



## GOAL

To transform a neighborhood liability into a community asset

## SUMMARY STATEMENT

The project is an adaptive reuse of a former steel wire production facility into an incubator for small business manufacturing in Southeast Chicago.

## CASE STATEMENT

The South Deering neighborhood on the far southeast side of Chicago suffers from an over abundance of vacant industrial facilities. The area's economic development has been historically linked to the growth and decline of the local steel industry. The neighborhood, originally known as Irondale, was settled by steelworkers for the Joseph H. Brown Iron and Steel Company in 1875. Following the flight of the local steel industry in the mid 1980s, specifically the closing of the Wisconsin Steel Works and U.S. Steel's Southworks plant, the area has fallen into a severe economic depression. Wisconsin Steel alone had employed nearly 3,000 people just before its closing on March 28, 1980 and left approximately 202 acres of land vacant.

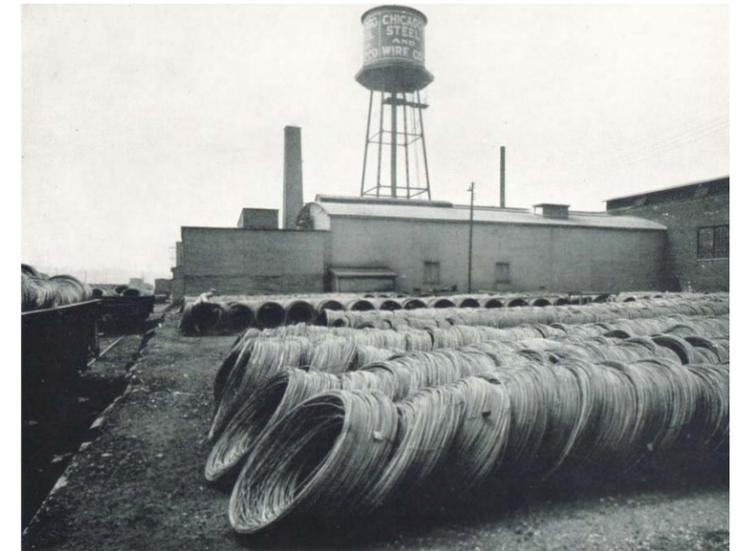
This project aims to revitalize a portion of the unused industrial facilities, specifically the former Chicago Steel and Wire Company (CSWC) located at the corner of 103rd Street and Torrence Avenue. The building was constructed in 1923 to house the offices, production and warehouse spaces for the company. The CSWC was part of a manufacturing chain that finished and distributed steel produced from nearby steel mills. The facility's production of wire and welding rods was intricately linked to the fabrication of steel from the local mills as they provided all of the raw material for the company's production line. With the closing of the mills the CSWC could no longer remain economically viable.

The building has sat vacant for over a decade and suffered fire damage on December 13, 2006 when a three-alarm fire partially destroyed a two-story section of the building. The structure now sits slowly decaying, a burden to the community and its residents. Without intervention this building will surely be targeted for demolition.

The intent of this project is to transform this vacant single use industrial facility into an incubator for small business manufacturing. By focusing on local and regional small business startups the objective is to reinvigorate the area. The project will engage the entrepreneurial spirit of community residents by encouraging and promoting small business startups of all scales.



103rd street and torrence avenue circa 1943



steel wire storage yard



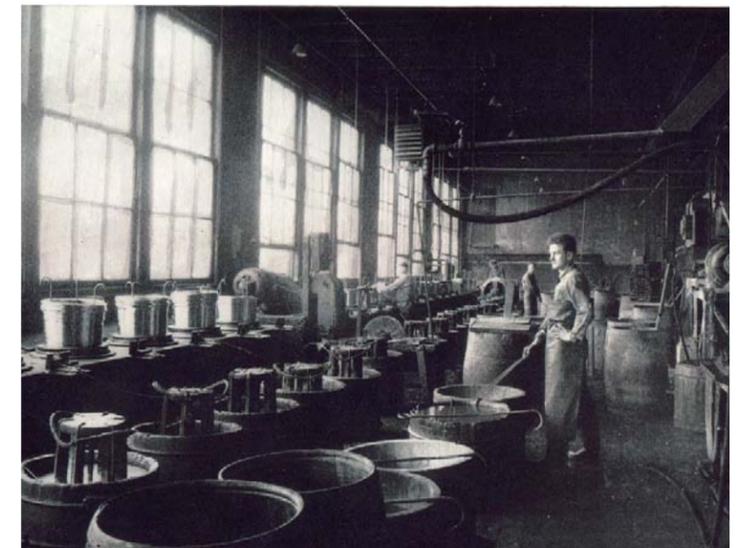
wire rod production



continuous wire production



rolling and spooling shop



wet wire shop

## STAKEHOLDER ENGAGEMENT

The process for engaging the project stakeholders involved a progression of meetings with public officials, small business support services, and local business incubators. The goal of the meetings was to acquire a deeper understanding of the project program, goals and guiding principles.

As part of the design process, meetings were held with the 10th Ward Alderman, John Pope, to discuss the current state of the structure and any community development plans in the area. Discussions were also held with administrators at the Illinois Institute of Technology Jules F. Knapp Entrepreneurship Center to discuss potential strategies and business services necessary to establish strong vital business community at the WIREYARD.

Consultations with the managers of the Fulton-Carroll Center, an industrial business incubator located on the near west side of Chicago, proved to be an invaluable resource in the development of this project. The Fulton-Carroll Center is an extension of the Industrial Council of Nearwest Chicago whose mission "is to strengthen companies in the Kinzie Industrial Corridor and to facilitate economic and community development." The relationship of the center and its community business partners is the model which the WIREYARD hopes to achieve through partnership with the Calumet Area Industrial Commission.

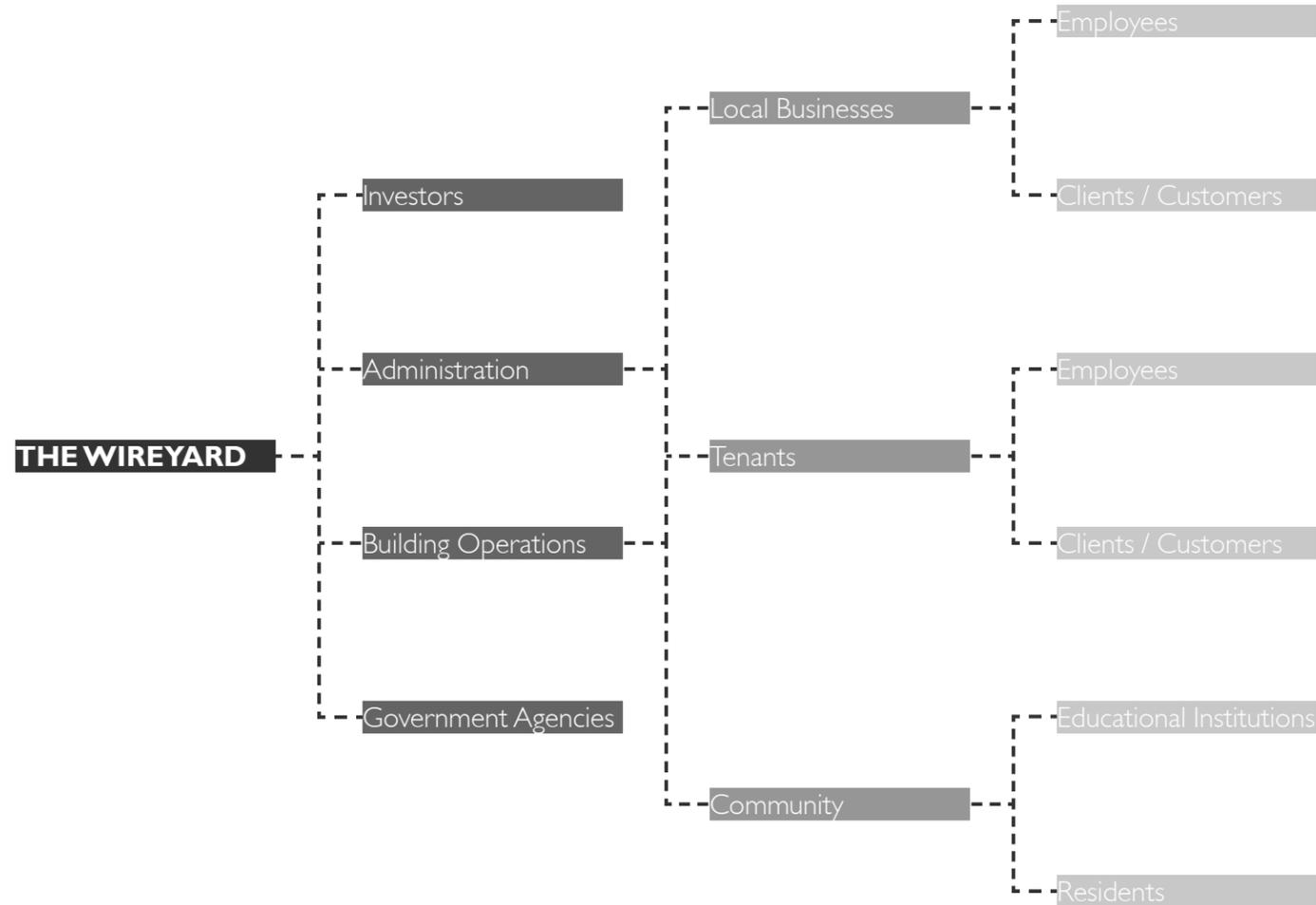


torrence avenue businesses circa 1920



south deering improvement association float

## STAKEHOLDER CHART



local community workshop



fulton-carroll center



illinois institute of technology tech park



tenant space at the fulton-carroll center



## SITE

The site is located at the junction of the Jeffrey Manor and South Deering neighborhoods on the far Southeast Side of the City of Chicago. Located on the intersection of East 103rd Street and South Torrence Avenue, the building is bordered on the north by a warehouse distribution center for Unicorn Lubricants. To the east lies the Chicago Rail Link Freight Rail yard, to the south a small retail strip, and to the west Torrence Avenue.

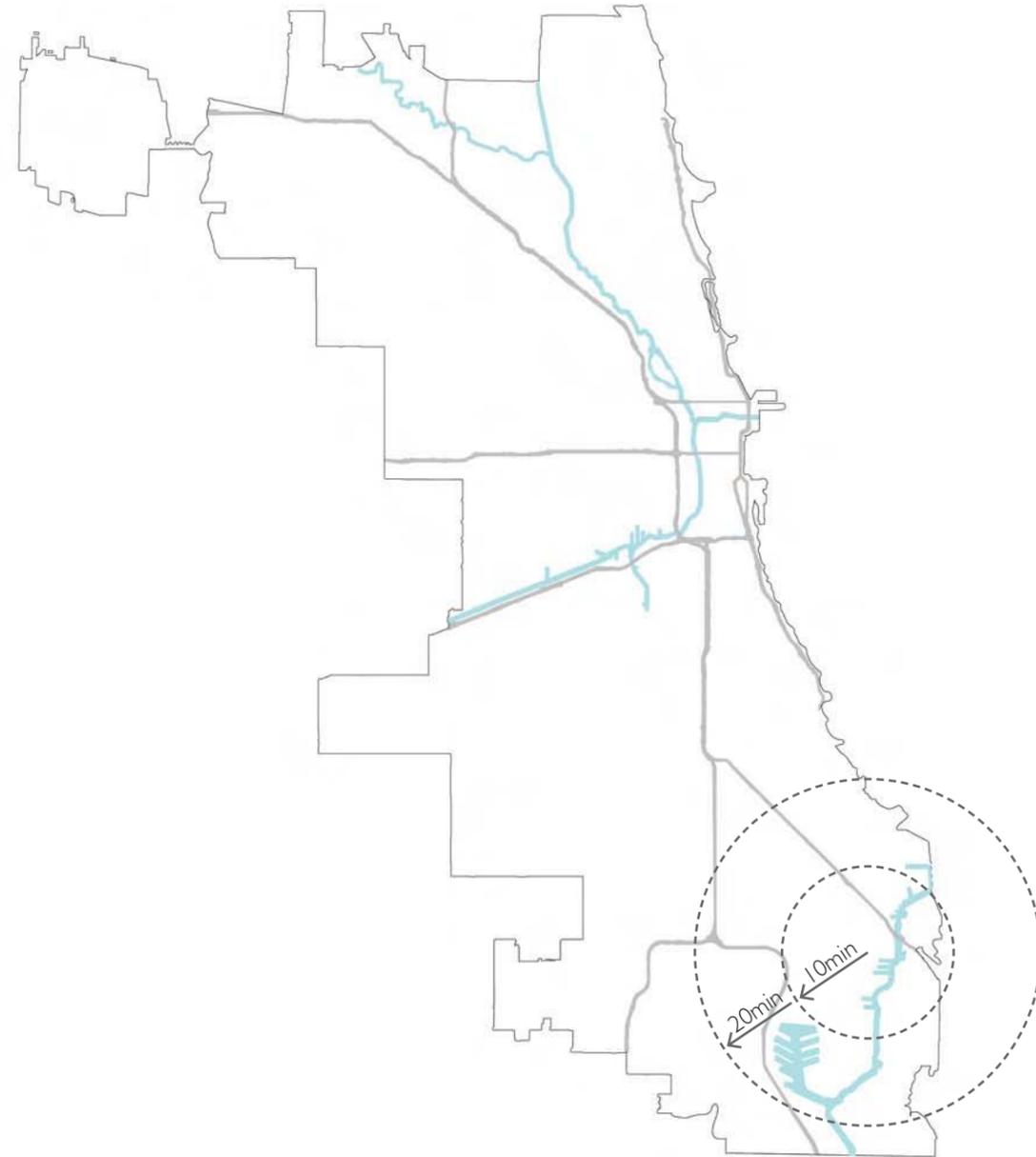
The site was part of a once thriving industrial and manufacturing district that spurred up along Lake Calumet River. The growth of this industrial corridor was driven by the success of the local steel industry.

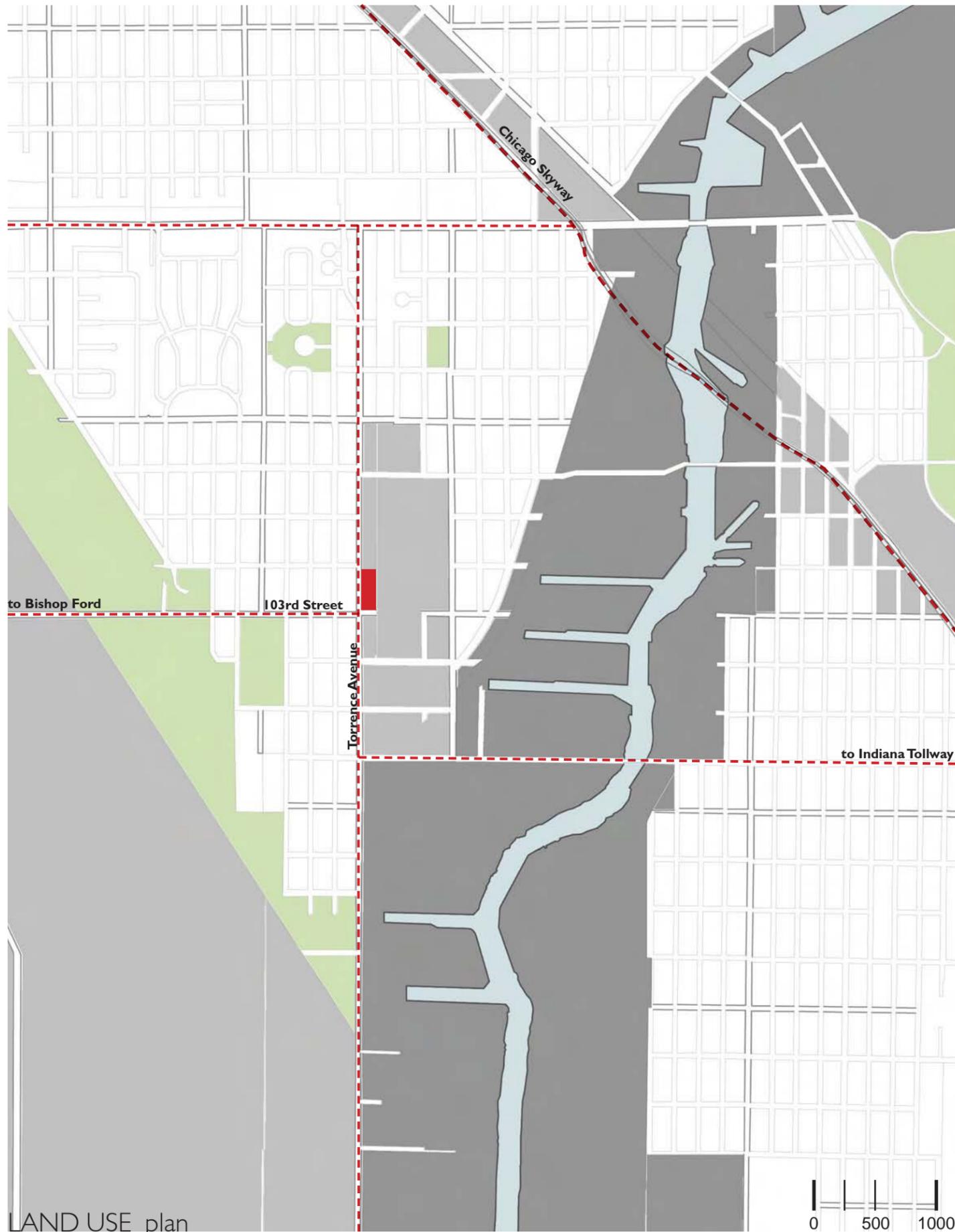
The location is ideal to take advantage of the heavy traffic that runs along both 103rd Street and Torrence Avenue. Connections to the Bishop Ford Freeway (I-94) and the Indiana Tollway (I-90) are located less than a 10 minute drive from the site.

The site lies on the northeast boundary of the Lake Calumet Industrial Tax Increment Financing (TIF) District, the largest TIF district in the City of Chicago. The TIF was established in 2000 to "restore business activity on expansive parcels of vacant and under-utilized land" in the communities on the far Southeast Side of Chicago (City of Chicago, Lake Calumet TIF Narrative). This position puts the building at the crossroads of this once heavily industrialized zone and its neighboring communities.

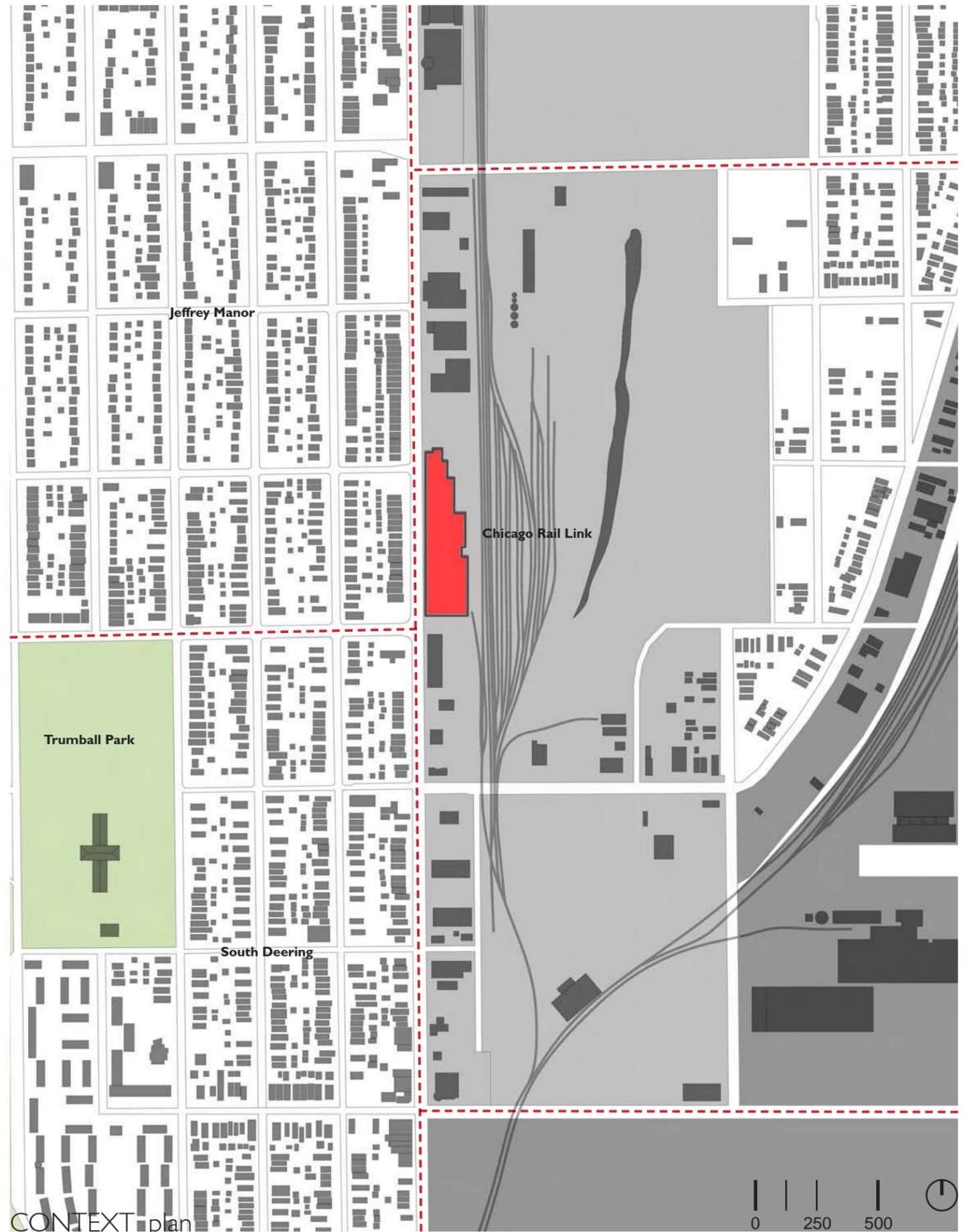
## ZONING

The parcel is zoned M1-1, Limited Manufacturing/Business Park District. "The primary purpose of the M1 district is to accommodate low-impact manufacturing, wholesaling, warehousing and distribution activities that occur within enclosed buildings. The district is intended to promote high-quality new development and reuse of older industrial buildings." (Chicago Zoning Ordinance, Title 17 Chapter 17-5-0102)





LAND USE\_plan



CONTEXT\_plan

## EXISTING BUILDING ANALYSIS

The 55,000 sf building was constructed in 1923 to house the offices, production and warehouse spaces for the Chicago Steel and Wire Company. The majority of the building is a single story heavy timber (mill), commonly used in the area at the time of construction. The southeast portion of the building is a 2-story section housed warehouse and loading docks on the ground level and the company offices are located on the second level.

The structure is composed of exterior load-bearing masonry walls laid in a common bond. The interior spans are achieved using a timber post and beam system with a concrete floor. The column spacing in the building varies from 16' on-center in the offices to 20' on-center in the former machine room. Timber bowstring trusses were utilized in a few sections of the building, which originally housed the wire drawing and wire cleaning shops, in order to maximize column free space.

Between 1945 and ending in 1980 a series of ad-hoc additions were added to the original building increasing the area to approximately 90,000 sf. The additions were built as needed to accommodate a period of growth and expansion for the company. Most of these additions were built using a structural steel frame with exterior masonry walls.

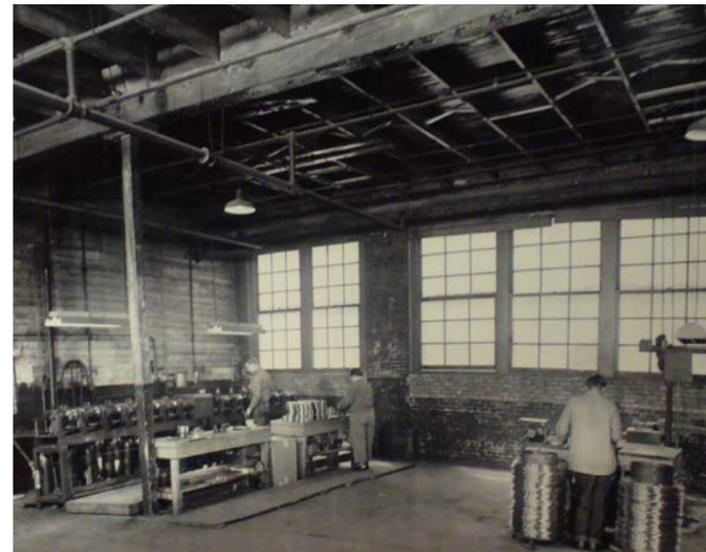
The building has sat vacant for over a decade since the bankruptcy and subsequent closing of the Chicago Steel and Wire Company. On December 13, 2006 a three alarm fire gutted the 2-story section of the building and partially collapsed a portion of the east facing exterior masonry wall. The fire was isolated to the 2-story section and the remainder of the building did not suffer any damage.



103rd street and torrence avenue 2010



firefighters extinguishing fire 2006



wire finishing shop



aerial view 2008



masonry common bond



existing condition of interior



SITE\_photography



SITE\_photography

## DESIGN STATEMENT

The WIREYARD will transform a neighborhood liability into a community asset. The building will serve as the connective tissue that will strengthen the bond between the communities and industry. To repair this frayed connection the WIREYARD seeks to address the two disparate faces of its context. The WIREYARD will also have the ability to expand over time to meet the incremental growth needs of its tenants.

### SLICE RESTORE

The first step taken in the design of the WIREYARD was to reduce the area of the facility by demolishing the ad-hoc addition to the building restoring the structure to its original footprint. This decision was based on the potential to recycle some of the salvaged steel to provide some of the initial capital for the WIREYARD. Additionally restoring the original building footprint allows for monies from the Federal Rehabilitation Tax Credit to be used in the initial construction phase.

### FUSION BUFFER

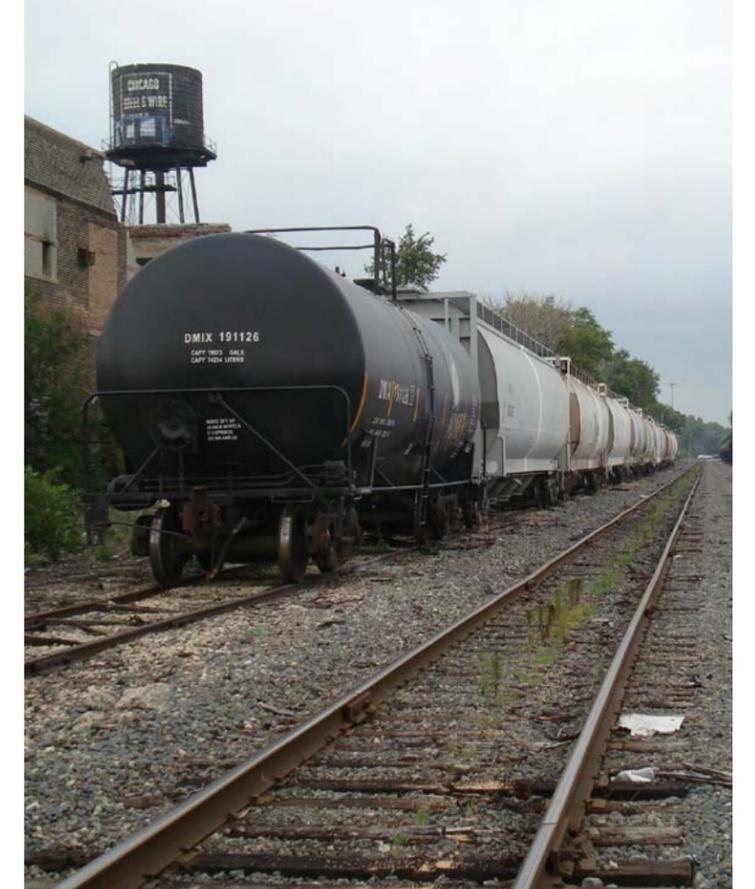
To the west the WIREYARD is faced with a continuous block of single family houses lined up along Torrence Avenue. To the east the site is bordered by the endless lines of trains queuing up at the Chicago Rail Link yard. To balance and mediate the relationship between Industry and Community, the WIREYARD aims to simultaneously fuse and buffer these two contextual forces both programmatically and physically. To accomplish this, a single continuous corridor is cut into the volume of the existing building, setting back the volume of the tenant areas from the street.

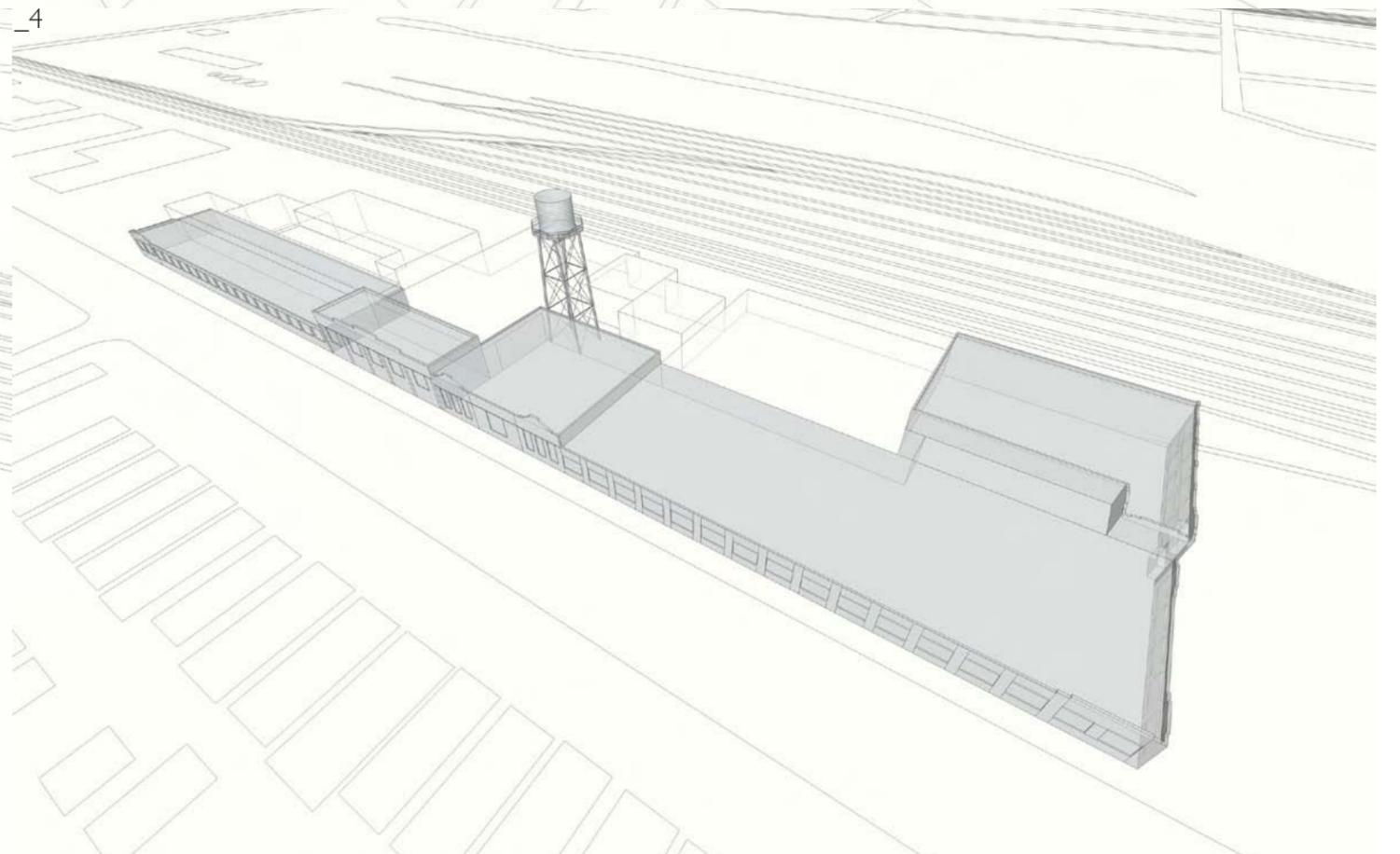
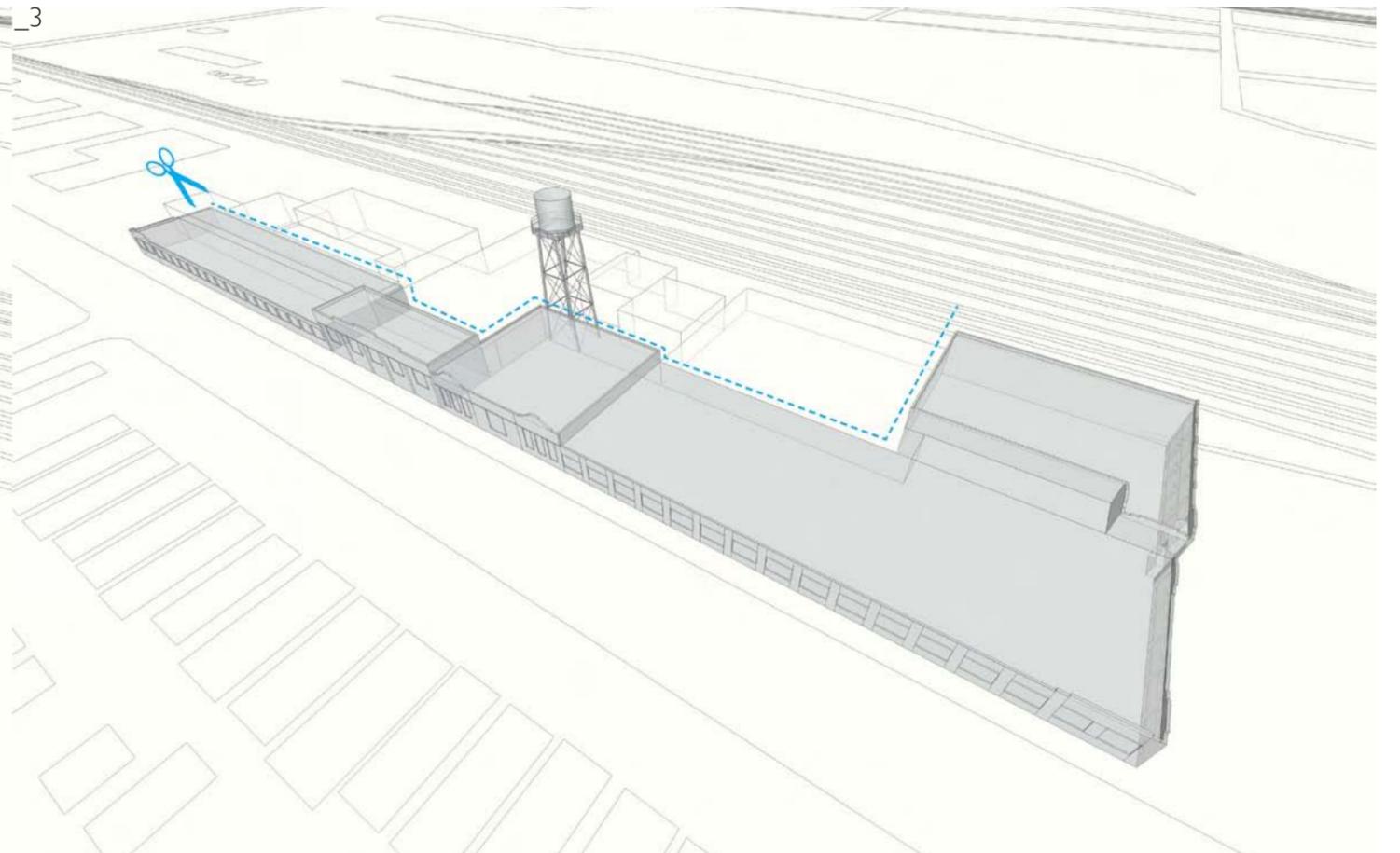
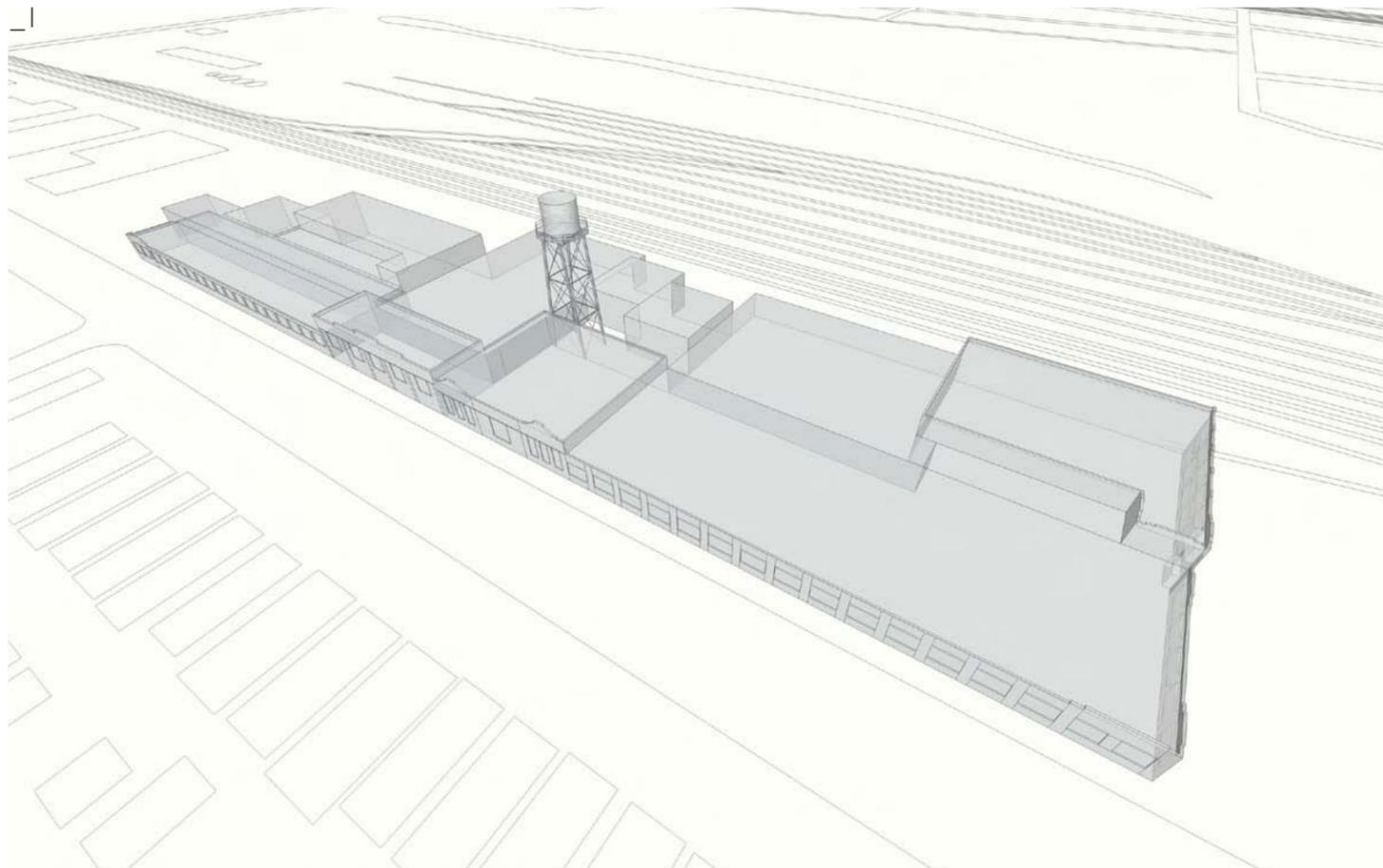
Programmatically the fusion buffer serves multiple uses. During business hours it is the life line that connects all of the incubator tenants with the business support services offered by the WIREYARD. It also serves to enhance tenant communication and interaction as it forces all users to use a common corridor space. After hours the space is opened up through the use of operable rolling doors and the space becomes a fusion zone for the community. The space becomes activated as a market which runs along a linear plaza that supports community micro-businesses. Neighborhood vendors can setup stands and tables to sell their arts, crafts, wares, produce, or promote their services.

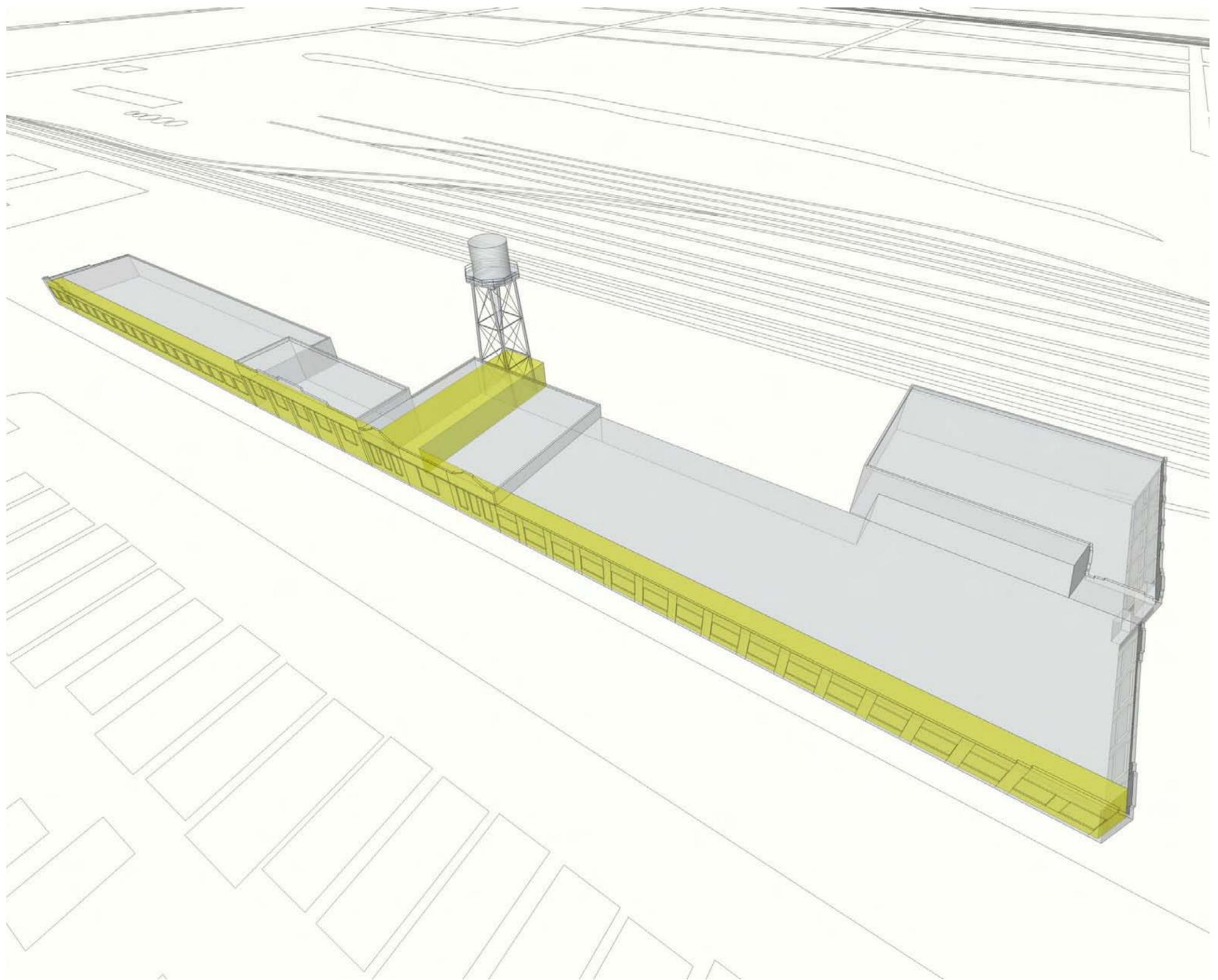
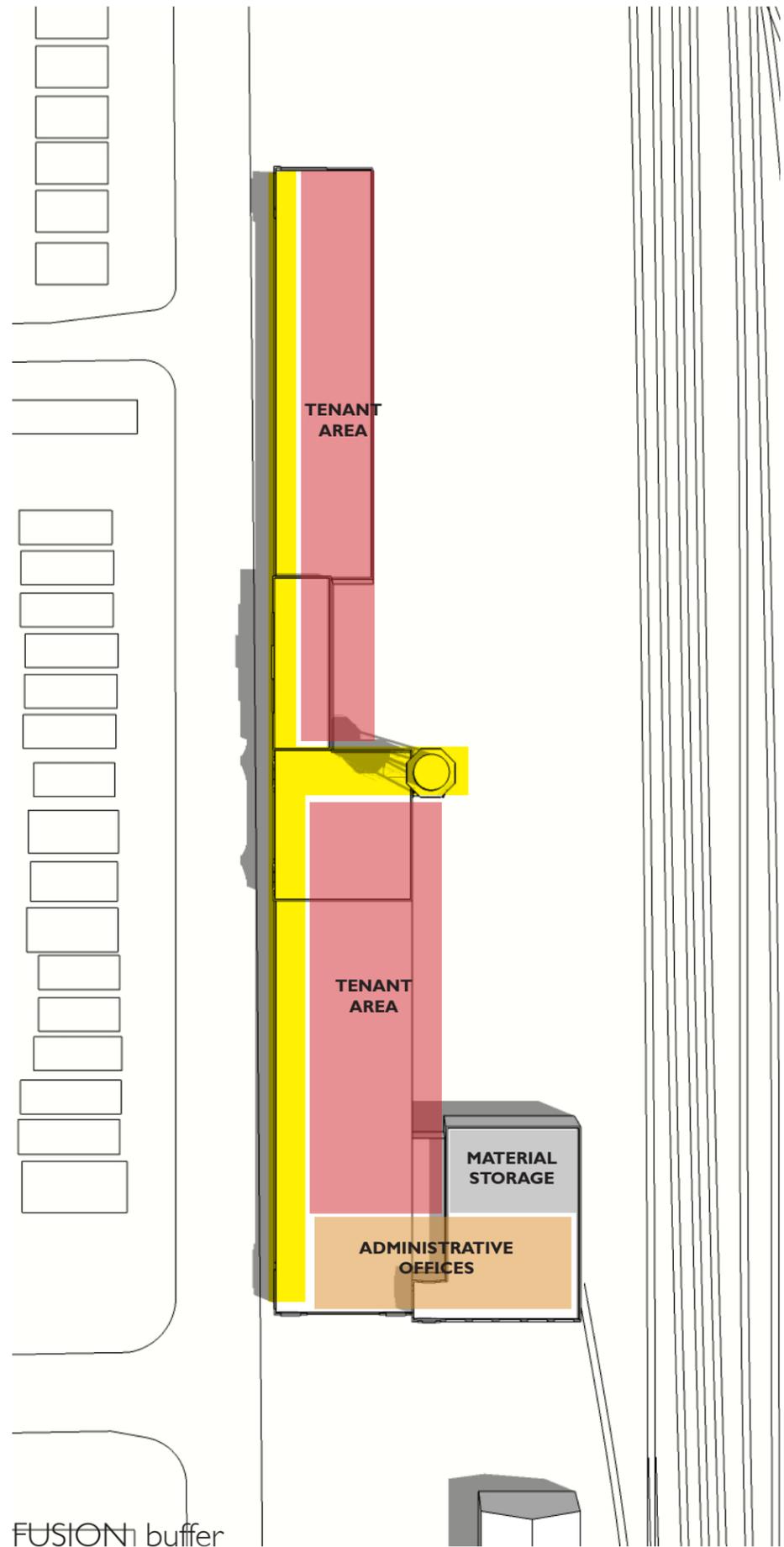
re-connect

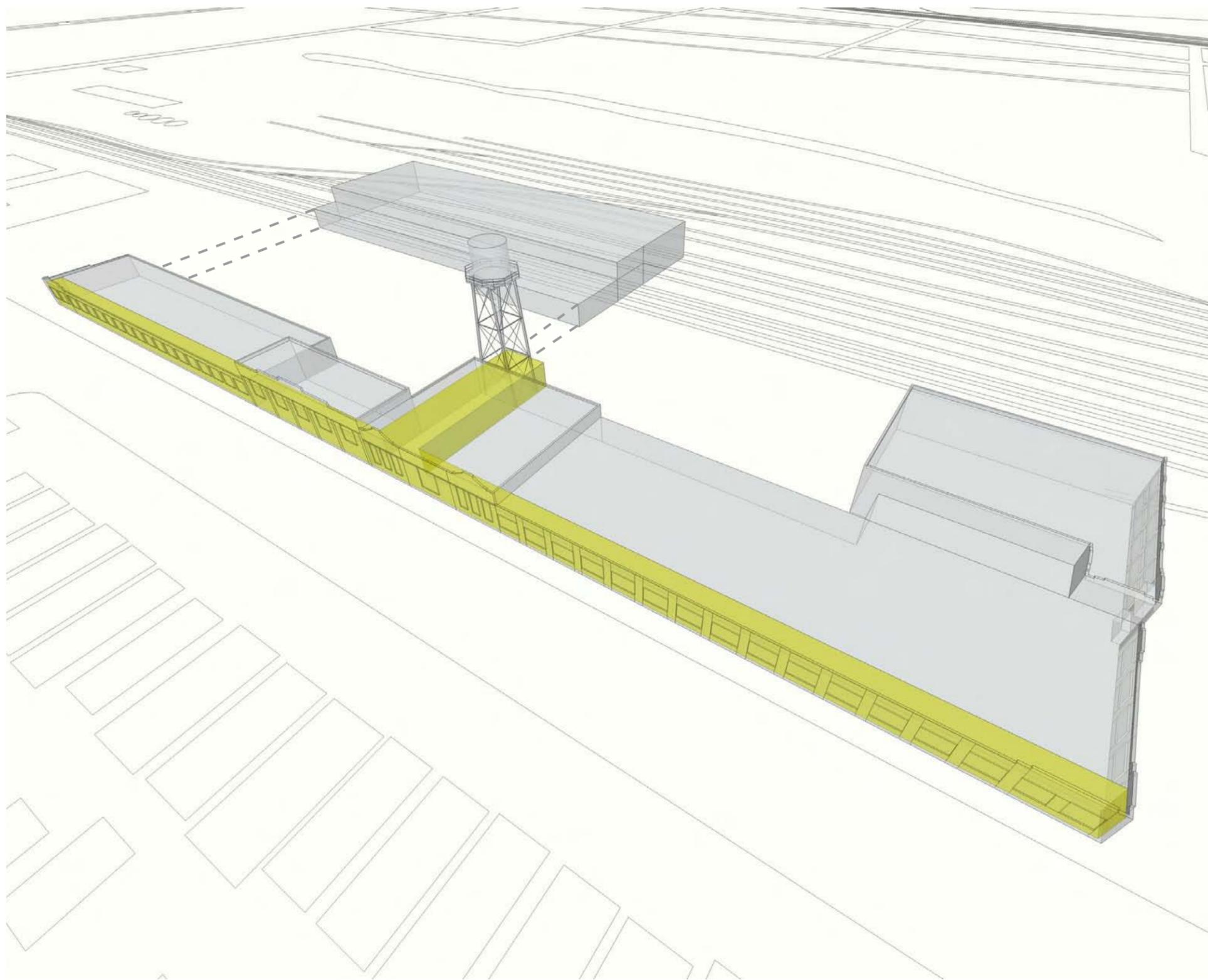
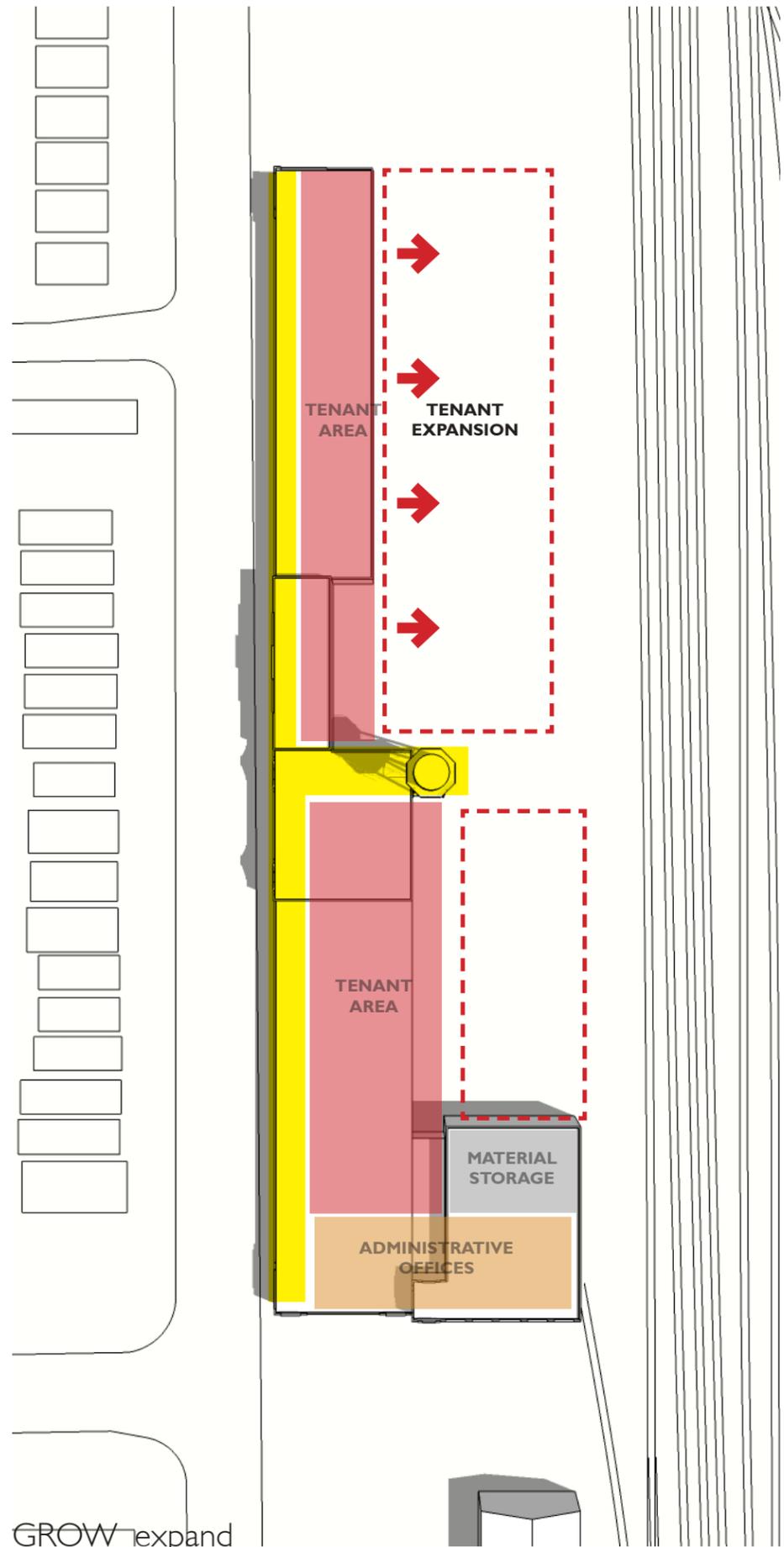


re-use



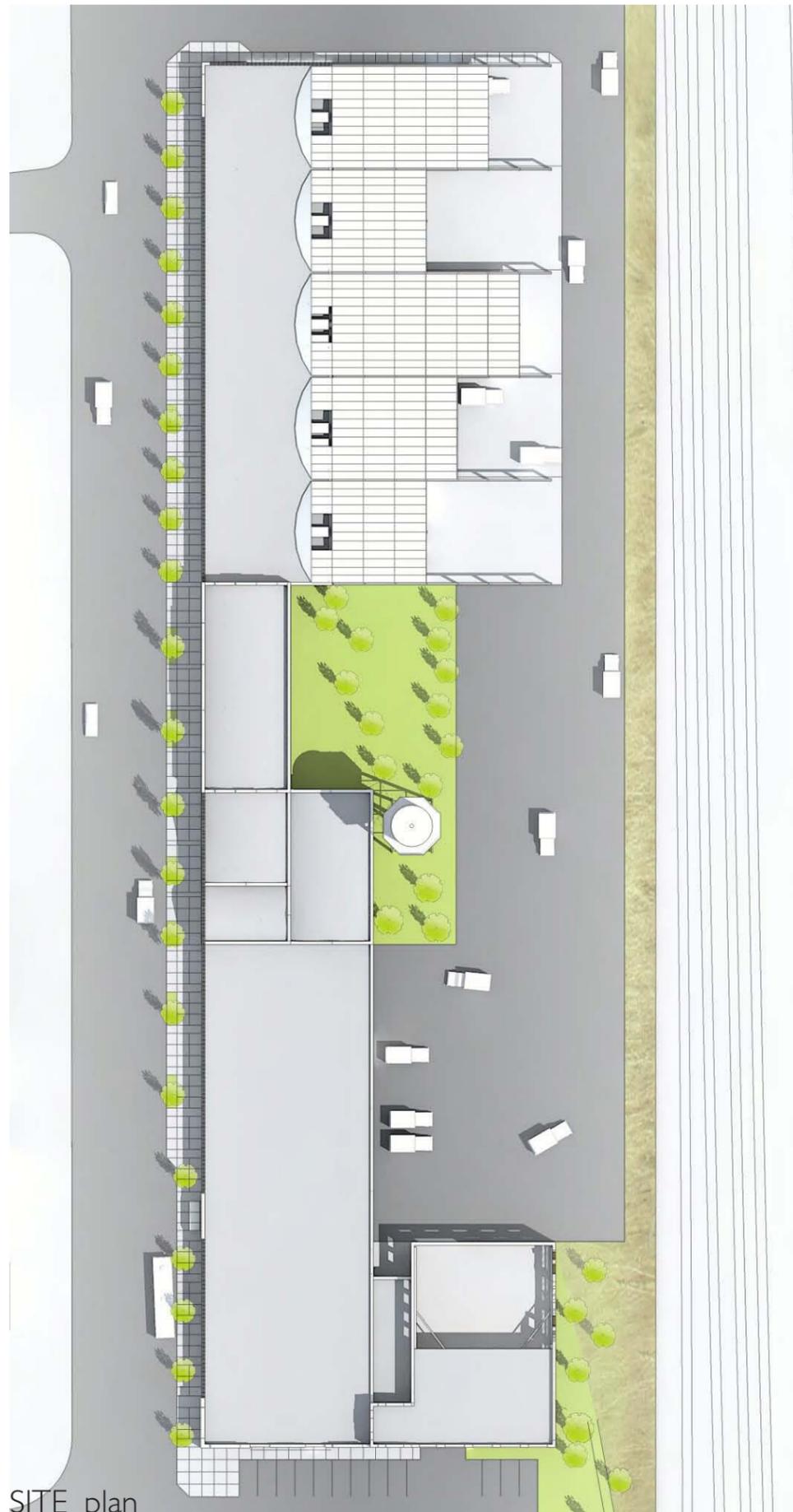


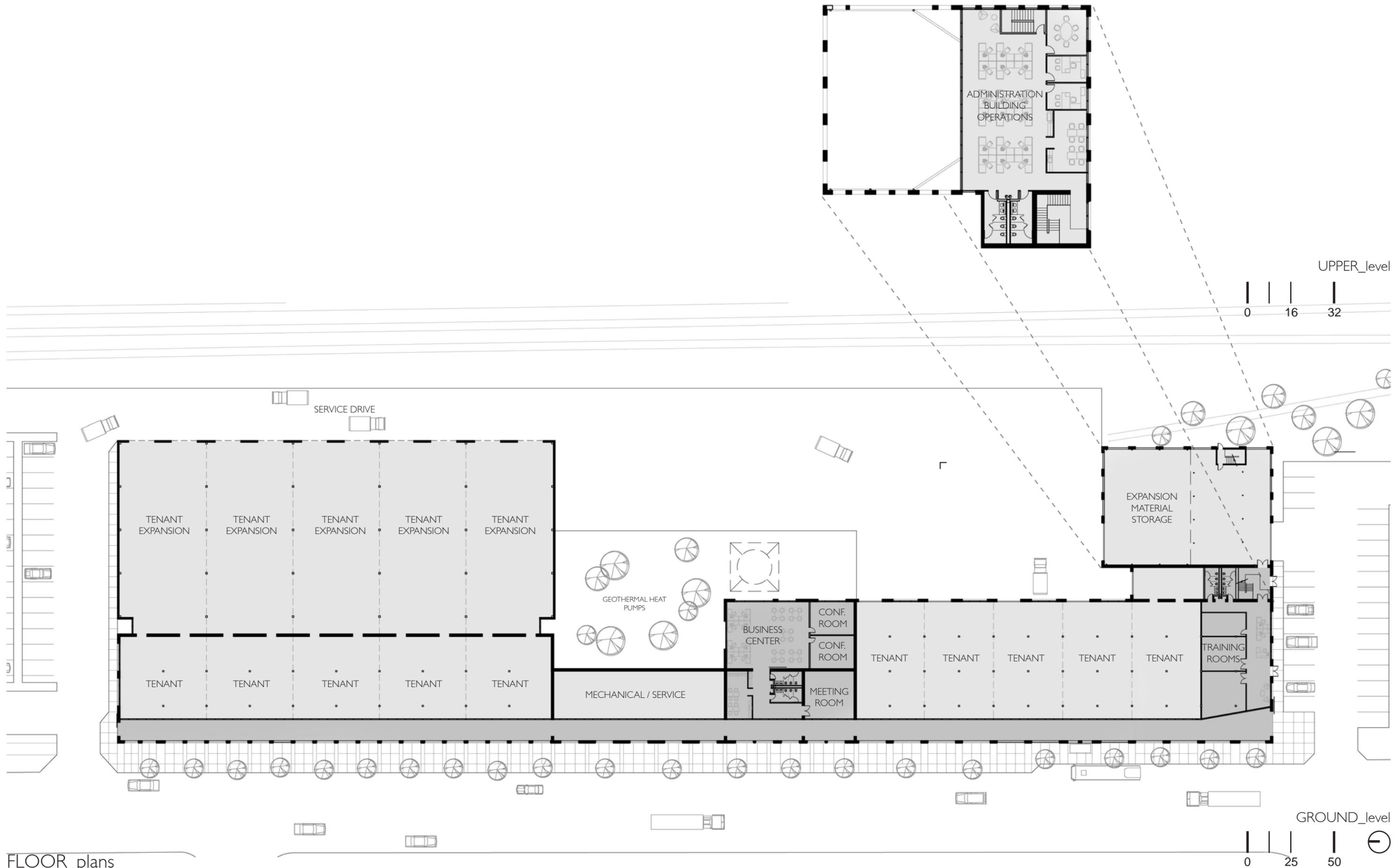






CONTEXT\_plan

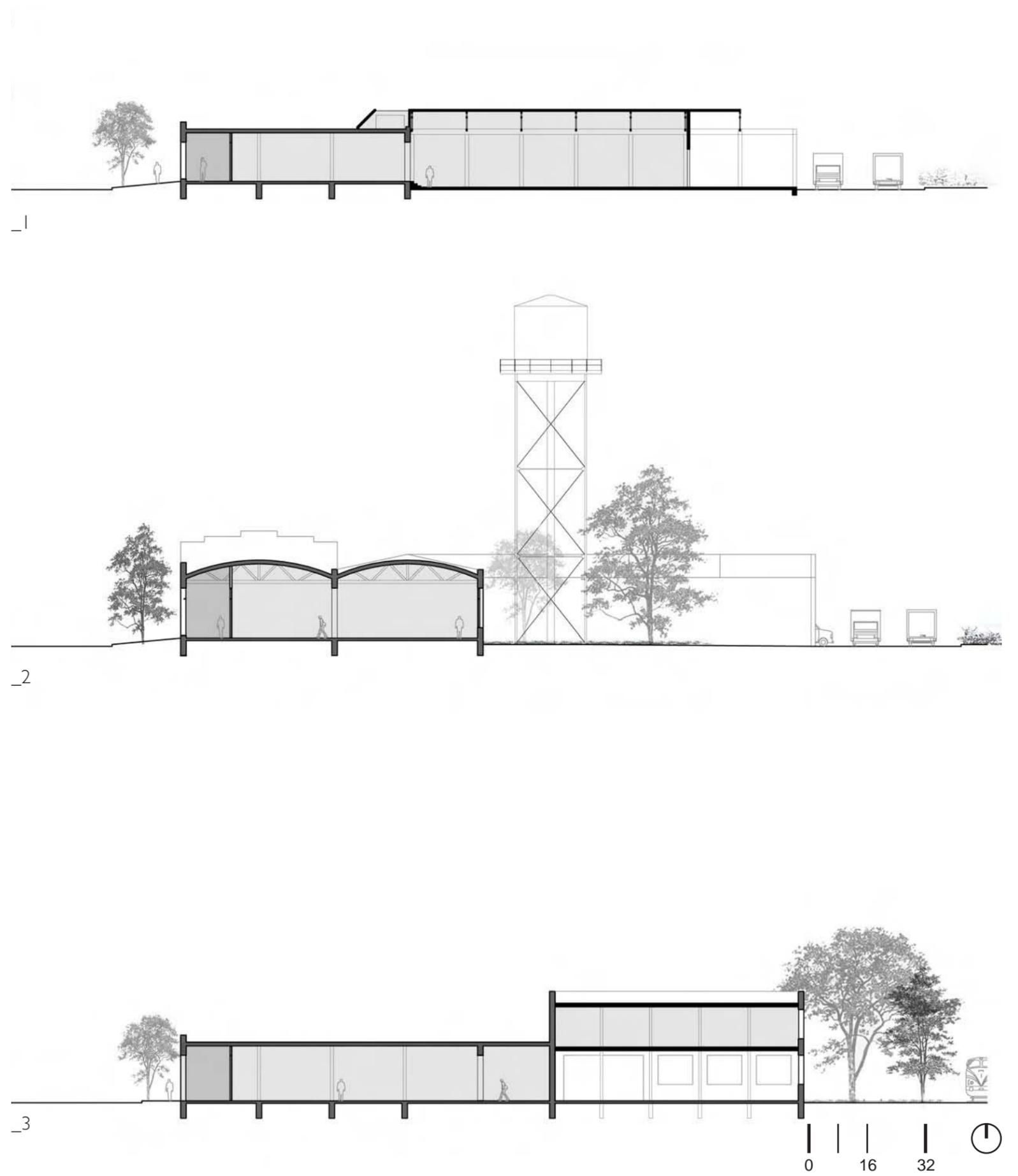




FLOOR\_plans

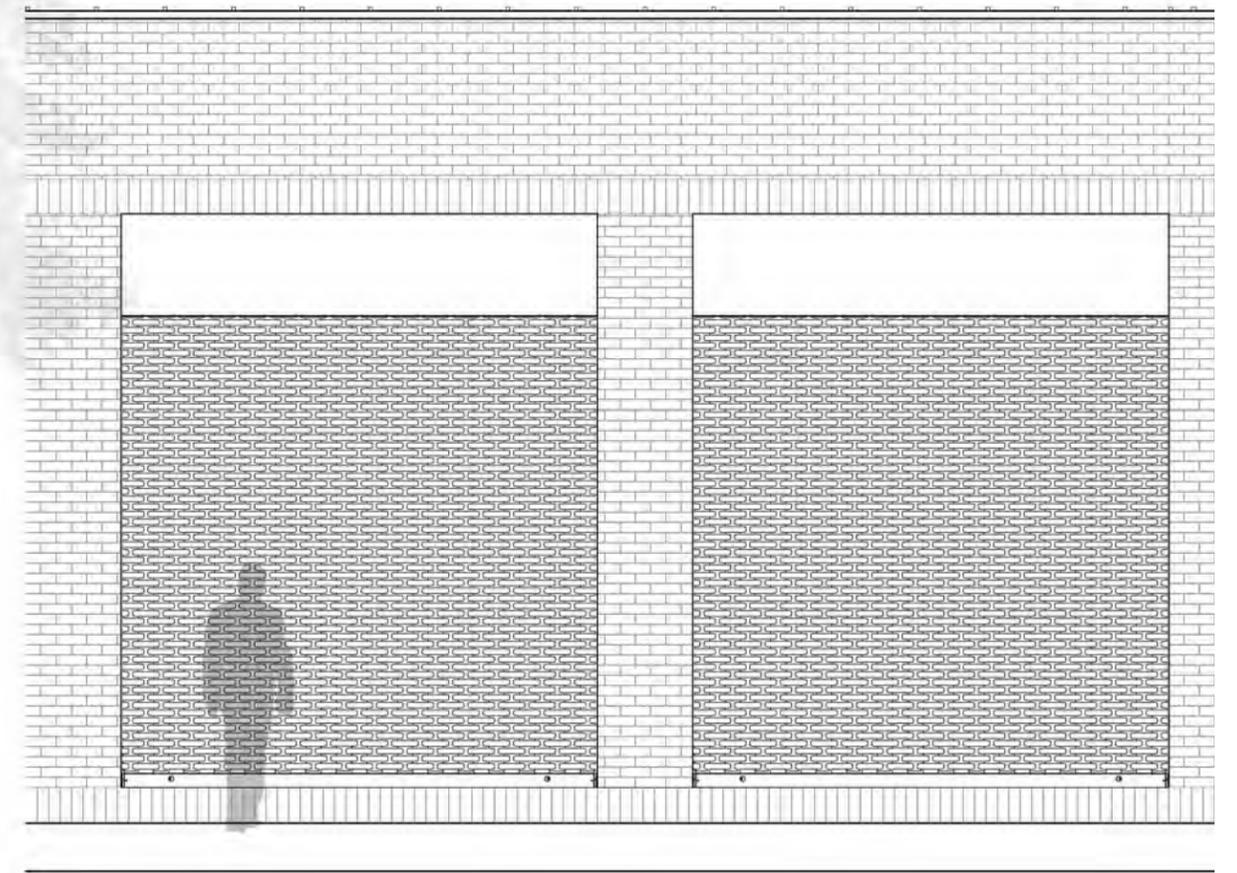
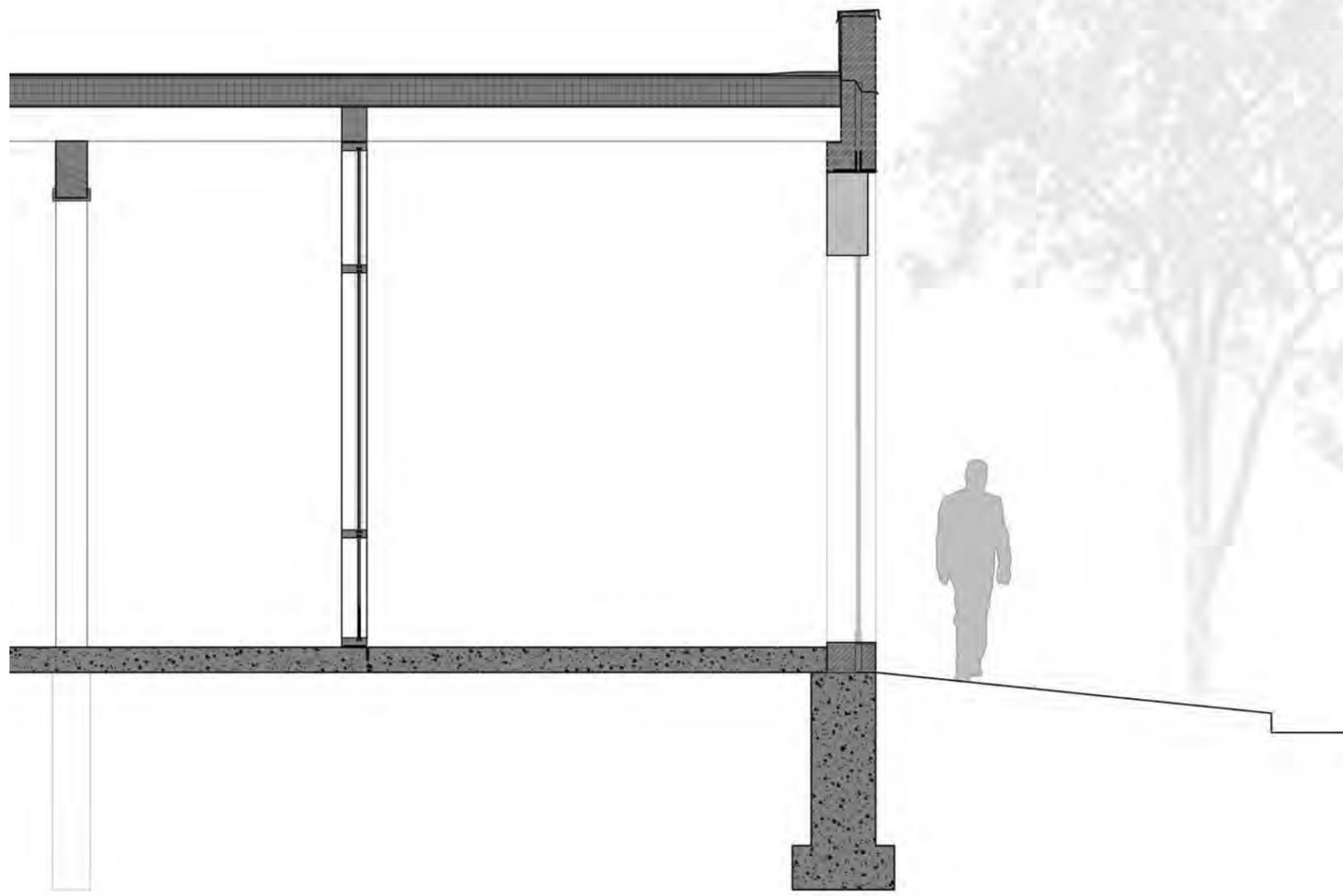


SEQUENTIAL\_sections





NORTH\_entry





CORRIDOR\_buffer



CORRIDOR\_fusion





SW\_corner





## DESIGN STATEMENT

### EXPANSION ZONE

To accommodate the potentially explosive growth that some of the incubator tenants may experience, a portion of the site area is set aside as an expansion zone. In order for the WIREYARD to adapt to the incremental growth of its tenants a modular system of expansion was developed. The first stage of the expansion zone to be built out is a steel armature which becomes an indicator of growth for the incubator tenants.

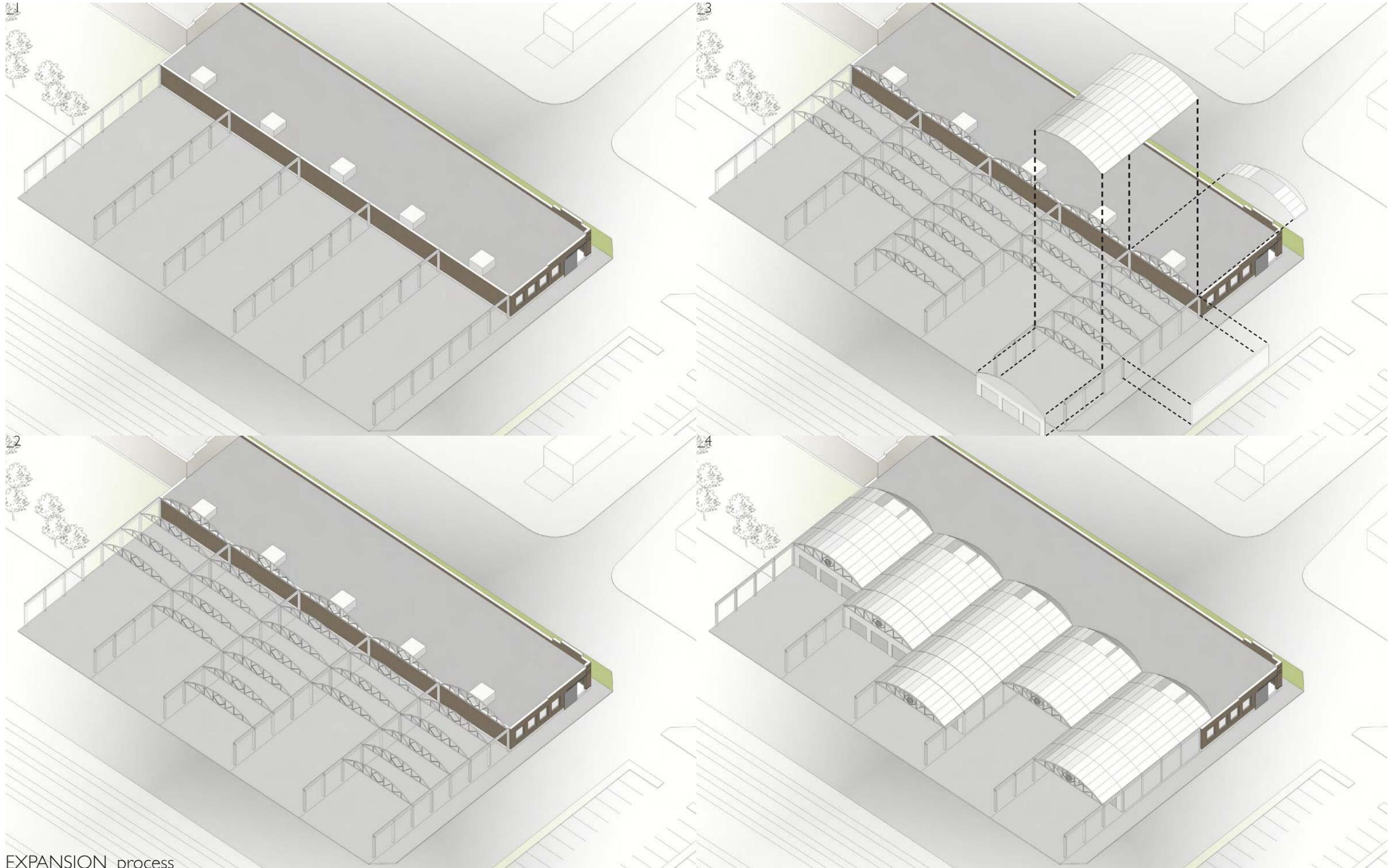
Each steel armature can support segmented bowstring trusses that will support the roof for the expanded tenant area. The structure is then filled in with steel structurally insulated panels and clad in metal panels to provide an easily constructed, well insulated, low-cost, and low maintenance exterior envelope. The segmented trusses and the exterior wall components are housed on site in the section of the building damaged by the fire in 2006 and monitored by the WIREYARD building operations staff.

During the period before the tenants expand, the area supplements the fusion community zone located along Torrence. On weekends and special occasions the space can host larger community activities such as farmers markets, flea markets, job/networking fairs, and other neighborhood events. As the tenants mature and their need for space grows the event space is slowly displaced. The event space then shifts south on the site to utilize the portion of the existing building where the expansion building components were once stored.

Environmental controls for the tenant space is handled via two systems. The existing structure is retrofitted with a radiant floor heating system powered in part by a passive deep well geothermal heat pumps. Prepackaged rooftop units provide the HVAC system for the expansion zone. This allows for tenants to add units as their space increases therefore maximizing system efficiency.

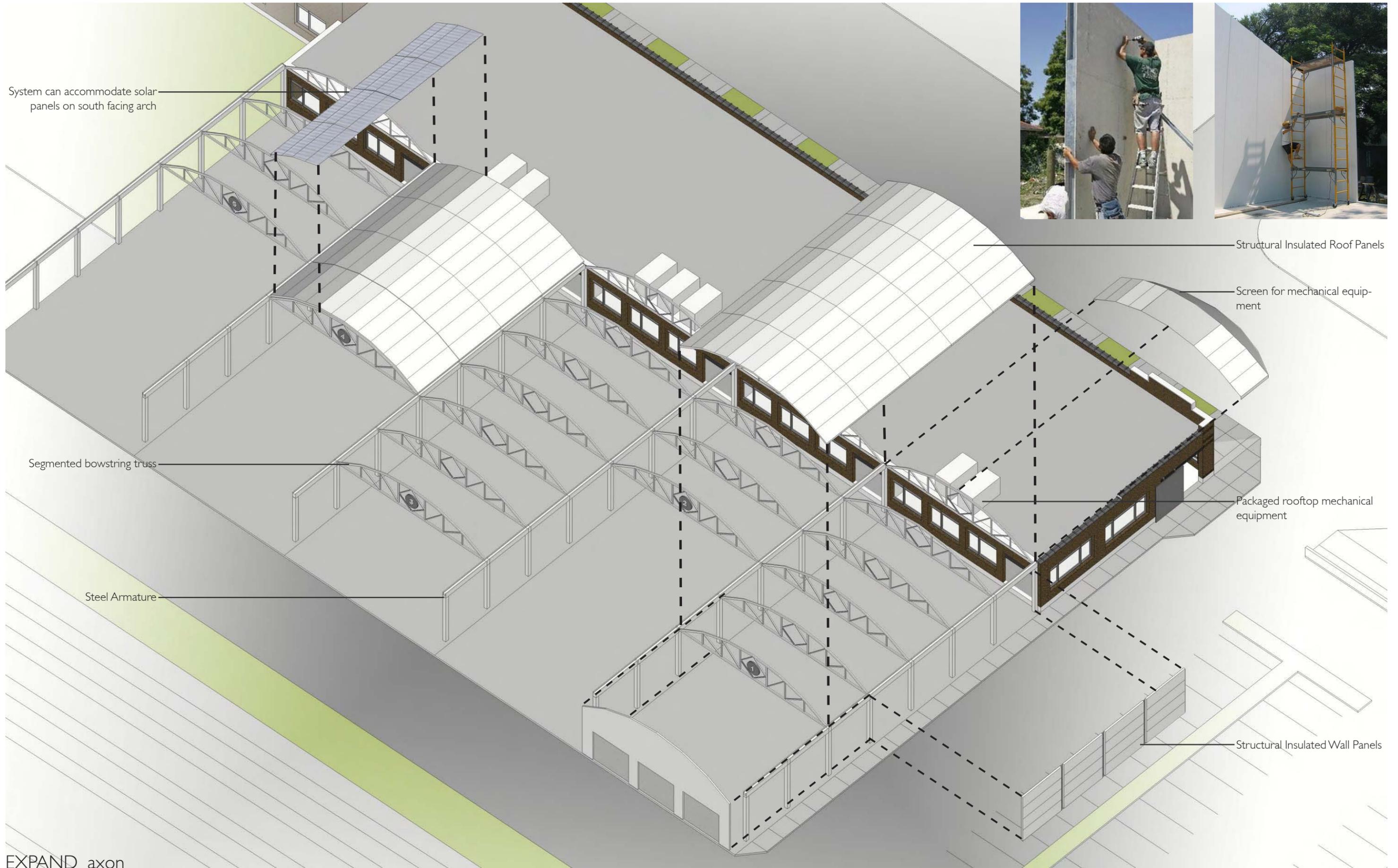
A landscaped bioswale running along the eastern edge of the service drive will provide a buffer from the rail yard. It will also provide a natural habitat for migrating birds which are known to travel along rail lines in urban areas.







INITIAL EVENT\_space



System can accommodate solar panels on south facing arch



Structural Insulated Roof Panels

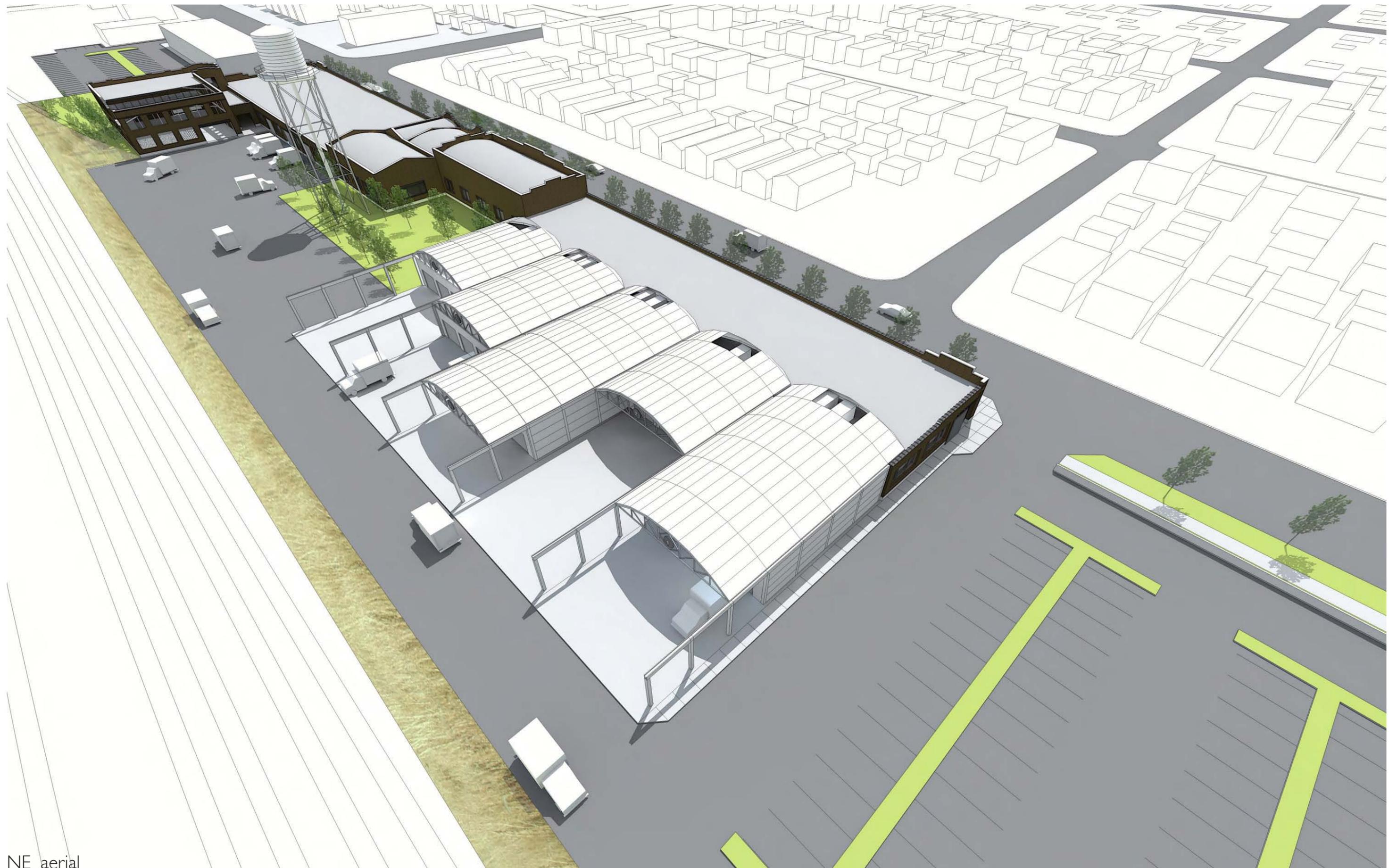
Screen for mechanical equipment

Packaged rooftop mechanical equipment

Structural Insulated Wall Panels

Segmented bowstring truss

Steel Armature





ECO\_corridor



SECONDARY EVENT\_space



ADMIN\_building operations





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