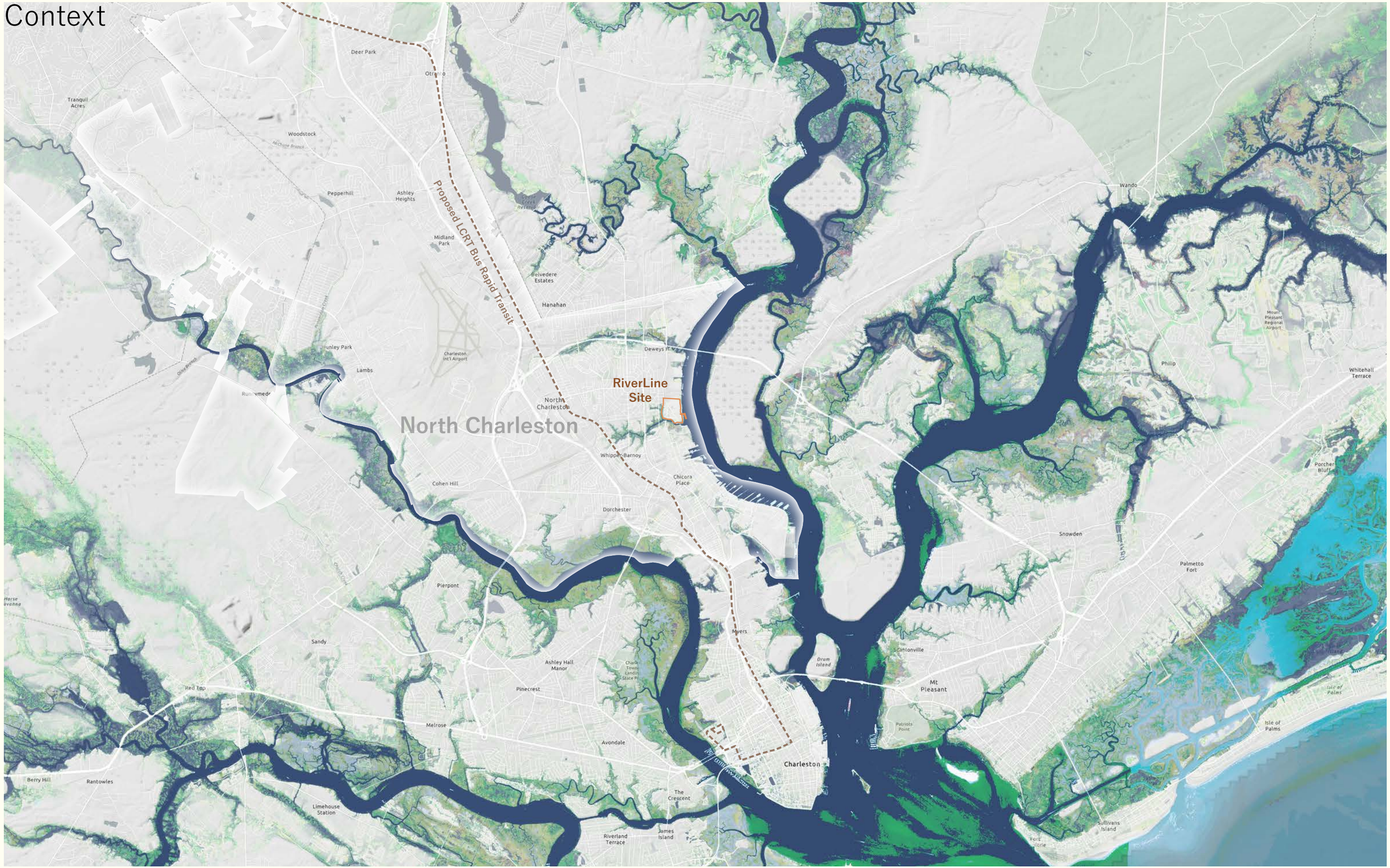
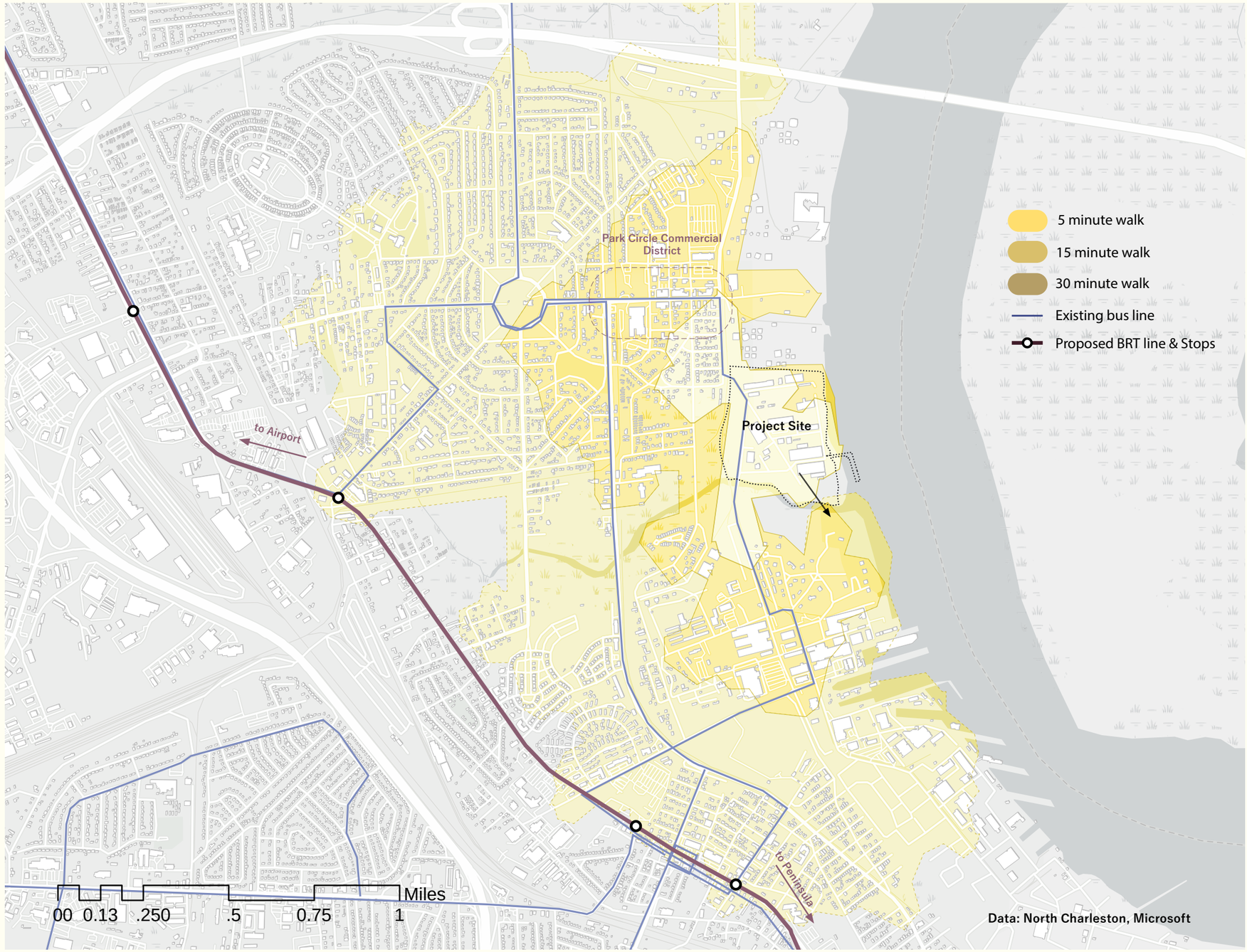
RIVER L\NE

Context


Proposed LCRT Bus Rapid Transit
RiverLine Site
North Charleston
Deer Park
Otranto
Tranquil Acres
Woodstock
Pepperhill
Ashley Heights
Midland Park
Belvedere Estates
Hanahan
Hunley Park
Lambs
Charleston Int'l Airport
Runnymede
North Charleston
Whipper-Barnoy
Chicora Place
Cohen Hill
Dorchester
Pierpont
Sandy
Ashley Hall Manor
Pinecrest
Melrose
Avondale
Red Top
Berry Hill
Rantowles
Limehouse Station
Riverland Terrace
James Island
The Crescent
Charleston
Myers
Drum Island
Scanlonville
Mt Pleasant
Patriots Point
Snowden
Palmetto Fort
Wando
Philip
Whitehall Terrace
Porcher Bluff
Isle of Palms
Sullivans Island

2023-9200 | RIVER L\NE

Site Analysis: Connectivity and Mobility



LRCT Bus Rapid Transit Station Rendering (LCRT)

Noisette Creek Bridge Under Construction (City of North Charleston)

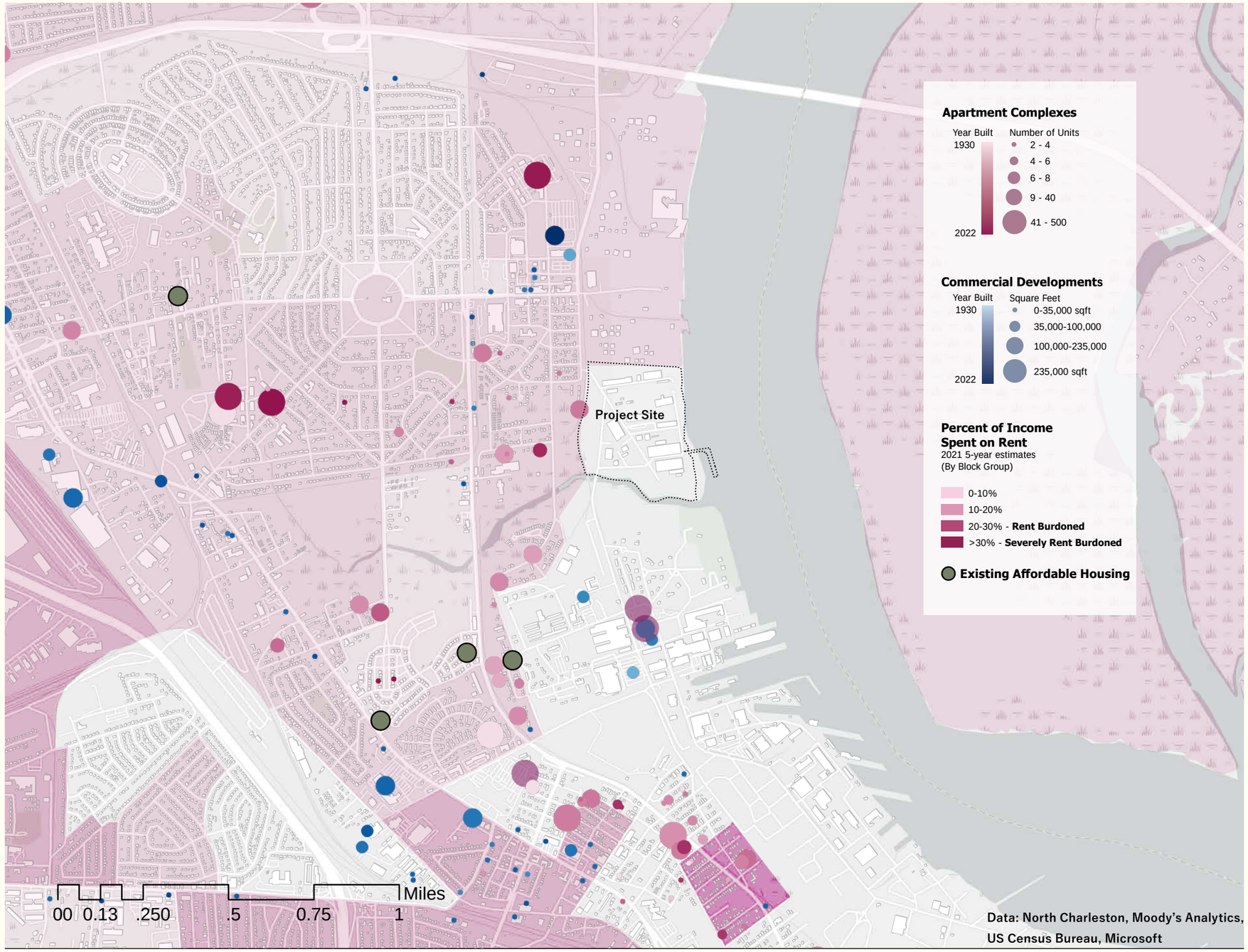
EXISTING CONDITIONS

- Currently only one bus line that goes through site, with no direct service to the peninsula or major job centers.
- New bridge under construction connecting south to river-front park and neighborhood.
- Park Circle North Charleston commercial district is a 10-15min walk from the site.
- The proposed Low Country Rapid Transit (LCRT) BRT line will feature 3 stops a 30 minute walk away from the site, inaccessible as a comfortable walking distance to most.

DESIGN GOALS

- Bring LCRT route into site, creating transit hub for increased density on-site as well as nearby Park Circle Neighborhood.
- Increase pedestrian access along waterfront and to existing parks and openspace.
- Concentrate a diversity of programs, including commerical, institutional, and office space on the site.

Site Analysis: Housing and Affordability



Phoenix Apartments, a nearby Affordable Housing Project (North Charleston Housing)

	Income Range (2-4 Person HH)	FTA (Renters)	FTA (owners)	Maximum Affordable Rent	Maximum Affordable Home Costs
Up to 30% AMI	$18,700-23,350	✓	✓	$470-580	$89,000-$111,000
60% AMI	$37,440-46,740	✓	✓	$820-$1,300	$178,000-$222,000
80% AMI	$49,850-62,300		✓		$233,000-$294,000
100% AMI	$62,313-93,480				

$60,900
BCD Median HH Income (100% AMI)

Rent affordability by area median income (AMI)
Berkeley-Charleston-Dorchester Region
(Low Country Rapid Transit Affordable Housing Assessment & Strategy, 2021)

EXISTING CONDITIONS

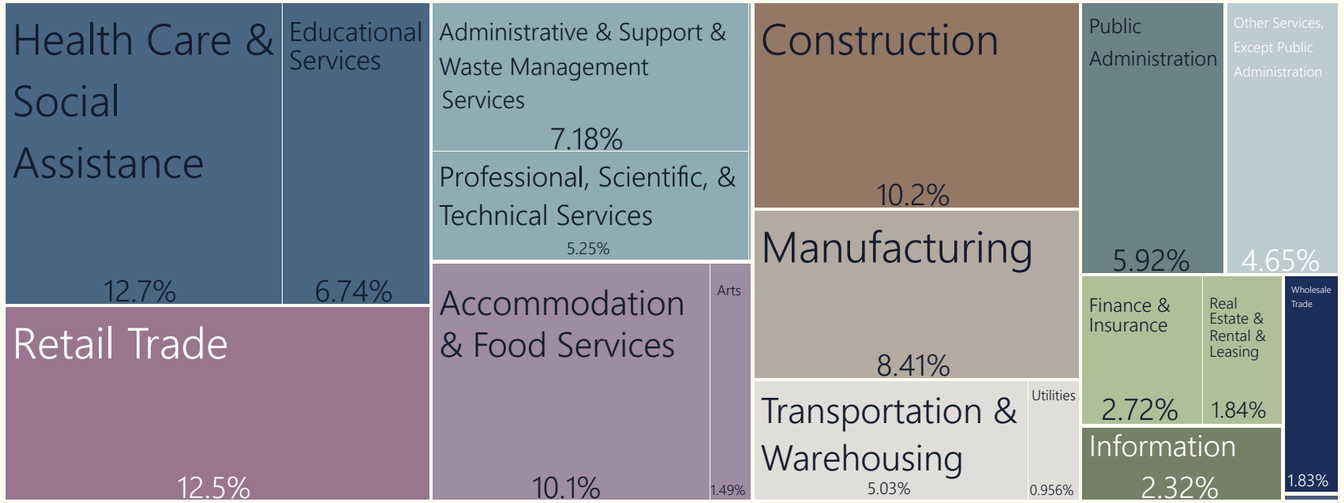
- Average rent prices are less than the metro region, at $1,521 (Moody's Analytics), and the majority of area surrounding the site is not rent burdened.
- However, there are some isolated pockets of rent burden to the north, east, and south, signaling the need for deeply affordable units to be added to the local housing market.
- Despite isolated large apartment complexes, North Charleston has relatively low housing density overall, with only 4 existing affordable housing projects in the vicinity.

DESIGN GOALS

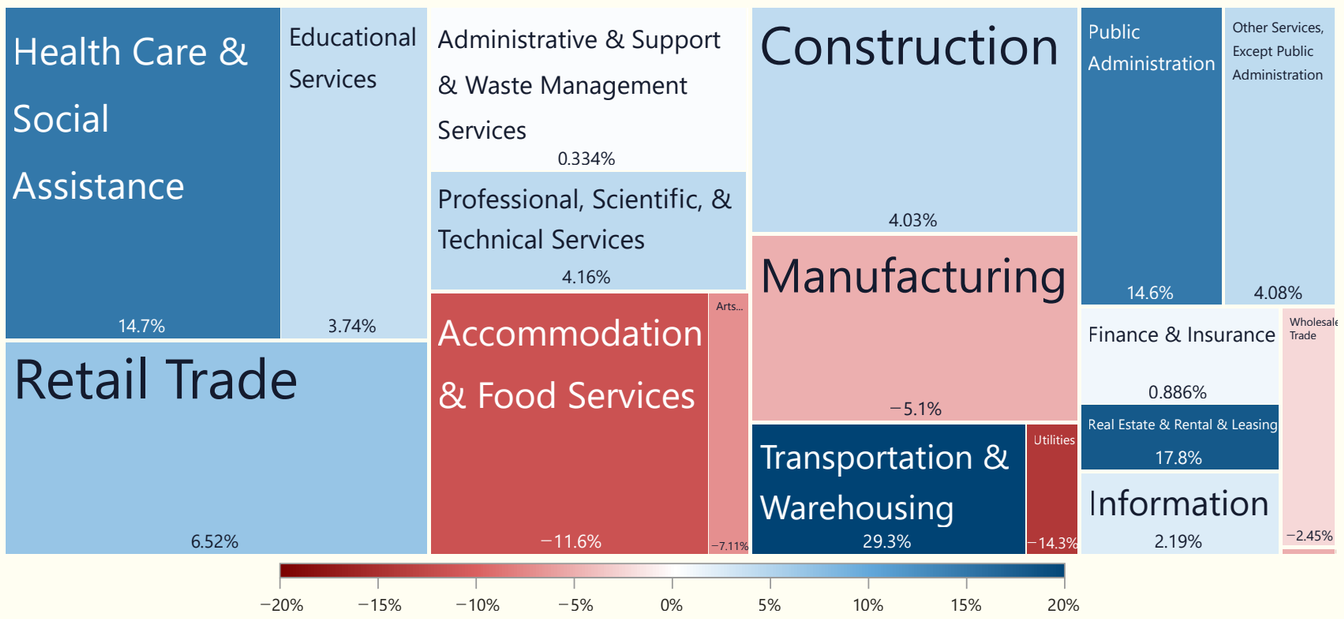
- Increase housing density on the site as a means of providing a larger number of housing units.
- Provide affordable units at 30% AMI and 60% AMI pricing.
- Leverage Entitlement incentives as a means of funding a larger proportion of affordable units among units in new development.

Site Analysis: Economic Opportunities

Employment by sector in North Charleston 2020



Year over year growth



Data: US Census Bureau

Businesses in Park Circle Neighborhood (E. Montague)

The Grit Counter in North Charleston (Grace Beahm/The Post and Courier)

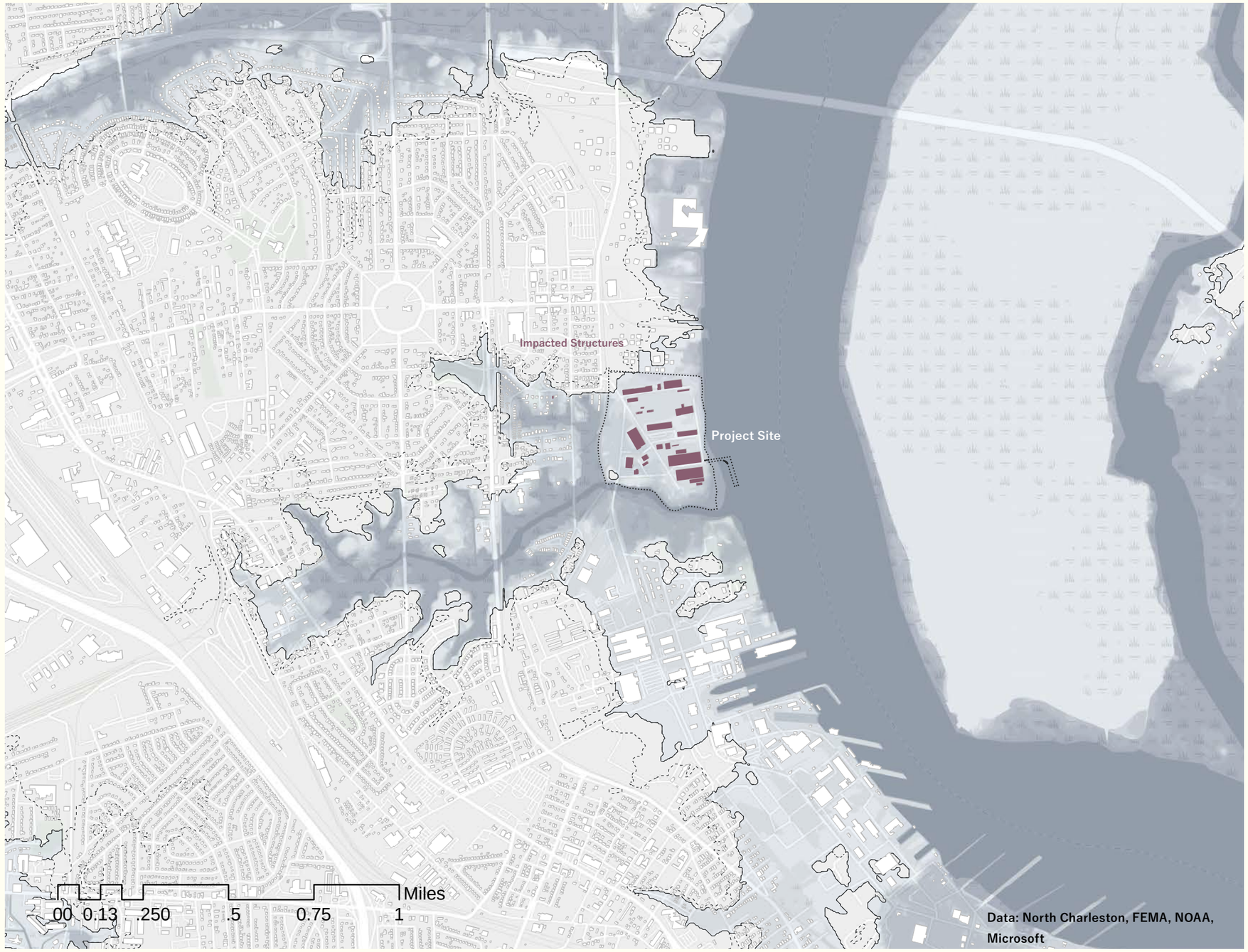
EXISTING CONDITIONS

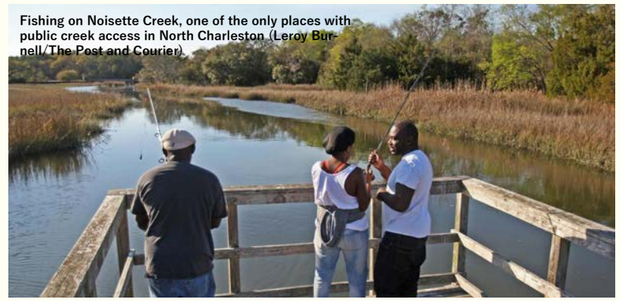
- Health care & Social Assistance, Accomodation and Food Services, and Retail Trade made up the largest employers in North Charleston in 2020.
- Health Care & Social Assistance, Retail and Trade grew between 2019 and 2020, while Accomodation & Food Services decreased significantly - likely owing to the impacts of the COVID 19 pandemic.
- In the greater metropolitan area, major employers include: Boeing, Mercedes-Benz, and the U.S. Military.

DESIGN GOALS

- Increase economic opportunities in high-value sectors including while supporting growth in existing industries, aiming for a diversity of commercial and employment opportunities on site.
- Create job-oriented educational services connected with local employment in food and hospitality, tech, the arts, and other industries.

Site Analysis: Resilience and Sustainability





Fishing on Noisette Creek, one of the only places with public creek access in North Charleston (Leroy Burnell/The Post and Courier)

Flooding during Hurricane Dorian (Sean Rayford/Getty Images)

EXISTING CONDITIONS

- Almost the entire project site is within the FEMA 1% annual flood risk zone.
- The lowest portions of the site may see an average of 3 feet of sea level rise by 2070 (based on NOAA projections).
- Storm surge heights are projected to be up to 9 feet, and would impact the entire site as well as adjacent neighborhoods.
- Much of the site sits on what would've historically been tidal marsh, which works to reduce storm surge power and wave heights during extreme weather events.

DESIGN GOALS

- Raise the design flood elevation for all buildings on site to reduce impacts on homes and businesses.
- Increase tidal landscape opportunities around site edges to mitigate storm surge.
- Embed functional stormwater systems in the landscapes and corridors of the site.

Design Narrative

“Perseverance – Progress – Prosperity”

RiverL\ne pays homage to North Charleston’s work-live-play culture while fostering future-thinking in its skills development and environmentally sensitive strategies. The 4 key components of the programming are 1) professional development hub, 2) inclusive housing, 3) commercial activation and 4) resilient public realm. Synergistically, they seek to address the goals of housing and affordability, economic development, connectivity and transportation, and sustainability and resilience.

Faithful to its motto, North Charleston has demonstrated resilience in economic crises while continuously striving for growth. This is supported by a dynamic economy of aviation, automobile, arts, food, retail, and a skilled population of young professionals. The city’s high quality of life with low cost of living, conducive business environment, and cheerful weather.

This project seeks to celebrate the existing strengths North Charleston while enhancing its economic, environmental, and social resilience as we confront the uncertainty of our future.

Professional Development

Supporting job training in North Charleston city agenda, we propose a professional development hub in the programming of the site. This hub provides a symbiotic platform for skills training, entrepreneurial incubation, and network building. There will be 265,000 square feet located on Component 8 designed for skills training which for various industries, including food and beverage, hospitality, aviation, and technology. Spatially, the project establishes a business node which connects the restaurants and stores along the commercial corridor of Park Circle to the events space of Riverfront Park and the emerging development south of the Naval Complex. A bus rapid transit hub at the intersection of Noisette Blvd and Ave B provides a point of flow for students, workers, and residents to access other jobs and neighborhoods from via a reroute of the proposed Low Country Rapid Transit (LCRT) connecting the lower Peninsula to the airport.

Inclusive Housing

RiverL\ne recognizes the area’s existing affordability profile and meets the broader needs for affordable housing in North Charleston by providing 25% of units at 50% AMI. These units are funded by entitlement incentives allowing greater density, taller buildings, and reduced parking requirements in exchange for providing affordable housing.

Housing types range from Studios to 1, 2, and 3-bedrooms to accommodate a range of potential residents. Additionally, 3% of units are provided as “Collaborative Housing” targeted specifically at professional development hub’s students to provide a more reasonable option for those on a limited budget who may not qualify for the fully affordable level.

With this spectrum of housing opportunities and rental rates, RiverL\ne fosters an economically diverse community to match its varied professional and commercial program.

Commercial Activation

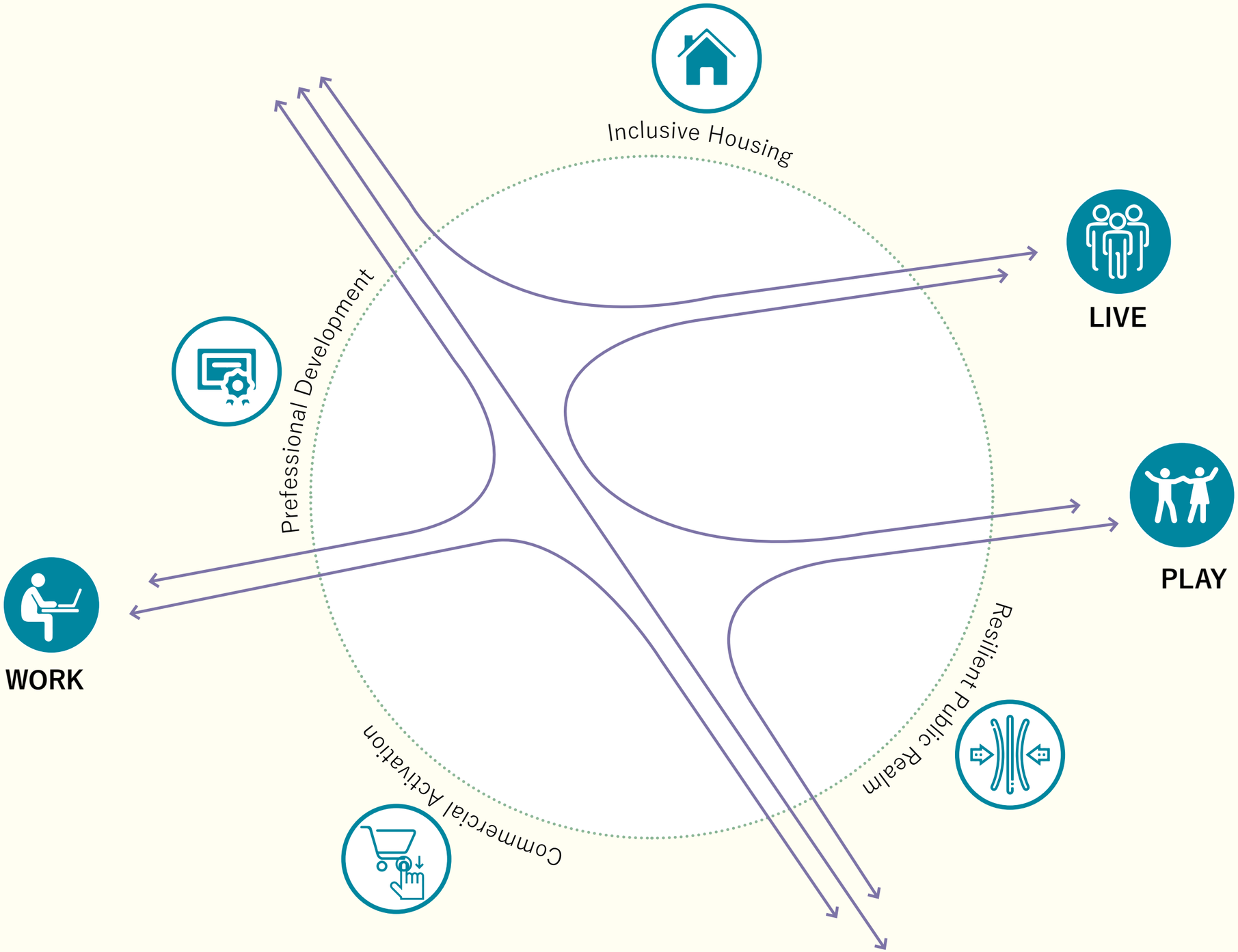
Beyond the professional development hub, RiverL\ne seeks to offer a range of ground-level and specialized commercial programs along the site’s main axis, Noisette Blvd, and the Cooper River waterfront. Offices, market-rate and not-for-profit, and collaborative workspaces are programmed at the western edge of the site to concentrate employment centers near the professional development hub and major transit access. Ground-level retail allows for a diversity of commerce and amenities, including grocery stores, childcare and library to serve residents and neighbors. A 100-room hotel is positioned in 2044 when the development is matured. The waterfront is activated through preserving a portion of the existing shed structures as an adaptive-reuse facility housing a large community center, which can be programmed to host pop-up markets, workshops from the Charleston culinary scene, community meetings, art exhibitions, and other large events. From the community center north along the Cooper River, a major pedestrian district is formed for on-the-river restaurants and shopping, interfacing with the pier-ed landscape along the river’s edge.

Resilient Public Realm

RiverL\ne responds to the site’s increasing vulnerability to sea-level-rise-related flooding by reestablishing tidal marshes landscapes along Cooper River and Noisette Creek that are interwoven with piers and boardwalks to allow a connection from the neighborhood to the waterfront. Stormwater improvements permeate into the neighborhood along green corridors, with microclimate pools along the main axis and green roof elements on selected buildings. The southern edge of the site includes productive greenhouses and small-plot agriculture that serves the training center’s food lab.

By increasing the marsh edge, and taking attention to the design flood elevation and internal stormwater management of the site, it is RiverL\ne’s goal to establish a sustainable, waterfront community that can serve generations of future North Charleston residents. From a local family looking to live in a mixed-use neighborhood, to a student hoping to gain practical skills for employment, to one of North Charleston’s many successful brewery owners setting up a new location, to a roseate spoonbill fishing for shrimp in the marsh, RiverL\ne provides community on the water.

Conceptual Diagram



Site Plan

1. Transportation Hub
2. Residential Unit
3. Riverfromt shops
4. Riverfromt terrace
5. Mixed-use complex
6. Recreation Amenities
7. Training and workshop
8. Agro Lab + Food Lab
9. Green houses
10. Co-operative housing
11. Community Center
12. Multipurpoes Lawn
13. Pier
14. Riverfront recreation boardwalk
15. Wetland and riverbank restoration
16. Noisette Creek Pedestrian Bridge

Program Breakdown - Commercial

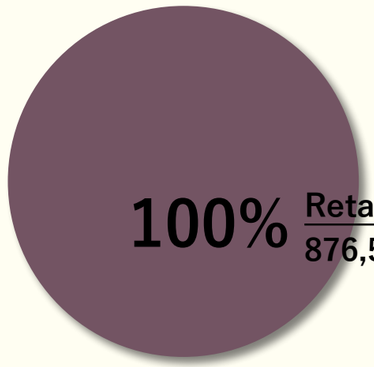
Parcel 217
Retail: 80,000 Sq.ft.

Parcel 072
Retail: 6,500 Sq.ft.

Parcel 017, 086, 065
Retail: 100,000 Sq.ft.

Parcel 109
Retail: 300,000 Sq.ft.

Parcel 040
Retail: 370,000 Sq.ft.



Retail
876,500 Sq.ft.

Program Breakdown - Office& Workplace

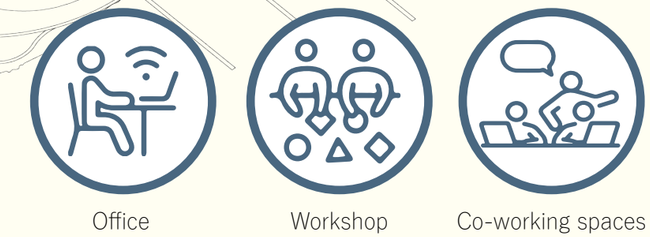
Parcel 217
Office & workplace: 40,000 Sq.ft.

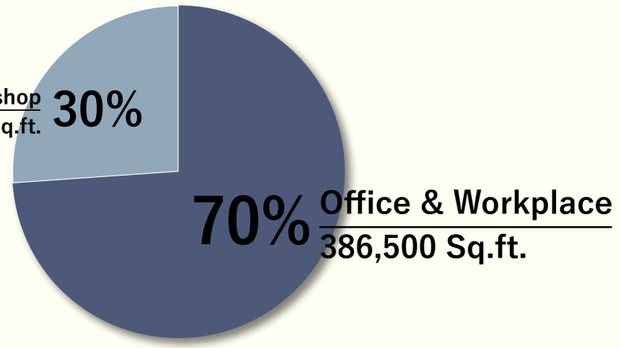
Parcel 072
Office & workplace: 40,000 Sq.ft.

Parcel 017, 086, 065
Workshop & training: 165,000 Sq.ft.

Parcel 040
Office & workplace: 6,500 Sq.ft.

Parcel 109
Office & workplace: 300,000 Sq.ft.





Program Breakdown - Residential

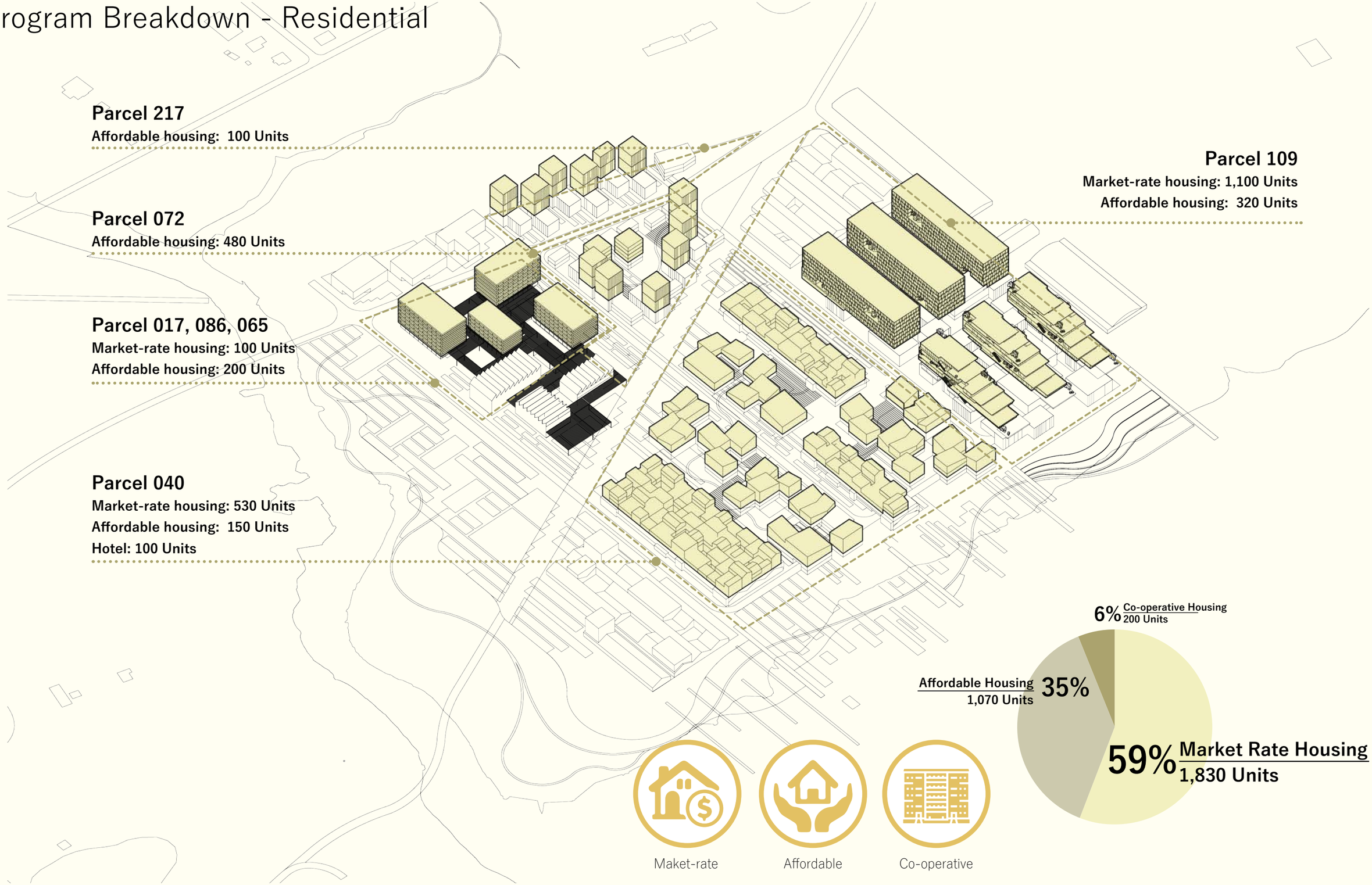
Parcel 217
Affordable housing: 100 Units

Parcel 072
Affordable housing: 480 Units

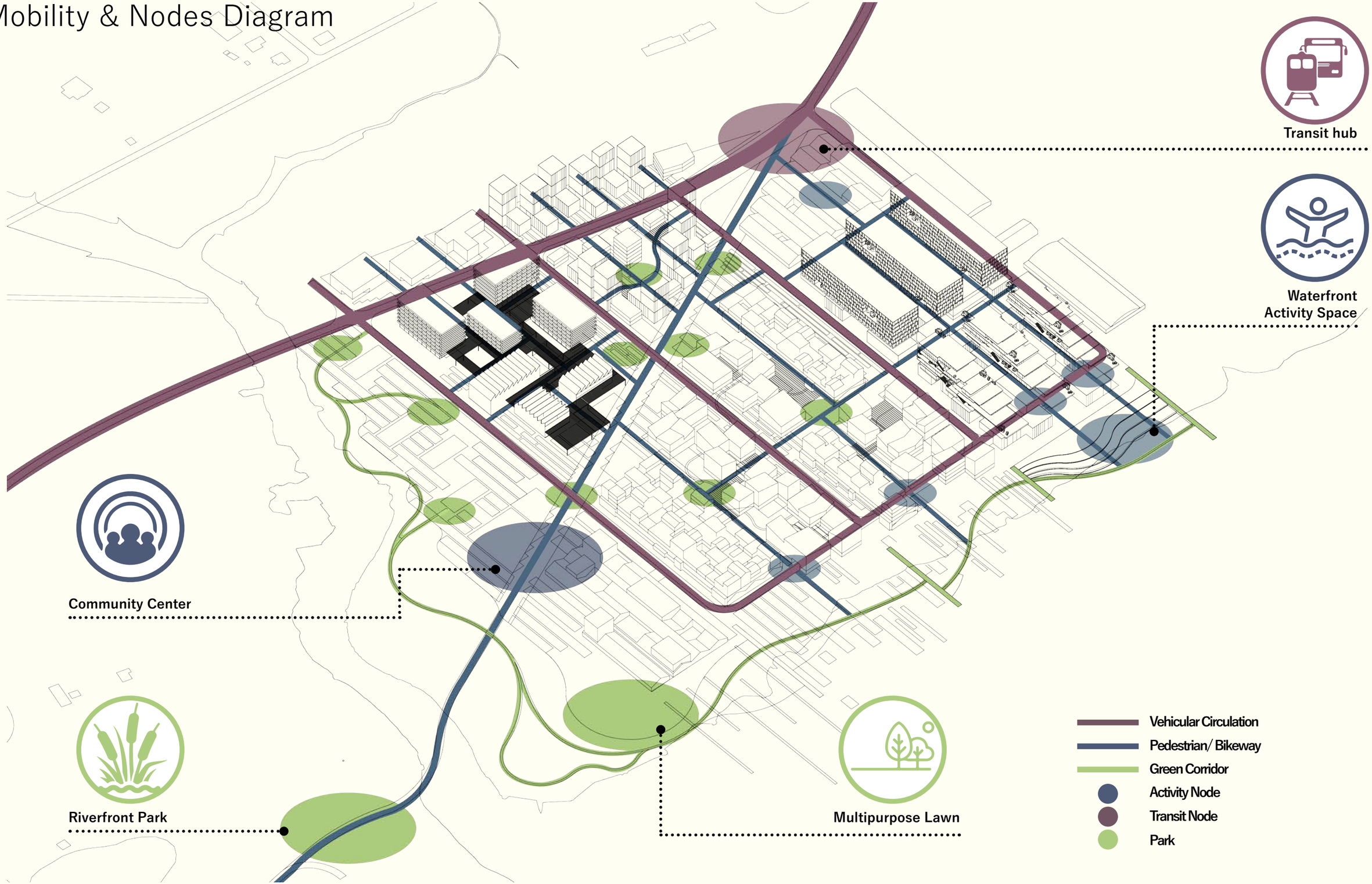
Parcel 017, 086, 065
Market-rate housing: 100 Units
Affordable housing: 200 Units

Parcel 040
Market-rate housing: 530 Units
Affordable housing: 150 Units
Hotel: 100 Units

Parcel 109
Market-rate housing: 1,100 Units
Affordable housing: 320 Units



Mobility & Nodes Diagram



BRT Transit Hub

Waterfront Housing: Room with a View

Recreational and Cultural Facilities

Pocket park

Indoor recreational facilities

Workshop & training

Urban farm

Activity path

Multipurpose park

Trandsit hub

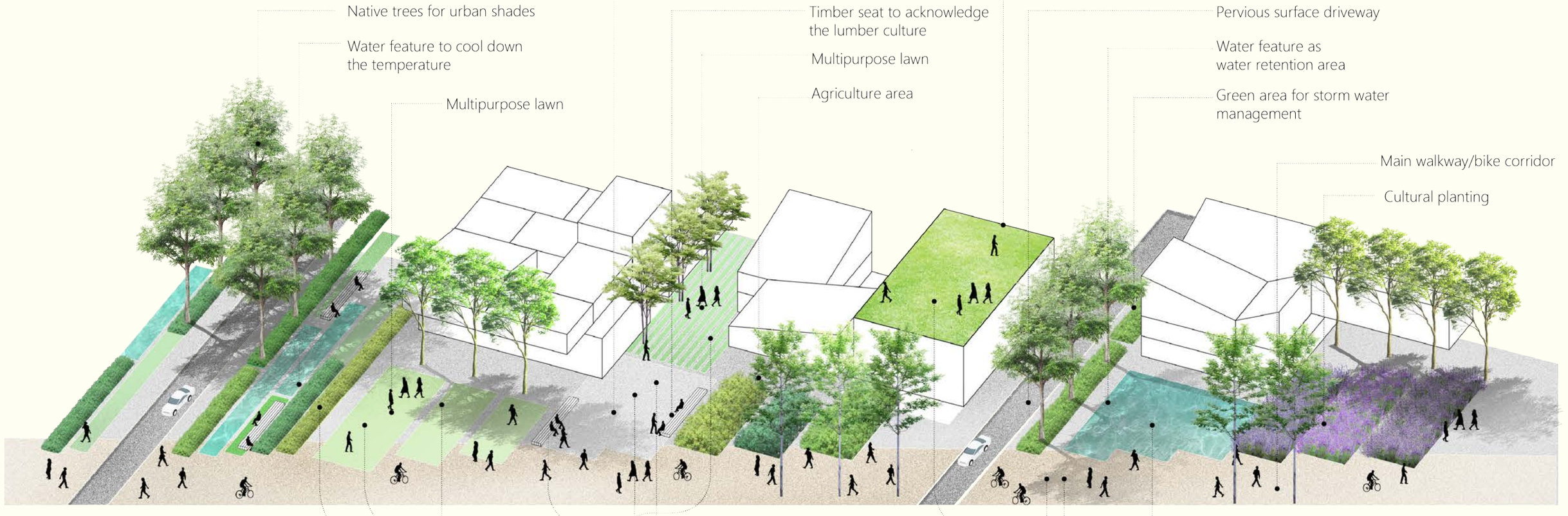
Pocket Park

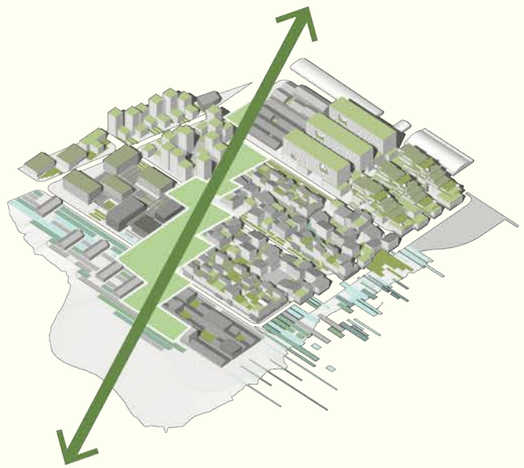
Pocket Park

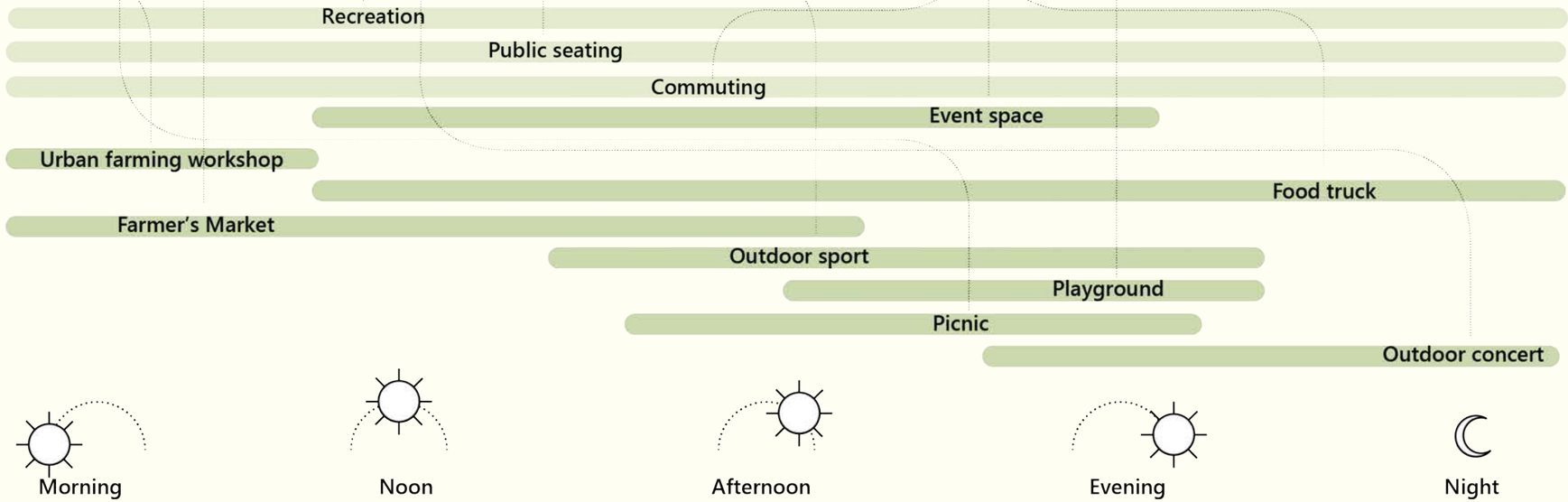
Pocket Park

Indoor multipurpose space/ Weekend farmer market

Walkway Corridor Line







Landscape Characteristic Diagram

Native Species

Red Maple

White Oak

Yellow poplar

Vegetables

Fruits

Herbs

Food Production

Marshland restoration and flood protection

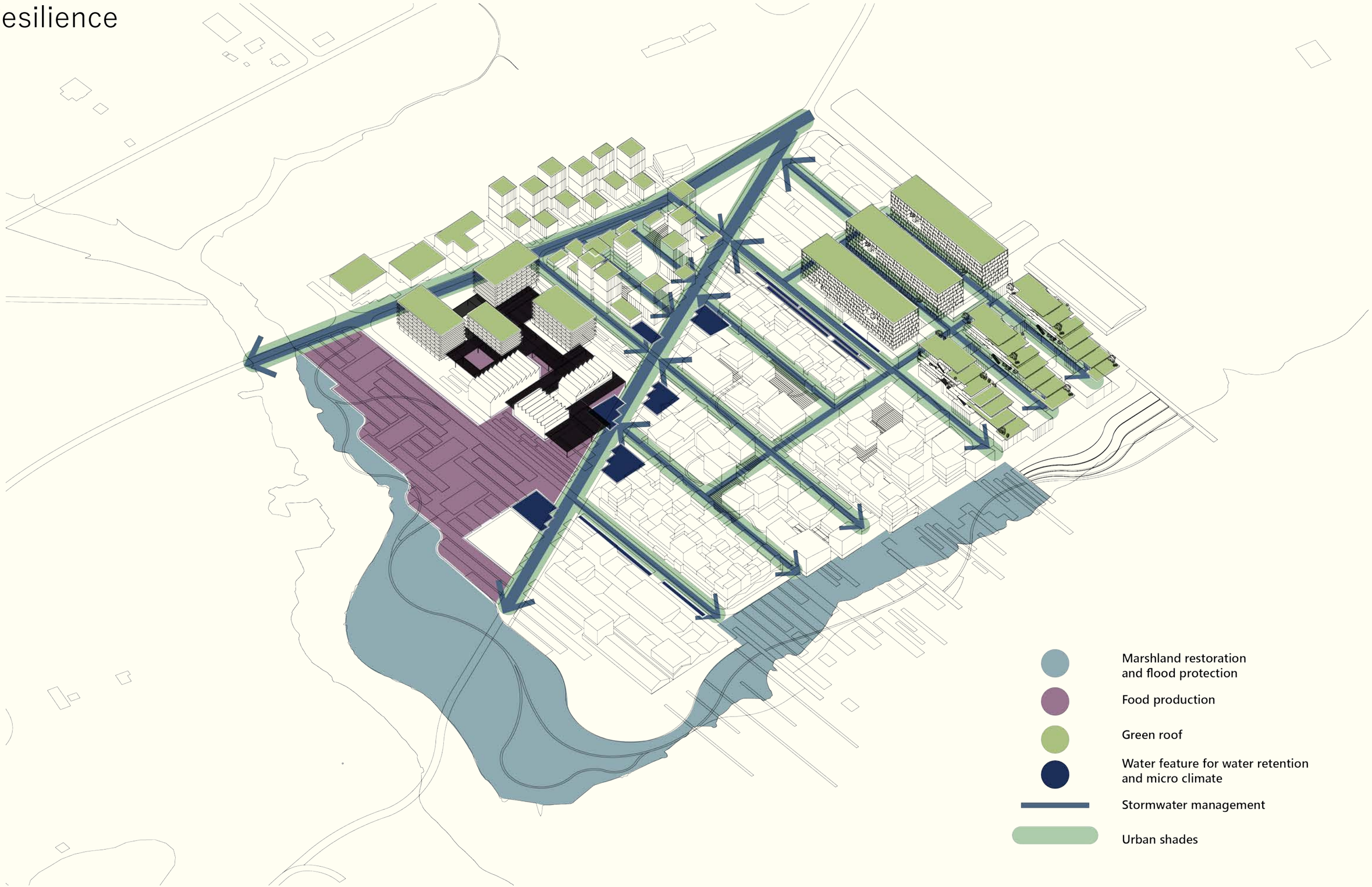
Cultural Species

Indigo

Silk tree

Oak Groves

Resilience


Marshland restoration
and flood protection
Food production
Green roof
Water feature for water retention
and micro climate
Stormwater management
Urban shades

Riverfront Corridor Line

Finance Narrative

RiverL\ne develops an aggregated land area of 52.81 acres with a total timeline of 20 years in two main phases. This includes a mixed-use development to fortify the area's economy, recreational landscape, and cultural identity. At the same time, RiverL\ne constructs a $174.5 million resilient waterfront infrastructure of 490,000 sqft to address sea level rise and more critically, storm-based flooding – aligning itself as a crucial node of North Charleston and the greater Charleston area's Flooding and Sea Level Rise Strategy. Finally, the phasing will be tactical in its spatial order to create access to the waterfront and Riverfront Park while during the duration of development.

The $2.33 billion development's realization is structured by a Public-Private Partnership model that produces a Neighborhood REIT co-owned by not-for-profit agencies, private corporations and market shareholders who may be local commercial tenants, residents or an ESG fund while government agencies retain a 34% stake independent of the Neighborhood REIT. The Neighborhood REIT concept recognizes each stakeholder at the individual level and invites participation from the community to create a sense of ownership and rapport. It also provides a more sustainable financing avenue by opening the development to capital markets at the stock exchange level as a sustainable investment product. It promotes reinvestment in the city and the development itself with the creation of a more liquid asset vehicle. The Neighborhood REIT will own the remaining 66% of the development with a consortium, "developer" led by the master developer, to own 60% stake of the Neighborhood REIT (effectively 39.6% of the development) with an 18-month moratorium after project completion of each phase accordingly. Further funding instruments for government agencies include TIF, municipal bonds to support the 34% stake of the development.

The resiliency infrastructure is funded through federal, state and municipal programs including the NOAA, USDA, Regional Coastal Resilience Grant and Creek Habitat Restoration and Flood Protection Project Local corporations will contribute $15 million in the proposed $174.5 million resiliency infrastructure which also includes the parks. Various philanthropic foundations such as the Kresge Environment Program will contribute to $8.725 million.

A core aspect of RiverL\ne is its commitment to housing affordability. The city will contribute the land and $50 million in funds for the development of affordable housing. The project will also seek from the HUD HOME Investment Partnerships Program, HUD Community Development Block Grant (CDBG), Housing Tax Credit Program, South Carolina Housing Trust Fund (SC HTF) and partnerships with Not-for Profit agencies such as Habitat for Humanity.

The Transit Hub in Phase I seeks to receive $225 million from the Federal Transit Administration Capital Investment Grants Program, matched by the Charleston County half-cents sales tax. It will seek $30 million from the Infrastructural Maintenance Trust Fund of the SCDOT.

Phase I consists of the mixed-use developments on Component 1,2 and Transit Hub (Parcel 4000000109), 6 (Parcel 4000000217) and 8 (Parcels 4000000017, 4000000086 and 4000000065.) Component 1,2 and the Transit Hub and Component 6 will be developed first before Component 8. In total, developer equity is $618 million, which includes the Neighborhood REIT and consortium portion of $247 million and $371 million respectively.

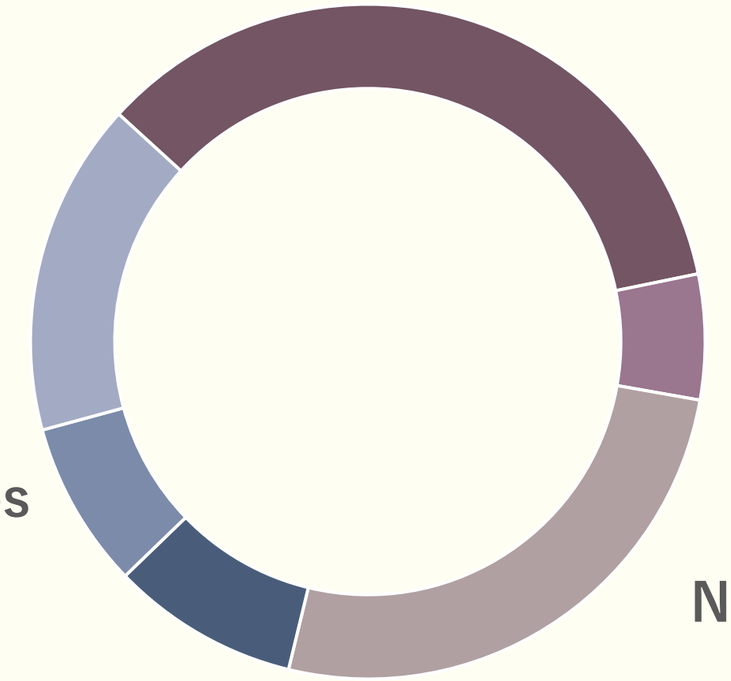
Phase II includes Component 3, 4 and 5 (Parcel 4000000040) and Component 7 (Parcel 4000000072) and will span 5 and 8 years respectively from predevelopment to close-out. Currently owned by the DoD, they are due to commence in 2034. Developer equity is $313 million, which includes the Neighborhood REIT and consortium portion of $125 million and $187 million respectively. The Hotel in Component 3, 4 and 5 has a developer equity of $30.1 million shared accordingly between the Neighborhood REIT and developer consortium.

The unleveraged returns on RiverL\ne are 13.01% and the leveraged returns are 14.50%. The small difference is remarkable given the integrated public-private nature of the project in architectural, landscape, and financial terms.

Stakeholders Diagram

	Funding & Investment	Project Development & Design Participation	Project Operation
GOVERNMENT SECTOR	**Berkeley-Charleston-Dorchester Council of Governments**		
	South Carolina Community Loan Fund		
		U.S. Navy Charleston: Properties Owner	
		South Carolina Ports Authority	
		Riverfront Park Agency: Ecological Preservation, Park Operation	
PRIVATE SECTOR	**Lowcountry Rapid Transit:** Bus rapid transit (BRT) system		
		Charleston Regional Development Alliance:	
		Palmetto Railways: Cargo Train Operator	
	Real Estate Developer Consortium: Investing in project		
	Neighborhood REIT: Securityholders including individuals and insitutional investors		
	Local Business: F&B, Local Products		
COMMUNITY & SOCIAL INSTITUTION			**Art & Culture**
			North Charleston Performing Arts Center
			North Charleston Coliseum
			Firefly Distillery music series
		Community	
		Coastal Community Foundation	
		Chicora-Cherokee, Union Heights, and Accabee	
		Metanoia	
			Vocational School: Job Training

Financing Structure



North Charleston
City Agencies
16%

Master Developer
35%

Co-developers
4.9%

South Carolina
State Agencies
8%

Neighborhood REIT
25.1%

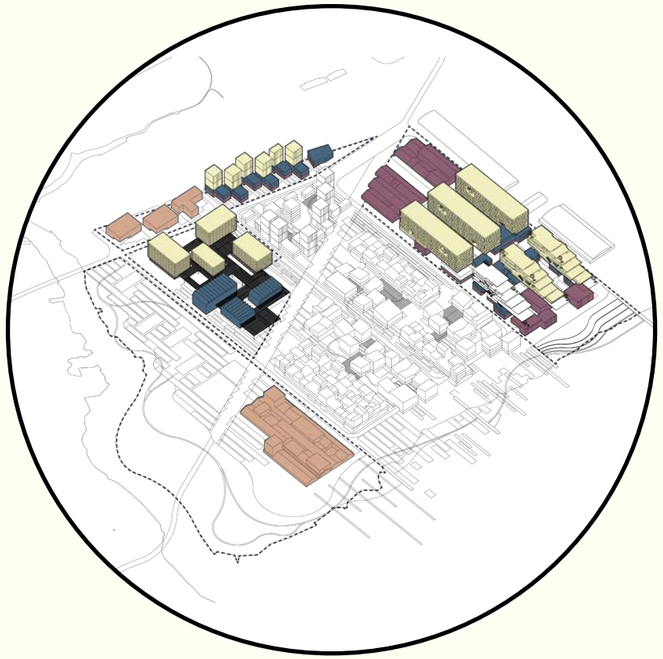
Private ESG Funds
Individual Investors
Business Tenants
Residents
Non-Profit Agencies
Philanthropy

Army Corp of Engineers
FEMA
NOAA
USDA
HUD
EPA
Federal Agencies
9%

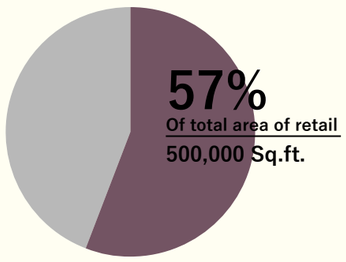
Total Project Cost $2.33 billion
Total Project Value: $2.86 billion
Leveraged IRR: 13.01%
Unleveraged IRR: 14.50%

Phasing Diagram

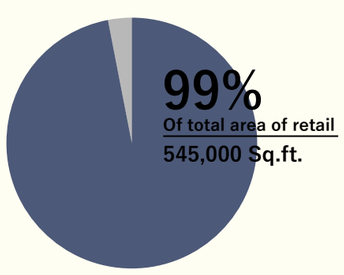
PHASE 1: Year 0 - 10

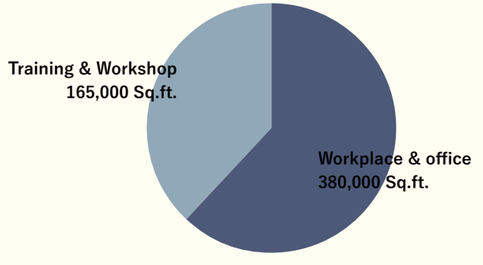


RETAIL & SHOPS

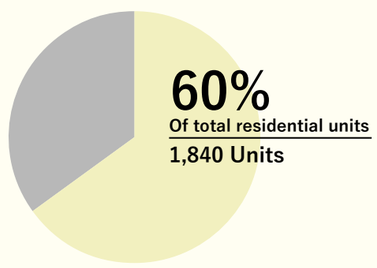


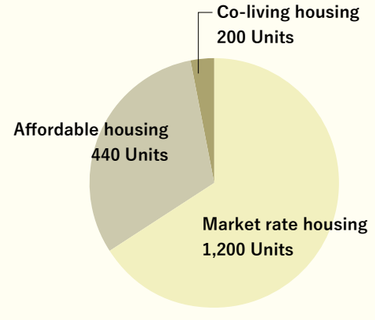
WORKPLACE



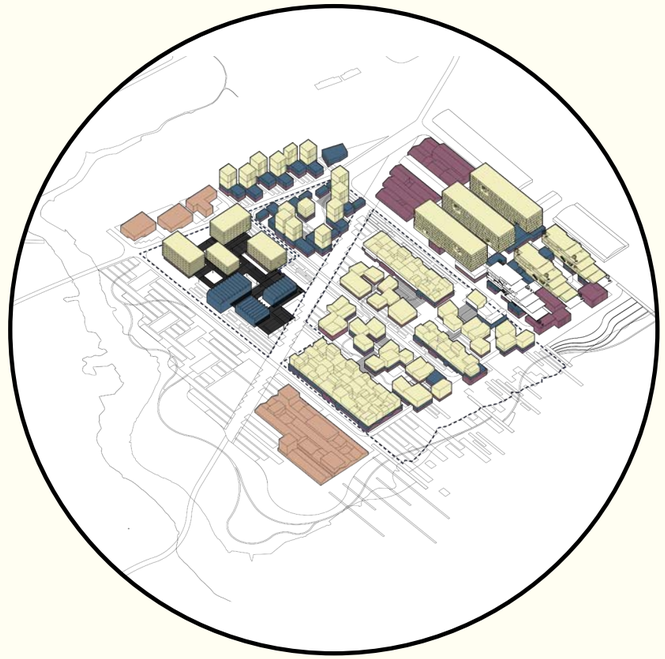


RESIDENTIAL

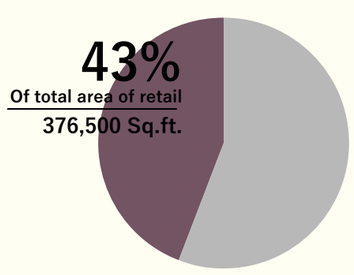




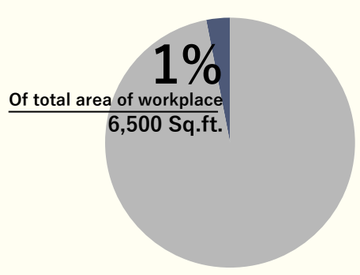
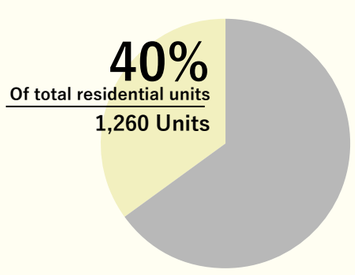
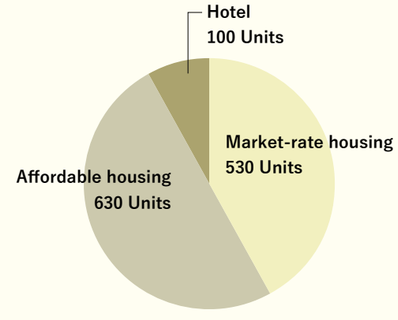
PHASE 2: Year 10 - 20



RETAIL & SHOPS



WORKPLACE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