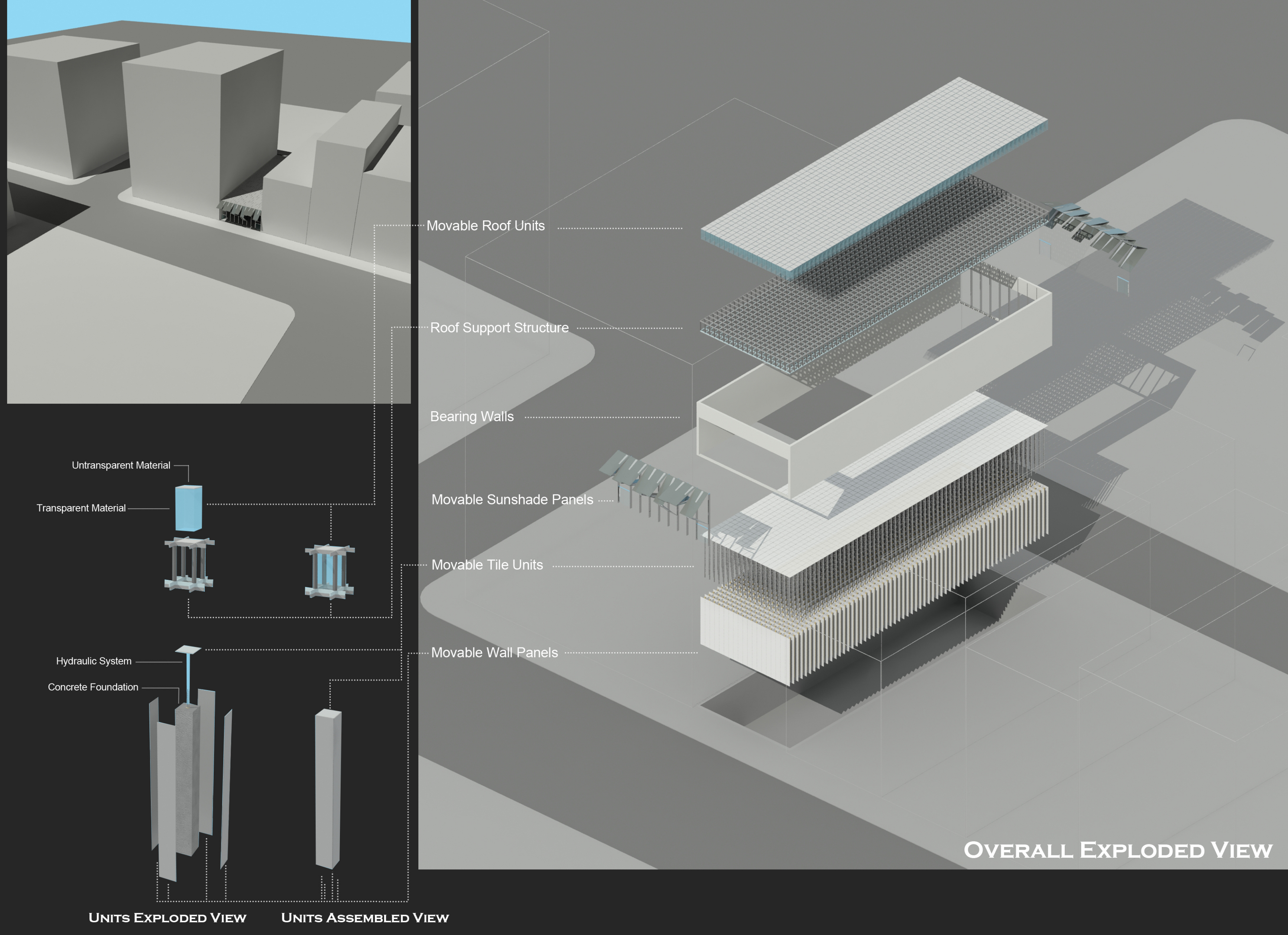


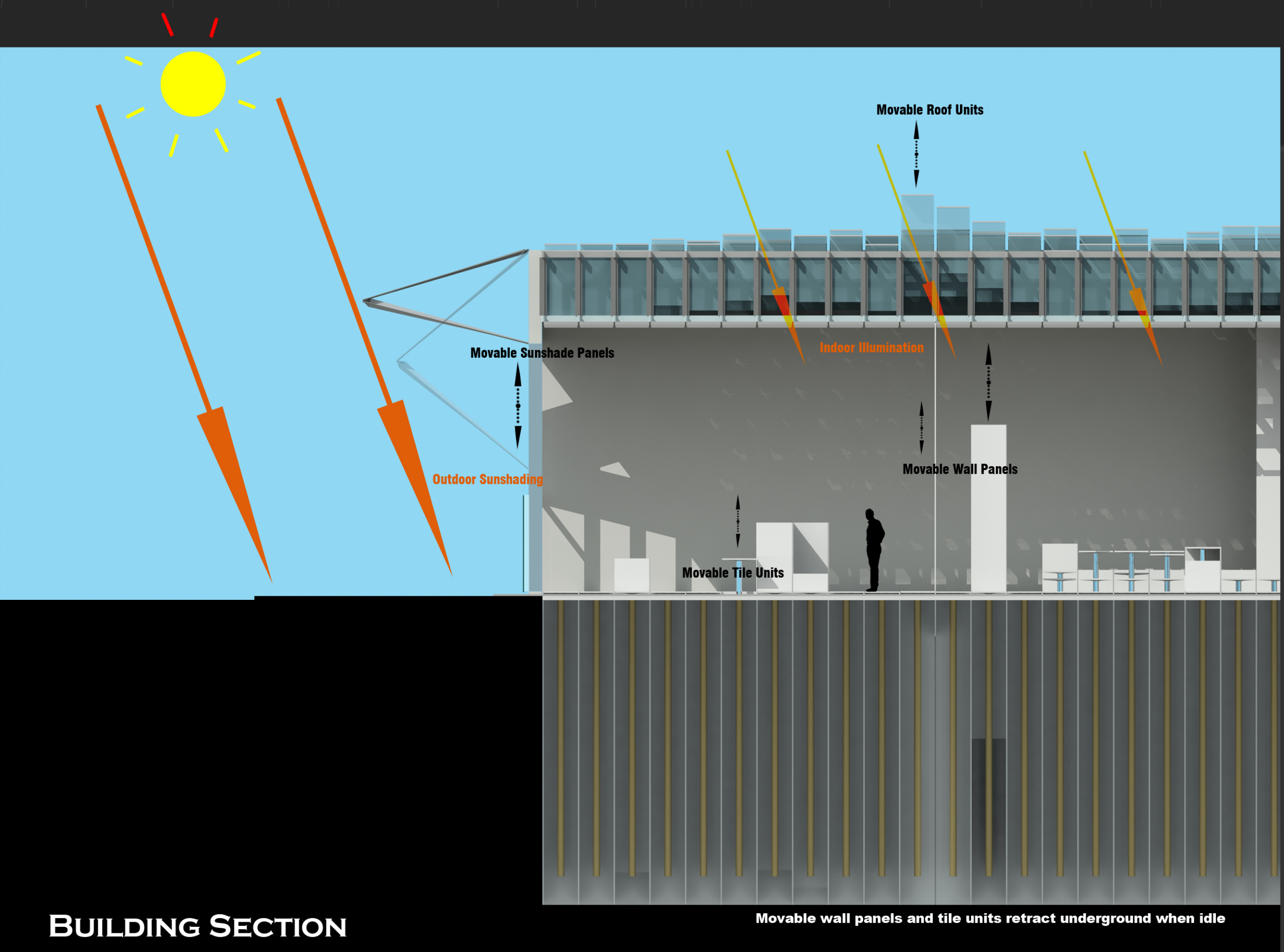
Morphs - Adaptable Future Competition

The site is located in St. Louis, United States. It is between Washington Avenue and Lucas Avenue. The surrounding is a very active area that full of restaurant and museums. The more important thing is, there are all kind of activities happens around that area all year around. Thus, the adaption ability of a building in here will be well tested all the time.

Adaption is a process, a movement, an evolution. In order to adapt, the building need to be dynamic. This building is named "Morphs". Just like the name, it has various adaptive phases. The idea of the design is to divide the space into many small even spaces, and apply controls on individual spaces to manipulate the whole space. It includes movable wall panels, movable tile units, movable roof units and movable sunshade panels. The sunshade panels and roof units control the overall openness and illumination of "Morphs". The movable wall panels and tile units are the most vital components of the building, since they carry the duty of forming the entire interior space. Movable tile units go up and down to define the ground level and provide support from the ground; movable wall panels go up and down to define the enclosure and provide horizontal orientation. When idle, the movable wall panels and tile units retract underground. The movements of the systems are achieved by hydraulic mechanism. Due to the efficiency and complexity of the movable systems, the systems are controlled by computer. What people need to do is to input the designated shape of the building into the computer, and the transformation of the space will be done automatically in minutes.

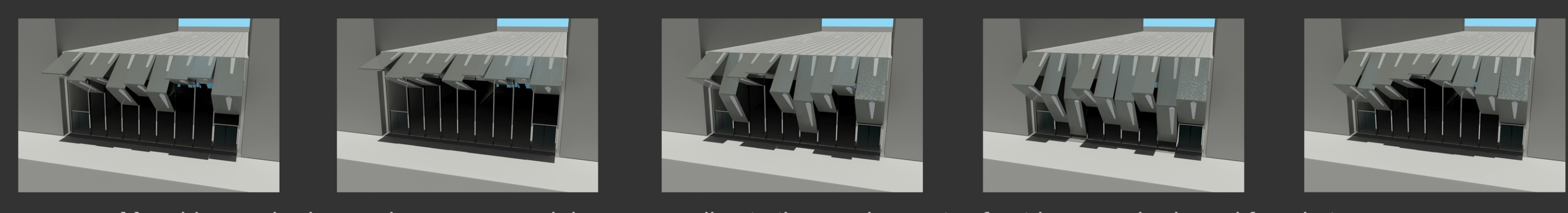
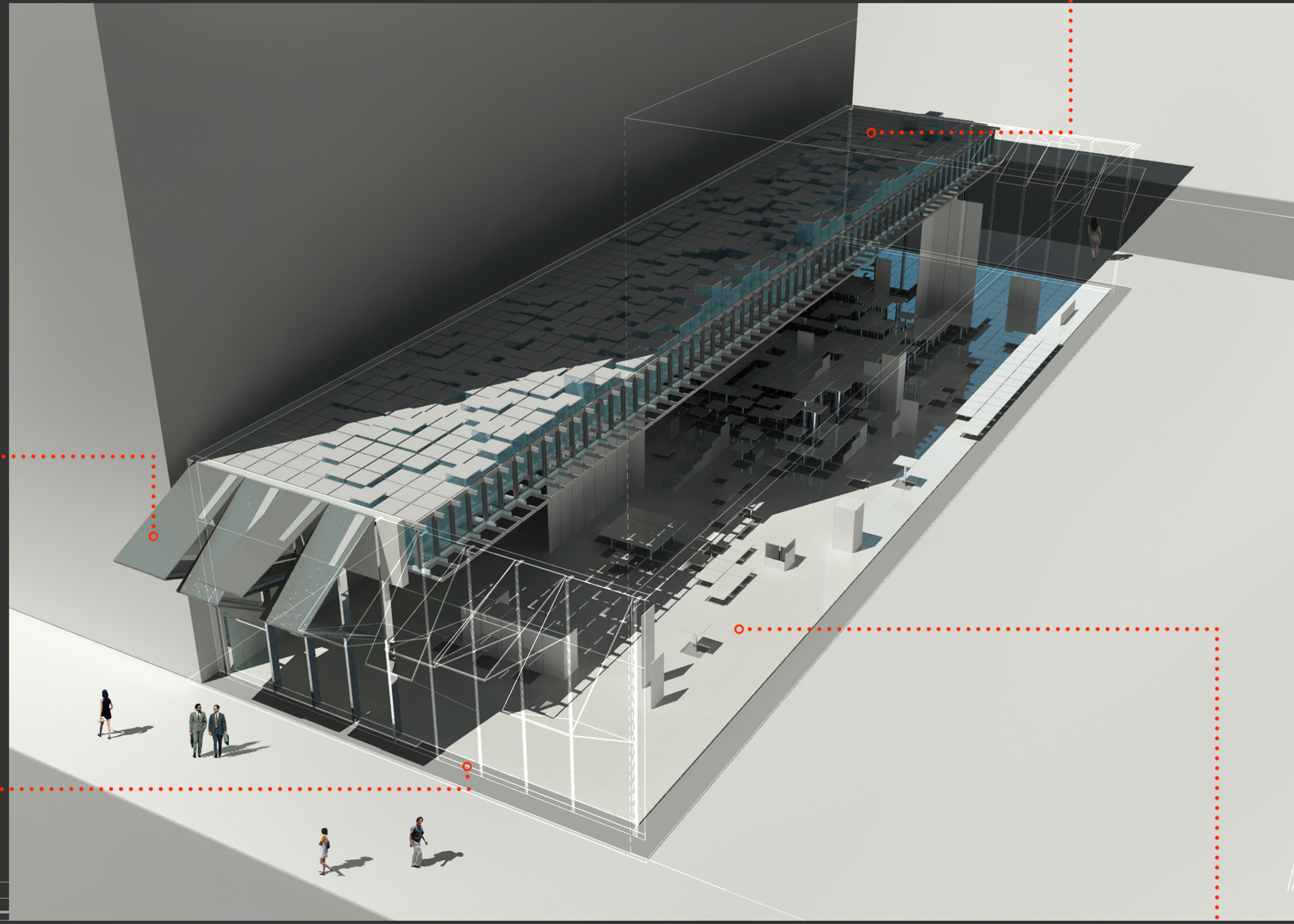
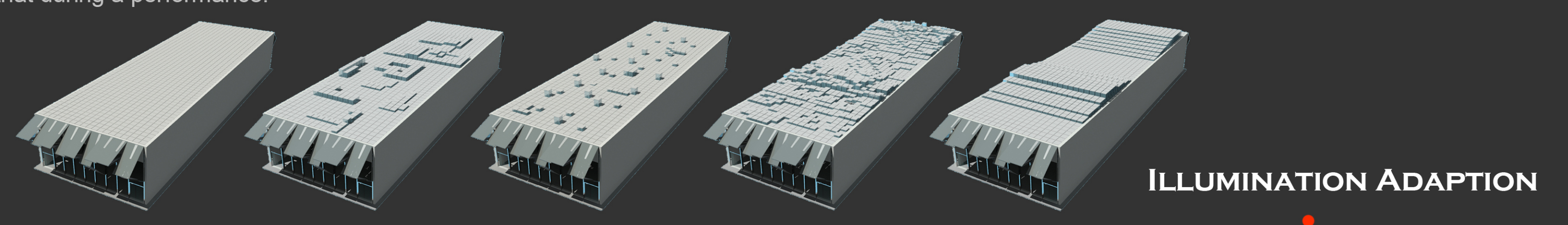


OVERALL EXPLODED VIEW



BUILDING SECTION

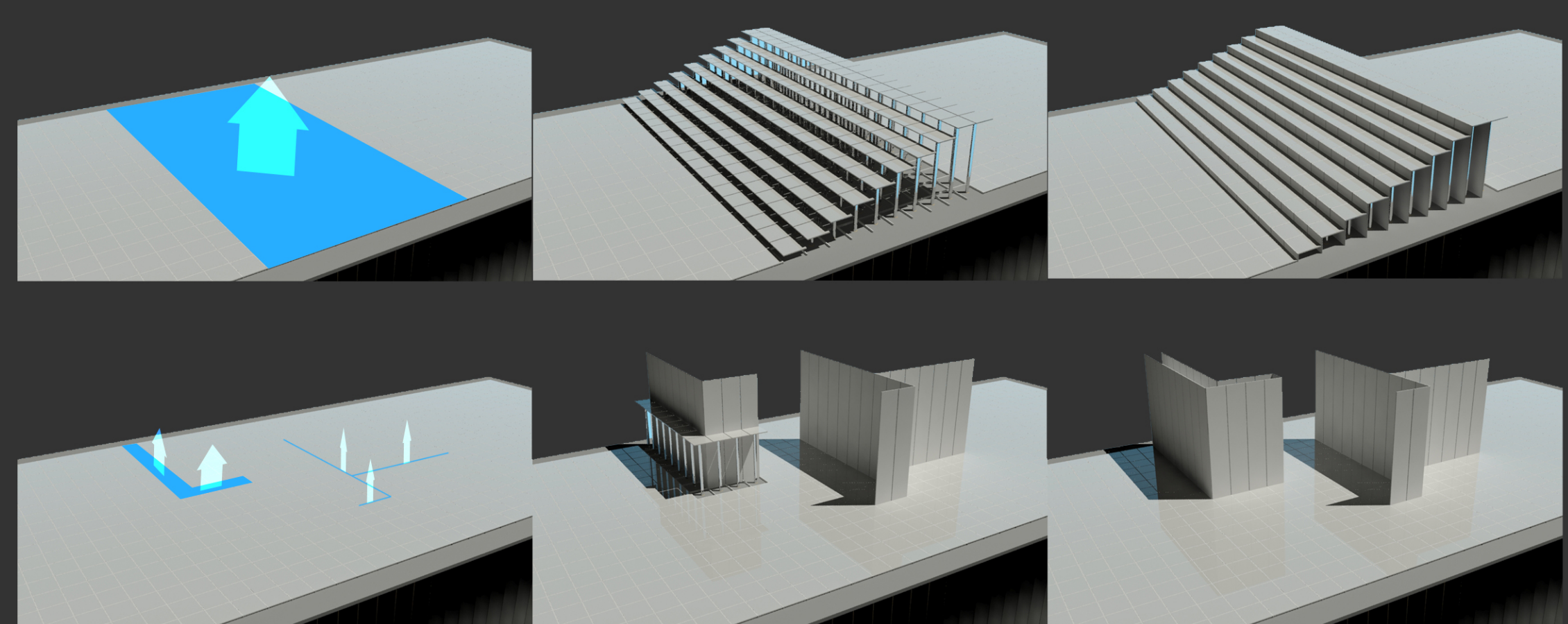
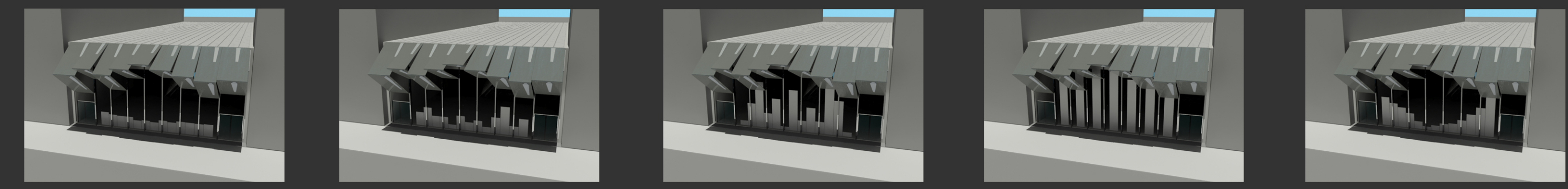
Movable roof units are the essential parts that provide illumination control for most portion of the building. The sides of the units are transparent which allow light goes through, while the tops of the units are transparent which totally block the light. The formation of the movable roof units determines how much sunlight can go into the building during daytime, and how much indoor light can goes out to light up the exterior during nighttime. Furthermore, people may control the roof movement and light in real time, so that can work with special atmosphere. For example, use that during a performance.



Movable sunshade panels move up and down, according to the requirements of outdoor sunshade and facade transparency.

FACADE VARIATION

The movable wall panels next to the glass windows may be used to cooperate with the movable sunshade panels to create various types of facades.



INTERIOR SPACE ADAPTION

When the building adapting new requirement, the movable wall panels and tile units can be moved to the designated position and be locked in, so that those panels and ties units will form integrated furniture and enclosure. By using this, the cost of functional reconstruction is minimized.

FUNCTIONAL TRANSFORMATION

