TRACTOR
INTERPRETIVE CENTER
LOGANSPORT, INDIANA

"creation of a meaningful architecture"

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Creation of a Meaningful Architecture
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Thank you to all my past professors.

Thank you to my family for supporting my endeavors throughout my education.

Thank you to my parents for giving me an appreciation for the past through our interest in the machinery that helped develop this thesis.

To all my Dad’s tractors for years of riding enjoyment.
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"...farming as a point of departure and as a means to a better end...emancipate themselves from the soil and join the ranks of businessmen and specialists."

Broehl pg. 24

"Above all by its architecture, its elaborate instructional programs, its air of gravity and propriety, and its wealth, the museum could testify to the serious character of culture as a larger activity, to the fact that there were agreed upon values and standards which could be applied to judgement, to history, to civilization itself."

Neil Harris

Designing a museum for tractors is an outlet for my own questioning the meaning in architecture. This thesis is dealing with the idea that the building relates wholeheartedly to the subject matter of the building. My premise in designing such a structure is not solely to understand the meaning in museums, but also to understand the place of meaning in varieties of architecture. The idea that meaning is only reserved to museums or art galleries seems to be present in people's minds. I want to question this idea in order to better my own architecture.
Fall 1997 Thesis Proposal
SUBJECT: ISSUES & POSITIONS

One of the ultimate questions of architecture asks us what our buildings mean. What connection is there to the user, subject matter or context? How can we as designers incorporate this meaning into our buildings? In order to understand what meaning is, we have to figure out what aspect of meaning that we want to consider. Is it the meaning of a particular culture, is it the meaning of a particular material when placed next to another material, or is it the formation of space in response to a wide variety of materialistic and cultural traditions?

In this thesis process I am going to look at these issues and try to develop a methodology of extracting a design process from these external issues of the subject. In developing this methodology I can then take it and apply it to some extent on every project henceforth. With an understanding that everything needs to be “deeper” than the skin of the building, and that everything needs to speak of its contents, hopefully a better architecture will emerge. It is the bringing together of the various levels of meaning that make up my theory. The fact that not one thing exists by itself, that everything has a connection to something else and they are interdependent makes meaning in architecture a tool to bring them together in syntax of space and form.

"It is now evidently the case that in any architectonic code the number of minimal significative units is limited, and that it is out of the syntagmatic and paradigmatic interaction of such units that the transfinite variety of architectonics formations in a built environment arises."

Donald Preziosi

This quotation has inspired a particular method of thinking in my mind. Understanding that in order to form a space, the parts that make up that space can be put together in an infinite number of ways. The built environment is the product of all of these various units intrigues me. It makes me strive for a style of architecture that is
not paper thin, that has substance, and can relate to the world around it and eventually with a contextual architecture that emphasizes the place of architecture in our lives.

OBJECT

In order to start to understand the process involved in creating a "meaningful architecture," I intend to look at the history of the American farm tractor as a social and economic tool in the advancement of the country with the Midwest in particular. I plan to look at a building type that would help to explain the importance of the tractor to any town in the country. In doing this I need to understand not only the technological aspects of the tractor but also the social implications of the tractor. How did various social historical events (depression, war, and ecology) effect the development of the tractor? To look at it the opposite way would help to understand as well, what effect did the tractor do to improve or worsen those situations. I am looking at it right now in a more of a cause and effect method with a movement through history beginning to be a programmatic style to follow. In an effort to understand the architectural features of a "machinery museum," one way I will look at the building as a museum without tractors. In doing this I hope to look at the museum and the types of forms, materials and spaces that can be used and created to inform the patron of the implications of the tractor without becoming a display of "meaningless" masses of metal dictating their understanding of the periods. The machinery can be communicated in a way as the scale of the equipment increased, the building mimics this, or as the complexity of the social implications of the industry increase, so do the language of the architecture. These spaces that don't include machinery themselves can still be filled with pictures and screens of video or sound, but by taking the material object out, the architecture can be understood as a pure entity that can stand alone. I intend to try to understand the tractor in many different ways, just as I will try to understand the building in more than one way. One of the issues that I
The idea that the tractor goes from point A to point B and break and “destroys” land on its way through is very powerful. Although there is another way to look at that, the tractor in the same instance acts as creator, for without this process the entire cycle of farming would not occur. It is these issues about the tractor that I hope to incorporate into the design.

LOCATION

The community of Logansport, Indiana is a city that has grown over the last 100 plus years to become a lively county seat for Cass County and a center of commerce in the area. The city is known for being at the intersection of three major rivers in Indiana (Erie, Wabash, and Tippecanoe). The rivers and railroad linked the city to the rest of the world and Logansport grew. A tractor museum in this area will provide a new connection to the agricultural heritage of this city. Satellite towns that are the smaller communities of farmers and businesses that help to build an agricultural base for this county surround the city. The connection to the community and the social history of this community will be a very important part of my design and methodology for designing the spatial qualities of the space.

SOCIAL & PHYSICAL CONTEXT

The social and physical context of the building in relation to the city and the subject seems to be very utilitarian in nature. This creates a paradox in the style that I wish to have at the end of my exploration. With a meaningful architecture comes a very modern method of design. The ideas of modern architecture and thought have a lot more, in my opinion, to deal with ideas about meaning and space. With the community and the subject matter being very simple and straightforward, trying to fit into this context I think will be a challenge. The tractor has another strong contextual issue, the idea, of its own history and the various styles, makes and models of tractors
need to be expressed somehow in the design to appropriately communicate the complexity of the agricultural industry. The context comes back to a pure geometrical problem for the exterior of the building in some cases where the form of the building needs to be in harmony with the rhythms, scale and proportions of the surrounding buildings. This can be abstracted to form a connection between the interior and exterior meaning.

GOALS, METHODS, AND PROCESSES

The process of developing a working building both architecturally and systematically will take much time to develop strategies and methods of work. The majority of my work will be in model form. Basic concepts and brainstorming procedures can be captured in model form and used over and over for inspiration and problem solving. I have already started looking at precedent buildings and theoretical writings on the subject of meaning. The Holocaust Museum in Washington D.C. has been the most studied by me in trying to learn how to create such an architecture. I hope to also find specific examples of museums, exhibits or architecture that deals directly with a tractor or agriculture. I have also started reading about the exhibit of the Enola Gay at the Smithsonian and the problems with moral issues. This topic is pertinent where it talks about the importance of considering the impact of the subject matter on the patron. This might not be the same importance in a tractor museum, but the same ideals have to be assigned to the project in order to make it truly viable. By studying these various things, I hope to start understanding my own viewpoints on these subjects and apply them to my own design. I plan to complete most of the schematic design phase by the end of the first semester when I can then focus on details and finalization of the design. In studying these other philosophies and styles I hope to enhance my own theories on architecture and the formation of space. The entire thesis project should be one of self-discovery and the informative process of developing one's own philosophy.
Site Information & Analysis
My final choice for the site is in Logansport, Indiana on the north bank of the Eel River. The site has become a part of the city that is known for festivals and its connection to the railroad heritage of Logansport. The site is presently the home for the Ironhorse (Little Turtle Waterway) Festival Park. This park is dedicated to the hosting of the annual festival commemorating the history of the railroad in the community. Logansport is known as a center of industry and manufacturing for the area and can also be considered an agricultural center. Picking this site was due partly to the connection with this city history but in another part by the generic character of the city. This city is a manifestation of some key ideals needed for this type of building. The rich history as well as the people that make up this community can help create interest in the museum. The people that know about the subject matter will have special interest in the museum, but I would hope that people of this area that do not know about the history of their community would be intrigued by the opportunity for this information.

The site is located on the north bank of the Eel River that passes through this section of the city. The river acts as a boundary to the south edge of the downtown area. In addition, this boundary brings the qualities of nature into the conceptual connection of the design. The river's quali
ties act as an oasis to the regimented order of the city. The connection that the building can have with the river leads to many possibilities for experiences in the building. Reflection, views and movement can all play a part in a design for this site. These qualities have been used in the development of the site.

The context of the site includes the major rail lines on the north boundary of the site with the railroad depot just across the street, which is important to the city's history. The downtown area is located approximately a block and a half to the north of the site. Downtown Logansport flourished in the period of the early twentieth century, but has suffered as has many other city centers have in recent years. A development such as this building will hopefully resurrect the quality and vitality of the city. The opportunities for development in this part of the city are great due to the amount of deserted or unused portions of land. The use of these open spaces to create a connected downtown area can bring this site and its context back to life.
Developing a thesis based on meaning demanded that I have some knowledge of buildings with similar objectives. The study of the Holocaust Museum in Washington D.C. helped me explore a successful building and understand the level of inquiry needed with the subject matter. James Freed, who designed the overall building, had a hard time starting the project. He had many questions about the issues at hand, and had to think of the enormous numbers of people who were affected by this ordeal. Freed visited many concentration camps in order to look at the architecture of the places where this death took place. One of the things that Freed was very astonished by was the fact that the Germans had taken such care in the design of these death chambers and warehouses for the prisoners. Freed stated: "It was always..."
incomprehensible to me why the places where the most atrocious things happened were so often the most beautiful."

One of the major design problems in this project was that there was a museum being designed. The fact being that this museum was different from many others in that it was centered on knowledge instead of artifact. The design process involved in this project was meant to bring the visitor into an understanding about the horrors and scope of this disaster. When the museum is centered not on the materialistic, but rather on a series of mental images and viewpoints, the meaning and symbolism in the built form must convey that message to a greater degree that might have not fully been realized in a traditional museum. Not only are these meanings intended for the sympathizers of the Holocaust, but attention needed also be placed for a good argument to the basic fact that the Holocaust did occur and that millions of people did die. In order to communicate more than just the basic ideas of the Holocaust, Freed decided to tell the narrative of the entire German society. By using the idea of a collapsing moral society after the war, he uses techniques of warped, fractured, dislocated, and ominous” as form givers to the building. By using these, he can start to change the feelings of the visitors, making them feel uneasy in these situations. By making these spaces very unsettling, one will increase their awareness of the pain and anguish that millions of people went through and are still going through in some cases.

Freed approached this building in two ways: from the inside and the outside. We think of these as fairly basic principles of design, but in this case the challenge had more to do with contextual features and internal meaning than usual. The exterior needed to fit into its context near the Washington D.C. Mall. In placing the building next to these neoclassical buildings, Freed wanted to make sure that people recognized this building as more than just another government office along the street. He did this in the front main entrance. With the Bureau of Engraving
and Printing adjacent to it on one side. Freed’s use of oversized classical proportions and distorted scale of entry seem to make it fit in some respects but be very different and “special” in others. Another part of the context that needed to be addressed was the deep red brick of the neighboring Auditor’s Building. A similar color is found in the exterior of the museum. After contextual issues have been addressed, the form of the building can then be derived from the meaning of the subject matter and historical precedent. The forms that are on the exterior, including the entrance and the four towers along the side of the building, all bring a symbolism from forms in the concentration camps themselves. The spaces allowed in the exterior alcoves of the building give no relief to the visitor. One of the main entrances, to my understanding, is on the side of the building, forcing the people to line up on this side with no protection and no place to “hide”. Creating these senses helps to begin the process that the person will be led through in the interior of the building. This being just another layer added to this very complex narrative design.

Moving from the outside to the inside, where the strength of the building is most prevalent, the formation of the important spaces begins. These spaces, given names like “Hall of Remembrance”, “Hall of Witness” and “Tower of Victims”, all communicate the ideas and thoughts that need to be present in order to fully appreciate the importance of the subject matter. The interior spaces, especially the Hall of Remembrance, critiqued by Michael Sorkin, claims that these halls as well as many of the other spaces in the building are too iconological. The use of triangles, derived from the identification symbols of the imprisoned Jews and eternal flames that signify the everlasting memory of the people killed seemed to be viewed by Sorkin not to be viable. I, on the other hand, view this as a very good attempt to bring these icons and basic forms into the design as a very tactful way to communicate the imagery of the time period. The images and symbols being used are a very important concept in the Holo
caust, where the individual's identity was taken away and replaced by these signs of ambiguity.

The way in which you move about these interior spaces is also being controlled. The design breaks down the chronology of the war into three distinct areas. The first begins on the fourth, explains the rise of the Nazi armies and the questions being risen in that party as to what to do with the Jews. The second shows the "final solution" with the icons of the death camps, train cars, gates and other horrors being displayed to give the visitor some visual connections to the Holocaust. The third reveals the aftermath when the allied armies discovered the tragedies that had occurred in these camps. This path concludes with a video presentation from survivors and some documentary footage to bring the whole thing into perspective.

Some of the interior displays include artifacts of the holocaust. People's shoes, toothbrushes, and even human hair are placed before the visitor in an attempt to force them to look upon these and create some kind of link or identity with the victims. One of the major problems people had with the construction of this museum in Washington D.C. is that disconnection with the facts and identity of the people killed. By creating spaces for this, the people start to understand that they are themselves moving along the same path as the victims. These shoes or these toothbrushes were the last remaining things of these people that were murdered. They were mindlessly picked up by the soldiers and placed in heaps of objects and were not thought of again.

With the integration of these displays into the building, one must ask whether the building should have been nothing more than a mere shell that houses displays and artifacts. In a basic shell the artifacts and displays would have priority over the structure containing them. However, Freed did not take this approach. The building itself brings the people closer to some of the displays, farther away from others in order to "control" the visitor as to the relative horror and pain each display narrates. Freed's

"Freed's solution balances representation and abstraction, as the architecture of the building nowhere literally recreates Holocaust architecture. Its combination of massiveness, austerity, and industrial detailing does convey a sense of ominous foreboding, at least according to many visitors."
use of late nineteenth and early twentieth century architecture is evident but not overwhelming.

The interior exhibitions, designed by the firm Ralph Appelbaum Associates, utilize the architecture very well. The interior space provided by the towers that Freed supplied is a very important piece of the entire narrative. The exhibitions in these towers are of pictures of the victims from a single Polish village. The power of seeing these human faces and trying to create a connection to them reinforces the intent of the exhibitions. Many of the interior spaces dictate a morbid scene and the architecture amplifies it in those places. However, in other spaces, there is a different feeling. The Hall of Witness (the main open space) and the Hall of Remembrance are thought of as being so well designed and constructed that they are beautiful and ominous at the same time. This balance in the architecture is what I think makes it such a wonderful structure.

Having not been to this museum in person, I can only see and preliminarily appreciate the building through pictures and critiques. Although, having visited Dachau concentration camp in Munich, Germany, I can appreciate what some of the criticism is describing. The fact that this building is pristine, with bricks laid immaculately, windows clean, spaces not full of hundreds of people creating a feeling of claustrophobia does not completely convey the meaning of the Holocaust. I feel that there are opportunities available in the design for this to occur, and it will only be materialized with my visit in person. Perhaps all people can look at this building and see the horror that has been presented and take it a step further to understand that this is a very clean portrayal of a very complex and dirty devastation.
The real power of this building lies in the narrative not only between the building and the displays, but also the narrative between the person and the structure, and the person and the display. The entire range of emotions, sensations and connections the person feels within the building help to make them understand the importance of such a museum. Michael Sorkin wrote this about the holocaust itself:

"By studying the Holocaust, we hope to help immunize modern man against the diseases particular to the twentieth century which led to this monstrous aberration."
Later in the process of the design, when many things as far as basic ideas had taken a final form, I visited the John Deere headquarters and the various John Deere facilities in Moline, Illinois. The visit to the world famous Eero Saarinen designed headquarters helped me see what another architect had done to materialize the concepts based in the tractor and agricultural industry. His use of materials and space helped me understand some of the space qualities that I had created. The arrangement of the building to the site and the movement across that site to the building helped to develop some of the intricacies of the organization in my design.

In this trip I also visited the John Deere Pavilion. This building is a more public attempt to advertise and inform people about John Deere's importance to the city of Moline as well as their importance to the agricultural industry. Located in the heart of downtown Moline, this center has a portion of the building dedicated to the display of the history of John Deere with another part for administrative functions of the company. The display component is what caught my attention as a very simple way to organize a tractor museum. At this point in my own design, I had developed spaces at each end of my building that resembled the space created at the Pavilion. The space I had created was being dictated by the subdivision of that space with walls, but after seeing this display, the tractor itself became the space organizer. The space in the pavilion was determined by the manipulation of the tractor. The movement of the people was being directed along combine heads and tractor/implement combinations. This idea not only was effective in the overall movement of the people, but also retained the simplicity desired in
the design. In my own design, I implemented this strategy to complete the effort for simplicity in the steel structure portion of the design.

This precedent was more beneficial to my thinking than even the Holocaust Museum, but as in the Holocaust Museum some questions about this design became important to me. The idea that this Pavilion was dedicated to the John Deere company is what troubled me most. The ideals of the company could be seen as a strong part of the design, but could these same ideals be placed into a design for International Harvester or any other major tractor company? In this argument comes positive hope for my design. The use of these ideals of agriculture in a broad sense allows the design of a Tractor Museum to be flexible enough to support the changes of displays as well as technologies in the subject. The basic ideas in the Pavilion are well done, but I believe are too broad to be used to signify one company.
"...commoness, especially over time, allows a certain degree of predictability such that one can determine within a range of error that certain meanings will be attached to certain forms by certain people."

Hersberger, pg. 11

- when the forms become common...meanings start to overlap.

- the spaces created by the synthesis of identity, status, and meaning form a dynamic environment for forming a syntax of material object to idea.

- as commoness continues to advance, the impact and importance of meaning fades.

- by studying people's perception of meaning I started to understand the way in which I could organize the spaces within the museum. the organization and progression of the spaces dictates the perceptions the visitor will have of the importance and meaning of the subject matter to them and their society.
- The equipment is caught between these issues.
- The intermediate space is dictated by decisions made by society and by decisions made by the science, the science being the thought process from the development of these tools of agriculture.
- These basic utilitarian ideals have been compromised by economic principles at periods of its evolution.

One of the design solutions I developed, was the idea of using the strain and discordance of the industry in relation to the natural and economic challenges as a form giver to the building. By doing this I saw some opportunities to look at how the building needed to speak about the strain in the science. Through studying this one idea came the realization that there are preconceptions as to what the tractor can do and what the people think they do. Most people conceive them as purely utilitarian pieces of equipment that have no thought put into them. One way this design helps to challenge that thought is to put the tractor in the middle of different scenarios the tractor has helped to solve. By doing this the tractor can be realized in its importance in society. The placement of the equipment in this position also allows forms to be created that convey the ideas about control and solutions.
...combination of the various aspects. Not to concentrate on one, which would make it very static. By diversifying the subjects purpose in the design of the museum, a better understanding of the complexity of the machine.

semantics: the relation of signs to things signified, that is, how signs carry meanings, the property of elements.

In the design of this concept, visions of motion and power came to the forefront. Shifting the main axis of the building is a way in which the progression of the building can capture some very dynamic views up the river and into the city. This also allows the building to cross the “line of discordance” in a dynamic way. By crossing it in this way, the spaces on the interior can be formed and controlled by this shift.
what meaning does the built environment have for the inhabitants and the users, the public, or more correctly, the various publics, since meanings, like the environments that communicate them, are culture specific and hence culturally variable.

"meanings are in people, not the objects or things."
rapaport, pg 19

tractor/tractorless design
- creating a distinction between the ideas of a world with and a world without tractors and equipment starts to create an understanding of the effects that the tractor has had on our lives.

- if we start to question the perceived simplicity then we can start to appreciate the complexity of the issues at hand.

- moving along a linear pattern towards a final significant icon, acts as an emphasis to the idea that the tractor is the culmination of these spatial issues.

- the forms in this design speak of the effect that the tractor has had on the landscape. one can think of it as being the effect that a tractor has had on the land to be shaped and ordered. or that without the tractor, the landscape would still be curvilinear and undisturbed.
placement of galleries around research module

- by placing these spaces in relation to the research area, people can have a connection to the actual history of the machinery
- protruding "arms" of the building makes the connection to the land and agricultural society
- axis shift in relation to the site

(--) galleries need to be further differentiated
(--) greater center focal point
(--) level changes

This concept evolved into a scheme that helped develop the central core of the final building. The use of the idea of the galleries being centered around a focus turned out to be a valid way of organizing space as well as organizing educational experience.
"captured landscape"

- arrangement of spaces and variations to capture views and varied landscape

- directing peoples' attention across the spaces by placement of walls of non-placement (void) of planes

- relates to a nature cleared by agricultural needs

- placing the tractor in this can help make a materialistic connection

- each space still needs to be "unique" in the grander organizations

The concepts in this part of the process were integrated into the final design by informing the connection between the interior and exterior. The connection in the greenhouse and the river view both "capture the landscape" through the use of walls and progression through the space.
The final design for this project took into account many of the concepts that were developed throughout the entire year. Some of the concepts have been adjusted to react to various site and contextual issues. The previous concepts were designed to be building reactions to the thesis question of a meaningful architecture. When these concepts were applied to the design of the entire system of site and building they needed further development to become viable concepts.

In the review of this design, I will take the reader through a space by space description of the building. The spatial organization of the structure builds from an exterior into an interior experience. The interior is meant to have a special connection with the exterior at key points in the design.
The first aspect of the design that a patron would interact with is the progression into the site and the entrance of the building. This progression is meant to bring the patron out of the urban environment and into semi-rural environment. The use of trees and plantings of agricultural vegetation brings the person out of the city context and creates a new connection with the subject matter. This path from the parking area of the site will, in my mind, be a winding path that allows for new views and experiences to take shape. It was brought up in critiques that this path might be straight, but I think that a curvilinear path adheres more to some of the primary concepts in the design process. This absence of the presence of the effects of the tractor upon the earth allows for lines to show what the earth could look like. The tractor/tractorless concept can control this part of the design. As part of the entire narrative, the effects of the tractor on the modern world can play an important role in the effectiveness of the building. I believe that a person's experience can be shaped differently if brought from the city itself rather than the semi-rural context of the pre-determined parking area. The city entrance can be a more controlled set of paths and spaces, unlike the curvilinear spaces of the rural entrance. After the progression through the entrance sequence, bringing the person out of the urban and into the rural setting, the patron then proceeds into the main axis of the building. The entrance of the building is divided
into two halves. The concept behind these two halves relates back to the progression between contexts. This dual entrance to the building not only serves this purpose, but also allows the main axis to be capped off. Having the axis terminate at this point also increases the desired amount of disjunction with the city.

The site also has natural features that allow for dynamic manipulations of space to occur in the organization of the building. The river being the most important of these helps to form a boundary for the south edge of the building. The river in this design acts as the connection to the natural environment, and with that comes the need for the building to interact with it very carefully. The side of the building that touches the water attempts to respect the water's independence as well as taking the liberties needed to tie in and effect the connection of the water to land. The river's position in relation to the city grid also allows for shifts in the structure of the building to take place. The steel structure of the building relates to the strength of the tractor, and this needs to be set off from the order of the rest of the building. The river allows for that change.

view of the building in relation to the water
Moving inside the building, the main axis becomes the first impression for the patron and will begin to intrigue the person as to the educational aspects of what they are about to learn. The main axis is organized to bring the patron farther into the building along with attracting attention to the introduction of the subject matter in the museum. In the center of this main axis lies the centerpiece of the entire museum. In this space will be a key piece of equipment that introduces the person to the subject matter of the building. This piece can either be permanent, that is general enough to represent the entire tractor industry, or more dynamic, changing as the exhibitions in the rest of the building change. The piece could be the signature Cyrus McCormick Reaper or the first John Deere plow. These key pieces of equipment are not necessarily tractors, but do have significance to the advancement of the tractor as a tool for farming. The change of these signature pieces would relate to the changes in content of the different exhibition spaces. With that centerpiece, the rest of the exhibits could reinforce the advancements and growth of technologies as per the original intent of this museum.
Once a person has entered into the gallery spaces of the museum, they begin to follow the timeline of the history of the tractor. The overall program of the building from its conception was to be a history of the advancement of tractor technology in relation to the changes in the earth over time. The first gallery space that is encountered focuses on the period without tractors. This area brings together methods of farming and tools used by farmers that did not have the advent of the machine to assist in their labor. This section of the building has a large greenhouse that looks out upon the expanse of crops that were mentioned in the entrance path from the rural context. This connection of the interior to the exterior emphasizes the product of the labor. This space can be used to showcase the methods these farmers used that helped the country grow and can explain the hardships that were faced without the assistance of the machine.
The next space that a person will come to is the first steel structure gallery. Each of these steel galleries are meant to reinforce the structure of the tractor in contrast to the molded and shaped earth. These spaces consist of a very simple steel structure to reinforce the simplicity of the tractor. The quality of the movement through these spaces will be dictated by the displays. The tractor itself will create the pockets of space that the people will interact with. In this section of the building, the tractors will be mostly primitive. Steam and early kerosene driven tractors will be displayed in this section of the building to remain consistent with the chronological theme in the programming of the building.

When a person leaves the first steel gallery space, the next space will be one of the four flanking “earth galleries.” These galleries act to be the product of the tractor. In a metaphor derived from the act of the plow on the earth, these spaces from the exterior seem to be carved and disrupted. The same feeling can be seen on the interior with the displays being arranged on the non-linear walls. With more development, these walls could contain more of the exterior quality on the interior to reinforce the idea of that material being molded by the tractor.
The next step for an individual is to come back across the main axis. At this crucial point, the person comes back in contact with the signature piece of equipment. I believe this to be very important because the first half of the museum has been dedicated to the time before the tractors were deemed a staple of the farming industry. Now, the person is about learn about the tractors that have played an integral part in the development of the country. This signature piece can remind them of the beginnings of that evolution. This transition space continues in my mind to include the next space with the connection to the river. At this transition point, I think it is necessary for the people to keep the connection with the natural environment and to remember the complexities in that environment that have shaped what they are about to study. There is a large window at this point and it is a space where a tractor can be displayed to give the tractor a natural backdrop.
The second half of the building is programmatic- 
cally dedicated to the modern tractor. Once the tractor 
became a widely used tool for the farmers, the com-
panies could then begin to design tractors to fit the specific 
needs of the farmer. Each change can be displayed here. 
The advent of high-crop tractors, orchard tractors and 
other advancements can all be explored in this wing of the 
building. The steel structure in this part of the building 
acts the same way as the mirror side.

Moving into the final spaces of the building, a 
person will learn about the modern history of the tractor. 
This includes the place that computers and modern mate-
rials are playing on the development of future tractors for 
our fields. This section is not different in form than the 
other spaces that flank the steel structure. This fact can 
help emphasize the common history that the modern so-
plicated tractors have with the steam powered ma-
chines of the past.
The entire building functions as a storybook of the history of the tractor. The architectural language allows the building to supplement the static displays inside while functioning by itself as dynamic architecture. The building offers many chances for the patron to look upon the tractor as something more than a simple tool, but rather as an integral part of our history. That history is reflected in the structure of the building and the meaning that was derived from the subject matter.
The exterior of the building harnesses the basic principles of the design. The walls that make up the mass of the building are made of concrete and take the form of worked land. The manipulations of these forms were meant to look like the tractor had affected them in some way. The steel structure of the building can be seen as a dynamic element of the building from the exterior. This element is made of steel that will resemble the bodies of tractors of the past. The straps at each joint and the reflection of the glass defining the gallery spaces inside give the viewer an understanding of the importance of the tractor.

The center space of the building has been explained for its meaning to the interior of the building, but the exterior focus that it gives is also important. This center piece allows for an icon to be created for the site and context. The experience of seeing this building from the bridge to the west will be improved with this strong icon.
This section is very important to understand the qualities of the transitions between the spaces of the museum. As a person moves from the side galleries to the steel structure galleries, there are many changes that take place to enhance the experience. The difference in height is one. This difference in height reflects the need to connect to the sky through the clerestory windows. These windows come at the point where the "earth" and "machine" meet. This connection is the most important one in the entire building. The height of the steel galleries is also responding to functional needs. The size of the equipment that could be housed in these spaces requires such conditions.

At the point where the steel gallery and the modern side gallery meet in this section, there are display areas designed to place the tractor in a contextual display. The use of concrete pads placed in the middle of a field of grasses gives the tractor a sense of context. The pockets surrounding each pad would contain dirt and vegetation that would be able to grow due to the sunlight coming from the clerestory windows in the steel structure.
This section shows one of the most important connections in the building. This connection describes the connection of the tractor to the earth. This aspect can be seen from the interior and exterior of the building. The design of this connection has grown from a complex truss system into the simple arch design. This simplicity is inherent in what I have been trying to understand about the identity of the tractor throughout this process. Questions arose at the beginning of the process that questioned whether a tractor was a simple machine or a complex combination of parts. Through this investigation, in order to convey the importance of the tractor, I believe the building needs to reflect the idea of a complex combination of parts. The steel structure has been refined from the truss system earlier proposed, but still retains a quality of complexity. The complexity has shifted from the roof structure to where the column meets the ground and where the parapet of the concrete meets the steel. These two intersections have to convey this complexity. The dynamic nature of the pinned connection at the base and the apparent tension of the steel and concrete transferred through glass, allow the complexity to become apparent.
Physical Model
Arial view from the northeast

Arial view from the northwest
north façade as viewed from downtown

aerial view from the south
view down axis from the south

view from rural entrance
Summary of Work
Through this process of inquiry for considering the possibilities of creating a meaningful architecture, I could not keep from learning about the subject that I was deriving that information from. Perhaps this type of inquiry is necessary for an architect to improve his level of design.

The agricultural industry has always been an interesting thing to me, but when combined with the creation of architecture, the intricacies and broader issues of our society’s evolution arise. Just as in architecture, tractors have had to change to the needs of the people. Technologies and techniques have dictated how we live. This dictation is not bad in that it forces people to remain dynamic. That dynamic quality is what makes architecture thrive as well. The creation of architecture that responds to those dynamic qualities is what makes a meaningful architecture. The meaning is then inherent in the program to keep people changing, be it by education or simple experiential qualities.

The history of the tractor has been an interesting challenge to create architecture from. This history helped lead me to several decisions in the design and assisted in the building becoming what it is. The history of a community in relation to the history of the subject is what helped drive much of my design. The ideas surrounding the exterior issues and the progress to the site all were derived from those community/contextual issues. The involvement of the person from that community in the programming of the design is crucial. The mixture of people and machine is what made this project become meaningful.

"Pioneers have bailed to give us the means of supporting millions of sheep, pigs, cattle, and poultry. Today the countryside is load with the hum of machines all contributing to the feeding of the population. More than any other it is the farmer and his men who have made us what we are, and in this they have been helped by the engineering pioneers in every age."  
Wright pg. X
Bibliography


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