The Urban Network: An Ecosystemic Framework for the Enhancement of Atlanta

Caleb Lawrence

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THE URBAN NETWORK
AN ECOSYSTEMIC FRAMEWORK FOR THE ENHANCEMENT OF ATLANTA
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This Thesis Research Project Proposal is Presented to

PROFESSOR EDWIN AKINS
And to the Faculty of the Department of Architecture

By

Caleb Lawrence

In partial fulfillment of the requirements for the B.S.
Bachelor of Architecture (B.Arch.)

Kennesaw State University
Marietta, Georgia

Spring 2020
I WOULD LIKE TO DEDICATE THIS THESIS FOR THE FOLLOWING IMPORTANT PEOPLE IN MY LIFE:

TO MY FAMILY AT SCHOOL
I HAVE BEEN BLESSED TO HAVE BEEN PART OF A PROGRAM WHERE THE RIGOR AND PROXIMITY FORCED UPON ME A WONDERFUL FAMILY AWAY FROM HOME, WITH ALL THE DRAMA AND JOY THAT SUCH A FAMILY ENTAILS. I WOULD NOT HAVE ASKED FOR MY COLLEGE EXPERIENCE ANY OTHER WAY THAN THE WAY I WAS TO SPEND IT WITH ALL OF YOU. I HAVE BEEN BLESSED WITH MORE FRIENDS THAN I COULD HAVE IMAGINED; I WOULD NOT BE ABLE TO LIST ALL OF THE PEOPLE WHO HAVE MADE SUCH A LARGE IMPACT ON MY LIFE DURING MY COLLEGE EXPERIENCE. I LOVE YOU ALL AND WISH YOU THE BEST THAT LIFE HAS TO OFFER.

YOU ALL HAVE BEEN THE BEST PART OF MY LIFE THESE FIVE YEARS.

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AND LASTLY TO ALL MY FRIENDS AND FAMILY WHO ENCOURAGED ME ALONG THE WAY

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THE CALL FOR AN ECOSYSTEMIC URBANISM FRAMEWORK

1.1 THE HYPOTHESIS

The city can be considered to be one of the most delicate and intricate ecosystems on the planet, as it defines the organization of the functions and systems that make up every day human life. With the continuing trends of rapid population growth and urbanization it is imperative to thoroughly and regularly examine the network of the city to ensure the continued ability of the urban model to sustain an adequate and resilient quality of daily life.

The network of certain cities, like that of Atlanta, must be challenged to develop towards that of a distributed network. The goal of a distributed network is to prioritize connectivity and density rather than continued sprawl. This thesis, "The Urban Network," applies a framework of ecosystemic urbanism to analyze and subsequently enhance the overall network of the city of Atlanta by scrutinizing the urban fabric at a smaller, district scale. The process aims to improve the overall network through this scalar application by validating proposals for new urban developments and design within the overall fabric of the city of Atlanta. This validation is based on the evaluation of four factors of ecosystemic urbanism—morphology, complexity, efficiency, and equity—to promote a more effective and flexible urban fabric that provides an adequate and resilient quality of life to both the existing and future populations of Atlanta. By defining a model of district design and development in Atlanta via the ecosystemic validation process a new, intentional narrative of effective urban design can reshape how the city will grow into the future.

"The scale of degeneration both of human conditions and landscapes in most cities around the world calls for a thorough regeneration of the urban systems on every level, and the creation of new sustainable planning models for urban development."

SALVADOR RUEDA, THE BARCELONA AGENCY OF ECOSYSTEMIC URBANISM
The world is becoming more urbanized and as society moves into the future, current stresses of urban areas will be extenuated. The urban model can be understood on multiple scales, but ultimately evaluated based on the city-wide scale. There are three major network typologies that can classify the functional design of a city: centralized, decentralized, and distributed. At its core, Atlanta acted as a centralized to decentralized network. At its core, Atlanta acted as a centralized to decentralized network. From this centralization, Atlanta grew radially with much sprawl leading to multiple satellite cores. However, to reach a fully distributed model, Atlanta must design for density to downplay the role of sprawl and contribute to an overall network process. As the Atlanta population grows, it is important that an intentional narrative of growth is conducted one that accommodates the influx of organisms in a smart, sustainable manner. Atlanta has worked as a centralized to decentralized network throughout its history. Atlanta began as a small city centered on a railroad intersection. This network model has grown rapidly with much sprawl leading to multiple satellite cities far from the urban core but connected by large arterials—a decentralized network. There are certain connective nodes that are pursuing a more distributed network, like the Beltline and the DeKalb Corridor light-rail. However, the city of Atlanta is almost completely as a decentralized model with radial networks being favored over few and far-between tangential networks. The goal for future development of Atlanta is ultimately to accommodate new people, new spread/manner that encourages densification closer to the urban core rather than spreading further in a radial manner. This new densification must serve both the new influx of people while also working with and benefitting the current urban fabric. New street networking may have to be introduced along with pedestrian paths and other forms of urban fabric to emphasize tangential connection between neighborhoods and satellite cores. However, to reach a fully distributed model, Atlanta must design for density to downplay the role of sprawl and encouraging the need for networking within the close-proximity urban core.
The base ideology of the hypothesis is rooted in the framework of the Charter for the Ecosystemic Planning of Cities and Metropolises, developed by the Barcelona Agency of Ecological Urbanism. The Charter is a response to urban population growth and industrialization. It was created to address not only a set standard for the further development of cities and metropolises, but also to set a standard for the regeneration of existing urban fabrics. The framework of the Charter is primarily based in ecology. It defines cities as urban ecosystems that run on set limits and variables in other words the most complex organizational system of humans. The ideology of Ecosystemic Urbanism is focused on the relationships between the various components of the urban fabric, specifically the restrictions established by the networking of these components. The framework works in generality, providing a method of networking urban components through interdisciplinary approaches, allowing the individual applications to be determined by the restrictions inherent of each ecosystem.

The framework is built as an intentional urban model around four key factors: 1. Urban Morphology, which addresses urban design (Urban Complexity), which addresses the resilience of the urban fabric and program; 2. Urban Efficiency, which addresses efficiency of resources within the urban systems; 3. Urban Equity, which addresses equity and accessibility in the urban design; and 4. Urban Complexity, which addresses complexity and the role of the city in the regional systematic context.

The four key factors of ecosystemic urbanism are described both in generality, but also in measurable definitions that can be used to effectively implement the framework into new urban design but also to analyze and understand the effectiveness of existing urban fabric. Altogether, there are 43 evaluators that can be used to understand the strengths and weaknesses of an existing city or proposal for a new urban district. These evaluators are defined in terms of minimum adequacy for ecosystemic urbanism as well as desirable measurements for ecosystemic urbanism. These evaluators will be imperative both in understanding the successes of the Atlanta urban network as well as define the way in which new design must be implemented.
COMPACTNESS VS. DISPERSION

- Reducing land use by increasing the proximity and critical mass of inhabitants and legal persons
- RecREATing existing urban fabric
- Recovering vacant property in urban areas
- Densification of sprawled urban landscape

DECOMPRESSION VS. COMPRESSION

- Inclusion of green spaces in or near fabric divided mostly to
- Maintaining a reasonable and dispersed decompressed space

ACCESSIBILITY VS. PRIVATE MOBILITY

- Alternative transport to cars, guaranteeing that all citizens can access the city
- Provision of access to all parts of the city through public transport
- Replacement of single-use mobility patterns with multilevel patterns of transportation under a singular transport system

CITIZEN VS. PEDESTRIAN

- Uses and rights in the public space
- Prioritization of foot traffic and the pedestrian right of way
- Transformation of urban space dedicated to mobility into the creation of a pedestrian network in the city
- Provision of comfortable and controlled public space that are attractive and provide basic services for the residents of the city
- Adequate access to necessary facilities from public spaces at ground level
- Creation of public space in urban fabric dedicated solely to building or mobility

HABITABILITY IN THE PUBLIC SPACE

- Controlling environmental variables

PRIORITIES OF URBAN MORA PHOLOGY

- Recycling existing urban fabric
- Recovering vacant property in urban areas
- Densification of sprawled urban landscape
- Provision of access to all parts of the city through public transport
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PRIORITIES OF URBAN COMPLEXITY

- Maintenance of complex ecological habitats within the city
- Maintenance of a moderate level of ecological disturbance
- Recovery of green space within dense urban fabric
- Provision of multilevel greenspace (green roofs and living walls)
- Recovery of natural landscape for resilience of natural systems and aesthetic appeal
- Provision of biophysical matrix that connects public space within the city to the edge
- Protection of fragile ecosystems within the region
- Centralization strategies to connect more urban fabric
- Multiple diverse economic sectors distributed and networked from the city center
- Connection of multifunctional public spaces and buildings
- Creation of urban attractors to increase population and diversity
- Convergence of multiple functions in multiple geographic areas to provide ease of access for each neighborhood
- Elimination of food deserts and large monofunctional spaces
- Encouragement of 24-hour activity

GREEN SPACE VS. ASPHALT

- Increasing green space and urban biodiversity
- Maintenance of complex ecological habitats within the city
- Maintenance of a moderate level of ecological disturbance
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Decentralization of materials dispersion in terms of food, creation of nodal management of reuse of waste and materials, reuse of underground sources in strategized water systems, mitigation of flooding risks through the reduction of runoff and large portion of permeable surface and low-impact construction, updating buildings and infrastructure to be proactive, promotion of sustainable buildings adapted to bioclimatic factors, provision of comfortable and controlled public space that is relation of housing to the biophysical matrix and natural systems, recovery of urban river spaces and the aquifer recharge zone, adaption to anticipated impacts of greenhouse gas emissions, ability of housing to adapt to market changes in the future, adequate access to necessary facilities from public spaces at installation of intelligent systems to increase metabolic efficiency, reuse of existing urban fabric for the creation of new housing to protection of quality of natural water masses and the water.

The urban network

Urban efficiency

Self-sufficiency vs. dependency
Moving towards energy sufficiency

Water self-sufficiency with new and renewable resources
Conservation in the water cycle

Reduce, reuse, recycle vs. waste
Moving towards sufficiency in terms of materials

Adapting to and mitigating the impact of climate change
Assessing and identifying urban ecosystems that can institutionalize a climate change assessment

Priorities of urban efficiency

Characteristics of each priority

- Maintenance of individual urban sectors with a level of energy independence
- Use of local energy sources and local energy services for saving local energy
- Use of centralized urban systems for energy savings and city-wide strategies in the case of system failure
- Assurance of a safe, reliable, and clean energy management
- Maintenance of individual urban sectors with a low level of energy independence
- Use of local energy sources and local energy services for saving local energy
- Use of centralized urban systems for energy savings and city-wide strategies in the case of system failure
- Assurance of a safe, reliable, and clean energy management

Urban equity

Social cohesion vs. social exclusion
Moving towards self-sufficiency in terms of materials commercial, and public sources

Universal access to housing in more sustainable buildings
Employing sustainable practice across all social classes and housing typologies

Balanced resources and distribution of facilities
Avoiding unequity to necessary urban functions for all citizens

Priorities of urban equity

Characteristics of each priority

- Promotion of high participation in urban society and the encouragement of high participation in urban society by the inhabitants of the city
- Providing ease of access to necessary urban functions by all citizens
- Encouragement of high participation in urban society and the encouragement of high participation in urban society by the inhabitants of the city
- Providing ease of access to necessary urban functions by all citizens
The Call for an Ecosystemic Urban Network

1.5

To apply the principles outlined within the framework, it is essential to design their application in a defined area of the city. These ideas of multiplicity that are evident within each of the four principles signify the multiplicity of certain qualities for a certain group of people, and in an urban center, that group is signified by the proximity to the factor of multiplicity. In this case, ecosystemic urbanism is a framework that can be applied to a neighborhood to improve the connectivity of that neighborhood to the surrounding urban fabric while also creating a specific area of multiplicity of uses, legal entities, and dispersed demographic resident and working populations. The direct application of ecosystemic urbanism is implemented in the city of Barcelona in what the Barcelona Agency of Ecological Urbanism outlines as "Superillas" which are groupings of 9 blocks—a modular unit of this modular unit for the city as what the framework considers to be the minimum size for the design and application of ecosystemic urbanism.

For this reason, to design for an ecosystemic urbanism and a distributed network in Atlanta, it is imperative to apply the principles of connectivity and the four factors on a neighborhood scale. The application to neighborhoods will serve as linkages between existing networks, areas for needed growth, and a way to extend the four factors into the existing urban fabric.

“How we build our cities—from the neighborhood up—is the biggest opportunity of our lifetime.”

-EcoDistricts
In order to fully understand the city network and how the factors of ecosystemic urbanism play out in implementation of regenerative efforts, it is important to analyze instances in relation to the city of Atlanta, in which certain cities have attempted to strengthen the city network through modular implementation of ecosystemic urbanism. Two such cities are Paris, France and Barcelona, Spain. Both of these European cities differ from Atlanta in that their histories have set them up as either decentralized or distributed models, either in terms of morphology or complexity. However, the implementation methods of districts reflect two various instances of possibilities in the city of Atlanta. Barcelona is the case city for the study of ecosystemic urbanism and boasts a strong city grid that builds up a distributed model. In this instance, the model for modular implementation is to redefine existing urban fabric rather than to define the method for infill urbanism. The existing fabric in most cases already houses the proper density although some cases involve a lower density. Another city with a network that is historically distributed but over the last few centuries has seen some sprawl that has contributed to some decentralized suburbs. The model for modular implementation studied reflects a condition of repurposing previous rail yards for an infill urbanism. This method is also relevant to Atlanta as there still exist many opportunities for urban infill close to the city core.
THE BARCELONA NETWORK

Barcelona, Spain is the original city of evaluation for the framework behind Ecosystemic Urbanism. Currently, the city boasts a high residential density and compact city and has been developed throughout history into a distributed network that has a defined order. The morphology of Barcelona is strongly informed by the Cerdà plan in the Eixample District in which there is a clear block structure with regularized block sizes, a clear grid, and diagonal boulevard streets. In addition, there is a strong metro system. The model, unfortunately has become too car-centric, leading to uncomfortable in-between urban spaces and less rights for the citizen or pedestrian.

SUPERBLOCKS: MODULAR STRATEGY FOR ECOSYSTEMIC URBANISM

Because Barcelona has already achieved a distributed network, the superblock does not create a new urban morphology by implementing new construction, but rather by taking advantage and manipulating the existing urban fabric. The superblock model is focused solely on taking already developed urban spaces and redefining the priority of movement to favor a more comfortable urban model. The process is to take a district that is roughly three blocks by three blocks and moving normal automotive traffic to the perimeter while limiting speed limits or automotive access to the through-streets inside the superblock. This in turn allows the leftover in-between space to be reclaimed for urban function. This results in an increase of urban activity, green space, mixed-use space, and citizen interaction while in turn increasing urban comfort.

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Poblenou is the poster child neighborhood for the superblock movement and implements the method through intricate tactical urbanism which takes advantage of the leftover space from cars. The already dense district is redirected to make space that is already reserved primarily for mobility to be for public use instead. The superblock creates a large priority of the pedestrian over the private vehicle. Poblenou has seen an increase in public activity since the implementation of the superblock and has had a measured increase in air quality—something that has become quite problematic for Barcelona today. Ultimately, Poblenou proves that ecosystemic urbanism can be achieved through less intensive methods in developed areas and will encourage the creation of more superblocks across the city.

- Recovery of space dedicated to private mobility towards pedestrian mobility and activity
- More defined networks of public transport with proper decompression spaces dispersed throughout
- Increased air quality and urban comfort due to more surface area provided for normal urban activity
- Centralization of activities in superblock pattern, distribution centers of activity throughout the city and allowing self-sustainability
- Centralized superblock creates a large priority of the pedestrian over the private vehicle
- Poblenou acts as a decentralized district that can help to create policy for self-sufficiency per district
- Decentralization of materials and dispersion throughout the urban fabric
- Recovery of urban hard surface for soft surfaces to increase the ecological footprint and decrease potential for flooding from climate change
- Multifunctional urban spaces in the street that support multiple functions between play and living
- Giving back to the biomatrix and protecting biodiversity by increasing green space
- Encouragement of the right of the resident and pedestrian to take advantage of the urban space and activities offered within
- Provision of community, welfare, and health centers that are localized to the specific superblock
- Public space becomes dispersed and accessible to all economic sectors
PARIS, France is another important city to note when considering urban history because recent growth over the past few centuries has shown a more sprawled model. Currently, the city boasts a high residential density with a less defined street network, as the city grew in a spiraling fashion. Paris is serviced by a multitude of transport typologies, from railroad, to private automotive, to bus, and to multiple transit lines. The morphology of the city is most renewed in section, as it has a cohesive and consistent street section with regulated building height and similar street fronts with a strong network of varied street typologies from alleys to boulevards. Currently, the city is lacking in large urban parks in certain areas of the city as well as new economic centers.

ECO-QUARTIER: MODULAR STRATEGY FOR ECOSYSTEMIC URBANISM

The main objective of the Paris modular strategy is to create sustainable economic centers called “Eco-Quartiers” across the city. These districts are the flagships of new construction in the city of Paris as they boast high architecture and design that is efficiency conscious. To achieve this, the Eco-Quartier system is based on an evaluation process to certify each district with certain labels. The evaluation criteria usually go further than the regulations and codes mandated by the city of Paris and are set forward by the Paris and Metropole Amenagement. These districts take advantage of less developed areas of the city by taking over industrial or infrastructural zones, increasing movement, activity, and comfortability in the areas that they occupy.

As compared to Atlanta’s population of about 500,000 with an area of 134 square miles resulting in a density of 3,732 residents per square mile.
CLICHY-BATIGNOLLES ECO-QUARTIER
PARIS, FRANCE

Clichy-Batignolles is a site that originally sits on a multiplicity of transport options, including the rail and the Paris periphery road, as well as many different bus and railway routes. Despite these connections, the urban fabric is relatively isolated and disconnected from the less-used urban spaces in a way that leads to population and activity, sustainability and good health. This means that the urban fabric would be connected across the rail. Additionally, the entire quartier is designed around a large urban park and green space that services Clichy-Batignolles. The quartier prioritizes efficient systems and has extensive use of solar panels and geothermal heating. One of the most successful goals of the district, however, is the multiplicity of the functions in the urban and built forms. The large mix allows for a very vibrant community that addresses the needs of all citizens and residents.

- Recovery of expansive trainyard for large mixed-use district
- Multilevel patterns of transport with access to alternative transportation primarily pedestrian
- Comfortable and controlled public spaces that act as decompression spaces within the formal tension of dense development
- Multifunctional urban spaces and varied building typologies with vertical dispersion of activity
- Large green space to attract residents and diversity of uses
- Complex ecological habitat in the Martin Luther King Park as part of a larger biomatrix
- Maintenance of low level of energy, and water dependence through passive thermal strategies and rainwater collection
- Mitigation of greenhouse gas emissions through renewable resources such as geothermal and photovoltaics
- Reduction of greenhouse gas emissions through renewable resources such as geothermal and photovoltaics
- Mitigation of the effects of climate change through large green space and water retention
- Range of activity, housing, functions, and jobs within all economic sectors
- Dedication to varied housing typologies and providing affordable and subsidized housing options mixed with market-rate housing
2.6 PRECEDENT CONCLUSIONS

THE FEASIBILITY OF A MODULE FOR ECOSYSTEMIC URBANISM

After studying these two cities and the implementation of the respective ecosystemic districts in each, criteria can be understood for the consideration of a possible ecosystemic district in Atlanta. Each precedent shows a possible scenario in Atlanta between urban infill projects to densify urban cores or the reclaiming of existing urban fabric in the core of the city that has been over-mandated by the car-centric model of Atlanta.

The physical characteristics of the overall districts of Poblenou and Clichy-Batignolles are very different, however, they showcase a recommended size range from a compact 9-block square to groups of large developments surrounding a large park. However, both precedent studies show that a strong mobility network is needed both in terms of alternative modes and pedestrian movement. The largeness of Clichy-Batignolles is offset by the strong pedestrian network within the district and through the Martin Luther King Park and the multiplicity of transportation options on the periphery of the site. Densification is important to facilitate the presence of citizens and pedestrian traffic in the district to create urban activity. The urban space should also be activated and comfortable to support multiple uses. All of these are important factors to consider when implementing ecosystemic strategies on a modular scale in Atlanta.
ATLANTA: THE OPPORTUNITY FOR A NEW ECOSYSTEMIC URBAN NETWORK

TO UNDERSTAND THE HISTORY OF THE ATLANTA NETWORK AND ANALYZE VIGNETTE FUTURES FOR ATLANTA
3.1 EVOLUTION OF THE ATLANTA NETWORK

1878 | RAILROAD HUB

Atlanta is founded as “Terminus” at the intersection of major rails in the Southeast and from the beginning grew outward as purely a centralized model of growth. The primary arterials that contributed to the “spokes” of the centralized model are the rails. The morphology of the urban fabric is defined by these arterials as the blocks are oriented along the rails. Because of these initial design moves, Atlanta is set out from the beginning to operate as a centralized network along corridors. As a regional power, the focus on the intersection of the rails creates the ability for arterial sprawl in a centralized fashion, even though the tight grid structure at this time and compact city center create a more distributed local city.

- Denser urban core with access to all types of transport available at the time
- Connected urban fabric through centralization strategies in which the size of the city was accessible as one larger node

1906 | ARTERIAL GROWTH

As centralized growth continues throughout Atlanta’s history, the city becomes a low-density sprawl with neighborhoods far from the city-center, but related to major arterials. This relational proximity to arterials rather than urban centers becomes set as the focus of densified areas and can be seen as the model of growth in an arterial setting in which denser and more-developed urban fabric radiates from the city core while the spaces in between are relatively low-density, with mono-functional activity such as single-family suburbs.

- Lower level of density with more focus on mobility rather than public space
- Connected urban fabric through centralization strategies in which the size of the city was accessible as one larger node
- Balance on a centralized model for resource management, resulting in an expansive unsustainable system
- Balance on an alternative transport network to provide access to all economic sectors
- Encourages separation of social classes
1922 | POST-INDUSTRIAL GROWTH

Because the urban fabric is designed around the corridors and arterials, zones of certain functions are created that are ‘accessible’ to the corridors. These decentralized zones serve as the nodes for the later satellite cities that incorporated more of a mix of function. However, these zones represent a step further from distribution, as certain urban functions and building typologies become grouped and inaccessible to most of the city fabric. As an overall model, the city starts to diversify functions; however, at the scale of the city, this diversification is grouped and not accessible or dispersed, intensifying a centralized model.

- Encourages less mobility as residence to work transport is localized
- Encourages project sustainability and transit into decompression ratio
- Encourages the multiplicity of typologies in the urban fabric while maintaining a high level of green space
- Encourages the multiplicity of typologies in the urban fabric while maintaining a high level of green space
- Encourages separation of social classes
- Beginning to rely on decentralized nodes of resource management
- As an overall model, the city starts to diversify functions
- As an overall model, the city starts to diversify functions
- This is due mainly to scale of the city at this point and still does not encourage efficiency
- Reliance on an alternative transport network to provide access to all economic sectors
- Provides more neighborhoods equal access to the city and alternative transport

1946 | “STREETCAR SUBURBS”

Atlanta, although acting as a centralized model, provides the correct transit that corresponds to these growth strategies. The streetcar system in place efficiently serves the neighborhoods and positively recharges the areas of density along the radial arterials while serving further into suburb areas and encouraging more walkability that relates to the streetcar lines. The overall network of the streetcar system is a denser system that provides easier passage around and through neighborhoods outside the city center.

- Encourages a better alternative transportation network and reaches more citizens than arterials
- Multiplicity of urban space by providing better access to more urban fabric
- Multiplicity of infrastructural systems
- Discourages the use of the car in more parts of the city diminishing the carbon footprint
- Provides more neighborhoods equal access to the city and alternative transport
The Atlanta seen today reflects the historical upward controlled-growth model set by the original models. The city is not defined by its metro region which houses 5.9 million people across 20 counties. The morphology of the city is defined by the street networks which are catered to private automotive mobility—a network that thrives on the interstate model. Other transport options include transit lines and buses that are run by MARTA as well as extensive networks that are currently being established and strengthened, including the Beltline.

- Attempts at radial connection with I-285 and Beltline which have attempted to limit metro growth
- Very low dense and sprawled decentralized model
- Urban model is extremely car-centric and contributes to a large carbon footprint
- Small amount of recent policy for mandated renewable energy
- Large amount of green space compared to asphalt
- This green space is largely undefined and either unprotected or not defined as public space
- Relatively good amount of dispersed urban facilities among neighborhoods
- Stratified neighborhoods that do not reflect the mix of social classes found in the city today

In 2017, the Atlanta City Studio published “OUR FUTURE CITY” which outlined an in-depth plan for the future of Atlanta. The plan is a response to the projections of the city Atlanta sharing 15 percent of the region’s 2.5 million person population growth by 2050. The plan focuses on two factors that make up the heart and soul of the city: the people and nature. Drawing upon the growth typology of Atlanta as a city of corridors, our future city takes advantage of the city’s morphology to create the most appropriate types of growth that thrive in a dense urban city. The five core focuses of the vision for the future city of Atlanta are very similar to the four factors of ecosystemic urbanism. They are: equity, progress, ambition, access, and nature. By adhering to the initiatives laid out in this vision for Atlanta, many of the priorities of ecosystemic urbanism can be met.

The plan defines areas of growth versus areas of conservation to protect the famed tree canopy of Atlanta. Within these areas of growth and conservation, the plan prioritizes creating a stronger network of connectivity for mobility of people as well as an intentional biophysical matrix. It calls for an extension to current alternative transportation networks that will reach denser parts of the city that are currently not accessible via alternative methods, encouraging more distributed corridors of connection. The plan outlines typologies of public spaces that can link together to become part of a biophysical matrix that also houses urban functions for pedestrian and citizen activity. Overall, the plan will create a framework for Atlanta that preserves the legacy of its trees, green spaces, and people in a manner that is more intentional than past models.
The initiative to improve the efficiency, comfortability, and functionality of urban public space in cities in the United States is the EcoDistricts initiative. It is a program similar to the Eco-Quartiers in Paris, France, in which a neighborhood or district within a city goes through a process to improve the sustainability of the district in order to become EcoDistrict certified. In order to become certified as an EcoDistrict, a community or neighborhood must follow a defined protocol: committing to the imperatives, forming a collaborative organization, developing a strategy to solve key issues regarding the imperatives of the district, and analyzing the performance of the strategies taken. This protocol works within the construct of the defined district type which helps community leaders determine the priorities of the ecodistrict. Currently there are three areas of interest in Atlanta in terms of EcoDistricts. Hartsfield-Jackson Airport acts as an EcoDistrict through sustainable policy implementation. English Avenue, Vine City, and Atlanta University Center neighborhoods have joined forces to start designing their own EcoDistricts. And the Midtown Alliance has begun making plans to implement an EcoDistrict plan in Midtown.

The EcoDistrict model is an important factor that is changing the city and has the potential to influence the future of Atlanta through modular implementation of ecosystemic urbanism and policy regarding morphology, complexity, efficiency, and equity.
NEIGHBORHOODS WITH ECODISTRICT POLICY IMPLEMENTATION

Three different entities within the city have or are planning to develop EcoDistricts. Midtown plans to create an EcoDistrict that focuses on business ethics and sustainability with a Zero Waste initiative. The A.V.E EcoDistrict is being certified with a district focused on equity and water reclamation, creating safer streets, more access to public space, and the creation of a park that will resurface and create a healthier watershed for Proctor Creek. The Atlanta Hartsfield-Jackson Airport is a certified EcoDistrict and LEED for Cities and Communities focused on Zero Waste and efficient systems of transport and energy.

ALTERNATIVE TRANSPORT NETWORK EXTENSIONS AND ADDITIONS

The City has planned for increased methods of rapid transit by setting forward municipal routes along the major corridors running East-West and North-South, to connect more of the city that is not directly adjacent to a light rail. Additionally, MARTA will be extended on the West Line and a corridor will be created between Avondale Station and Emory. The goal of this will be to better connect areas of the city previously less accessible.
3.3 SITE SELECTION AND INTENTION

RECOGNIZING POTENTIAL SITES FOR MODULAR IMPLEMENTATION

By overlaying these new initiatives and current models of city networking in Atlanta, a synthesized understanding of the ecosystemic network can be realized. Areas of intersection between transportation networks, sustainable-concious districts, biophysical matrices, and pedestrian networks can define nodes of the city network that will serve the best for urban densification or new intentional urban design. The best sites for designing an ecosystemic district in Atlanta will be at the nodes that lack residential density or urban activity due to functional areas of industrial zones, large areas of infrastructure, or existing areas of very low density and sprawled urban fabric. By concentrating on these nodes, an example of densification and optimization of existing fabric within the city limits can prove the potential to redefine the overall network of the city. With this intention, the city network can then be interconnected within the city limits to become even more distributed with modular implementation of ecosystemic urbanism in areas devoid of nodes of intersection in current city networks.

HULSEY YARD

In order to push Atlanta from a decentralized network towards a distributed network like that of Barcelona, we must focus inward, encouraging higher densification near the urban core of Atlanta. Low-density or vacant urban spaces must be taken advantage to the fullest extent to allow for the accommodation of more people while at the same time providing for the people already living in proximity. It is important to focus on sites that exhibit strong radial movement outward from Atlanta’s core but need a stronger periphery.

Hulsey Yard is a currently vacant train yard in close proximity to downtown Atlanta. The neighborhoods surrounding the yard are primarily low density and require an offset of development in the yard to accommodate an appropriate amount of people. The abundance of modes of transport around the site present a strong network of movement to and from the core but not between other nodes in the city. In fact, the yard acts as a physical and social barrier between the North and South. This proves Hulsey Yard to be a perfect candidate for new development that will exhibit a stronger distributed network and characteristics of ecosystemic urbanism. In order to achieve this, the Hulsey Yard Development will be proposed as a grouping of transit-oriented developments along the MARTA corridor.
Hulsey Yard sits between very walkable neighborhoods but acts as a barrier between the neighborhoods along the Dekalb Ave corridor. There are two funnel points within the site at Boulevard and Krog St tunnels and four connections overall along the two miles in proximity to the Yard. The number one priority of a street network design in Hulsey Yard would be to increase the network between North and South expanding upon the walkable fabric of the district as a whole. There are many opportunities for this to happen as there are many streets that end at the edge of Hulsey Yard. Although not all of these can pass MARTA, there are opportunities for multiple connections at or below street level.

Hulsey reflects certain qualities of the urban site for the Clichy-Batignolles Eco-Quartier in that it is a vacant rail yard situated along a major corridor of centralization—Dekalb Ave and the East MARTA rail—nil intersection of some sort of peripheral network system— in this case the Beltline. The Yard itself is the current problem and the possible solution to an undistributed network in the area. Much like Clichy-Batignolles, a primary focus of the site will be to build linkages across physical barriers to stitch together the urban fabric via a physical street network, while at the same time providing key programmatic functions within the site as a functional and social linkage in the developing distributed network. The site itself is a keystone to fill in the distributed model in this area of Atlanta.
THE FRAMEWORK AS A TOOL FOR SITE-SPECIFIC ANALYSIS

TO UNDERSTAND THE ROLE OF ECOSYSTEMIC PRIORITIES AND EVALUATORS IN ANALYZING POTENTIAL URBAN INFILL SITES
THE PROCESS FOR AN ECOSYSTEMIC ANALYSIS OF HULSEY YARD

Because Hulsey Yard is currently a vacant site and a new development would act as an infill urbanism project, the surrounding fabric of the site must be understood in order to properly apply the factors of ecosystemic urbanism to the design of the new Hulsey Yard district. To achieve this understanding of context, evaluators from each factor will be chosen to evaluate the conditions of that factor in the existing urban fabric surrounding Hulsey Yard [ANALYSIS]. From these general ideas of how the context will affect the inclusion of these evaluators within Hulsey Yard itself [SITE OPPORTUNITY], the overlay of site opportunities for the evaluators of specific factors will then show the [DESIGN STRATEGY] for each topic.

These analyses and site opportunities must be understood both in plan and section for those evaluators that apply both two and three-dimensionally due to the extreme range of topographic conditions of Hulsey Yard as seen to the right. By understanding the ecosystemic evaluation of each of these factors along different sectional conditions, the design areas of interest can be determined for the implementation of ecosystemic elements and priorities on the site. The goal of this analysis is to develop strategies in plan and section to implement ecosystemic urbanism in terms that are specific to Hulsey Yard and its surrounding context.
The morphology of the urban ecosystem is defined by the physical organization of the urban fabric. It is determined primarily by the street network, the built form of the block, and the in-between urban space—be it resultant or planned. The major functions of urban life that the morphology affects are the functionality of the urban fabric (LAND OCCUPANCY), the mobility and accessibility of the overall network (MOBILITY AND SERVICES), and the quality of the urban space (PUBLIC SPACE AND HABITABILITY). To understand the morphological effect of the existing site, the two most important factors to understand are the amount of citizens living, working, and using the urban space as well as their ability to move freely through the urban network for this reason, evaluators such as RESIDENTIAL DENSITY and PROXIMITY TO ALTERNATIVE TRANSPORT will be tested to understand the amount of life on the site and the general ease of access for the street network and transportation network which will be essential to further define the success of urban functions and urban factors that will later be evaluated.

By providing a high residential density, an urban fabric becomes activated with life, allocating transportation, basic services and facilities, active functions and community relationships, institutions, activities, and exchanges. The goal for residential density is to reach between 40 and 64 dwellings per acre.

By increasing the frequency of access to networks of alternative transportation, mobility is increased and democratized. By reducing private motorized traffic, more of the population is able to be mobile in a safer and more sustainable manner that does not stress the urban ecosystem. The goal for alternative transport, including a large pedestrian ally as seen in Figures 4.1.2 and 4.1.3 that connect the metro station to the South of the site to Port Clichy and the Peripherique to the North.

The habitability of public space in Clichy-Batignolles focuses on the vegetation of the public space. The development in Figure 4.1.4 boasts over 34,000 square feet of planted surfaces that serve to cool the atmosphere, clean the air, and mitigate the transference of noise. The signs of spaces are spread throughout the district and are all linked to the Martin Luther King Park.

Clichy-Batignolles sits at a key intersection of multiple transport options, similar to Hulsey Yard. The focus of movement across the large urban site is pedestrian, which is why there are multiple typologies of pedestrian movement, including a large pedestrian ally as seen in Figures 4.1.2 and 4.1.3 that connect the metro station to the South of the site to Port Clichy and the Peripherique to the North.
The housing typology in the four surrounding neighborhoods consists primarily of single family housing. For this reason, the general density of the area is less than 16 dwelling units per acre. The exceptions are the higher density corridors along the Beltline, North of Hulsey Yard, and other high density developments close to the flanking MARTA stations. In general, the housing density is higher to the North edge of the site along Dekalb as compared to the almost completely single-family typology in Cabbagetown and Reynoldstown to the South. There are two cross-sectional areas of relatively middle-density at areas D-D and F-F.

To meet desired housing density requirements for an ecosystemic district, the general density of Hulsey Yard will be around 40 dwelling units per acre. However, to address the single-family context, the intent will be to match areas of higher and lower density. Another deciding factor will be to focus the highest housing density near current and future MARTA stations to create Transit Oriented Districts. For this reason, the area of highest density will be located at Krog St and Dekalb Avenue as this provides the highest access to transportation in addition to the major Transit Oriented District of the site - a focal point for housing density.

Hulsey Yard is close enough to the city center to have a decent alternative transportation network. The surrounding neighborhoods have adequate bus access, the Beltline connects North to South, and MARTA connects East to West. Unfortunately, due to the lack of development in Hulsey Yard itself the site acts as a barrier between the North and South and is not balanced by the Beltline. The areas directly North and South of the site do not have adequate bus access and have a longer walk to a MARTA Station compared to the areas to the East and the West. For this reason, the Hulsey Yard development needs to be structured around alternative transportation.

To address the need for alternative transportation for the future residents of Hulsey Yard and some existing residents of the four surrounding neighborhoods, the street network of Hulsey Yard will be laid out along two major axes that service new bus routes connecting to the existing network - one North to South near the center of the site and one East to West to provide bus access to all future residents. Additionally, the new MARTA station at Krog St will address the major Transit Oriented District of the site allowing for a more comfortable walking distance as well as acting as a core for the major Transit Oriented District of the site - a focal point for housing density.
MORPHOLOGY DESIGN STRATEGY

New bus routes and alternative transport access

Areas of interest

New MARTA station and access

Connections between areas of medium to higher density

Relative buffer for lower densities

Areas of interest exist within this site, including:

- Areas with the most need for density and alternative transit: areas C-C and F-F.
- Areas of focus will be in the entire area in the center of the site from B-B to D-D, as well as the area around F-F near the eastern edge of the site.

These areas will serve both as the hotspots for alternative transport and the development of the street network. They will also serve as TOD's on the site, designating the greatest building height and influencing the building footprints in the site.

MORPHOLOGY DESIGN GOALS

1. Design for a higher and more variable density
2. Increase alternative transport and connectivity
3. Create a street network that improves accessibility

See Section 4.5 for strategic design statements.
The complexity of the urban ecosystem is defined by the functional and relational organization of the urban fabric. It is determined by the interactions between citizens and entities that happen within the urban fabric. The elements of the urban fabric that are manifested by urban complexity are building typology and the overall order of objective function and organization, as well as the diversity of the urban fabric in the manner to which void may be filled and purposed with vegetation or public park space. To understand the urban complexity of the existing site, the most important factors to understand are the frequency and distribution of multiple activity or building typologies as well as the provision and diversity of green, public, or open spaces for the mixed evaluation. These parameters will be tested to understand the diversity of the urban form and function, which is paramount to understanding the quality of life for the residents. By providing access to green spaces, an urban fabric addresses multiple physical and social needs of the population and provides an essential urban function for organization and metabolism. Green spaces increase diversity and complexity of urban form and tectonics. The goal of green space is to allow 75 to 100 percent of residents access to green spaces of multiple scales.

**Clichy-Batignolles**

Clichy-Batignolles is a highly diverse district that plans to serve as a new economic center in the Northwestern area of Paris. The plan for the district will create a zone of tertiary activity. The northern edge of the district will focus around the economic district created by the new Paris Courthouse that will create a zone of tertiary activity.

By providing multiple building functions and uses in the urban space, the overall fabric and activity becomes complex and non-specialized. By providing multiple building functions and uses in the urban space, the overall fabric and activity becomes complex and non-specialized. This allows for work-residence proximity and allows for more basic needs to be met in the area of residence. The goal of non-residential uses is to meet 15 to 20 percent of urban and park functions to be dedicated to non-residential functions.

**Green Spaces and Biodiversity**

Clichy-Batignolles plays a large role in saving and maintaining the biodiversity in the Northwestern Region of Paris. The park provides nearly 25 acres of green space that house diverse environments for Vegetative biodiversity and human activity. The park provides conditions for multiple tree, shrub, and grass species, wetlands, basins and rocky areas that amount to 500 different plant species. In addition to this space, the green space is permeated throughout the rest of the district through 70,000 square feet of private green space and more than 150,000 square feet of green roofs.

**Complexity Evaluators Seen in Clichy-Batignolles**
The historic functionality of the area around Hulsey Yard had a high work-residence proximity as many residents worked in local industrial buildings like Fulton Cotton Mill. Currently, there are surrounding corridors of mixed-use functions, however most of these functions are more privatized and do not serve a large population in work or activity. Areas that are most lacking in accessible, mixed-use functions in general are the areas of Cabbagetown and Reynoldstown directly South of Hulsey Yard. The most successful mixed-use corridors are Edgewood Avenue to the North, Memorial Drive far to the South and more active areas of the Beltline.

The goal of mixed-use function on the site will be to restrain as much mobility as possible to allow for close live-work-play proximity. The design, opportunely, will be to increase overall functions by including office typology—currently non-existent in the surrounding area—as other work functions in the site in general. Mix of uses that allow for more 24-hour activity will be designed in corridors that connect existing corridors of activity from North to South as well as provide access to the existing Beltline. This corridor will service both the residents and Beltline users.

In general, the green space per inhabitant in Atlanta is higher than most cities in the United States, and the area surrounding Hulsey Yard is no exception. The greatest green space asset to the area is Oakland Cemetery, which is a public area, however, the entrance is difficult to access for most of the residents of the four surrounding neighborhoods. This is the lacking quality of green space in Atlanta—as much as there is, the low walkability of the city makes it hard to access as a pedestrian and a good portion of the current green space is privatized. The public green spaces in the map are large but spread. The Beltline, as a green corridor, in the most accessible.

The design, in terms of green space, will also play as a corridor approach. The main goal will be providing access to the more-than-adequate green space in the area. Drawing upon the idea of the Beltline, a secondary green corridor will run alongside the Seaboard Avenue extension with branches reaching the major parks and providing a northern entrance to Oakland Cemetery. This green corridor will serve a tangible benefit of physical well-being as well as serve as the lungs of Hulsey Yard. It will connect to the larger network by connecting to the Memorial Greenway to the West and the Dekalb Avenue complete street to the East, while adding intimate pocket parks.
**EXISTING SECTION EVALUATION**

The areas with the highest potential for complexity extend through all cross-sectional areas of the site, as the corridor design will focus primarily on a longitudinal approach with the green spaces connecting corridor on the Northern edge and the mixed-uses corridor on the Southern edge. For this reason, all sections will be strong in both aspects of complexity. Because the design will address all areas simultaneously, all areas will be optimized for urban complexity depending on direct context for implementation.

**AREAS OF INTEREST**

**COMPENDY DESIGN GOALS**

1. **Create dispersed corridors of non-residential uses**
2. **Create a green "spine" to connect adjacent urban green space**
3. **Intentionally influence the future growth of surrounding urban fabric**

Refer to Section 4.1 for strategic design statements.
The efficiency of the urban ecosystem is defined by the ability of metabolic systems in the urban fabric to utilize and produce resources for the good of the inhabitants. Efficiency is composed of the various systems that provide necessary infrastructure for living functions including the water cycle, energy cycle, waste cycle, as well as the overall environmental impact of an urbanism on its surroundings. The goal of these METABOLIC PROCESSES in an ecosystems urbanism is to reach a certain level of self-sufficiency in the site, thereby decreasing the impact of the site on the surrounding environment and resource pool. The most notable evaluators of metabolic processes are an existing setting drawn from the energy processes in an urban fabric. 25, 26, and 28 will be evaluated to understand the site’s current energy impact on the surrounding environment and infrastructures. The focus of analysis will be on the use and production of energy in the site. The efficiency of the urban ecosystem is defined by the the ability of metabolic systems in the urban fabric to utilize and produce resources for the good of the inhabitants. Efficiency is composed of the various systems that provide necessary infrastructure for living functions including the water cycle, energy cycle, waste cycle, as well as the overall environmental impact of an urbanism on its surroundings. The goal of these METABOLIC PROCESSES in an ecosystems urbanism is to reach a certain level of self-sufficiency in the site, thereby decreasing the impact of the site on the surrounding environment and resource pool. The most notable evaluators of metabolic processes are an existing setting drawn from the energy processes in an urban fabric. 25, 26, and 28 will be evaluated to understand the site’s current energy impact on the surrounding environment and infrastructures. The focus of analysis will be on the use and production of energy in the site. 25 RESIDENTIAL ENERGY CONSUMPTION
26 ENERGY CONSUMPTION BY SERVICES
28 RENEWABLE-SOURCED ENERGY
By designing and mandating a maximum provision of energy with the lowest consumption through a focus on reaching comfort, a district may become energy self-sufficient. The goal for energy consumption is for between 50 and 100 percent of all built fabric to be adapted to thermal requirements and be adequately enclosed to reach an easily-attainable sufficiency through self-production.

Clichy-Batignolles is a leading district for sustainability in Paris and has regulations for buildings that exceed the normal energy regulations in Paris. All buildings in the district are limited to 5 kWh per square foot and the energy used for heating cannot exceed 1.5 kWh per square foot. For this reason, the building must be designed to passively use less energy through small compact volumes with increased surface area, dual exposure and solar protection through facades and green roofs, and proper insulation of buildings. Facades are designed to mitigate heat transfer and many buildings use a thermal slab to capture and reserve heat.

To offset net energy usage in total, Clichy-Batignolles is also leading in renewable efforts through both geothermal and photovoltaics. The district has a decentralized heating grid that connects all buildings, allowing 35 percent of heating needs to be satisfied via renewable processes which also lowers 502 emissions per year by nearly 4,000 tons. In addition, Clichy-Batignolles, once completed, will boast more than 350,000 square feet of photovoltaic panels that will produce 3,500 MWh per year and will provide 40 percent of the energy consumed in the buildings within the district, primarily used for lighting.
ANALYSIS

Atlanta as a city has pursued multiple endeavors in terms of energy and water efficiency across the city in public spaces and its individual properties. The Atlanta Beltline Institute mandates:...and provides Property Assessed Clean Energy [PACE] financing for energy efficient properties.

EXISTING URBAN POLICY AND GOALS

THE ATLANTA CLIMATE ACTION PLAN 2017

Atlanta has committed to:...and aims to achieve a:

SITING OPPORTUNITIES

SITE OPPORTUNITY

To meet required energy and water consumption within Hulsey Yard. It is imperative to be intentional in design and policy of the district as compared to the surrounding neighborhoods. All of Hulsey Yard must be considered in terms of energy and water efficiency rather than the city of Atlanta. The entire district of Hulsey Yard should be committed to reducing energy consumption by 30 percent of an area of equal population in the surrounding neighborhoods.

To achieve these goals, the entire site will have to be tested for the best strategies: solar panel installations, geothermal, wells, and rooftop photovoltaics.

To address the need for renewably-sourced energy and water production in the district of Hulsey Yard it will be important to focus on three primary strategies: solar panel installations, geothermal wells, and rooftop photovoltaics. All buildings in the two Hulsey Yard districts will be equipped with rainwater collection systems and the buildings will have to be benchmarked for the implementation of geothermal to be able to support a heating grid to meet the demands of the buildings. This will be essential in meeting the various demands of the buildings while also reducing the carbon footprint.
Given the low provision of energy and water reduction in buildings surrounding Hulsey Yard as well as the unclear plan for renewable energy in this area of Atlanta, the entire district must act in unison to achieve ecosystemic efficiency. This means that this factor must apply equally to the entirety of the site. Each building in the site must be committed to energy and water efficiency and there will be a general design of renewable energy strategies across the district. This will be integrated into new construction.
The equity of the urban ecosystem is defined by the diversity and coexistence of different demographics in the urban space. It is determined primarily by the inclusion of multiple population typologies in regards to housing, work, and everyday activity, as well as the general high-quality of the urban environment that is provided. A democratic manner urban equity is met by meeting the basic needs for all population types, be it based on income or other social variables; for this reason, urban equity is only met by facilitating the ability for all social groups to be able to take part in functions of an urban space and interact among each other—SOCIAL COHESION. To understand how the basic needs are met on the existing site, the two most important needs to consider are the provision of services: 41 PROXIMITY TO BASIC FACILITIES and 42 PROVISION OF BASIC URBAN FACILITIES—as well as the provision of the most basic need—43 SUBSIDIZED HOUSING AND DISPERSION. These evaluators will be tested on the site primarily for the provision of these needs, however, the design implementation should focus both on the provision as well as the proper dispersion to increase the intensity of the social mix across the entire site.

SOCIAL COHESION

41 PROXIMITY TO BASIC FACILITIES
42 PROVISION OF BASIC URBAN FACILITIES

By providing dispersed facilities that meet the basic needs of all populations, the overall urban fabric becomes a collection of nodes that facilitate democratic social complexity, increasing the quality of life for all. The goal for urban facilities is to increase access to the facility types for 75 to 100 percent of the population.

43 SUBSIDIZED HOUSING AND DISPERSION

By increasing the amount of affordable housing, the basic need for social democracy in the urban fabric is met. The increase of housing typologies allows for a higher social mix and increases the overall social complexity that is able to be achieved in an urban setting. By having affordable housing go to 75 to 100 percent of units, it is possible to meet urban equity.

4.4 URBAN EQUITY EVALUATORS

EQUITY EVALUATORS SEEN IN CLICHY-BATIGNOLLES

Clichy-Batignolles is a highly diverse district that, as stated before, acts as a new economic hub in the Northwestern area of Paris and aims to create active environments for residents and pedestrians. The district has dedicated more than 300,000 square feet— including a 10,000 square foot community center—to public facilities and has added entertainment for residents of the area. These uses are distributed throughout the site horizontally and vertically into primary office, retail or residential buildings, many of which include affordable units. These public facilities are very accessible due to the strong pedestrian network throughout the site.

Out of the total 3,600 residential dwelling units in the district, 500 are dedicated to social housing making up 50 percent of the surface area of the district. There are also capped rent housing as per urban housing policy. The affordable housing typology is also varied allowing for 50 units for student housing, 200 rooms for dependent seniors, nursing homes, and social welfare centers. The affordable units are not distinguished by income or quality on the site and are mixed with the market rate units in the mixed-use buildings spread throughout the site.

URBAN EQUITY

The sociocultural urban fabric: human relationship, cultural diversity, quality environment, and access to resources.
41+42 ANALYSIS

The area surrounding Hulsey Yard does not provide adequate job opportunities or basic urban facilities, however, very fine areas of future if they have access to a multiplicity of services. The smallest area is the Northeast in Sweet Auburn. The smallest area that would make up for 1% of One-Atlanta’s goal of 20,000 units. There are some scattered tax credit properties with income-based guidelines. The entire site falls within the Beltline Inclusionary Zoning, which does limit rents for a certain number of units but an affordable housing is generally considered to be at 80% AMI or below. This policy will not have a deep or adequate enough effect on affordable housing to create an equitable ecosystemic urban environment.

41+42 SITE OPPORTUNITY

To meet equitable conditions for residents, urbanism regarding urban facilities, at least 15 percent of units at 80% AMI. The dispersion of affordable housing will cover the entire site, but will be concentrated around the areas of existing urban policy and goals. The Beltline Inclusionary Zoning covers a half mile radius surrounding the Beltline and includes:

- 10 percent of units at 80% AMI
- 15 percent of units at 90% AMI

The City of Atlanta has a goal to reach 20,000 new affordable units by 2020.

43 SITE OPPORTUNITY

The goal for the design will be to meet roughly 20 to 25 percent of units to be affordable which would meet approximately 20% of the overall goal of One-Atlanta. The units will be of varying quality, but primarily subsidized by housing authorities at 30 to 50 percent AMI. The dispersion of affordable housing will cover the entire site and be concentrated around the areas of intersection of multiple types of transit at Krog St and at the Reynoldstown Transit Station. The affordable housing to create an equitable ecosystemic urban environment.
NEED FOR ACCESS TO RECREATION FACILITIES

NEED FOR ACCESS TO EDUCATION FACILITIES

NEED FOR ACCESS TO COMMUNITY CENTERS

NEED FOR ACCESS TO HEALTH FACILITIES

NEED FOR ACCESS TO WELFARE FACILITIES

SUBSIDIZED/LOW-INCOME MULTIFAMILY HOUSING

LOW INCOME TAX CREDIT PROPERTY

AREAS OF HIGHEST PERCENTAGE OF SUBSIDIZED HOUSING [25-30 PERCENT]

DISPERSED DEVELOPMENTS THAT INCLUDE AFFORDABLE UNITS - LITCP OR SUBSIDIZED [15-20 PERCENT]

SCALE: 1"=750'

SCALE: 1"=250'

EXISTING SECTION EVALUATION

The areas with the most need for affordable housing occur at areas F-F and between areas D-D and C-C. The areas with the most need for basic facilities occur at areas A-A, B-B, and E-E. For this reason, the concentration of affordable housing will occur at F-F and C-C while the concentration of multiple facility functions will occur at B-B and E-E so that housing and facilities will be adjacent. Additional affordable housing and facilities will be dispersed through the site as needed, but there will be a focus on activity and at-market housing.

EQUITY DESIGN GOALS

REFER TO SECTION 4.5 FOR STRATEGIC DESIGN STATEMENTS

INCREASE AMOUNT AND DISTRIBUTION OF SUBSIDIZED HOUSING

DESIGN TO ENCOURAGE INCLUSIVITY AND DEMOCRACY

PROVIDE COMMUNITY FUNCTIONS FOR NEW AND EXISTING POPULATIONS

REFER TO SECTION 4.5 FOR STRATEGIC DESIGN STATEMENTS
4.5 STRATEGIC GOALS FOR DESIGN

SYNTHESIS MAP OF ANALYSIS OUTCOMES

While all ecosystemic urbanism design elements will be dispersed throughout the site, certain areas will be more suited geographically or physically to house concentrations of certain ecosystemic principles.
The density of the surrounding urban fabric is important to maintain healthy levels of social equity in the urban fabric and provide additional green surface as the resulting surface area should be above the 110 sq ft per inhabitant minimum of an urban fabric. Instead of providing additional green spaces, the goal of green space in the Hulsey Yard should be the strengthening of the biomatrix. With the Beltline serving as green surface on the southern edge of Hulsey, a new “Green Spine” should follow the Seaboard Avenue extension to connect Oakland Cemetery to Inner Park. This spine should then have pedestrian corridors to connect additional adjacent parks. These corridors should serve as a centralized route, while being accessible to most of the site due to its central location and adjacency to the Beltline crossing, allowing for the most walkable proximity.

The primary purpose of non-residential functions should be to maximize the activity of the street. Secondary should provide workplace or commercial functions that encourage complex activity throughout a 24-hour period. These functions are beneficial to a corridor organization; the design for a more walkable and mixed-use neighborhood along Marta and the Beltline should focus on mixed-use and decompression as well as specifically define the areas of high-density, mixed-use or non-residential function, and those still untouched by mass development. These corridors of green space should define areas of compression and decompression in the surrounding neighborhoods, specifically those still untouched by mass development. These corridors of high-density, mixed-use or non-residential function, and corridors of green space should define areas of compression and decompression as well as specifically define the areas of future growth in the surrounding urban fabric. This should allow for an increase in density towards more desirable levels while maintaining healthy levels of social equity in the urban fabric and providing additional green services and functions for the increased population.

Adjacent parks in proximity to the site total more than 170 square feet of accessible green space per inhabitant. To maintain an average desirable green surface area, it should be necessary to provide additional green surface as the resulting surface area per inhabitant with the added extended Hulsey yards would be above the 110 sq ft per inhabitant minimum of an urban biomatrix. Instead of providing additional green spaces, the goal of green space in the Hulsey Yard should be the strengthening of the biomatrix. With the Beltline serving as green surface on the southern edge of Hulsey, a new “Green Spine” should follow the Seaboard Avenue extension to connect Oakland Cemetery to Inner Park. This spine should then have pedestrian corridors to connect additional adjacent parks. These corridors should serve as a centralized route, while being accessible to most of the site due to its central location and adjacency to the Beltline crossing, allowing for the most walkable proximity.
Hulsey Yard, being a site with a multitude of infrastructural systems, serves as a key location for the implementation of green infrastructure in the district. The best way to implement green infrastructure in the district should be to take advantage of the Beltline and green spaces as part of the bioclimatic to include elements such as bioswales, rainwater harvesting, rain gardens, and the retention of the Atlanta tree canopy. Other areas of intervention in the district should include permeable paving and green streets and alleys on tertiary streets as well as a minimum six-foot median on the primary North-South boulevards to house flood water mitigation elements, large street trees, and community gardens. This design goal goes hand-in-hand with goal 1 that these green elements will be embedded in the design of the district.

Sustainability and renewable strategies are a key focus to achieve a high-efficiency district. An important design strategy that is designed on paper and implemented in construction, is the continued commitment of the residents, business, actions, and other tenants of the district to the values of sustainability to maintain an efficient and resilient district. The design and incorporation of low-energy and water-efficient as well as renewable strategies must become a physical spectacle within the district itself. The design should pay special attention to the bioclimatic to include elements such as bioswales, rainwater harvesting, rain gardens, and the retention of the Atlanta tree canopy. Other areas of intervention in the district should include permeable paving and green streets and alleys on tertiary streets as well as a minimum six-foot median on the primary North-South boulevards to house flood water mitigation elements, large street trees, and community gardens. This design goal goes hand-in-hand with goal 1 that these green elements will be embedded in the design of the district.
SYNTHESIS OF ECOSYSTEMIC ANALYSIS AS VALIDATION OF DESIGN

To prove the relevance of ecosystemic urbanism as a process to validate urban design decisions.
INTRO TO EXISTING PROPOSALS

Following the clearing of the CSX Railyard at Hulsey, locals got to work envisioning what the future of the site could be. A urban studio from local architectural firm Lord Aeck Sargent formed a Pop-Up Studio at local Lang Carson Community Center that allowed the neighborhoods to have input on how the site should be designed. The study asked the participants to define the three areas of the site shown below with terminology inspired by the Atlanta “Transit Oriented Districts” on the scale and character of the blocks on the site. The study concluded with three definitive masterplans that displayed three different street networks and base urban models.

REGIONAL DESTINATION

DENSITY: 10 d.u. per acre
SCALE: 12-18 Stories
EXAMPLE: Ponce City Market

INTOWN MIXED-USE CENTER

DENSITY: 15 d.u. per acre
SCALE: 6-10 Stories
EXAMPLE: Lindbergh Center

INTOWN VILLAGE

DENSITY: 15 d.u. per acre
SCALE: 4-6 Stories
EXAMPLE: Inman Park Village

RESIDENTIAL NEIGHBORHOOD

DENSITY: 9 d.u. per acre
SCALE: 3-4 Stories
EXAMPLE: Glenwood Park

The proposal for the Roundhouse Masterplan intends to provide a large public park at the crossing of the future Beltline Rail from the Beltline to the Inman Park station. Typical of the Pop-up Studio proposals, the street network in Hulsey will act as a connective issue with North-South connections at Delta Place - Theater Ave and Pearl St - Waddell St and East-West connections with the extension of Seaboard Ave across Hulsey. The density of the site is situated primarily along Dekalb Avenue with lower density along Wylie. The highest density sits to the West of the site near the Inman MARTA Station.
The proposal for the Hulsey Squares Masterplan intends to provide multiple smaller urban public spaces along the length of Hulsey Yard similar to the squares in Savannah. Typical of the Pop-up Studio proposals, the street network in Hulsey will act as a connective tissue with north-south connections at Delta Place - Chester Ave and Pearl St - Waddell St and East-West connections with the extension of Seaboard Ave across Hulsey. The North-South connections are not interrupted by the squares and allow for thru traffic. The density of the site is situated primarily along Dekalb Avenue with lower density along Wylie. The highest density sites to the West of the site near the Inman MARTA Station. The Hulsey Squares plan does provide more land area to the higher density Intown Mixed-Use typology.

The proposal for the Green Ribbon Masterplan intends to utilize the Beltline corridor throughout the site as one long continuous green space of decompression. Typical of the Pop-up Studio proposals, the street network in Hulsey will act as a connective tissue with North-South connections at Delta Place - Chester Ave and Pearl St - Waddell St and East-West connections with the extension of Seaboard Ave across Hulsey. However, this masterplan does not propose Seaboard Ave as the continuous through street in the site. The density of the site is situated primarily along Dekalb Avenue with lower density along Wylie. The highest density sites to the West of the site near the Inman MARTA Station. Additionally, the Green Ribbon plan only provides smaller parks in the site which allows for more of the Regional Destination typology.
Another important study to validate through ecosystemic urbanism is the concluding design from a graduate Georgia Tech focus studio led by Professor David Green in 2005. The students were tasked with defining different typologies on the site with varying housing density that might build on each other over time. The options ranged from a continuation of the single-family typology of Cabbagetown to medium-density donut buildings around parking structures to towers that accommodate a high density. The final design focused on the tower typology and displayed the sectional qualities of this typology and how it may fit into the surrounding context.

The masterplan proposed by the focus studio is a more in-depth focus into the built-form possibility on the site based on a need for higher density while still respecting adjacent areas of low-density or single-family residential typologies. Similar to the Green Ribbon Masterplan, the plan proposed by the focus studio is built on the green spine of the Beltline as the primary arterial network through the site. The plan does not accommodate for any new thru streets to make tighter North-South connectivity, but does allow for many access points to Cabbagetown or Reynoldstown from the South edge of the site. There is a large ratio of green space to building footprint when compared to the other masterplans, however, the green surrounding the lower-density single-family residences does not contribute to the overall urban public space.
Although the large green space offers some great potential, this large of a park is not necessary to provide urban space to the surrounding residents, given the high amount that exists already. Additionally, the density does not reflect the trends of housing density or building height adjacent to the site, which would prefer a higher density closer to Krog and the Fulton Cotton Mills. The street network, with an East-West street through the site, prefers shorter block widths North-South and longer block widths East-West, favoring the corridors of a centralized model and diminishing the maximum density potential of buildings on these blocks. This proposal does not show how the networking strategies in function and morphology may strengthen the surrounding urban fabric and networks.

ROUNDHOUSE PROPOSAL STRENGTHS

- Connectivity: A connecting E/W street through the site, possibly extended to create a more central core.
- Density: The varied housing density helps to create a more mixed-use environment.
- Accessibility: The proposed transit-oriented development would improve access to public transportation.

ROUNDHOUSE PROPOSAL WEAKNESSES

- Low Amount of High-Density Development
- Lack of Intersection of Alternative Transportation Routes
- Green Space Does Not Connect Existing Spaces
- Does Not Define Southward Growth
- Requires Dispersed Affordable Housing

In order to maximize the effectiveness of the base model, the first priority of the ECOSYSTEMIC Roundhouse Masterplan will be to increase housing density across the site and to reallocate the largest building sizes and densities along the Northern edge of the site and concentrated closest to the nearest MARTA station at Krog, and the East and West ends of the site. Additionally, subsidized housing must be distributed throughout the site both geographically and amongst multiple housing typologies to create the maximum potential for accessibility to facilities and site opportunities. An emphasis on alternative transport will be placed on the Seaboard Avenue extension to include bike paths, bus routes, wide pedestrian sidewalks, a new MARTA station at Krog, and a green buffer to the Railroad lines. These will help strengthen the biomatrix and the alternative transportation network. Specifics to the Roundhouse Masterplan, the large green space will be split and partly reallocated to housing to increase the density and create a more mixed-use public space. Weaknesses that continue in the ecosystemic proposal would include the need for more parking structures or proper building footprints to allow for denser development. The block structure near the Reynoldstown Station to the East is too small and broken to create a dense Transit Oriented District. However, the additional public green spaces and plazas are nicely distributed and used to create decompress spaces for community functions.
Although the squares provide urban plaza and green spaces, they result in a block format that is too permeated for the small width of the Hulsey Yard site. Additionally, the density does not reflect the trends of housing density or building size and height adjacent to the site, which would prefer a higher density closer to Krog and the Fulton Cotton Mills. The Hulsey Squares Masterplan creates its own system of networking within its boundaries, which does not reflect or relate to surrounding morphological or functional networks; therefore, this network cannot be properly networked in its surrounding existing context. Additionally, the network within the site is heavily privatized as there is not a strong biomatrix network between the squares and the Beltline and light rail do not spur off towards Reynoldstown MARTA as they do in the other proposals.

In order to maximize the effectiveness of the base model, the first priority of the ECOSYSTEMIC Hulsey Squares Masterplan will be to increase housing density across the site and to reallocate the largest building sizes and densities along the Northern edge of the site and concentrated closest to the nearest MARTA stations at Krog and the East and West ends of the site. Additionally, subsidized housing must be distributed throughout the site both geographically and amongst multiple housing typologies to create the maximum potential for accessibility to facilities and site opportunities. An emphasis on alternative transport will be placed on the Seaboard Avenue extension to include bike paths, bus routes, wide pedestrian sidewalks, a new MARTA station at Krog, and a green buffer to the Railroad lines. These will strengthen the biomatrix and the alternative transportation network. Specifics to the Hulsey Squares Masterplan, the housing density will be allocated to provide appropriate massing to make the multiple squares comfortable morphologically. A weakness that continues in the ecosystemic proposal is the small inconsistent block size that does not provide adequate space for parking structures or proper building footprints to allow high density. The structure also does not allow a Beltline and light rail spur to Reynoldstown MARTA. However, the squares are nicely distributed and sized to create decompression spaces for community functions both privatized specific to the site and publically outside the site. There is also a potential mixed-use corridor action to the South.
The density shown in this proposal does not reflect the trends of housing density or building size and height adjacent to the site, which would prefer a higher density closer to Krog and the Fulton Cotton Mills. Given the high success of block sizing throughout the site, more attention should be paid to the Eastern and Western flanks of the site to create block sizes that accept a Transit Oriented District typology. Shown as they are, these blocks do not support a higher density of housing and retail to activate these important areas.

**GREEN RIBBON PROPOSAL STRENGTHS**

- Density across the site
- Connectivity
- Decompression spaces
- Historical growth of Atlanta
- Radial corridors
- Strongest connection
- Biomatrix
- Urban design
- Block sizes
- Density
- Proper building footprints
- Parking structures

**GREEN RIBBON PROPOSAL WEAKNESSES**

- Limited amount of housing
- Connectivity
- Large blocks
- Connectivity
- Limited density
- Lack of intersection
- Dispersed affordable housing
- Southward growth

In order to maximize the effectiveness of the base model, the first priority of the Ecosystemic Green Ribbon Masterplan will be to increase housing density across the site and to reallocate the largest building sizes and densities along the Northern edge of the site and concentrated closest to the nearest MARTA stations at Krog, and the East and West ends of the site. Additionally, subsidized housing must be distributed throughout the site both geographically and amongst multiple housing typologies to create the maximum potential for accessibility to facilities and site opportunities. An emphasis on alternative transport will be placed on the Seaboard Avenue extension to include bike paths, bus routes, wide pedestrian sidewalks, a new MARTA station at Krog, and a green buffer to the Railroad lines. These will help strengthen the biomatrix and the alternative transportation network. Specific to the Green Ribbon Masterplan, the strength of the biodiversity of green space will be drawn upon as the density. Placing the green spaces will be matched to create a garden urban morphology that also serves to further intensify the site.

**ECOSYSTEMIC PROPOSAL**

- Increased housing density
- Reallocation of largest building sizes
- Concentrated closest to MARTA stations
- Subsidized housing distribution
- Alternative transport
- Bike paths
- Bus routes
- Pedestrian sidewalks
- MARTA station at Krog
- Green buffer to Railroad lines

This base model allows for the most regularized block size giving an overall clarity to the urban model of the site and allowing for proper building footprints to accommodate density and parking structures.
The strengths of the plan are a strong sense of block form and shape following DeKalb Avenue, while maintaining a comfortable 300 to 400 foot block width. The green corridor works well within the centralized urban model of Atlanta and does contribute slightly to an overall biomatrix in the surrounding area but must be further defined at the edges of the site. The density is cognizant of the height disparities between the north and south of the site. The proposal provides high density along with a high variability in housing typologies giving the proposal an overall language that can define Hulsey Yard as an urban model.

Although the consistency in built form in the large blocks does allow for a higher density within Hulsey, the continuity of that density and building height does not reflect the adjacent densities or areas of high interest nor does it transition smoothly to the single family residences. Overall this masterplan does work best within the desire to increase density within the centralized network of Atlanta, however, varying densities along the site and between the varying Transit Oriented Districts can display an even higher understanding of the morphological effect of the design in the surrounding context. The low density areas in the Eastern edge of the site also may not be adequate to create the necessary urban fabric and does not ensure the communal qualities of the expansive green spaces in this area of the site.

In order to maximize the effectiveness of the base model, the first priority of the High Density Masterplan will be to increase connectivity across the site by including the two boulevards found in the Lord Aeck Sargent masterplans. Additionally, subsidized housing must be distributed throughout the site both geographically and amongst multiple housing typologies to create the maximum potential for accessibility to facilities and site opportunities. An emphasis on alternative transportation will be placed on the Seaboard Avenue extension to include bike paths, bus routes, wide pedestrian sidewalks, a new MARTA station at Krog, and a green buffer to the Railroad lines. These will help strengthen the biomatrix and the alternative transportation network. Specific to the High Density Masterplan, the density will increase near the Eastern edge of the site, taking up some of the extra green space that is not designed for the public communal interests. Additionally, certain areas along Seaboard Ave will have reoriented heights to provide different experiences along the linear green space. Overall, the High Density Masterplan comes closest to addressing the majority of the issues and design goals on the site. The goal of the Ecosystemic version of the proposal will be to increase the effectiveness of the urban plan to positively affect the surrounding areas by defining areas of future growth. For this reason, the linear green space will be better defined with intentional density on the Eastern edge of the site.
This map displays the design moves that reflect strengths that are shared between three or more of the analyzed masterplans. These nodal intersections, lines of street network, and planes of green public space will be observed in the design of an Ecosystemic Hulsey Yard.
To implement the design goals revealed through the ecosystemic analysis on the site.
6.1 DESIGN DEVELOPMENT
6.2 MASTERPLAN: THE DESIGN

SCALE: 1"=400'
CREATE A GREEN "SPINE" TO CONNECT ADJACENT URBAN GREEN SPACE

6.3 ECOSYSTEMIC STRATEGIES IN DESIGN

Krog Corner
Neighborhood Green Space
Geared Towards Residents of Hulsey Yard

Krog Plaza
Civic Plaza Typology
Located at the Edge of the Beltline
Geared Towards Visitors and Workers in the Hulsey Site

Hulsey Yard Community Park
Neighborhood Park Typology
Community Recreation Facilities
Geared Towards Hulsey Residents

Hulsey Commons
Confluence Park Typology
Large Green Pavilions
Restroom Facilities
Geared Towards Beltline Visitors and Regiona Residents

Hulsey Square
Civic Square Typology
Small Public Zone with Public Seating
Geared Towards Beltline Visitors and Workers in the District

Atlanta Beltline
Hulsey Corridor
Linear Park Typology
Small Designated and Purposeful Spaces Along the Beltline"

Hulsey Greenway
Toward Capital Greenway Park

Hulsey Greenway
Toward Krog Street Market

Hulsey Greenway
Toward Krog Plaza

Hulsey Greenway
Toward DeKalb Ave Complete Street

Krog Corner
Located at the Edge of the Beltline
Geared Towards Residents of Hulsey Yard

Krog Plaza
Civic Plaza Typology
Located at the Edge of the Beltline
Geared Towards Visitors and Workers in the Hulsey Site

Hulsey Yard Community Park
Neighborhood Park Typology
Community Recreation Facilities
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Toward Krog Plaza

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Toward Krog Street Market

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Toward Krog Plaza

Hulsey Greenway
Toward DeKalb Ave Complete Street

Krog Corner
Located at the Edge of the Beltline
Geared Towards Residents of Hulsey Yard

Krog Plaza
Civic Plaza Typology
Located at the Edge of the Beltline
Geared Towards Visitors and Worker...
INTENTIONALLY INFLUENCE THE FUTURE GROWTH OF SURROUNDING URBAN FABRIC

1. CONCENTRATED CORRIDOR FROM HULSEY COMMONS ALONG FLAT SHOALS ROAD TOWARD MORELAND AVE.
2. MIXED-USE CORRIDOR ALONG BELTLINE REUSING EXISTING INDUSTRIAL URBAN FABRIC.
3. RETAIL AND RESIDENTIAL URBDANITY ALONG DEKALB AVE. TO TRANSITION TOWARD DENSITY ALONG SEABOARD AVE.
4. SLIGHT DENSIFICATION ALONG BOULEVARD TO INCLUDE COMMUNITY FACILITIES AND RETAIL.

CREATE A STREET NETWORK THAT IMPROVES ACCESSIBILITY

1. BOULEVARD CONNECTION
2. PEARL STREET CONNECTION
3. MONEY STREET CONNECTION
4. SEABOARD AVENUE RADIAL CONNECTION
5. KROG STREET TUNNEL EXISTING CONNECTION
6. POWELL STREET TERTIARY CONNECTION
7. BELTLINE TUNNEL EXISTING CONNECTION
8. PEARL STREET TUNNEL CONNECTION

CREATE A STREET NETWORK THAT IMPROVES ACCESSIBILITY

1. BOULEVARD CONNECTION
2. PEARL STREET CONNECTION
3. MONEY STREET CONNECTION
4. SEABOARD AVENUE RADIAL CONNECTION
5. KROG STREET TUNNEL EXISTING CONNECTION
6. POWELL STREET TERTIARY CONNECTION
7. BELTLINE TUNNEL EXISTING CONNECTION
8. PEARL STREET TUNNEL CONNECTION
SYNTHESIS OF ECOSYSTEMIC ANALYSIS AS VALIDATION OF DESIGN

TO UNDERSTAND THE ROLE OF ECOSYSTEMIC URBANISM AS AN ITERATIVE PROCESS THAT CAN IMPROVE THE NETWORK OF THE CITY
ECOSYSTEMIC URBANISM IN THE FUTURE OF ATLANTA

The ecosystemic process is an effective method for designing the future of Atlanta through intentional district design. The goal is that the study of an ecosystemic Hulsey Yard will serve as a model for how this process can be played out and to understand how it serves the network of the city. Hulsey only displays one type of district implementation—a completely new infill. The city of Atlanta has opportunities for ecosystemic districts of varying qualities that range from urban infill, adaptive reuse of industrial zones, to low-density redevelopment. By recognizing additional key nodes for ecosystemic districts and creating connections of alternative transportation, pedestrian, biophysical, and mixed-use networks that work both in a central directionality from the Atlanta core and radially through the city while emphasizing density and discouraging sprawl, Atlanta can start moving from a decentralized network to a more equitable, complex, and efficient distributed network.

CSX TILFORD YARD
Type of Development: Urban Infill
Primary Focus: Urban Morphology and Complexity
Tilford Yard is a recently vacated rail yard in the Northwest area of Atlanta. It sits between residential and industrial typologies and is in close proximity to the Beltline. This site plays a key role in the network of Atlanta in that it can serve as an area of new density and connectivity and create a model for development in previous industrial zones of Atlanta.

BANKHEAD TRANSIT
Type of Development: Urban Redevelopment and T.O.D.
Primary Focus: Urban Complexity and Equity
Bankhead is a neighborhood at the terminus of the MARTA green line and the start of a future possibility of a MARTA line extension. Possible redevelopment of the area due to the adaptive reuse of the nearby Bellwood Quarry has sparked debate on gentrification. By focusing on the priorities of urban equity and using complex corridors to define future growth, a new T.O.D. could be equitable.

AIRPORT CITY
Type of Development: Urban Infill and Economic Hub
Primary Focus: Urban Complexity and Efficiency
The College Park, Hapeville and East Point communities, near the airport and intersection of new BRT routes serves as the site for a new 420-acre retail district. Being close to the airport, this district will serve as a flagship for the future image of Atlanta development to visitors and should showcase the strong pedestrian and biophysical networks as well as an efficient sustainable design.

Ecosystemic Urbanism in the Future of Atlanta

CLIFTON CORRIDOR
Type of Development: Urban Redevelopment and T.O.D. Network
Primary Focus: Urban Morphology and Efficiency
Clifton Corridor in the Northeast of Atlanta, is a MARTA light rail corridor to run from Marietta through Old City to Decatur. The project serves as the perfect backdrop for a new network of dense, sustainable districts of Transit Oriented Districts that will increase activity in this area of Atlanta as well as extending the Atlanta network deeper into the low-density suburbs.

TURNER FIELD NEIGHBORHOODS
Type of Development: Urban Redevelopment and Economic Hub
Primary Focus: Urban Complexity and Equity
The low-density neighborhoods of Mechanicsville and Summerville near old Turner Field may serve as a new gateway district into Downtown from the South along I75/85. The project will make use of this vast empty parking lots once used to serve the stadium by creating an economic hub that should be defined in a way to preserve the character of the established surrounding neighborhoods.
From the beginning, this thesis has served a very important purpose for me. I have always admired some of the unique qualities of our city, most notably, our green space tree canopy. I have learned and experienced many of the transformative aspects of our city and have followed the recent debates on the cultural impact and the socio-economic issues. In the last decade and a half, development has affected the current residents of our green-friendly areas of Atlanta. Through my college experience, especially towards the end in which I was introduced to urban design theory, I realized the potential of our city and how they have created an inefficient sprawled network. In many ways, I felt like I was being led to disregard our city as a city of potential. However, this only served to motivate me in observing that there is only room for urban design solutions. For our city and that urban design may be the best method for brainstorming solutions for our city’s problems of sprawl and current gentrification.

This thesis so far has served as a method for analyzing and understanding sprawled urban design and the role that localization in an overall city network. Choosing an infill site for the case study also allowed for the communication of the urban network while learning experiences on morphological factors of urban design. The conclusions are based on a collection of observations that must be translated in order to fully understand the implications of ecosystems in the city. This thesis represents the beginning of this exploration of the thesis and a general framework for an ecosystemic process in cities but it is only the start of the journey of developing ecosystemic priorities in the site. I hope that this thesis proves the potential of this process to create a better Atlanta, an Atlanta that can be celebrated for its success in urban design.