thesis project by Lynn Marie Faulring

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William Brown, Chairman

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Mind takes form in the city; and in turn, urban forms condition mind. For space, no less than time, is artfully reorganized in cities: in boundary lines and silhouettes, in the fixing of horizontal planes and vertical peaks, in utilizing or denying the natural site, the city records the attitude of a culture and an epoch to the fundamental facts of its existence. The dome and the spire, the open avenue and the closed court, tell the story, not merely of different physical accommodations, but of essentially different conceptions of man’s destiny . . . With language itself, it remains man’s greatest work of art.

Lewis Mumford
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abstract

What makes a city exist? Is it movement, rhythm, symbols, texture, volume and time? Architecture should heighten the drama of living, walking gives a true scale of the city, creating an experience. Urban spaces must accommodate the individual. Movement systems determine the shape of the fields of influence; this varies in intensity with the degree of movement.

This thesis is an exploration into architecture of meaning, space and elements. These common elements change context and increase scale while recognizing the difference between inside and outside. This contrast supports meaning. The play of scale, hierarchy and patterns use space in different ways accommodating the individual. An existing condition is transformed and renovated. What entities are removed and what entities will remain?

This art museum is permanent and changing over time, architecture that transforms. A strong symbolic form, the cube, establishes an entity within the urban fabric. A sequence of sensations in size, scale, color, texture and light motivate the space. Tension is created between two bodies, the exterior brick shell and interior steel framework. Natural light penetrates a double height space of new elegantly structured steel with reinforced concrete stepping platforms. The existing wood columns overlap into this steel structure creating a place for movement.

Juxtaposition is created between new construction and the existing. Light steel opposes heavy wood while transparency opposes opacity. Steel frames with concrete slabs independent of the existing shell and cantilevering precast concrete boxes oppose wood timbers and brick bearing walls. Concrete floors and gaps created where they meet walls oppose wood floors touching the walls. This completes this thesis.
In 1881, Frederick J. Kimball chose Roanoke (then named Big Lick) as the spot where his north-south Shenandoah Valley Railroad would cross the east-west line of the Atlantic, Mississippi and Ohio. The two railroads were combined to form the Norfolk Western and soon after, construction began on the many houses and shops the town would need. He had the vision to build a grand hotel. The Hotel Roanoke became a reality and its elegant Tudor appearance has been a fixture since Roanoke’s beginnings as a railroad town.

The wooden hotel had 38 rooms, about 60 more were added over the next four years. In 1898 a fire destroyed much of the building but it reopened a few months later. The hotel was renovated in 1995; “The Grand Old Lady on the Hill” now offers 332 guestrooms in addition to a conference center with 37 meeting rooms and a ballroom. The Norfolk and Western and the Southern Railway in 1989 merged into Norfolk Southern and helped contribute money to keep the hotel opened.
implicit and explicit symbols

old distinguished from new

various elements mixed together
What makes a city exist? Is it movement, rhythm, symbols, texture, volume and time? Movement systems determine the shape of the fields of influence; this varies in intensity with the degree of movement. Architecture should heighten the drama of living, walking gives a true scale of the city, creating an experience. Urban spaces must accommodate the individual. The human eye doesn’t want to be too easily or quickly satisfied in its search for a unity within a whole.

Cities are natural phenomena and beyond our ability to change. Binding together of perception sequences shared by large numbers of people develops a group image from shared experiences and gives a sense of underlying order which individual freedom and variety are related. A simplest form of sense is identity. “A sense of place”, identity, a place as being distinct from other places, unique. Events also have identity “A sense of occasion”, orientation in time, how the present moment is linked with the past and future. History remains meaningful only if the genuinely old can be distinguished from the new.

The urban environment is a medium of communication, displaying explicit and implicit symbols: flags, lawns, crosses, signboards, picture windows, colored roofs, spires, columns, gates, rustic fences, sculptures, clocks, street signals, pavement, sidewalks, awnings, newspaper machines, phone booths, fire hydrants, benches, and light poles. In moving through the environment we learn to pick out these different patterns of stimuli. The grain or texture of a settlement is the way various elements are mixed together.
path characterized by an "event"

positional relationships, objects

objects, screens and surfaces
What is **space**? It denotes a discrete and delimited volume of human occupation and movement. It’s a three-dimensional field of everyday experience.

What is a **place**? It’s the further perceptual qualification of a space to achieve an identity as a behavior setting. A place is a definite location, a portion of space.

What is an **occasion**? It’s due to a presence and activity of human occupants in a place in accordance with an implicit or explicit program. It’s an event of happening, a favorable time or opportunity.

Visual space exists in terms of the perceived positional relationships that are objects, screens and surfaces. A **place** results from the additional treatment of the more or less anonymous space. Place depends on furnishings such as props, finishes, and effects.

Path is characterized by “**events**”, any noticeable change in any attribute, an event occurs at the start and at the end of horizontal motion and at a change in the rate of motion. The main urban elements are centers and paths. Elements of human orientation include paths, edges, districts, nodes, and landmarks. A path equals an event. Given space equals a particular place. Public spaces are the responsibility of the community.

Distance zones occur within an urban context. 6-15 ft. - 7-12 ft. is the far phase of social distance. 15-35 ft. - 12-25 ft. is the close phase of public space distance. The far phase of public distance begins near 30 ft.
weathered brick wall

bridge iron work

pedestrian (wood) & vehicular (blacktop)

brick with beveled edges
When redeveloping an area, a crucial component is walking the site to experience the space. Understanding a place’s history and past remnant help to unlock the future. Paying attention to small details on the site influences the physical and literal connections. Without these links progress is not possible.

There are two types of scales used in studying and developing an urban place: the pedestrian scale and the vehicular scale. The pedestrian views at eye level where detail is evident while height is limited. The motorist views at a specific velocity where detail is lost but massing is intensified. Important to both scales is an element that satisfies both requirements.

Specifically, the city of Roanoke contains elements of human orientation:

- **paths** = new proposed wooden walkway and existing sidewalks
- **edges** = railroad and Salem Avenue
- **districts** = Market Area, Warehouse Row
- **nodes** = 2 bridges (connector point, shift in movement)
- **landmarks** = Mill Mountain, Hotel Roanoke

Two blocks west of the downtown Market place is the location of Warehouse Row, the investigation of this thesis. Located between Norfolk Avenue, southwest, the railroad its northern boundary and Salem Avenue its southern boundary, the project is a combination of seven brick warehouses.

The highlighted areas mark important landmarks revealing some of Roanoke’s past and future. To the left of the site is the Museum of Transportation. Two blocks east is the recently erected First Union Bank and below that the Market area. Diagonally across the railroad tracks are three smaller buildings that were once part of the Norfolk Southern complex headquarters, now abandoned. To the right of them is the magnificent Hotel Roanoke.
buildings scaled to a pedestrian level

bridge is a link
What encompasses the specific area of the site? This area is a tall vertical cavern, which mimics the mountains in the background. It becomes a valley in the expanse of the city. The pedestrians move simultaneously along a path creating a flow with the railroad.

The biggest influence of growth in Roanoke, the railroad, becomes a link and a divider simultaneously. The railroad has been named the river of Roanoke by some because it’s a point of attraction. The trains are the boats of a river.

The pedestrian walking in this area has a sense of being separated by the railroad. This area has many parking lots so more “green space” could help alleviate this urban jungle. The trains when passing are not immense; the car heights are proportional to a person’s scale and the speed is very moderate.

The buildings here become horizontal against the vertical buildings of the surrounding city. They cater to the pedestrian level providing a feeling of comfort. First Union bank is the only building out of scale in relation to a walking person.

The bridge as it stands now is for cars and pedestrians. It’s a major artery between the divided sides of the railroad. The bridge’s narrow space creates a fantastic view of Roanoke in the direction of the railroad, east and west. This bridge acts as a major focal point to the railroad and the downtown area. The bridge is a crossing point connecting safely and visually both sides. The mountains off in the distance become reminders of the heritage in the Roanoke Valley.

This old bridge possesses an interesting character. Its floor is constructed of wooden planks and the railings are cast iron. Its major structure is framed of steel while the foundation is stone. This variety of materials and their articulation give it a more pedestrian friendly atmosphere. The bridge defines a path and connects both sides of the railroad while linking back to Market Square downtown.
This is the anchoring building of Warehouse Row. Its white washed brick exterior presents bump outs mimicking the wood structure inside. The building's railroad history and its thick outer shell give it an austere presence.
Construction is about appearance, the way material ages, looks, feels, and smells, the aura and experience it presents. The articulation of the brick and the oval windows of this warehouse building have a special quality. In the early nineteenth century workers took pride in the aesthetics of the buildings they constructed. This warehouse’s thick brick outer shell has a rough texture and whitewashed appearance. The interior is comprised of heavy timber beams, columns, and wooden plank flooring. Light penetrates through the south facade windows during the midday hours and beyond; the inside is rather dark and mysterious. The north facade is only illuminated during the morning hours with a diffused light.

The scale and proportion was never overlooked in this building. There are two doors, one to the scale of a person, the other much larger to accommodate large storage items. Brick relief coursing on the exterior mimics and reveals the shape of the wooden structure on the inside.

This building’s shell has barn like qualities. Some of these qualities come from what’s called the “banked barn”. This type has a masonry exterior with superb craftsmanship, usually stone but not always. This shell is fortress like and extremely thick. The doors are constructed of vertical wooden slats that slide left and right on an inside track. The interior structure contains different sizes of heavy timber beams and columns. These qualities are strikingly similar to this existing warehouse.

These seven warehouses are currently being used for storage but originally the first two buildings were used for just storing sugar. The goods were loaded off the trains onto the loading dock and then into the building. The main thesis concentration is this first four-story brick building situated next to the cast iron bridge spanning the railroad. This proposal is for an art gallery big enough to fit the growing collection of Southwestern Virginia.
interior wood beams and columns

door and window with stone lintels

a rusticated concrete tooled base
brick exterior mimics interior wood

proportions express verticaity

doors at two scales
This perspective is the existing seven Warehouse Row buildings, the last one on the right is the main thesis investigation. The brick exterior conveys similarly spaced structural bays creating its unity.

This first floor plan shows elevated entrance pads of concrete to the north that meet the floor level inside. This continuous concrete pad was used for loading goods on and off the train. The south side has separate entrances and concrete pads for each building. The structural spacing and size of the columns are similar even though the buildings were erected at different time periods.
This south elevation faces the parking lot and expresses the varying styles of each building. This side is highlighted by direct sunlight in the afternoon hours.

This north elevation faces the railroad and has a concrete pad to accept goods from the train. This side is illuminated only during the morning hours, the rest of the days are in shadow. A different, dreary atmosphere exists here contrasting the sunny south elevation.
Warehouse Row (red)

left - road overpass (light gray)

grey - cast iron car and pedestrian bridge (light gray)

east - parking garage (dark gray)

west - Museum of Transportation (dark gray)
Warehouse Row (red)

north - the railroad (light gray)

north - two warehouses, parking lot (dark gray)

cross Salem Avenue - parking lot (light gray)

south - two warehouses, parking lot (dark gray)
steel column and beam connections

steel column connections
Some final thoughts about Warehouse Row are to continue it as an art gallery. Treat the existing architectural conditions by preserving the facades since they have no damage but replace the roof. The wooden roof trusses are rotted from many leaks in the roof. On the railroad side of the buildings, a concrete loading dock is deteriorated. It’s replaced with a pressure treated wooden walkway, elevated to meet the existing interior floor level of the buildings. The east facade’s brick is water damaged which is taken out, infilled with new stacked brick bond contrasting the existing running bond and distinguishing old from new.

The old wooden trusses are to be taken out and replaced with square steel tube trusses with steel rods that fit into the existing wall pockets. The building is covered with a steel and glass skylight system for maximum light penetration. It has operable shading devices so the artwork being displayed will be protected from harmful rays. This skylight system has a built in rain gutter that overlaps the existing brick wall.

Most of the interior wooden beams and columns are taken out and replaced with steel, a contrasting material. A small portion of the existing wooden structure and floor towards the railroad side will remain creating a dark intimate space preserving a little of the building’s history where artificially lit art exhibits of historical precedents will be displayed.

A steel framework for the rest of the building replaces the old wood and uses W-section beams of various sizes and C-channels for columns. The column is comprised of two C-channels sandwiching a flat plate that extends at the top and bottom beyond the channels for connection. This exposed flat plate extends creating a place for a more stable connection between beam and column. The web of the W-section steel extends past the flange making a larger place for attachment.
A new steel structure and concrete floors replace the wood which is almost entirely removed. The new floors step up and down three risers for viewing artwork. In the three corners, new steel framed stairwells are erected.
Along the right side, the east, five levels of office boxes of reinforced precast concrete rest on the steel frame, cantilever and extend through the wall engaging the outside. They contain two sliding shades so the inhabitant regulates the light. They are stacked on top of each other and become an urban element to identify with. The spacing between these boxes is 1’ to 1’-6” accommodating electrical and mechanical functions. Some of these boxes don’t penetrate the wall and are backlit with artificial light giving a similar feeling as the naturally lit boxes. On either end, contained in the precast concrete boxes are accessible restrooms that don’t penetrate the wall for privacy.

The first, third, and fifth floors are double height spaces cut away from the brick shell for plenty of natural light. They are reinforced concrete slabs supported by a steel frame. This area is where larger exhibits such as sculptures are displayed. These floors connect with the office box levels. A centrally located elevator services all six levels of the gallery.

The spaces along the left side, the west, step up and down three risers allowing easier viewing of smaller paintings. Their steel structure overlaps into the existing wooden column and beam space. This overlap area creates circulation; handicap ramps connect the two levels. These two lines of columns simultaneously create a new zone 4’ wide. On the right side of the existing wooden structure, the box side, new steel touches the old columns and beams creating a different spatial organization. This right side has a compressed feeling opposing the spacious 4’ distance between old and new columns.

The building’s three corner stairwells are constructed with steel and framed with an aluminum panel system. The panels are layered with insulation for fireproofing. This same system is also used for the entrance boxes on the north and south facades along with the elevator shaft. Halfway in between these entrance boxes in the same plane as the existing brick walls is a glass door. These dark intimate spaces open up into the larger more expansive gallery creating a threshold between old and new and inside and outside. The box's floor accentuates this difference with a contrast between its wood and the gallery’s concrete floor.
The building shell is left intact except for this east wall which is partially demolished for the office boxes. Half of the center wood structure and floors is also kept.

The building’s west wall is left undisturbed because of the other warehouse’s wall. The central wood structure and floor is kept. Both north and south facades keep their original openings but new glass is inserted.
The windows on the north and south facades are treated differently because of the varying intensities of the sun. On the north side, the window mullion system is applied to the outside of the facade for maximum light penetration. On the south side, the window mullion system is applied on the inside of the facade so the light won’t be as intense. The thickness of the brick wall also helps in this diffusion.

Instead of a singular design proposal, this thesis seeks to establish an architectural palette that can be transferred to new buildings as well as renovations. This palette uses dark intimate spaces of natural wood and small reinforced precast concrete boxes with natural diffused light controlled by the person. A place for electrical and mechanical systems is designated in the design. Double height thin but elegantly structured spaces of steel and reinforced concrete with natural light, along with stepping platforms where the columns overlap creating a place for movement. Stairwells and elevator shafts becoming elements in the space instead of necessities. Treating the building’s different light conditions with windows that relate to their sun orientation.

This art museum is permanent and changing over time, architecture that transforms. It creates volumes of space in scale with its needs. A specific place between cubes sustains the building’s life systems. This strong symbolic form, the cube, establishes an entity within the urban fabric. It engages the inside space as well as the outside becoming part of the city. A sequence of sensations in size, scale, color, texture and light motivated the spaces. Tension is created between two bodies, the exterior brick shell and interior steel framework. The attention to detail and the hierarchy of the spaces give the inhabitant an eye-opening experience. Movement is directed but not regulated by overlapping materials and structure. Not only is the artwork inspiring but so is the construction and sequence of spaces.
New steel tube trusses are inserted into the existing brick wall openings which housed the old wood trusses. Here the material contrasts in color and texture. Wood, brick, concrete and steel are used.

This top view demonstrates the importance of the steel frame separating the functions of the building. The middle left section is the existing wooden structure.
This axonometric demonstrates the building's old and new parts existing cohesively. The facade and east wall both have protruding boxes that become thresholds. This creates an urban element engaging the inside as well as the outside.
steel tube stringers

steel structured stairwell

steel grate treads

steel C-channel structure
steel column and beam connections

steel frame anchored to brick wall for lateral support

existing floor cut between steel column and beam

steel column base set into concrete floor
This wall section cuts through precast reinforced concrete office boxes containing sliding shade devices. It shows the pocket for the square steel tube trusses. These trusses contain a prefabricated gutter system which slopes slightly to two existing downspouts located on the exterior of both facades. The roof is an aluminum and steel framed glass panel system.
The basement level houses mechanical functions along the right side which is enclosed with an insulated metal panel system and steel structure. The rest of the basement is storage facilities for the art gallery.
This section cuts through small galleries on the left, the center is the existing wooden structure, a historical gallery. On the right are restrooms and offices constructed of reinforced precast concrete boxes cantilevered off a steel structure.
The first level contains a double height main gallery, steel and concrete. Two smaller steel structured gallery floors step up three risers and overlap into the existing wood structure creating a place for ramp movement. The existing wood structure is a historical gallery. Along the right side, reinforced precast concrete boxes protrude through a new stacked brick wall. These boxes contain restrooms, offices and a conference room which let in natural light.

first floor plan 3/32" = 1'-0"
This section cuts through the main gallery on the left, the central elevator services all six floors and on the right are sitting areas with concrete slab floors supported by a steel structure.
The second level is opened to the main gallery below on the left side but along the right offices are contained in reinforced precast concrete shells. They penetrate the new stacked bond brick wall and have sliding sun shades to regulate the light.
This section cuts through the main gallery double height space on the left, the center is the elevator and on the right are restrooms, offices and conference rooms. Their enclosures are reinforced precast concrete boxes cantilevered off a steel structure. They penetrate the brick wall to the outside. The top two floors are sitting areas.
The third level contains a double height main gallery of steel and concrete which is opened for maximum light penetration. Two smaller galleries step down three risers and the historical gallery fills the back part of the building. Offices, a conference room, a sitting area and restrooms reside along the right side. This floor has an indoor/outdoor sitting area with a steel frame and glass enclosure. It's a threshold for experiencing the brick facade.
The fourth level consists of two small gallery spaces of steel and concrete which step down three risers. They contrast the existing wood columns, beams and floor. This old structure, the historical gallery is penetrated by a 4' overlap where a new steel structure creates ramp movement.
This section cuts through the right and left steel structured stairwells. The center contains 18 reinforced precast concrete office, restroom and conference boxes. They cantilever from a steel structure extending through a new stacked bond brick wall. Sitting rooms and services are also interwoven into this fabric. The space between each concrete box is designated for plumbing, heating, electrical and cooling pipes, ducts, and wires.

section N.T.S.
This section cuts through the right and left steel structured stairwells. Three small galleries step up and down three risers joining the three main gallery levels which are double height spaces. The steel structured elevator shaft cuts through these spaces and services all six levels. The existing structure of wood column, beam and floors is located to the left of the elevator shaft creating the historical galleries on all four levels.
The fifth level main gallery space is framed with new steel and reinforced concrete slab floors with a double height ceiling. The right side is more compressed with reinforced precast concrete office boxes and restrooms.
The sixth level contains a historical gallery constructed of existing wood columns, beams and floor. This is the top level of the building which is opened on all sides to look below. At this level a person is closest to the new steel tube roof trusses where natural light is let in.
framework east, precast reinforced concrete boxes

inside, steel stairwells, office boxes and wall beyond

framework west, steel framed galleries on varying levels

inside, steel framed elevator, galleries and stairwell
This south facade shows the first floor entrance box and the third floor glass and steel framed window box.
This south facade shows the first floor entrance box. It becomes an urban element engaging inside and out simultaneously.
This east facade with its penetrating precast concrete office boxes engages the outside as an urban element.
fifth floor looking south at main gallery

third floor small gallery looking south

first floor main gallery looking east

third floor main gallery looking north at smaller galleries
the Roanoke star

Virginia

Roanoke

Roanoke county
In the Commonwealth of Virginia, Roanoke is referred to as the “Star City of the South”. It’s flanked on the southeastern side by Mill Mountain where an illuminated star was erected in 1949 to signify the end of World War II. It gives the city an identity, a permanent icon.

The city of Roanoke is the dominant urban center for a large fertile agricultural region in Southwestern, Virginia. It’s located between the Appalachian Plateau and the Blue Ridge Mountains, 175 miles west of the state capital at Richmond. It has served as the major crossroads for traffic moving through the Shenandoah Valley and for travel between the Tidewater and the Midwest. It’s a natural gateway through the mountains to the Midwest and was instrumental in establishing the Norfolk and Western Railway’s path.

Roanoke’s population is estimated at about 230,600 inhabitants and is the only large city in Western Virginia. However, it’s within a day’s drive of two-thirds of the United States’ population. Roanoke’s economy rests on the manufacture and repair of rail equipment, the production of clothing, textiles, and furniture, and services such as health care and banking.
present day market canopy

first erected market building

Center in the Square building
The historical Roanoke market was established in 1874 and ten years later a two-story; brick structure was erected which became the focus of the city’s food distribution. The periphery had a partially sheltered canopy for the farmers to occupy to sell their fruits and produce.

Today, moving east from Roanoke’s downtown retail shopping core, the urban scene changes. Within one block the world is transported to department stores, specialty shops, large office buildings, and impressive banks. The present market appears much as it did over forty years earlier. It’s a compressed space less than six blocks in area and is still very much alive. These spaces range from pawnshops, tiny cafes, low cost hotels, coffee shops, various secondhand stores, to theatres, galleries, restaurants, boutiques, antique shops and museums. All this is contained in two and three story buildings constructed during the latter part of the 19th century.

In the last fourteen years, this Center in the Square, what the market area is now called, has become the arts and cultural complex of Roanoke. The center is now the core of an economic and cultural revival. 240 new businesses have opened in the market area, and $750 million has been spent on renovation and new construction in this section of Roanoke. This includes the First Union Bank, the Norfolk Southern’s buildings and the Hotel Roanoke. Future plans for the Norfolk Southern buildings include housing and a learning center.
First Street view, Market Square 1915

Market Square building 1922

Market Square 1936

Mill Mountain
present day 5

present day 6

present day 7

present day 8
The first urban thoughts about this thesis related to its context. How to connect Warehouse Row with the rest of Roanoke? After an overall analysis the conclusion was to use four key urban elements. The first was the lightpole, the second the walkway, the third the market structure and lastly, the urban cube. This last element, the urban cube was previously discussed. The following pages contain detailed descriptions of these urban elements and how they function. These were all initial ideas and were not fully developed.

The lightpole’s introduction came from walking this site during evening hours. The conditions along both sides of the rail were dimly lit. A lighted direction was composed out of many wooden poles.

The **lightpole** how is it constructed? Along both sides of the railroad, lights are placed within two double pieces of pressure treated wood posts. Three galvanized steel connectors anchor the four 2x4 wood columns to the ground and occur at the halfway point and at the top for stability. These connectors attach to the light fixture at all three positions depending on the desired intensity of the light. The space between the columns houses the wires of the lights. These poles are erected along the rail and continue over the existing bridge to illuminate the path at night.

These double columns are the basis for construction of the wooden walkway and new market structure. The repetition of these parts and the ease of purchasing the materials along with the ease of erecting them make it economical and expresses the versatility of the structure. The city of Roanoke can adapt these lights to different urban conditions within its fabric while making walking much safer.
walkway with varying opacities and roof materials

walkway looking west

walkway pavilion constructed of three lightpoles
The walkway's idea is directly related to the lightpole but presents opportunities to stop and take in the urban scenery.

The walkway how does it work? Along both sides of the railroad, the walkway is placed containing the lightpoles for night use. The floor of the walkway consists of brick pavers except for in front of the warehouse buildings where elevated wooden planks meet the inside floor level. The buildings existing concrete loading docks for rail use will be demolished since they are crumbling.

The walkway contains lightpoles; wooden frames made up of three lightpoles and vegetation, which meander along the rail breaking up the long linear quality of the site. To mark an important event along the path, three lightpoles are combined forming a triangular configuration. 2x4's of various spacing span the roof, which contain planes of varying degrees of opacity presenting different lighting conditions. These planes are a strong canvas, glass and translucent plexiglas that are fastened to the top of the 2x4's. These canopies are constructed so pedestrians have an urban place to gather.
market structure, varying conditions of enclosure

market structure south view

market structure, varying degrees of opacity

five market pavilion structures

market structure, varying conditions of enclosure
The market structure is an attempt to link the existing Market Area of downtown Roanoke to Warehouse Row. Setting up commerce gives the area some financial stability.

The warehouse parking lot, which faces Salem Avenue, is devoid of trees and life. The walkway will help to bring pedestrians to this area and a wooden market structure in the parking lot becomes a framework for vendors, restaurants, and shops. A row of trees will also add character and shade to this place.

This four-lightpole enclosure consists of varying degrees of openness and opacity. Brushed glass and clear glass makes up the enclosure. Four lightpoles are again used linking each of them together with galvanized steel connectors to make the frames. These frames and line of trees provide a buffer space against the noise of passing cars on Salem Avenue. These wood structures provide shade from the intense southern sun. The space between the wooden market structure and the warehouse is a fifteen-foot distance. This preserves the warehouse’s facade; which tells a story about the history of this place.
wall layers are filters but also bring the outside inside

new steel supports the floor, separates from facade

window boxes display sculptures, become an urban element
The importance of a place depends on keeping its identity. There are many vacant buildings in Roanoke, why not renovate while preserving the building’s history. The difficult question is how much to keep and how much to take away without losing the building’s integrity.

The first proposal is an art gallery. Comprised of all seven-warehouse buildings, the program: offices, a restaurant, bookstore/gift shop, studio/living space for artists, storage, gallery space, and a lecture hall. The restaurant can be accessed nightly and the other buildings closed off for security. Each side of the facade is treated differently. The north side, the railroad side, has no shading devices for maximum light penetration. The south facade, the parking side, has different shading devices on the gallery windows regulating light penetration so the artwork is preserved.

The original facade openings are kept while wood and glass window boxes are inserted. This enables a pedestrian to preview artwork from the outside while drawing them into the building. These boxes become identifiable urban elements within the fabric of the city.

A contrasting new steel structure is juxtaposed with the existing wooden column and beams. The roofs and floors are cut away from the brick exterior at certain moments letting in natural light. This occurs along the facades where they meet the roof and when important exhibits are erected.

The wooden walkway along the railroad side will extend through the building which can be closed off for security reasons while the pedestrian is able to view a glimpse of the art work while on the walkway. This brings the urban environment inside.

The interior structure of all the buildings are wooden columns and beams 1’x1’ square which are not destroyed. The new steel mingles with the old but doesn’t overpower it. The existing freight elevators remain but two new stairwells are constructed out of steel.
window boxes, glass and wood framed

main gallery, two layers of wall, brick and screen

section, new steel and old wood structure interwoven
The first scheme of the first floor plan. Spaces are arranged as follows from left to right: restaurant, gift shop/book store, the main gallery with the exterior walkway passing through the interior, and two smaller galleries.

The first scheme of the second floor plan. Spaces are arranged as follows from left to right: lecture hall, restrooms, smaller galleries, the main gallery, and another small gallery.

The first scheme of the third floor plan. Spaces are arranged as follows from left to right: roof plan, artist's workshop and living spaces sometimes opened to below.
window box, pivoting movable shade

frame of wood

wooden window box top
window box, glass with wood base frame

copper gutter and downspouts

wood frame base
interior glass double door entrance threshold

double door threshold

exterior double wood doors on tracks

interior glass doors sit on wood frame
The second Warehouse Row building. This south facade contains wood framed window boxes of glass, inserted into existing openings. The box shades pivot on a rod according to the intensity of the sun so artwork is not harmed.

The second Warehouse Row building. This north facade contains a center glass and wood framed window box for viewing artwork inside as well as outside. A steel frame structure holds up steel display cases on the interior.
second floor north, steel display cases

first floor north, steel framework is the handrail

first floor north, wood and glass box for art work

first floor south, old wood and new steel structure
relationship between old wood and new steel column

metal frame, wood panel enclosure between old columns
After another investigation of the buildings, the findings were that all of them contain wooden structures. Three out of the five buildings have a steel structure on the first floor and the other floors are wood. This brought up the question of material. How much of the existing to keep and how much to take away, if any? The other question posed is where to place the new steel columns in relation to the old wooden ones without disturbing them.

Designing all seven buildings was too difficult a task so concentration turned to the first two wooden structured brick buildings. More detail could be reached with this decision. This new space contains only an art gallery.

The solution is imposing a new grid of steel frames for hanging and displaying the art exhibits but leaving the existing structure. Cut away the floors in the center bay for a stairwell and cut the roof along the facades letting in light. This area is exposed to the elements and becomes a threshold between the old and the new. The new facade is made of curving glass and steel while a wooden bridge spans across this moat. The wooden floorboards are taken away here where the structure remains. The curving glass and cut floors occur at all levels. This floor recedes back 1’ on each floor letting in more light. This creates an interior place for displaying sculptures.

The urban condition of the site changes so the middle warehouse building has the roof taken off and the floors taken out exposing the wooden structure. This becomes a link between the railroad side and the parking lot side. The walkway from the railroad side extends through this structure for direct access. This helps create and urban room for pedestrian gathering.

These last two end buildings now use a steel framework that supports the exhibits but not the actual building. This scheme was considered an industrial design issue since it was not architectural and didn’t structurally hold up the floors.
west, existing wood columns contrast steel frame

south facade, openings show curved glass beyond

east, service center becomes stairs and restrooms

curving glass from facade
first floor plan

second floor plan

third floor plan
column and wall relationship
The next proposal is to work with one building, the four story end building. It becomes an anchor for the other seven warehouses and a model for renovating them. The decision is for something other than an art gallery. The proposal is for an office building or store but keeping multipurpose in mind.

The organization of the spaces is like a street running through the center of the building. Leave a remnant of the old, the middle portion, but extract the rest. These central wooden columns, beams, roof and floor remain. Different spaces along both sides form while renewing the structure with steel and different flooring materials creating thresholds.

To help organize the space, the services are grouped along the right side including stairs, an elevator, and restrooms. The new materials include a reinforced concrete elevator and concrete block restrooms. Their floor structure is made of steel. The front and rear entrance boxes are constructed of wood studs and wood horizontal siding. These dark, small spaces open up creating a transition to a larger naturally lit space. They create a filter to bring in pedestrians while being an urban element.

The left side of the building is infilled with new steel and a different type of wood floor. Both sides are lit from a skylight above. The left side contains receding floors letting natural light filter to the ground floor.

Window boxes of wood and glass are still employed in the existing openings so a person experiences the transition between inside and outside. This doesn’t destroy the facade. It becomes an opportunity to touch the old brick wall.

The treatment of the column is an architectural question. To let it be placed the same way in all spaces is not respecting it. The new concrete block wall surrounds the column making a place while the new steel never interferes with the old. The old columns touch the concrete elevator but the new steel stair structure completely separates from the old column.
from left, restrooms, elevator, steel framed stairs

steel framed floors cut away to let in light

wood entrance box, new steel receding back

wood entrance box
first floor, north at wooden entrance box

fourth floor, north at poured concrete elevator shaft

first floor, east at concrete block restrooms

second floor, west wood beams, columns and floor
This section looks north expressing the three bay structural system. The left side is new steel construction, the center is an existing wood structure and the right side is new steel frames with concrete and concrete block restrooms.
The south facade window boxes are constructed of glass and wood. They contain artwork which is viewed inside and outside. A wood framed and clad entrance box threshold exists between old and new.

The north facade contains new steel on both sides. The central existing wood bay is not touched. The left side services an elevator, stairs and restrooms.
Unless otherwise noted, images, drawings, and photographs by the author.


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