architectural thesis

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ABSTRACT

Circulation does not stop at the door when a person is approaching or exiting a building. Likewise, the environment does not stop at the door when transitioning from exterior to interior space. Many times, a major design opportunity is lost when trying to create this transition between exterior and interior space.

As a model to study and practice these ideas, I am designing a Center that is focused on the agricultural heritage of Indiana. With a project of this nature, the opportunity exists to explore how people can be moved through spaces on a journey and an exploration through history and time. It also presents itself as a study of how interior and exterior spaces can supplement one another.
BACKGROUND

Since becoming a state in the year 1816, Indiana has depended heavily on its fertile land and moderate climate as a means of survival. Early pioneers settled and cleared the land of which they had found originally to be covered 80% by forest. As agriculture proved to be successful in the area, more and more land was cleared, leaving the land as it is today, covered by less than 17% forest. Thus, agriculture has proved to be a dominant factor in the culture of Indiana families and citizens throughout many generations.

There is now an interest in making a place where this heritage can be explored, better understood, and ultimately celebrated. It is understood that a state sponsored Center with this type of focus can greatly enhance people’s understanding of the state itself and of its role in the greater fabric of the country.
Sited in Charlottesville, Indiana, the Indiana State Agricultural Heritage Center is surrounded by miles of fields and small farming communities. This contextual canvas provides the designer with numerous tools for abstraction.

The picturesque landscapes of field crops blowing in the breeze as far as the eye can see, bordered by narrow tree lines are found throughout the state. The swaying of the plants in the breeze create organic waves across the fields, while the determined, planted rows, and patterns throughout those same fields seem to have order and purpose for being right where they are.

Supporting agricultural structures stand in the landscape, piercing into the sky, providing shelter, storage, a place for work, and possibly a place for rest. These pieces, seemingly created about, offer a sense of order. The “barnyard” which is created identifies circulation zones, specific function spaces, and a sense of place or ownership.
Each of these components combine together to create a wholistic scene; one where no single piece can be removed from the composition without the scene being disrupted.

In the same spirit, elements of design can carry into the design development of the *Indiana State Agricultural Heritage Center*. Looking at the surrounding landscape, of which the Center represents, appropriate proportions and scale can be observed and used as a guide for this project. While using the latest technology and materials in its design, it is essential to keep in mind the purpose of the Center, and what it represents. The integration of interior and exterior spaces, as well as their compatibility with one another will continue to be an extremely crucial component in the design of the *Indiana State Agricultural Heritage Center*. 
Before starting the conceptual design of the Indiana State Agricultural Heritage Center, I needed to decide what the overall character of the facility wanted and needed to be. I took this challenge from multiple angles. First, I looked at the habitat which the Center would be representing. Field agriculture lends itself as a representative of nature, man, and the effect that the two have on one another. Man's response to nature can be found in the way crops are planted, or the contours a fence takes over the landscape, or the way agricultural buildings are grouped together, for a few examples.

Secondly, I looked at examples of previously built projects that have been integrated with their habitat and surroundings. Architecture should be identifiable as man's response to a given landscape, yet work and transition comfortably within that

Thirdly, I looked at examples of similar typological projects that have responded to design with a focus toward technology. Materials, construction methods, and form can greatly enhance the overall success of a design.
I further investigated vernacular style buildings to create a palate of design forms and ideas that could be interpreted in the *Indiana State Agricultural Heritage Center* design. These examples helped to establish a design language that can better integrate the Center with its environment and purpose.
PRECEDENT ANALYSIS
The Indiana State Agricultural Heritage Center site is located nearly 1/2 mile east of Charlottesville, Indiana. This central location within the state allows for relatively short travel distances from all areas in Indiana. This also places the state capital, Indianapolis, within close proximity to the Center.
Sketching seems to be one of the most free flowing ways to relay creative thoughts and ideas into actual forms. After researching different precedents, and building a design palate for the nature of this project, I was ready to begin sketching.

My first thoughts were of how the Center would be located on the site and then how it would be approached. Taking full advantage of the large rural site, I decided to completely submerge the Center into the site, giving it nearly 360 degrees of rural visibility. This also allows the approach to the building to be very site focussed. A "meandering path" driveway allows for visitors to experience the site even before entering the visitor's center.
With much focus being on the site and the surrounding rural landscape, the design of the building needs to be aligned in a way that exposes as much of the site as possible. As a way to investigate this idea, I looked at various farm machinery that works on this same maximum exposure principle. A mowing machine, used for mowing various hays, grasses, and legumes, has a small amount of material making up its frame and body, while with its composition, is able to cover a wide area of land to mow. I used this compositional idea in the organization of the Indiana State Agricultural Heritage Center.

Creating a long, narrow section in the building allows for much site exposure. If this section is then aligned along an east-west axis, it can take advantage of the consistent north and south natural light.
PROCESS
The site is organized, as mentioned before, with the main visitor's center located at the center of the site. Surrounding the Center are field plots of various crops. These plots are part of the visitor's experience. A network of roads connects the visitor's center to numerous viewing pods throughout the site. From these pods, visitors can observe field work and experience up close how agricultural machinery and farming techniques are used.
1. Main entry air lock
2. Main entrance lobby
3. Coat check
4. Information center
5. Ticket sales
6. Food court/lounge
7. Sandwich shops
8. Gift shop
9. Gallery/tower lobby
10. Gallery space
11. Site transport station
12. Shop/garage
13. Loading dock/storage
1. Lounge/bar waiting
2. Restaurant seating
3. Kitchen
4. Restrooms

SOLUTION PLANS

restaurant

level 2
1. Lobby/lounge
2. Lecture space
3. Conference rooms
4. Kitchenette
solution plans

structure
SOLUTION PLANS

hvac zoning
s o u t h
SOLUTION  INTERIOR

visualize
INTERIOR AND EXTERIOR SPACES BOTH CAN STRENGTHEN EACH OTHER'S EXPERIENTIAL QUALITIES. WHETHER THE SPACES ARE JOINED PHYSICALLY, VISUALLY, OR OTHERWISE, THE EFFECT CAN BE A POSITIVE ONE. JOINERY OF THE TWO SPACIAL TYPLOGIES CAN OCCUR THROUGH SMOOTH TRANSITIONS WITH FLOOR TO CEILING GLASS, OR WITH SIMILAR MATERIALS USED ON EITHER SIDE, FOR EXAMPLE. ON THE OTHER HAND, THESE TRANSITIONS CAN BE MORE ABRUPT WITH VERY DEFINITIVE BARRIERS, BULKHEADS, MATERIAL CHANGES, ETC.

THROUGH MATERIALS, SCALE CHANGES, LIGHTING, AND MANY OTHER TOOLS, TRANSITIONING BETWEEN INTERIOR AND EXTERIOR SPACES CAN BE AN INTEGRAL PIECE OF ANY DESIGN.

POSSIBILITIES CONCERNING THESE MENTIONED TRANSITIONS ARE ENDLESS. FOR THE INDIANA STATE AGRICULTURAL HERITAGE CENTER, CONTINUED STUDIES SHOULD FOCUS ON FACILITY EXPANSION AND SITE TRANSPORTATION. FOR THE PROJECT, AND ANY PROJECT, THE SITE CIRCULATION AND BUILDING CIRCULATION ARE OF EQUAL IMPORTANCE, FOR CIRCULATION DOESN'T STOP AT THE DOOR.