

Mars Transfer Vehicle Concept

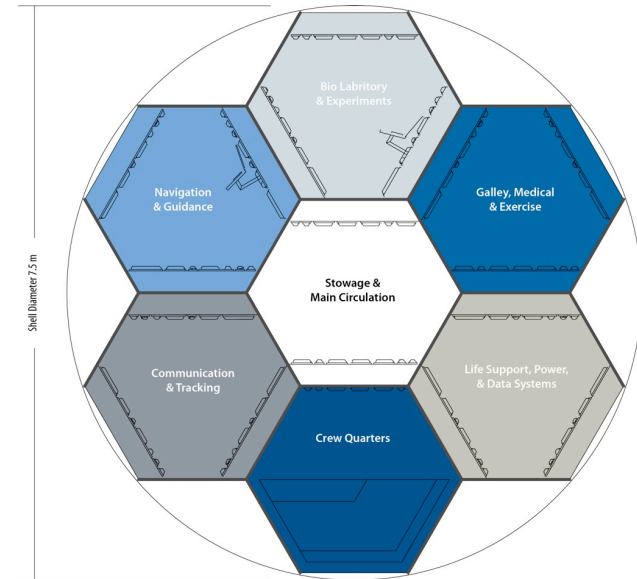
Utilizing Re-Configurable Building System

Stacy Henze
ARCH 7610 Space Architecture Studio
Spring 2012



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

1



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

2

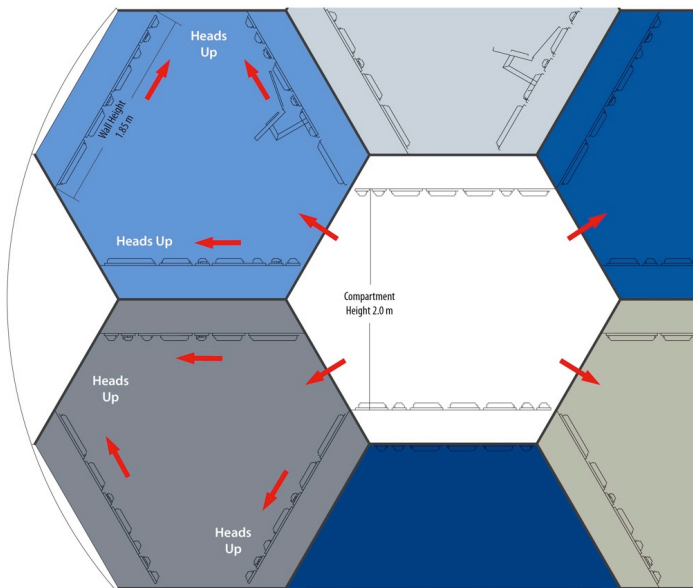
Geometry Benefits:

Work surfaces wrap around spaces. Workflow can flow from one surface to another. No arbitrary ceilings or floors.

The hexagonal geometry allows for a more efficient nesting within a cylindrical volume in cross section.

The hexagonal geometry does not exist in the longitudinal direction allowing for easy self orientation within a space.

The structural system allows for easy modification and re-configuration of spaces if needed.



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

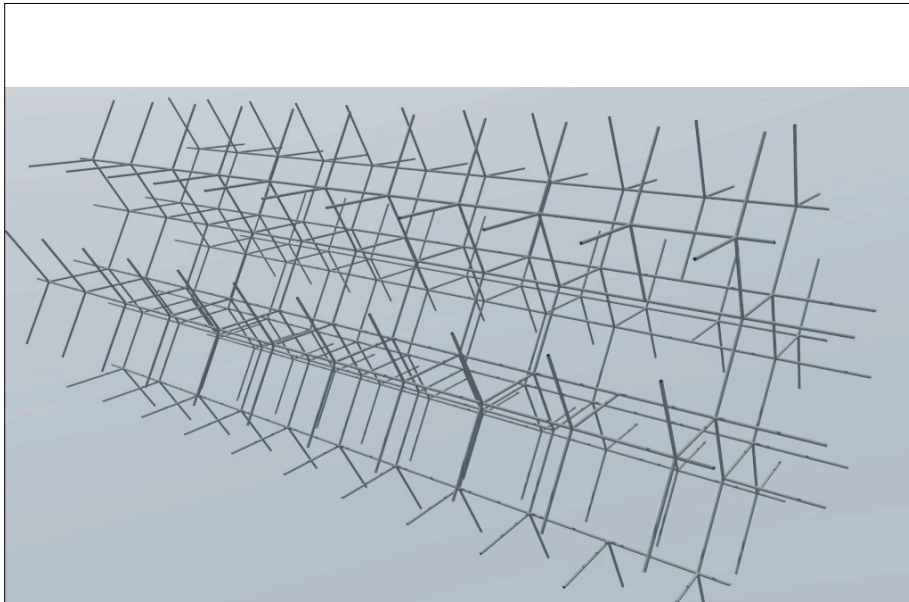
3

Final Design 3/4 Perspective View



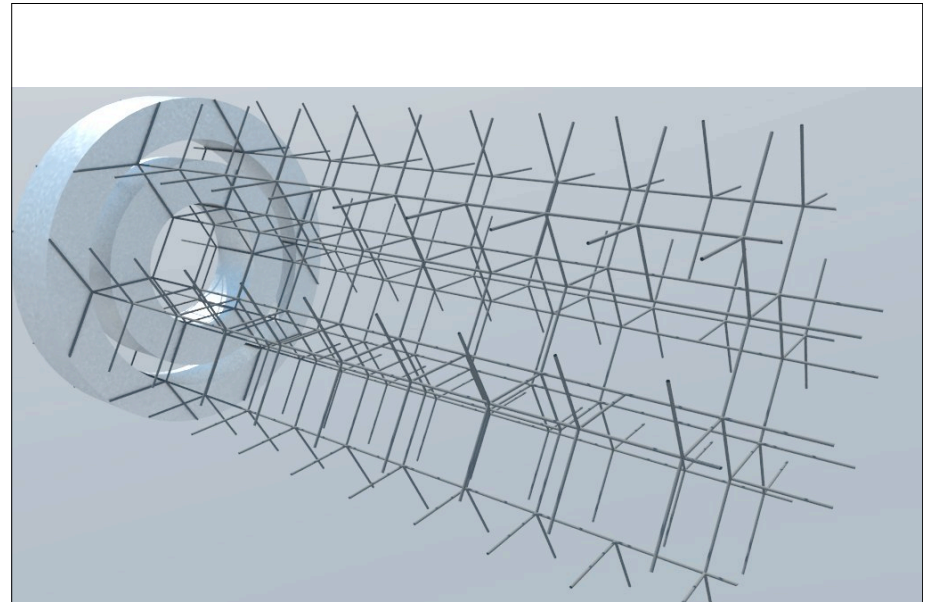
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

4



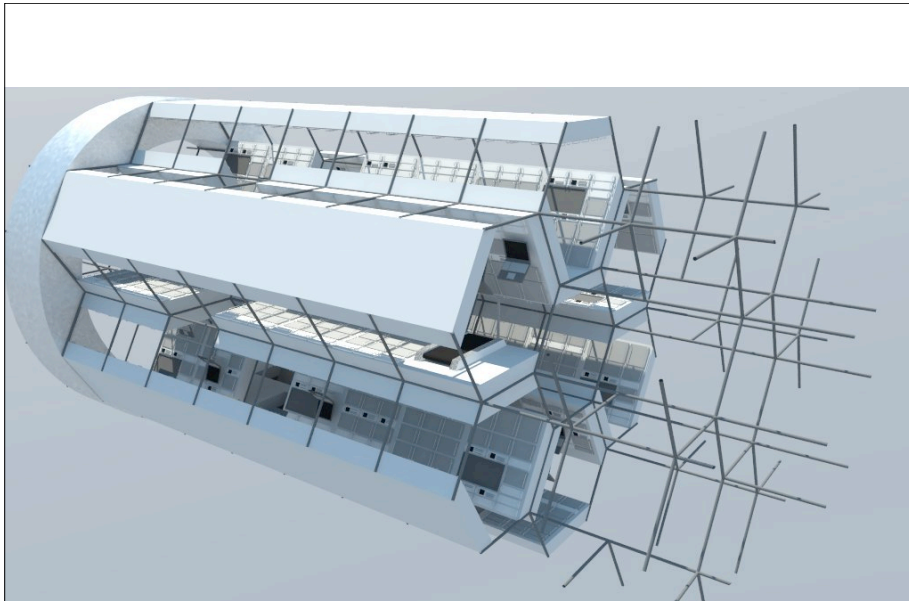
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

5



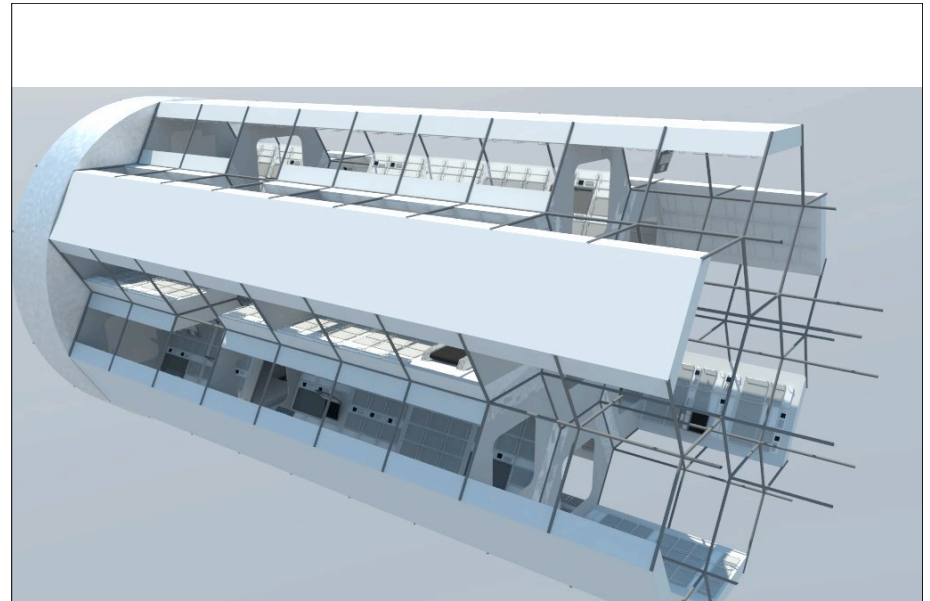
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

6



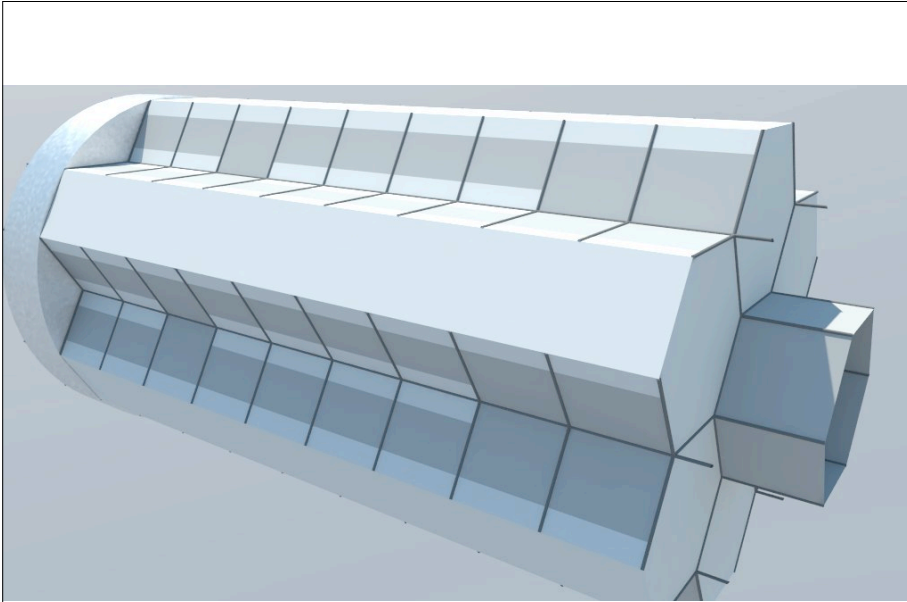
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

7



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

8



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

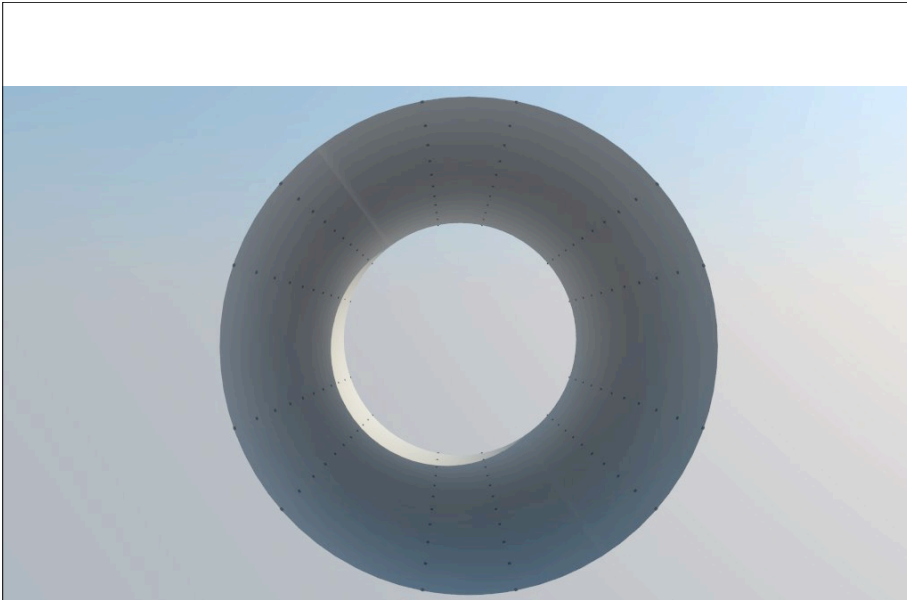
9

Final Design Cross Sectional View



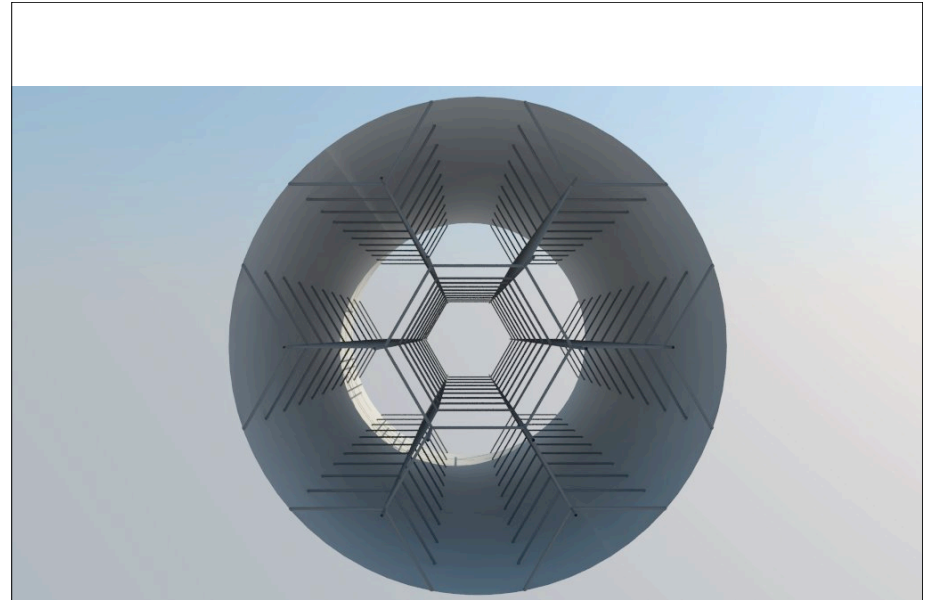
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

10



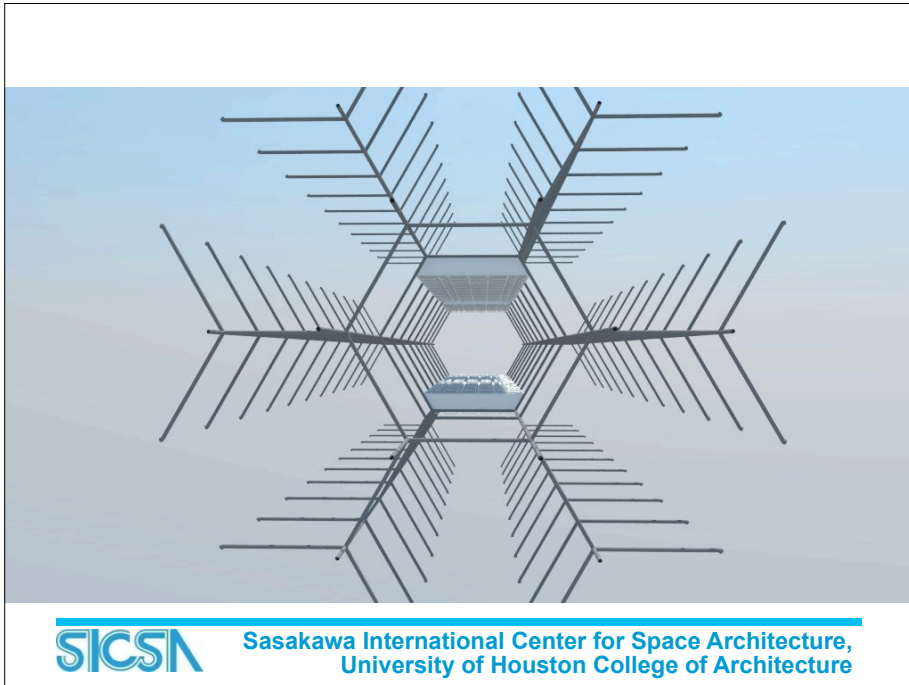
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

11

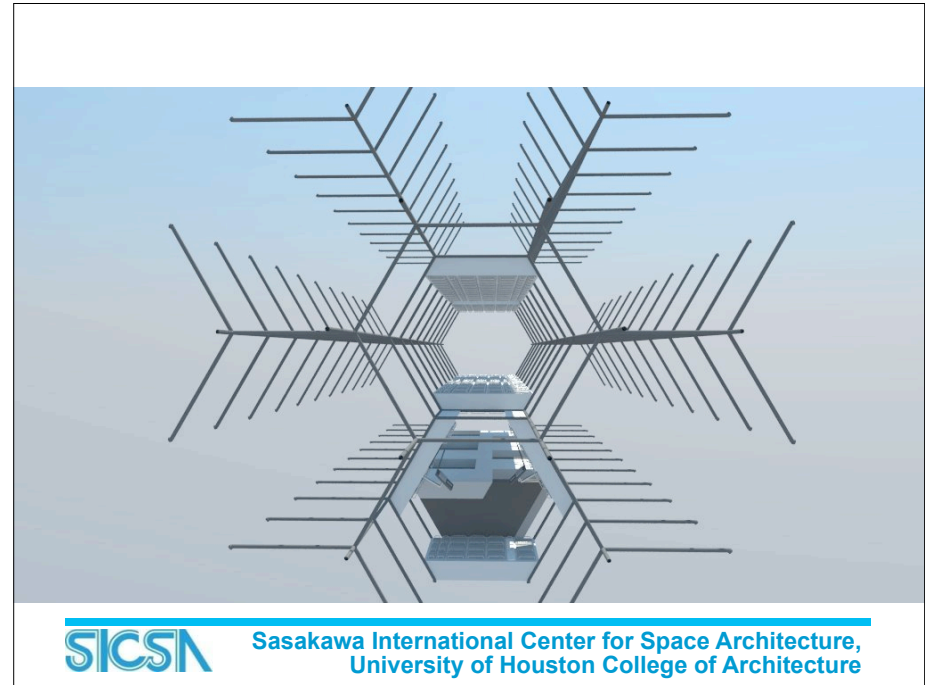


Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

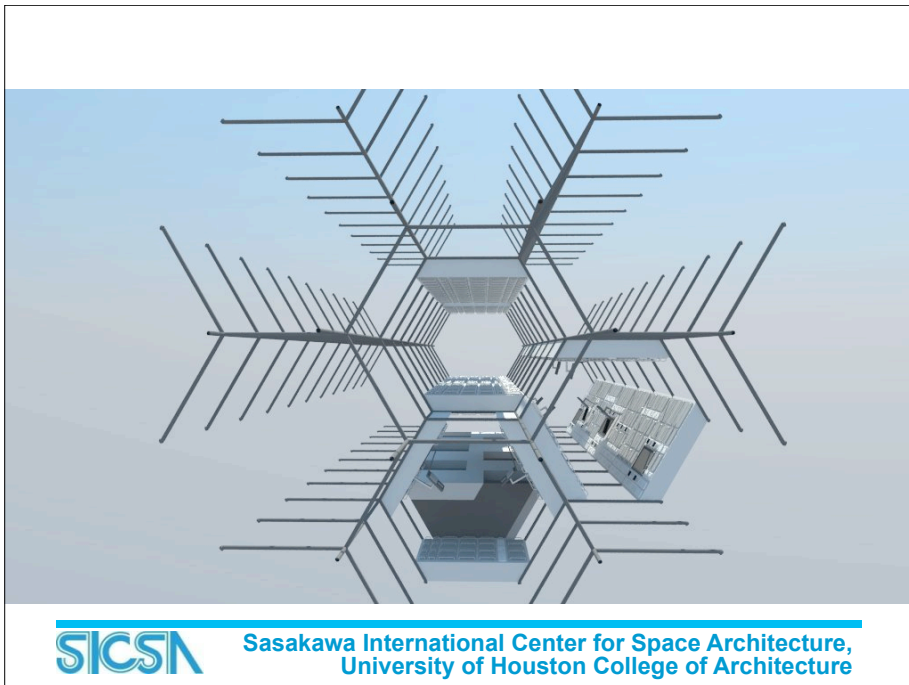
12



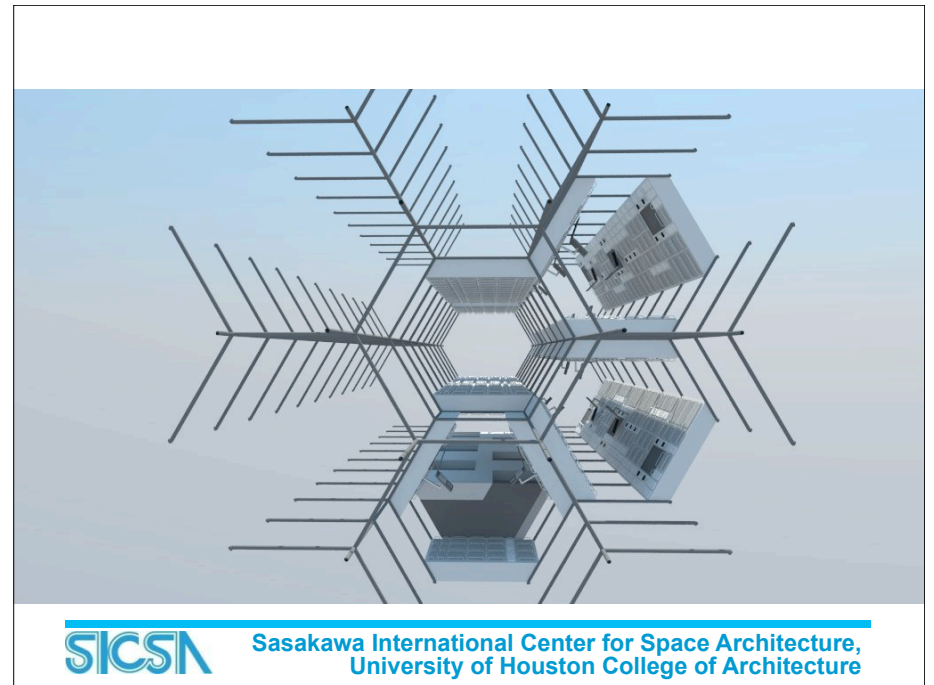
13



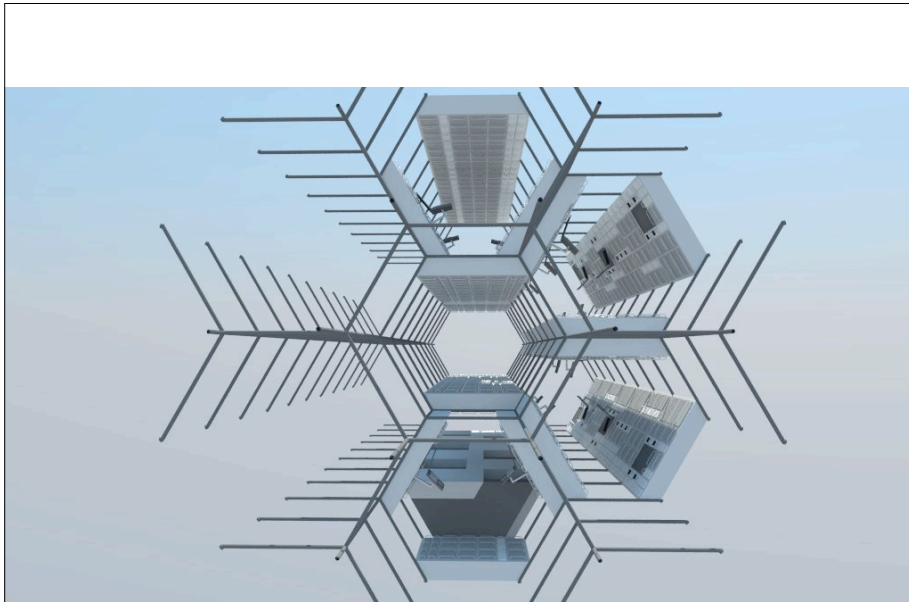
14



15

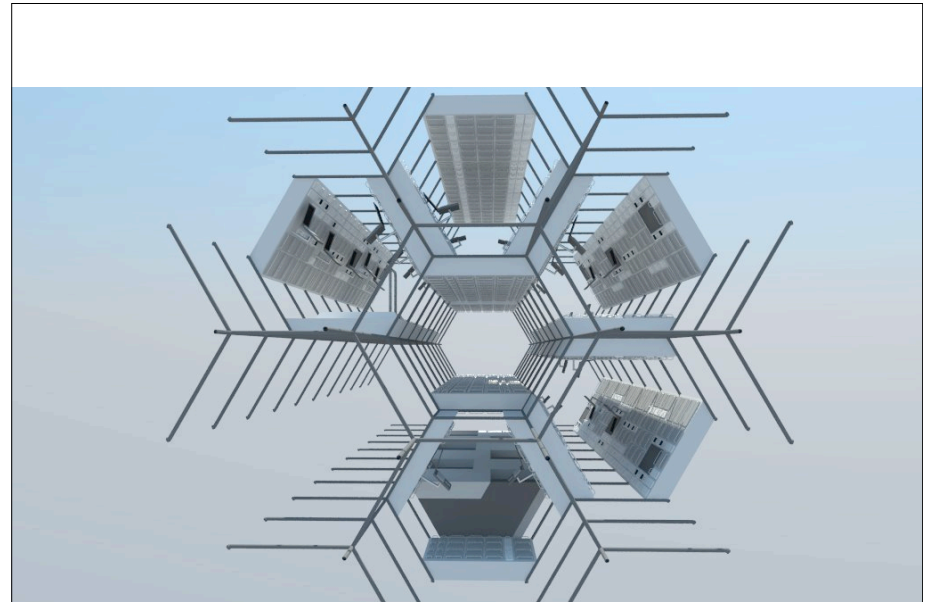


16



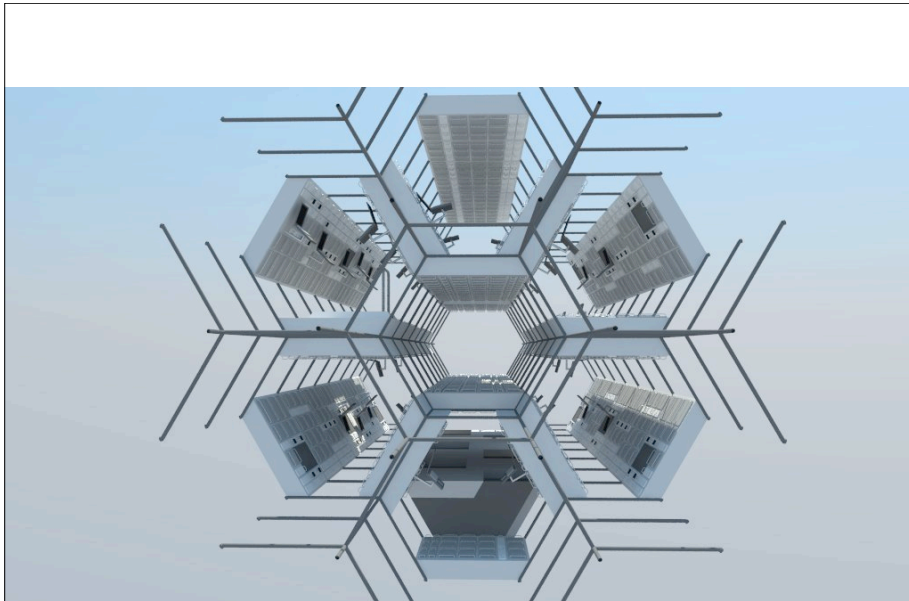
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

17



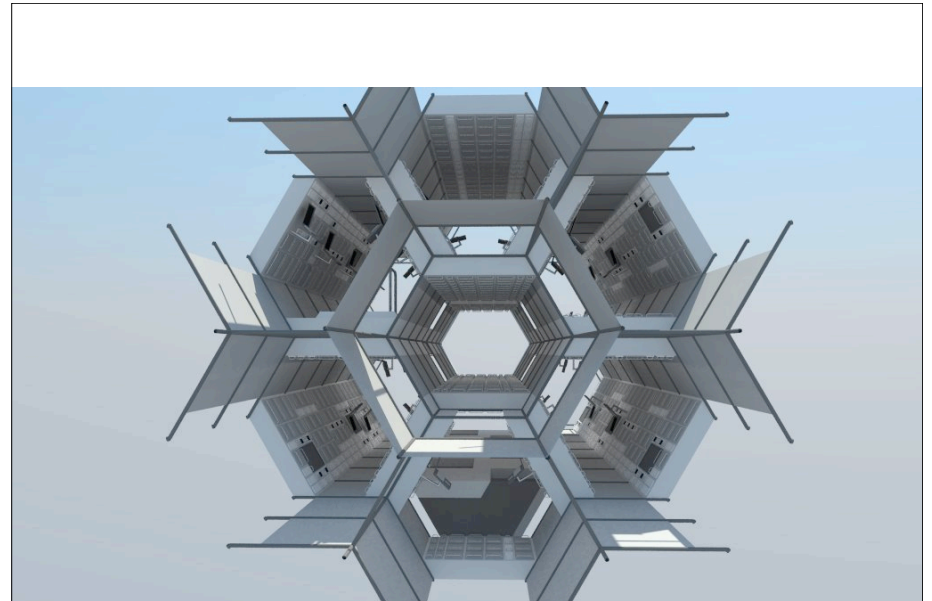
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

18



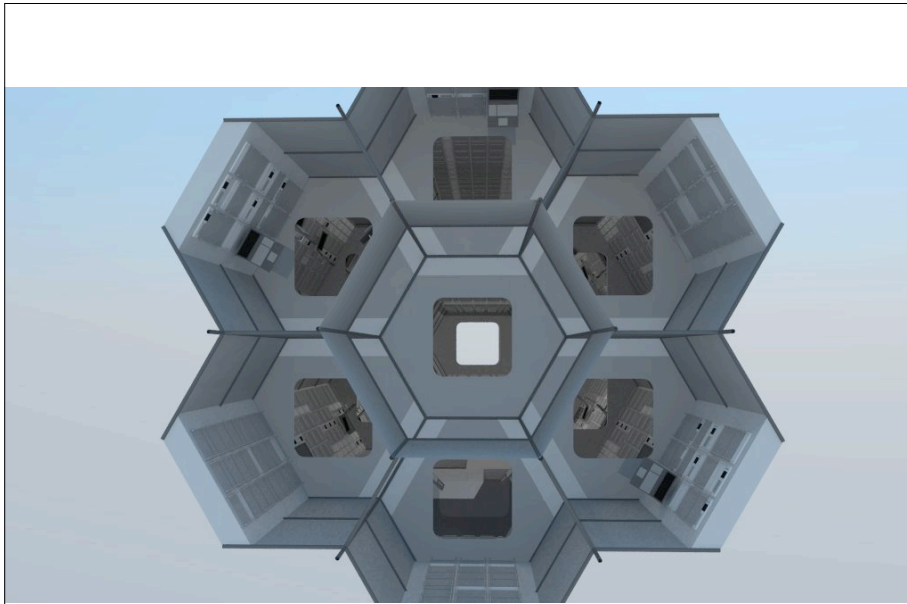
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

19



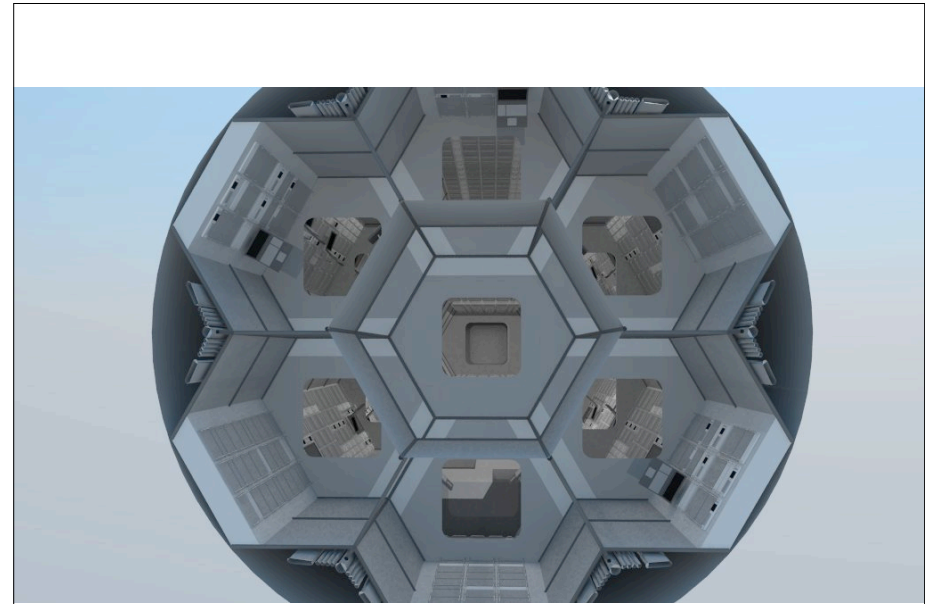
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

20



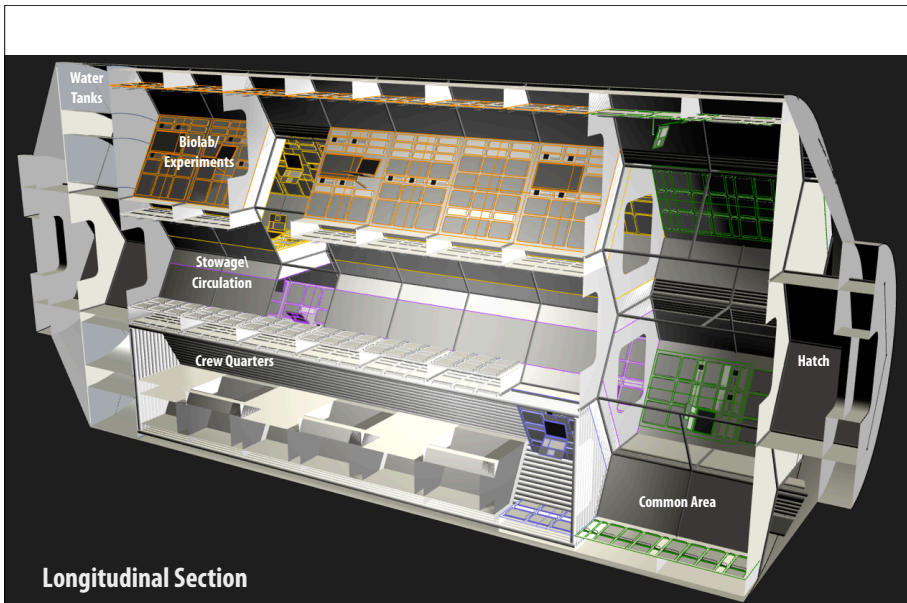
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

21



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

22

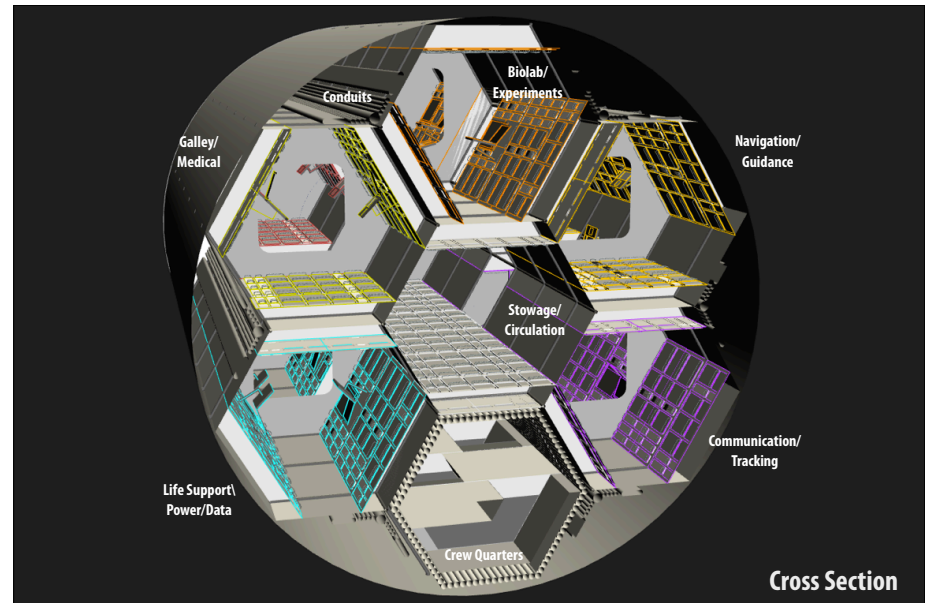


Longitudinal Section



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

23



Cross Section



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

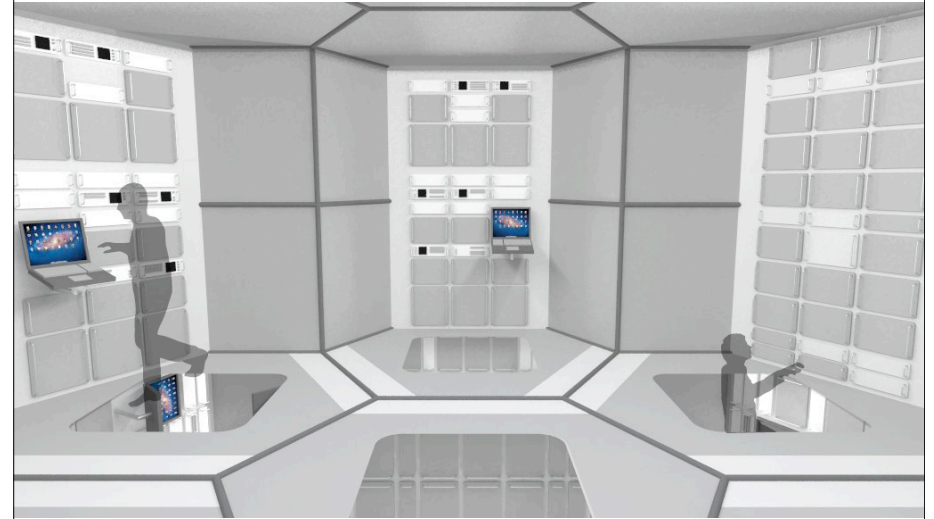
24

Interior Perspectives



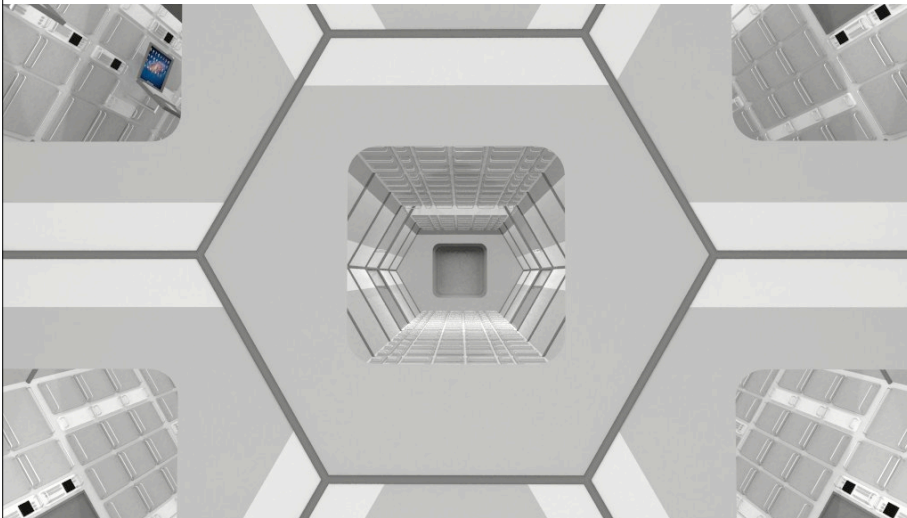
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

25



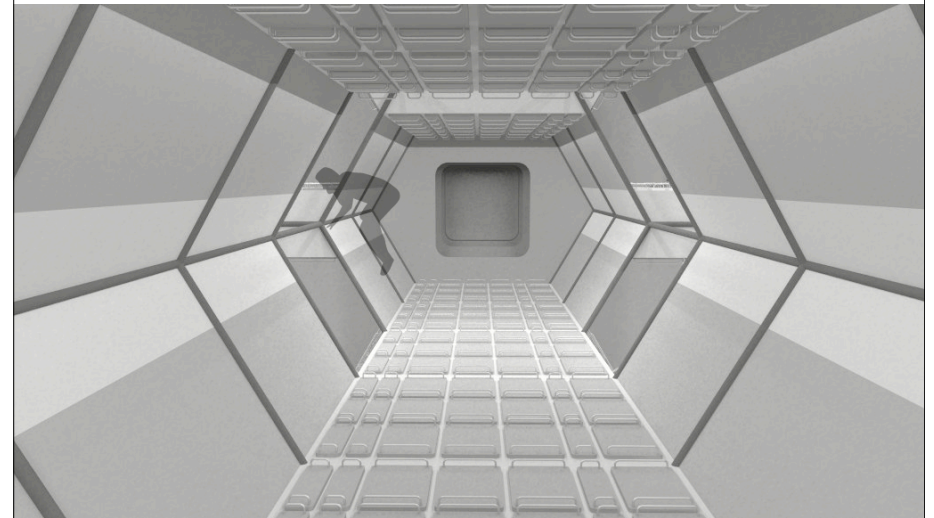
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

26



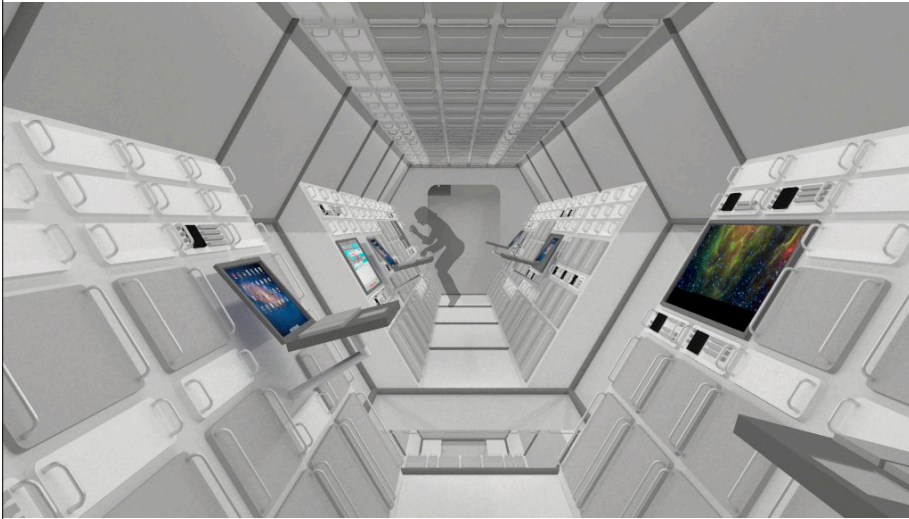
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

27



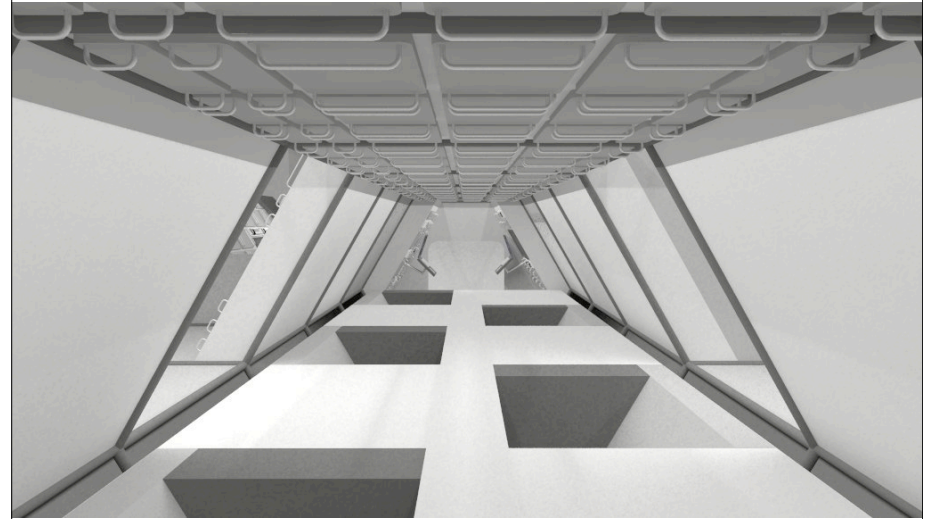
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

28



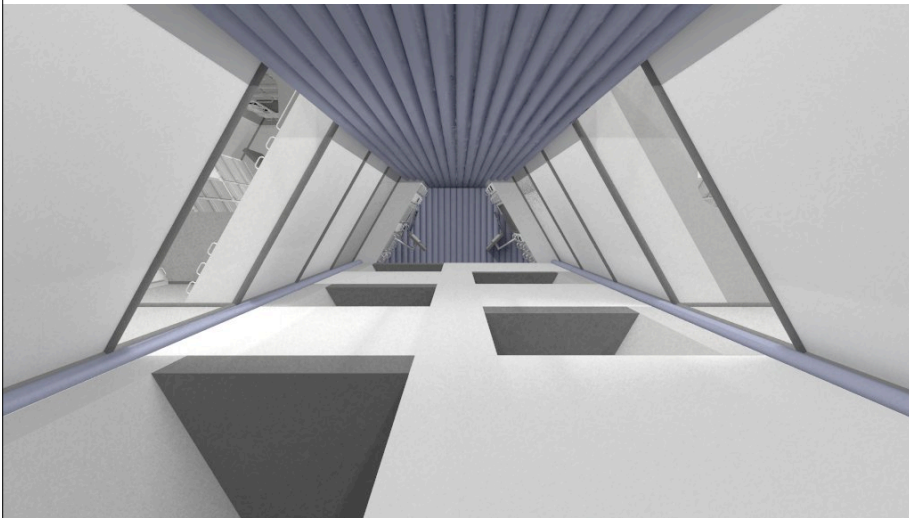
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

29



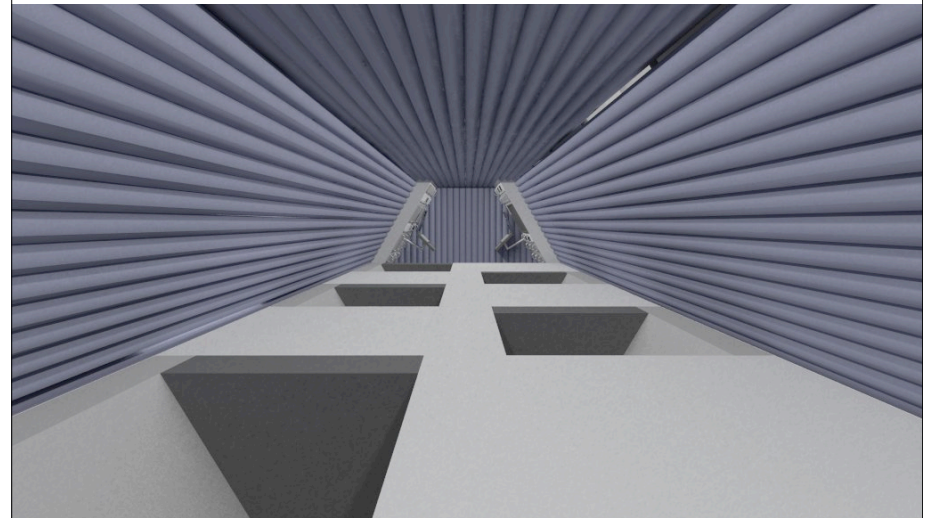
Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

30



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

31



Sasakawa International Center for Space Architecture,
University of Houston College of Architecture

32