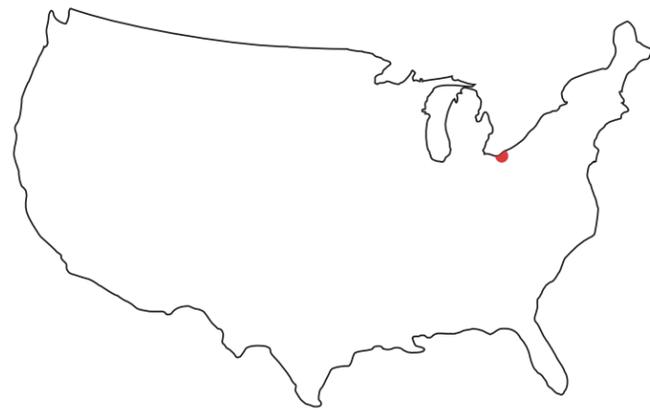


EAT

LOCAL

CLEVELAND



Master's Project Submission

Spring 2010 - Great Lakes Infrastructure Studio

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“the development of an urban prototype that connects local consumers and local farmers in an exchange of food-for-soil.”

A-1 Introduction | America’s industrial food chain is long, very long and fueled primarily by petroleum. Oil not only supplies fuel for transportation but is also the primary component for the production of synthetic fertilizers, provides the energy and additives for processing and the raw material used to produce the plastics for packaging.

In the US, the linear distribution system promotes food production far from the location of its eventual manufacturing and distribution. Supervalu, one the country’s largest food suppliers only operates 11 food distribution centers in order to service retail outlets in over 30 states.

Currently, almost all food waste is shipped to landfills where anaerobic biodegradation leads to increased methane production contributing to global warming. The current industrial “cradle-to-grave” food system is reliant upon a stock of raw material that is non-renewable and rapidly being depleted while valuable nitrogen- and carbon-rich waste products lie idly in landfills. Farmers, in turn, have become reliant upon petroleum- dependent fertilizers to overcome largely nutrient-depleted soil, a result of widespread monoculture.

At the scale of the local market, consumers are rarely exposed to local goods. Urban dwellers, who are increasingly pedestrianized, shop primarily at markets that are automobile-centric and predicated on episodic shopping. To accommodate this system, markets have become large single-purpose facilities focused on frozen and preserved foods located near highway on-ramps rather than public transportation nodes. The status quo promotes “once-a-week” shopping making shoppers less inclined to purchase fresh, non-preserved goods for fear of spoilage.

The linear food distribution system must be replaced by a closed-cycle, sustainable system that puts consumers back in contact with the food source. A new post-industrial food chain will rely on regional supplies from local farmers and farmers will rely on composted waste to replace oil-based fertilizers promoting sustainable and organic farming practices. The new urban prototypical system facilitates the exchange of foodstuffs for soil, linking local farmers with consumers. The prototype makes urban marketplaces once again a part of everyday life. In the future markets will be pedestrian-friendly hubs of activity that bring together all the parts of the local food system. In short, the urban marketplace must be involved in a new infrastructure that promotes local sourcing, consumption, disposal and reuse of food and waste.

A-2 Project Description | In order to develop a novel marketplace system a complete understanding of the current system and its shortcomings was assessed. Analysis of the state-of-the-art and identification of the key components of the new system led to a diagrammatic representation of the prototypical system. From this diagram real world technologies and techniques were applied to realize a model of the prototype. The third step was to test the prototype on a variety of sites adapting each to its locale and immediate context. In all cases the resolution promoted pedestrian access and local sourcing. The siting of this system focused upon the Great Lakes Basin, specifically on the Cleveland/Cuyahoga County Metropolitan area. This area lies upon one of the world's most valuable natural resources, the Great Lakes specifically Lake Erie, and will undoubtedly see an increase in population and density as the world's fresh water supply continues to be diminished. Sustainable systems for food production and distribution are a necessity for the ongoing success of these budding urban areas.

The goal of this project was to present a permanent, sustainable alternative to the current "cradle-to-grave" industrial food system. One that can provide year-round local products and services utilizing an existing and under used transportation infrastructure both regionally and locally. Maybe most importantly this project aimed to

reconnect the regional community attempting to break down barriers that separate rural and urban dwellers. Building the regional identity will make consumers more likely to invest hard-earned dollars in premium local goods and by making face-to-face connections, producers will be more inclined to practice the most sustainable and responsible production methods. The new system requires the use of the same industrial pathways that once contributed to distancing the schism between rural and urban to reconnect the regional community. Cleveland and the surrounding counties retain the remnants of an industrial past and by breathing new life into the aging and under used railroad infrastructure the system will require minimal alteration to the local landscape. The system represents a commitment to rebuilding the community economically and environmentally through local interdependence between the urban and the rural.

GOAL STATEMENTS

- The project will promote a closed-loop food system to divert waste from landfills.
- The project will provide a permanent, year-round solution as an alternative to “big box” grocery chains.
- The project will connect local farmers and consumers utilizing existing, under used infrastructure.
- The project will redefine the ways people purchase, eat and dispose of food.

GUIDING PRINCIPLES

SUSTAINABLE PRACTICES:

The building design will respond to the overall sustainability of the system to which it is a part. The design will focus on reuse and consciousness in terms of materials and energy efficiency.

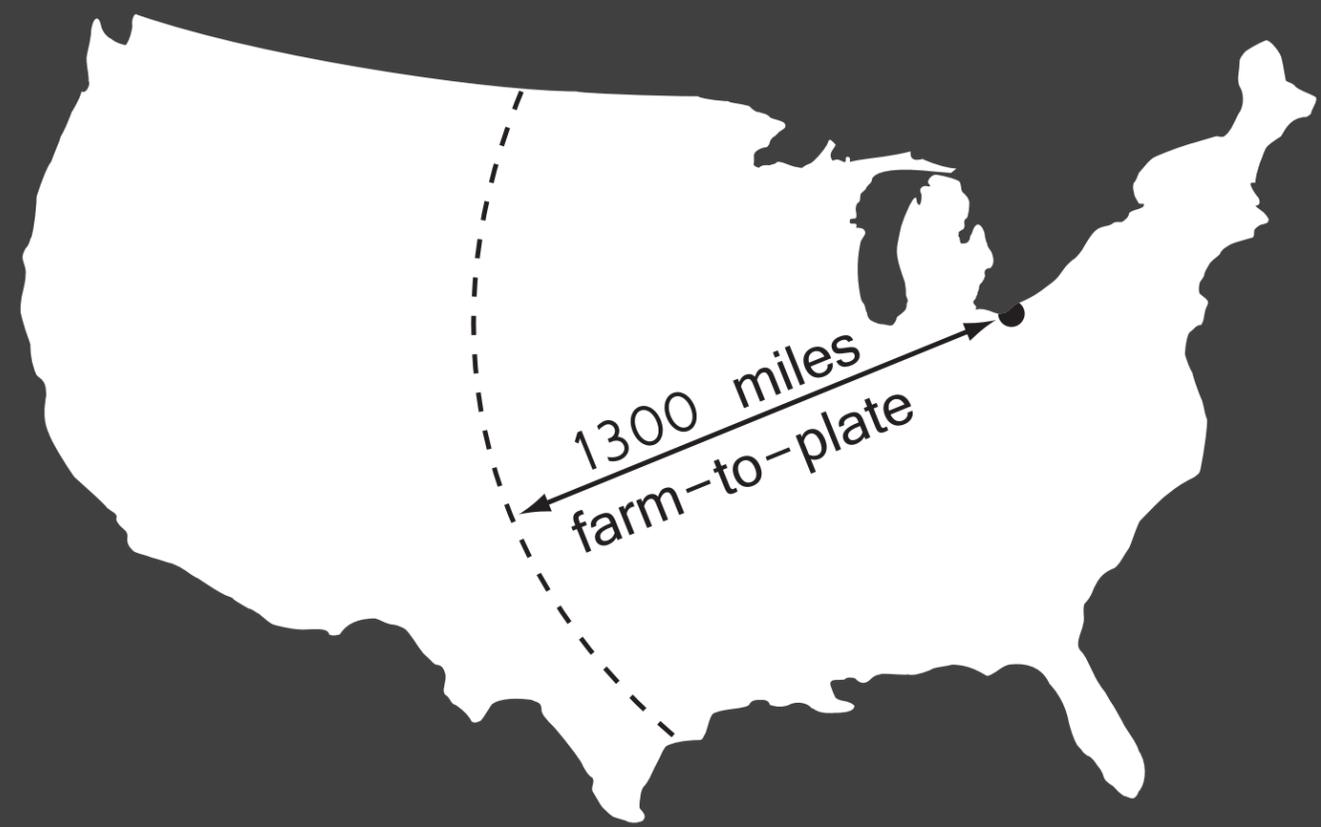
ACCOUNTABILITY:

The project will promote mutual responsibility between urban and rural communities for the success of the local food chain. By increased interaction between farmers and consumers, both are held more accountable for their roles in the overall health of the food system.

SEASONAL/REGIONAL FOOD EDUCATION:

This prototype will involve a reintroduction of people to their food. To ensure the success of local food movements people must be provided an educational outlet to alternative approaches to health and diet.

B - 1 | The American food distribution system is driven primarily by a few large suppliers, producers, processors and distributors which form a far-reaching network with relatively few interconnecting nodes. The interaction between these remotely located hubs results in a 1300 mile journey, on average, for every food item consumed in the U.S.



n a t i o n

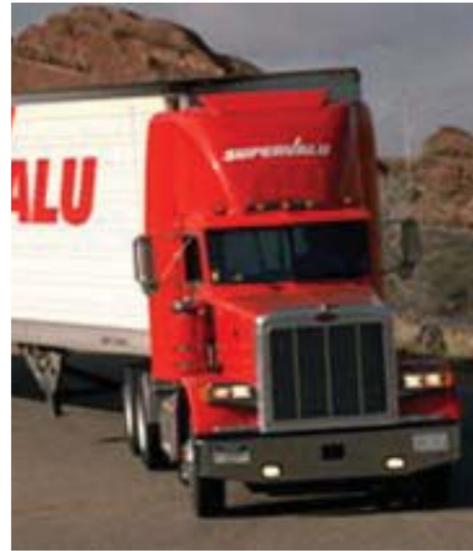


B-1 U.S. Food System | The current “cradle-to-grave” food system represents energy and resource inefficiencies at every scale from the large national retailers and producers to the local marketplaces and the handling of food waste. On average, food travels 1300 miles from farm-to-plate in the United States and a very small fraction of the waste produced is returned to the ecological system from which it originated. Current agricultural practices encourage vast areas of monoculture which deplete the soil of valuable nutrients. The continued devastation of fertile farmland promotes the increased dependence of farmers on oil-based fertilizers.



B - 1 . 1
Diagrammatic representation of the current U.S. linear food distribution system.

B - 1 . 2 Photos of system elements. Large monoculture of corn (left) typical food processing plant (bottom) shipment of processed food (top). Typical distribution center (opposite, left) shipment of packaged and branded food (opposite, right)



After harvest from massive farms the majority of food is shipped to secondary locations for processing. Large processing plants are responsible for breaking down foodstuffs into their constituent parts in order to produce a vast array of products from a relatively few species of raw materials.

Typically, processed foods are next shipped a second time to large packaging and distribution centers. At these packaging/distribution centers foods are stored and branded. Current packaging techniques are heavily dependent upon oil-based plastics and due to large quantities, non-reusable packaging at a number of scales are often necessary. Shipment from the distribution center represents the final leg of travel before processed goods are available for sale at stores throughout the country.

In general, current conventional food outlets are designed to accommodate low-frequency, high-volume shoppers typically traveling by automobile. Highly processed foods are produced to have long shelf-lives and sold in bulk to further this goal. These markets therefore necessitate large parking lots and large stores for frozen and preserved foods. For these reasons among others these outlets have become giant, stand-alone entities aligned near major roadways and often outside the paths of urban dwellers everyday lives.



B - 1 . 3 Diagrammatic representation of the proposed cyclic food distribution system.

B - 1 . 4 Photo of an existing urban farmers market (opposite)



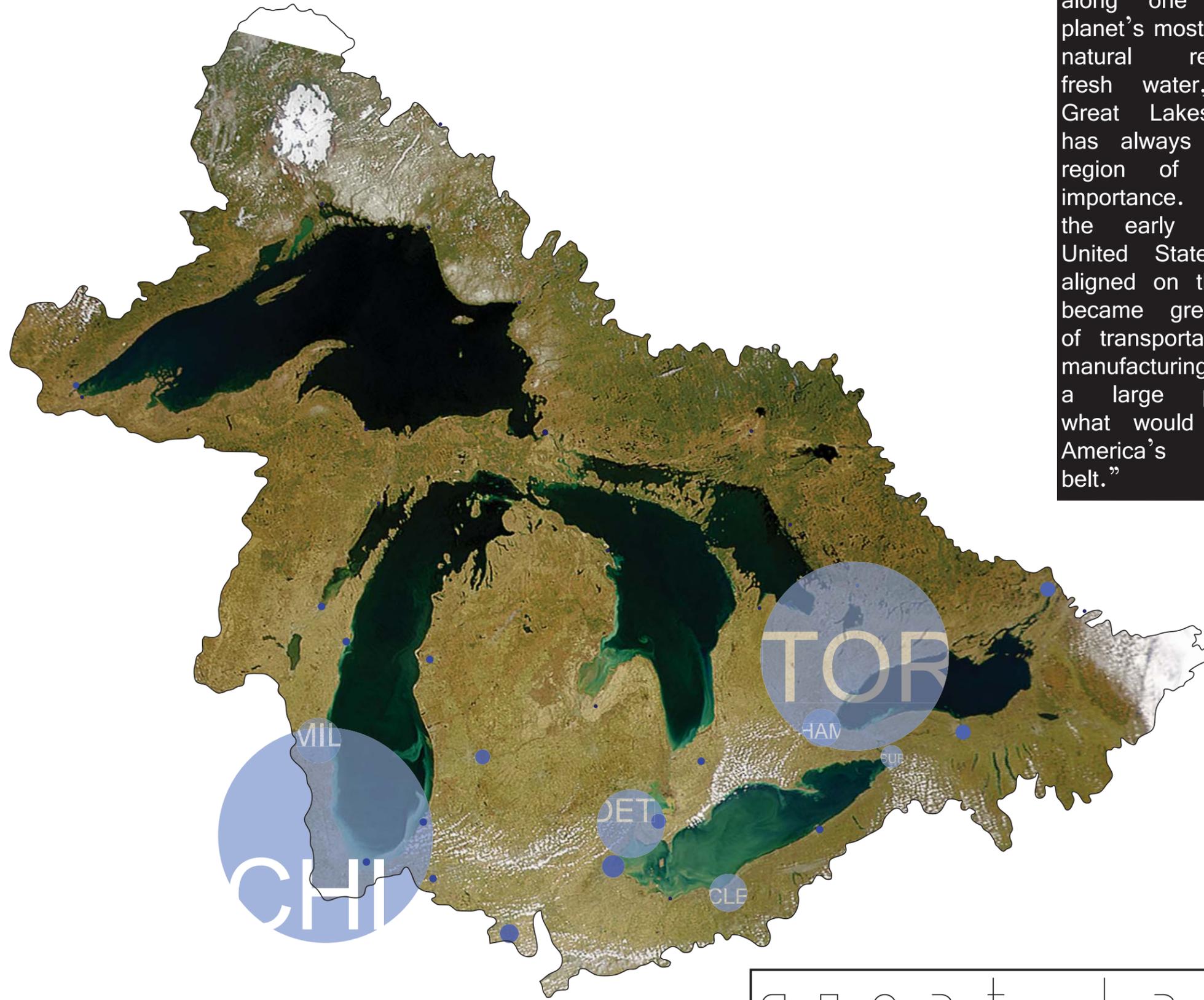
B-1 Novel Local System | A novel local food system will work in a closed-loop cycle in which food wastes are put back into the system for soil renewal. Food grown locally will be collected and channeled into urban areas by a variety of infrastructural devices. In urban areas a concerted effort to educate and expose consumers to local foods and cooking techniques will be integral to the success of the system.

Waste produced in the city will be sorted and collected to produce nutrient-rich compost. The compost will be returned to local farms and will contribute to soil rejuvenation. Locally produced compost will allow farms to reduce their dependence on synthetic fertilizers and practice more sustainable and organic techniques.

The urban prototypes will be connection points sited along urban and

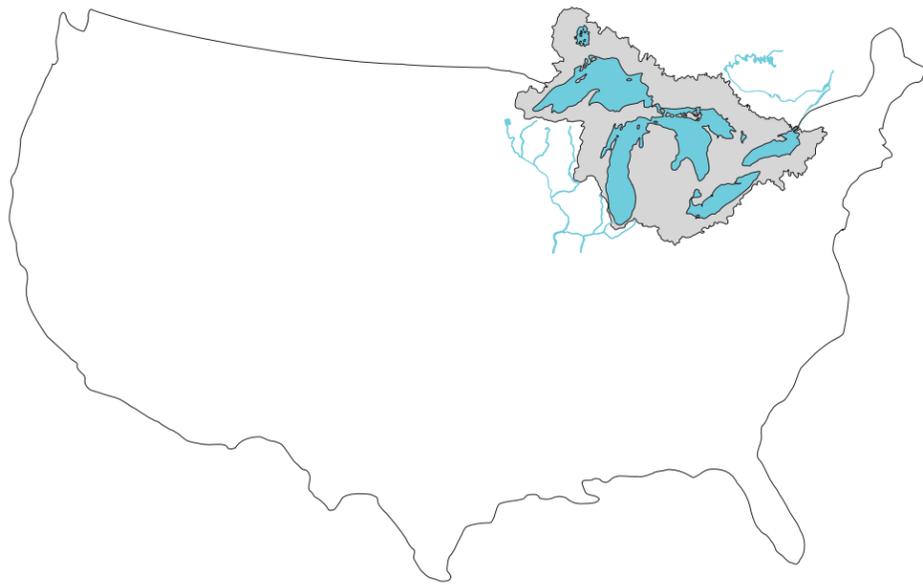
regional transportation lines. By positioning these units along routes of public transportation the marketplace will again be a convenient part of everyday life. Thus reducing the need for automobile based, large-scale, low-frequency shopping trips. Also, alignment near nodes of interaction between regional freight and local transit infrastructure will ensure a seamless interaction between the two systems.

The prototypical food system will act in coordination rather than in competition with the existing fabric of local food outlets. The units will simply represent the next step in the progression towards more permanent and robust local food markets. Ultimately every resident within the city limits will live within a 0.5 mile radius from a system outlet.



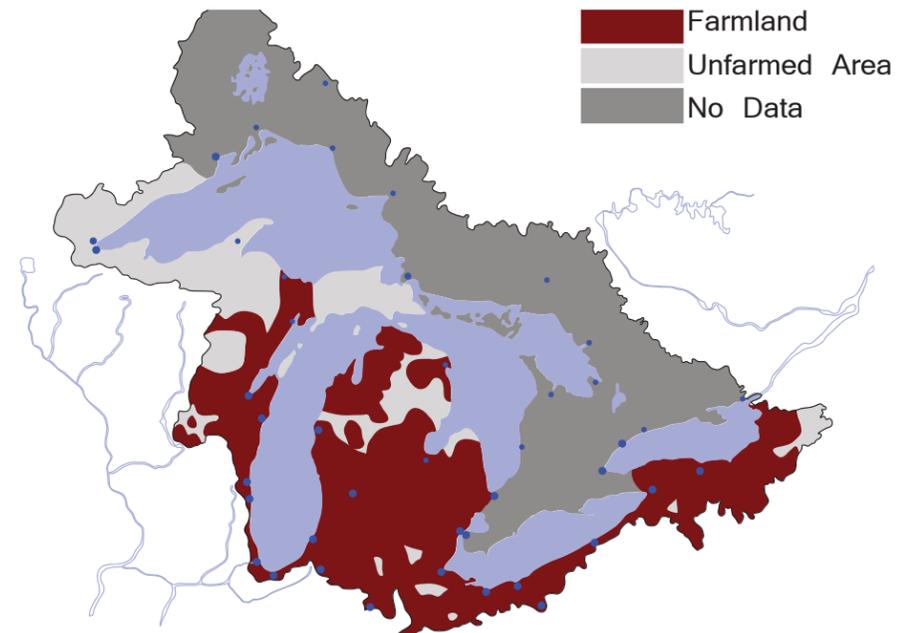
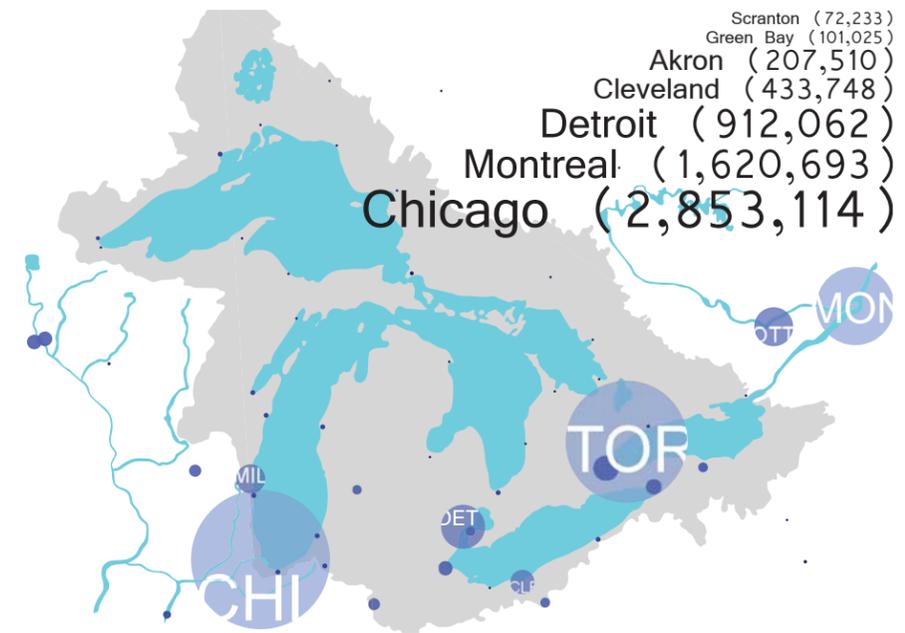
B - 2 | Situated along one of the planet's most valuable natural resources, fresh water, the Great Lakes Basin has always been a region of strategic importance. For the early industrial United States cities aligned on the lakes became great hubs of transportation and manufacturing forming a large part of what would become America's "rust belt."

great lakes



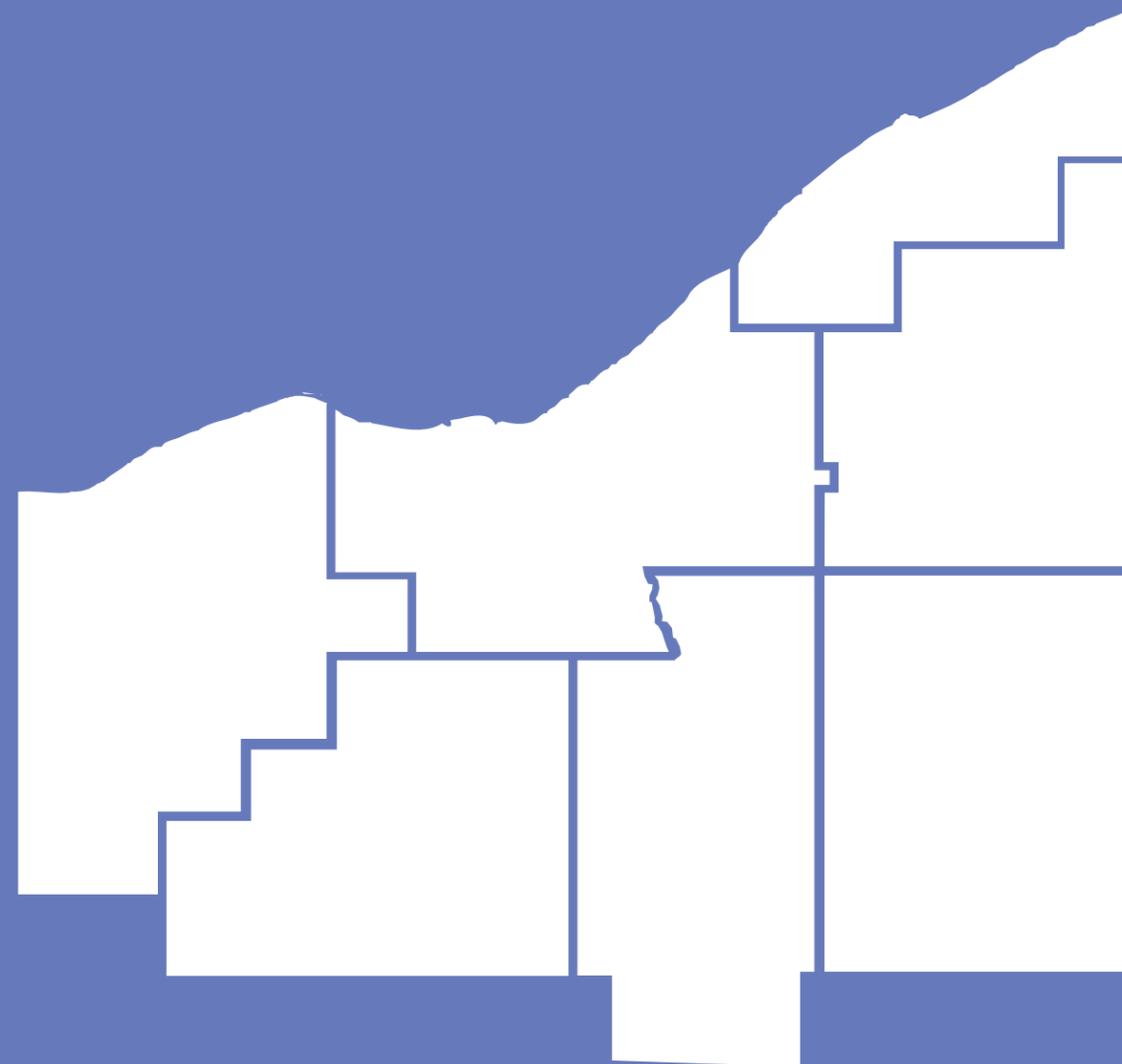
B-2 Great Lakes Basin The Great Lakes Basin of the United States and Canada includes those areas directly adjacent to the lakes and the St. Lawrence Seaway which naturally shed their water back into lakes. Although this region only includes one entire state (Michigan) and slivers of other surrounding states (Illinois, Wisconsin, Minnesota, Indiana, Ohio, Pennsylvania and New York) it is home to many major population and industrial centers including Chicago, Detroit, Cleveland, Milwaukee, Rochester and Green Bay on the U.S. side and Montreal and Toronto on the Canadian side.

Due to its industrial past the region is densely packed with freight and transportation infrastructure forming a complex network connecting each city together. Although this area boasts an incredible amount of industry much of the land is still arable and used for farmland. On the U.S. side only small areas in Northern Michigan, Minnesota and Wisconsin are not used extensively for farming. Even with so much land area still devoted to agriculture this industry is still continually in decline in the Great Lakes Region.



B-2.1-3 | maps representing existing population centers (top), land usage (middle) and transportation infrastructure (bottom).

B - 3 | The 7-county region of Northeast Ohio including the five counties of Greater Cleveland and neighboring Portage and Summit (Akron) counties comprises one of the largest metropolitan areas in the U.S. with a combined population of nearly 3 million residents.



r e g i o n

LORAIN

Aufdenkampe Family
 Baumhart Road
 Berry Farm
 Bergman Orchard
 Black River
 Organics
 Columbia Berry
 Farm
 Fitch's Farm Market
 Hillcrest Orchard
 Miller's Farm Market
 Peasley Poor Farm
 Chance Creek Blues
 Red Wagon Farm
 Rex Gees Orchard

GEAUGA

Blue Jaye Orchards
 Patterson Fruit Farm
 Eddy Fruit Farm
 Ridgeview Farm
 Sunrise Farm
 Sage's Apples
 Fruits and
 Vegetables
 Chagrin Family
 Farms
 Maplestar Farm
 Rock Bottom Farms
 Western Reserve
 Farm Co-op
 Farmore Farms
 Starr Farm
 Wind-Song Farm
 Zaylor Farm
 Stollard Farms
 Moss Farm
 Sunnybrook Farm
 Nursery
 Neubauer's Game
 Farm
 Timmins Farms
 Hiram Farm
 Carriage Trade
 Farm
 Mapledale Farms

LAKE

Rainbow Farms
 Mountain Glen Farm
 Greystone Farm
 Antioch Farms
 Cascade Valley Farm
 Tummy Acres Farm
 Schreve Farm and
 Greenhouse
 West Orchards and
 Fruit Market

CUYAHOGA

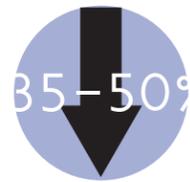
Rosby Greenhouse
 and Berry Farm
 Bio Farms Organics

MEDINA

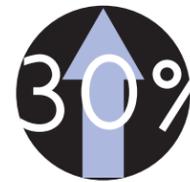
Geig's Orchard
 Hillside Orchard
 Pinecrest Farm
 Market
 Richardson's Farm
 Krugge
SUMMIT
 The Spicy Lamb
 Farm
 Szalay's Sweet Corn
 Farm
 Boughton Farms
 Case-Barlow Farm
 East Bath Farm
 Greenfield Berry
 K&S Greenhouse and
 Berry Farm

PORTAGE

Russell Farms
 Rufener Hilltop Farms
 Hilgert's Farm and
 Market
 Daybreak Lavender
 Farm
 Monroe's Orchard
 and Farm Market
 Walnut Drive Gardens



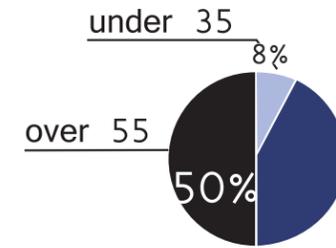
food prices
 compared to 1985



farmland to be devoted to
 commercial and residential



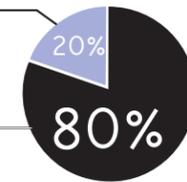
population change



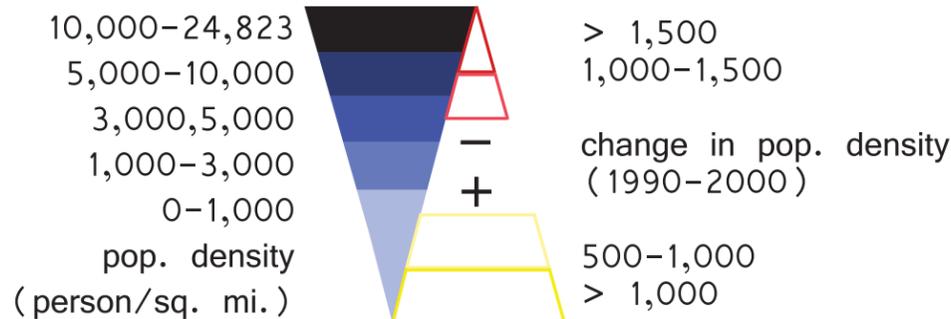
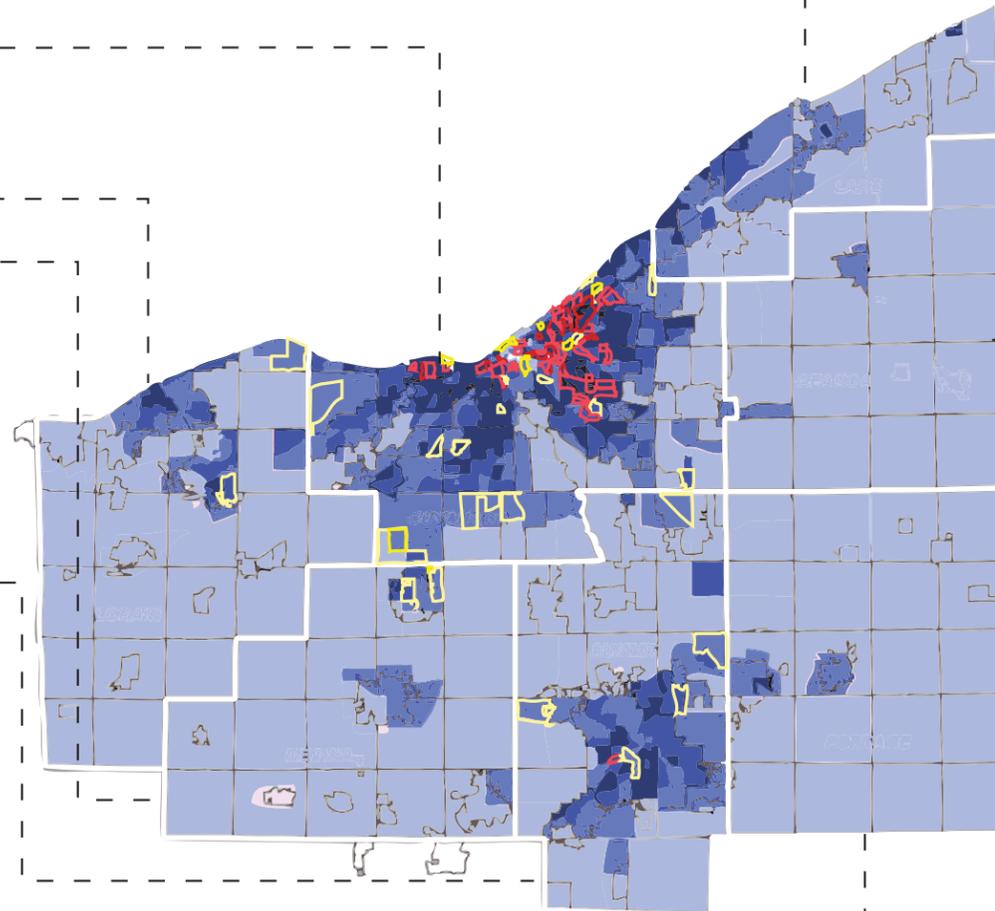
local farmers
 avg. age

farmers & suppliers

distribution, processing,
 packaging, advertising
 & disposal

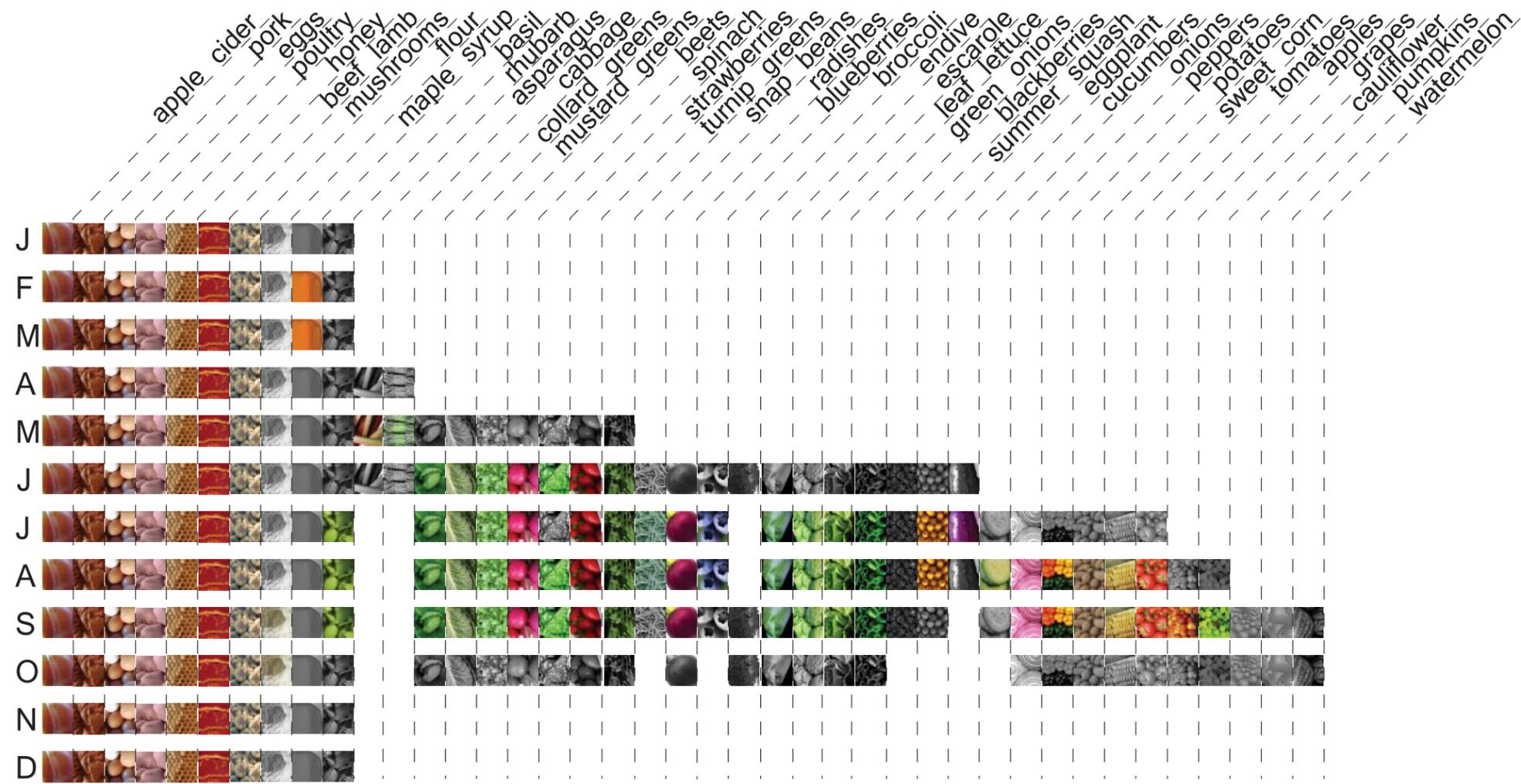


distribution of avg.
 food dollar spent



B-3.1 map depicting population density and change in population including a selection of local farms grouped by county.

B-3.2 Statistics analyzing the current state of population stabilization and agricultural issues in the Cleveland/Akron regional area.

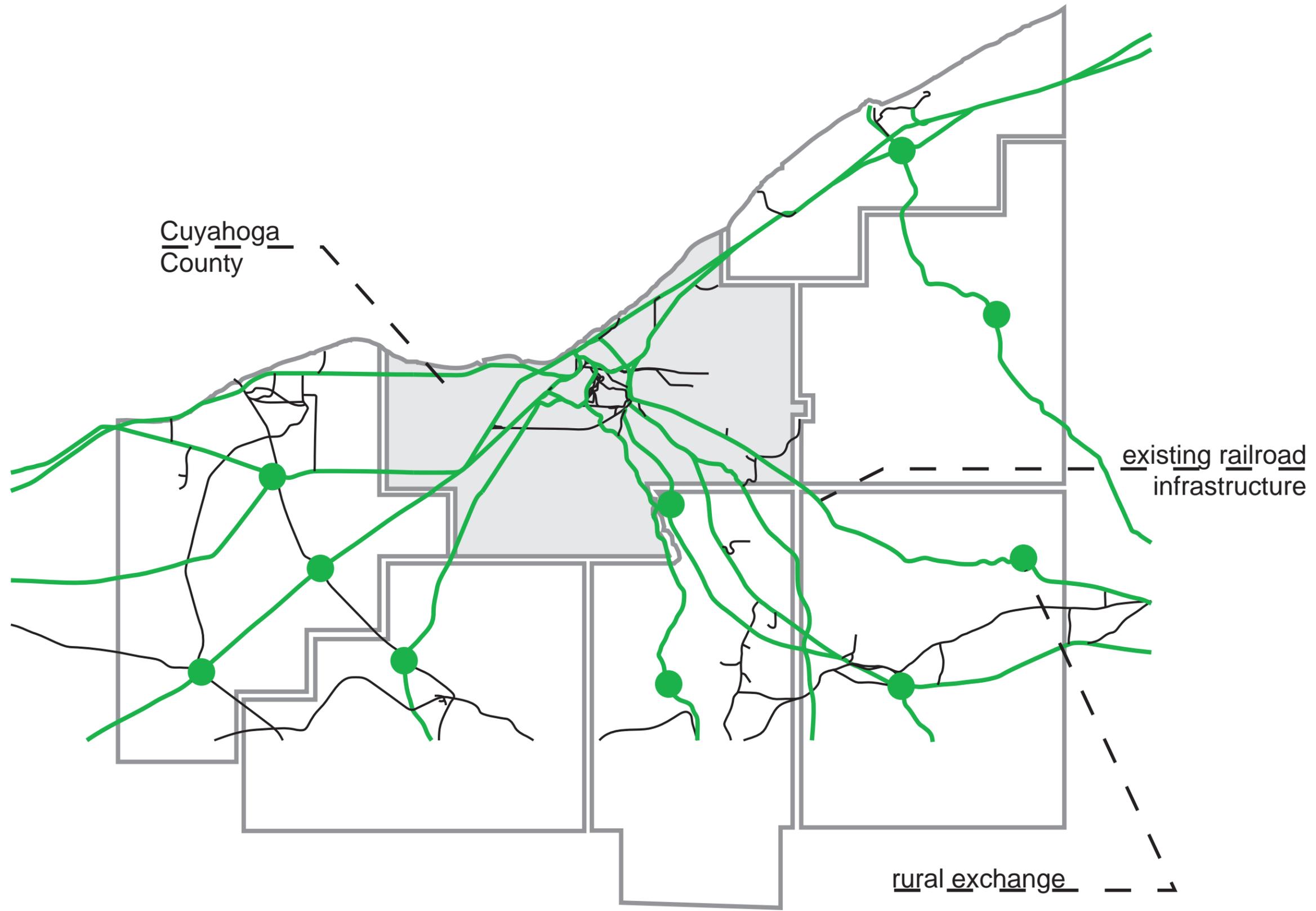


B-3.3 | diagram of seasonally available products typical of Northeast Ohio farmers markets

B-3 Agricultural Assessment | Situated along the fertile shores of Lake Erie, the farmlands of the 7-county region are in crisis. Although the region boasts a wide array of products some available year-round the agricultural industry in Northeast Ohio struggles to remain viable. Farming consistently ranks as one of the fastest declining industries in the US and as of the 2000 the U.S. Census it was not even considered an occupation. In 1997, Northeast Ohio, an area with a rich agricultural tradition, was recognized as the 7th most threatened American region for prime farmland being lost to urban sprawl. The American Farmland Trust (AFT) identified this area as one of the top 20 most threatened major land resource areas (MLRA) in the country. Lorain County alone lost 31% of its farms between 1977-1997.

similar farming regions throughout the country. The most impacting reason listed was the low-price fetched for goods. Compared to 1985, food prices in Northeast Ohio have gone down between 35-50%. In many cases, due primarily to government subsidies, food prices are lower for consumers than it actually costs to grow the food. This type of cut-rate pricing effectively removes small farms from competition if they cannot receive the same subsidies to allow them to operate at a loss. The second major issue threatening the farmland in Ohio is the value of the land for other uses. Many farmers are tempted to simply sell their land for residential development as they can receive up to \$10,000/acre for housing versus about \$120/acre/year growing soybeans. Thirdly, as farming becomes a less viable profession less and less young people in rural areas are pursuing it as a career choice. Currently, only 8% of farmers in the region are under the age of 35 while a staggering 50% are over the age of 55.

B-3.4 | map of the proposed regional solution including locations for rural exchange sites to reach inner-city locations (opposite).



Regional Exchange Solution



This fact combined with the ever decreasing knowledge of agrarian methods in urban areas contributes to increasing levels of food illiteracy in the region. Other local farmers are abandoning the profession because of growing anxiety over security loss and loss of continuity on their farms. The last reason cited by farmers might have the most effect on destroying existing farmland in the region. Urban sprawl contributes directly to the reduction of viable farmland in the area. It is a curious phenomenon for a region that has undergone over a 3% population loss in the last 5 years. However, in the coming years over 30% of existing farmland in the region is expected to be converted for residential development.

B-3 Regional Solution | Any plan for the redevelopment of the food system must initially start at the source, the local, sustainable farm. These small agrarian communities are the life-blood of any local food distribution system. Currently, farmers from the surrounding counties who wish to sell their wares in the city pack up their trucks and personally drive to one of the many downtown

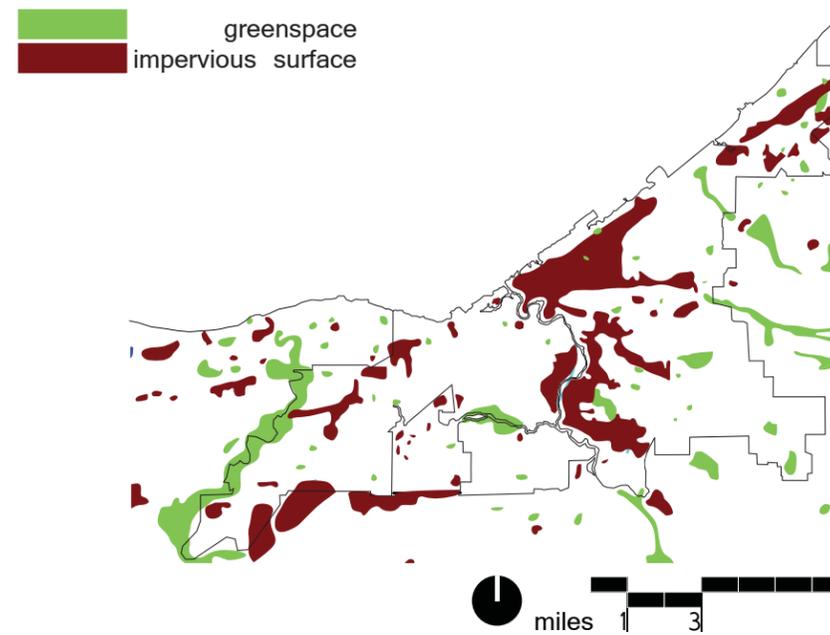
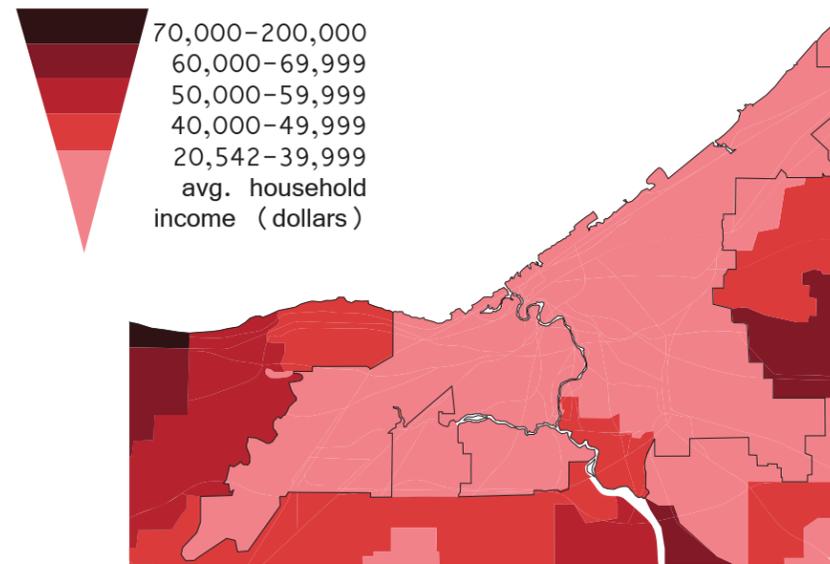
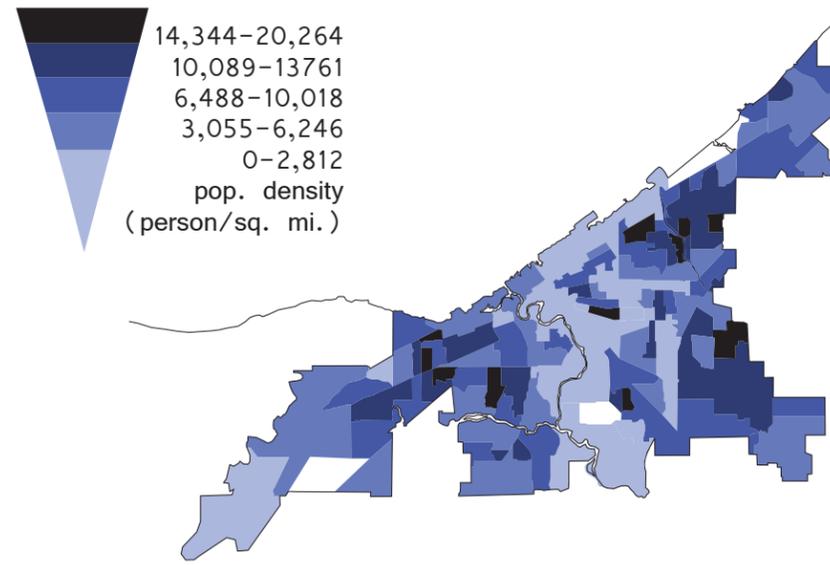
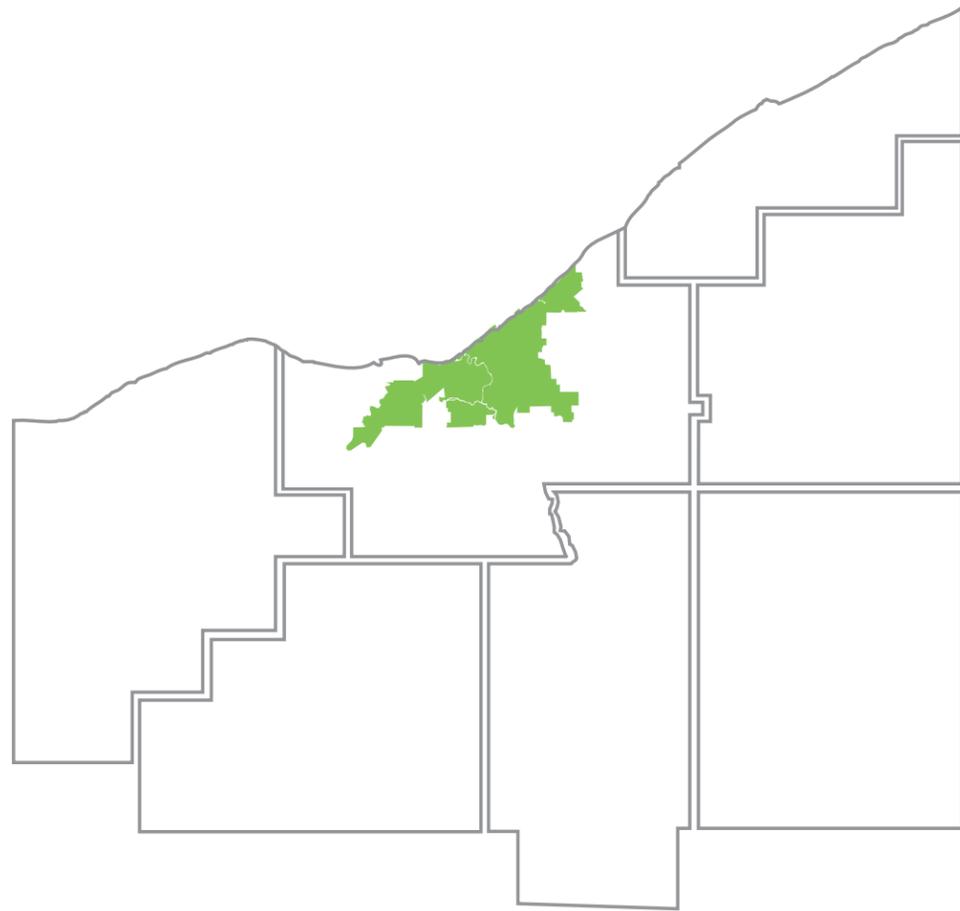
farmers markets on a weekly basis during the season. While this system works well to service a relatively small number of loyal farmers market patrons a more robust and streamlined approach is proposed herein. This system could potentially accommodate far more consumers and provide additional convenience for the farmers by taking advantage of the underutilized regional railroad system. The solution is simple, Eat Local Cleveland would establish collection points in each county along existing railroad lines. Farmers would then have the option to load their goods at these sites to be shipped to the downtown marketplaces for sale. The system could be structured a number of ways including by consignment or a joint-venture between rural and urban groups. These rural exchange sites would also serve as pick-up points for farmers to receive compost produced by food wastes from the inner-city effectively closing the food cycle and supporting the rejuvenation of the surrounding farmland. Branding of this system would become constant advertising for and would build an identity for the local food movement.

B-3.5 | scene depicting activities at a rural exchange site.

B - 4 | The city of Cleveland was a once industrial powerhouse situated at the source of the Cuyahoga River at Lake Erie. With the decline of industry the city has been left largely vacant by urban sprawl leaving behind the remnants of its once glorious past. Emerging developments aimed at connecting downtown to decentralized business and cultural districts and a budding local food movement give hope that the city will rebound and once again be a bustling metropolitan area.



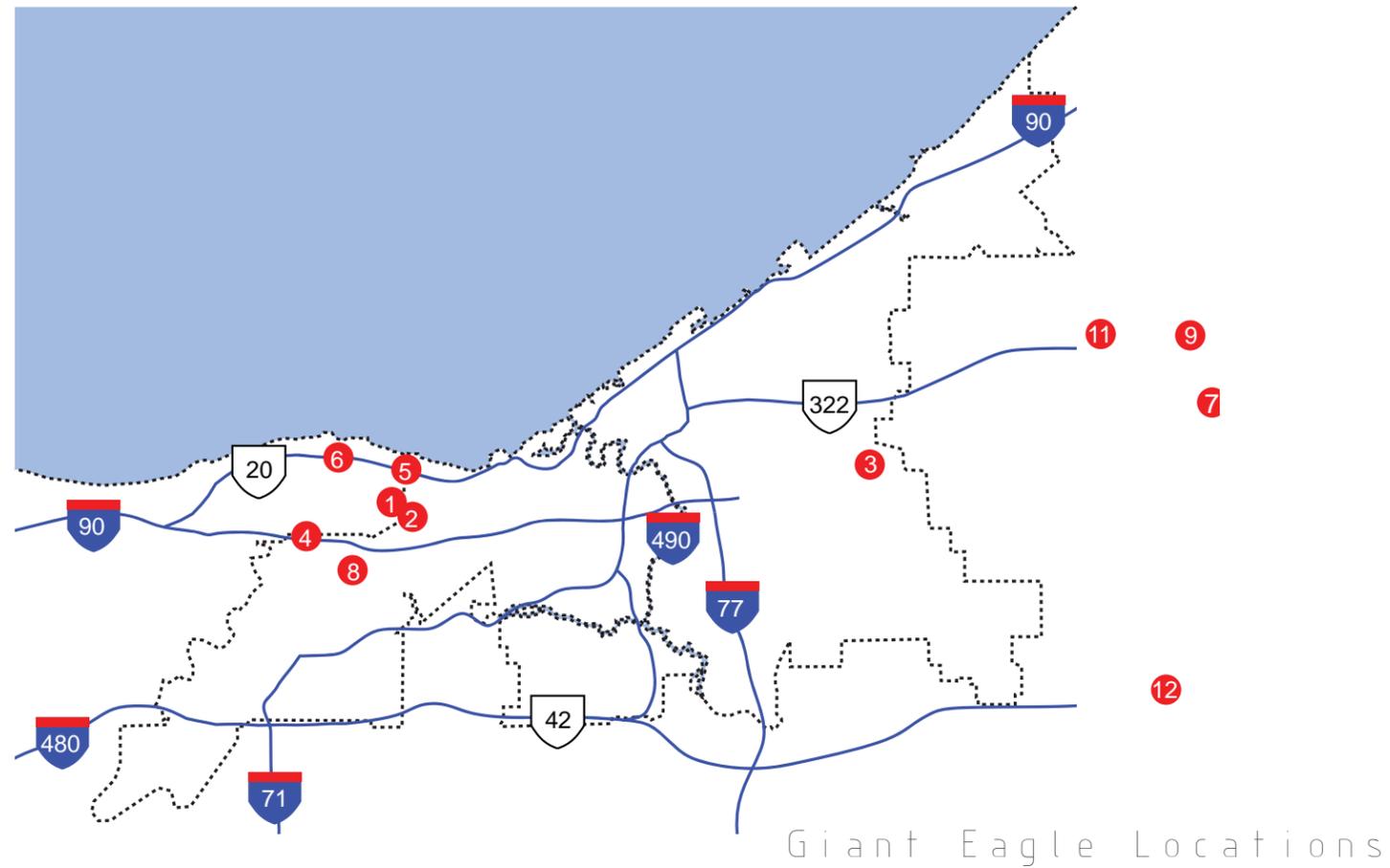
c i t y



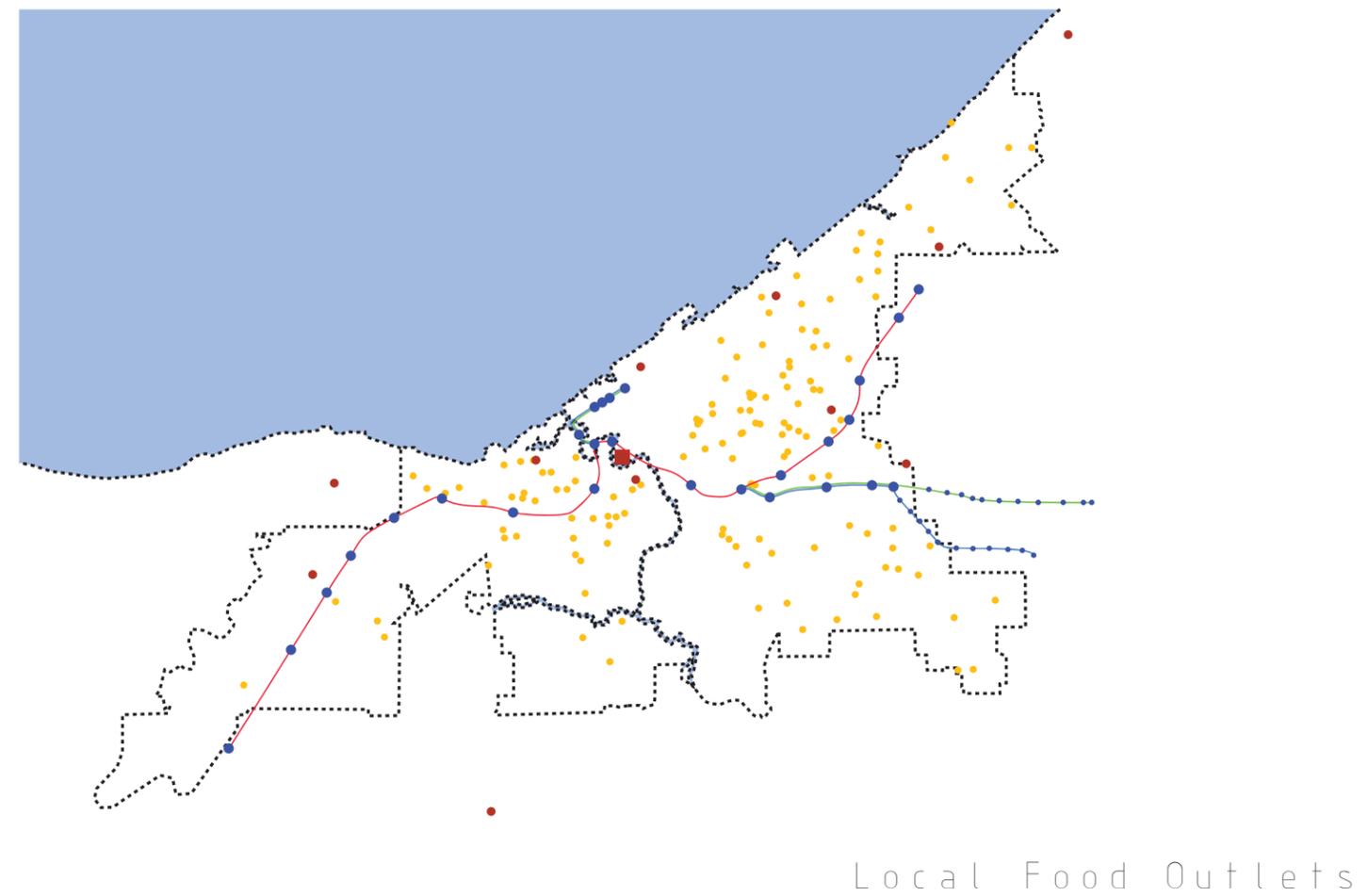
B-4 Cleveland | Situated at the source of the Cuyahoga River on Lake Erie, Cleveland's industrial economy has been in decline for nearly half a century. The remnants of the city's once great beacons of industry have left the inner-city barren, a patchwork of industrial warehouses and vacant factories. The infrastructure that mobilized this once-great region has ravaged the existing fabric of the city resulting in a blanket of impervious surface which covers the majority of the city limits. Urban sprawl has left the city-center vacant and loss of inner-city job opportunities has run salaries in the city on-average below the poverty line. However there is hope that the city is beginning to rebound. Downtown developments and entertainment districts have renewed some spirits and reenergized the public transit systems. The development of the Healthline BRT (Bus Rapid Transit) system has connected downtown with the cultural and educational institutions on the east side and began the rejuvenation of formerly grand Euclid Avenue. The local food movement is one of the strongest in the country with over 225 community gardens and 8 farmers markets within the city limits alone. The historic West Side Market continues to be a unique

B-4.1 | map showing Cleveland city in the context of the surrounding 7-county region.

B-4.2-4 | maps depicting various characteristics of the urban context. Population density by census tract (top), average household income by census tract (middle), and greenspace v. impervious surfaces (bottom)



B-4 . 5-6 | maps depicting the extent of “big-box” versus local food outlets in the city limits. Giant Eagle, Cleveland’s largest grocery chain, locations (top). Locations of community gardens (yellow), farmers markets (red), West Side Market (square) and RTA stops (blue) (bottom).



outlet for Clevelanders to obtain high-quality, locally produced and manufactured goods. The further development of the local food movement by the implementation of a novel food network will continue to propel Cleveland's urban renewal.

B-4 Urban Network | The development of the urban network of local outlets will be phased to ensure the viability of the system and to ease the cost of construction over a longer period of time. Initially, key units will be aligned along the existing public transit routes, namely the GCRTA Red, Blue, Green and Healthline with an emphasis on sites with intersecting infrastructural modes. The sites with access to both local and regional infrastructure will act as important exchange nodes for food that is coming into the city and compost that is headed to the surrounding farm community. After the establishment of the system's backbone along the local train routes the units will branch out from the core with an ultimate goal of providing an outlet within a 0.5 mile radius of any location within the Cleveland city limits.

Phase I. This phase will include the primary backbone of the system and all of these units will be associated with existing, refurbished

or reinvented public transit stations. The overall success of this project is dependent on the continued and increased ridership of the GCRTA. By livening these stops and making them more convenient for the needs of everyday life commuters should be more apt to forgo personal transportation for the ease and comfort of the public transit system. The order of construction is based primarily upon adjacency to regional freight lines. The first outlets will also act as distribution points for the rest of the system and serve as the primary interchange sites for the rural/urban exchange.

Phase II. After the successful establishment of the primary system backbone, interstitial outlets will be begin to be developed. This secondary wave of development will be focused primarily on the under served inner-city food deserts which lie between stops on the public transit system. Units in this phase must rely on distribution and support from the outlets established in the initial phase of the project.

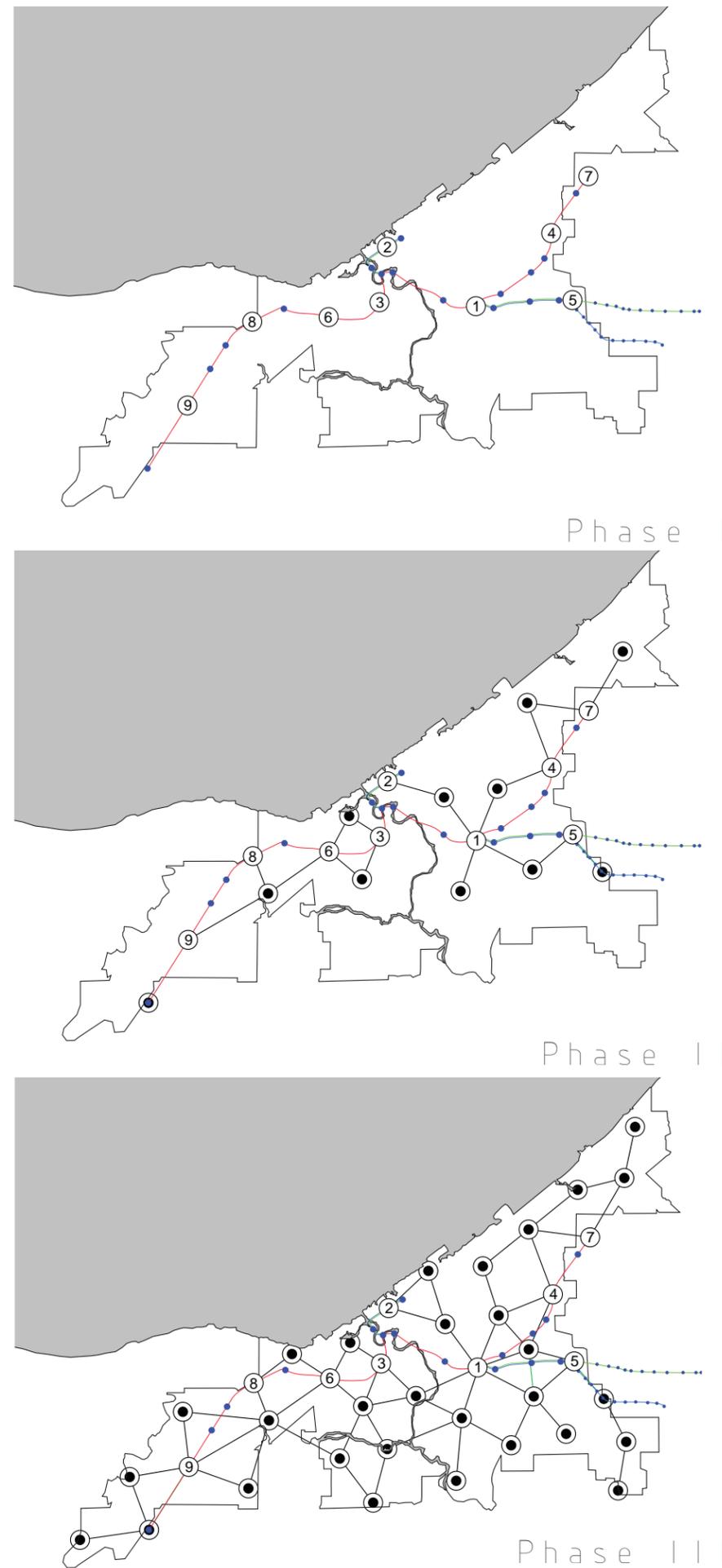
Phase III. The final phase of development will focus on blanketing the city with outlets having an ultimate goal of providing a unit within a 0.5 mile radius from every point within the city limits. In

B-4.7 | map depicting the urban network after completion of all three phases of development



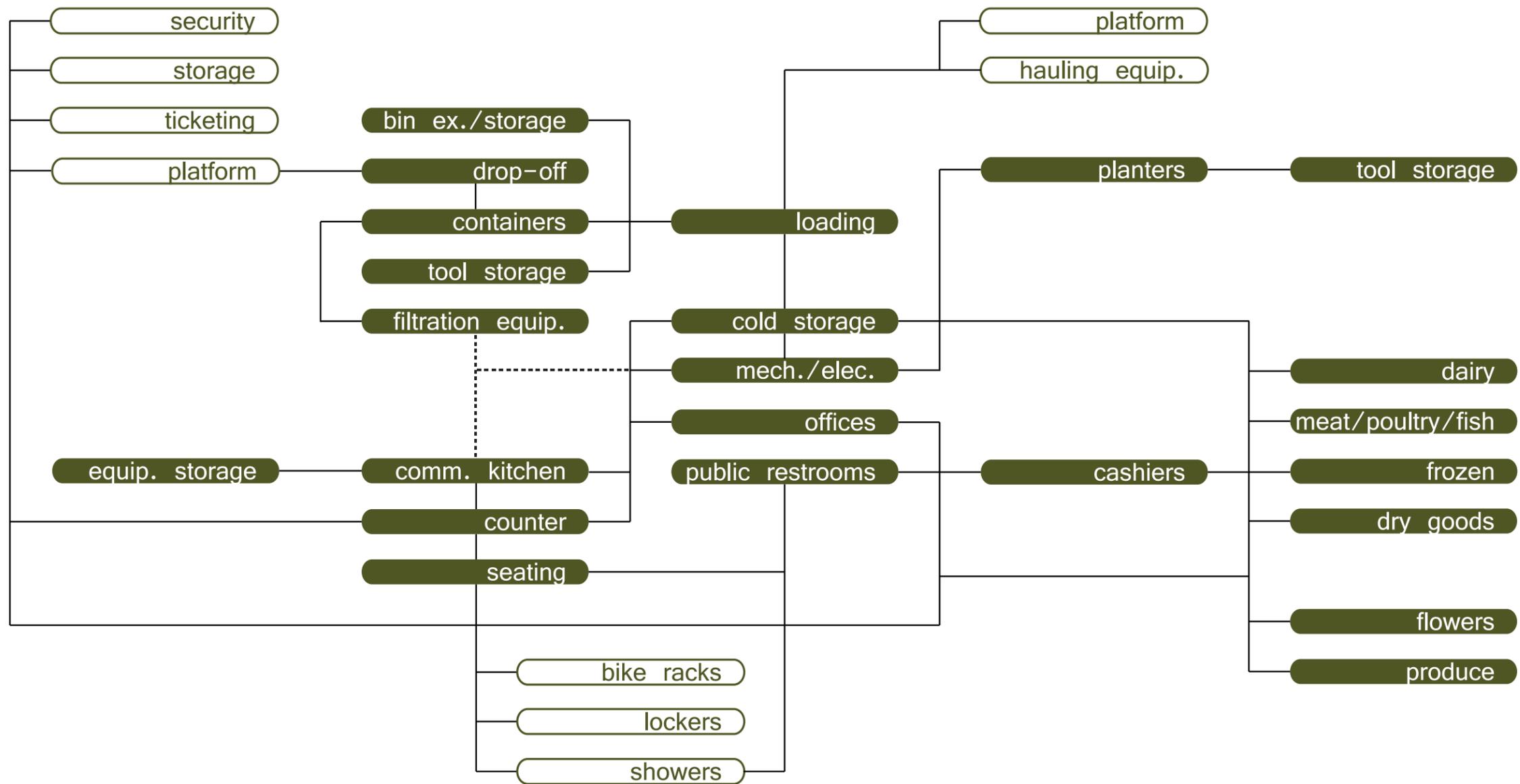
order to accomplish this a minimum of 38 outlets would have to be developed and would involve a concerted effort between local farms, businesses, neighborhood organizations, local infrastructural organizers and local government.

C-1 Programming | The design of the units themselves will not be static. Each market outlet and exchange site is intended to respond to its particular site conditions and surrounding urban context. While all will have some similar programmatic elements each will represent a unique contribution to the system. Initially the program was conceived as a mixture in scale of four basic programmatic divisions: market, kitchen/food stand, greenhouse and composting. The market division would include all the services deemed necessary for a state-of-the-art urban market with an emphasis on pedestrian consumers. A variety to market scales were explored depending primarily on the outlets location within the city, available land and adjacency to residential neighborhoods. The kitchen/food stand division of the program was conceived of as the primary educational outlet for the system. This division could range in scale as well as program manifesting itself as anything from a restaurant or cafe to a demonstration or community kitchen. The element is integral to the success of the system because it is primarily responsible for the education of consumers about utilizing local and seasonal ingredients. The third programmatic division is the greenhouse. This element was envisioned to provide another form of educational outlet as well as provide additional goods for sale in the market. The final programmatic division is the composting element. This part of the program sets this particular system apart from most traditional food distribution systems. Consumers will be encouraged to shop in small batches and to in turn return food waste in small batches for on site composting. By utilizing containerized compost units the system can provide high quality organic fertilizer for local farmers without the worry of overwhelming odors or large areas dedicated to compost piles.



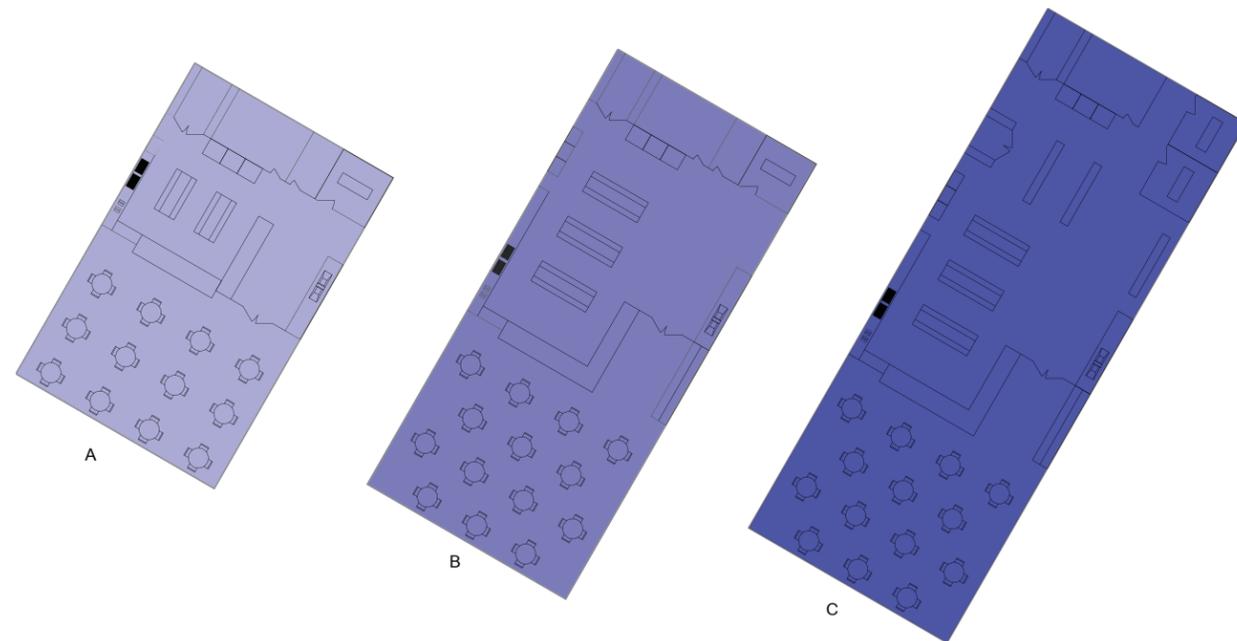
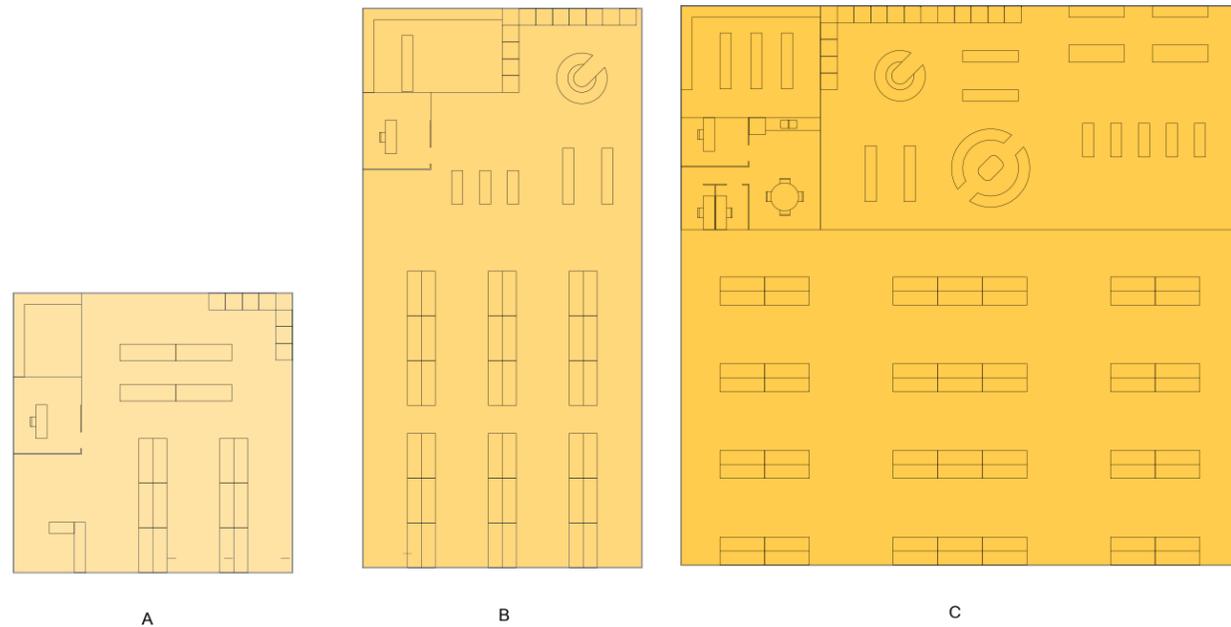
B-4.8 | break-down by phase of the network development.

C-1.1 | bubble diagram of interrelated program elements (opposite).



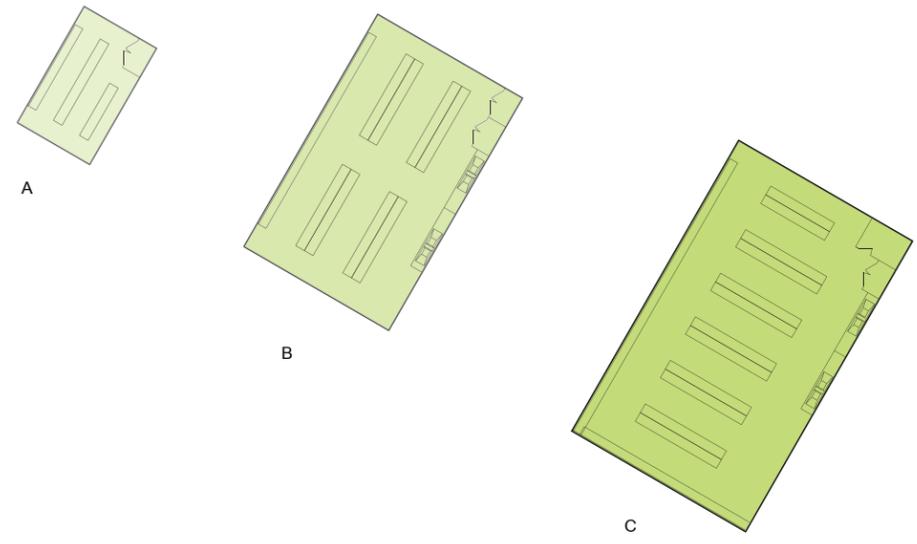
| Category | Element | Variations | | | Description |
|----------|-------------------|------------|---------|-----------|----------------------------------------|
| | | A | B | C | |
| Market | | | | | |
| | cashiers | 100 sf | 200 sf | 400 sf | |
| | produce | 1250 sf | 2500 sf | 5000 sf | |
| | meat/poultry/fish | 250 sf | 600 sf | 1100 sf | |
| | dairy | 100 sf | 150 sf | 200 sf | |
| | dry goods | 300 sf | 600 sf | 1200 sf | whole or minimally processed dry foods |
| | frozen | 150 sf | 300 sf | 600 sf | |
| | storage | 250 sf | 550 sf | 1200 sf | includes dry and cold storage |
| | offices | 100 sf | 100 sf | 300 sf | |
| | total | 2500 sf | 5000 sf | 10,000 sf | |

| Category | Element | Variations | | | Description |
|--------------|----------------|------------|---------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | A | B | C | |
| Kitchen/cafe | | | | | variation based on site constraints and local zoning. K-A would be analgous to food stand/window, K-B a small cafe and K-C a small commercial kitchen for catering |
| | seating | 1000 sf | 1200 sf | 1200 sf | indoor and outdoor seating combined |
| | office | 100 sf | 100 sf | 200 sf | K-A and K-B assumed to have 1 managerial office while K-C would have additional |
| | food prep. | 900 sf | 1200 sf | 1500 sf | |
| | food storage | 140 sf | 260 sf | 460 sf | includes dry and cold storage combined areas |
| | supply storage | 60 sf | 100 sf | 150 sf | for paper and cleaning supplies |
| | bakery | N/A | 100 sf | 300 sf | |
| | service | 50 sf | 75 sf | 75 sf | |
| | warewashing | 250 sf | 250 sf | 250 sf | based on a single tank dishwasher |
| | total | 2500 sf | 3545 sf | 4135 sf | |

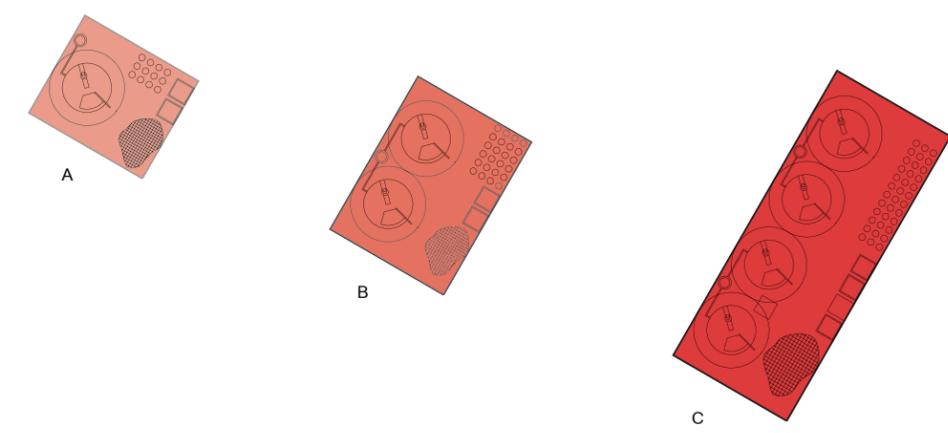


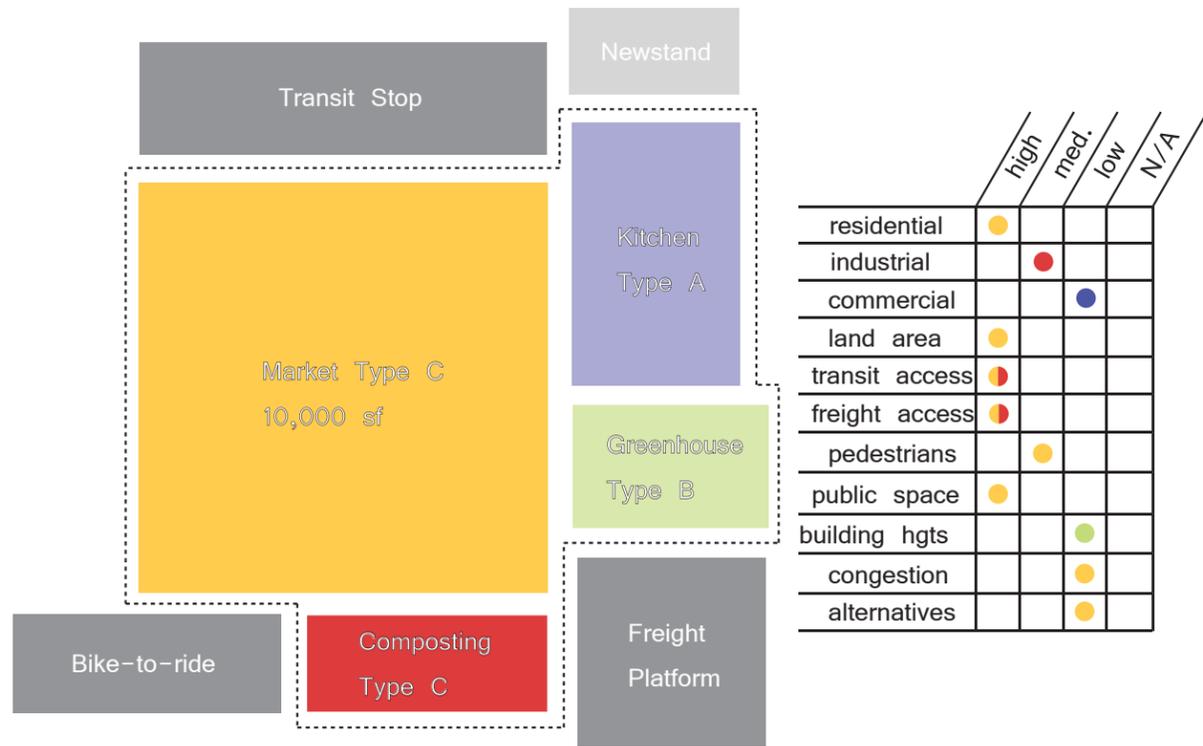
C-1.2-5 | break-down by scale of the programmatic divisions with estimates for potential square footages. Market division (left), kitchen/food stand (right), greenhouse (opposite, left) and composting (opposite, right)

| Category | Element | Variations | | | Description |
|------------|-----------------|------------|---------|---------|---------------------------------------------------------------------------------------------------|
| | | A | B | C | |
| Greenhouse | | | | | variation based on site constraints and will coincide with the market and kitchen/cafe variations |
| | plantings | 235 sf | 900 sf | 1400 sf | total growing area in raised planters or ground-level beds |
| | supply storage | 15 sf | 30 sf | 50 sf | tool, compost and seed storage |
| | wash/processing | N/A | 70 sf | 70 sf | area for basic food washing and processing |
| | total | 250 sf | 1000 sf | 1500 sf | |

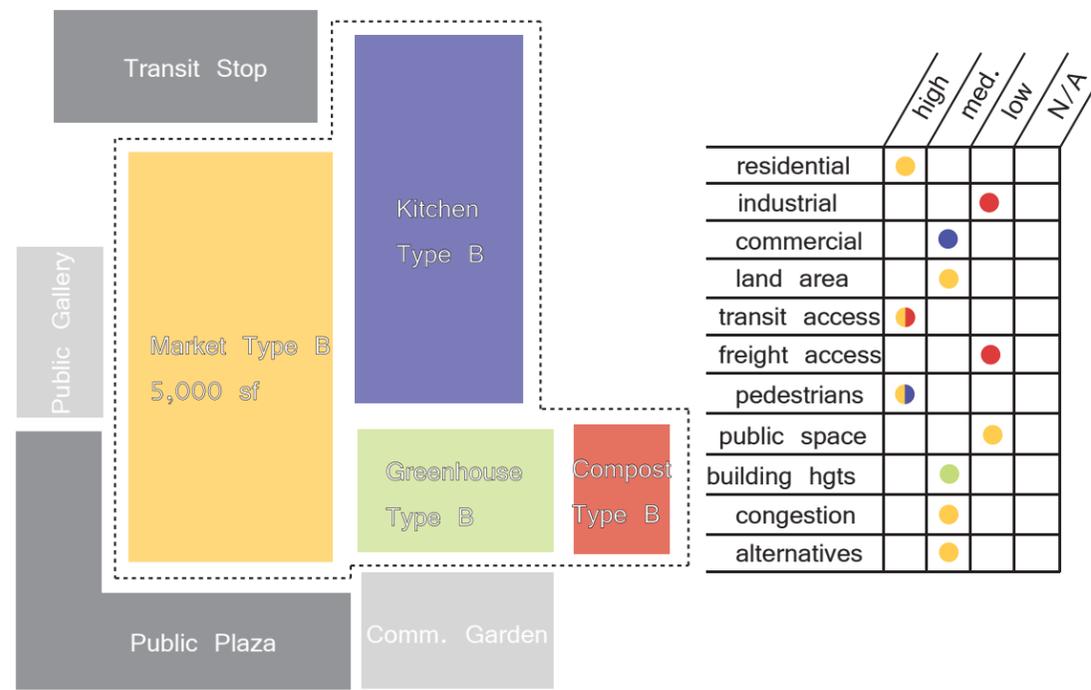


| Category | Element | Variations | | | Description |
|------------|----------------|------------|--------|----------|------------------------------------------------------------------------------------------------------------------------------------------|
| | | A | B | C | |
| Composting | | | | | variation based on expected # of users, proximity to freight and waste sources (residential/commercial/industrial) and site constraints. |
| | containers | 1 | 2 | 4+ | containerized composting units including biofilters and pumps 168 sf/unit |
| | tool storage | 25 sf | 25 sf | 50 sf | small storage space for basic maintenance tools and replacement parts |
| | bin storage | 50 sf | 100 sf | 150+ sf | 5 gallon bins for exchanging compost with farmers/consumers |
| | carbon storage | 50 sf | 50 sf | 100+ sf | storage of carbon rich bulking agent need on hand min. 3.0 cu. yd./unit |
| | curing area | 50 sf | 50 sf | 100+ sf | area for recommended additional curing of compost |
| | total | 343 sf | 537 sf | 1000+ sf | |

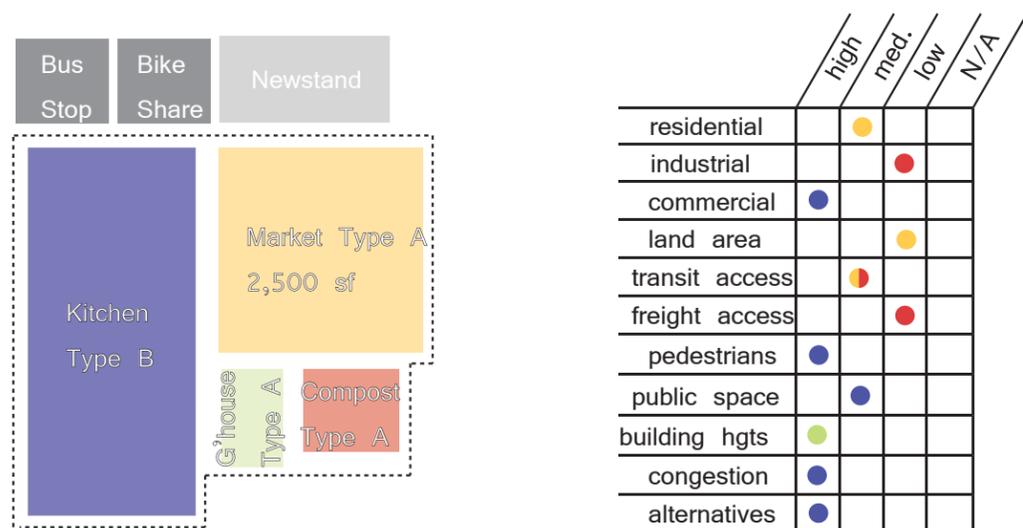




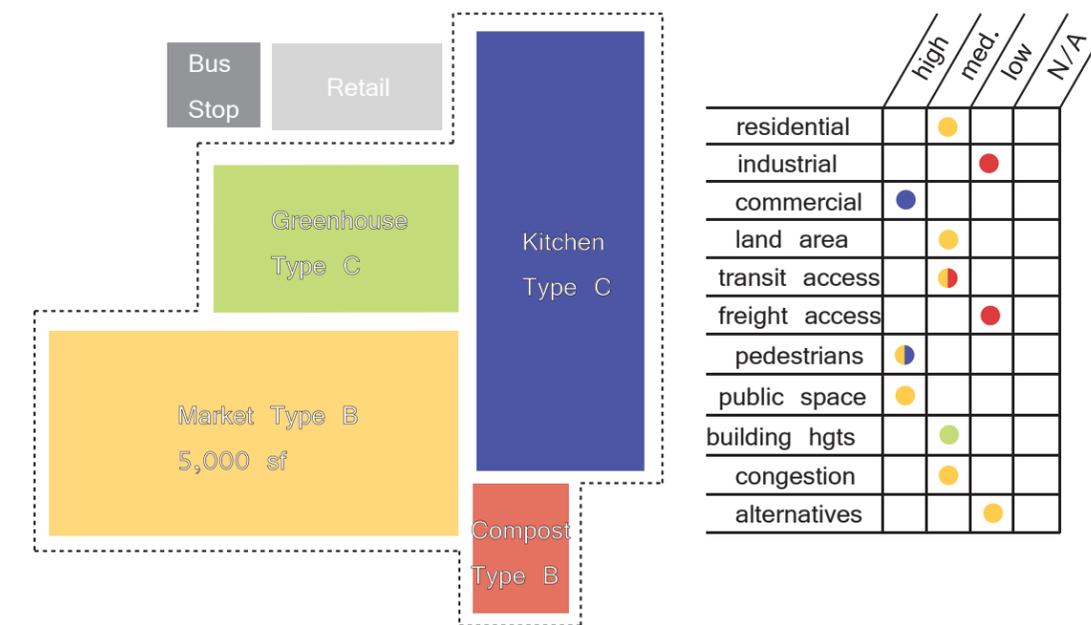
Model 1: low density, high access, large lot, residential



Model 2: med. density, mod. access, med. lot, residential

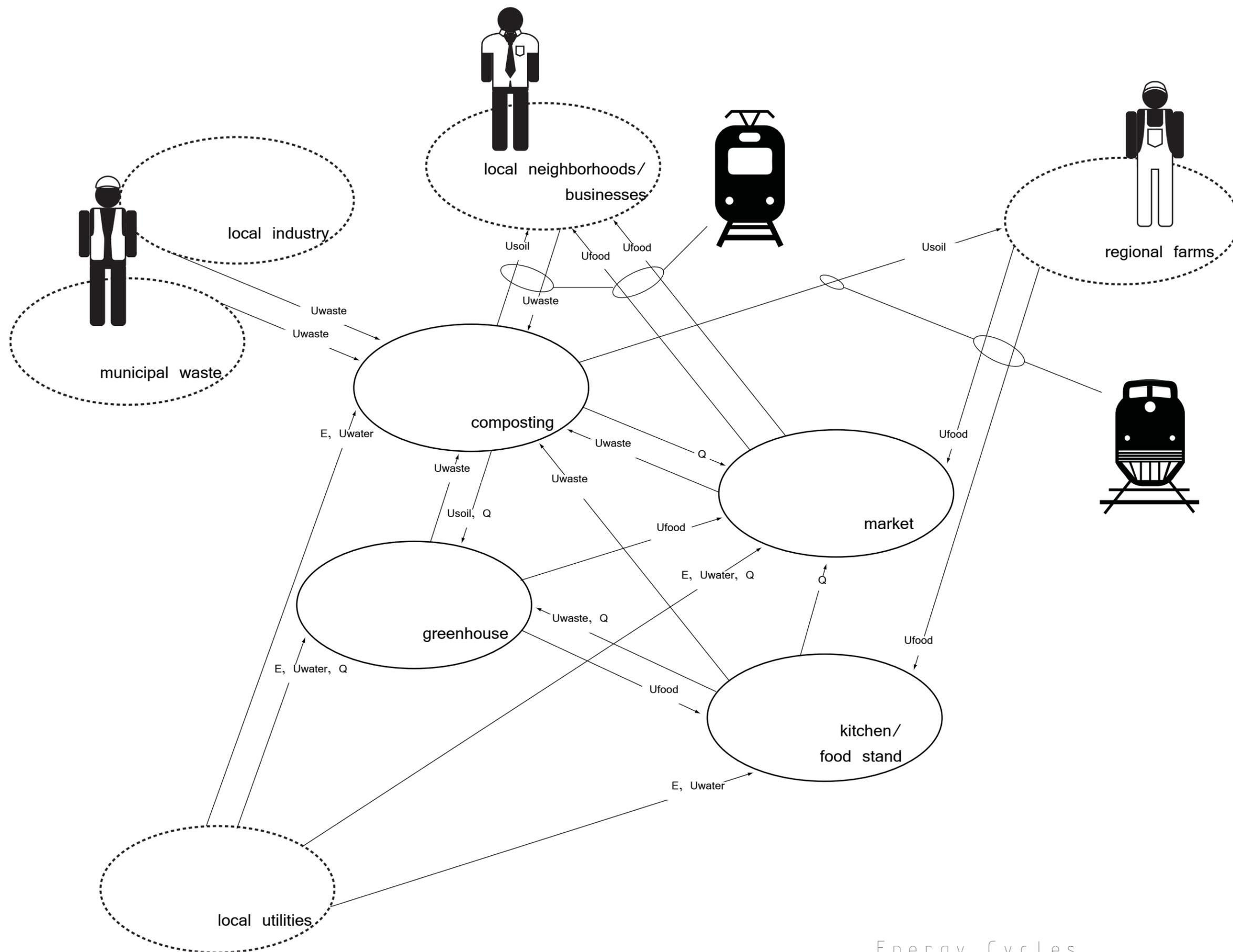


Model 3: high density, low access, small lot, commercial



Model 4: med. density, low access, med. lot, commercial

C - 1 . 6 - 7 | analysis of potential programmatic responses to hypothetical models (above). Diagram of energy cycles associated with the system (opposite).





SITE 01

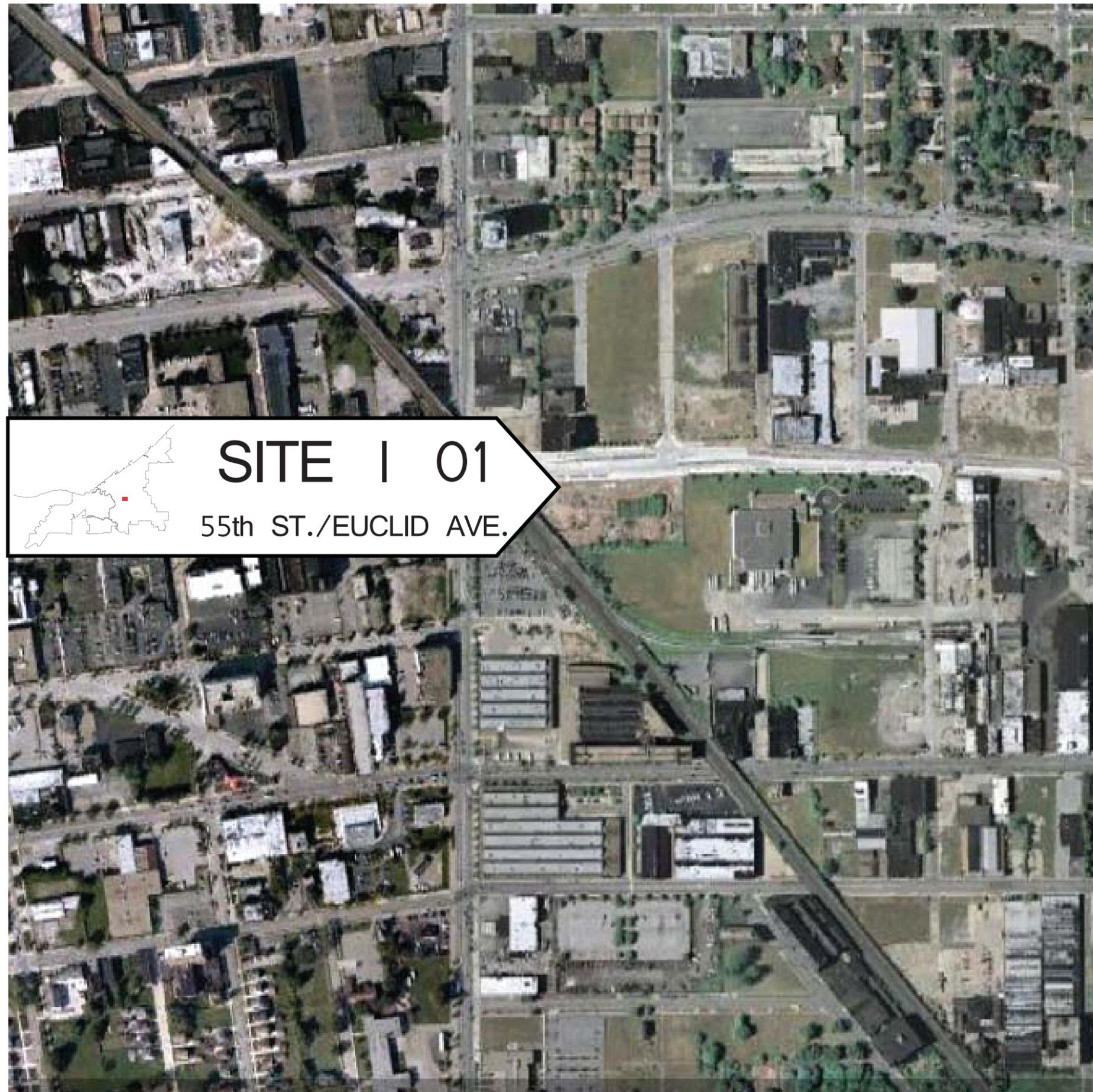
SITE 02

D-1 Site Selection | Two separate but relatively close sites were chosen to test the prototypical system. Both sites located in Cleveland's near east side are aligned along E 55th St. Although the locations only lie about 3 miles apart the surrounding context and adjacent neighbors give each of these sites very different characteristics. The first site, to be referred to as Site I 01, lies at a crucial intersection between E 55th st. and Euclid Ave. Passing over the intersection is a local railroad right-of-way which immediately ramps down to grade forming an access point on the southern edge of the site. The current landowner, the Greater Cleveland Rapid Transit Authority (GCRTA) utilizes this site for storage of various supplies. This site poses a unique opportunity to engage the existing railroad right-of-way as well as interact with the newly finished Healthline BRT system which also has a station adjacent to the site. Site I 01 due to its ideal location along Euclid Ave. will act as a "collector" inviting urban dwellers to interact and learn more about their rural counterparts.

The second site, about three miles South of Site I 01 is located at

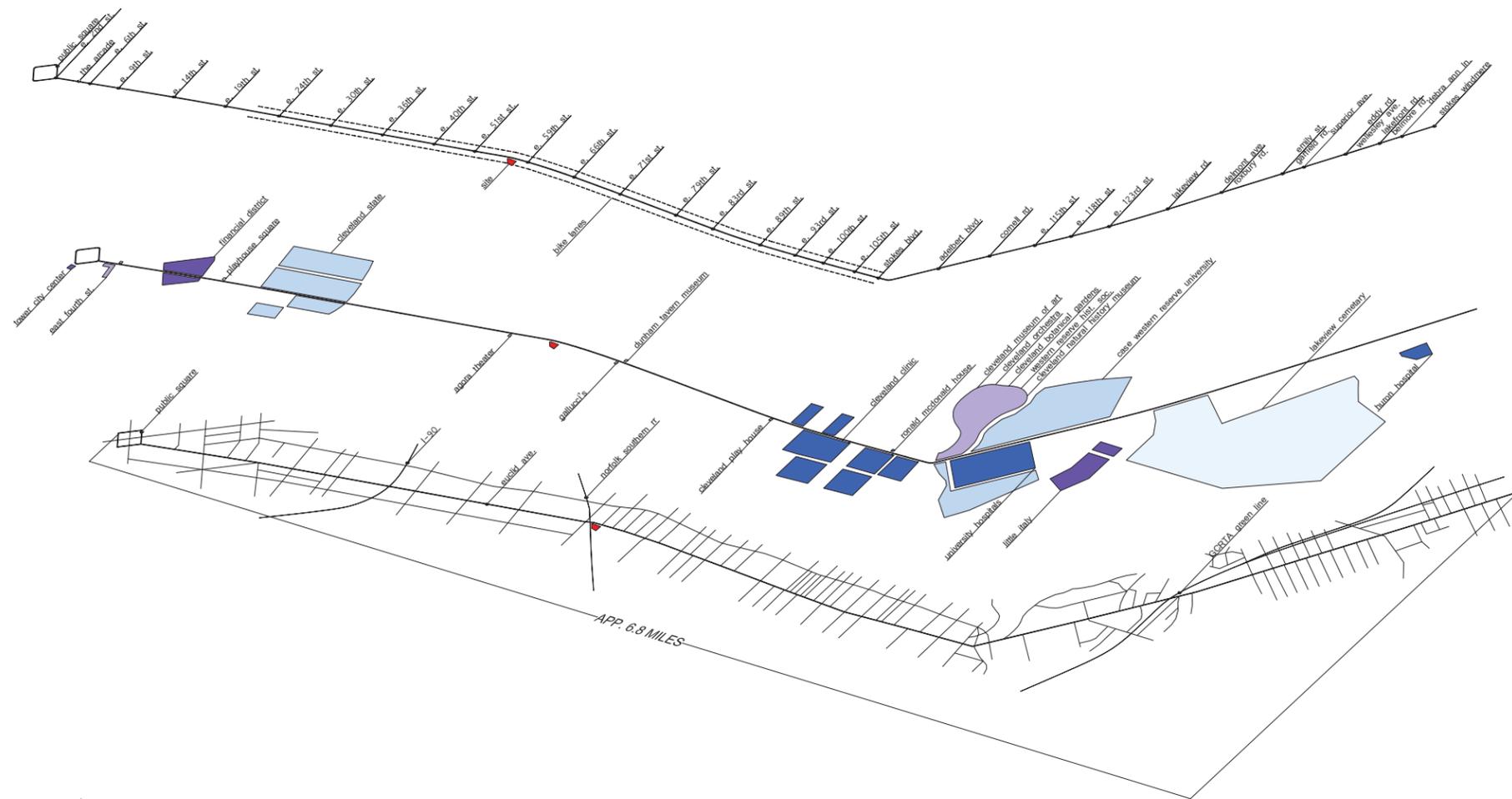
the existing E 55th RTA station. this station represents the last stop in the system where the Red heavy rail line and Green and Blue light rail lines all share the same tracks and the same platform. Site I 02 also has access to local and regional freight lines. This site provides an ideal location to benefit all commuters headed by train to the East suburbs and due to its close proximity to the regional rail lines it becomes an ideal location as a distribution point and compost collection node.

Both sites represent different aspects of the system and emphasize different roles that it should fulfill. Site I 01 with its emphasis as an event space will act as a permanent advertisement and be especially important to the educational and outreach goals of the program. Site I 02 more representative of the majority of the system elements will emphasize the lifestyle change a transit-oriented food distribution system could promote for commuters. This site will exhibit how by putting the market back in the routine of everyday life people can make healthier choices more often.



SITE | 01

55th ST./EUCLID AVE.



D-2 Site | 01 | Situated along Cleveland's newest form of public transportation the Healthline BRT (Bus Rapid Transit) this site is intended to contribute to the rejuvenation of historic Euclid Ave. Euclid Avenue which runs from the financial and entertainment districts downtown eastward to some of Cleveland's most important cultural and educational institutions has been enjoying a resurgence in recent years. Taking advantage of adjacencies including the new BRT stop and an existing railroad right-of-way the 55th st. site will provide a unique experience for consumers to interact with producers in an urban setting. The market will serve as not only an outlet for food but also as an educational outlet for city dwellers to learn about local foods and cooking seasonally. The program includes a flexible indoor marketplace conceived to provide year-long access to locally grown and manufactured foods and goods. The program will also include a demonstration/community kitchen that could be flexible to change throughout the day. As this site is located in a central business district the kitchen could service a cafeteria style eatery by day and then by night operate as demonstration or educational kitchen. The most novel and playful element of the program will be the construction of an open-air farmers market to be accessed



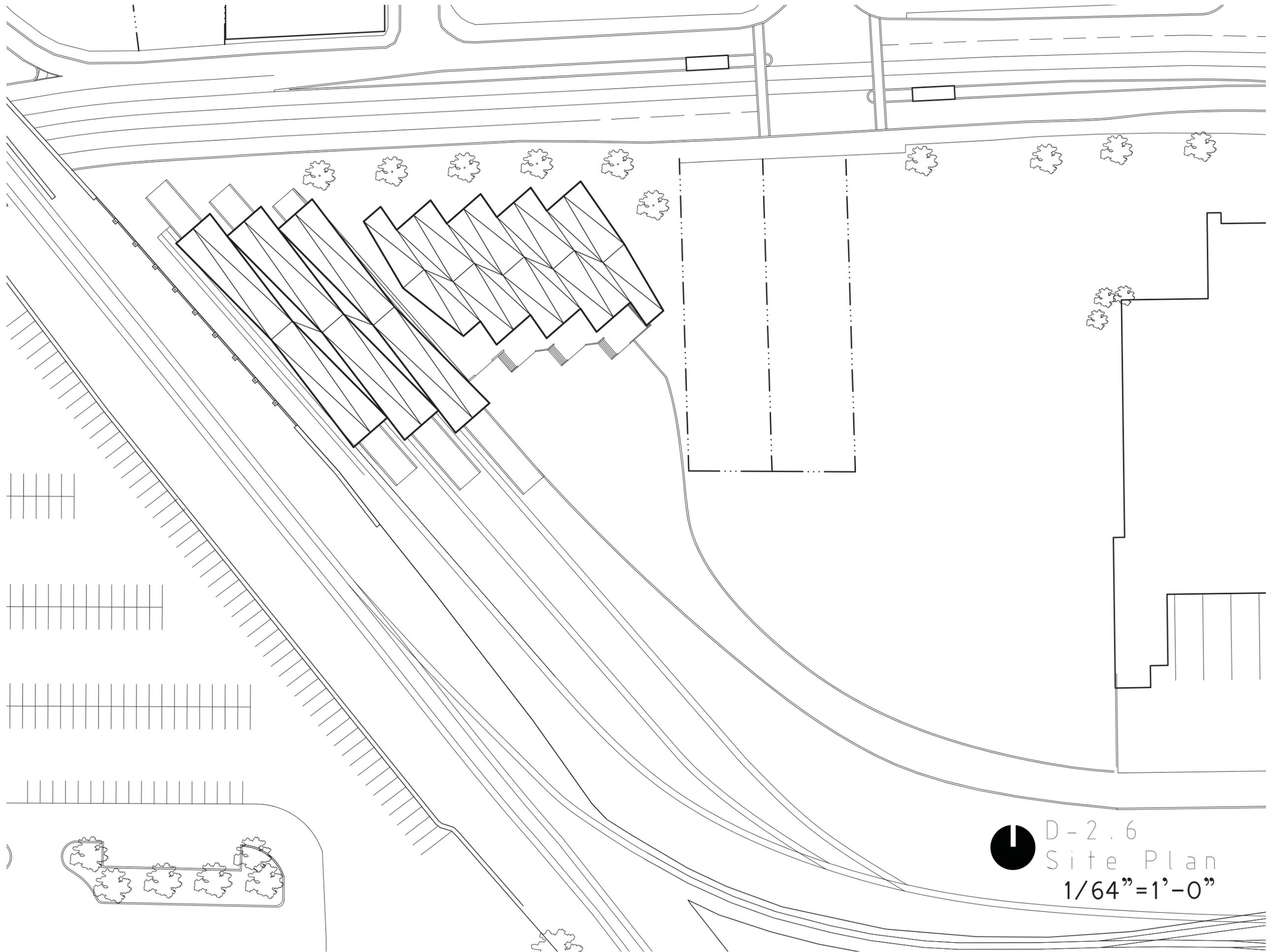
D-2.1 | Map depicting the new Healthline BRT route.

D-2.2-3 | Pictures of the Healthline BRT Euclid Ave. station and vehicle.

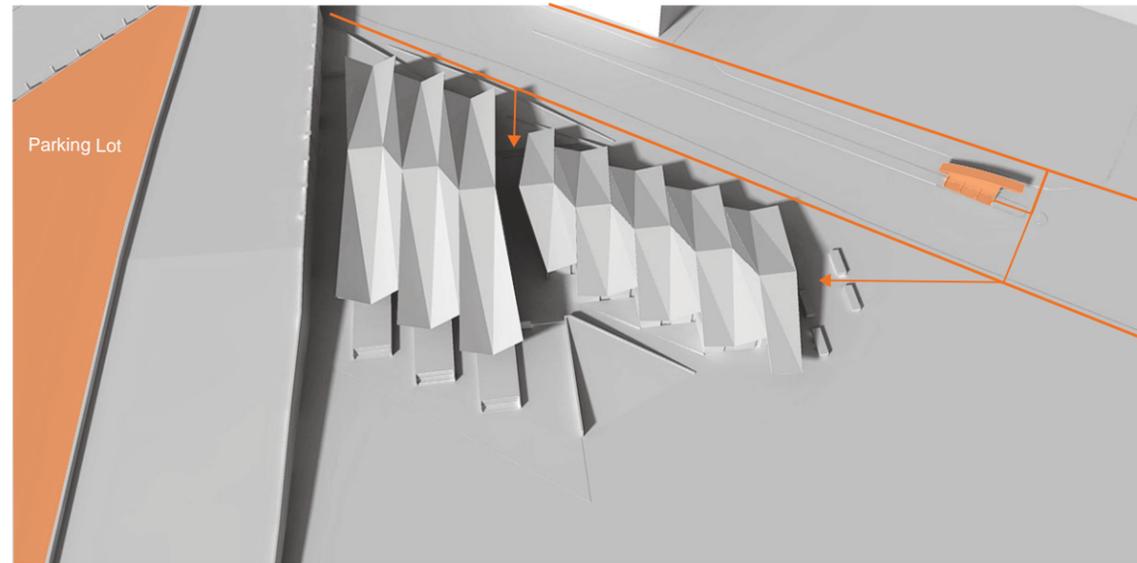
directly from the trains transporting the goods to the city. Familiar market tents will be replaced by boxcars from which local farmers could sell their wares. By occupying such an important location along the new transit system the market will act a permanent advertisement for the overall market system promoting local sourcing of food for urban dwellers.



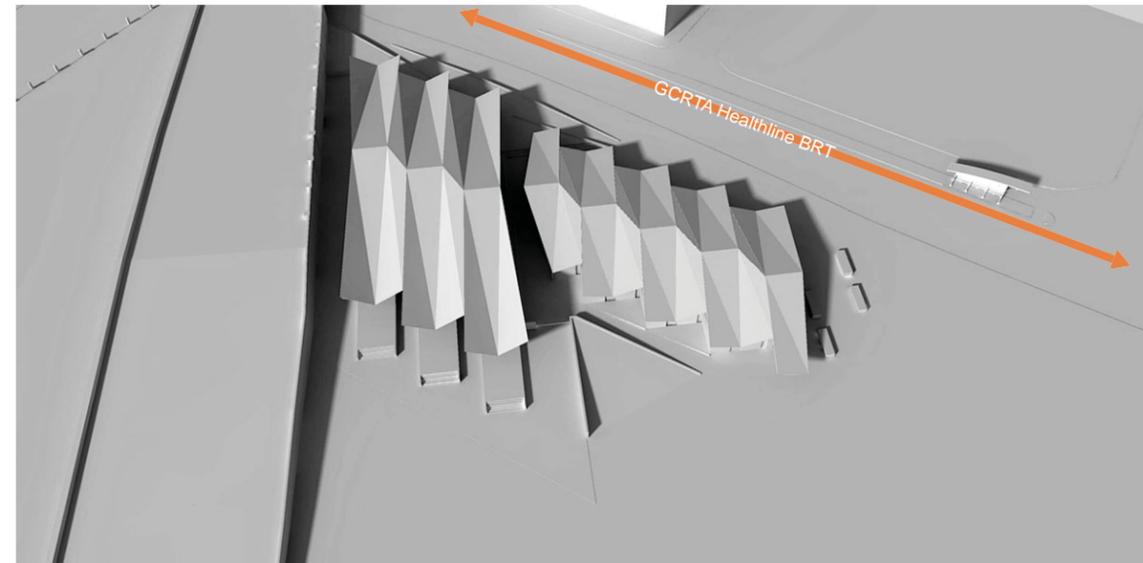
D-2.4-5 | Site pictures from Euclid Ave. looking onto South onto site



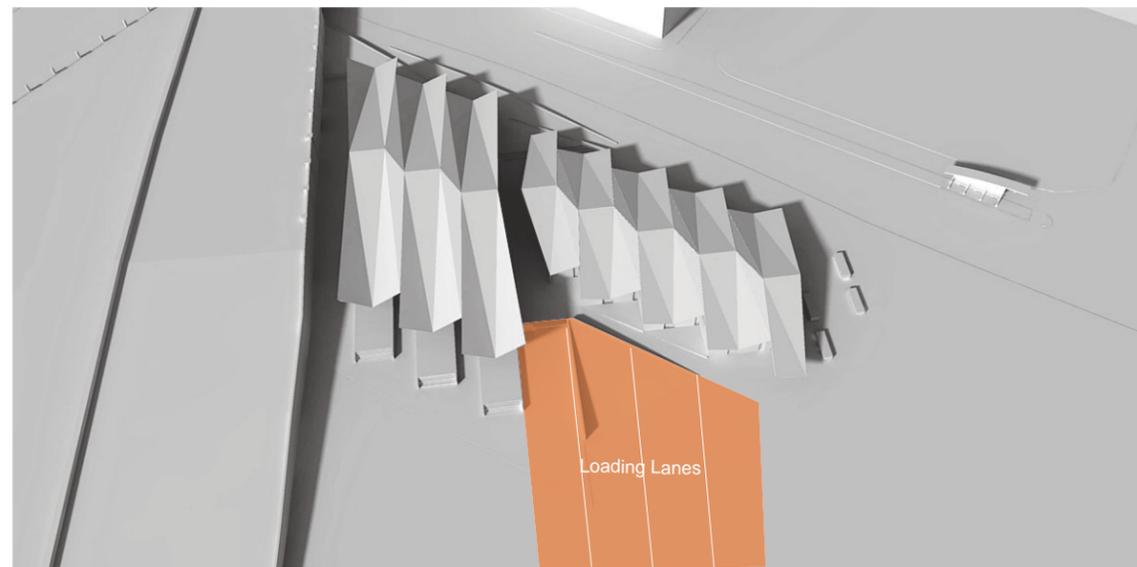
D-2.6
Site Plan
1/64" = 1'-0"



Pedestrian



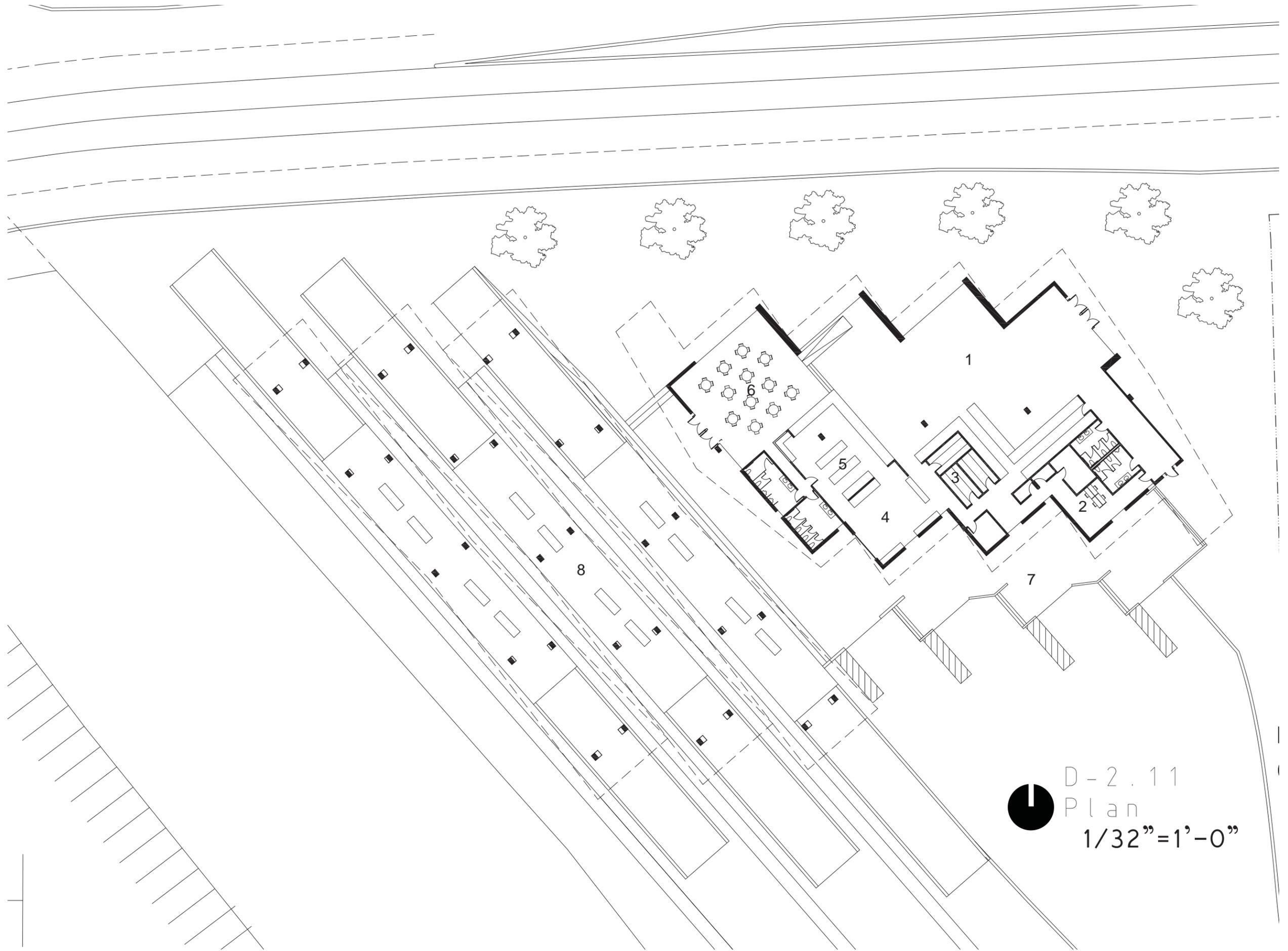
Transit



Auto Loading



Rail Loading
 D-2.7 |
 Site circulation
 diagrams



D-2.11
Plan
1/32"=1'-0"

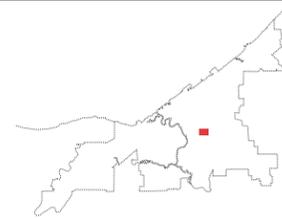


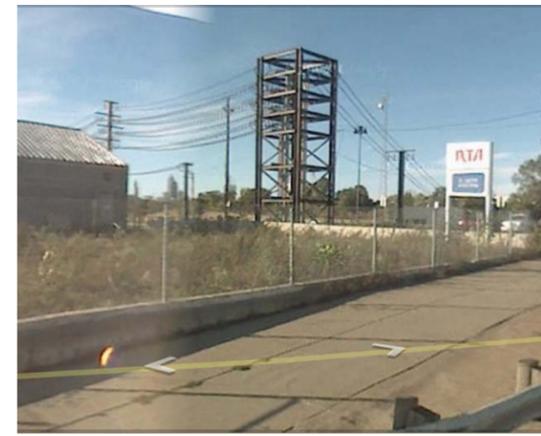
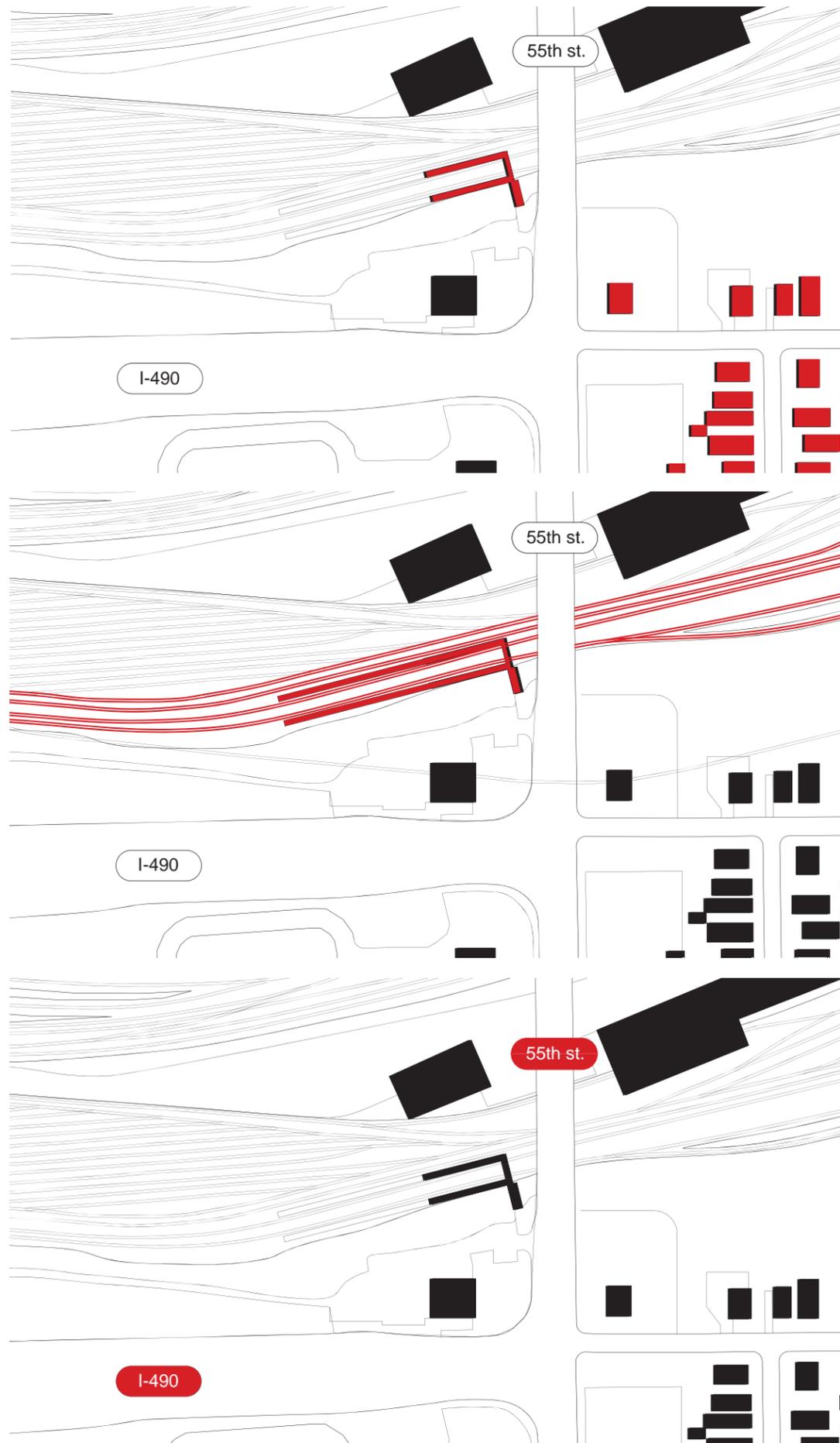
D-2.12 | Scene depicting activities at the farmers market.



SITE | 02

E55th ST. RTA STOP





Street View



Light Rail

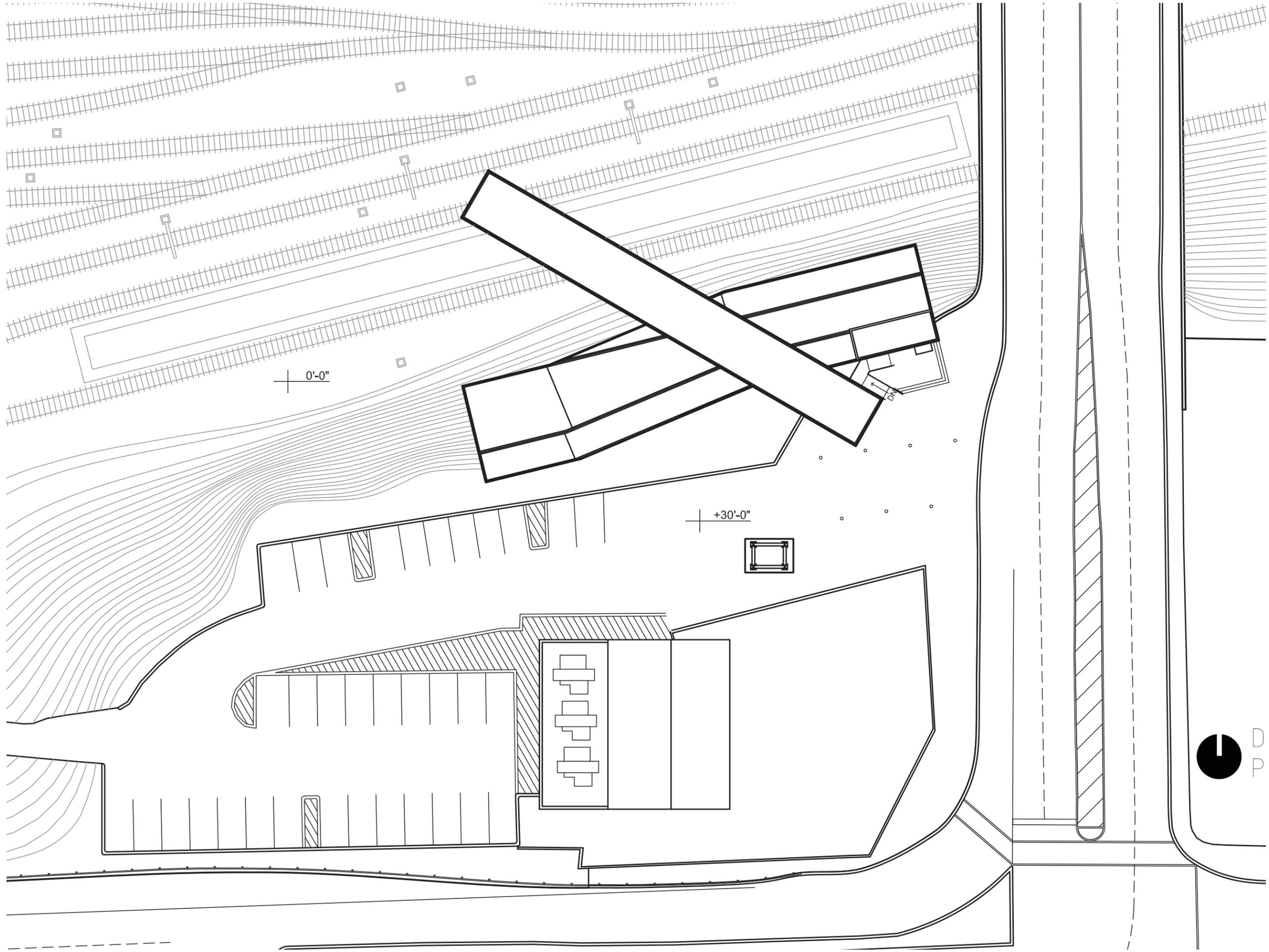


Heavy Rail

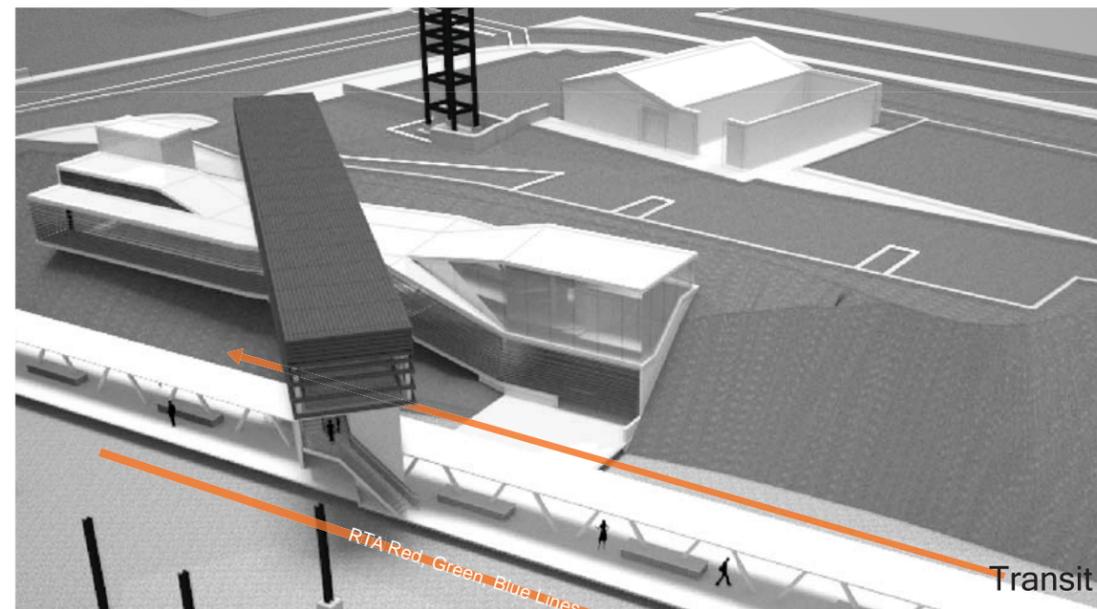
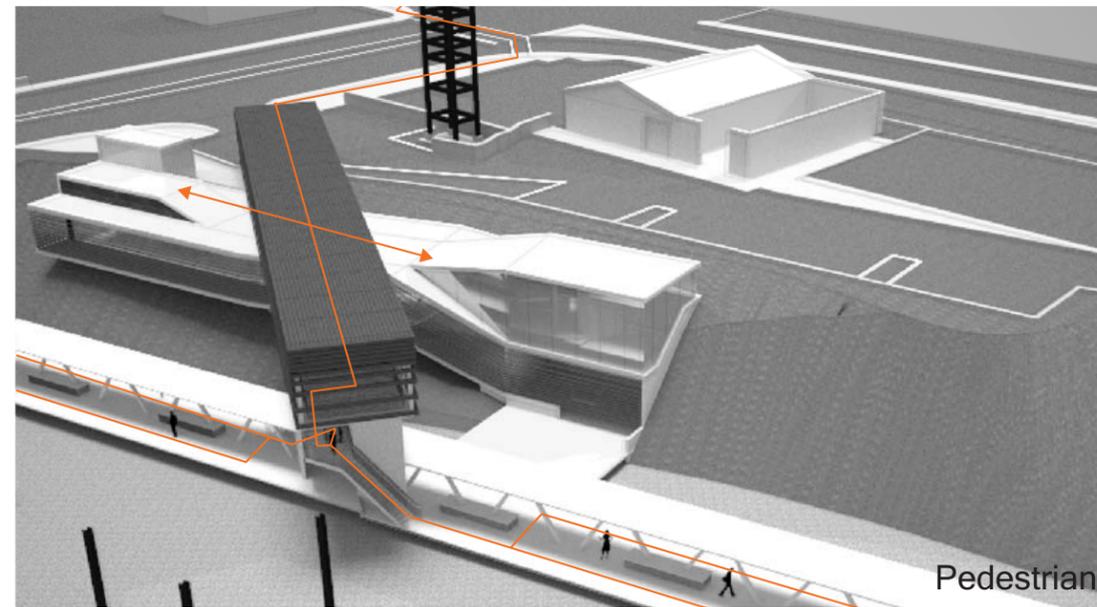


Pedestrian Walkway

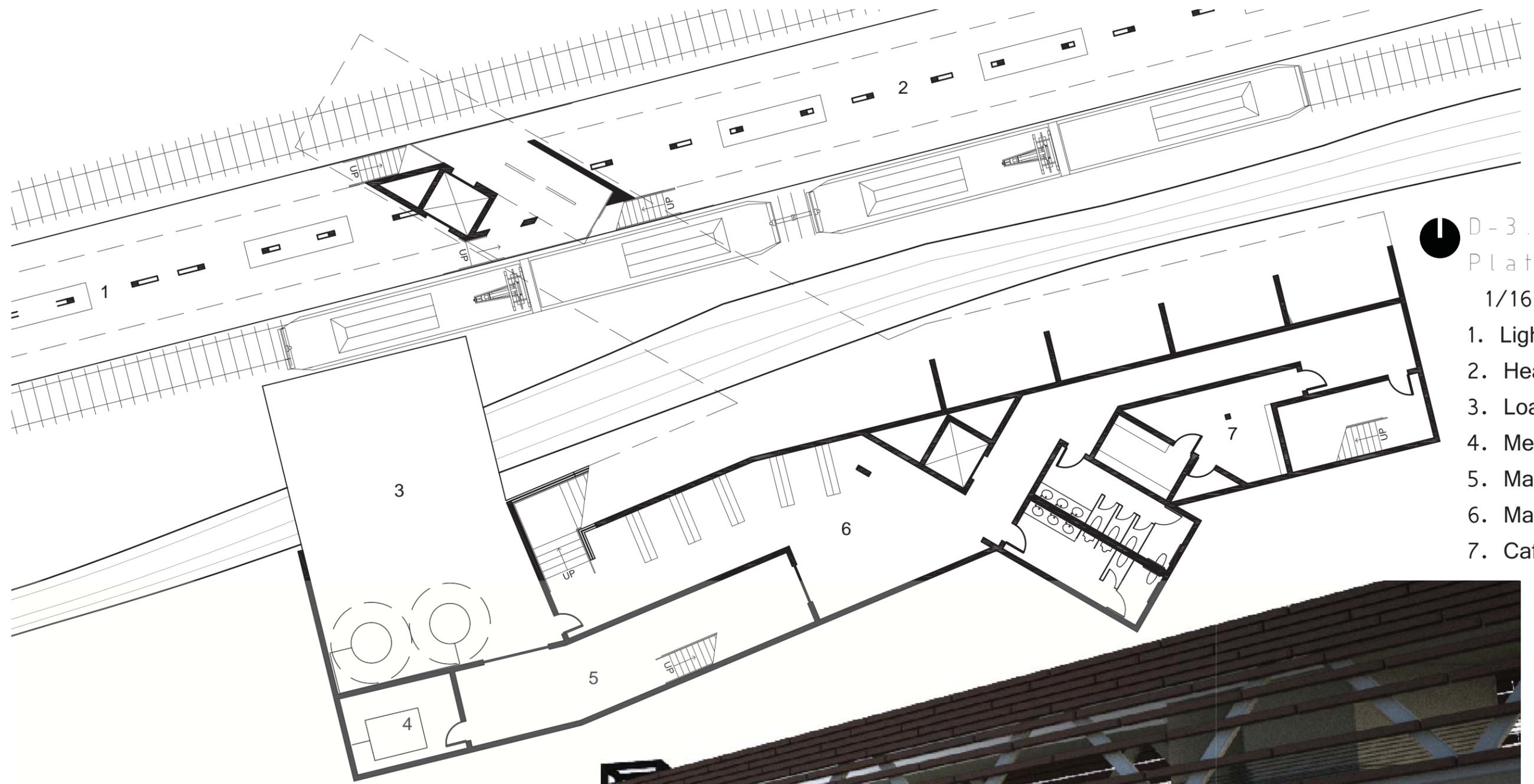
D-3.1-3 | Diagrams depicting site adjacencies and assets. Central Neighborhood (top), GCRTA tracks (middle), and Local street access (bottom)



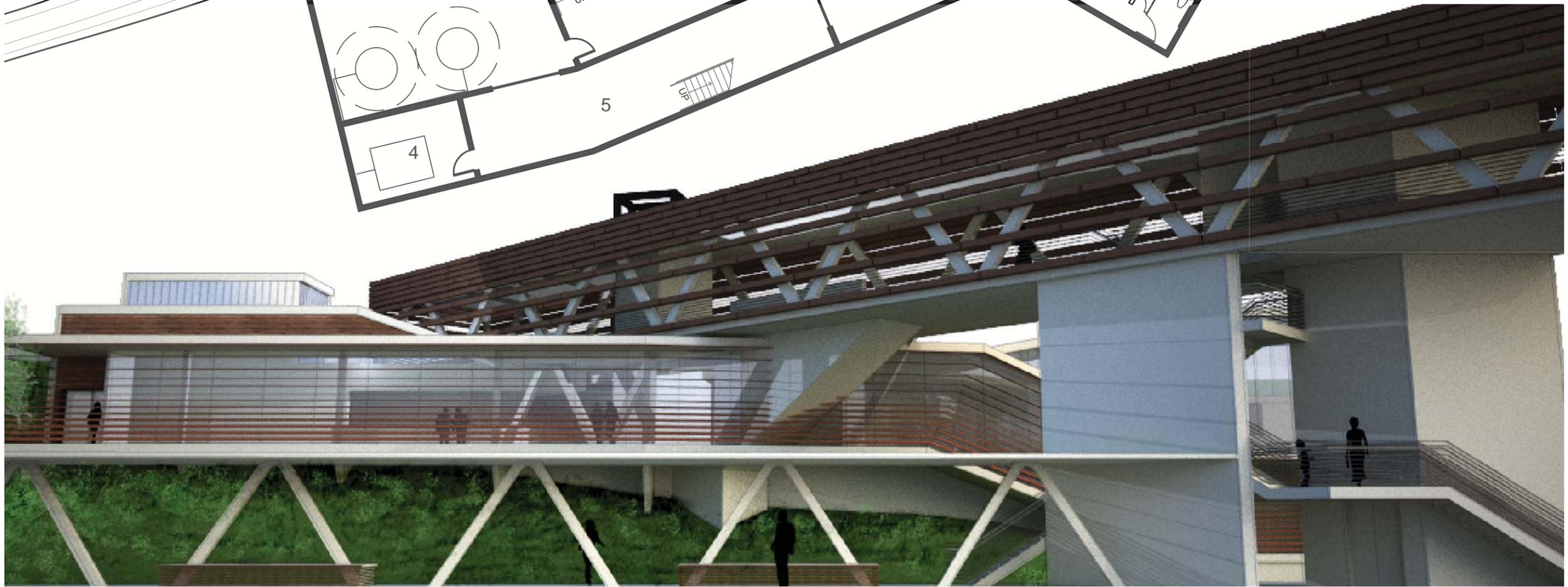
D-3.4
Plan
1/32" = 1'-0"

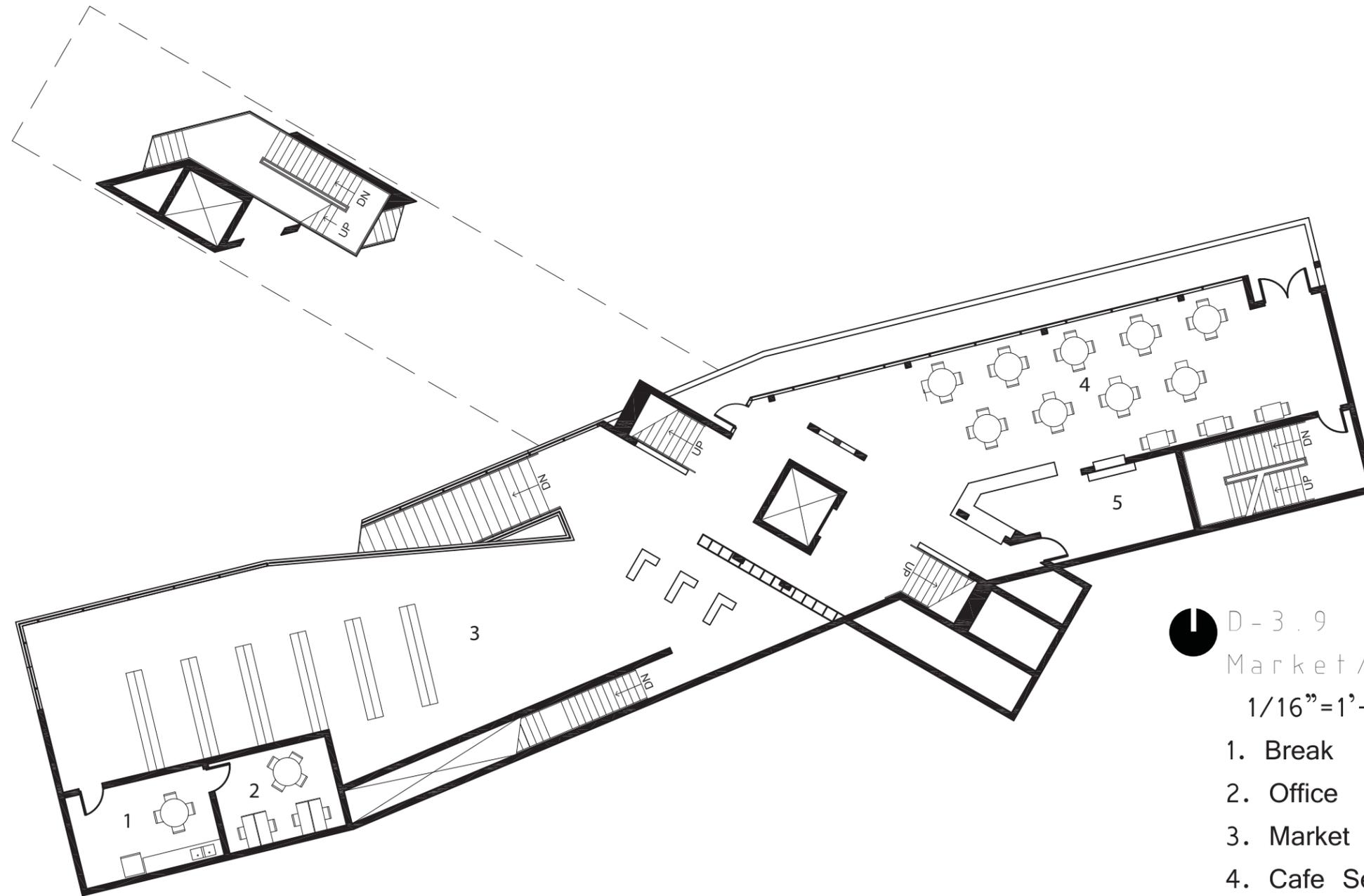


D-3 Site | 02 | Sited on a crucial connection between the local transit system and regional freight lines this outlet will provide the ultimate convenience for commuters. Intended to support hop-on, hop-off shopping this will be a bustling hub of activity on a previously neglected industrial site. Riders will have access not only to a robust local market but an on site cafe offering healthful items prepared using the same local ingredients available at the market. The program for this outlet includes on site composting facilitated by the use of containerized units. Compost collection will be a major factor for this site as it is an ideal location for distribution of compost to rural exchange sites.



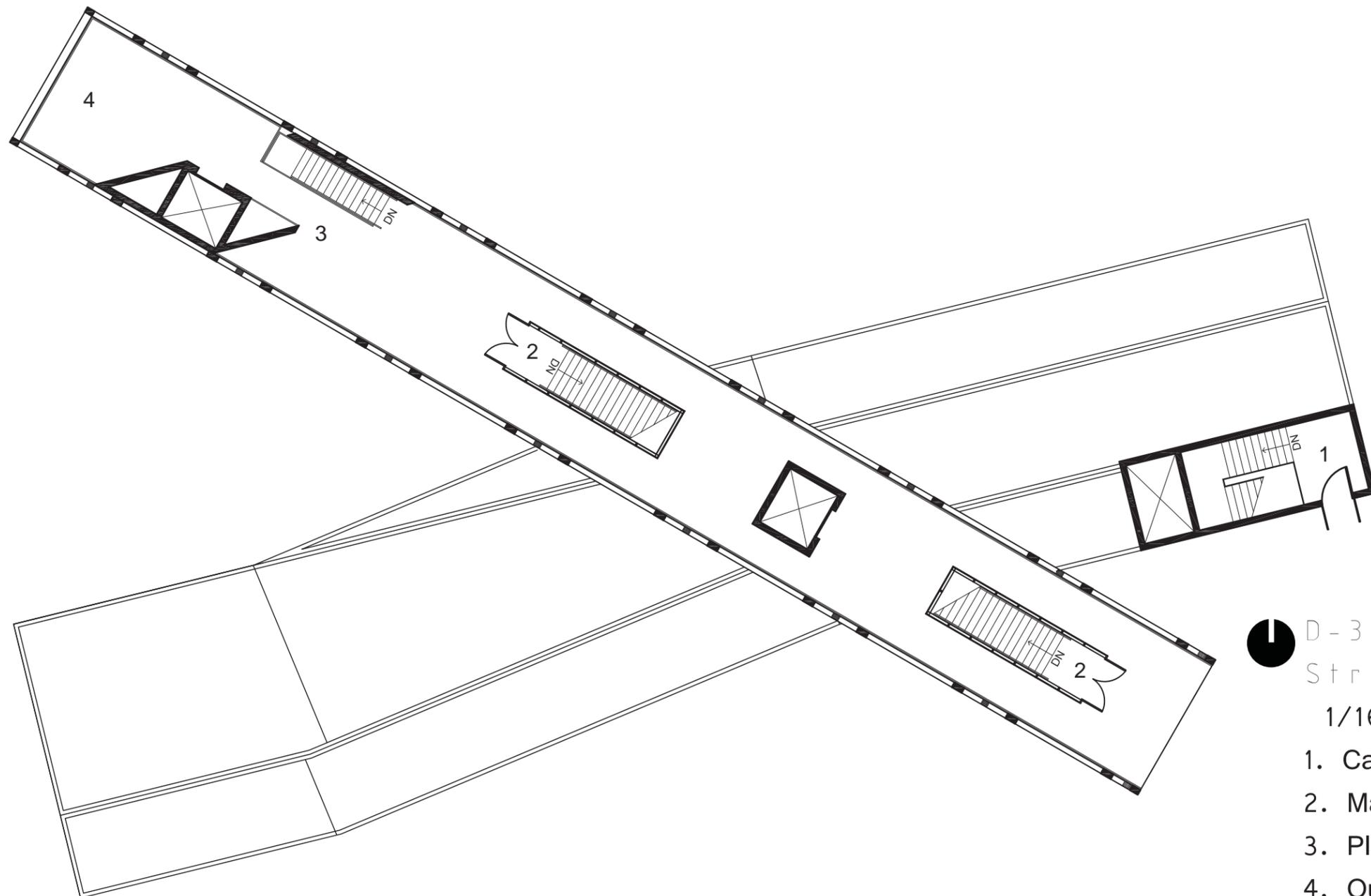
- D-3.8
 Platform Level
 1/16"=1'-0"
1. Light Rail Platform
 2. Heavy Rail Platform
 3. Loading/Composting
 4. Mechanical
 5. Market Storage
 6. Market Floor
 7. Cafe Storage





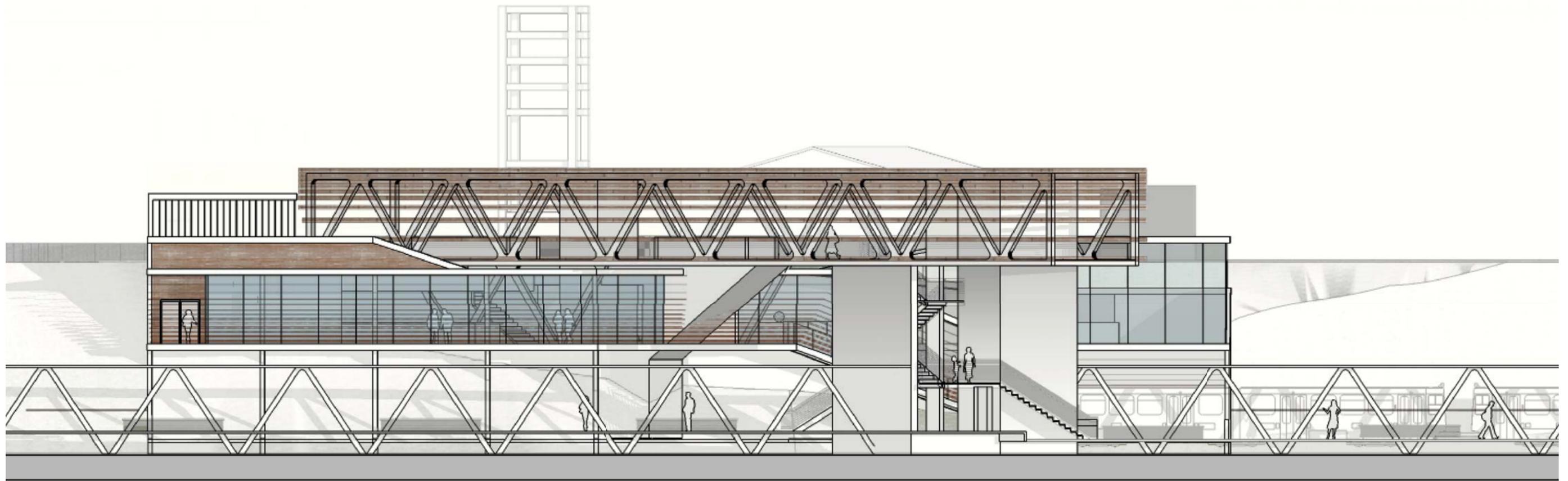
 D-3.9
 Market/Cafe Level
 1/16" = 1'-0"

- 1. Break
- 2. Office
- 3. Market Floor
- 4. Cafe Seating
- 5. Kitchen

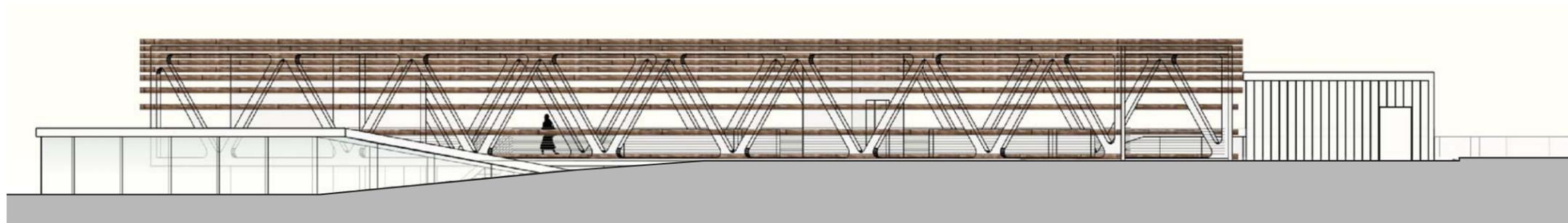


 D-3.10
 Street Level
 1/16"=1'-0"

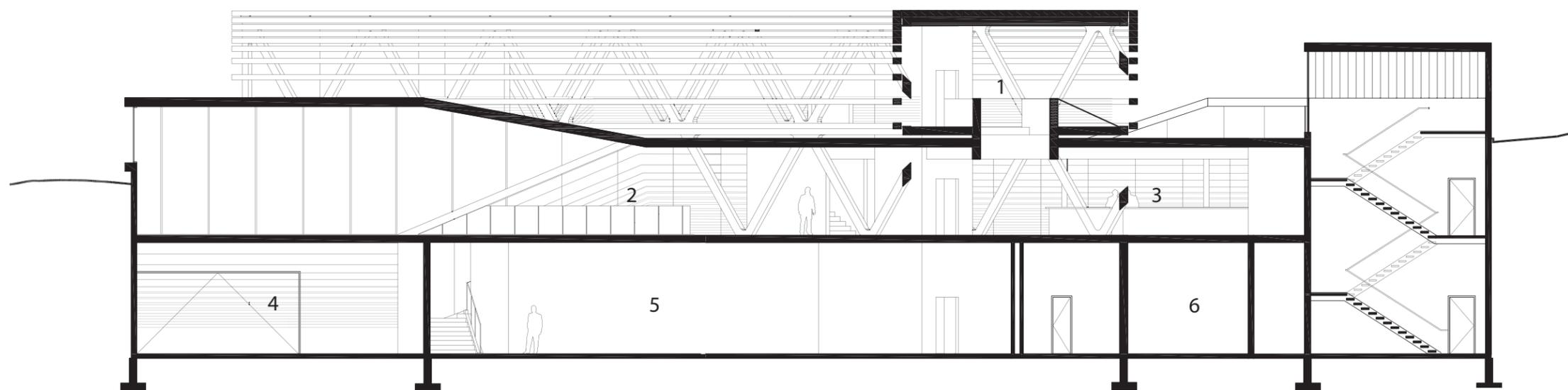
1. Cafe Entry
2. Market/Cafe Access
3. Platform Access
4. Outlook



D-3.11
North Elevation
1/16"=1'-0"

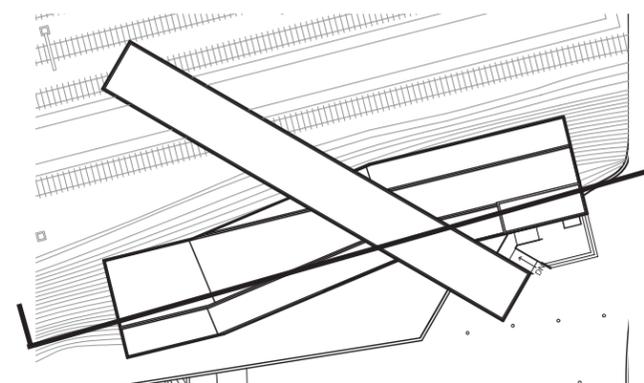


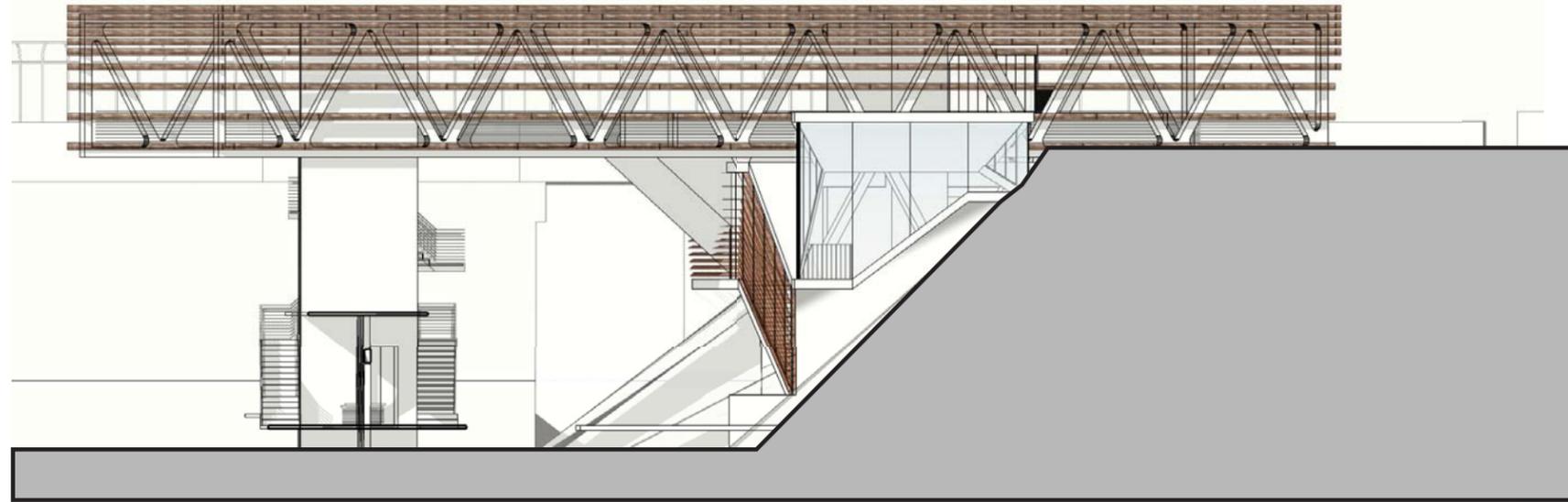
D-3.12
South Elevation
1/16"=1'-0"



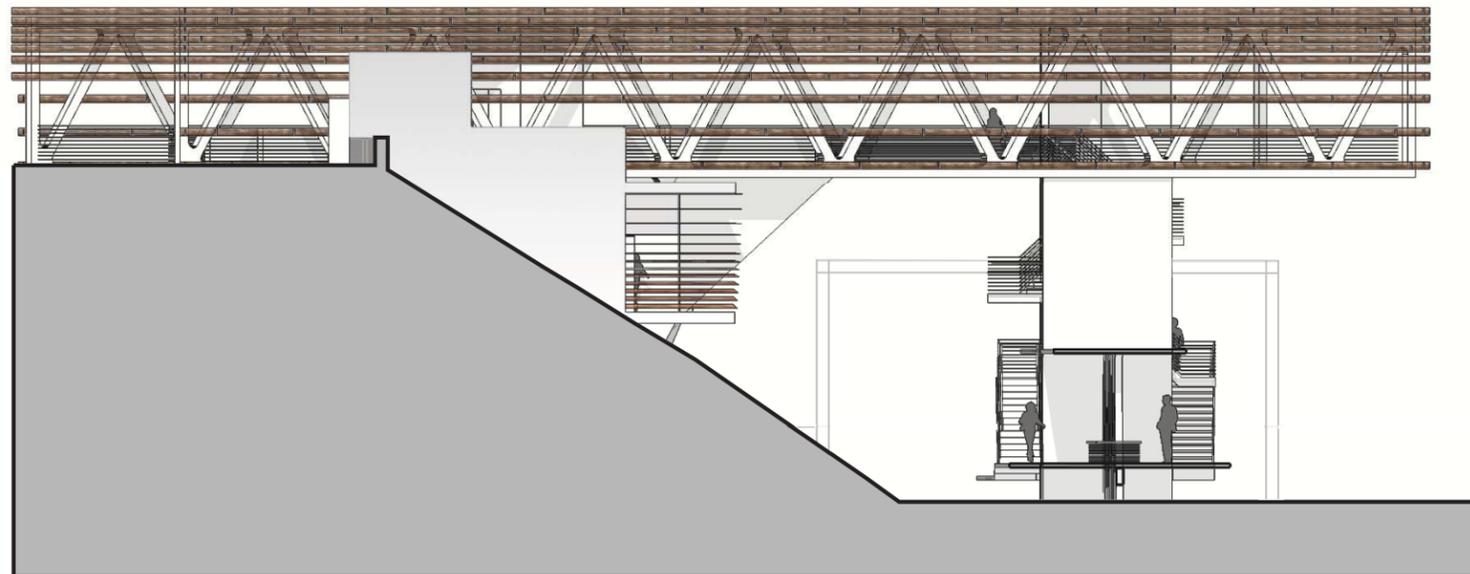
D-3.13
Section 1
1/16"=1'-0"

1. Transit Access
2. Market Floor
3. Cafe
4. Mechanical/Compost
5. Market floor (lower level)
6. Cafe Storage

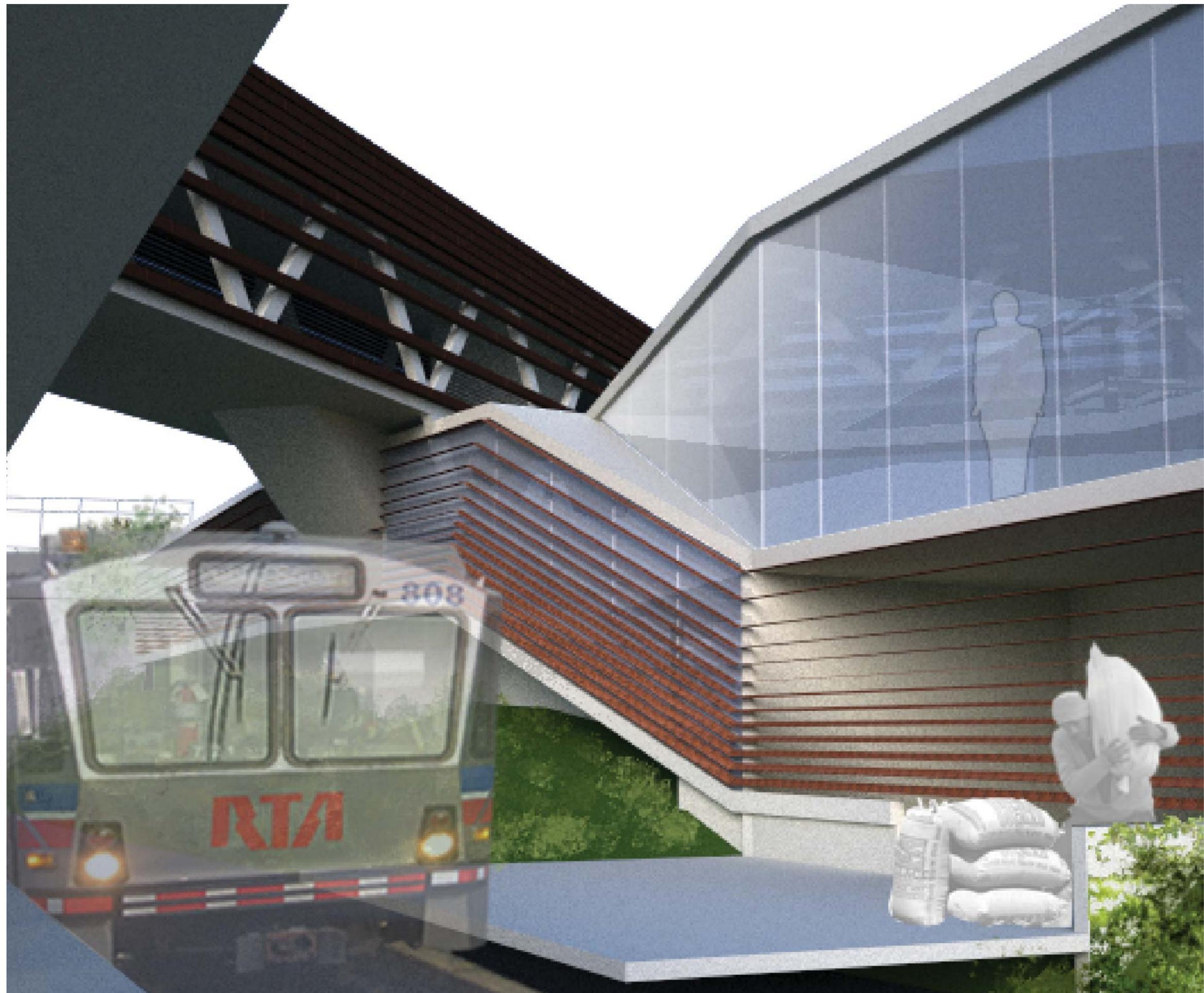




D-3.14
West Elevation
1/16"=1'-0"



D-3.15
East Elevation
1/16"=1'-0"

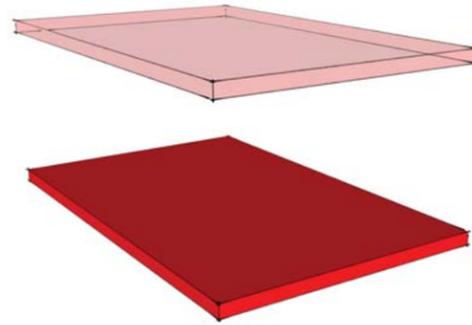


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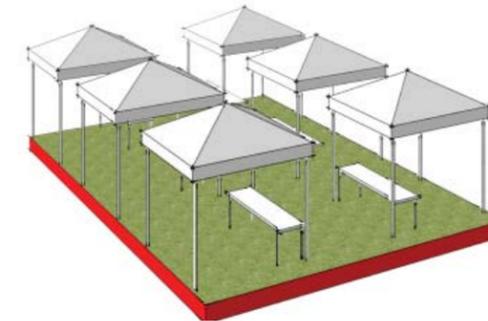
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offerings

- seasonal produce
- frozen meat
- limited dairy
- flowers
- honey
- preserves
- whole grains
- breads & pastries
- prepared foods
- fresh/dry pasta



open-air



seasonal/temporary



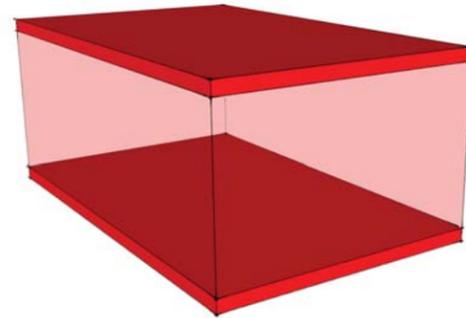
Green City Market
Chicago, IL



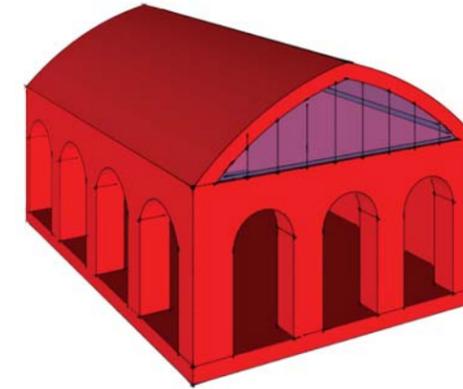
Growing Power
Milwaukee, WI

offerings

- seasonal produce
- fresh meat & fish
- cured & preserved meats
- full dairy
- flowers
- honey
- preserves
- dried fruit
- canned food
- whole grains
- bread & pastries
- bars & restaurants
- wine
- oils & vinegars
- condiments
- fresh/dry pasta



semi-enclosed



open-air markets



“La Boqueria”
Barcelona, Esp

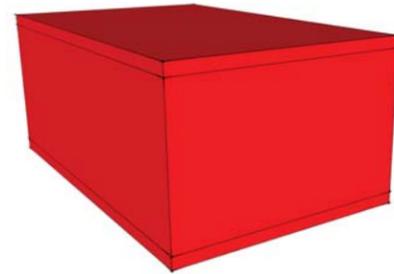


Santa Caterina Market
Barcelona, Esp

Semi-enclosed Markets

offerings

seasonal produce
butcher/
fishmonger
cured &
preserved meats
full dairy
flowers
honey
preserves
dried fruit
canned food
whole grains
breads & pastries
bars
wine
oils & vinegars
condiments
fresh/dry pasta
“health” food
supplements
food court
meal
replacements
candy
snacks
beverages
alcohol
international
housewares
pets
pharmacy
baby care
deli



“box” stores



superstore chains



Marsh Supermarket
Naperville, IL



Whole Foods - Lincoln Park
Chicago, IL