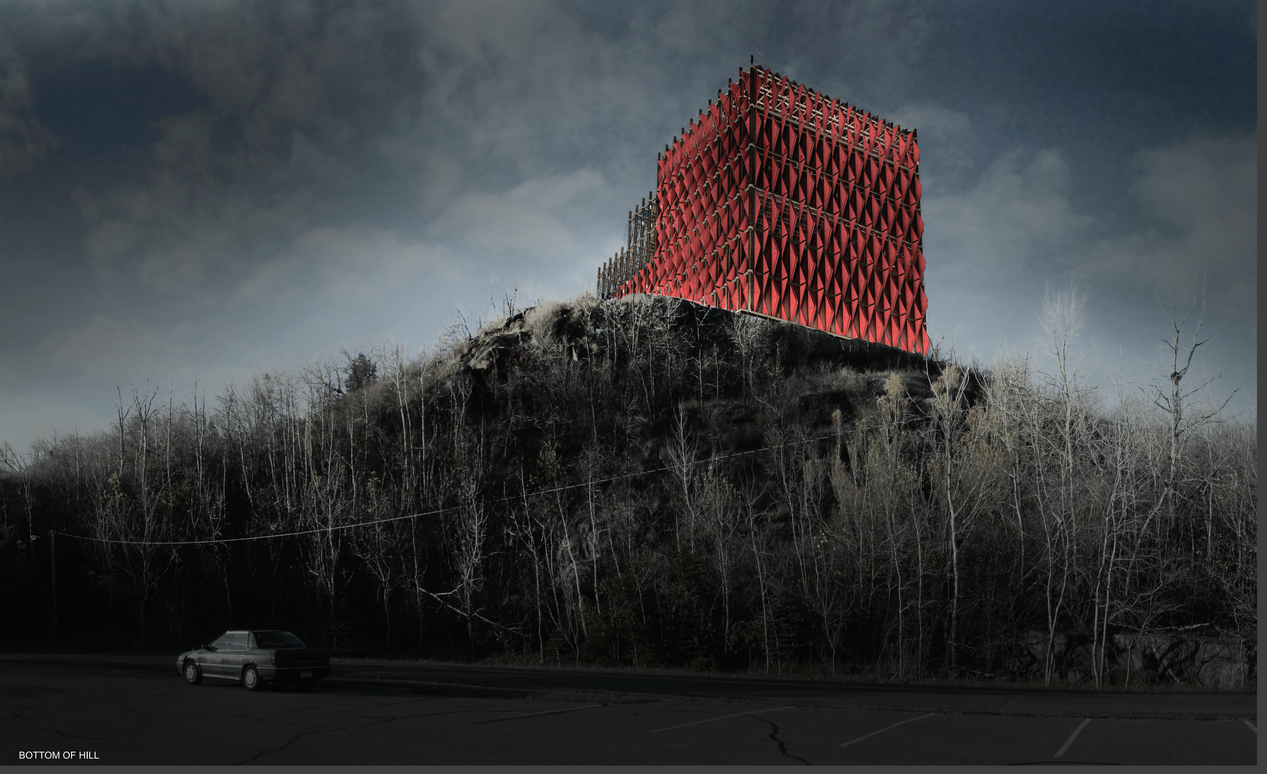


BOTTOM OF HILL

LOBBY

ADAPTIVE ARCHITECTURE ARCHITECTURE THAT RESPONDS TO CHANGING NEEDS

Duluth Performing Arts Center

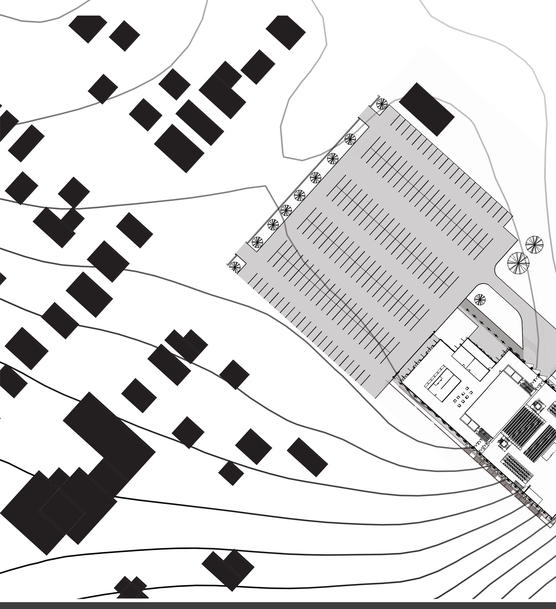
Problem Stagement

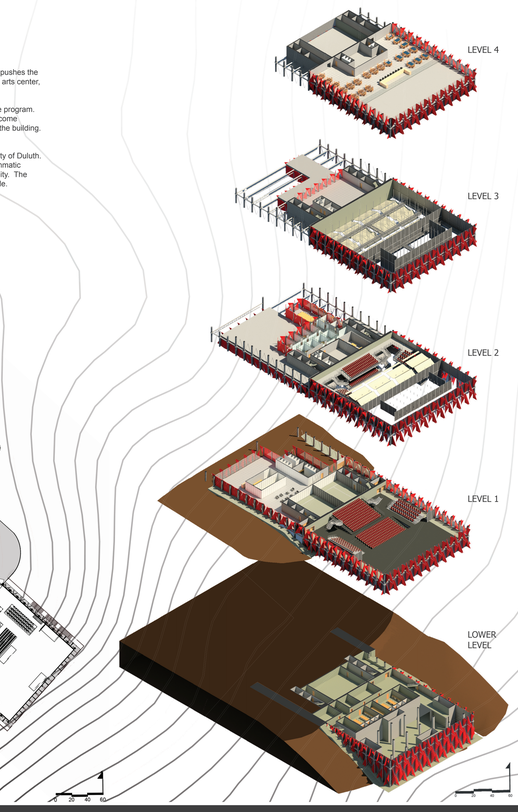
How can architecture adapt to changing users in order to keep relevant, while embracing traditions?

This thesis explores adaptable architecture and its ability to change to the needs of its users. This is in an effort to create architecture that pushes the limitations of a structure after the completion of 'initial' construction. By using flexible and kinetic components in the design of a performing arts center, it can expand the functions of the structure for the client, to provide for today's need and tomorrows.

With today's fast changing needs, architecture is to slow to keep up. Monumental construction techniques are too expensive to change the program. Out of date finishes, changing a rooms size, or space functions are difficult to alter. With the culture of replace anything outdated it has become expensive and unsustainable to continue replace buildings. Architecture that is capable of adapting to new needs extends the life cycle of the building. A wide range of opportunities to use a building keeps intact the historical, cultural, and visual fabric of a community.

The theatre provides to large and small performance groups, traveling and local. It is a place to display the adaptable architecture to the city of Duluth. Flexibility of architecture allows for adjustments to the program for a variety of uses and users. Performing art centers has varying programmatic needs that can change from day to day. With the ability to provide for a larger variety of users, it can create a larger appeal to the community. The infrastructure of the building is designed to provide longevity. Finishes and material are replaceable and mechanical systems are accessible.





LEVEL 4

8640 RESTRAUNT
KITCHEN
BATHROOM

5760 GREENHOUSE

LEVEL 3

3456 GALLERY
BATHROOMS

LEVEL 2

CONFRENCE ROOM
OFFICES
6000 BATHROOMS

TECHNOLOGY ROOM

LEVEL 1

LOBBY
BATHROOMS
13600 TICKET/COAT CHECK
REHEARSAL ROOM

14400 AUDITORIUM

LOWER LEVEL

800 LOADING DOCK

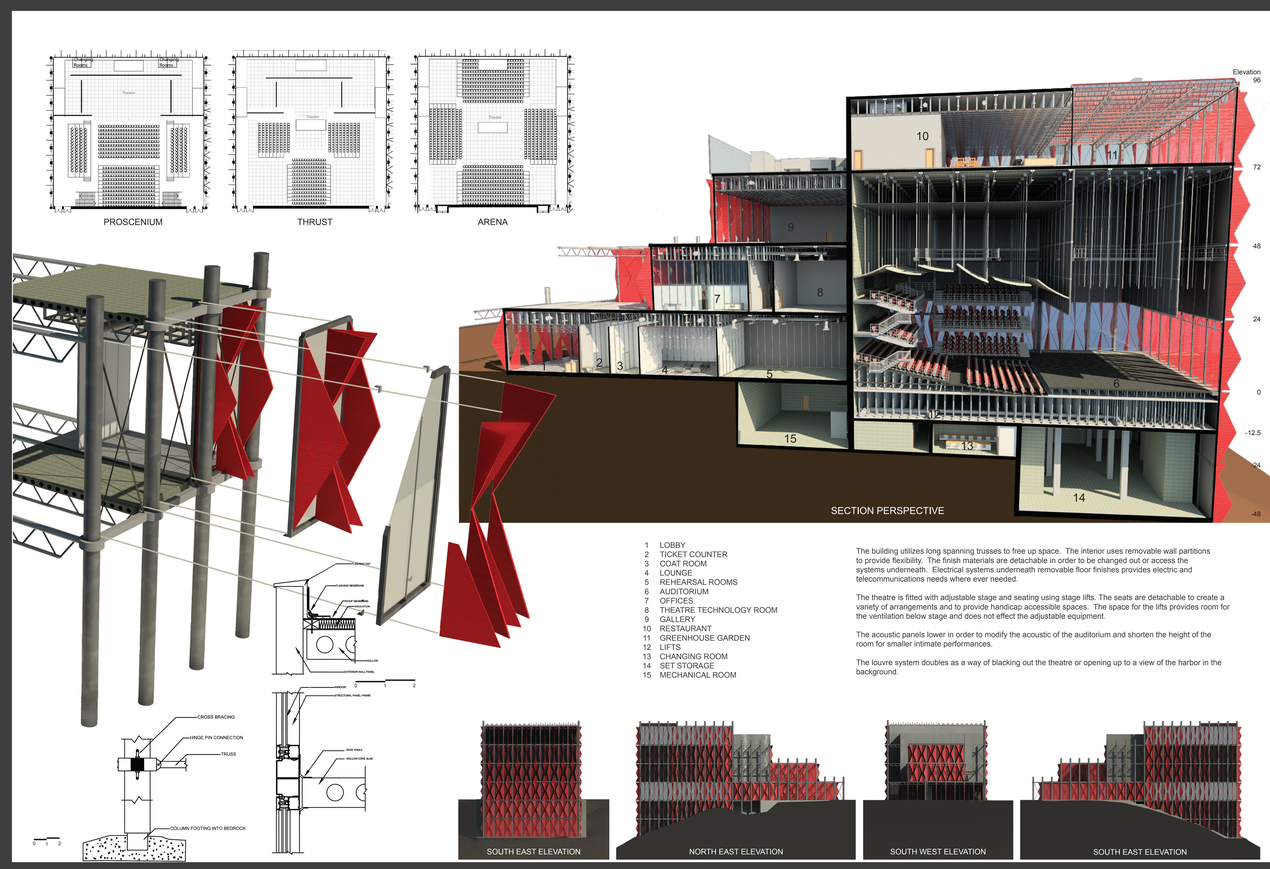
1960 MECHANICAL

1533 PROP/INSTRUMENT/
COSTUME/STORAGE/
GREEN ROOM/

6450 CHANGING ROOM/GREEN
ROOM

7200 SET STORAGE

74000 TOTAL SQUARE FOOTAGE



1 LOBBY
2 TICKET COUNTER
3 COAT ROOM
4 LOUNGE
5 REHEARSAL ROOMS
6 AUDITORIUM
7 OFFICES
8 THEATRE TECHNOLOGY ROOM
9 GALLERY
10 RESTAURANT
11 GREENHOUSE GARDEN
12 LIFTS
13 CHANGING ROOM
14 SET STORAGE
15 MECHANICAL ROOM

The building utilizes long spanning trusses to free up space. The interior uses removable wall partitions to provide flexibility. The finish materials are detachable in order to be changed out or access the systems underneath. Electrical systems underneath removable floor finishes provides electric and telecommunications needs where ever needed.

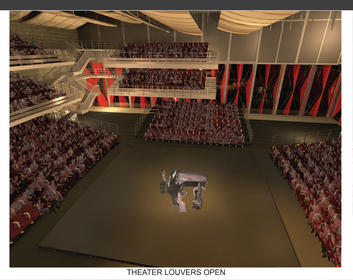
The theatre is fitted with adjustable stage and seating using stage lifts. The seats are detachable to create a variety of arrangements and to provide handicap accessible spaces. The space for the lifts provides room for the ventilation below stage and does not effect the adjustable equipment.

The acoustic panels lower in order to modify the acoustic of the auditorium and shorten the height of the room for smaller intimate performances.

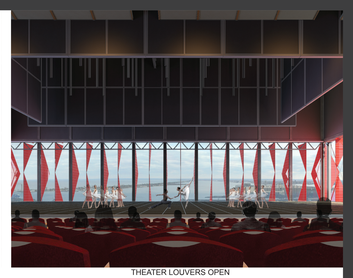
The louvre system doubles as a way of blacking out the theatre or opening up to a view of the harbor in the background.

DULUTH

ROOF GARDEN

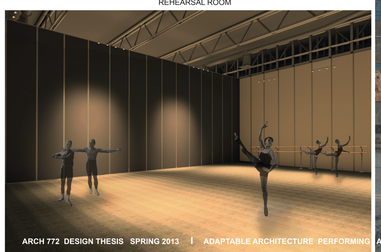


THEATER LOUVERS OPEN



THEATER LOUVERS OPEN

REHEARSAL ROOM



STREET VIEW

THEATER SIDE SEATS

ARCH 772 DESIGN THESIS SPRING 2013 | ADAPTABLE ARCHITECTURE PERFORMING ARTS CENTER, DULUTH 74,000 SQ. FT. | JACOB WINDSCHITL | RON RAMSEY | AUTOCAD, REVIT, SKETCHUP, PHOTOSHOP, INDESIGN, ILLUSTRATOR