URBAN ARTIFACT

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Degree
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ABSTRACT

Urban artifact is a deep study of the entropic nature of a destabilized big-box. When a building is orphaned at the end of its usable life, a slow and steady decline begins to happen. This project is a study in what the disconnected Big-Box has become and the development of productive practices to actively engage it.

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CHAPTER ONE | PROVOCATION

THE DORMANT SITE

Dormant big-box stores are becoming very common in towns across the United States. Big-box stores such as Wal-Mart, Lowes, K-Mart, and Sears are some of the biggest offenders, but the number of other large retail stores closing their doors are growing at a rapid pace. Generally, most of these companies didn't own the land or the building they occupy, so they have no investment in the property, other than the products inside and sign-age of the store. Since the mid nineteen nineties Wal-Mart has started to purchase land and speculate new housing developments and purchase land nearby. They now have a corporate real estate division that works to sell or lease older properties (Figure 1) and land (Figure 2) still owned by the company. These are huge stores that are left empty because they have served their purpose and are at the end of life, per the retailers that occupied the space. Typical big-box stores range in size between 60,000 to 150,000 square feet, constructed mostly of concrete block and steel.

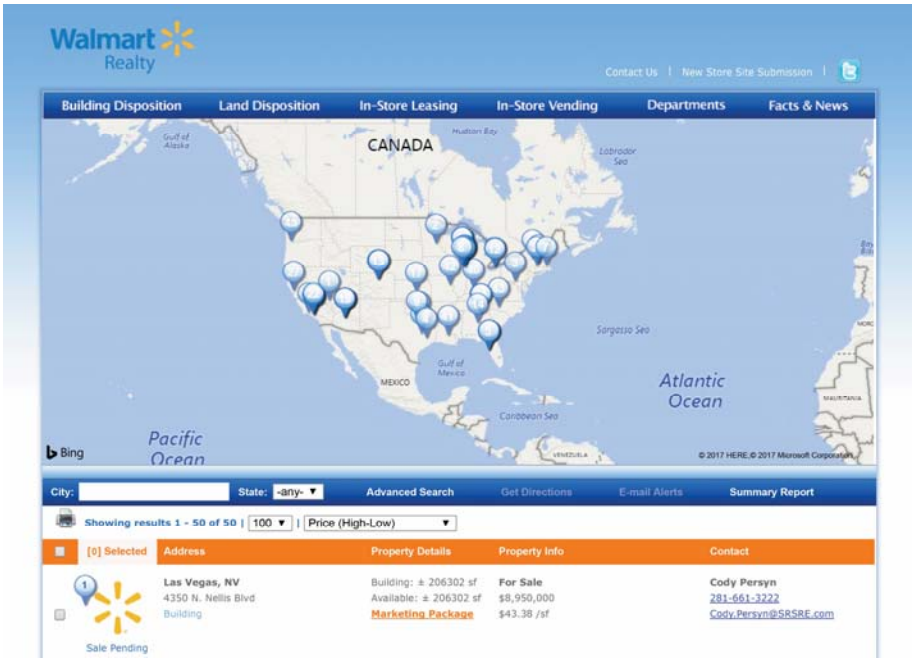


Figure 1. Walmart Buildings For Sale

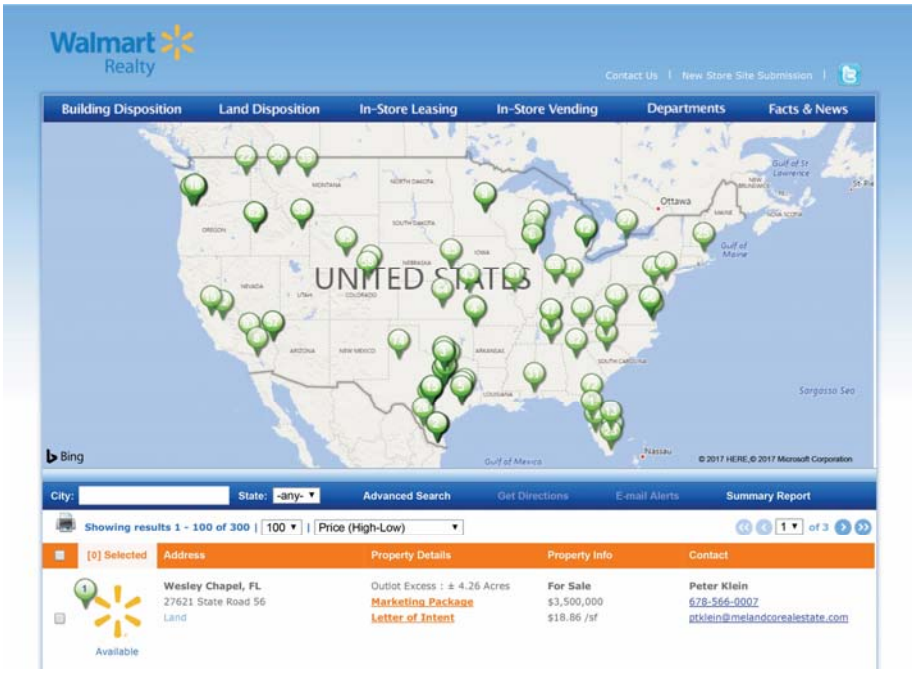


Figure 2. Walmart Land For Sale

CURRENT TRENDS

"The days of big boxes and power centers seem to be giving way to more urban-centered and smaller-footprint retailing, undermining the economics of larger-scale retailing."[1] Joe Cortright

"*These massive stores and malls were built during a bubble cycle where commercial developers were responding to new housing developments around the country*."[2] Haniya Rae

More young people are investing in their downtowns and reinventing the former urban centers of cities that had been forgotten during the shopping mall boom that happened during the 1980's through the 1990's. The big-box is dying in part because of the younger millennial generation that are more focused on local rather than the big global companies. Millennials have a strong sense of identity and are drawn to the authenticity of the place and craft. They are a generation (born between 1978–2000) that is globally connected, extremely diverse, technologically savvy, very progressive, and outspoken politically. "*The millennial generation is the first generation in American history to inherit a nation in decline*."[3]

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[1] (Cortright 2015)

[2] (Rae 2017)

[3] (Rae 2017)

THE BIG-BOX HAS SEEN BETTER DAYS

North America experienced a large boom in suburban McMansion housing developments in the 1980's and early 90's that enabled developers to build large and small shopping centers. The 1980's started off slow economically but rebounded with a vengeance. "*By the mid 1980's the US entered the longest period of sustained economic growth since World War II*."[4] This was in part because of the birth of the new conservative approach to tax reform, "*Reaganomics*". Cut income tax, cut corporate tax, cut capital-gains tax, and loosen up on government regulations would put more money back in people's pockets. More people (the 1%) now had more money to spend and could make more money because of less regulation. The 80's saw a rise in materialism and consumerism and the birth of the "*yuppie*", because of the economic upturn and mass marketing.

When many shopping centers were built, there was much confidence in the economy and people were spending money, lots of it. People had money to spend and developers jumped at the chance to feed the beast. Shopping malls, strip malls, and big box stores started to sprout up almost everywhere. But every party must end sometime…right? Reaganomics was like the bad friend that encourages you to stay out late even though you must work the next day. Turns out, Reaganomics was not that great of an idea; and because of deficit spending, the national debt nearly tripled. We as a country coasted on this notion of materialism and consumerism through the early 90's until the party was officially over.

[4] (University of Groningen, The Netherlands 2012)

THE PARTY IS OVER

Shopping malls in the late 90's and early 2000's began experiencing an increasing amount of vacant store spaces, many strip malls are all but empty, the neighborhood department store up and moved to a better neighborhood. Leaving behind "will build to suit" and "come see us at our new location" signs. In 2017 close to seven thousand retail stores closed their doors for good (Figure 3), and the trend is expected to continue in 2018.[5]



Figure 3. Number of Retail Stores Closing in 2017

Source: Business Insider

[5] (Malinsky 2018)

CHAPTER TWO | SITE

THE GENERIC SITE

As these types of sites can be found all over the country and they generally have no context or connection to the local building typologies they are generic. These buildings are highly engineered steel and concrete structures to maximize space with minimal use of material. These buildings are large, free-standing, rectangular, generally single-floor structures built on a concrete slab. They have a flat roof with steel ceiling trusses, and the walls are concrete block. The structure typically sits in the middle of a large, paved parking lot. It is meant to be accessed by vehicle, rather than by foot.[6]

THE SITE

The disconnected big-box site that I am using for my thesis is the former K-Mart at 7428 Kingston Pike in West Knoxville, TN, adjacent to West Town Mall. It is now being used as a wholesale furniture outlet store. The structure and site were originally built in 1967 as a K-Mart store with an adjacent store in the same building. This building at the time it was built was on the outside edge of West Knoxville with the West Hills neighborhood being developed across Kingston Pike and the interstate. Historic aerial imagery shows the location of the site in 1935 (Figure 4), and in 1953 (Figure 5), The area this site occupies was farm land until interstate forty was completed around 1968.

[6] (Kelbaugh 2002)



Figure 4. 1935 Territory of Knoxville, TN

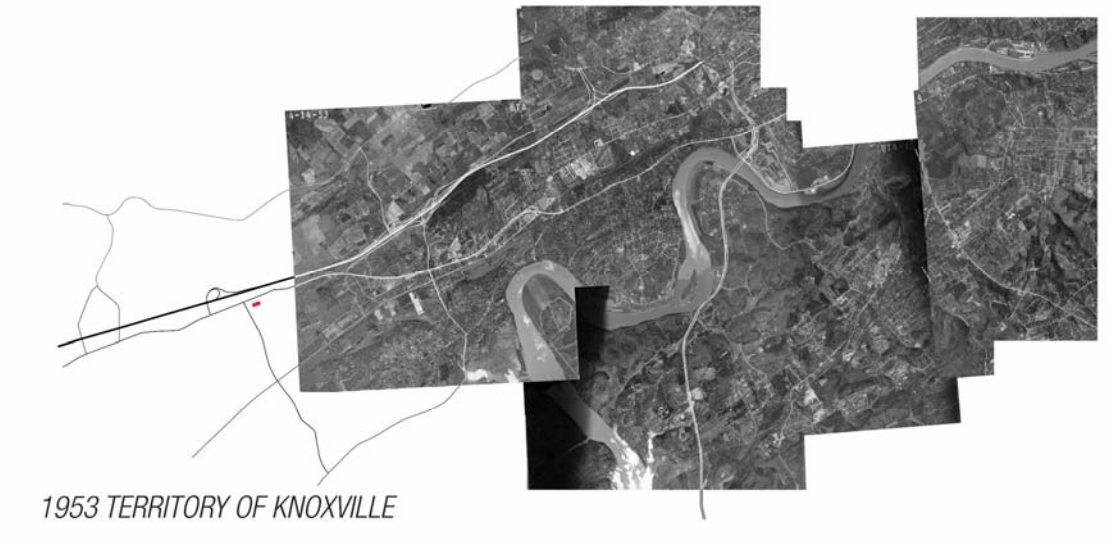


Figure 5.1953 Territory of Knoxville, TN

The completion of the interstate enabled the suburban expansion into West Knoxville. This was the period when more people were moving away from the downtown city centers and into more suburban locations. Interstate 40 runs parallel to Kingston Pike and this site is in a prime location for the delivery of goods. The trucking industry was a key player in the consumerism of the United States in the 1960's and 1970's. The trucking industry was able to grow because of the new interstate system and could move goods faster than the railroad.

The big-box site that I have chosen for this project is quite the anomaly when compared to similar sites across the country. It is situated in an area that is highly commercialized and still thriving (Figure 6). The paradigm of the big box is such a part of our way of life in that it blends in to the landscape of commercialism and the decay of the building goes unnoticed. The total site is roughly eleven acres of valuable real estate that has been in an entropic state since it was disconnected from its original purpose.

This big-box was once a part of a large network of logistical support systems of maintenance, economics, resources, and corporate structure. The disconnected building has been in a gradual decline since it has been cut off but still maintains a presence in the landscape of west Knoxville (Figure 7). The destabilized big-box is now a part of a smaller logistical system that has more of a focus on moving goods than maintaining an appearance.



Figure 6. Big-Box Site, A. Russell, 2018



Figure 7. Current Territory of Knoxville, A. Russell, 2018

CHAPTER THREE | METHODOLOGY

UNDERSTAND THE BUILDING

This building typology is at a point in time (the 1960's) when retail shopping is moving from the downtown city centers outward to the suburbs. The brick and mortar bearing wall construction of the downtown buildings were limited by the spans that were allowed by the materials that were being used. Structural reinforcement of a clear span was usually no more than twenty feet until there was some type of bearing wall needed. The available space in the city centers was also limited regarding the footprint of the building. Twenty, thirty, or forty foot lots were typical lot widths in downtown lots because that's how much the span could be, and it also worked out when using the typical building materials at the time, mainly bricks. (Figure 8)



Figure 8. The Standard, Knoxville, TN.

Source: JO Photo (2017)

The new building typology that is the Big-Box is not that much different than the brick bearing wall construction that came before it. By using steel rather than bricks, engineers were able to set up a structural grid that maximized the spans with the least amount of interior obstruction as possible. Instead of a bearing wall type system to support the floors and the roof, they used steel posts. Instead of wood structural members for the floors and ceiling, they designed light weight steel trusses that could be set farther apart, carry more load and were pre-manufactured off site.

In 1954 Mies van der Rohe made a proposal for the new Chicago convention hall (Figure 9). The use of a steel framed structure created a column-free, open interior space, made possible by modern technology.

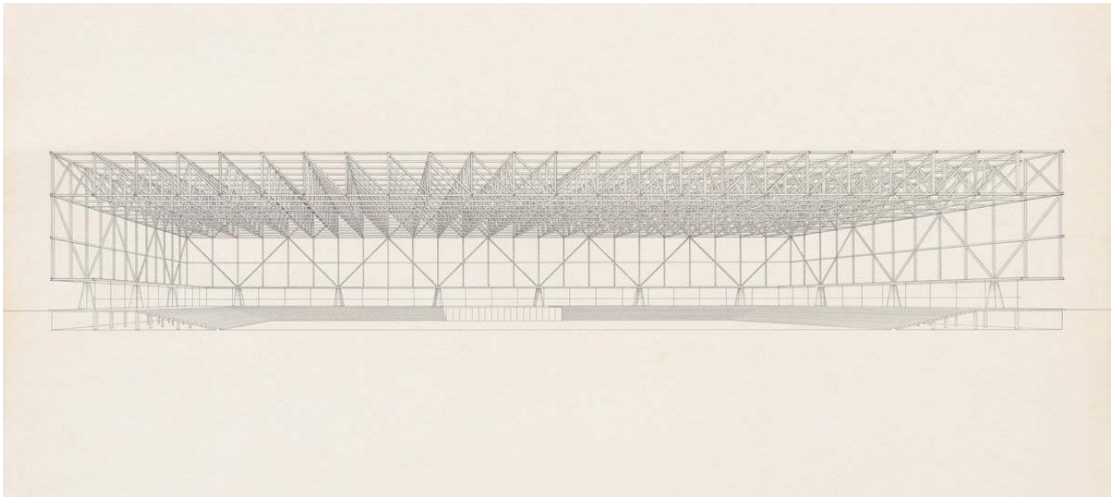


Figure 9. Chicago Convention Hall Proposal, Mies van der Rohe, 1954

This new building typology of the Big-Box is the post-modernist distillation of retail shopping architecture. The new engineered structures that were being built took much of their cues from what Mies van der Rohe envisioned in his 1954 proposal for the Chicago Convention Hall. Large steel frames that could be replicated and joined together to create large spaces that are mostly free of any vertical structure to hold them up. Thin steel posts set on a grid are the only part of the structure that interrupts the free plan of the inside. This type of plan gives the most flexibility for the inside of the building as there are no bearing walls to break the spaces up.

The building stands at twenty-two feet six inches high with a column grid inside set on a fifty-foot by thirty-foot plan. This specific building has several design elements that have been deleted in future iterations of the highly engineered prototype big-box store. The facade is one of the most intriguing parts of the building, continuous five-hundred fifty feet long, single height facade with a ten-foot-deep awning over the sidewalk. The flatness of the façade is covered in numerous coats of peeling beige paint that begins to act like an urban camouflage. The front of the store has two hundred fifty feet of glass between the steel frame that supports the building.

CATALOGUE THE ARTIFACTS

By spending time in and around the site I began to catalogue the artifacts of what was there. Rather than looking to fix the big-box by turning it into something that still looks like a big-box, I decided to study what it has become and make my design decisions based on those cues. As I built the catalogue of found artifacts I produced several iterations of images using photo manipulation. By lavishing unwarranted attention on something undeserved, I began to curate the artifacts in a way to guide me through the remainder of the project.

TERRITORIAL BEIGE

Territorial Beige (Figure 10) is the name of a paint that is produced by Apple Barrel for crafts. A thick coat of beige paint covers the entire building (Figure 11), making the building recede into the background like and urban camouflage. The Beige of the building works to blur and fade as you move passed the site (Figure 12). Beige is a color that is an easy go-to for anyone that needs paint and wants it to match almost everything. It's drab, uninspired, and very predictable. Beige can strip away and cover up any type of form or shape from whatever you slather it on.



Figure 10. Territorial Beige



Figure 11. Joiner of the Big-Box, A. Russell, 2018



Figure 12. Blur, A. Russell, 2018

PEELING & FLAKY PAINT

The paint on the building is peeling and flaky (Figure 13), this is from a lack of maintenance and corporate standards that are not upheld by smaller retail stores. The cost of maintenance on a building this size would be tremendous.



Figure 13. Flaky Beige Paint

BURNT-OUT LIGHTS

The Interior and exterior light bulbs that are burnt out and not replaced show the lack of maintenance on the building (Figure 14). The interior lighting is set on a regular grid that would fully illuminate the space if properly maintained. The burnt-out lights on the interior give the ceiling a texture when looking across the building and blend together making patterns of light and dark. The following images are photo manipulations that followed in the process (Figure 15) (Figure 16) leading up to the final produced image (Figure 17).



Figure 14. Ceiling Lights, A. Russell, 2018

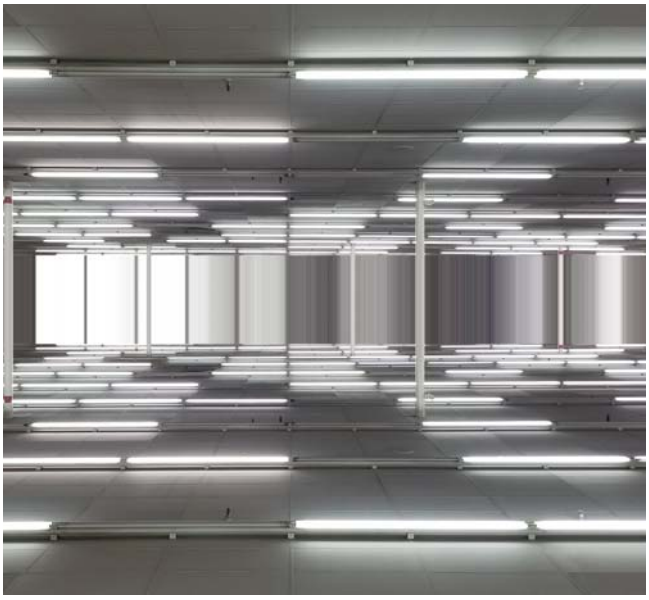


Figure 15. Photo Manipulation 01, A. Russell, 2018

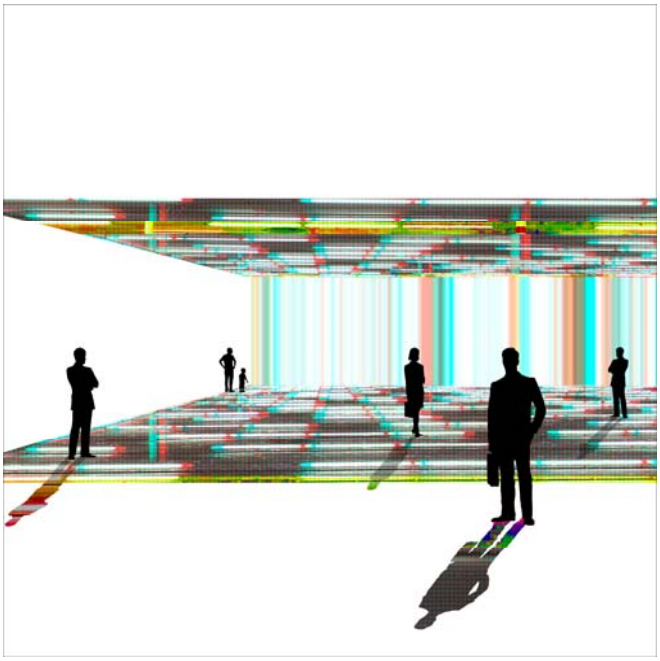


Figure 16. Photo Manipulation 02, A. Russell, 2018



Figure 17. Section of the Big-Box, A. Russell, 2018

ORPHANED & BUNDLED WIRES

Orphaned and bundled communication systems that are not needed or outdated can be seen hanging from the ceiling (Figure 18). Phone, security, and other systems that are used by major department stores are no longer used in the disconnected big-box, the cost to run the systems are wasted capital and unnecessary.

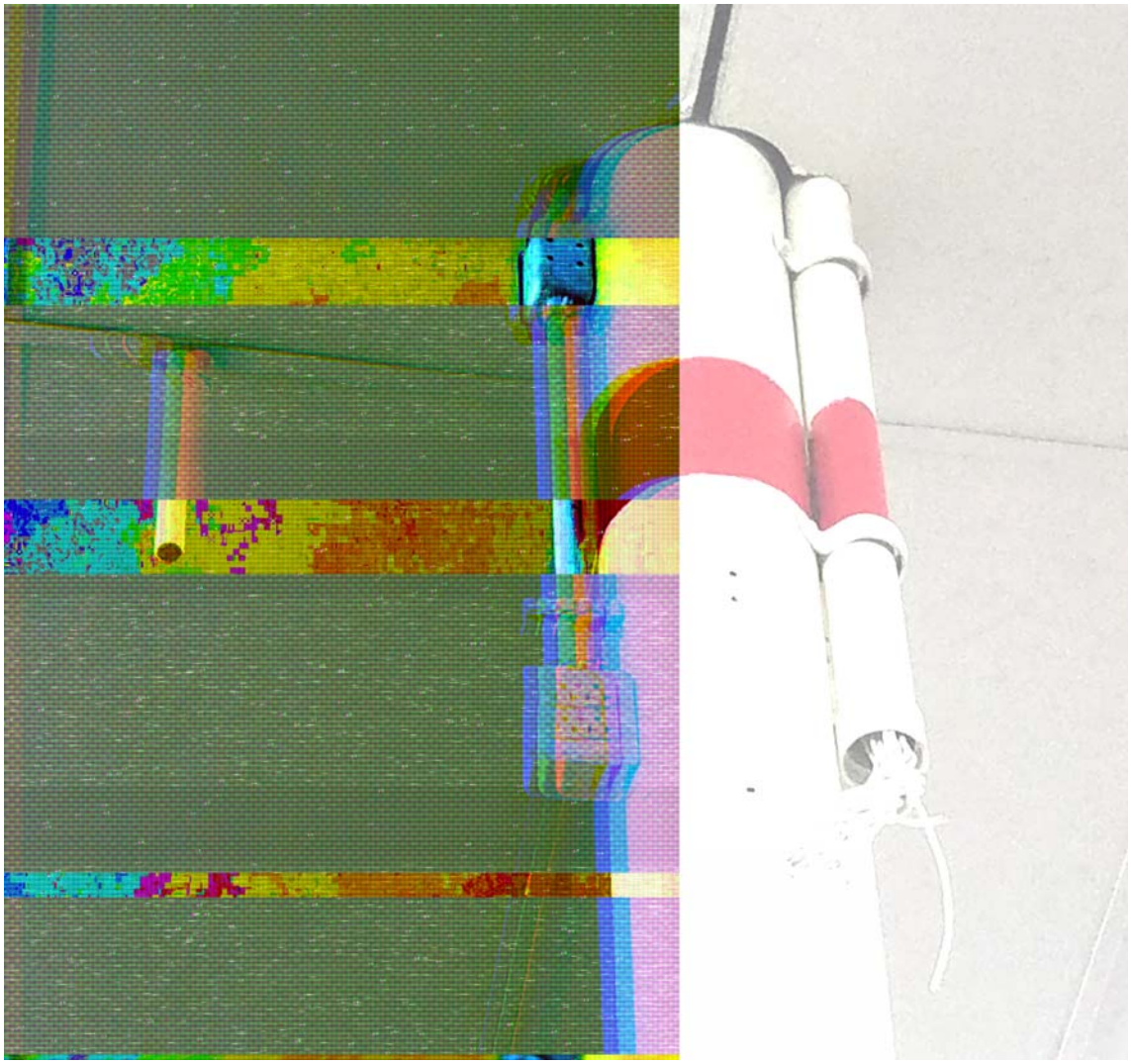


Figure 18. Orphaned Communication Systems, A. Russell, 2018

FADED PARKING STRIPES

The faded parking lot stripes that once maintained a form of organization is not as important as it once was. The disconnected Big-Box has many fewer cars in the parking lot than it once did, so the need for organization is no longer a priority. The only form of organization are the lot lights that stand in every other row of parking spaces. There are no trees or curbs that define the lot or the organizational logic of the parking lot.

TOLERANCE

The tolerance that was once important in a highly engineered building now embodies other meanings. The tolerance of how parts fit together are very important in architecture and engineering, tight tolerances make for a good fit and take more work and precision. The tolerances in the disconnected big-box are much larger not so tight of a fit because of a lack of work and precision. Tolerance is also the acceptance of how things are and being lenient. The exterior of the building and parking lot is being tolerated for what it has become. The parking lot is now used for many more activities than it once was, being at a crossroad of travel it is being transformed by the people who use it.

DATUM

The beige datum that runs around the inside of the building works to keep your eyes down and focus on what is for sale. Much like the way casinos in Las Vegas keep the ceilings dark and the flooring very busy to keep your eyes focused on the gaming.

LOT LIGHTS

The parking lot lights are a very sculptural element only found in shopping centers of this time. The 1960's still has a great amount of design carryover from the modern 1950's aesthetic and these lights are very characteristic of that time. A very minimal double pole design that not only did the job of illuminating the parking lot, but with a well-designed style (Figure 19). Much like the building, the lights have not been maintained, but they still illuminate the parking lot. They are black metal with peeling safety yellow paint covering the concrete base (Figure 20).



Figure 19. Lot Light Against the Facade



Figure 20. Light Base w/ Flakey Yellow Paint

CHAPTER FOUR | THE PARADIGM

EMBRACE IT

The dormant big-box site is a paradigmatic condition and I want to leverage and maintain the advantage it has. I see this big-box as an urban artifact of planned obsolescence, they are designed to last a predetermined amount of time then they are cut off and left to deteriorate. The entropic nature of the site has allowed new uses, functions, and relationships on and around the site. Because of the destabilized nature of what this site has become the parking lot has become a separate and independent domain from the big-box. The site and the building are now two itinerant domains that coexist, the building and the parking lot. Customers to the building use the parking lot as they always have. Truck drivers now use the parking lot for parking, staging, and sleeping. Loiters use the parking lot as a cut through or to set up shop selling used goods and wares from the trunk of their car. The dashboard diner that finds an empty parking lot to pull into and have their lunch or dinner while they are out running errands.

DISRUPT IT

There is nothing I can do to the building that would make it anything other than what it already is. This site should be left as it is and be treated as an artifact for future generations to see and interact with. The paradigm has shifted in the case of the destabilized big box. The parking lot is now the more activated space rather than the store itself. You used to go to the big box via the parking lot, now you go experience the parking lot through the big box.

CHAPTER FIVE | THE PROJECT

ATTACK ARCHITECTURE

"The Point is to Attack Architecture" [7]

James Wines

"The main idea was to put art where you least expect to find it. The endless boredom and lack of aesthetic commitment in the American shopping mall became the perfect foil for this kind of intervention."[8]

James Wines

This thesis project is a group of design interventions on and within the site that use the artifacts produced by the destabilized big-box. They are intended to be separate projects that relate to the building and the site.

[7] (Wines 1981)

[8] (Wines 1981)

EXTRACTION

I meticulously mapped the burnt-out lights inside the building, the patterns they made when looking from one end of the building to the other began to look like voids or holes in the ceiling. I created a ceiling plan to explore how these voids impacted the space. By removing the areas void of light the pattern became more apparent and transformed the space (Figure 21).

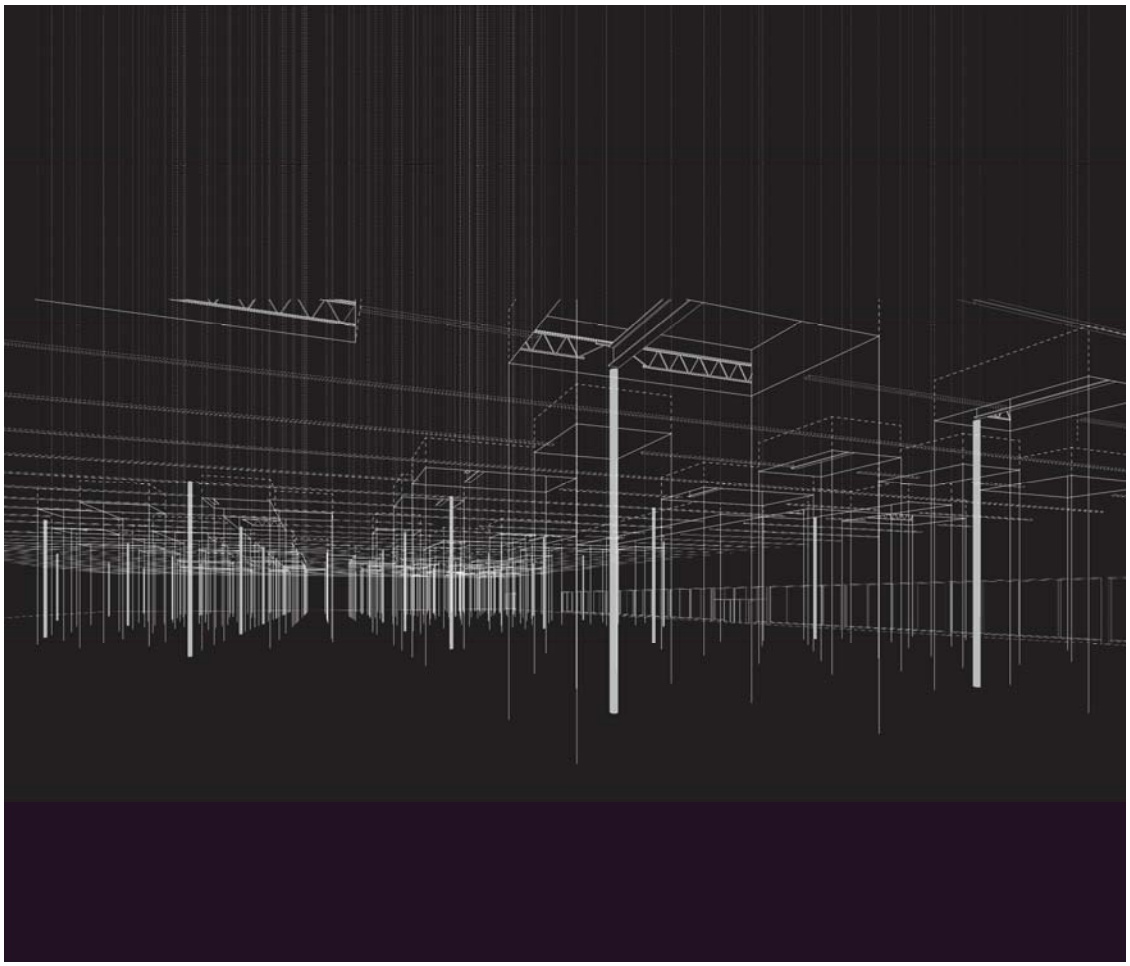


Figure 21. Ceiling Extractions, A. Russell, 2018

By adding translucent walls in the void areas to let in light and work to prop up the extracted ceiling. The areas that are removed and sealed off as a remnant of what the building once was. The translucent panels fill the space between the floor and the ceiling and create a series of pathways within the structure (Figure 22).

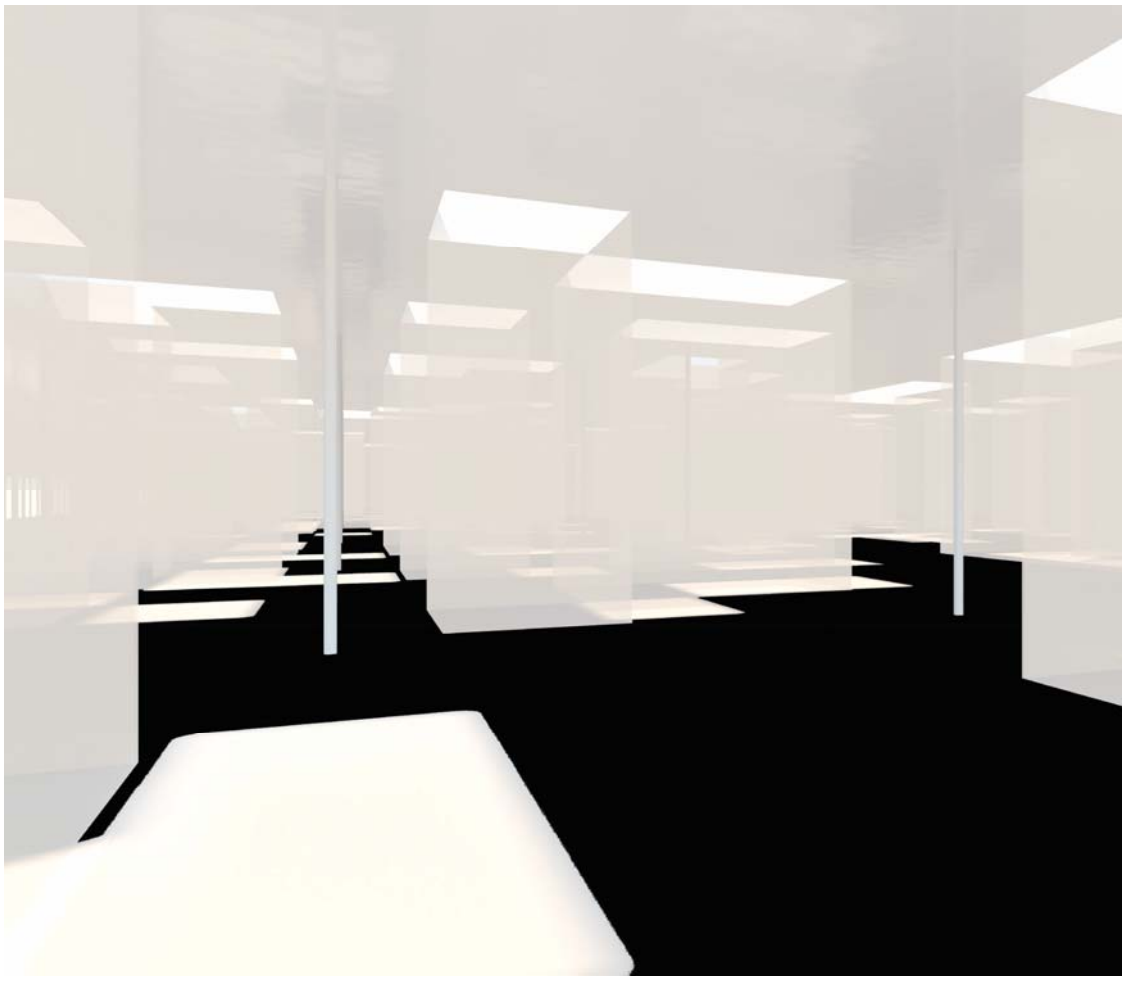


Figure 22. Ceiling Extractions with Translucent Panels, A. Russell, 2018

ANAMORPHIC PROJECTION

"An anamorphic image is one that can only be interpreted when viewed from a particular vantage point, angle, or through a transforming optical device like a mirror."[9]

As I spent time at the site I took a lot of pictures, and one that stood out was the light pole against the facade of the building. It perfectly fits onto the facade given the location of where I was standing. I worked to reproduce this image, in an anamorphic projection, that uses the lot light and the territorial beige as my inspiration. I reproduced the image that I took with a camera in a three-dimensional computer model (Figure 23), (Figure 24). I also produced a ¼" = 1'-0" scale physical model of the projection as one of the artifacts of the project (Figure 25).

[9] (newscientist.com 2008)



Figure 23. Anamorphic Projection, A. Russell, 2018



Figure 24. Anamorphic Projection, A. Russell, 2018



Figure 25. Anamorphic Projection Model, A. Russell, 2018

THE AUTONOMOUS CRITTER

I started by mapping the light produced by the lot lights as it created an invisible boundary that could be mapped. The concrete light post bases are the data points within the boundary of the light border. With these points the critter is set to move throughout the entire space bounded by the cut-off. The autonomous critter loiters throughout the site and moves like current automated vacuum cleaners. The critter is only concerned with the borders, boundaries and the given sets of data points in-between. The algorithm that the autonomous critter uses is called the least cost path formula. The path of the critter (Figure 26) is defined by defining the parking lot as a graph. A weighted directed graph is defined by a set of nodes, a set of edges, and a mapping from the set of edges to a set of values.

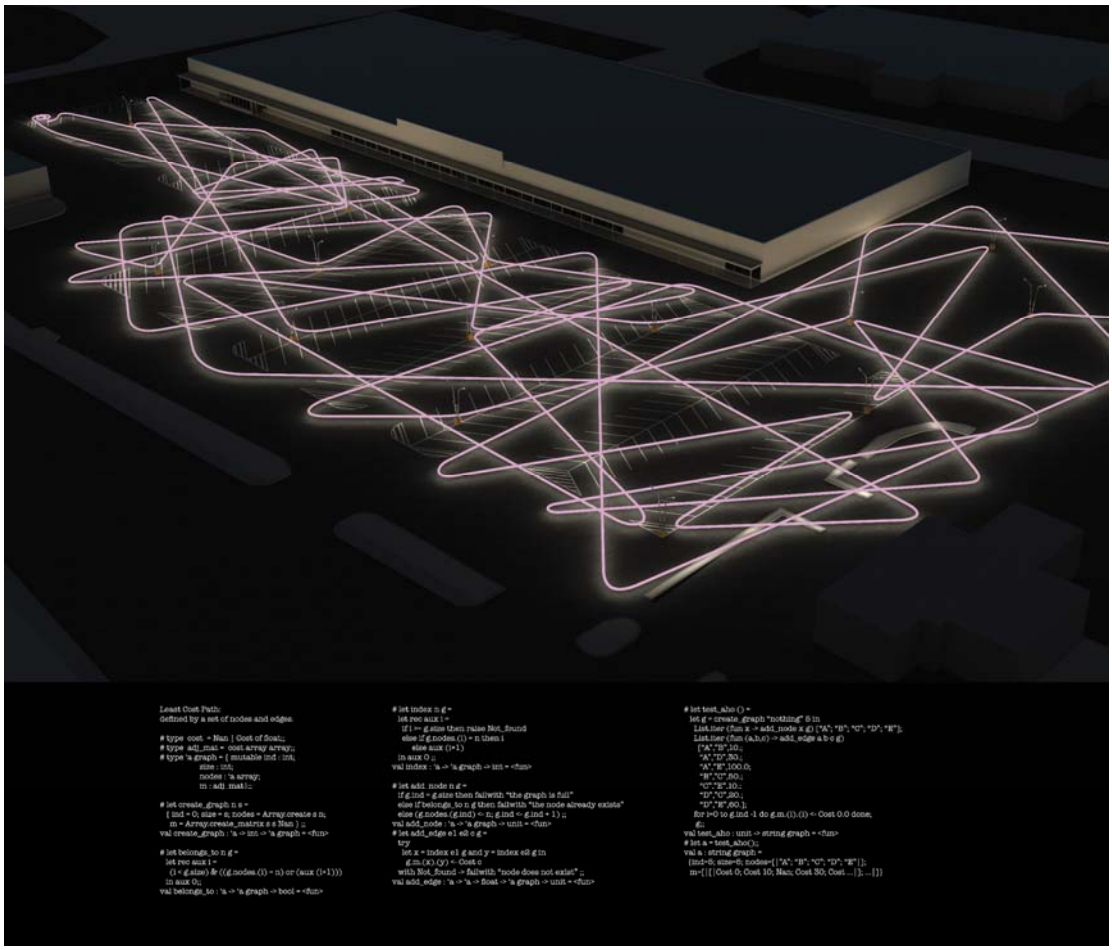


Figure 26. Path of the Critter, A. Russell, 2018

The autonomous critter is the facilitator of the paradigmatic shift of the big-box. The critter is a plastic pink flamingo sitting on top of a robotic base that loiters across the site (Figure 27). A video camera hangs from its neck like a collar with a name tag. The camera is sending a live feed of the parking lot of the various interactions it finds back inside the big-box that are then projected onto the backs of the front windows.



Figure 27. The Autonomous Critter, A. Russell, 2018

BEIGE BAND

A beige band or datum painted on all the light poles throughout the site. A reference to the beige datum that runs around the inside of the building (Figure 28**Error! Reference source not found.**).

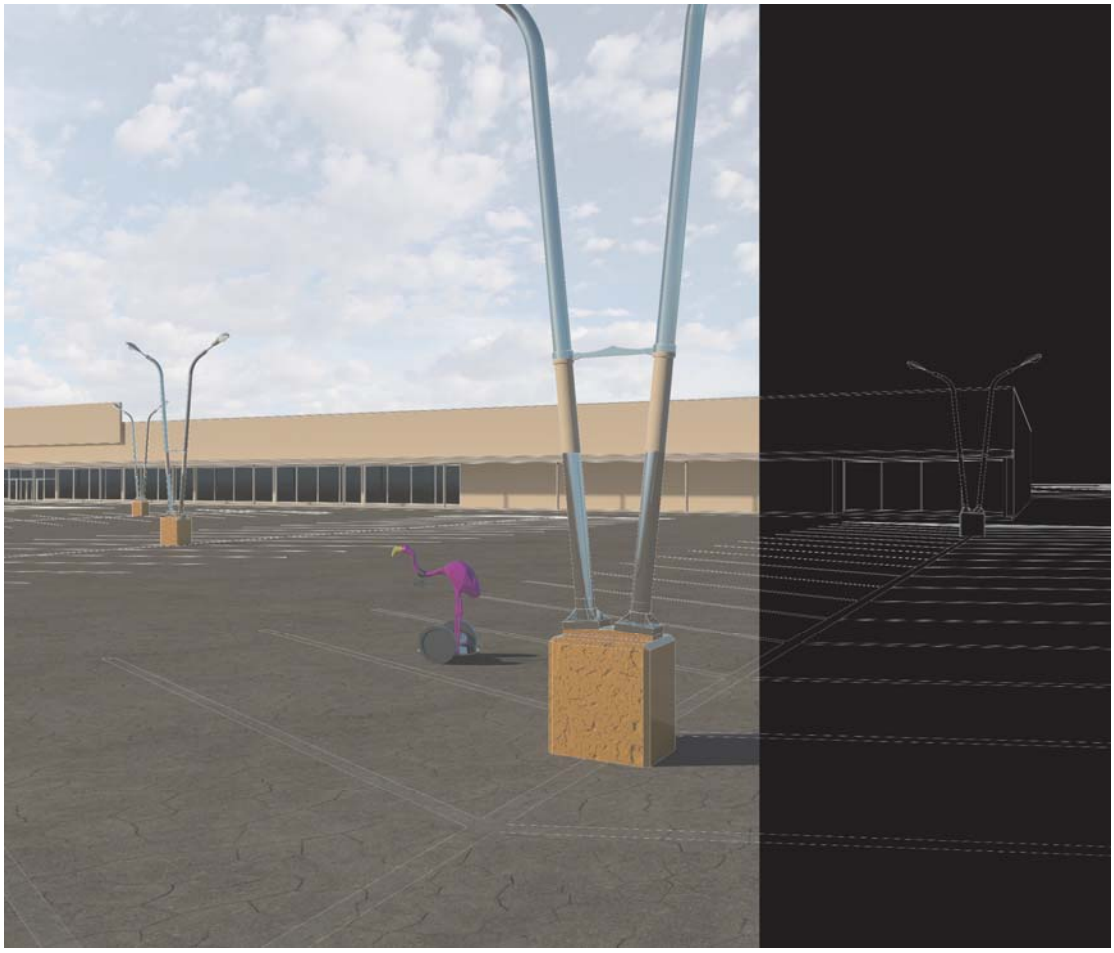


Figure 28. Beige Band, A. Russell, 2018

CHAPTER SIX | REFLECTION

This thesis project challenges conventions and blurs the lines of what is art and what is architecture. By pushing the boundaries and taking risks I have set a trajectory for myself in the practice of architecture that will influence my thinking and production for years to come. This project has challenged me to chase out and define a set of productive practices that engage the types of environments we all take for granted.

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VITA

Andrew Russell was born in Morristown, TN and worked as an architectural designer for eight years before pursuing his formal training in architecture at the University of Tennessee. The experience gained while working in the architecture field combined with a bachelor's degree in construction engineering has formed the technical groundwork for the formal training in the discipline of architecture.