NYC Builds Bio+ and NAIOP NYC Presents

THE COVE: A GLOBAL HUB FOR INNOVATION IN THE HEART OF THE EAST COAST LIFE SCIENCES CORRIDOR

Tuesday, May 25, 2021  |  1:00 PM – 2:30 PM  |  Online Zoom Event
A Place for Active Lives and Active Minds
Project Location

- Downtown Jersey City
- Grand Jersey Redevelopment Area
- Site
- Liberty Science Center
- Liberty State Park
- Hudson River
- New York City
The Cove

North Commercial Lab Buildings

Residential Tower 1

Academic Lab Buildings

Public Park

Residential Tower 2

Future Residential Buildings
Environmental Remediation – Phase 1 Completed
Environmental Remediation – Phase 1 Completed
Environmental Remediation – Phase 1 Completed
Local Investments and Growth Potential

- **Grand Jersey North**: 2,740 units zoned
- **Hudson-Bergen Light Rail**: 52,000 avg daily trips
- **Liberty Harbor North**: 8,200 units zoned
- **Project Site**
- **Morris Canal Redevelopment Area**: 1,400 units approved/under construction
- **Jersey Avenue Bridge**: $10 million
- **Liberty State Park**: Ecological Restoration $40 million
- **Liberty Science Center**: 600,000 annual visitors
Flood Resiliency and Infrastructure Benefits
Flood Resiliency and Infrastructure Benefits

- Flood Resiliency
- Land Rise
- Restored Salt Marsh/Public Park
The Cove is adjacent to Liberty Science Center, NJ’s largest cultural institution and the largest interactive science center in the tri-state area with more than 650,000 guests every year. The Project should also benefit from its adjacency to Liberty Science Center’s recently announced SciTech City development.

SciTech City is a truly unique endeavor and aims to build a science and technology campus providing deep education experiences in a fully immersive environment. The project will be built in phases and includes a K-12 science focused charter school, conference center, 160,000SF of research labs, and housing for approximately 400 graduate students.
Bridging disciplines, institutions, and people, The Cove is a super-connected live-work-play supercluster just minutes from Manhattan.

This is a cutting-edge life science center in the heart of the East Coast life sciences corridor. Connected to New York City and New Jersey and served by three international airports, it sits on the Hudson River at the mouth of New York Harbor. Simply put, this is the center of one of the world’s largest STEM concentrations: colleges and universities, hospitals, healthcare companies, tech firms, data companies, independent research institutions, incubators, accelerators, maker spaces, pharmaceutical and biopharmaceutical companies, finance firms, and more. These strong, resilient industries have withstood the ongoing tests of the COVID pandemic and will continue to grow into the future.

New Jersey’s Workforce
- 553,263 STEM employees in New Jersey
- 225,000 scientists and engineers, the highest concentration in the U.S.
- 72,900 workers directly employed by New Jersey’s life science cluster
- Despite having only 2.7% of the U.S. population, New Jersey employs nearly 8% of all the pharmaceutical workers in the U.S.
- 3x the concentration of pharmaceutical workers than the national average
- Nearly 2x greater concentration of medical and diagnostics workers than the national average
Leveraging Local Strengths

From tech to finance to pharma, Jersey City and NYC form the beating heart of the East Coast innovation economy and ecosystem.

Leading institutions across industries call this area home, including some of the nation’s most prestigious colleges and universities, its largest financial services firms, its most cutting-edge technology businesses, and 12 of the world’s 20 largest pharmaceutical companies. In addition to those above, other world-class institutions and corporations — like Princeton University, Abbott Laboratories, and Novo Nordisk — are less than 50 miles away.
Keep Good Company

Primed to connect North Jersey’s pharmaceutical and biotech network with Manhattan’s financial, education, and healthcare powerhouses, The Cove positions its tenants to partner with dozens of leading institutions and companies.
If NYC follows Boston example:

- Pharma will be attracted to new development
- New construction has good chance of being pre-leased prior to completion
- Some companies will seek NYC-adjacent markets:
  - Lower rents
  - Amenity-rich properties
  - New development offerings
  - Public transit

Overall NYC market is strong & growing

- Largest concentration of most prominent academic medical centers in the world graduating more than 20 startups/year
- $2 billion state and city public investments have been committed — rising tide will lift all boats, in NYC and adjacent markets
- 6 Incubators will graduate 93 companies in 2–3 years, fueling need for step-out space at 2–3X multiples
- New companies have received funding — these are mid-sized and large companies of future
- Uptick in new life science companies expected as a direct result of COVID-19 research conducted at NYC academic medical institutions
- NIH funding and VC investment in NYC life sciences are at an all-time high
- Tech boom creates unique opportunities for innovation with life sciences tenants (Google, Facebook, Apple, Amazon)
- Lab demand has grown significantly both in terms of number of tenants (42) and total space (850,000) CBRE
- Low vacancy rate of 2.3% with rising rents; 3+ million sqft needed over next 10 years to accommodate growth
- 5 signature projects underway on spec, mostly conversions
New Jersey: Continues to Play Leading Role in Life Sciences

• Home to 2200+ companies, including 12 of the top 20 pharmaceutical players
• Boasts a highly skilled workforce with over 225,000 scientists and engineers
• Historical pharma footprint has contracted but resilient market has transitioned to biotech operations, generic drugs, smaller R&D, and pharma operations – positioned for strong growth
• Many large & growing companies have relocated or expanded operations in NJ, especially international companies
• New & emerging technologies like cell/gene therapy and small scale biomanufacturing are also driving new demand
• NJ life science companies at the forefront of the COVID-19 battle which is driving new requirements supported by government funding; several big pharma requirements have occurred especially in testing and diagnostic areas
• Little new construction – market is tightening, with rents increasing for high-quality, second generation space
NJIT’s Ying Wu College of Computing recently opened pilot academic campus and will expand; NJIT School of Biomedical Engineering & Rutgers also interested

International companies active in Jersey City; 6 of 9 leases signed since 2017 by internationally based firms

Whole Foods will open new Northeast headquarters in 94,950 sq ft in JC (2020)

Jersey City, Hudson County Board of Education and Liberty Science Center announce plan for Liberty Science High School at SciTech Scity, which will break ground in 2021 (2020)

95 Greene Street purchased for $94.5 million and being repurposed by Thor Equities for life sciences, healthcare and tech tenants (337, 890 sq ft) (2020)

Merck spinoff Organon & Co leased 110,000 sq ft in Goldman Sachs tower for new global headquarters (2020)

Evergreen Therapeutics raised $19m Series A round and broke ground on new manufacturing facility in Springfield, NJ (2020)

Claris Biotherapeutics raised $12m from Denmark venture capital firm (2020)

Publicly traded Synexis moves from North Carolina to Jersey City due to connectivity, deep talent pool and collaborative ecosystem (2019)
New Jersey is continuing to find ways to enhance and build for the future with a new $11.5 billion commitment to sustainable economic development.

**NJ Has a Strong Incentive Base**

- Multiple funding channels to attract and sustain a diverse *Innovation Economy*.
- $2.5 billion for **Investments in Transformative Projects**: Up to $250 million for ten projects.
- **Community-Anchor Institutions**: $1.2 billion for innovative new investments to leverage the economic development missions of universities, hospitals, and other non-profits.
- **Innovation Evergreen Program**: Investment in venture fund locating in NJ - $300 million (over six years).
- **Angel Investor Tax Credit**: $210 million.
- **Funding for Emerging/Biotechnology Firms**: $360 million in expanded NOL transfers.

**NJ Emerge Program**

- Newly enacted in 2020 to replace the former NJ Grow incentives program.
- Awards state tax credits on a per employee basis to companies expanding or relocating to New Jersey.
- Credits will be earned on an annual basis for a term of up to 7 years.
- Amounts vary based on geography and other factors.
- In addition to the “base” amount per job, companies can earn additional amounts based on a menu of 20 potential project characteristics subject to an overall maximum per job.
- With allowable bonuses, Jersey City projects can be awarded up to $6,000 per job per year ($42,000 over seven years).
A Transit–Rich Nexus

Linked to road, rail, river, and air connections, The Cove is accessible from just across town, clear across the country, and around the world.

While three nearby New Jersey Turnpike exits and ample on-site parking cater to car commuters, mass transit links are abundant; a planned ferry stop servicing Manhattan, the NJ PATH train connecting to the World Trade Center station, three nearby stops on the Hudson–Bergen light rail, and access to Amtrak via Penn Station, which integrate The Cove into the rest of the East Coast life sciences corridor.
• The greater New York City marketplace has a number of subclusters emerging in Manhattan, flanked by two major live/work/play environments in the northeast and southwest.
  • Long Island City
  • Jersey City

• Jersey City is the gateway between New York City and New Jersey

• Opportunity: Create Global Destination Hub for Life Science/ Tech/ Healthcare
Located in the heart of the Eastern U.S. Life Sciences Corridor, one of the world's most concentrated locations for life sciences, tech, and healthcare.
Vibrant, Diverse, Open

The Cove offers anyone who lives, works, or plays on site abundant options: parks, communal gardens, event venues, terraces, and community gatherings.

A comprehensive life sciences campus demands thoughtfully designed outdoor spaces and innovative indoor-outdoor integration. From lush greenery and vertical gardens to eye-catching biophilic design pieces to event spaces to terraces, The Cove is a waterfront park that brings the outdoors in and the indoors out — for tenants, residents, and the Jersey City community alike.
Equal Parts Campus and Catalyst

Welcome to East Coast evolution. From this inclusive and versatile platform in Jersey City, we’re building inspiration and creating innovation.

- Lab/tech office: 1.4m SF
- Residential: 1.6m SF
- Parking: 1.700 parking spaces
- Gross: +/- 3m SF
- Mixed-use campus setting
- Large floor plates 25,000 - 50,000 SF
- Light and air on all sides of buildings
- Waterfront park
- Surrounded by art and cultural institutions
- Proximity to many higher-education institutions and pharmaceutical companies
- Largest concentration of biomedical engineers in the world
- Over 1,200 3 & 4 star hotel rooms in a 1.25 mile radius
- 30,000+ SF of on-site retail space and services
- Access to light rail, subway, trains, ferries, highways, international airports, and micromobility options
Cultivate an Innovation Environment

Customizable labs and offices function as a technological platform to empower firms to succeed — today and tomorrow.

Spaces
- Academic and commercial labs
- VC offices
- Incubators and accelerators
- Maker spaces
- Core and specialized facilities
- Vivarium
- Multi-tenant and single-tenant floors
- Residential

Amenities
- Lobby
- Conference Center
- Co-working facilities
- Executive conference rooms
- Food courts
- Fitness center
- Terraces
- Retail
- Parks

Infrastructure
- Building support services
- Shared lab services
Flexible Spaces to Shape the Future

Great interiors facilitate great work. Our ground-up, built-to-suit offices and labs offer the height of functionality, beauty, sustainability, and convenience — from focused and clutter-free labs to engaging, collaboration-friendly innovation spaces.
Phasing Plan

- Academic and Commercial — Phase 01
- Commercial — Phase 02
- Residential — Multiphase
PATH TO NET ZERO CARBON

1. **PASSIVE STRATEGIES**
   - Building Massing, Shading Envelope, Thermal Mass, Glazing

2. **EFFICIENT SYSTEMS**
   - District CHW / HHW, Geothermal, DHW Heat Pumps, LED Lighting
   - Heat Recovery Chillers, DOAS w/ Energy Recovery
   - Smart Controls, User Education, Battery Storage, Thermal Energy Storage

3. **ENERGY RECOVERY**
   - Solar PV, Biomass
   - Virtual Power Purchase Agreement (VPPA)
   - Renewable Energy Credits (RECs), Carbon Offsets

4. **AWARENESS + CONTROLS**
   - MANAGE & CONSERVE CONSUMPTION

5. **ON-SITE RENEWABLES**

6. **OFF-SITE RENEWABLES**

7. **OFFSETS**
   - GENERATE CLEAN ENERGY
Aquathermy
Thermal energy from wastewater

- Geo-exchange like system that uses wastewater (rather than ground) as source
- Source where there is high-density development
- Warmer than ambient and ground in winter
- Cooler than ambient in summer
- Over 550 installations worldwide
  - Oslo, Norway
  - Sandvika, Norway
  - Beijing, China
  - Washington DC
  - Vancouver, BC
  - Denver, CO
  - Vail, CO
thermal energy recovery from wastewater
LOAD PROFILE

24 Hour Peak Load Profile

MW

MW Available

Resi+Life Sciences Heating + DHW Load
Landscape

Site Restoration
- Remediated Brownfield Site
- Combined Sewer Stormwater Retention Tank
- Waterfront Reclamation
- Bio-Engineered Embankment
- Restored Wetland Habitat

Urban Realm
- Full Public Waterfront Access
- Eco-Education Loop
- Walkable Streets
- Developed Landscape & Public Parks
- Dedicated Bike Lanes & Bike Storage
- Abundant Public Transportation
- Bird Friendly Building Facades

Healthy Living
- Live-Work-Play Community
- High Indoor Air Quality
- Abundant Parks
- Green Roofs & Terraces

Energy Conservation
- Co-Generation District Heating & Cooling
- Renewable Energy: Geothermal & Solar
- 40% Energy Cost Reduction Goal
- Future Proof / All Electric Ready Buildings
- Dedicated Electric Vehicle Parking
- High-performance Building Facades
- Low Embodied Carbon Construction

Certification Standards
- WELL Certified
- LEED Silver Baseline Performance
Landscape

Site Restoration
- Remediated Brownfield Site
- Combined Sewer Stormwater Retention Tank
- Waterfront Reclamation
- Bio-Engineered Embankment
- Restored Wetland Habitat

Urban Realm
- Full Public Waterfront Access
- Eco-Education Loop
- Walkable Streets
- Developed Landscape & Public Parks
- Dedicated Bike Lanes & Bike Storage
- Abundant Public Transportation
- Bird Friendly Building Facades

Healthy Living
- Live-Work-Play Community
- High Indoor Air Quality
- Abundant Parks
- Green Roofs & Terraces

Energy Conservation
- Co-Generation District Heating & Cooling
- Renewable Energy: Geothermal & Solar
- 40% Energy Cost Reduction Goal
- Future Proof/All Electric Ready Buildings
- Dedicated Electric Vehicle Parking
- High-performance Building Facades
- Low Embodied Carbon Construction

Certification Standards
- WELL Certified
- LEED Silver Baseline Performance
Landscape

Site Restoration
- Remediated Brownfield Site
- Combined Sewer Stormwater
  Retention Tank
- Waterfront Reclamation
- Bio-Engineered Embankment
- Restored Wetland Habitat

Urban Realm
- Full Public Waterfront Access
- Eco-Education Loop
- Walkable Streets
- Developed Landscape & Public Parks
- Dedicated Bike Lanes & Bike Storage
- Abundant Public Transportation
- Bird Friendly Building Facades

Healthy Living
- Live-Work-Play Community
- High Indoor Air Quality
- Abundant Parks
- Green Roofs & Terraces

Energy Conservation
- Co-Generation District Heating & Cooling
- Renewable Energy: Geothermal & Solar
- 40% Energy Cost Reduction Goal
- Future Proof/All Electric Ready Buildings
- Dedicated Electric Vehicle Parking
- High-performance Building Facades
- Low Embodied Carbon Construction

Certification Standards
- WELL Certified
- LEED Silver Baseline Performance
Live-Work-Play Community

- Research
- Universities
- Hospitals
- Live
- Cafes/Retail
- Live Laboratories
- Culture
- Live Academic Centers
- Medical Centers
- Theaters
The Cove “Smart Cities”

Creating a “Circular” Neighborhood:
- Green infrastructure & Campus Wide Systems
- Network of Natural & Semi-Natural areas strategically designed to solve problems with storm water management
- Heat Stress
- Air Quality
- Biodiversity
- Energy Consumption

Smart City Technologies, Services and Connectivity:
- Using data to improve community experience

Art as Science:
- Linking artistic intersections with scientific discoveries

Diverse Talent Development:
- Link educational and workforce development programs to training hubs in Innovation Districts (pharma, medical, tech, manufacturing).
- Create targeted partnerships with K-12 school systems, community colleges, 4-year colleges.
- Live / Work / Play environments that include day care and family friendly community entertainment/gathering opportunities

Choreographing Creative Collisions and Collaborative Innovation Post COVID-19:
- Programming and Events (Diversity)
SMART NEIGHBORHOOD

Smart neighborhoods which incorporate smart technologies to enhance health, communication and collaboration, and ensure a sustainable future.

**Solitary Building**
Little to no interaction with occupants

**Standard Buildings**
Minimal interaction with occupants: thermostat control, lighting control

**A Human-Centered Digital Ecosystem**
Seamless technology integration into the architecture of the building. Building automatically responds to occupants in a symbiotic relationship to improve experience.

- Welcome back Lucas, your lights and temperature are set to your preferred settings
- There's a sale at your favorite store
- Don't miss the happy hour in the building lobby!
- Mia, your dinner reservation is in 15 minutes, leave now to make it on time.
HUMAN-CENTERED DIGITAL ECOSYSTEM

Predictive Built Environment
A robust technological infrastructure for a reactive and resilient environment, improving the performance and experience of the built world.