



PENNOVATION WORKS

Where Ideas Go To Work



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Pennovation Works' long-term development capacity (approximately 1.5 million square feet)



Pennovation Center

A Culture of Innovation

The Pennovation Works is a distinctive blend of offices, labs, and production space developed by The University of Pennsylvania (Penn) to link the intellectual and entrepreneurial initiatives necessary for advancing knowledge and generating economic development. The master plan articulates a phased approach, with initial activity focused on site improvements and renovating existing buildings, beginning with the 2016 completion of the Pennovation Center, and continuing with the 2017 renovation of the Office Building and planned 2020 completion of the Lab Building renovation. When completed, Pennovation Works will grow to more than 1.5M square feet.

The 23-acre property adjacent to Penn's campus accommodates, in state-of-the-art facilities, researchers, entrepreneurs, and industry partners solving real world problems and translating inventiveness into viable ventures. By grouping facilities for innovation, technological development, and artistic production/exhibition, Penn envisions a multifaceted workshop for harnessing and commercializing the tremendous creative potential in the region.

The Pennovation Works is anchored by the Pennovation Center, a business incubator that provides flexible office, lab, and coworking space, and acts as a hub for collaboration and the exchange of ideas for innovators from all disciplines.

This property is strategically situated in a valued location within the Lower Schuylkill Innovation District, and is envisioned to become a keystone securing University City, Center City, and the emerging Innovation District as three engines of Philadelphia's economy.



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Potential site parcelization

A Flexible Framework

Design goals

Connect

- University
- River/River Trails
- City/Neighborhoods
- “Innovation District”

Catalyze development

- Mixed-use Innovation
- Cultural Hub
- Events-based Spaces

Spirit of ground-up innovation

- Industrial Character
- Working Landscapes
- Flex-Loft Workspaces

Development principles

Entrepreneurship, creativity, and innovation

- University Research
- Technology Transfer
- Design/Arts Innovation

Foster collaborations and partnerships

- Institutions
- Corporations
- Research Entities

Offer responsive and flexible spaces

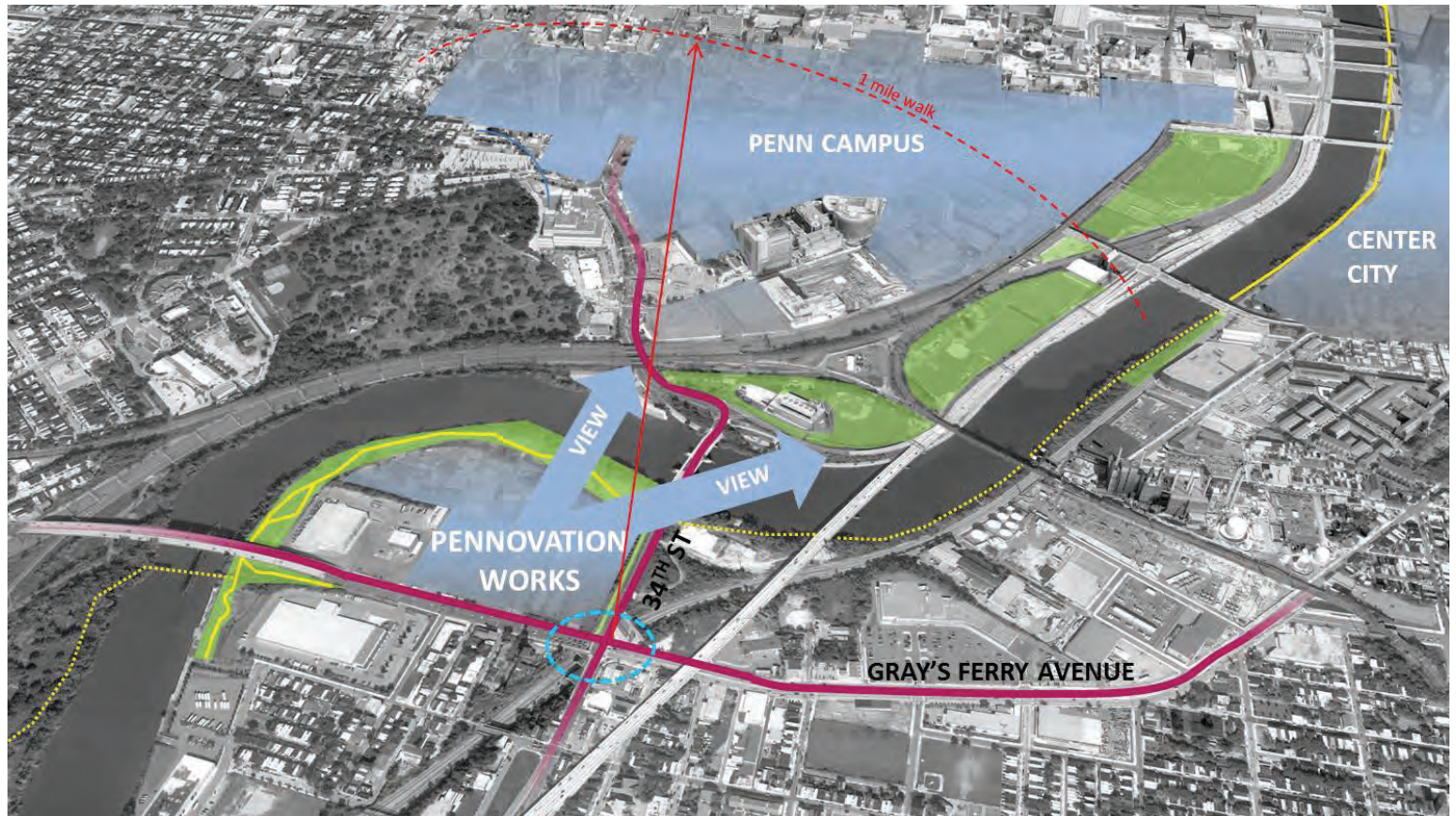
- University innovation and research needs/ambitions
- Real estate market demand



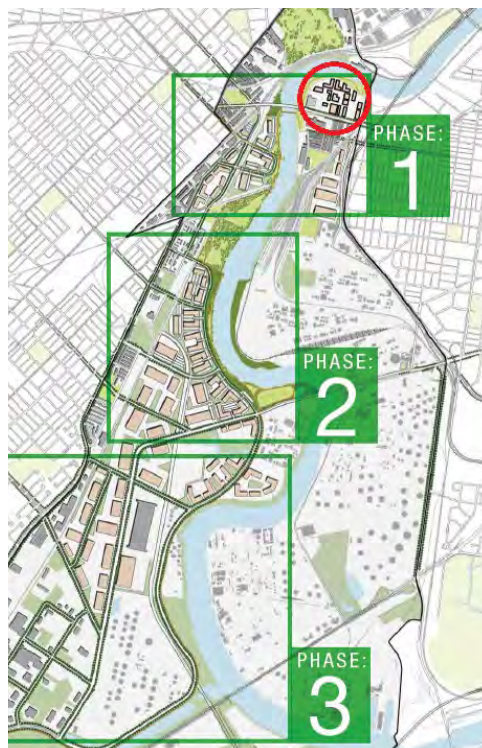
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Pennovation Works site in relationship to Penn campus and Center City Philadelphia



Revitalization plan for Philadelphia's Lower Schuylkill River

A Strategic Site

The Pennovation Works is a highly visible site that is well connected to the region, Center City, and University City. Recent investments in open space trails have connected the site to the Schuylkill River with dedicated public access and riverside amenities. Penn, the Philadelphia Industrial Development Corporation (PIDC), and the City, along with public agencies, are joining efforts to improve the pedestrian and traffic connections to the site, reposition properties in the surrounding areas, and create improved vehicular and pedestrian access to the neighborhood and University City.

The Pennovation Works framework plan aligns with PIDC's vision to revitalize the 500-acre Lower Schuylkill River district into a regional Innovation District.

Early implementation efforts are underway to establish a distinctive Innovation District Gateway at 34th and Grays Ferry Avenue. New investment and PIDC master planning will drive the transformation into a mixed-use area featuring cutting-edge innovation, the next generation of entrepreneurs, and expanded university-based research commercialization.

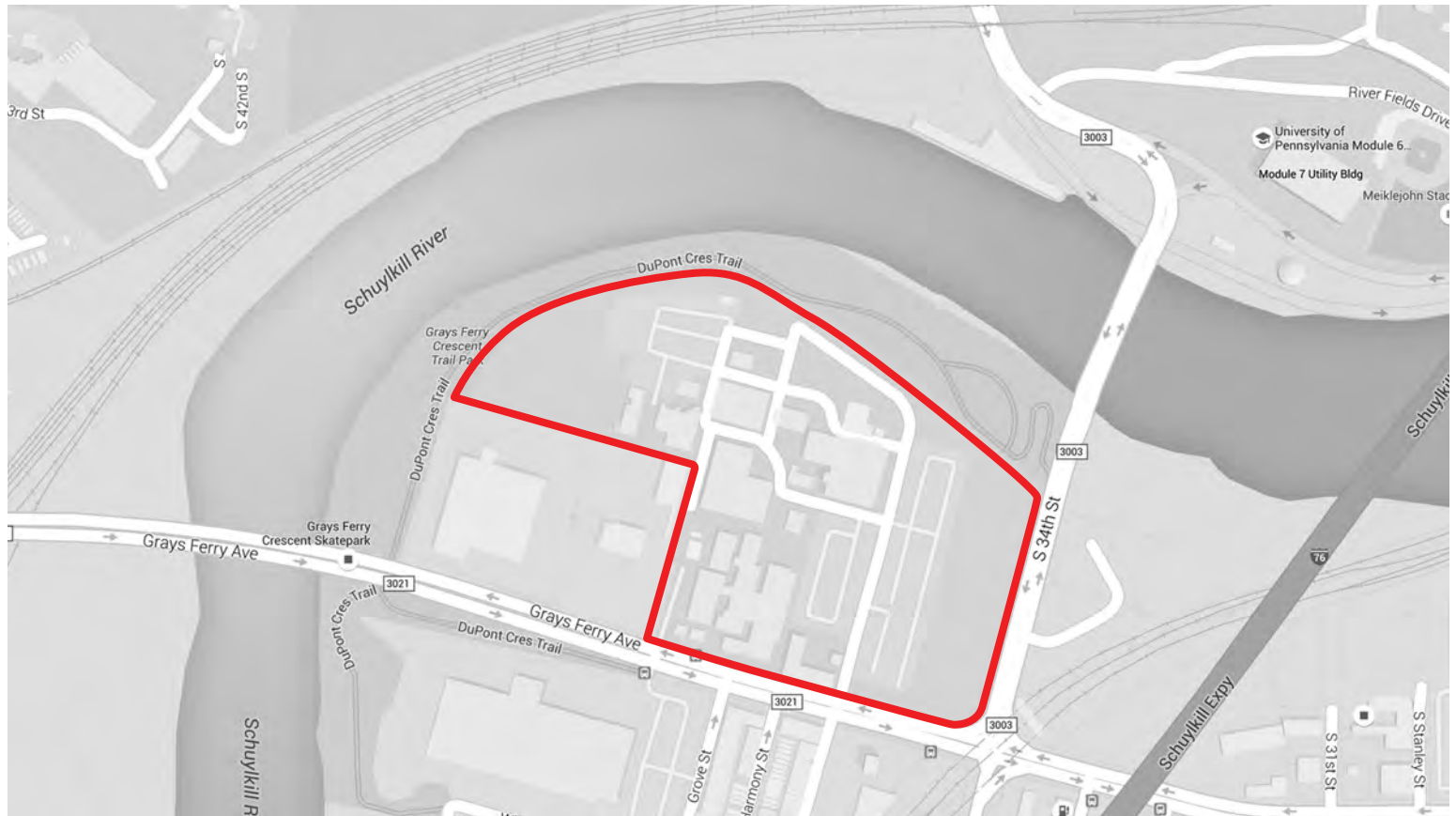
Businesses that are located at Pennovation Works are eligible to receive significant state and local tax benefits including abatement of Business Privilege Tax, Net Profit Tax and Real Estate Tax.



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Aerial map of Pennovation Works site with street names

Getting There

Pennovation Works is located at the intersection of 34th Street and Grays Ferry Avenue (3401 Grays Ferry Avenue).



Parking

Limited parking is available on the site.



Public Transportation

SEPTA bus routes 12, 49, and 64 service the site.



Bike Share

Nearby Indego bike share stations are located at 3499 Civic Center Blvd., 246 S. 40th Street, and 598 S. 43rd Street.



Walking Escort Service

Penn offers a Walking Escort Service which can be requested by calling 215-898-WALK (9255)



Penn Transit

Penn Transit Services offers an on-demand transport service to Pennovation Works for all Penn Community members holding a valid Penn Card or Pennovation ID.

Call (215) 898-RIDE (7433) and select Option 3.



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Greys Ferry site, circa 1940 (Photo courtesy Allied Chemical and Dye Corporation Plant, Library Company of Philadelphia)



"Yard Scene: Acid Storage Tanks and Cars,"
Harrison Brs & Col, 1902 (Photo courtesy Kislak
University of Pennsylvania Libraries Special
Collections)

History of Innovation

The Pennovation Works is a 21st Century hub for innovation and industry. Beginning with the creation of the Pennovation Center - a building redesigned and adapted from a 20th Century paint factory - the Pennovation Works consists of facilities existing for the purpose of turning ideas into economic opportunities for the surrounding area and neighborhoods. Interestingly, when you take a look at the site's colorful history, you see that it's been an incubator for industry and innovation in the Philadelphia area for over 200 years.

History:

Beginning in 1690, the current Pennovation Works site was host to the Lower Ferry crossing of the Schuylkill River, which served as the Southern entrance to Philadelphia throughout the 18th century. In the mid 1700s, ferry operator George Gray began to develop the area surrounding the crossing, opening a tavern and designing a garden to attract patrons to the area, with waterfalls, grottoes, and greenhouses. On the west bank of the Schuylkill River, Gray's Garden became important to the local horticultural movement, which included celebrated gardens at The Woodlands and Bartram's Gardens on the west side of the Schuylkill River (opposite the Pennovation Works site) and seed manufacturers on the east bank of the river, just a few blocks from the site.



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In 1778, George Gray replaced the ferry crossing with a floating bridge that could be pushed aside to accommodate barges and ships navigating the river. Sixty years later, in 1838, the Philadelphia Wilmington and Baltimore Railroad replaced the heavily used Gray's Ferry bridge with a permanent railroad bridge, the Newkirk viaduct. With Baltimore and Philadelphia connected via railroad for the first time, industry began to thrive along the riverbank on what is now the Pennovation Works site. Factories sprung up in the location due to its access to the railroad as well as to the river. The site was also far enough from the city center that industry like chemical production and slaughterhouses could operate safely.

From 1865 to 1917, Harrison Brothers operated an industrial chemicals and paint manufacturing company on the site, relocating their headquarters from their original hub in Kensington. Harrison Brothers were leaders in development of chemical processes, and with contemporary innovations in the production of tin cans, the company could make and distribute ready-mixed paint for the first time to average citizens. (Before these innovations, individual batches of paint needed to be mixed with new pigments each time, without the option to package or sell in large batches.) By the late 19th century, the company was one of the top color manufacturers in the United States, employing over 400 workers at its 30-acre Grays Ferry site. Harrison Brothers expanded the site to include facilities for their employees like a restaurant and athletic field, as well as their own power plant and the first private telegraph line in the country.



Dupont Research Laboratories, 1957 (Photo Courtesy: City of Philadelphia Department of Records)

In 1917 the prominent E.I. DuPont & Nemours company purchased Harrison Brothers and Co. and the Grays Ferry site became home to DuPont's new paint and finishes department. Throughout the second half of the 20th century, the site - and in particular the current Pennovation Center structure - was a facility for both production and chemical research, and was responsible for many innovations in the field. Successful products developed on the site include Duco laquer, a quick-drying automotive paint that was durable and revolutionized auto production by dramatically reducing the paint's drying time. While manufacturing ceased there in the 1980s, DuPont continued with research there until 2009. During the Harrison Brothers and DuPont company eras, at least 11 patents are believed to originate from research conducted at the site.

In 2010 the University of Pennsylvania purchased the site and worked closely with the Environmental Protection Agency and the Department of Environmental Protection in order to clean up and protect the site and its surrounding areas. As the Schuylkill River has its revival with the Bartram's Mile and extension of the Trail, this industrial riverfront is again establishing itself as a place of connection and progress, where ideas go to work.

Today:

Officially opened in September 2016, the Pennovation Center is a 58,000sf business incubator and laboratory that aligns and integrates researchers, innovators, and entrepreneurs for the commercialization of research discoveries. Landscaping for the entire site includes storm water management techniques, increased connections between buildings, and access to Schuylkill River trails. As development of the site continues, Pennovation Works is aligning University-related research functions with private commercial enterprises seeking to operate in close proximity to the University and its neighboring institutions.





25,000 sq.ft. Office Building



Location of Office Building on site

Inventor Office Building

The Inventor Office Building is a 3-story facility offering office/flex space designed for start-up companies and entrepreneurs whose needs have expanded beyond the incubator model. Renovated in 2016-17, the Inventor Office Building consists of 24,000 rentable sq.ft. that can be modestly fit out to meet a tenant's needs. Approximately 16 companies currently occupy the Inventor Office Building, most in spaces close to 2,000 sq.ft. each. Amenities include a shared pantry. The Inventor Office Building accommodates a wide range of tenants, from robotics to life science.

Located near the entrance to the Penovation Works site, the Penovation Center, several other renovated research facilities, and the central Penovation Plaza, the Inventor Office Building is connected to the spirit of community and collaboration developing at Penovation Works.



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Pennovation Lab Building



Location of Lab Building on site

Lab Building

The Pennovation Lab Building is a 65,000 +/- rentable square foot scientifically advanced, multi-tenant laboratory and office building located within Pennovation Works. The building opened for occupancy in the Winter of 2021.

Ideal tenants are early stage companies requiring 2,000 SF to 6,000 SF —companies that have secured early-stage funding and outgrown their incubator space either at Pennovation or moving from other locations. The Pennovation Lab Building is positioned to enable such companies to locate and grow at Pennovation Works, benefiting from the programming and amenities already available on the site and adding critical mass to this growing innovation community.

Lab areas on each floor consist of 2,000 SF modules that can be combined or subdivided based on tenant requirements. Utilities are modularized similarly and will be available without disruption to adjacent modules. The Building's design is an industrial maker space aesthetic. Shared amenities in the building include a two-story lobby with seating areas and space for events and programs, lounge, kitchenette, and space for dry storage facilities. On-site amenities include the central Pennovation Plaza, Pennovation Café, and several of the University of Pennsylvania's Penn Center for Innovation programming, events, and services.

The Lab Building's proximity to the Pennovation Center and several other renovated research facilities contributes to the spirit of community and collaboration developing at Pennovation Works.



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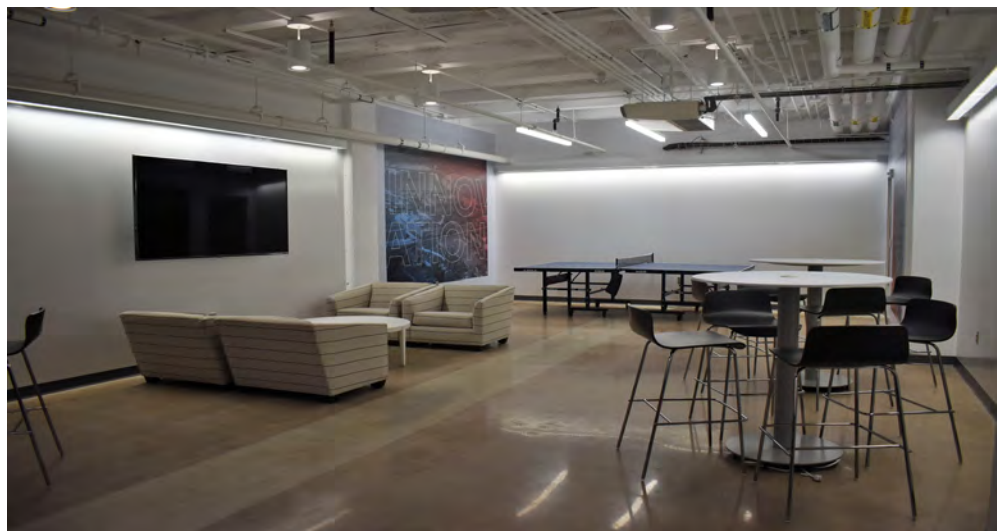
Lab Building Entry and Common Areas



Lobby Entry



Lab Lobby

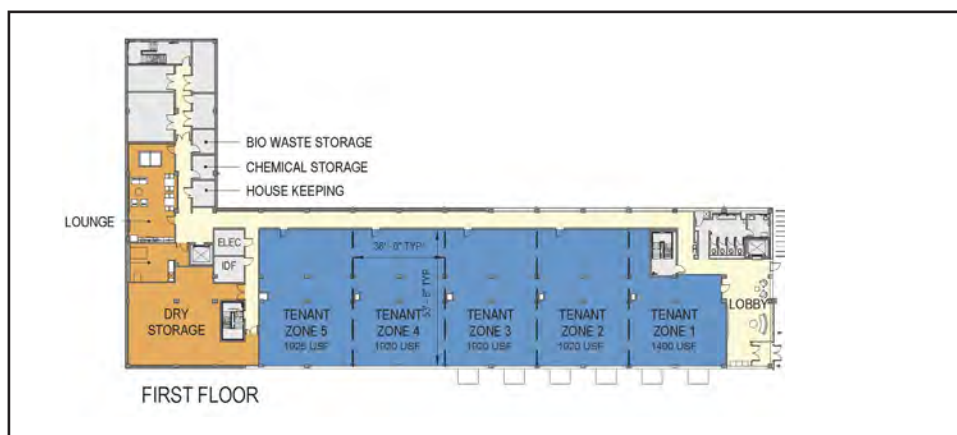
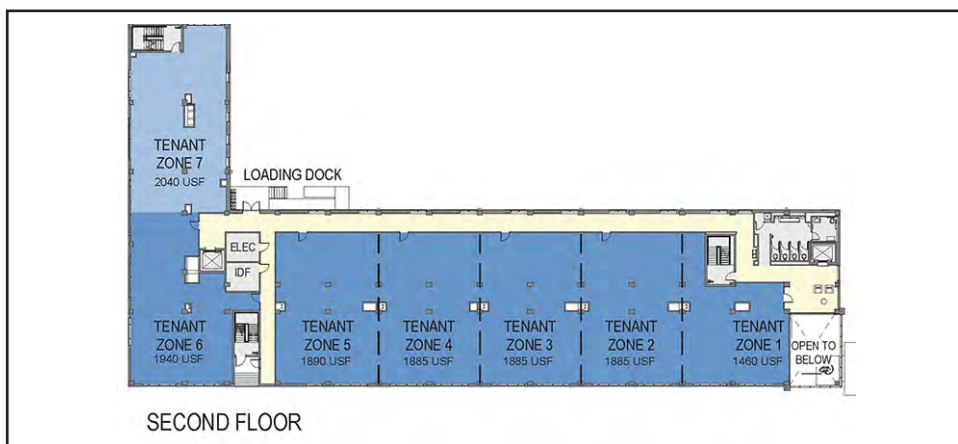
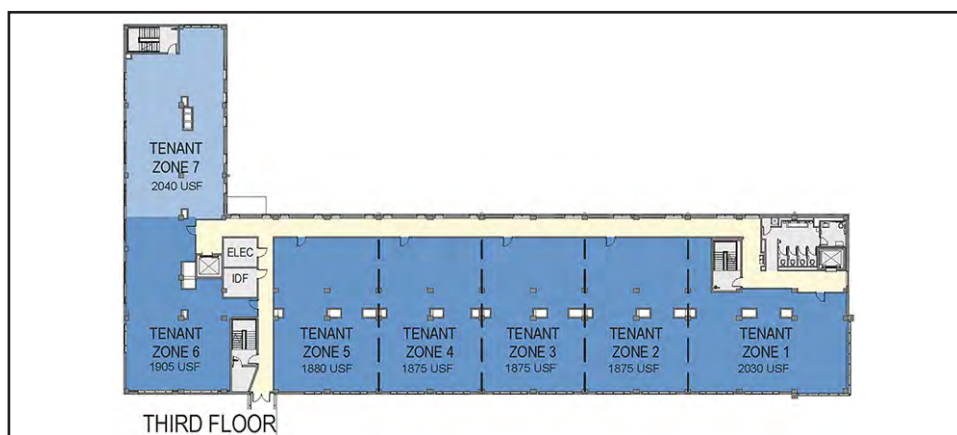
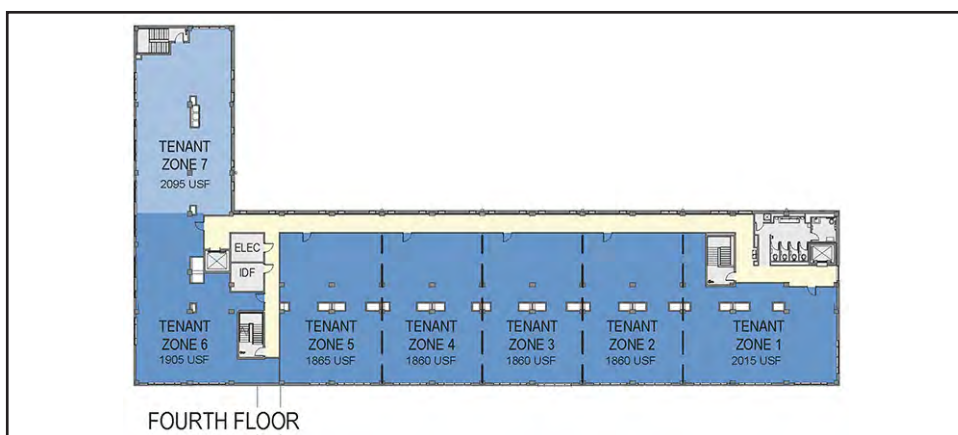


Lab Lounge and Kitchenette



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Lab Building Floor Plans



KEY

- WET LAB AND OFFICE/FLEX
- DRY LAB AND OFFICE/FLEX
- SHARED



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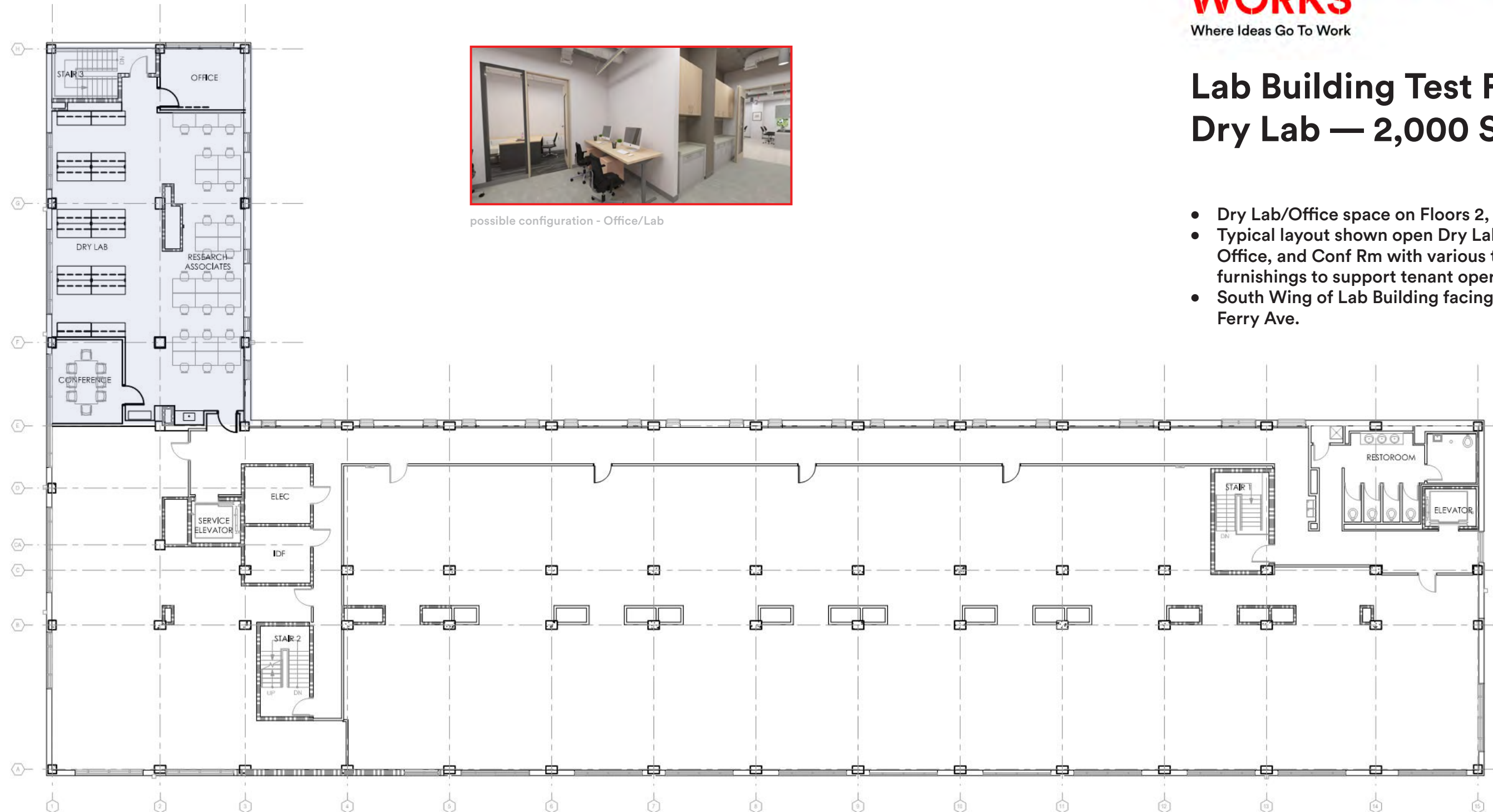
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Lab Building Test Fit Dry Lab — 2,000 SF

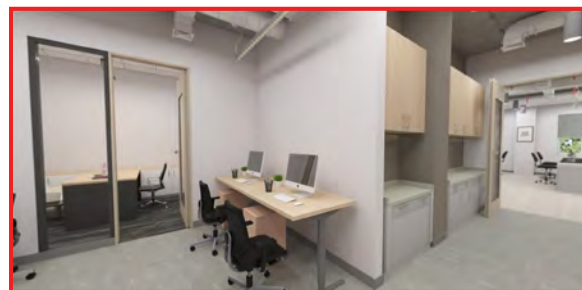
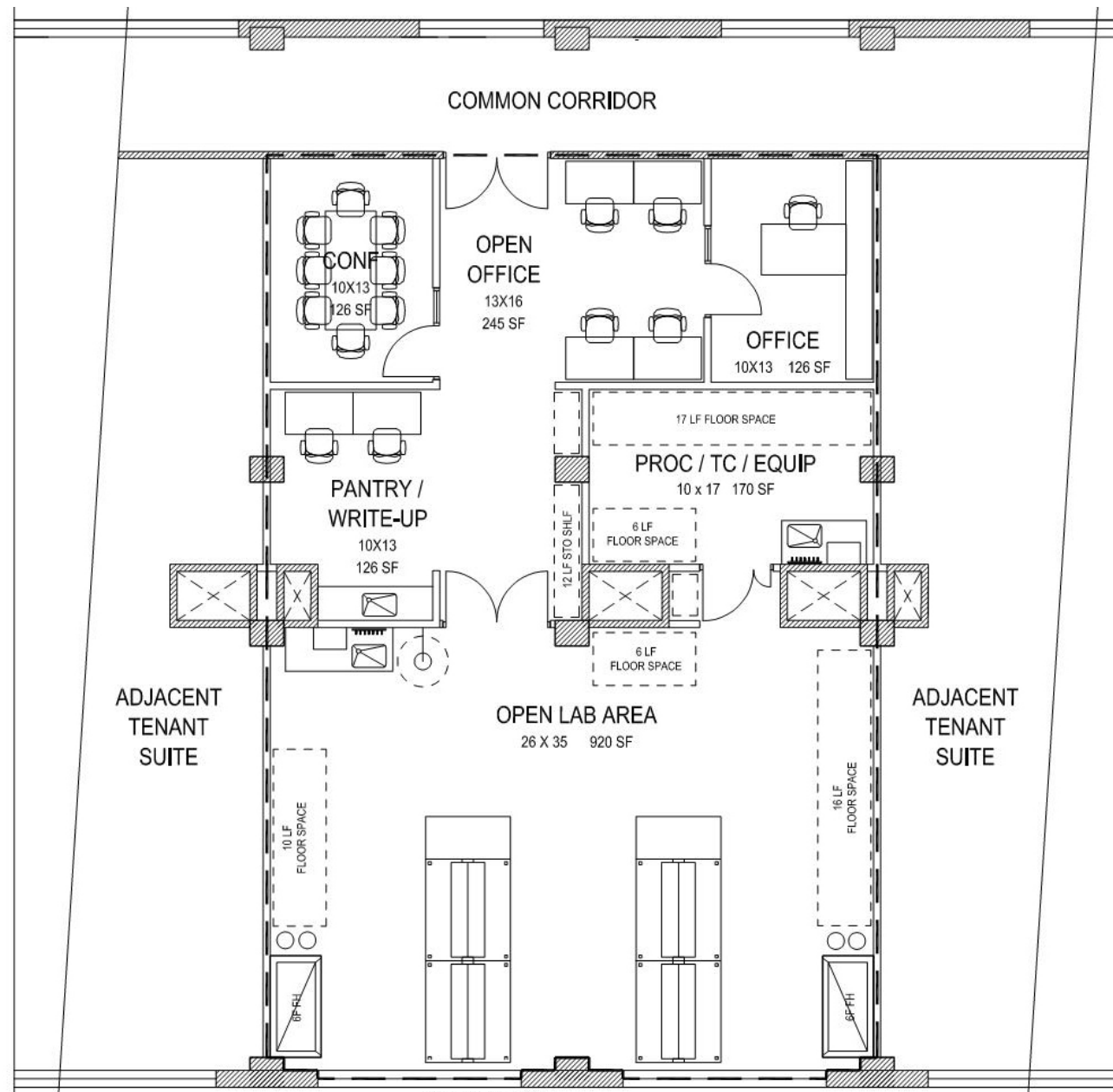
- Dry Lab/Office space on Floors 2, 3, and 4.
- Typical layout shown open Dry Lab area, Office, and Conf Rm with various tables and furnishings to support tenant operations.
- South Wing of Lab Building facing Grays Ferry Ave.



possible configuration - Office/Lab



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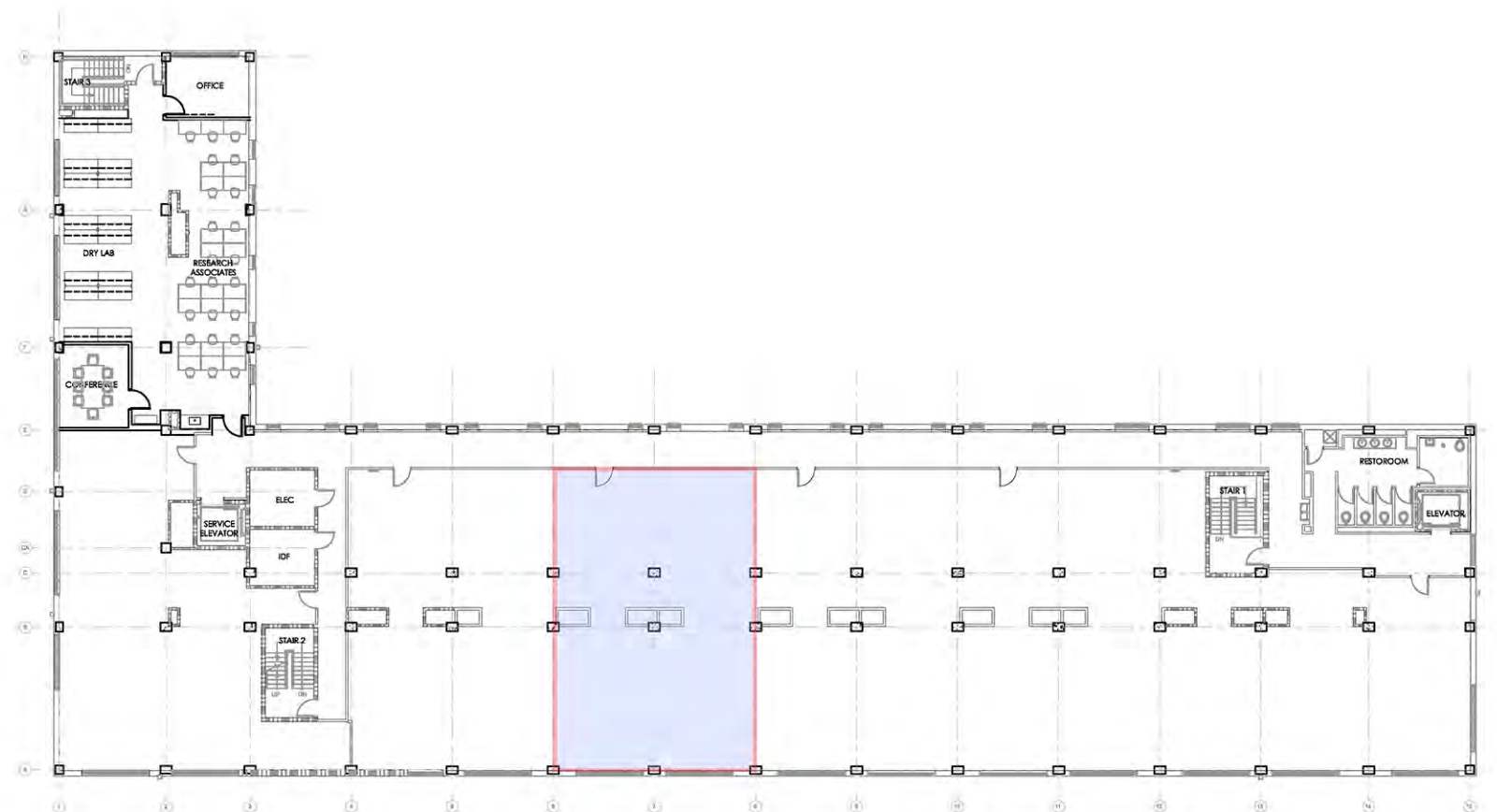
possible configuration - Office/Lab

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Lab Building Test Fit Wet Lab — 2,000 SF

- Standard Wet Lab suite.
- Wet Lab space on Floors 1, 2, 3, and 4.
- Typical layout shown with (2) 6 ft hoods, (2) lab sinks, (1) pantry sink, (1) emergency shower, and various tables and furnishings to support tenant operations.
- East face of Lab Building looking over Pennovation Works lot and meadow.



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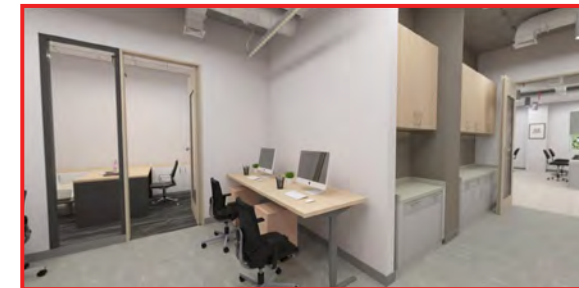
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Lab Building Test Fit Wet Lab — 6,000 SF

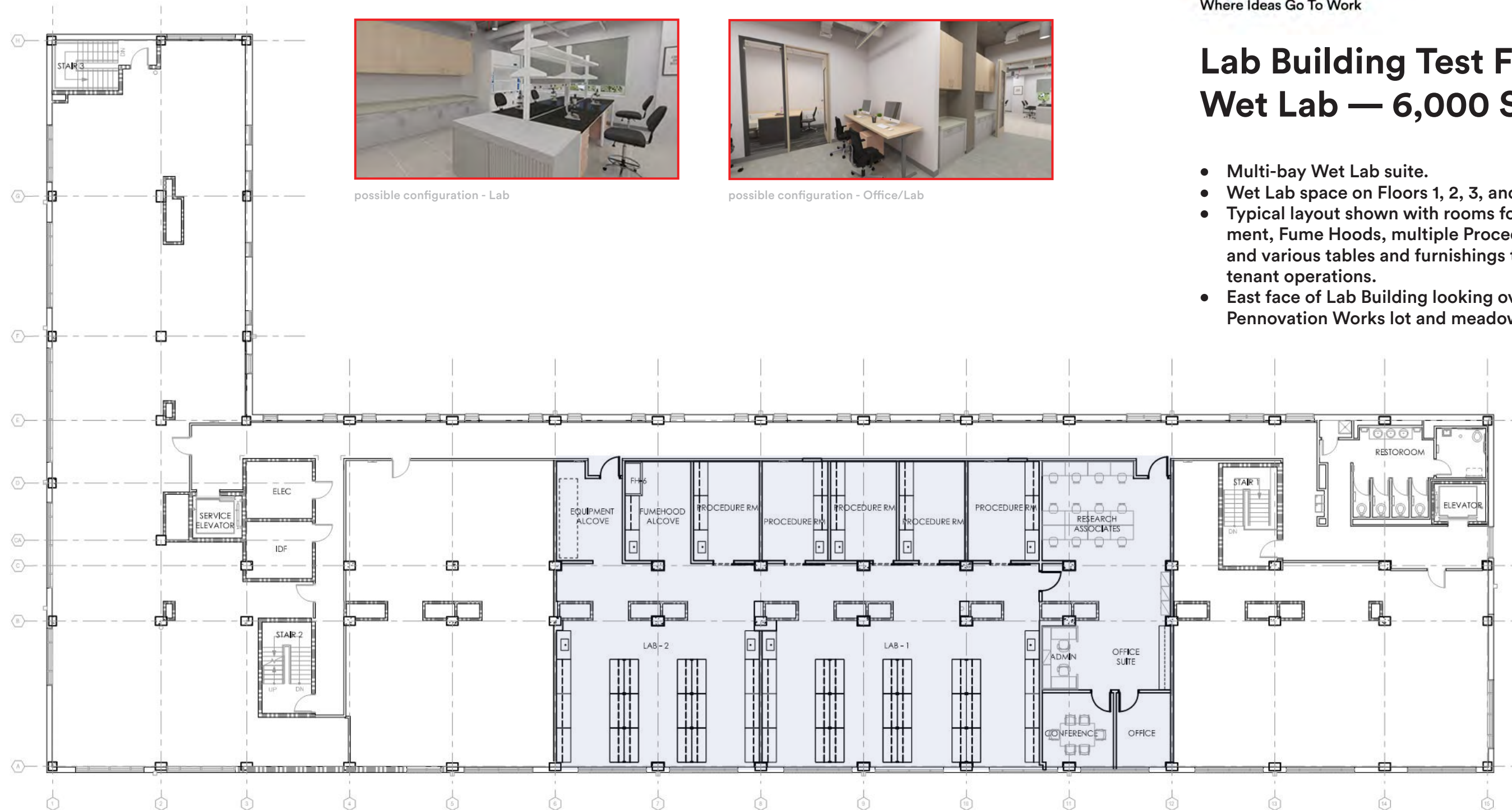
- Multi-bay Wet Lab suite.
- Wet Lab space on Floors 1, 2, 3, and 4.
- Typical layout shown with rooms for Equipment, Fume Hoods, multiple Procedure Rooms, and various tables and furnishings to support tenant operations.
- East face of Lab Building looking over Pennovation Works lot and meadow.



possible configuration - Lab



possible configuration - Office/Lab



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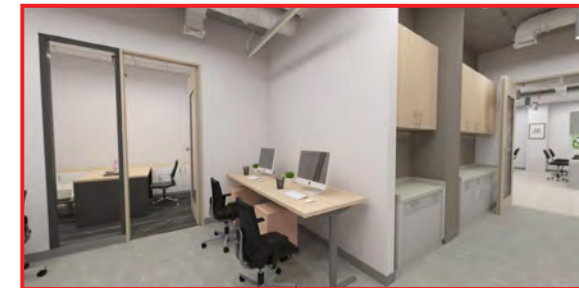
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Lab Building Test Fit Wet Lab — 8,000 SF

- Multi-bay Wet Lab suite.
- Wet Lab space on Floors 1, 2, 3, and 4.
- Typical layout shown with rooms for Equipment, Fume Hoods, multiple Procedure Rooms, and various tables and furnishings to support tenant operations.
- East face of Lab Building looking over Pennovation Works lot and meadow.



possible configuration - Lab



possible configuration - Office/Lab



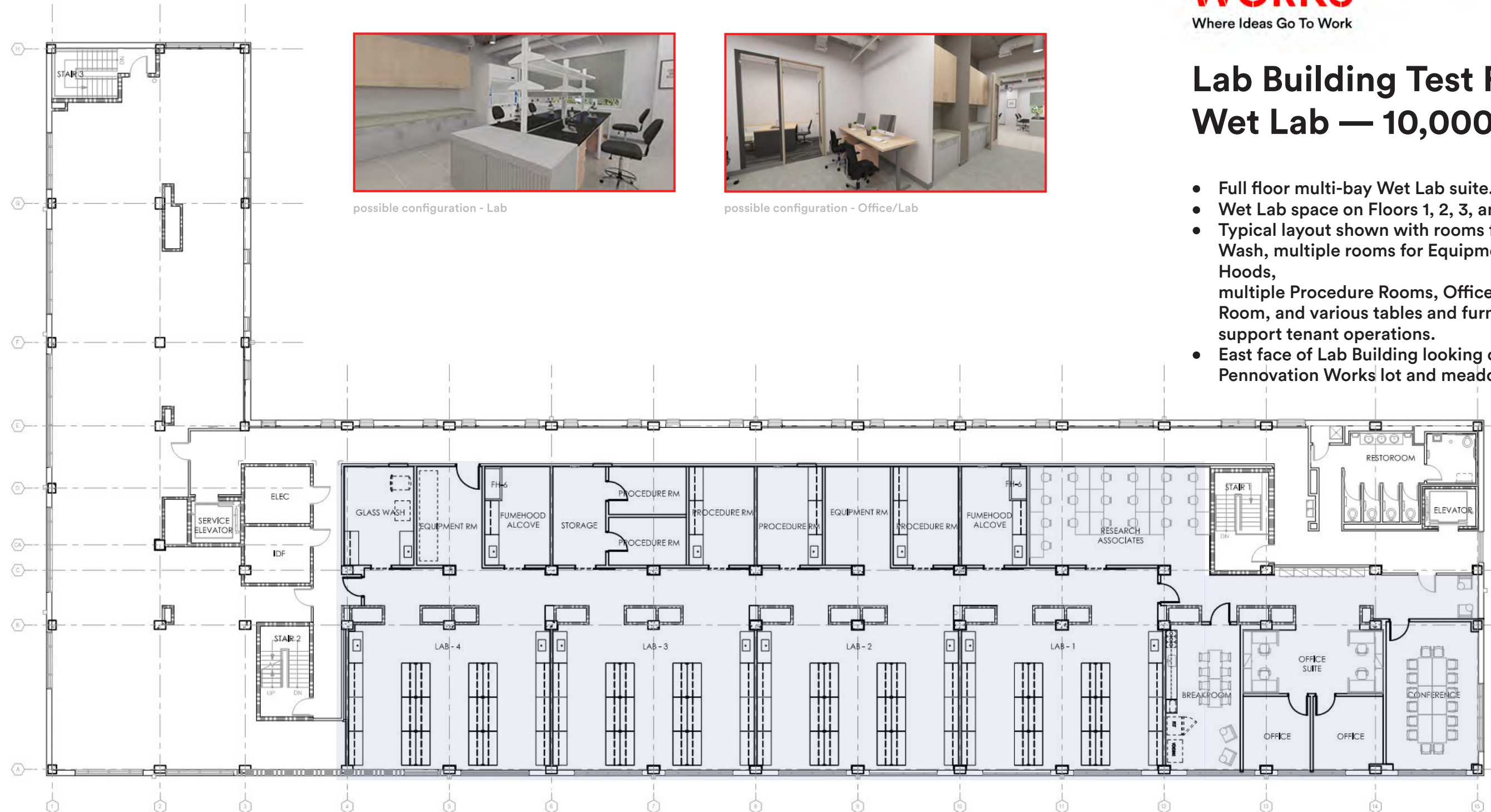
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Lab Building Test Fit Wet Lab — 10,000 SF

- Full floor multi-bay Wet Lab suite.
- Wet Lab space on Floors 1, 2, 3, and 4.
- Typical layout shown with rooms for Glass Wash, multiple rooms for Equipment, Fume Hoods, multiple Procedure Rooms, Offices, Break Room, and various tables and furnishings to support tenant operations.
- East face of Lab Building looking over Pennovation Works lot and meadow.



Lab Building Systems & Improvements

The landlord will deliver the leased premises in shell condition with perimeter walls insulated and drywall to be included in tenant improvements. In addition, the Lab Building offers:

HVAC

- Building HVAC provided via a high energy efficient Variable Refrigerant Flow (VRF) System with Heat Recovery. Landlord will provide one (1) VRF cassettes for each 2,000 square feet leased. Additional cassettes, if required, will be in tenant improvements. All distribution and installation to be included in tenant improvements.
- Laboratory Exhaust Systems capable of supporting exhaust hoods and dedicated equipment exhaust at 70 fpm face velocity at 18" sash height openings. All distribution and installation to be included in tenant improvements.
- Dedicated Duct Chases to each lab.
- 6 air changes per hour for wet lab areas.
- Office and Lab outside air provided by a redundant dedicated outside air system.

Electric

- 208/120V power provided to electrical closets on each floor, conduit runs from electrical closet to Tenant suite. Branch circuit distribution in tenant suite to be included in tenant improvements.
- Building provides (1) 400 kW diesel emergency generator. Connection to Building supplied emergency generator from electrical closet to Tenant suite, including conduit runs, if required, to be included in tenant improvements. A maximum of 2 circuits at 20A at 120V for each 2,000 square feet leased.

Plumbing

- Acid resistant drain and vent piping stacks run vertically and are stubbed outside shaft walls within each laboratory area for future connection by Tenant (zones 1-6 only). Tenant responsible for collection of hazardous waste at the tenant suite.
- Domestic Cold and Hot Water stubbed outside shaft walls within each laboratory suite.

Voice and Data

- A combined MDF/IDF room provided on the ground floor for incoming fiber optic cable services. IDF closets provided on floors 2, 3, and 4 for Tenant connections to each Tenant suite. Tenant provides its own tele/data closets and backbone fiber optic cables, via Building provided ceiling mounted common area cable trays.

Security & Life Safety

- On campus staff providing 24x7 site access control and systems monitoring.
- Cameras and Card Access Control at Building exterior doors and selected interior common areas. Tenant suite security and/or suite access control to be included in tenant improvements
- Fully Sprinklered Building with Fire Detection, redistribution as required within suites to be included in tenant improvements.
- Strobes and detectors in corridors and common areas. Additional as may be required to be included in tenant improvements.





Rendering of the Longfellow Life Sciences Research, Development and Manufacturing Facility



Future Location of Life Sciences Building on site

Longfellow Life Sciences Research, Development and Manufacturing Facility

Longfellow Real Estate Partners and the University of Pennsylvania formed a strategic partnership to plan and develop a ground-up, state-of-the-art life science facility inside the Pennovation Works ecosystem. The partnership marks the first development in the Philadelphia market for Longfellow Real Estate Partners, the largest privately owned commercial developer of life science buildings in the country.

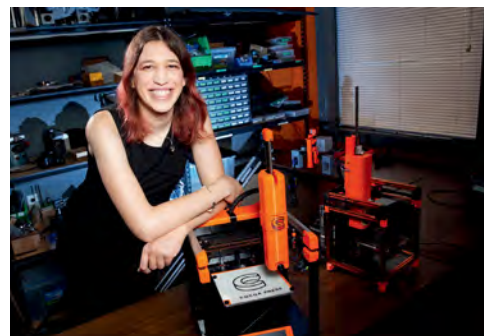
The newest development is a 455,000 square foot facility segmented into 387,000 square feet of research and development space and 68,000 square feet of biomanufacturing space. The facility will have rooftop terraces with views of Philadelphia's skyline and Penn's campus, as well as access to amenities of the entire Pennovation Works. The new development includes flexible lab/office space allowing for tenants to customize to meet their needs. The project design includes two adjoining six-story buildings and is scheduled to open in Q4 2025.

The development will be built with speculative labs to accommodate its robust ecosystem of life science companies and incubator startups. These world-class innovators will have access to Longfellow's proprietary tenant experience platform Elevate™, which combines the building facilities with custom programming that encourages connection and collaboration throughout Pennovation Works.



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Innovators

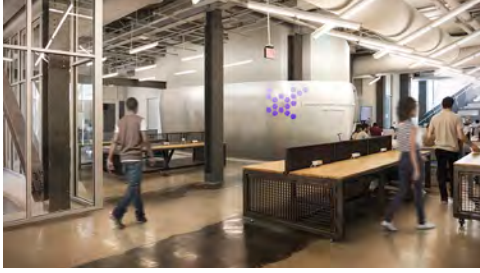
- Acumed
- AlphaThera
- Amriton
- ANAMEG
- Aqueduct Fluidics
- Automation Research Group (ARG)
- Avisi Technologies
- Axonova
- Baleena
- Chip Diagnostics
- Ciscovery Bio
- Cocoa Press
- DriQ
- Emu Comfort
- EPOCH Boats LLC
- Eztia
- FloBio
- Forsagen
- Free Library of Philadelphia
- Ghost Robotics
- Goeppert
- Grant Luminous
- Infini Fluidics
- Innamed
- Innovations Unlimited
- Instanosis
- Interius BioTherapeutics
- IoT4Ag
- Linnaeus Therapeutics
- LYF Innovation Ltd.
- Mechano Therapeutics
- Naamira Biomedicals
- Netronix
- Opertech Bio
- Penn Dental Research Greenhouse
- Penn Design Studio
- Penn Engineering Research & Collaboration Hub (PERCH)
- Penn Vet Working Dog Center
- PhylloPharma
- Polyhedral Structures Lab (PSL)
- Prohibix
- Qualcomm Research Philadelphia
- Red & Blue Ventures
- Sambodi Medical
- Sledge Scarves
- Scalable Autonomous Robots (ScalAR) Lab
- Sonnest Bio
- Strella Biotechnologies
- Suquino
- The Autoware Foundation
- Tozuda
- Treeswift
- Unlimited Inc.
- U Study LLC
- Vertiq
- Vimano
- WearWell Inc.

Listing as of January 2023

Approximately 70 companies and 400 innovators are currently located at Pennovation, where ideas go to work.



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Johnson & Johnson Innovation, JLABS

Johnson & Johnson, JLABS, launched JPOD@Philadelphia in collaboration with Penn to accelerate healthcare innovation and commercialization in Philadelphia and beyond. JPOD@Philadelphia, located within the Pennovation Center, is a networking hub which includes a secure telecommunications conferencing system to connect regional innovators to the Johnson & Johnson Innovation Network.

Web: jlab.jnjinnovation.com/locations/jpod-philadelphia



Netronix

Netronix offers purpose-built telemetry hardware that allows remote sensors to report directly to our data center via various communications channels. Data is captured and securely stored by Netronix's servers and made available through Environet, and advanced hosted web-based application. Environet provides the end-user access to the data anytime, anywhere, for real-time monitoring, analysis, and collaboration.

Web: netronix.io



Qualcomm Research Philadelphia

A division of Fortune 100 company Qualcomm Incorporated, Qualcomm Research Philadelphia was established in February 2015 with the acquisition of KMeI Robotics. This Pennovation Works-based team works on research, development, and commercialization of leading-edge technology for aerial vehicles and robotic systems. In addition to creating new capabilities, the team works closely with other organizations within Qualcomm to integrate the company's wide range of world-class technology into the robotics domain.

Web: qualcomm.com





Clean Energy Conversions Lab

Research at the Clean Energy Conversions Lab is focused on minimizing the environmental and climate impacts of our dependence on fossil fuels. From exploring materials to best remove CO₂ from the air to coal mine remediation projects, the Clean Conversions Lab is busy working on cutting-edge energy research. Jennifer Wilcox was originally appointed to lead the research, but has since been on a leave of absence as she serves as the principal deputy assistant secretary in the Office of Fossil Energy and Carbon Management at the Department of Energy under President Biden's administration. The research team is currently led by Professor Peter Psarras and is located within the Pennovation Lab.

Web: <https://ceclab.seas.upenn.edu/>



Penn Dental Research Greenhouse

Driven by a desire to provide inexpensive medicine to people in remote areas, Dr. Henry Daniell at the Penn Dental Research Greenhouse wants to use plants in a new medicinal capacity. One of the biggest barriers in providing low-cost medical supplies to the developing world is the lack of refrigeration available on delivery routes. Dr. Daniell seeks to use plants as shelf-stable incubators for drugs, effectively eliminating the need for costly or infeasible refrigeration.

Web: dental.upenn.edu



Penn Design Studio

Graduate architecture students use this studio space to design and construct through hands-on work, focused on acquiring knowledge through making. They have built direct collaborations with experts outside of the university as well, including industry, to develop their skills further.

Web: design.upenn.edu





Penn Engineering Research and Collaboration Hub (PERCH)

On the 3rd floor of the Pennovation Center, the Penn Engineering Research and Collaboration Hub integrates computer science and electrical, mechanical, and systems engineering in a vibrant, collaborative research and development environment. Students, faculty and staff from the School of Engineering and Applied Science use PERCH to promote fundamental research and accelerate the lab-to-market technology transfer pipeline in robotics, internet of things, and embedded systems.

On site, adjacent to the Pennovation Center, is an instrumented, outdoor laboratory that enables the design and validation of high-performance outdoor aerial and ground robots in the safety of a netted enclosure.

Web: grasp.upenn.edu/perch

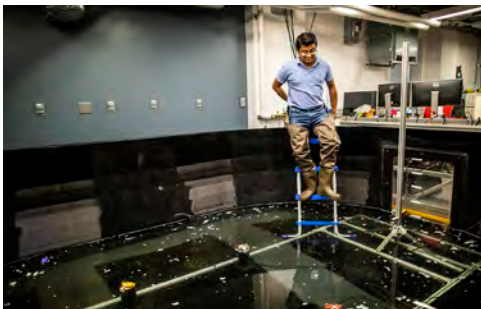


Penn Vet Working Dog Center

The Penn Vet Working Dog Center (WDC), founded and directed by veterinarian Cynthia Otto, trains dogs to search and rescue, sniff out indicators of disease, and detect bioterrorism threats. Dogs enjoy Pennovation Works' green open space, warehouses, office areas, and other indoor spaces as they learn how to detect threats in a wide variety of contexts.

The University of Pennsylvania's School of Veterinary Medicine actively supports the WDC, contributing scientists, clinicians, and veterinary students. The team researches canine genetics, emergency medicine, reproduction, and behavior to select dogs that are predisposed to the rigorous training working dogs undergo.

Web: vet.upenn.edu/research/centers-initiatives/penn-vet-working-dog-center



Scalable Autonomous Robots (ScalAR) Lab

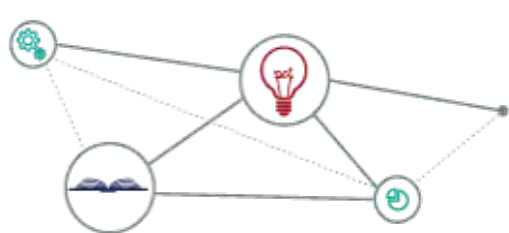
Researchers in M. Ani Hsieh's lab (Penn Engineering) are working to enable robots to perform useful tasks across the ocean, fueled by the power of the water's currents, with the ability to stay in the ocean beyond the lengths of time any manned vehicle could without extensive equipment and fuel.

Web: scalar.seas.upenn.edu

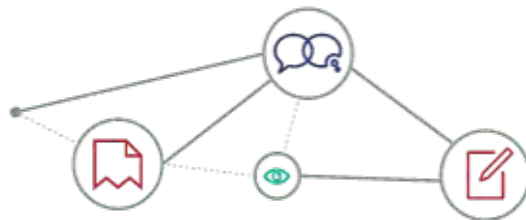


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FOSTERING THE ENTREPRENEURIAL SPIRIT



PCIV Impact

- 250+ company projects since inception (80 remain active)
- Over **\$650.0 Million** raised from VCs, angels, grants, corporations, charitable foundations, and business plan competitions
- **300+** technical jobs created in the Philadelphia region
- 7 Companies producing revenue
- 6 Exits

Featured Collaborator: PCI Ventures

PCI Ventures, as part of the Penn Center for Innovation, provides a suite of services and hands-on support to promote entrepreneurship and to incubate early-stage technology-based businesses as they make their way towards commercial success. Pennovation members receive:

- Office hours for all companies
- Assistance with SBIR/STTR grant applications
- Educational, Strategic and Tactical Programming
 - Mentors in Residence
 - Pitch deck and Presentation Skills Training
 - Partner Office Hours
 - Workshops



- Virtual incubator for faculty/staff companies built around Penn intellectual property.
- Bridges the gap between basic research and commercial products through a fully hands-on approach, an array of service offerings, coaching, and funding strategies.



- Advisory services provided for companies that do not request our full hands-on approach but that want access to the Penn venture ecosystem.
- Offerings include: step-by-step venture acceleration manual, agreement templates, mentoring office hours, introduction to capital acquisition sources.



- Advisory services provided to faculty prior to forming a company.



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www.pennovation.upenn.edu



Cira Centre South: FMC Tower, Cira Green, EVO, (2014, 2016)



The Radian (2008)

Real Estate Development

While Penn's heritage is reflected in its environs and architectural legacy on its 300 contiguous acres, it has, over the last decade, engaged in a real estate development strategy to strengthen its core campus while thoughtfully supporting new development in the University City neighborhood. Penn's development strategy involves partnerships with the private market on planning and developing new projects in student housing, retail, office, and technology/medical space.

Completed projects in which Penn was a sponsor, ground lessor or partner include the \$51M acquisition and subsequent coordination of the \$700M public-private redevelopment of the 24-acre USPS property with "Cira South"; "Domus," the \$100M luxury apartment and mixed-use development at 34th and Chestnut Streets; "The Radian," a \$75M 500-bed student residential and mixed used development, and "The HUB," a 120-unit \$23M public private, developer-built apartment building at 40th & Chestnut Streets. Other transformational projects include the \$12M turnkey development of the 39th & Walnut Streets office building; Evo at Cira Centre South, a \$158M upscale housing tower at 30th & Chestnut Streets; and FMC Tower, a \$341M mixed-use development at 30th & Walnut Streets. Representative completed projects range from the \$75M Biotech Translational Research Laboratory ("TRL") for the School of Medicine, the \$14M WXP/WXPN/World Cafe Live performance venue and sound stage, and the development of a \$24M turnkey development of the former Divinity School site for the Penn Assisted Alexander K-8 School for the School District of Philadelphia.

The University development projects initiated and led by FRES have been recognized by professional and trade organizations on numerous occasions. The World Cafe Live project was the recipient of a Deal of the Year Award by the Philadelphia Business Journal (PBJ). The Domus mixed-use Residential project was awarded the PBJ Best Residential Deal for 2007. The FMC Tower was a finalist in the 2017 Delaware Valley Green Building Council Groundbreaker Awards.



3901 Walnut Street (2015)



The HUB (2006)



The Left Bank (2001)



Domus (2007)



PENNOVATION CENTER

Where Ideas Go To Work



East and north facades



Illuminated east and north facades

About

The Pennovation Works is anchored by the Pennovation Center, a business incubator and laboratory that aligns and integrates researchers, innovators, and entrepreneurs for the commercialization of research discoveries. Intended to marry entrepreneurs with an expert workforce and scientifically advanced facilities, key features of the Pennovation Center are common creative spaces, including coworking areas, a cafe, and a venue for events and programs.

By creating an atmosphere for collaboration, creativity, and productivity for innovators from all disciplines, the Pennovation Center brings people together to foster interaction and the exchange of ideas. Interior spaces in the 58,000 sq. ft. building emphasize daylighting and retain an industrial character to develop social space with a “cool factor,” while an adjacent outdoor plaza focuses activity on the site and link surrounding buildings and open spaces to this new hub.

Landscaping for the entire site includes stormwater management techniques, increased connections between buildings, and access to Schuylkill River trails. Wayfinding and signage foster an identity for the site, and increase visibility of the site and the Center from the surrounding area.



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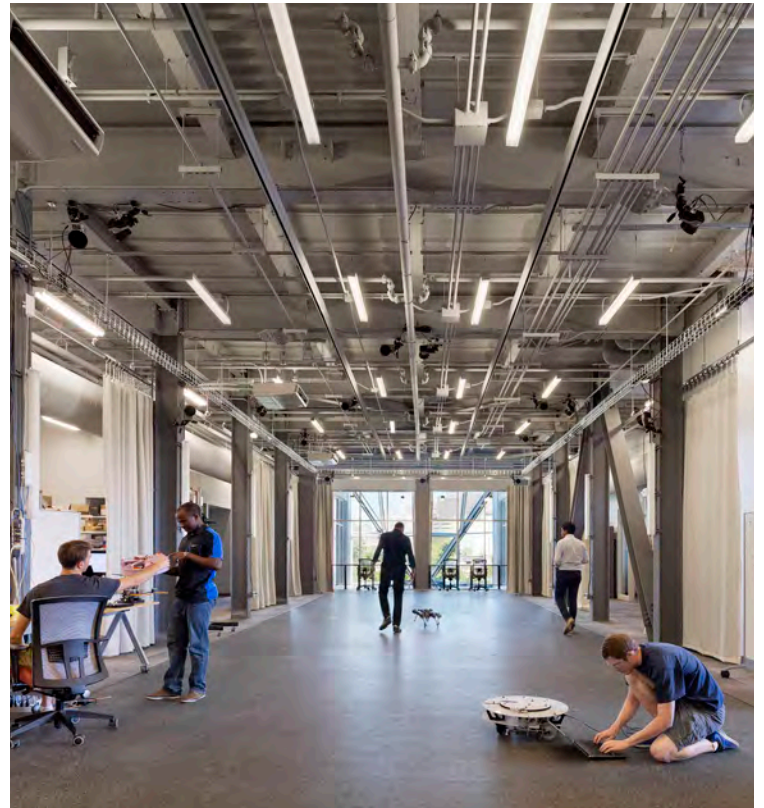
Pennovation Plaza



First floor central bleacher



2nd floor coworking space



3rd floor



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PENNOVATION CENTER

Where Ideas Go To Work



First floor social center

Fast Facts

- The Pennovation Center is the 58,000 sq. ft. innovation hub of the Pennovation Works.
- The Pennovation Center contains a full service business incubator, basic wet and dry laboratories, private office and collaborative workspaces for companies, entrepreneurs, inventors and their teams.
- The Pennovation Center is home to award winning companies in robotics, emerging medical technology, environmental monitoring, and early stage startups.
- There are multiple ways to become part of the Pennovation Center.
 - Penn Faculty and Students
 - Inventors and Entrepreneurs
 - Companies
 - Freelancers and Creatives
- PCI Ventures provides comprehensive incubation and commercialization services (formation, capital, management) for qualified Pennovation Center members.
- The Pennovation Center features 5 Inventor Garages, 10 offices, 200+ coworking desks, and intentionally designed common areas for collaboration, meetings and events.
- The north facade, a crystalline web of glazed panels, was designed to symbolize the innovation and social energy of the Center pushing through the building and exploding into the world.
- Pennovation Center Inventor Garages, inspired by the garages that spawned many disruptive companies in Silicon Valley, feature working roll up doors that open to the Pennovation Plaza.
- Each month, in partnership with PCIV & 76 Forward, the Pennovation Center hosts a variety of programs, trainings, lectures, events and meetups to bolster the growth of innovation and creativity in the region.



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Membership

Members are a solopreneurs, multi-person startups, freelancers and/or mobile professionals working, collaborating and engaging within the Pennovation Center.

The space features offices, lab benches, Inventor Garages and coworking desks on two floors and flexible floor plans to fit any budget and work-style.

Some memberships tiers include 24/7 access, allowing tenants to produce their best work during non-traditional hours.

Based on your membership level, Pennovation Center members have access to:

- Professionally managed coworking space that is flexible and affordable
- Eligible for Keystone Innovation Zone (KIZ) tax credit benefits
- Centrally managed waste handling and common lab equipment maintenance and supply
- Site access to PCI Ventures start-up formation services
- Networking programs that build a sense of community among tenants, service providers, venture capitalists and corporate partners
- Access to extensive on-site programming, featuring topics and speakers that inform company formation and growth issues
- Close proximity to Penn faculty, students, and programs
- Easy access from the Schuylkill Banks to the River Trail for bicyclists and pedestrians
- Parking availability
- On-site locker storage for office/work-life essentials and supplies
- Common kitchenette and on-site café
- Use of conference room, common areas, audio and video conferencing
- Mail and package delivery
- Use of small breakout & phone niches

Pricing

The following flexible options are available depending on the stage of the concept, invention or company. At the Pennovation Center, members can experience the collaborative energy of open coworking spaces in the heart, create your inventions in our Inventor Garages, conduct research in our state of the art labs, or write and produce your work from the quiet of a private office.

All Prices are monthly. 60 day notice required to cancel. Offices, Labs, Inventor Garages and Resident Desks may require additional notice of cancellation.

PRIVATE OFFICES: \$1499-2499/MONTH

LAB BENCHES: \$999/MONTH

INVENTOR GARAGES: \$2099/MONTH

Coworking Desks (price/month)

THE RESIDENT: \$399

- Dedicated Desk
- 24/7 Access
- 6 hours of conference room time per month
- Lobby signage
- Mail/Package delivery
- Lockable storage

THE COWORKER: \$299

- Non-Dedicated Desk
- M-F Access
- 4 hours of conference room time per month
- Lobby signage
- Lockable storage

MOBILE PRO: \$199

- Non-Dedicated Desk
- M-F Access/10 days per month
- 2 hours of conference room time per month



Events & Programs

The Pennovation Center, through a collaboration with Penn Center for Innovation Ventures and 76fwd, produces and hosts a robust series of programs, trainings meetings, and events each month. Our signature events and programs are detailed below. All current event offerings from Penn Center for Innovation (PCI) and other Penn organizations in the Innovation & Entrepreneurship ecosystem can be found online at pci.upenn.edu/event-calendar/



Pennovation Accelerator

The Pennovation Accelerator welcomes a cohort of startups to the Pennovation Center for six weeks over the summer. The Accelerator – a collaboration between PCI, PCI Ventures, 76fwd, and the Penn Vice Provost for Research's office--covers several topics relevant to early stage companies, presented by guest speakers over the course of six weeks. Each team is paired with a mentor from the wider entrepreneurial community, and must complete weekly assignments. At the end of the Accelerator, teams present their pitch decks to mentors, presenters, and friends at the Pennovation Center to start building support for their companies.



Mentor-in-Residence

The Mentor-in-Residence (MIR) Program pairs startup companies with accomplished entrepreneurs and industry leaders who serve as informal advisors. The Mentors participate in the development of PCI Ventures portfolio companies and Pennovation Center members, providing advice on business strategy, market penetration and fundraising. The Mentors also bring with them a wide network of contacts that the companies will be able to leverage.



Warm Intros

Warm Intros is a new Pennovation Works series in partnership with NextFab. The series offers resources on how to transform an idea into reality. This partnership also provides established businesses assistance with funding and business plans. NextFab is a network of membership-based maker spaces providing access to tools, technology, education, events, and services for individuals of any skill level.



Bio-laboratory Incubator



The Pennovation Center has multiple shared labs and private customized leasable space options for tenants, including the Bio-laboratory Incubator, which features four shared labs (three 6-seat labs and one 12-seat lab). The Center leases lab benches, offices and desk space to small companies with approximately 1 to 12 employees, offering cost-effective memberships with numerous benefits.

Both coworking desk memberships and lab bench leases include common equipment access, instruments, amenities, and services at no additional charge.

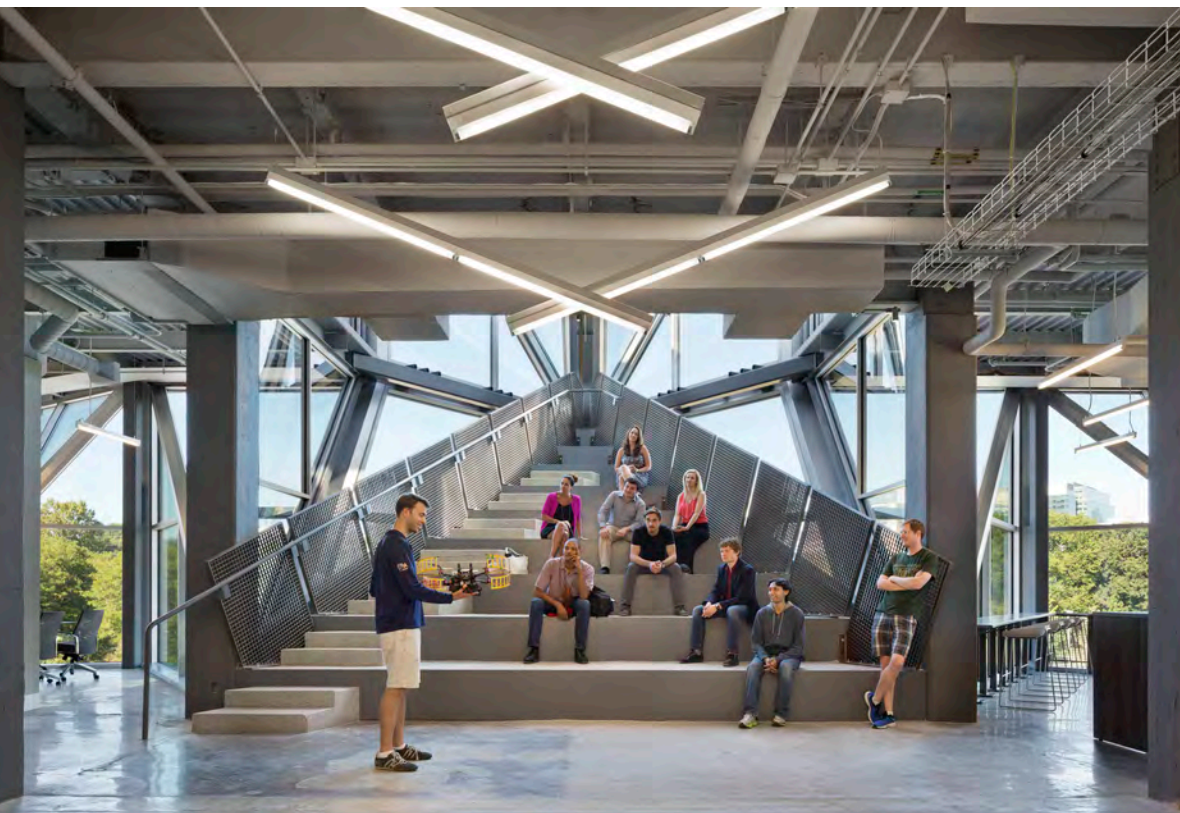
- **Services**

- Benches with fume hoods
- Glass wash and sterilization centers
- Centrifuges
- Microscopy
- Cell tissue culture and bioinstrumentation suites
- Safety measures such as security systems, emergency eye wash, and air change stations

- **Flexibility**

- Flexible space and lease terms
- Expand as you grow





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