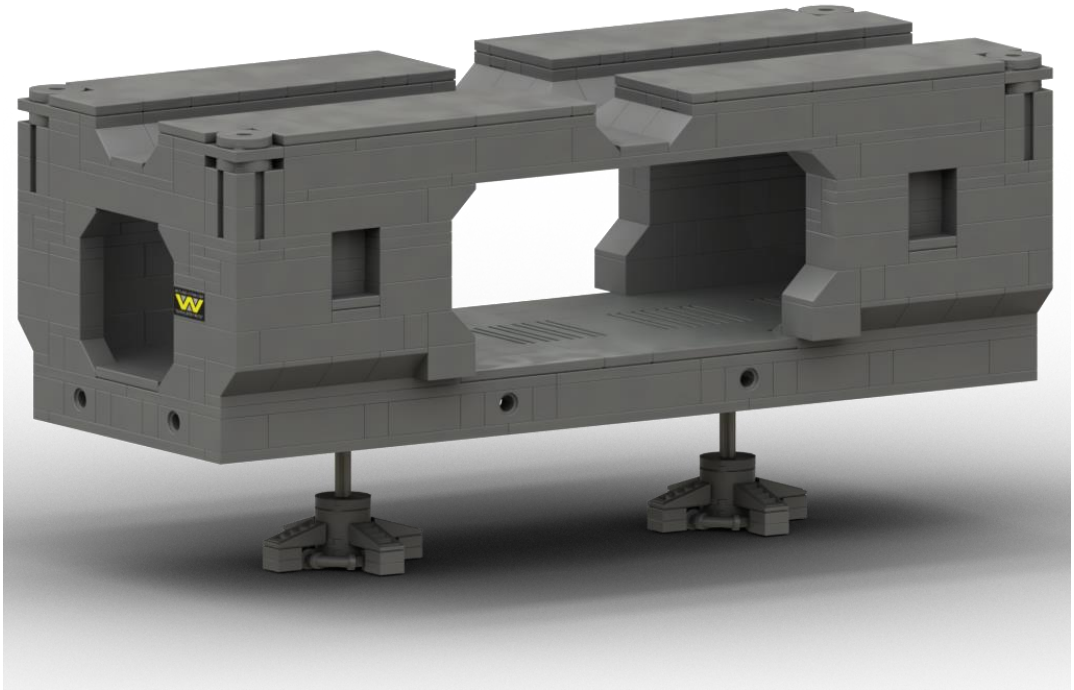


Fig. 19: Corridor module (crossing) with four passages

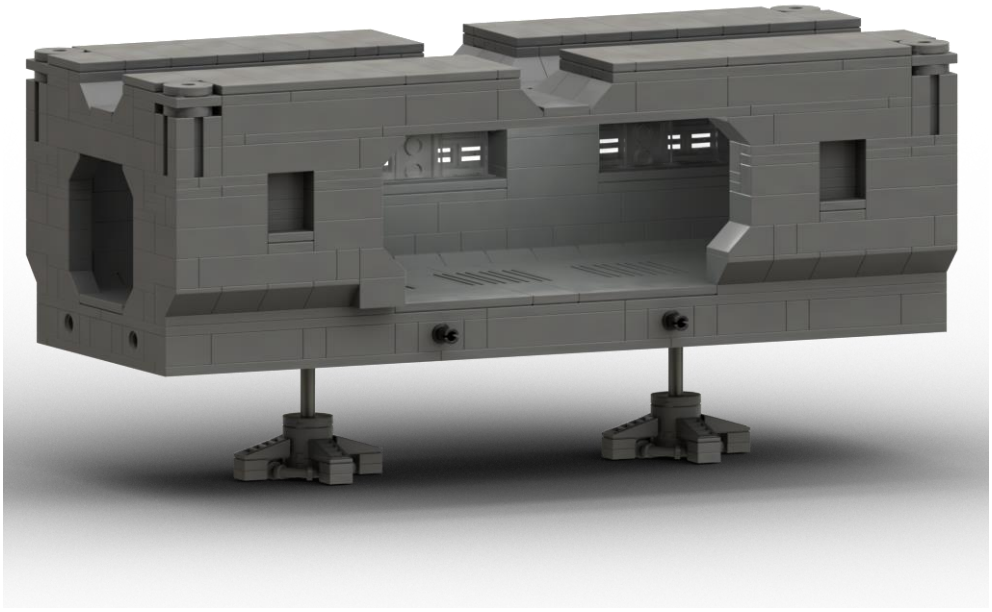


Fig. 20: Corridor module with three passages (2x front side, 1x long side)

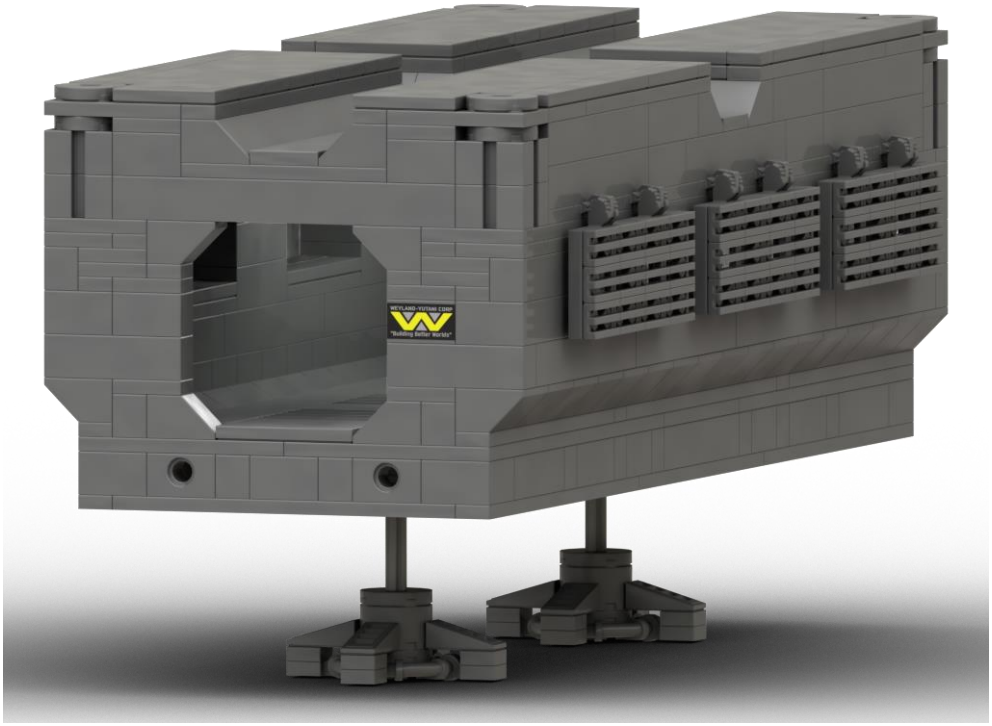


Fig. 21: Corridor module with two end passages (corridor extension)

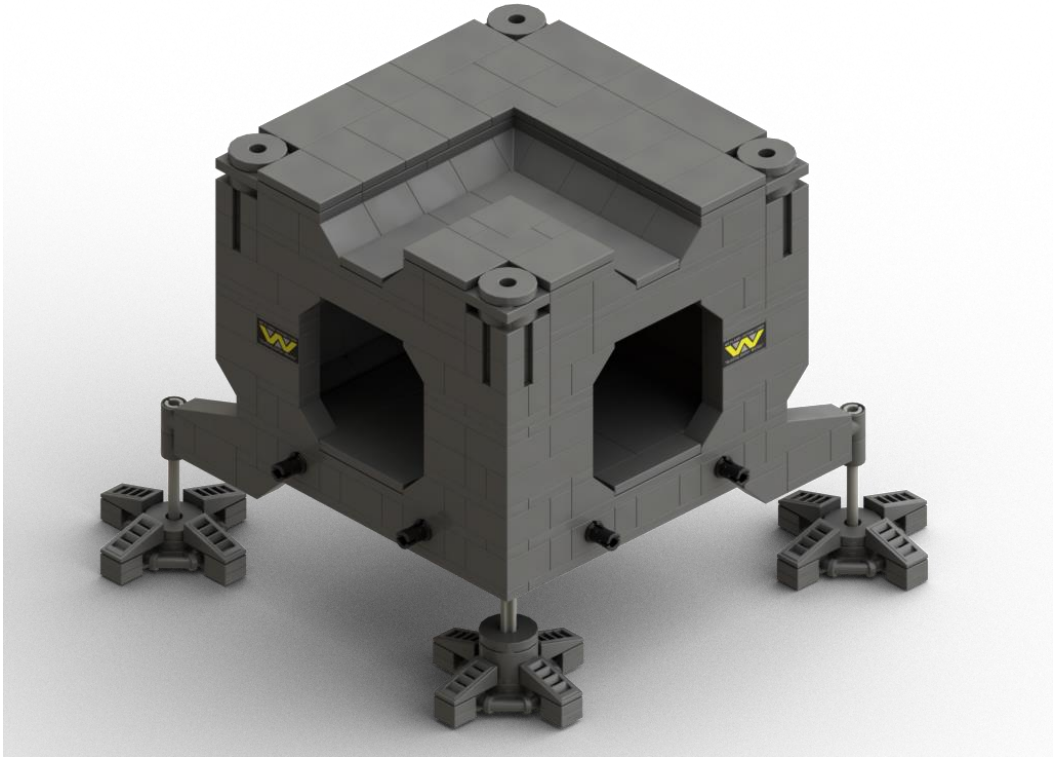


Fig. 22: Corner module to deflect the corridor by 90°

3.1 Elevator Module

To bring people or loads to the level of the modules, I designed an elevator module, which consists of a converted connection module. The exit has a sliding door so that the elevator room itself can be used as a kind of airlock. When the elevator platform is up, it locks and brings atmosphere into the elevator room. The elevator platform is large enough to carry boxes or several people up. On the roof is the motor for the elevator control, which is moved by ropes and cable drums.

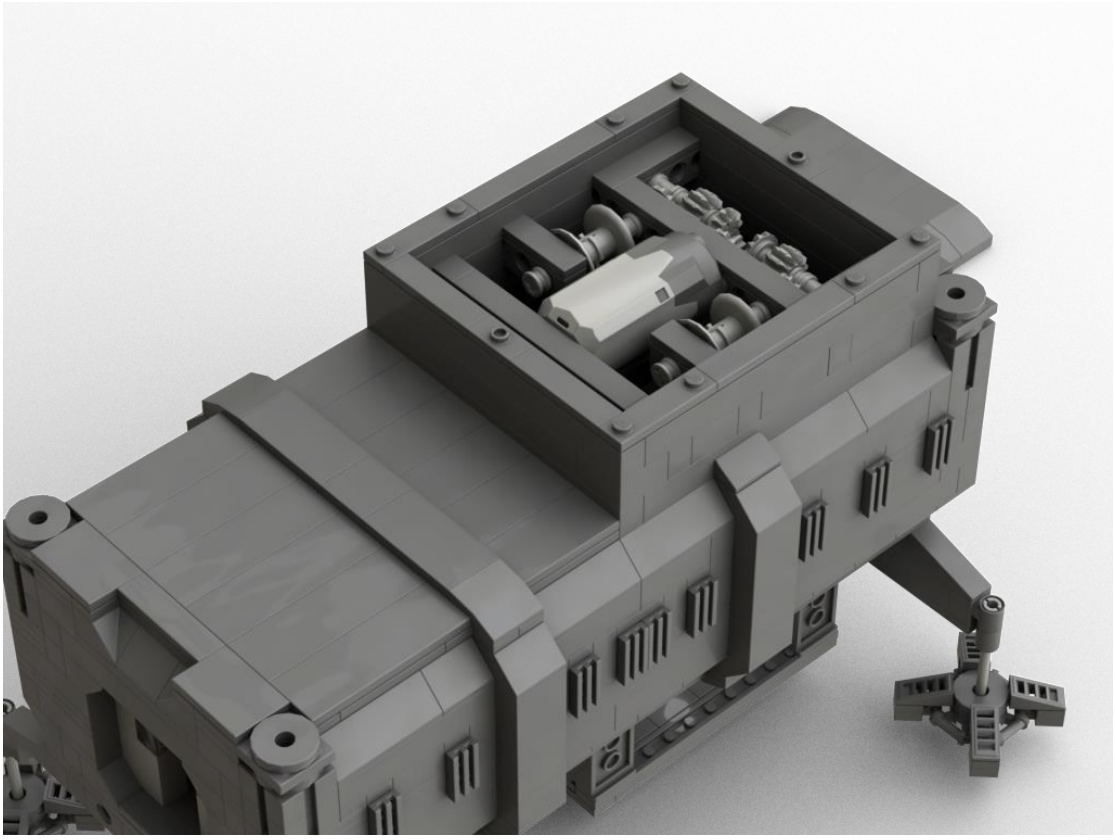


Fig. 23: Elevator module with view into the motorization for moving the elevator

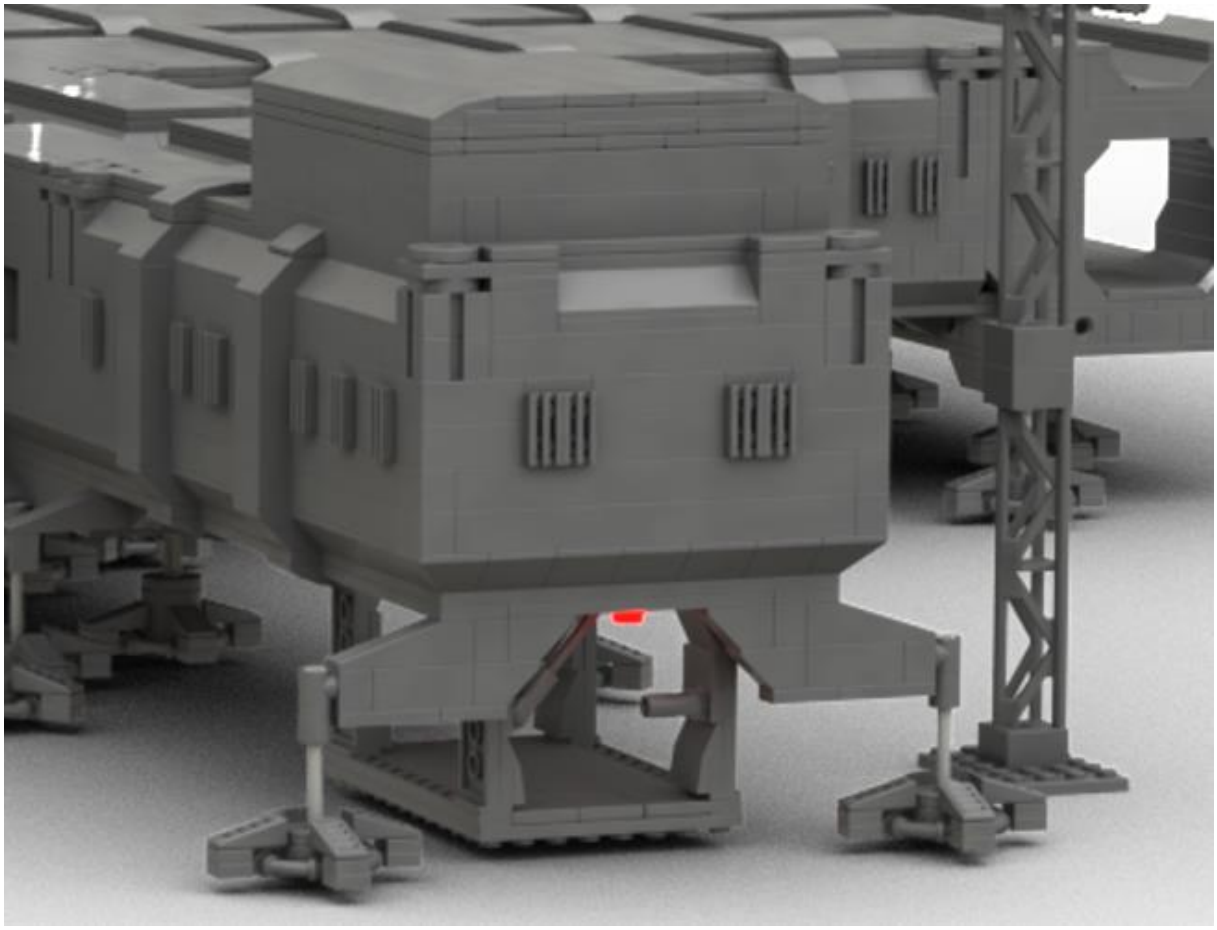


Fig. 24: Elevator platform lowered

3.2 Bridge Module

To allow transporters or the APC to pass through within the structure, there is a bridge module that is inserted between two connecting elements.

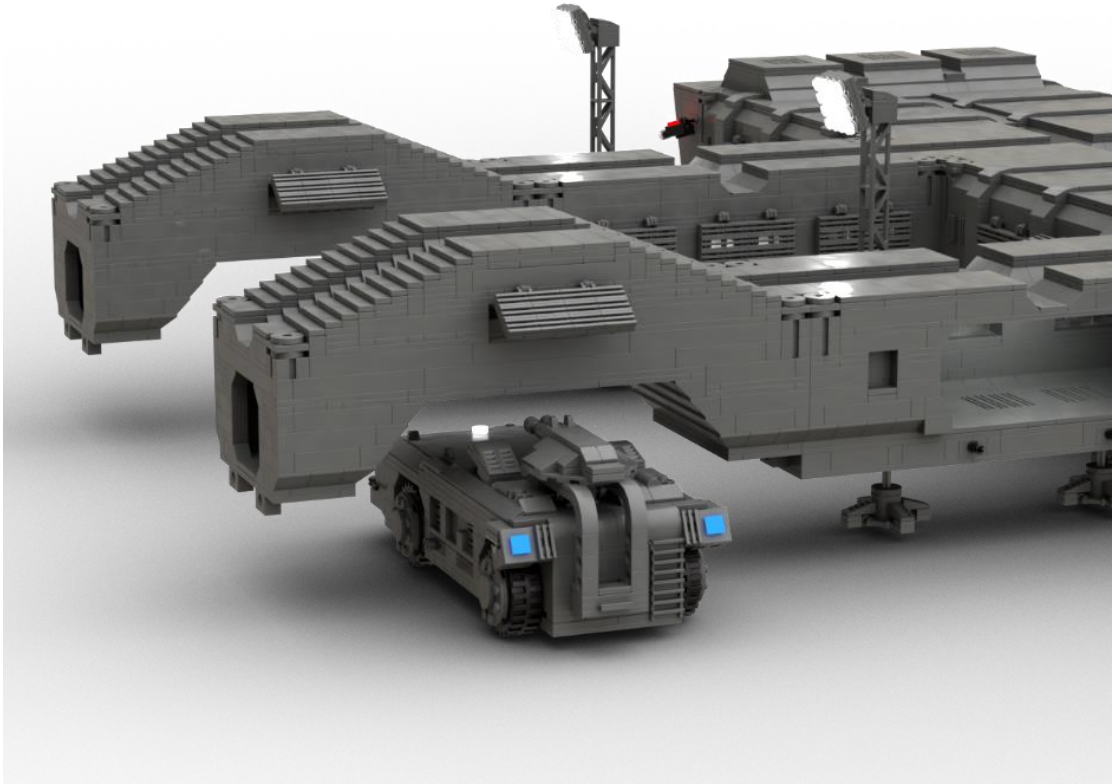


Fig. 25: Bridge module

4. Hangar/garage/workshop/material store

The largest module is the hangar module, which is at ground level and has a large roll-up door at one end. For connection with corridor modules, the module has accesses at the rear right and left, which lead across the upper level in the module. For chaining several hangar modules there is a small connecting module. With about 2600 parts.

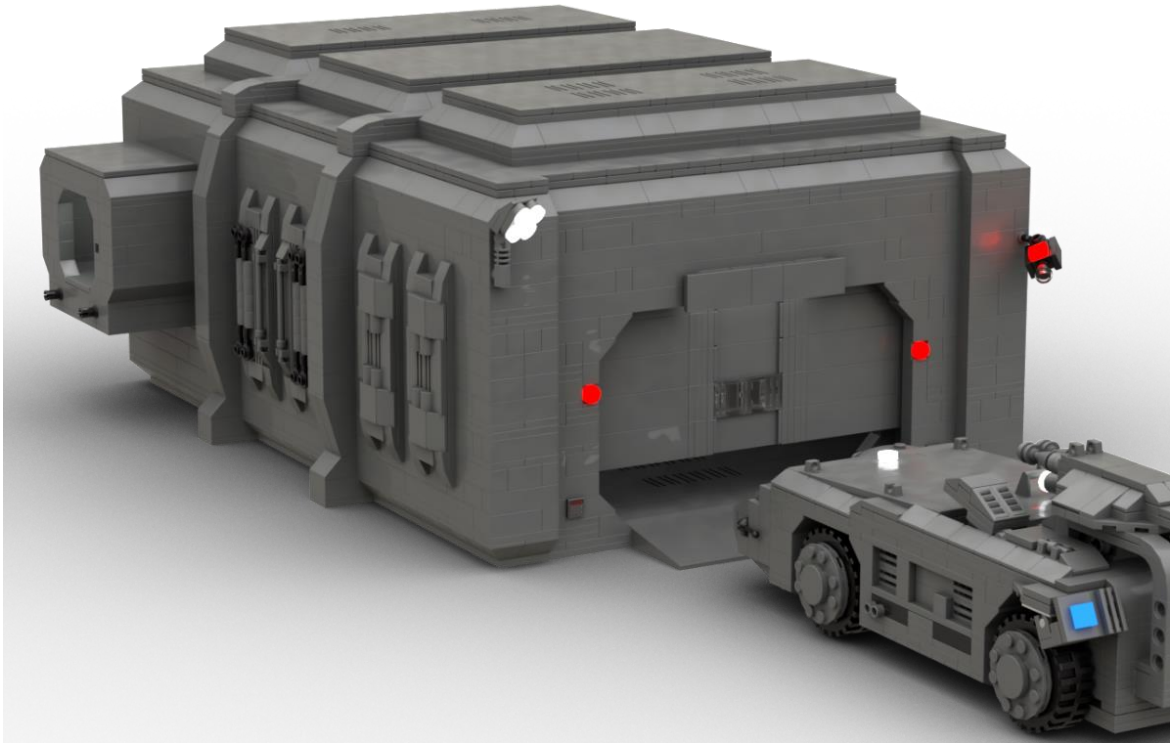


Fig. 26: Large universal module with gate

Inside there is a staircase to the upper level on the side and an elevator. The module can house an APC or be used as a materials store. A workshop can be set up at the back of the lower level for the APC. There is also an overhead crane under the roof that can be used to lift loads. A floodlight illuminates the entrance area, which can also be monitored by a camera. The controls for light, camera and crane are placed on the upper level with a view to the front/bottom.

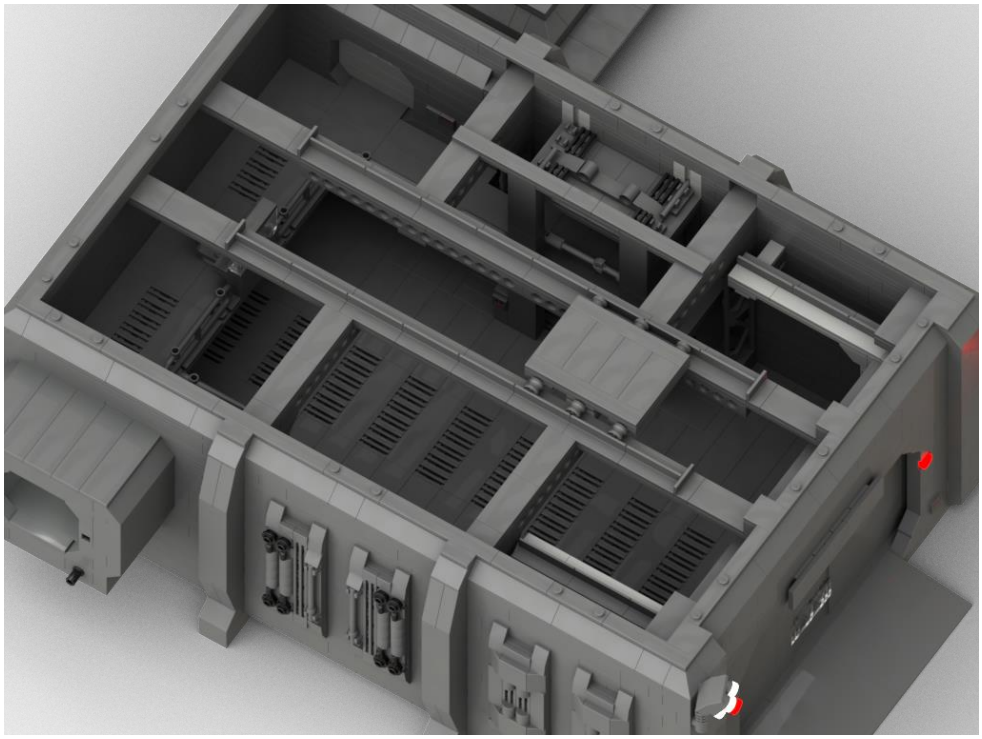


Fig 27: Interior view from above

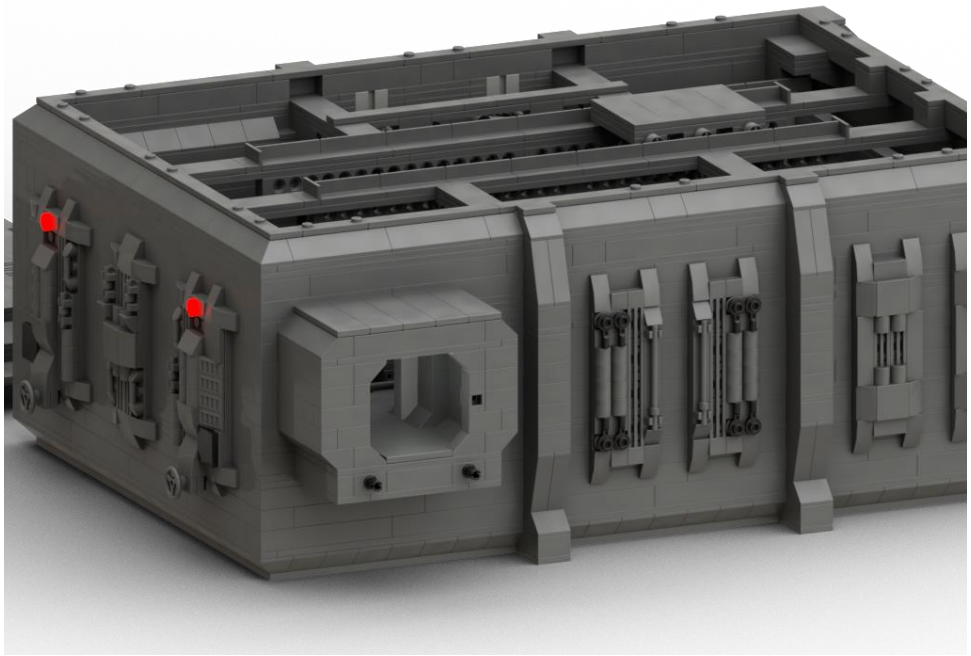


Fig. 28: Small connecting element between two garage modules

5. Landeplattform

The landing platform in the appropriate scale for a dropship is already a large area. If the usual extensions are added, it looks quite oversized in relation to the station itself overdimensioned. That's why you can leave out the outer ring. In the Game „Aliens: Colonial Marines“, some smaller platforms are shown, which in the hilly terrain also stand on pillars.

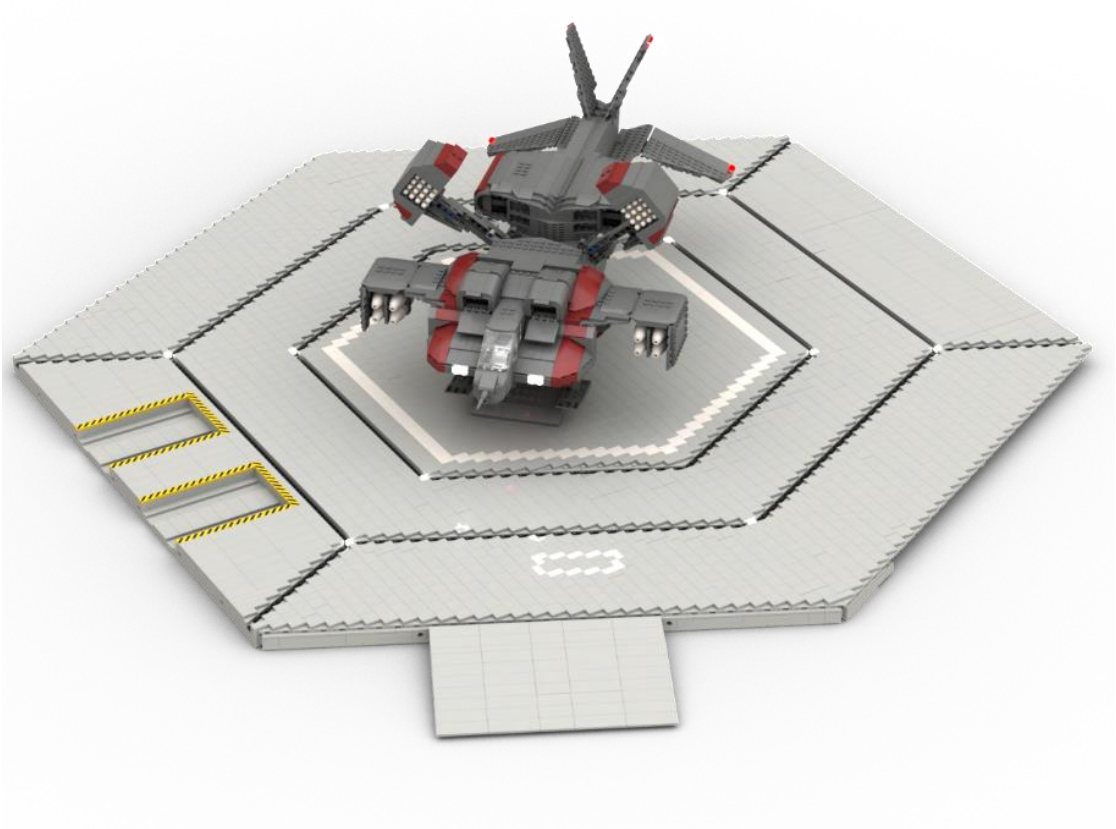


Fig. 29: Landing platform (large expansion stage)

6. Schutzwall-Element

The concept sketch by Lorin Wood shows the rampart with a battlement along the top edge. I adopted and implemented this principle for the elements. In Hadley's Hope the wall is just a slab without a walkway - of course you can leave it out, to get the Hadleys Hope style.

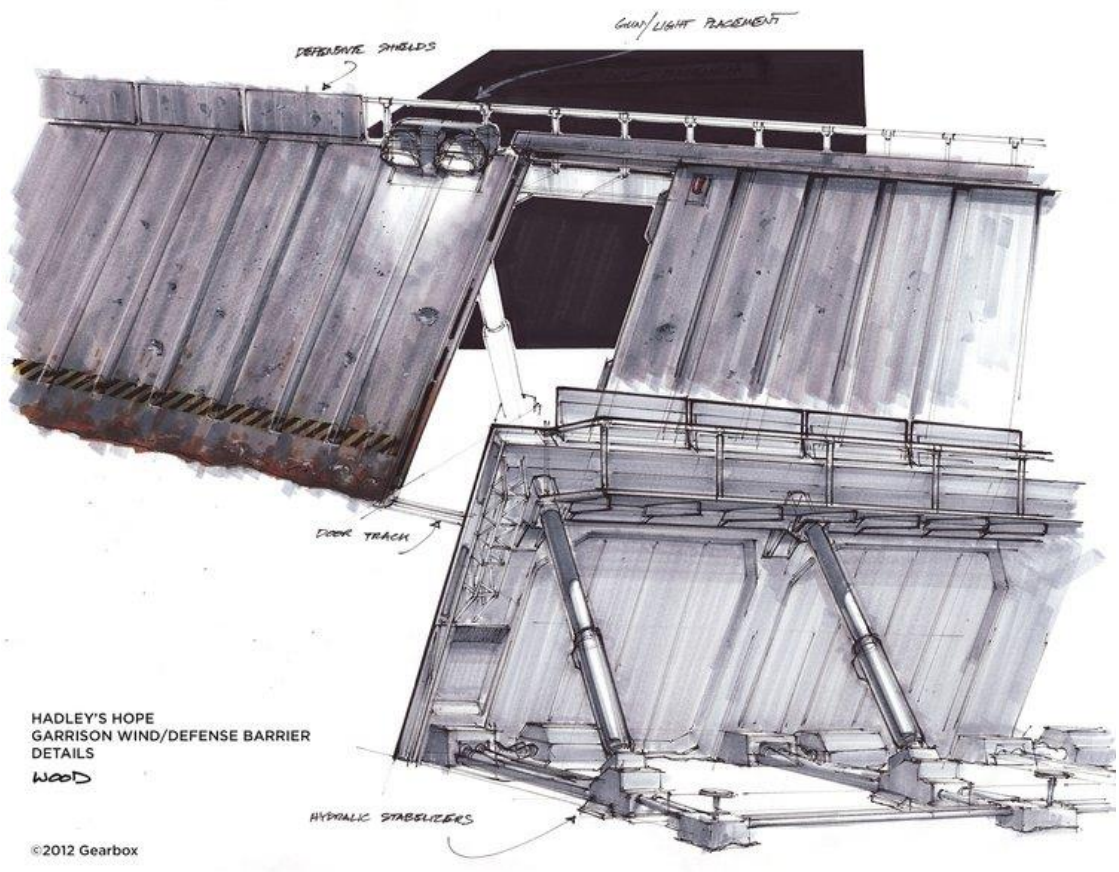


Fig 30: Concept art by Lorin Wood for the Gearbox game "Aliens: Colonial Marines"

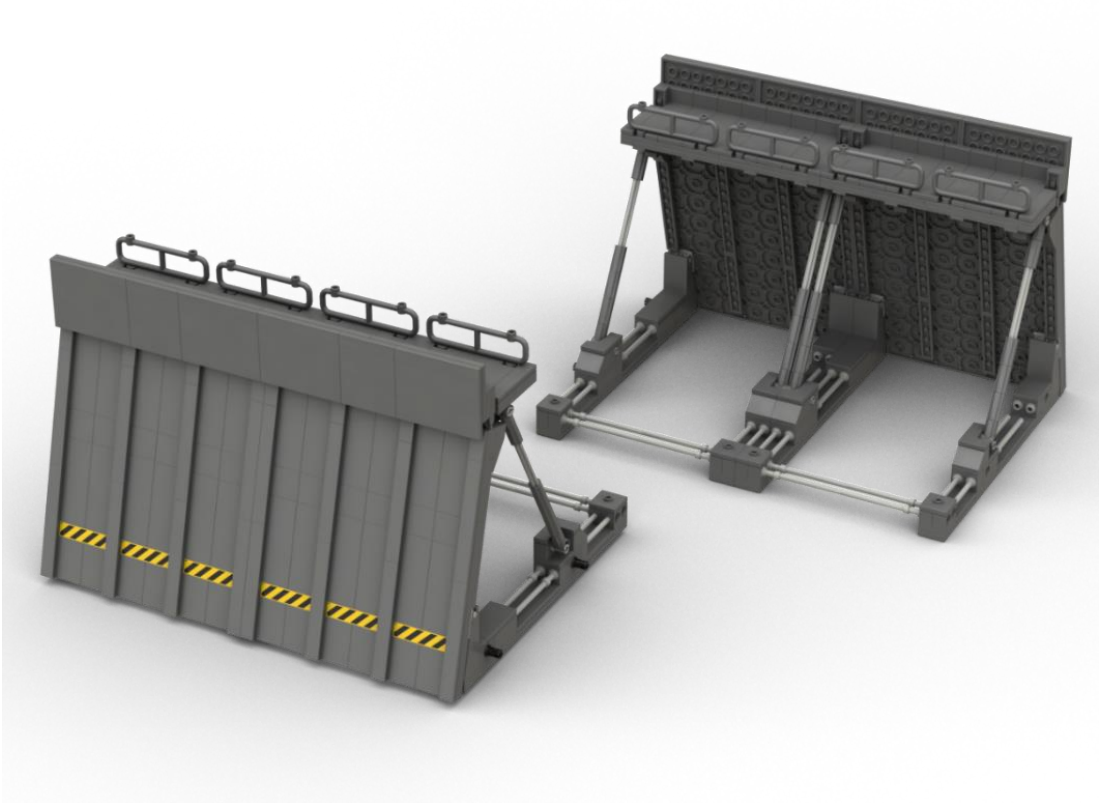


Fig. 31: Straight protective wall element (here two pieces plugged together)

6.1 Gate element

The gate element has a sliding gate that can be technically moved on the outside and controlled via the consoles outside and inside and from the battlements. In addition, a floodlight illuminates the entrance in front of the gate. When opening and closing, warning lights are mounted on the gate and on the closing edge. Due to the battlement concept, there is also a stair access at the gate element.

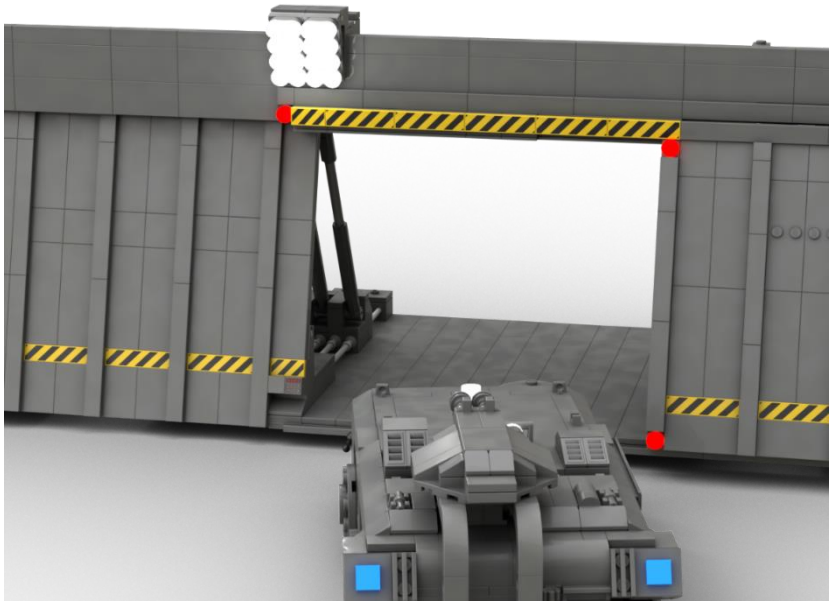


Fig. 32: Door element with open door from the outside

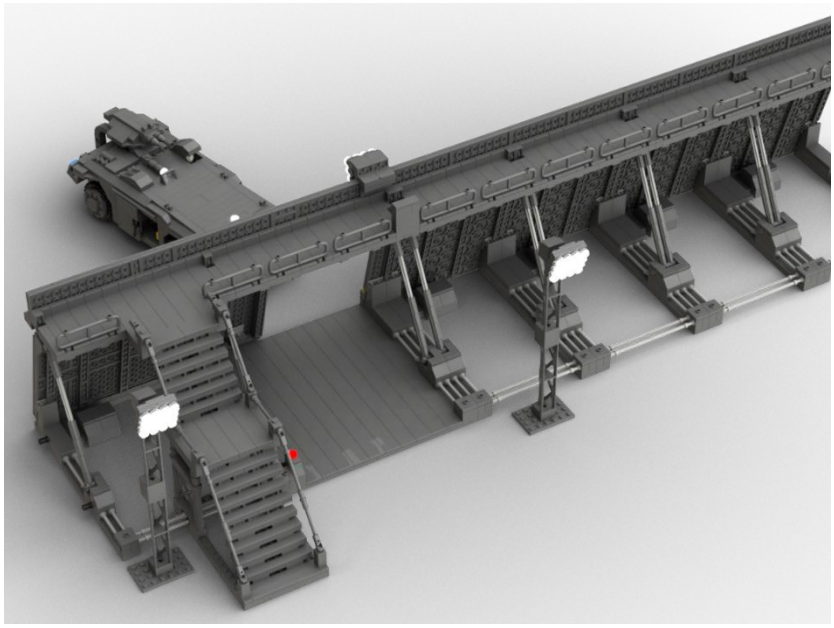


Fig. 33: Gate module in the crash barrier viewed from behind

6.2 Corner element (90 Degree)

The corner element has got a tower, over which the battlement is led at the top. In the lower part is also a room that can be used as a warehouse.

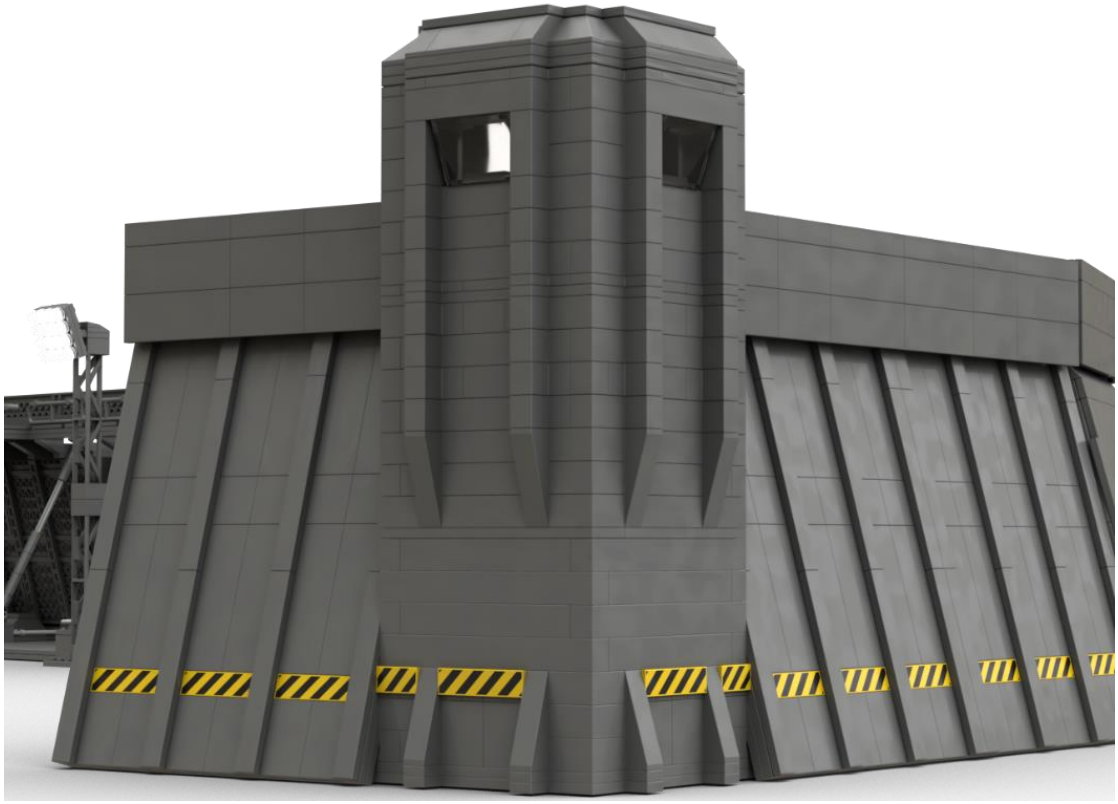


Fig. 34: 90° corner module with tower

6.3 Corner element (45 Degree)

The 45 degree elements are a challenge because a sloping wall 45 degrees deflected due to the missing plates with corresponding angles are very difficult to to design. It's not quite 45 degrees either! The hinge stones used for angulation of course still have some play to match the angle.

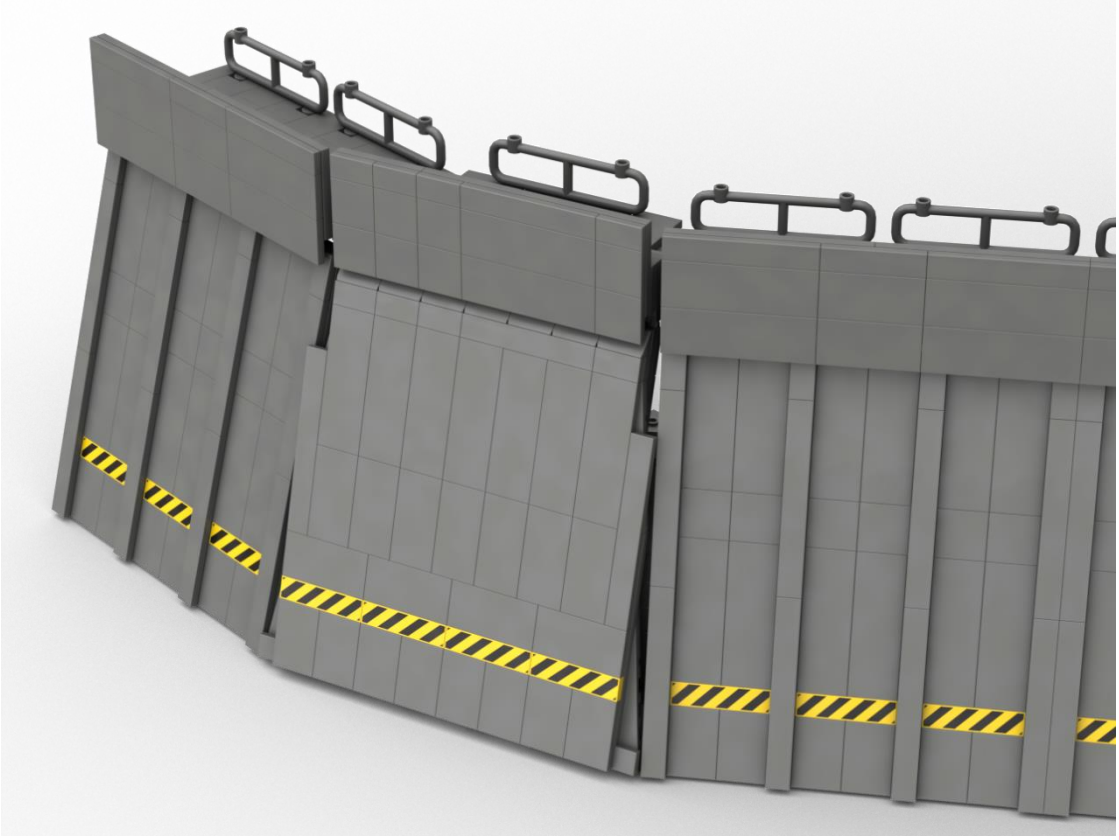


Fig 35: 45° protective wall elements inserted between two straight elements

7. Floodlights

Poles with mounted floodlights are used in a variety of ways to illuminate the to illuminate the environment. In the game Aliens: Colonial Marines you can see some variants that are mobile and can be raised. I opted for the fixed variant. The head can be tilted to align the illumination.

Fig. 36: Simple, fixed floodlight

Fig. 37: Mast with two floodlight elements

Fig 38: Quadruple floodlight

Notes

The concept presented here is a fan project without commercial background. Inspired by the Alien movies and computer games as well as concept graphics, especially the interiors are own interpretations of the theme.