

# op PORT-UNITY

MIXED-USE DEVELOPMENT FOR NORTH CHARLESTON

2023-8968

AERIAL



## GENERAL NARRATIVE

The North Charleston region has long been defined by its blessing of a natural harbor, wrangled by human interference, to create piers, yards, and other pieces of working infrastructure along its waterfront that is collectively termed as “the port”. Through hundreds of years, this “port” has provided jobs, connectivity, delights from abroad. In its most modern incarnation, the port represents the region’s access to globalized commerce, a rich naval heritage, and a source of middle-class livelihoods – but with a price – ports have also imported injustices and their adjoining waterfronts are noisy and unwelcoming.

Now, the region is threatened by social, physical, and natural forces that are exacerbating inequality and shutting opportunity for the communities that call this place home. Our site exemplifies these challenges. In the black neighborhoods around the site, education levels remain stifled while demand for economic justice remains high. Economic attention has shifted to tech, meaning existing industrial/maritime jobs are increasingly competing against start-ups and e-commerce for warehouse space and young graduates. A lack of reliable public transit leaves residents without means to get to quality nutrition. Rising waters and rents are amplifying gentrification and displacement for the people that have endured the most unfair urban development. How can we respond effectively against these forces?

In envisioning our site, we first imagined what would it look like if we did not intervene. We could imagine that the traditional industrial typology of warehouses and small manufacturing would continue proliferating and aggrandizing, acting on our site’s previous relationship to the Navy Yard to the south. We could imagine that the freight lines to our west would eventually provide a sharper divide and isolation from the rest of the Park Circle neighborhood. We could imagine, that in time, the creek and river waters would eventually overwhelm the site and leave it unsuitable for human development. A community lost.

### **A Port as Op-Port-Unity**

However, what if instead our site “pushed back” against these forces and instead leveraged the region’s strong identity informed by the port to enhance the site?

What if we went further and imagined using the elements associated with ports – connectivity, vitality, and their connection with water – to create an opportunity for equity to flourish?

With Port Unity we fused this new organizing paradigm into a mixed-use development that offers a place to work and live and create along the water while helping correct historical inequities.

### **Port Unity Increases Connectivity and Mobility**

Our site would leverage the most important attribute of a port – its association with movement – to increase connectivity. Ports famously facilitate the changing of one transit mode to another. We would establish a ferry service, in agreement with the region’s transportation plan, to provide direct access to downtown Charleston. Furthermore, recognizing that our development should improve livelihoods beyond our boundaries, we would develop an underutilized rail line into a shared bike/walk/mobility path to connect adjacent residents to our site and to the new regional bus rapid transit (BRT) service.

### **Port Unity Addresses Issues of Equity and Housing Affordability**

Our site advances equity by hosting solutions to housing demand and food accessibility. Our site would provide a minimum of 24% affordable housing units in buildings that are designed to intentionally gather residents. Borrowing from a port’s association with markets and trading, our site would work with local food collective, to help forward food justice, host a year-round open-air farmer’s market with on-site urban farming ground and warehousing for harvest storage and vendors.

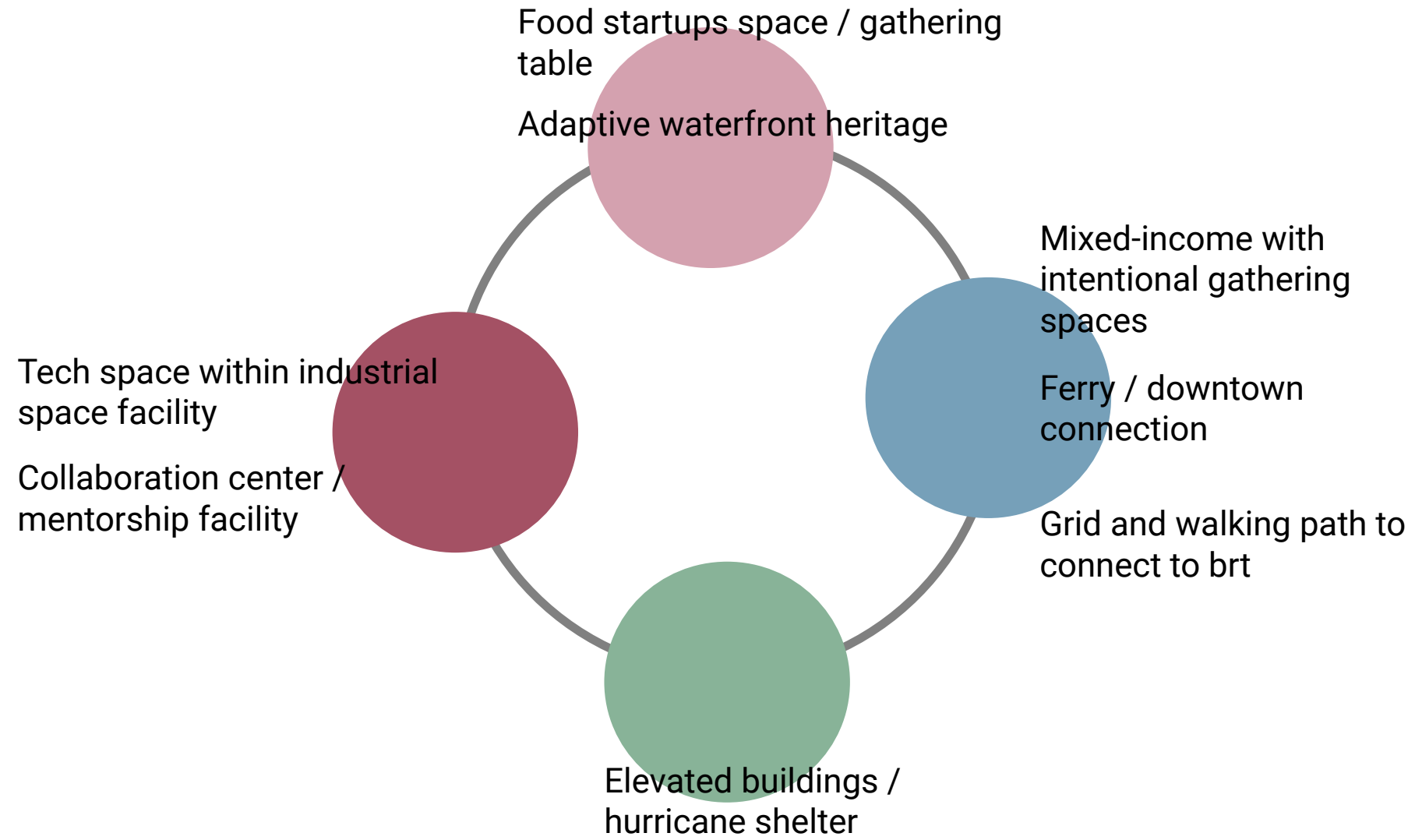
### **Port Unity has a Positive Economic Impact**

Our site will lean on a port’s historic ability to transact commerce and assembly by providing maker spaces that are large and flexible for growing, creative businesses to experiment and expand. In these same buildings, offices-as-moments provide open areas to do business with interspersed places for formal meetings instead of traditional working spaces. The maritime industries incessant demand for labor will be met by providing collaborating, mentorship spaces that connect area youth to South Carolina’s HBCUs to foster industrial apprenticeships, mentorships, and other educational opportunities with university and business partners in the area.

### **The Port Increases Sustainability and Resiliency**

Our site reinforces its connection with water to adapt to sea level rise and leverages a Port’s morphology to allow water to move between human spaces. Taking cues from containerization, we imagine buildings raised selectively on site, stacked vertically in interesting arrangements and to a logical order. Channels cut into our site will allow water to gather after a storm, while remaining as green swales during dry periods. Additionally, our site will serve as a traditional port of refuge, sheltering residents from powerful hurricanes when necessary.

# COMMUNITY BENEFITS



# STAKEHOLDERS



*"This masterplan development will address pressing housing needs, attracting diverse industries, fostering a young, highly skilled workforce, and ultimately boosting our economy for years to come"*

**-City of North Charleston**



*"We love living in the neighborhood that is affordable and walkable! Our apartment complex has everything we need, and we love picking our fresh produce from a local farm."*

**-Local Residents/Family**



*"I enjoying coming here and learning from so many professionals! This experience really broadened my horizon about who I want to be when I grow up!"*

**-Young Person/Child**



*" I absolutely loved my trip - I learned about the culture, history, art and even tasted delicious local cuisine. It was so fun arriving here by ferry from Charleston! "*

**-Tourist/Visitor**

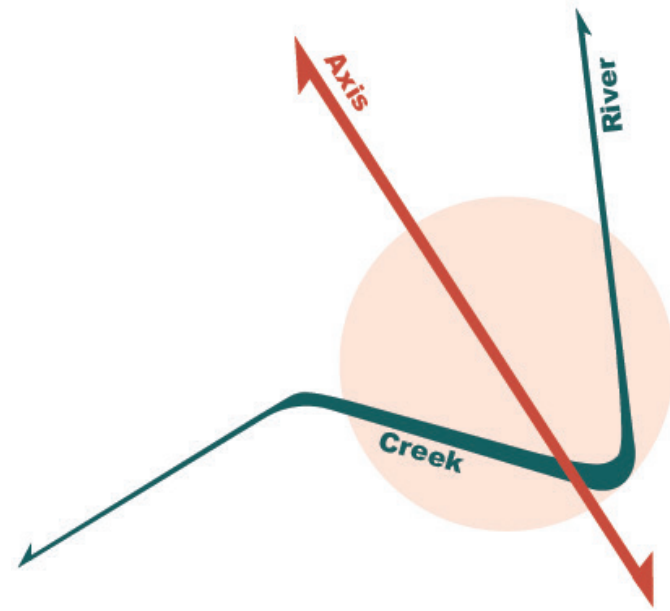
# URBAN CONCEPT



## Park + Yard -> PORT UNITY

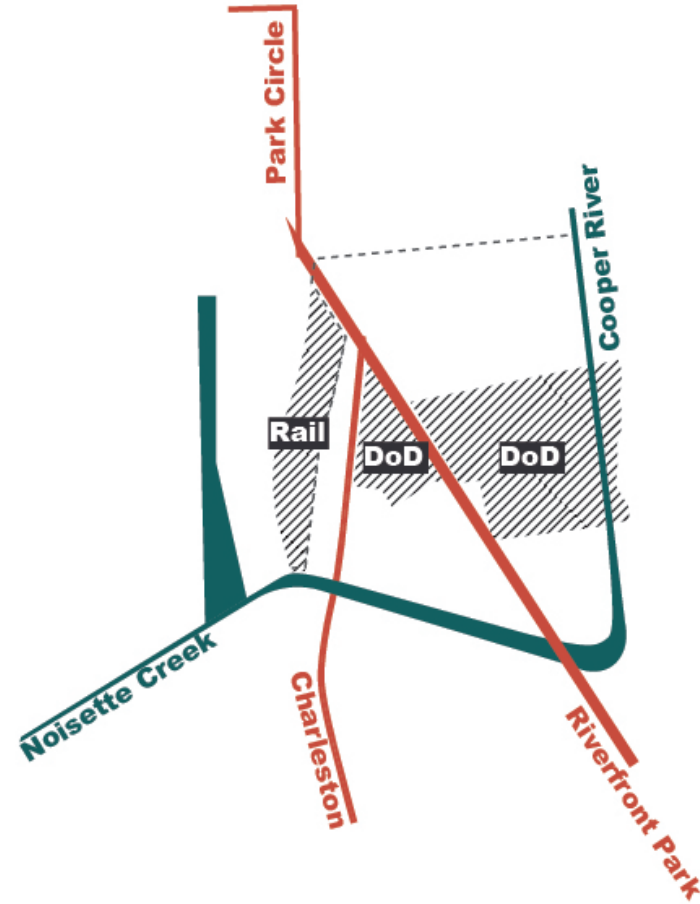
Our site sits at the intersection of the Park Circle neighborhood and Navy Yard site, creating an opportunity to take elements from a port-like environment to create a more equitable residential experience.

# DESIGN CONCEPT



## River + Axis

For organizing the site, we took inspiration from the surrounding water bodies and the diagonal street that unfolds from the pedestrian bridge.



## Navigating constraints

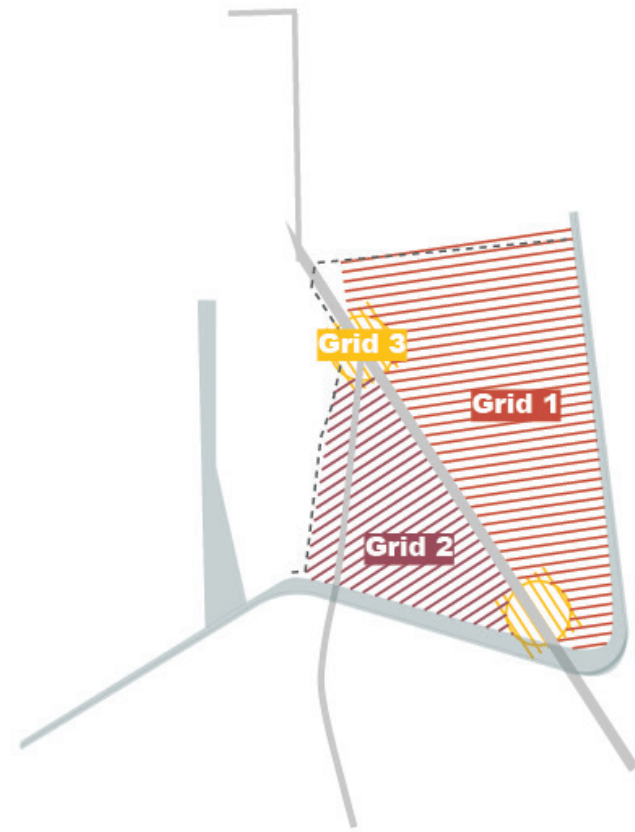
Noting the human constraints on our site informs where we can place moments for work, live, play, and create.



## Extending green fingers

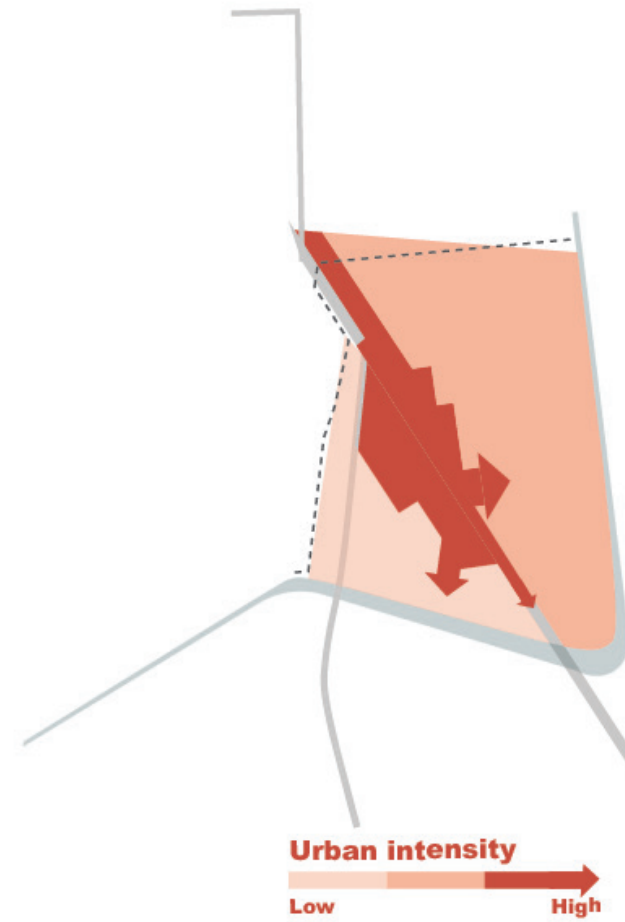
Swales act as fingers collecting stormwater on our site. Along the river, these fingers become channels to connect to historical port character

# DESIGN CONCEPT



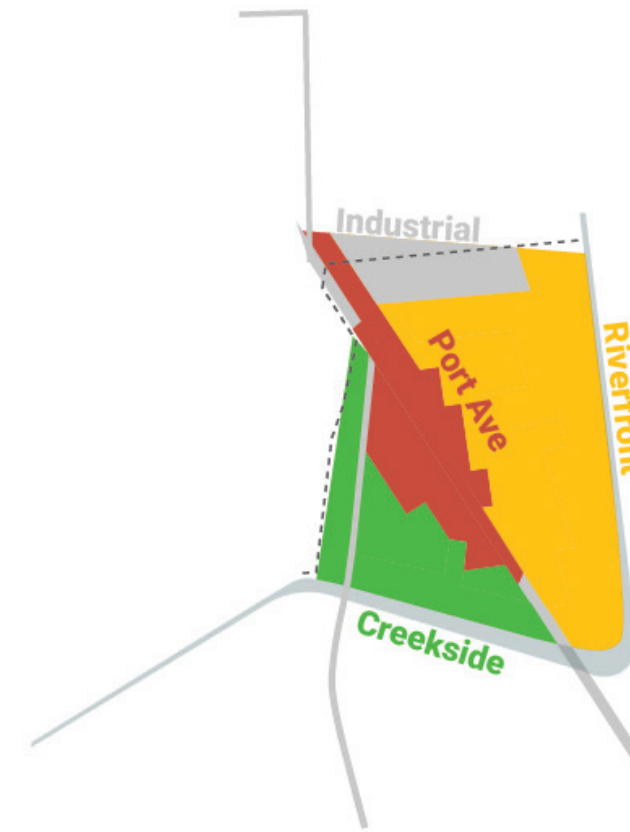
## Structuring grids

Following historical port patterns, our first grid is oriented toward the river, our second grid is informed by the diagonal avenue, and our third by Park Circle's iconic road circles.



## Control urban intensity

Providing a mix of uses and densities ensures a lively place along the retail diagonal while balancing the surrounding neighborhood.



## Infuse with distinct character

With the mix of grids, uses, and densities, Port Unity develops into sub neighborhoods that accentuate and reflect their relationships with industry, river, creek, and vital diagonal avenue.

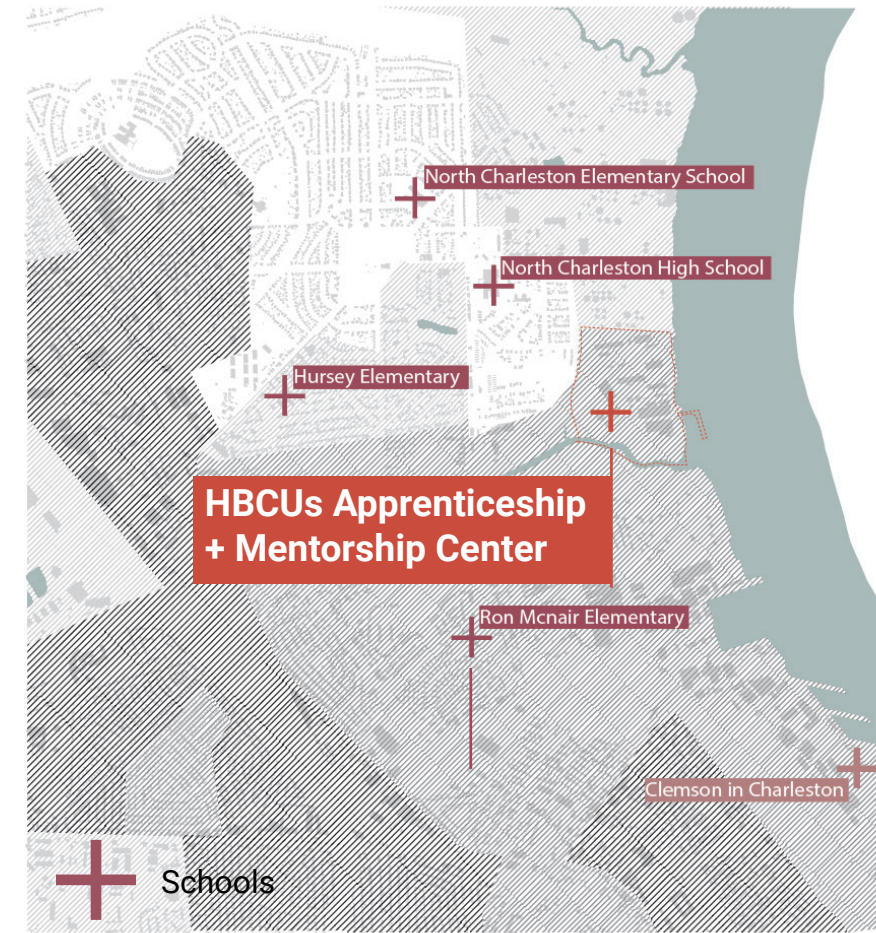


# SITE ANALYSIS



## Housing + Transportation

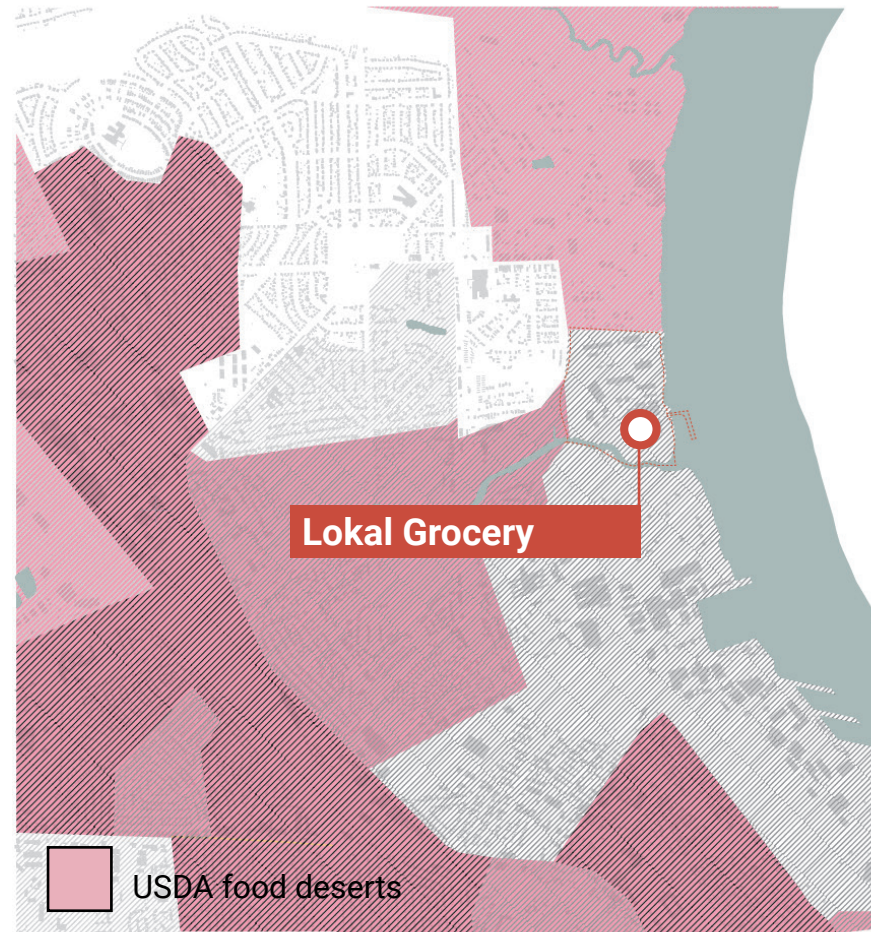
Our site suffers from relatively poor public transportation access. Bus service is currently infrequent. A new BRT line is underway that bypasses the neighborhood, however an abandoned rail line provides an opportunity to connect to the BRT to improve transportation equity.



## Education + Work force

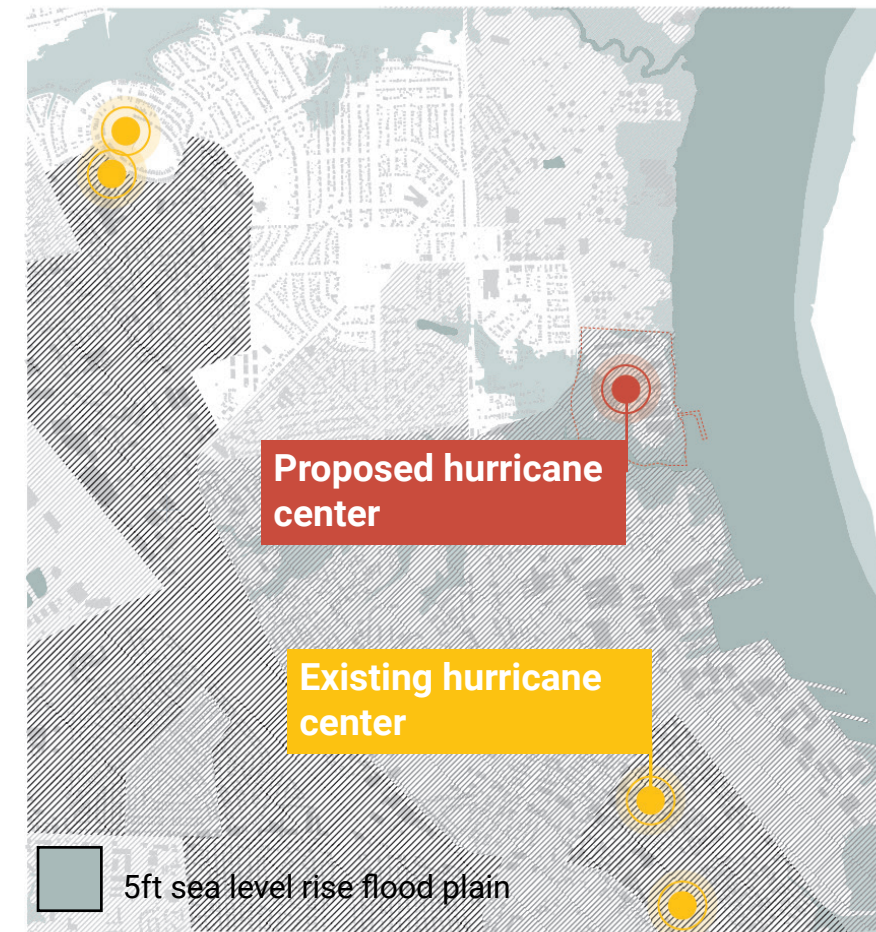
There are several schools near our site which could create a meaningful education-to-workforce pipeline if students are matched to local apprenticeships or receive college guidance from mentorship moments.

# SITE ANALYSIS



## Nutrition + Culture

There are no large-format grocery stores within two miles of our site, exacerbating nutritional inequity for the BIPOC communities that instead must rely on high-price, low selection convenience stores for nourishment.



## Environment + Resilience

A 5-ft sea level rise would overflow Noisette Creek into surrounding communities. However, the more immediate risk is from storm-induced flood risk and increasingly powerful hurricanes. Current shelters are far and not easily transit-accessible.

# SITE PLAN



# LAND USE





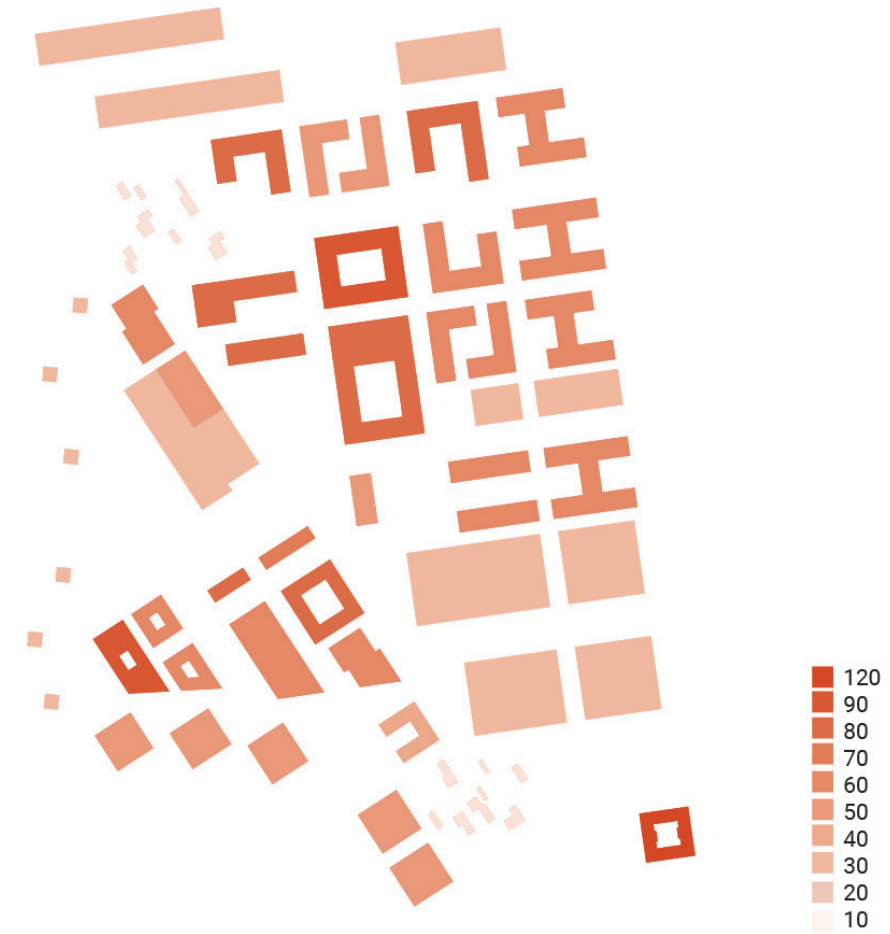
**Connectivity**



**Blue green structure**

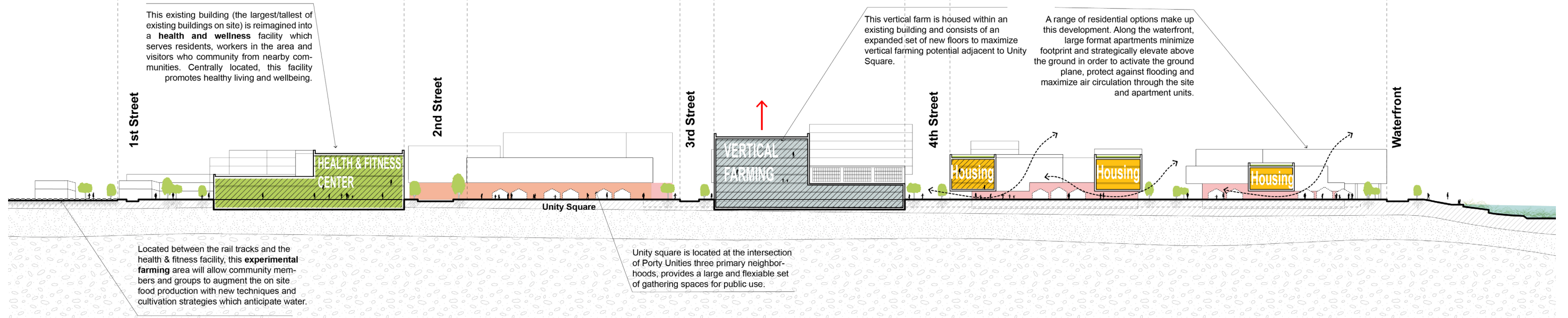


**Active frontages**

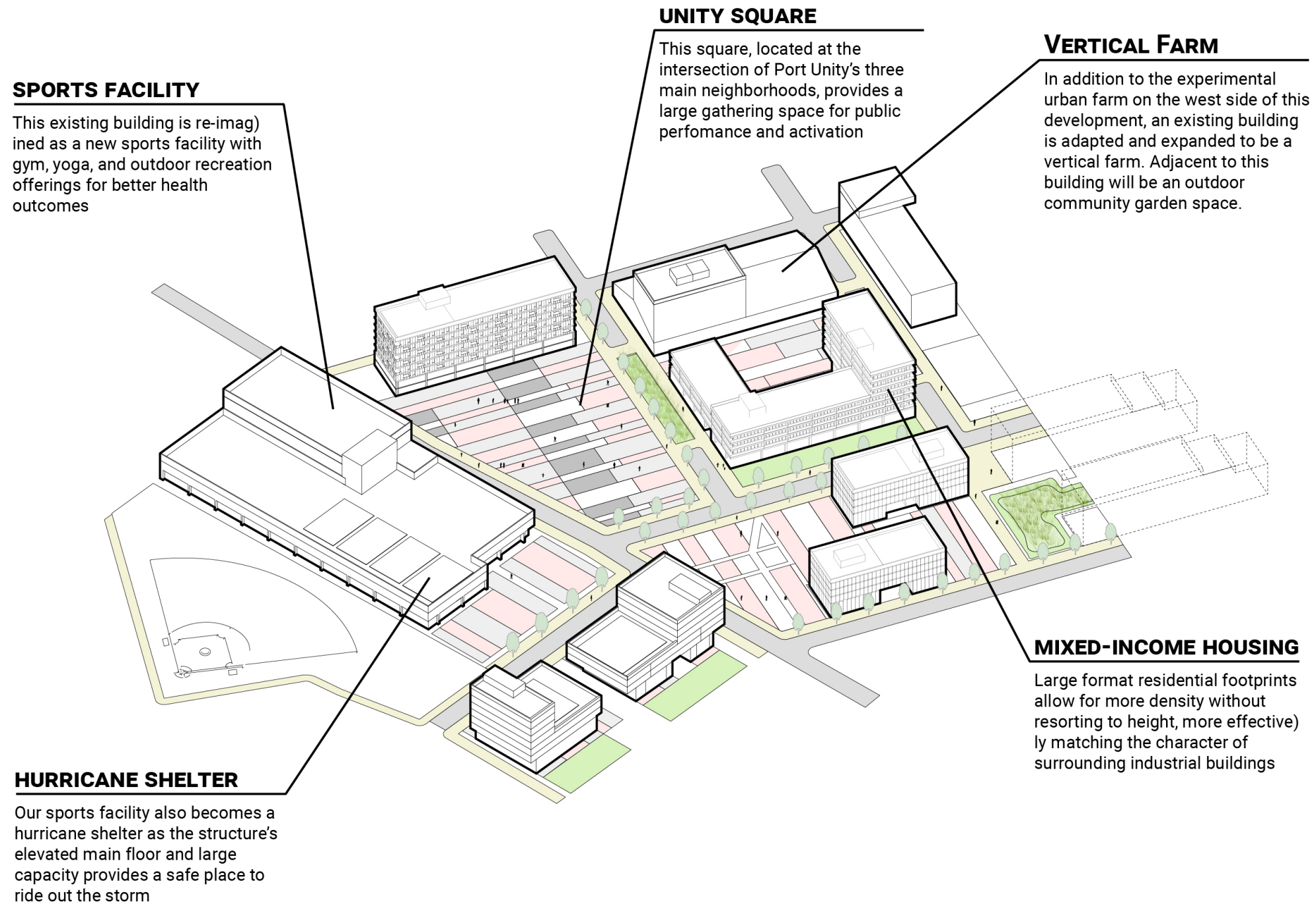


**Height distribution**

# SITE SECTION



# PORT UNITY SQUARE



## **SPORTS FACILITY**

This existing building is re-imagined as a new sports facility with gym, yoga, and outdoor recreation offerings for better health outcomes

## **HURRICANE SHELTER**

Our sports facility also becomes a hurricane shelter as the structure's elevated main floor and large capacity provides a safe place to ride out the storm

## **UNITY SQUARE**

This square, located at the intersection of Port Unity's three main neighborhoods, provides a large gathering space for public performance and activation

## **VERTICAL FARM**

In addition to the experimental urban farm on the west side of this development, an existing building is adapted and expanded to be a vertical farm. Adjacent to this building will be an outdoor community garden space.

## **MIXED-INCOME HOUSING**

Large format residential footprints allow for more density without resorting to height, more effectively matching the character of surrounding industrial buildings



A day at Port-Unity Square Market



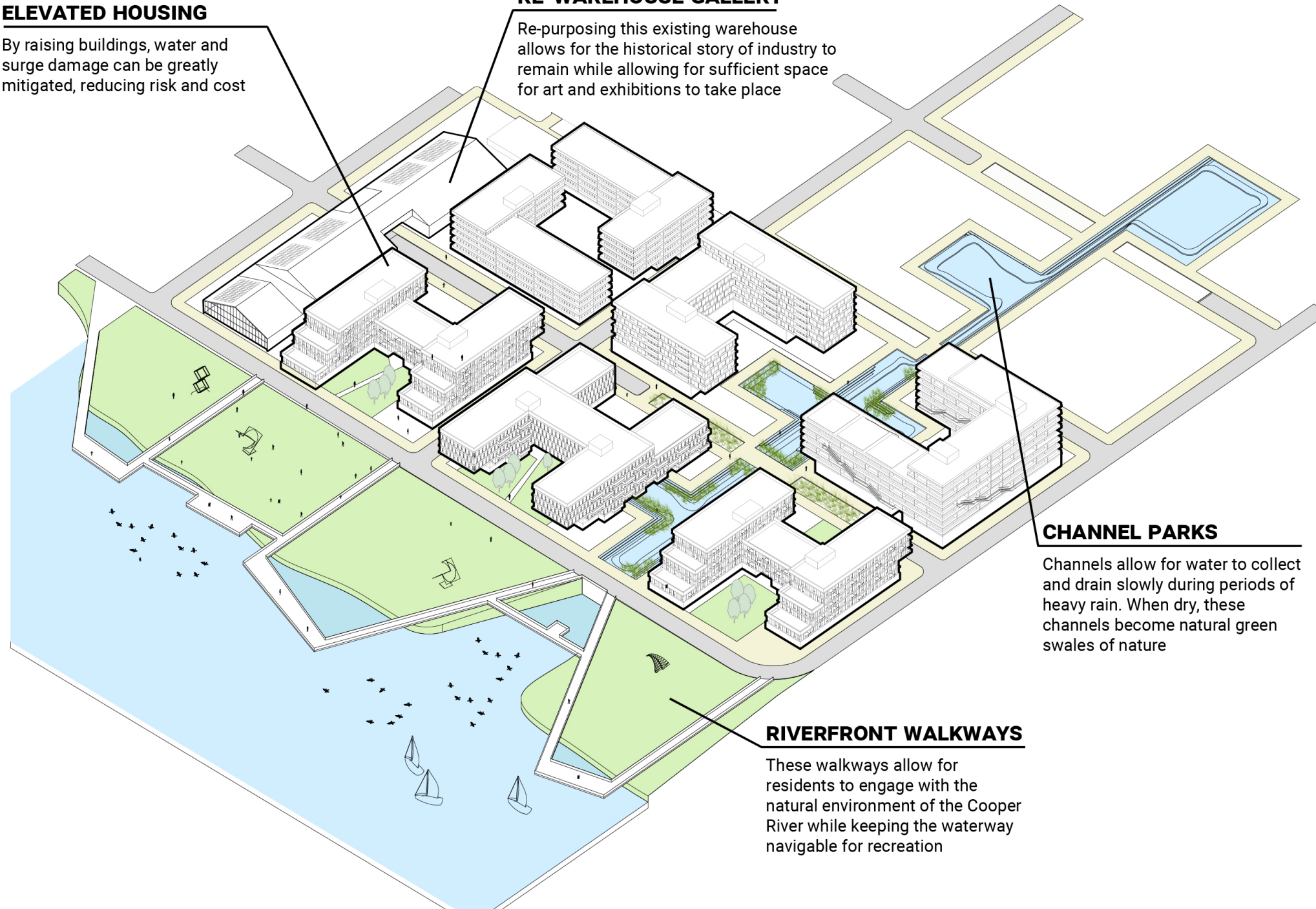
# THE CHANNELS

## **ELEVATED HOUSING**

By raising buildings, water and surge damage can be greatly mitigated, reducing risk and cost

## **RE-WAREHOUSE GALLERY**

Re-purposing this existing warehouse allows for the historical story of industry to remain while allowing for sufficient space for art and exhibitions to take place



## **CHANNEL PARKS**

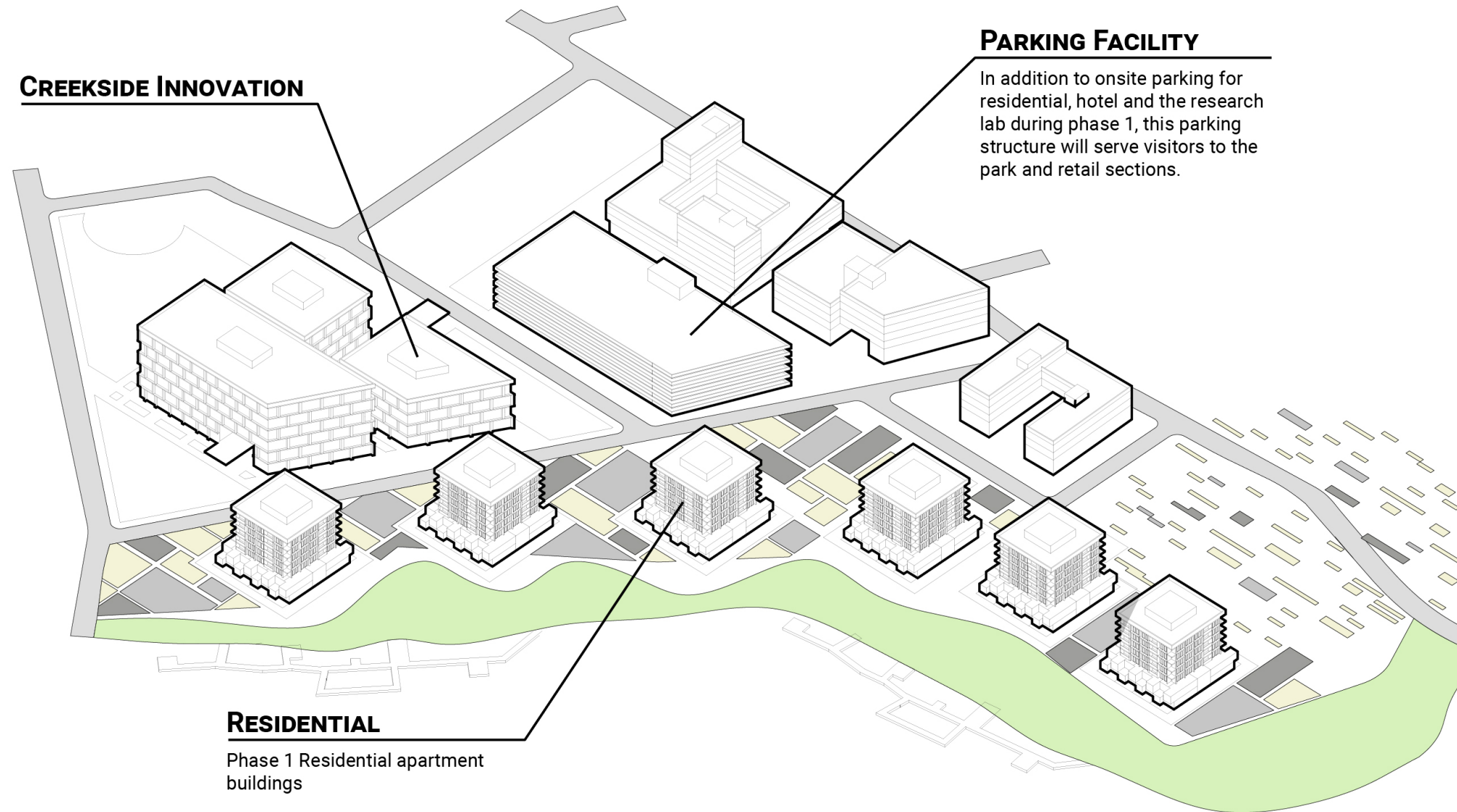
Channels allow for water to collect and drain slowly during periods of heavy rain. When dry, these channels become natural green swales of nature

## **RIVERFRONT WALKWAYS**

These walkways allow for residents to engage with the natural environment of the Cooper River while keeping the waterway navigable for recreation

# A walk at stormwater retention channel





## FINANCIAL NARRATIVE

Port Unity is imagined as a 2.2 million sq ft development spreading over all the currently owned city parcels between the Cooper River and Noisette Creek. The project will deliver 2,488 units of which 598 (24%) are affordable to residents in North Charleston along a dynamic waterfront while supplying a more equitable development strategy for the community.

In following strong and sustained market demand for industrial versus office and retail, Port Unity will focus on delivering residential living with creative industrial and retail serving as stabilizers. This allows the project to take advantage of existing industrial buildings on site and save on demolition costs while preserving the authenticity of the site's appeal. Port Unity will be built over a ten-year period in three phases which emphasizes project financial stability regardless of the ultimate decision with the DoD parcel. In partnership with the city, our project will deliver \$90m worth of green resilient infrastructure and streetscape improvements across all sites. In exchange for these improvements, we would negotiate with the city to write-down the full value of the land. Additionally, the project will enter into an agreement with the existing owner of the south parcel to swap the brewery's current location into a new purpose-built food hall with more amenities.

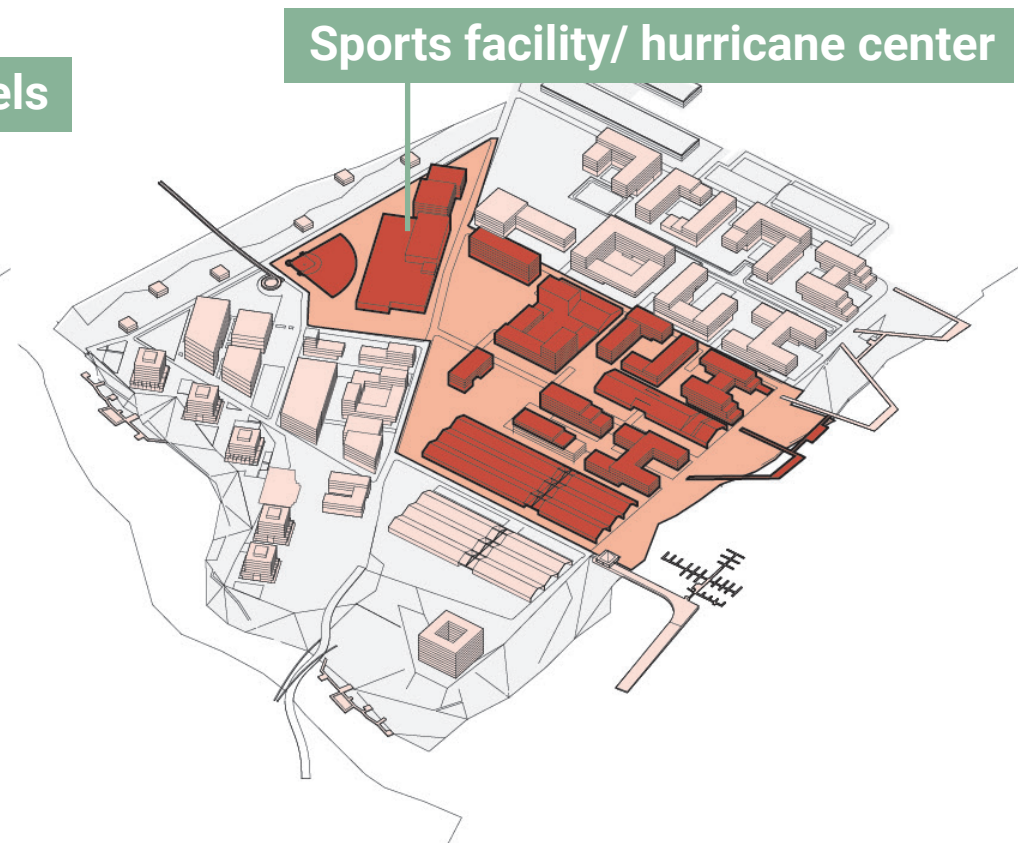
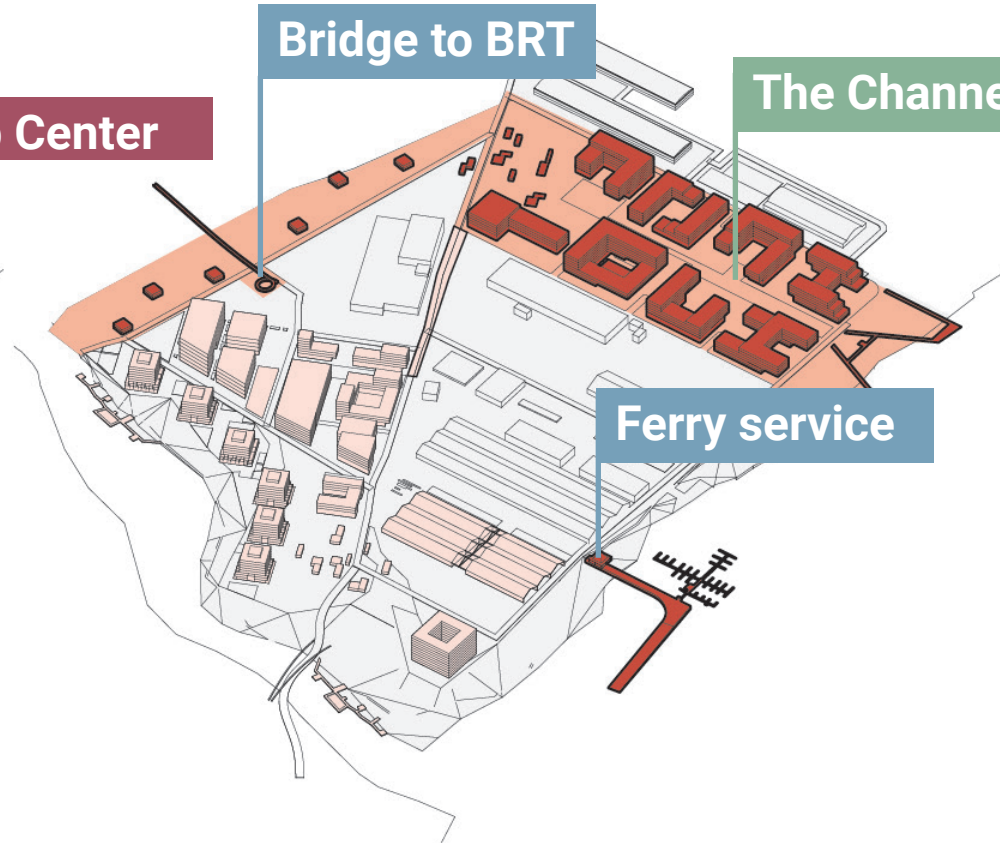
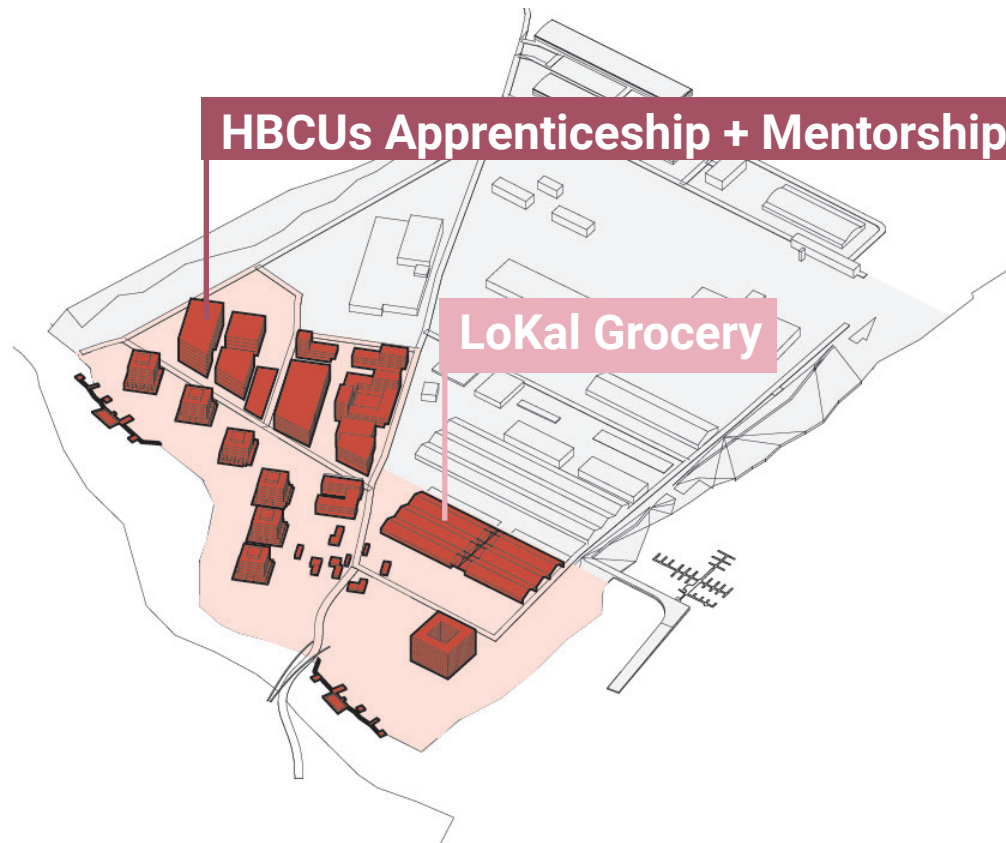
Port Unity's phasing strategy roughly corresponds to the activating of Port Unity's constituent neighborhoods from south to north. **Phase 1** (years 1-3) is visualized as building off the activation of the already existing Riverfront Park and newly opened pedestrian bridge. During this phase, Creekside is established as a mixed-use development with six residential and retail towers (506 units) and opening concurrently with the hotel to offer a place to stay for Riverfront Park's current festivals and scenic elevated views. The Diagonal shared street is constructed allowing for the first 39,000 sqft of retail to be developed to service the new residents. Additionally, the 213,000 sqft Research & Apprenticeship Center is developed during this period to take advantage of the high demand for quality industrial/maker space. Finally, a repurposed warehouse is redeveloped into exhibition space for local arts programming and a parking garage is prepared for future retail demand and cash flows. In essence, Phase 1 supplies a sampling of the entire Port Unity concept.

In **Phase 2** (years 3-6), The Channels neighborhood builds on the excitement of Creekside and delivers additional housing, education, and cultural pieces to the site. The housing in this phase is composed of 10, 5-7 story mid-rise buildings which provide density with context (774 units). This phase also introduces a neighborhood school and waterfront park extension to connect residents and visitors to the Cooper River. In effect, Phase 2 establishes Port Unity as a full community with services to stabilize returns.

In **Phase 3** (years 6-9), The Diagonal shared street's building frontage is completed, supplying an additional 80,400 sqft of retail and delivers the largest segment of residential units to the project (1,200 units). The repurposed 202,500 sqft Sport Facility is opened along with the final warehouse conversion into a gathering space and food hall that is now able to function with sufficient demand for food & beverage.

Port Unity's total development value is \$2.2 billion with a total cost estimated at \$1.75 billion. For financing, we assume 37% will be from equity sources with 55% stemming from debt as the primary sources, with public subsidies forming the remaining 9%. In subsidies, our project focuses on securing federal funding already allocated to the State of South Carolina. LITHC at the 9% rate provides the bulk of the funding (\$146 million), this is assumed despite the competitive nature of the grant due to the project's large scale and total affordable units delivered. Additionally, a Community Development Block Grant (CDBG) will fund \$2.75 million, and finally a \$6.5 million grant from FEMA's Natural Hazard Mitigation Program (North Charleston can apply on the project's behalf) as our site includes a variety of methods to reduce the ongoing dangers of river flooding and hurricane risks for a vulnerable population. In terms of infrastructure, the site will deliver connections to the BRT line through a rail-to-bike path extension, solar panels for electric generation, substantial flood mitigation through elevated structures and on-site stormwater retention, and a public riverfront walkway. The project's total unleveraged return is estimated at 10% with a levered return of 17%.

# PHASING



Phase 1	0-5 years	Phase 2	5-10 years	Phase 3	10-15 years
	ft <sup>2</sup>		ft <sup>2</sup>		ft <sup>2</sup>
Hotel	306,250				
Research	213,002				
Parking	128,000	91,017			
Cultural	100,228			138,000	
Retail	48,812	108,750		100,500	
Residential	633,053	1,061,826	1,281,250		
Industrial		124,894			
Education		12,437			
Sports				202,500	

# FINANCIAL SUMMARY

**17%**  
Leveraged IRR

**10%**  
Unleveraged IRR

