This project proposes to create a new intermodal prototype: a combination of a park and ride facility and urban agricultural farm on a re-imagined rail yard site. Specifically, we propose to bring the process of food production and consumption in contact with a major multi-modal transfer point between the car and NYC's existing public transportation network. Designed for New York City, many of its ideas can also be abstracted and developed as a prototype for how to address urban vehicular growth and food security in urban conditions. The site chosen in NYC is analogous to what can be found surrounding other large urban areas whose existing public transportation infrastructure has an accompanying rail yard.

The project is a creative response to some of the impacts of urban growth, specifically New York City's, in light of its consideration of congestion pricing and other vehicle-restrictive techniques and its need for an energy reducing and land-preserving food supply. The potential for many of the surrounding neighborhoods of Manhattan's Central Business District to be even more congested with vehicles looking to avoid paying fares is a concern for the people living in those areas. The project will provide an alternative option for those accessing NYC by car and also challenge the conventional function of a park and ride facility to provide a greater good for those users and the surrounding neighborhoods.
RAIL AND THE URBAN FORM

The relationship of American cities with its railways has always been challenged by the design of rail corridors and yards. While commuter and freight rails are necessary to connect a city center to its suburbs and the rest of the country, the functional and safety requirements of a railway usually mean that it is designed and maintained as an untouchable corridor or area, with good reason. The rail corridors and yards typically are fenced, and crossings are heavily controlled. These rail yards often take up large swaths of land within the city center with a harsh boundary facing its surrounding neighborhoods. The uses around rail corridors and yards tend to be industrial in nature at the beginning of their existence. Roadways tend to run parallel to the rail corridors, and also surround the rail yards to provide an additional buffer against trespassers and deter encroachment. These areas tend to be viewed as undesirable, while their functions are, more often than not, absolutely critical to the success of a city. The romance of rail has long worn off. Today we need to re-imagine rail transportation systems in relation to the realities of the 21st century.

As cities grow over time, the urban fabric undergoes dramatic changes. Rail yards that had been at the periphery of growing cities when the railroads were established now find themselves embedded in denser city fabric. Larger and larger farms needed for an ever-expanding food supply as well as industrial and manufacturing uses have been pushed further away from the city, as land is converted for other uses and typical city zoning reinforces the cleanup of the city. The pressure for residential and commercial, recreational, and other amenities, is constant for viable, growing cities, but development comes at the expense of the landscape and history of the area. In the midst of this is the tantalizing “open” space of the rail yard.

Since many Americans regard car ownership as a right rather than a privilege, cities have had to continually innovate in order to provide access to parking in order to maintain the viability of commerce. Several cities, however, have decided that the scarce resource of roadways needs to be managed in another way, through congestion pricing. Paying for access to a Central Business District has proven to reduce congestion in the target area, but this creates stresses elsewhere by transferring the demand to other modes of transportation in other parts of the city. Logically, drivers would like to get as close as possible to their destination, but outside the restricted area, before changing modes of travel. These are three examples of cities utilizing congestion pricing with similar conditions of rail yards located adjacent to existing transportation networks.
SITE APPROACH

The project is a re-purposing of the urban rail yard, and will require careful and surgical integration into the existing urban fabric. It is a novel and deliberate linking of infrastructure and landscapes, ecology and architecture. Some of the infrastructural systems addressed by this project include parks and open space, vehicle storage, transportation, storm water, food systems, recreation, local economies, ‘green’ infrastructure, educational programs and markets.

The process of selecting a site is extremely important: the site should satisfy a number of urban criteria. Both programs, farming and parking, need to be located adjacent to a major transportation nexus in addition to having a large amount of currently vacant land for farming. This adjacency facilitates the delivery and distribution of fresh local crops at the multi-modal transfer point. The project is sited above the Sunnyside Rail Yards between Long Island City and Sunnyside, Queens; two transforming areas within Manhattan.

Farming Level Plan

1. Elevated 7 Train
2. Queen Blvd Metro Station
3. Metro Market
4. Farming Plots
5. Vertical Farm Towers
6. Open to Tracks Below
7. Park Path
8. Open Public Space
9. Future Development
10. Skillman Avenue
DESIABLE LINKAGES: INFRASTRUCTURE, DISTRIBUTION, CULTURE

This site connects the urban farm to a larger existing network of food distribution within NYC. The connection with this network ensures that the roughage and other discarded plant materials can be used as compost in the farm. It also ensures that fresh food can be delivered to local markets as well as enhancing food security. This proposed community-based infrastructure centralizes food production in an urban context and creates a continuous productive landscape out of this enormous “vacant” land.

The site also presents an opportunity to reconnect Long Island City and Sunnyside Queens which is split due to the interruption of the rail yard’s huge swath of open land, and provide for a much needed public green space - the existing “green spaces” surrounding these two communities are actually large cemeteries and do not function as public spaces.

Currently, Long Island City houses a number of cultural institutions which has already set up a special corridor and place for the farm to be successful as a public gathering space. The site becomes the new agriCULTURAL institution to be included in the larger scheme.
SITE PROGRAMMING

The parking facility is hovering over the rail yards and is adjacent to Queens Blvd., providing access for vehicles in both east and west bound directions. The constructed landscape is supported by a series of linear trusses. Depending on the span, the depth of the truss is great enough to service the parking facilities, and shallow enough to support the soil needs of the growing beds above.

The site will be farmed using a biointensive method of double dug raised beds, intensive planting, and companion planting; with a range of various vegetables to be grown taking advantage of their continuous seasonal harvest.

The landscape penetrates the elevated 7 train facility to bring a public green market space directly into the building to become the point of food consumption for those traveling between the car and the train. The vertical green towers on site are more localized gathering facilities acting as large indoor greenhouses above, while serving public amenities below such as cafes and farmers market. These towers become “farm frames” to suggest the stitching of the two adjacent neighborhoods by bringing visitors to the site along its corridors. The project suggests a multiplicity of contextual layers of landscape to provide a completely new experience of how one occupies a parking lot, a park, and a farm.
Reconnect Long Island City and Sunnyside, Queens to provide for a much needed public space

The plan establishes a framework of programmed spaces that can be applied over the entire site. The matrix is composed of: Vertical Greenhouses, places for interaction and education; Agriculture, crops of various fruits, vegetables, and grains; Public “Leisure” spaces, large manicured green spaces open to the public for relaxing and recreation; Paths, a linear hardscape that negotiates between agriculture and public space for a new experiential journey; Open to Below, cuts in the landscape that allow for light to penetrate to the lower parking level.
Challenge the conventional function of a park and ride facility to provide a greater good for those users and the surrounding neighborhoods.
REGULATORY FRAMEWORK

Re-imagining existing rail yards as including “vacant” developable land presents challenges on the physical, economic, and political realms, all of which are interconnected. In the physical realm, it is assumed that the rail functions will stay and therefore a deck on top of which new development will occur must be provided. Historically, this has been a costly undertaking to provide a structure and infrastructure, and requires an economic calculus that would not only provide for the initial capital costs of construction, but also ongoing funds for maintenance and periodic replacement of the deck. This development scenario calls for a thoughtful choreography among the public authorities, agencies, private developers, and the community. In essence, density of use will be needed in order to provide the necessary economic motivation for private developers, but there also needs to be a public good that is created to generate the political and community goodwill that is required.

The transportation authority and public agencies’ roles are clear: they should recognize that new uses, including open space, farms, housing, and other uses are a plus for the city, and should pave the path to allow development to occur. The transportation authority should relinquish the air rights for a reasonable amount of compensation, and agree to coordinate construction, even to provide the new deck once a funding strategy has been agreed upon. The public agencies should respond to the need for development and create planning and zoning mechanisms to arrive at a vision for the newly created space that is jointly a product of both the public and private sectors. Some key elements of this vision would be to have a diversity of uses on the newly created “land” from use of the air rights, to respond to the current needs of the city and adjoining communities in its space planning, to allow novel uses (like urban farming) to populate the new space, and to elevate the principles of sustainability. This requires visionary planning and urban design strategies, and novel approaches to create value for all of the players in the process. If, for example, portions of the peripheral roadways surrounding the railway (typically owned by the city) can be used for locating structural piles, then there would be less infringement on the railway to build the deck. The agencies need to approach this problem creatively with all of the players in the process. Traditional techniques such as floor area bonuses, tax incentives, and zoning have proven to spur development in the past and should also be considered.

It is critical to find developers who share the vision for the new rail yards and can work with all of the other players to achieve it. In this case, the developer may be the public sector itself. It is clear that the addition of a new transportation hub, additional parking, open space, and an agricultural landscape can only help the city address its needs.