

ECO-INDUSTRIAL PARK & RESOURCE RECOVERY BUILDINGS

06.12.2019

Schematic Design Package

The Alachua County Eco-Industrial Park:

The Alachua County *Eco-Industrial Park (E.I.P.)* seeks to foster a collaboration between Alachua County, the City of Gainesville, the University of Florida, and private enterprise. Envisioned as an epicenter of waste-related material research, education, and business incubation, the *E.I.P.* will be a catalyst for ventures that promote the region's recycling, remanufacturing (upcycling) and zero-waste goals.

Situated just North of the Gainesville Regional Airport on a 37-acre site adjacent to the existing *Leveda Brown Environmental Park and Transfer Station*, the *E.I.P.* presents a unique statement about the potential linkages between industry and ecology in a circular economy. With over half of the park's development planned as conservation land, researchers within the *E.I.P.* can take advantage of not only preeminent research facilities focused on improving the environment, but also views and proximity to an ecologically-restored wetland landscape.

Roads, stormwater facilities, and utilities within the *E.I.P.* will be completed by the Summer of 2019.

The Anchor Building and Resource Storage Facility

Alachua County is currently partnering with the University of Florida to design the *E.I.P. Anchor Building* as well as an adjacent *Resource Storage Facility*. These structures will be the first built interventions within the *E.I.P.* In addition to their programmatic linkage to the *Leveda Brown* complex, these pioneer buildings will inform and stimulate future *E.I.P.* site development.

The *E.I.P. Anchor Building* will serve as the conceptual nexus of the park's development. The 35,000 S.F. workspace will be designed as an open, flexible, high-bay structure. The *Anchor Building* will house public-private partnerships who share goals related to upcycling, material innovation from waste streams, and other intellectual property development. This space will be designed to facilitate physical processes and testing of materials, precision research, and administrative functions operating concurrently under one roof.

The *E.I.P. Resource Storage Facility* will be a 15,000 S.F. ancillary structure created solely to receive and store materials with the potential to be refurbished or sold outright before being considered trash. This building will both support material influx into the *Anchor Building*, as well as alleviate storage congestion at the *Leveda Brown Materials Recovery Facility*, and will act as an overflow space for recycling commodities.

Together, these two core buildings will anchor material research, education, and industry on the *E.I.P.* site, subsequently attracting private enterprise to the remaining *E.I.P.* development parcels. Ultimately, this park will generate Florida-based manufacturing jobs benefiting East Gainesville residents and workforce populations, with the fully-built potential of up to 3,300 direct and indirect jobs.

The Anchor Building Schematic Design Schemes

Two design strategies were investigated in the Schematic Design phase: the Big Roof Scheme and the Shell Scheme.

The Big Roof Scheme envisions constructing from low carbon footprint material components that, due to their module nature, can be easily assembled, disassembled, and reused in various phases of construction. This design strategy references a history of Florida Modern architecture through its horizontality and passive cooling. The Big Roof Scheme integrates horizontally into the landscape, which in turn moves through the building, in some instances acting as a placeholder for future development. Much of the building's circulation is exterior, unconditioned space, decreasing energy usage and thus increasing efficiency.

Where the Big Roof Scheme integrates and expands horizontally, the Shell Scheme allows for vertical expansion, fully utilizing the building's footprint. This design strategy draws a strong connection between UF academics and industry workers, as well as intellectual and physical research through spatial relationships, including an exterior catwalk that overlooks the high-bay spaces. A series of light cannons create a connection to place while organizing and encouraging engagement with collision spaces.

Both design strategies aim to utilize materials with low carbon footprints, evidenced by the recycled glass gabion wall marking the entrance to the Big Roof Scheme.

Eco-Industrial Park Preliminary Program

This document outlines basic space needs and areas to be incorporated into the Eco-Industrial Park schematic design. All data was collected from primary user groups as identified by Alachua County + UF.

Darren Midlane & Ryan McMeekin
Life Soils
March 4, 2019

The following list reflects the spatial and programmatic current/future needs of Life Soils, Inc.:

- Microbiological Lab Space (approximately 1,000 SF), including standard countertops, sinks, incubators, and emergency eyewash / safety showers
 - Lab space requires vibration isolation
 - Lab space requires a separate ventilation system for incubators (air intake must not come from working yard space)
- Educational Greenhouse (approximately 20' x 60') with water catchment area
- Outdoor demonstration space (including blocks of turf for home composting demonstrations, hardscaping tests, and runoff tests)
- One cubic yard of media (must be outside but always shaded from the sun)
- Meeting space for 20-30 people
- Offices

Elliott Welker
Client Services Manager, Sid Martin Biotech
March 25, 2019

The following programmatic and spatial considerations were observed at the Sid Martin Biotech building:

- Total building area: 40,000 SF
- Includes two greenhouses, two animal facilities
- All labs must be on single pass air system
- Companies in the Sid Martin Biotech have access to shared storage and equipment (autoclave)
- The average company in the building has rented space for ~15 years and is comprised of 2-15 employees
- Lobby is used as flex space for conferences and meetings too large for the standard meeting room
- Lobby includes communal coffee / small kitchen station
- See photos for plan configuration suggestions

Mark Long
UF Director of Incubation Services, Innovation Square
April 3, 2019

The following programmatic and spatial considerations were observed at the Innovation Square:

- Lab spaces range from 500 SF - 1000 SF, configured in standard arrangement with countertops below and cabinet storage space above
- All lab spaces must include a fume hood & emergency eyewash stations
- All labs must be on single pass air system
- Shared lab equipment might include the autoclave and flammable storage cabinets
- Collision space in the form of open flex space is not useful; collision space works best when it is configured as a breakroom, kitchen, or conference room
- Must have mailroom
- Large atrium space cuts into building utilization ratio (not rentable space, area becomes unprofitable)
- Lobby includes communal coffee / small kitchen station
- All bathrooms are single-occupancy unisex bathrooms with toilet, sink, and shower
- See photos for plan configuration suggestions

Dr. Cris Johnsrud
Founding Principal at Pathfinders Research, Inc.
April 10, 2019

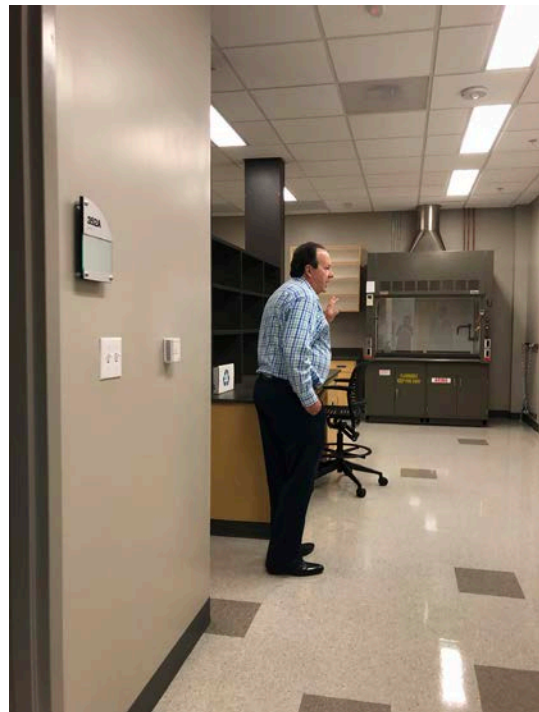
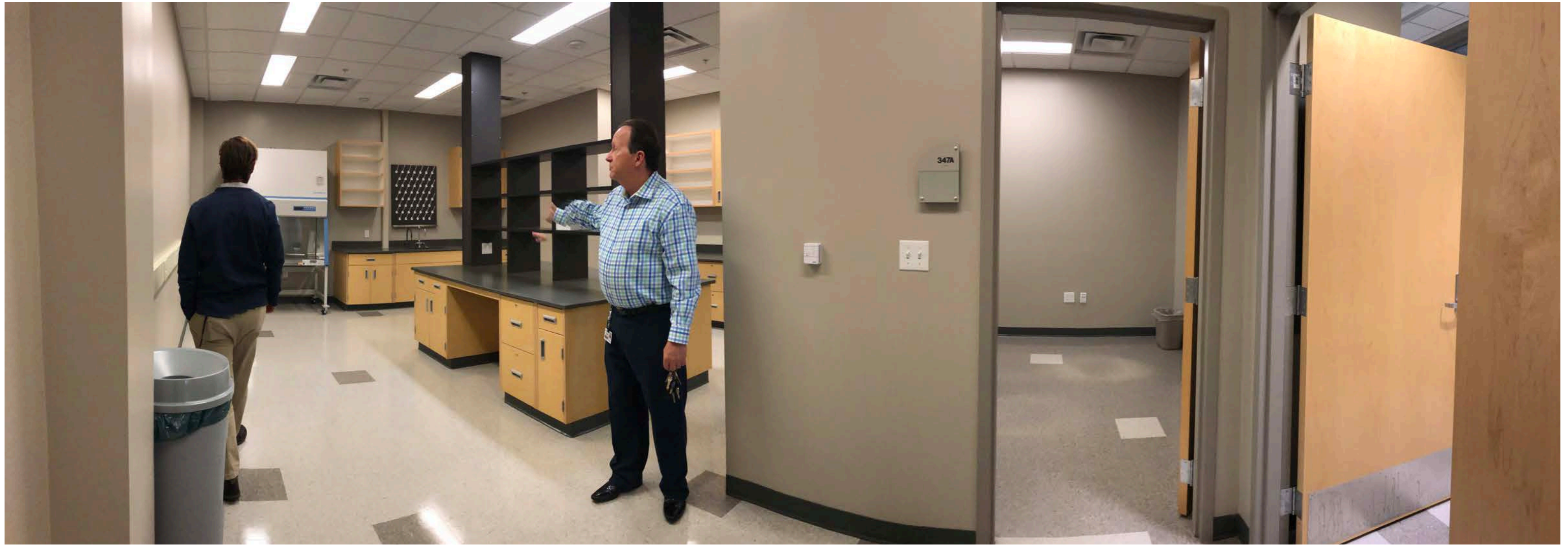
The following notes are Dr. Johnsrud's suggestions on programmatic usage in the Anchor Building

- Could be a proof of concept of an incubator space that collides industry ventures with UF Research
- Open to the public / accessible to those outside the industry / research
- Recruit industry leaders / businesses privately
- Involve larger community, could be a center to educate the community on recycling processes
- Collision space or shared spaces (conference rooms, breakrooms) that encourage collision between academics and industry employees

Dr. Christa Court
UF Food & Resource Economics Department (FRED)
April 19, 2019

The following notes are Dr. Court's suggestions on programmatic usage in the Anchor Building

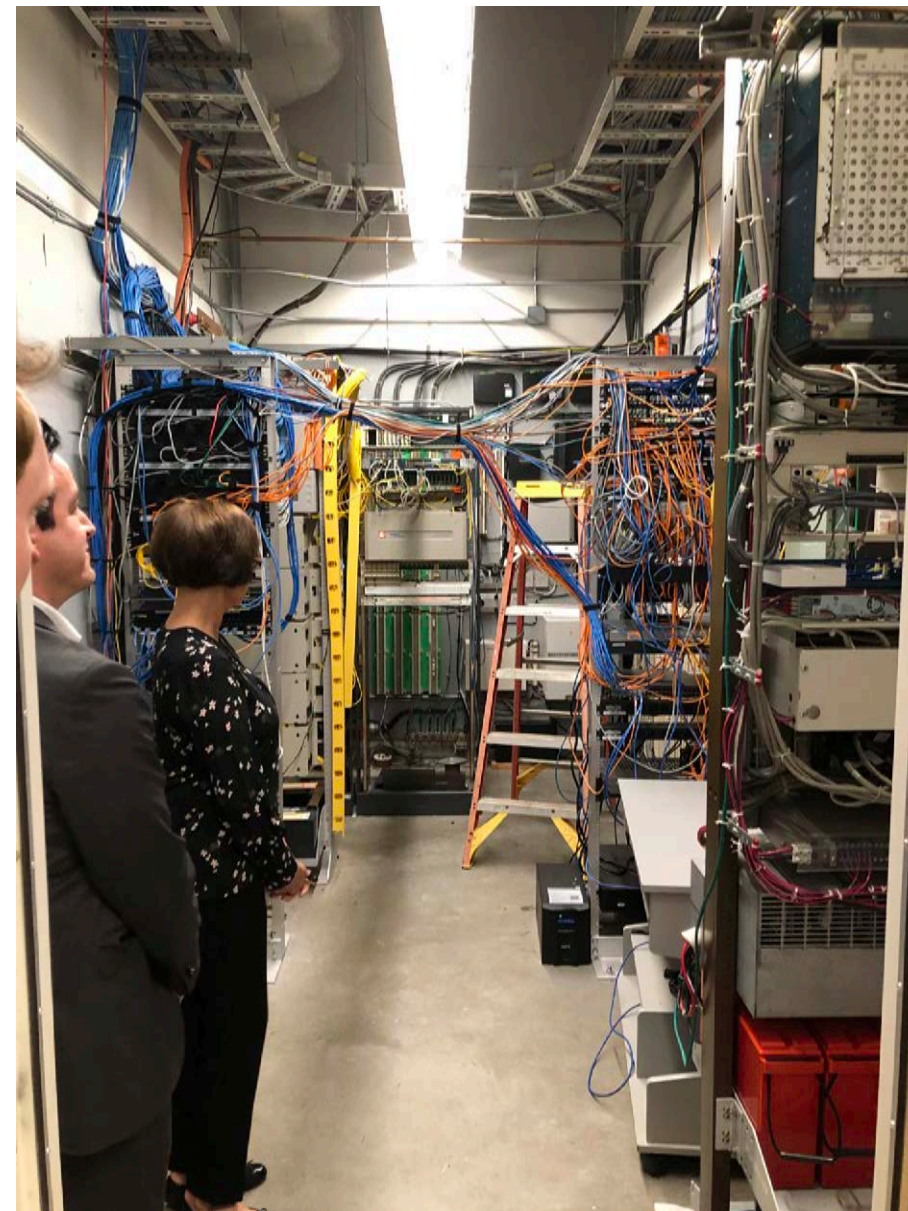
- Lab space for conducting preliminary research into materials, designed with moderate sound isolation
- Demonstration classrooms that could double as conference spaces
- Collision space or shared spaces (conference rooms, breakrooms) that encourage collision between academics and industry employees
- Anchor Building could begin a program to partner with local artisans in Gainesville who work to upcycle trash into art, and would also need grant-writing spaces



PROGRAMMING RESEARCH: Innovation Square



PROGRAMMING RESEARCH: Sid Martin Biotech



PROGRAMMING RESEARCH: Sid Martin Biotech

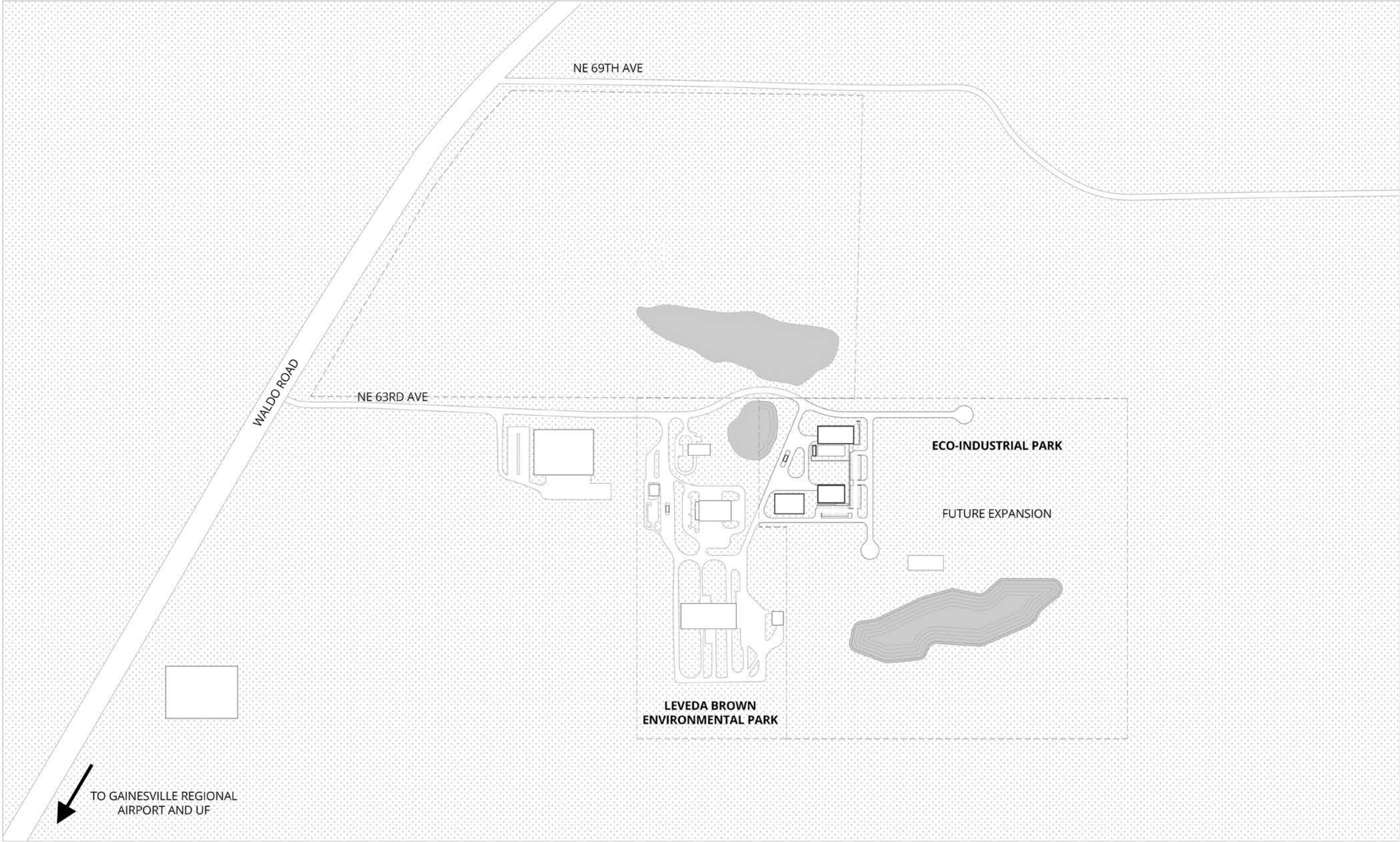


Florida Map



Gainesville Map

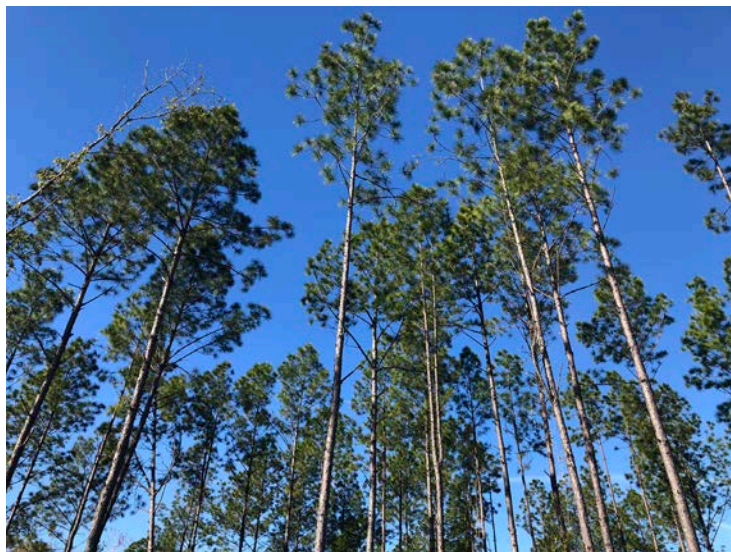
Site Location



Site Plan

NOTES:

ISSUE:	DATE:
	04.08.19
	04.29.19
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Site of Future
Anchor Building

Existing Leveda Brown
Recycling Facilities

Existing Site Conditions

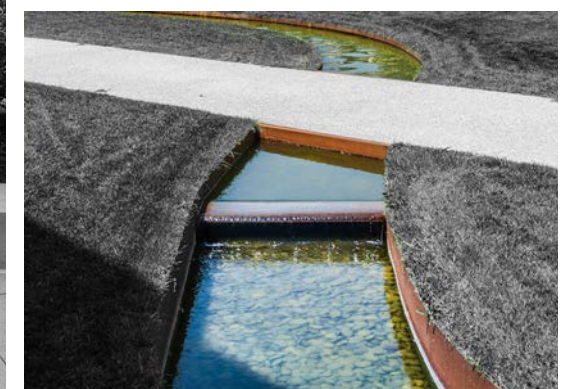
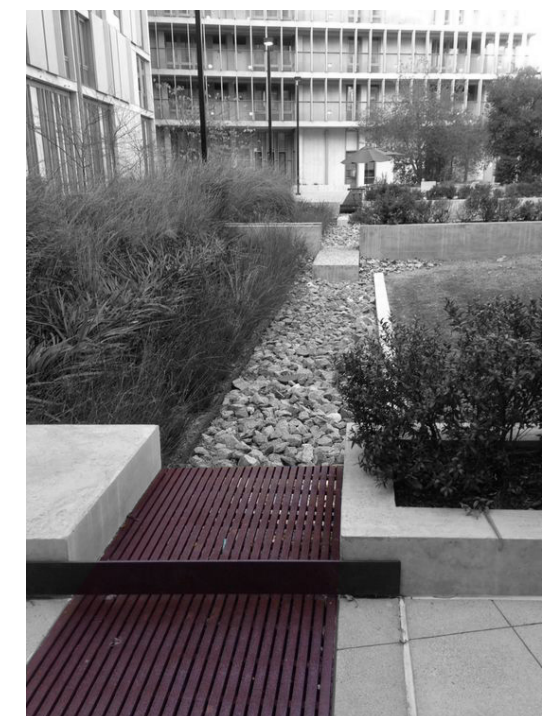
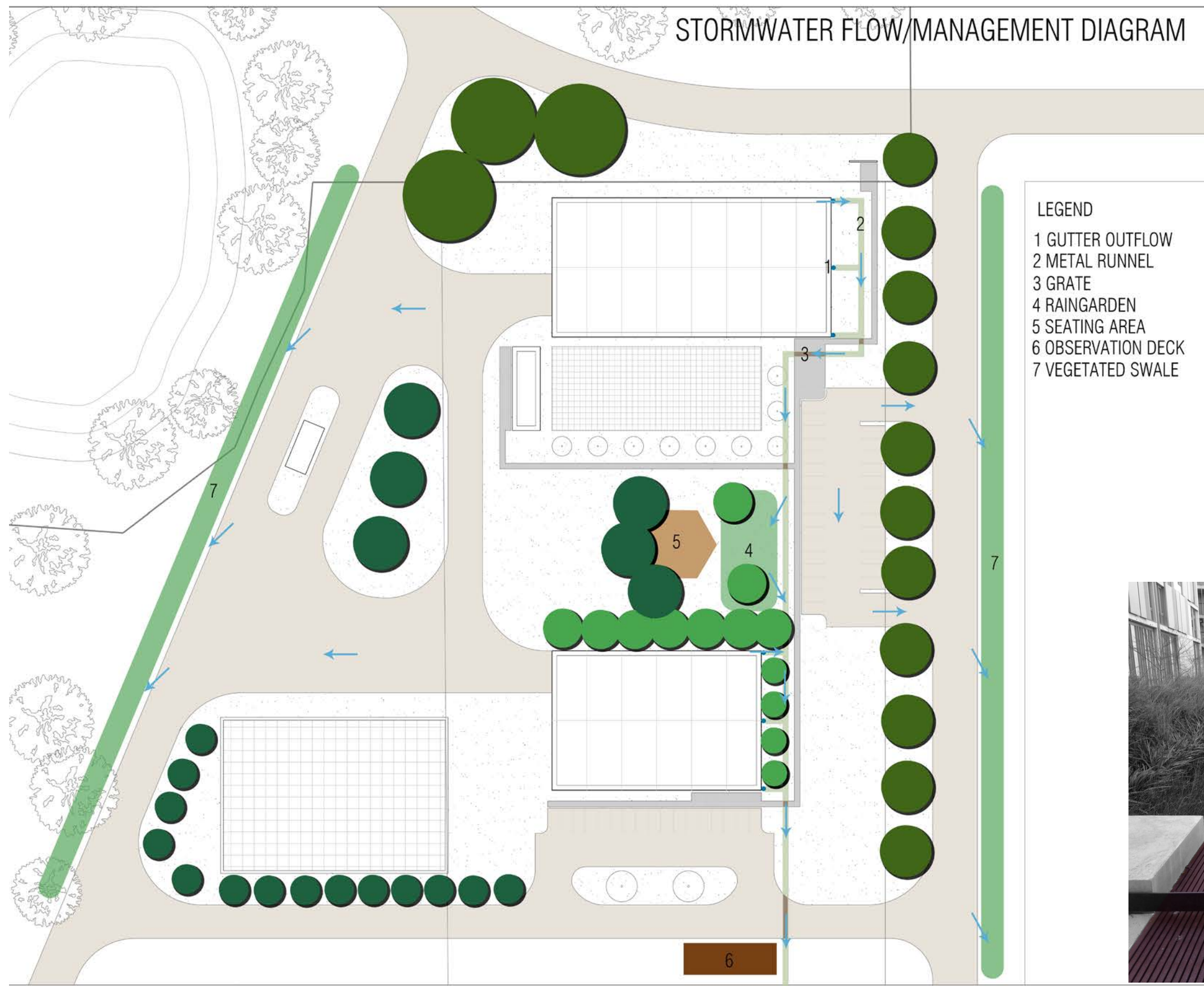


- 1 RESEARCH AND INCUBATION MULTI-USE ANCHOR BUILDING (± 35,000 SF)
- 2 RESOURCE STORAGE FACILITY (± 15,000 SF)
- 3 GREENHOUSE (± 1,200 SF)
- 4 YARD SPACE
- 5 SCALE HOUSE / SERVICE DRIVE
- 6 VISITOR & EMPLOYEE PARKING

Enlarged Site Plan

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LANDSCAPE: Stormwater Management & Precedents

Agave americana
(century plant)



Magnolia figo
(banana magnolia)



Serenoa repens
(saw palmetto)



Aloe maculata
(soap aloe)



Muhlenbergia capillaris
(muhly grass)



Taxoidum distichum
(bald cypress)



Hamelia patens
(firebush)



Nephrolepis exaltata
(Boston Fern)



Zamia integrifolia
(coontie)



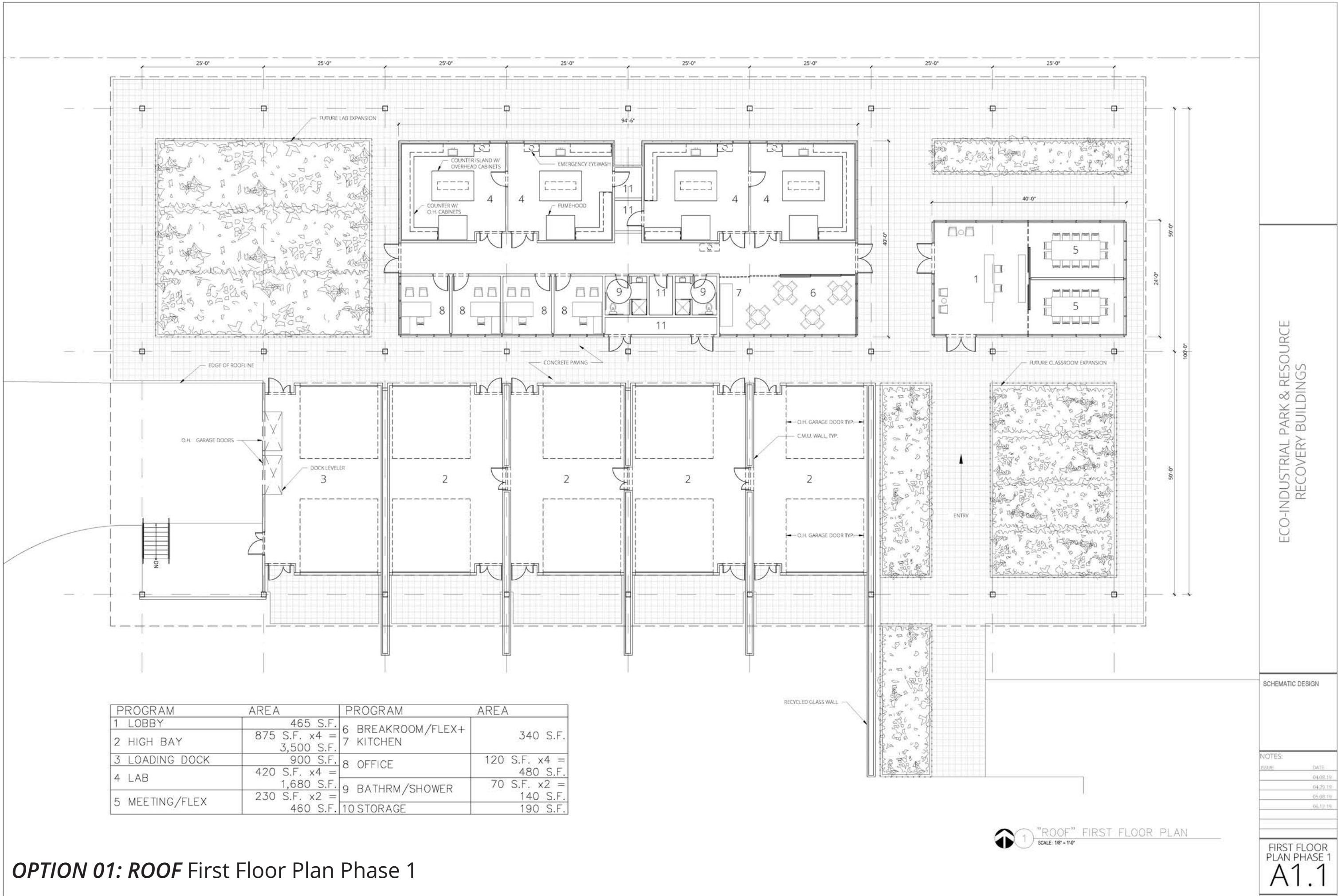
Iris virginica
(blue flag iris)



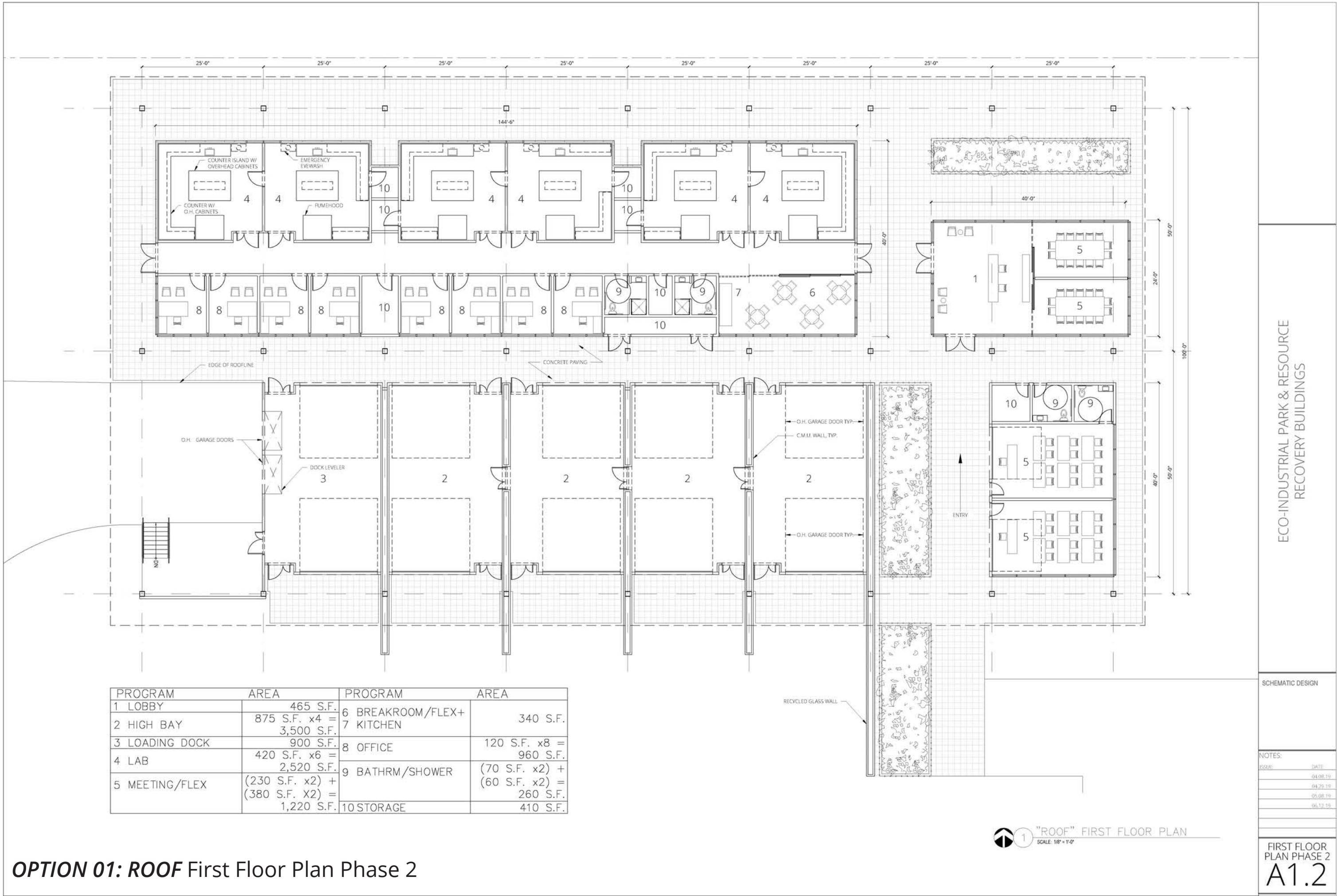
Sabal palmetto
(cabbage palm)

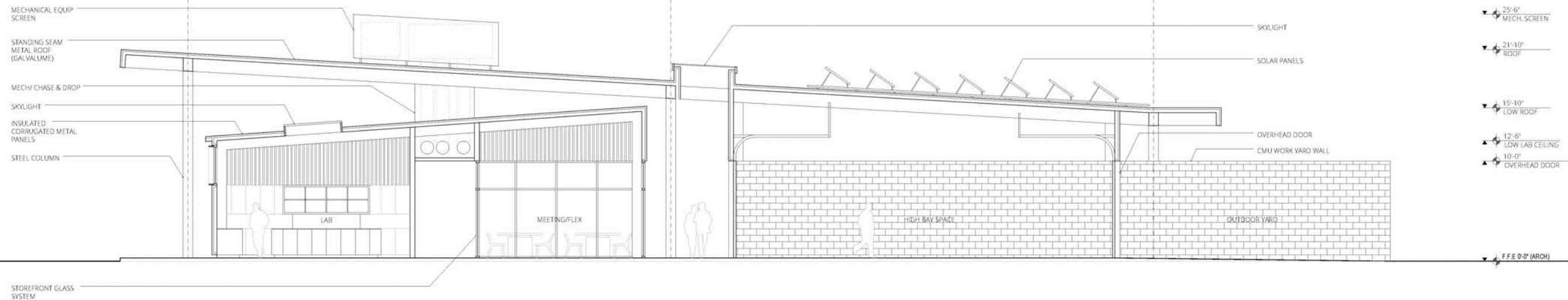
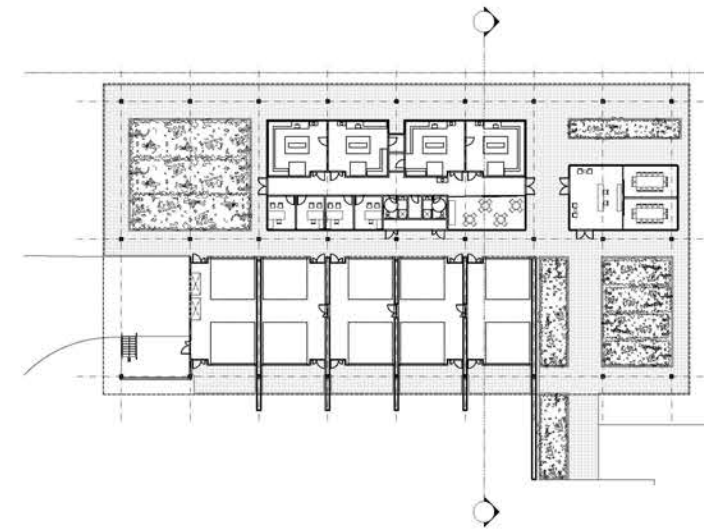


LANDSCAPE: Suggested Species



OPTION 01: ROOF First Floor Plan Phase 1





ECO-INDUSTRIAL PARK & RESOURCE
RECOVERY BUILDINGS

SCHEMATIC DESIGN

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BUILDING
SECTIONS
A6.1

OPTION 01: ROOF Section

1 ROOF OPTION SECTION
SCALE: 3/16" = 1'-0"



OPTION 01: ROOF View from NE 63rd Ave



OPTION 01: ROOF View Approaching Building from Parking Lot



OPTION 01: ROOF Interior



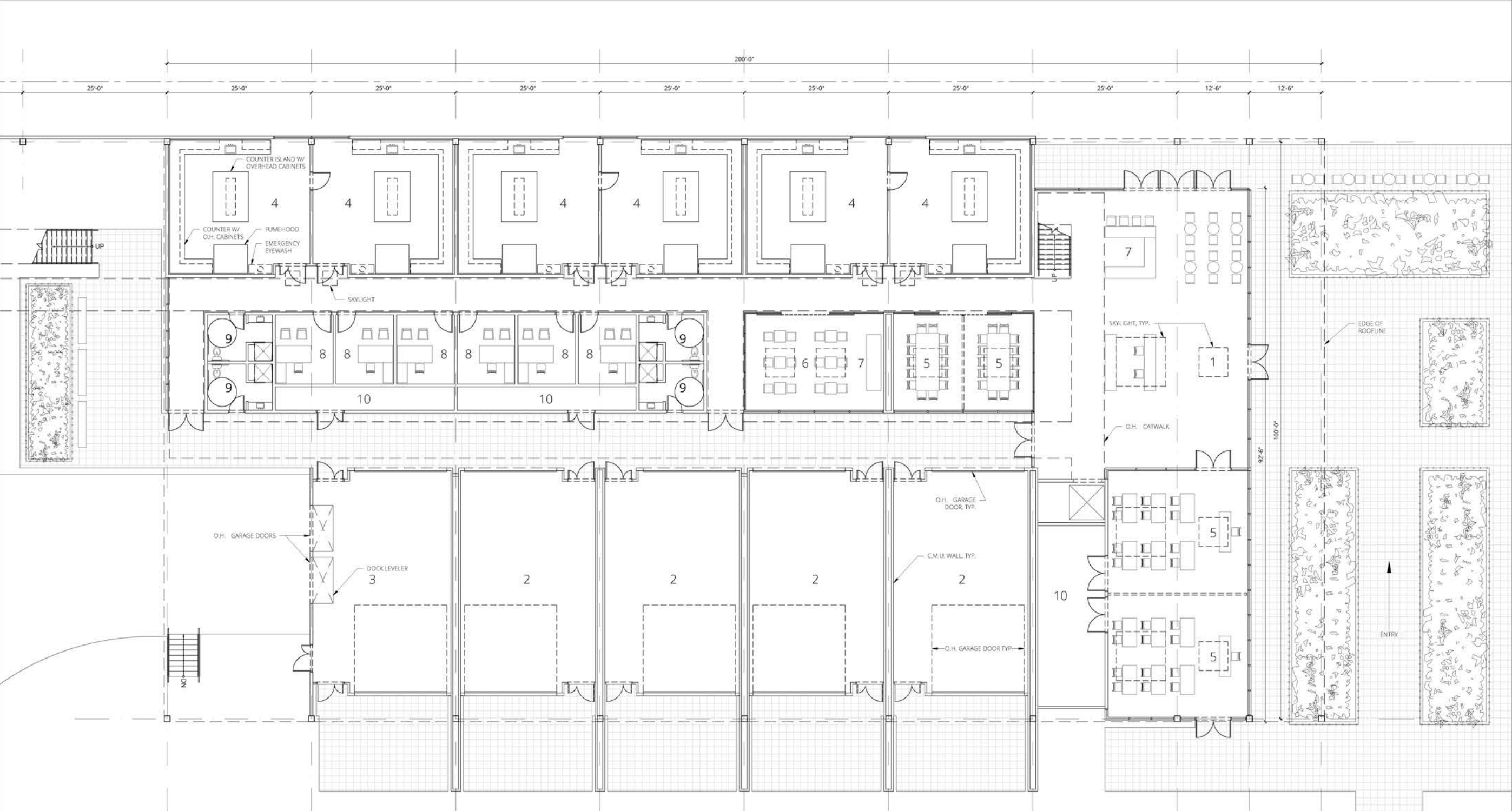
Operation Desert Shed
ARCHITECT: Lloyd Russel



Longbush Eco-sanctuary Welcome Shelter
ARCHITECT: Sarosh Mulla



OPTION 01: ROOF Precedents



PROGRAM	AREA	PROGRAM	AREA
1 LOBBY	1,030 S.F.	6 BREAKROOM/FLEX+	400 S.F. +
2 HIGH BAY	875 S.F. x4 = 3,500 S.F.	7 KITCHEN/CAFE	380 S.F. = 780 S.F.
3 LOADING DOCK	900 S.F.	8 OFFICE	120 S.F. x6 = 720
4 LAB	565 S.F. x6 = 3,390 S.F.	9 BATHRM/SHOWER	90 S.F. x4 = 360 S.F.
5 MEETING/FLEX	(200 S.F. x2) + (560 S.F. x2) = 1,520 S.F.	10 STORAGE	615 S.F.

ECO-INDUSTRIAL PARK & RESOURCE
RECOVERY BUILDINGS

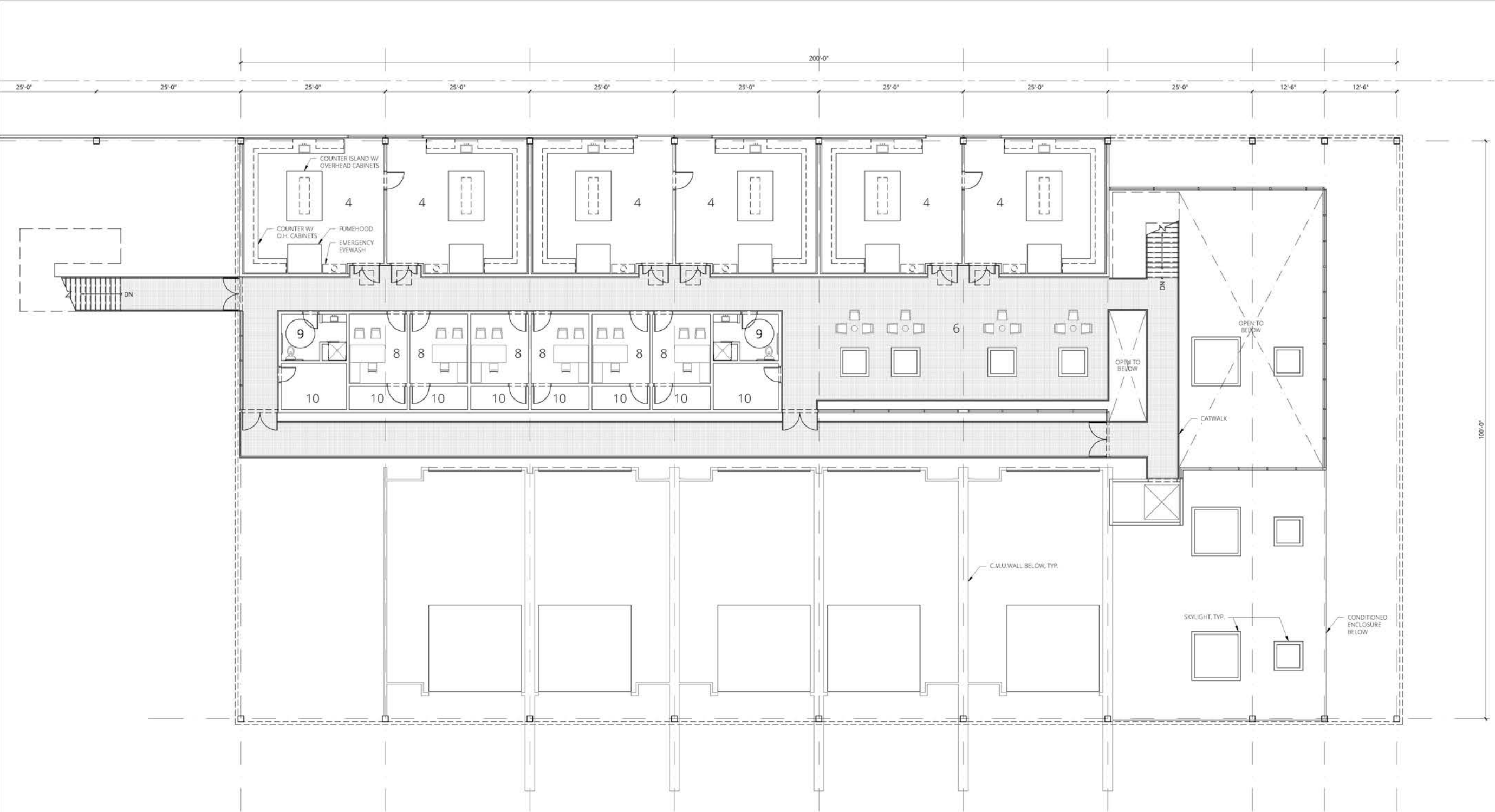
SCHEMATIC DESIGN

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FIRST FLOOR
PLAN
A1.3

OPTION 02: SHELL First Floor Plan

1 "SHELL" - FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"



PROGRAM	AREA	PROGRAM	AREA
1 LOBBY	1,030 S.F.	6 BREAKROOM/FLEX+ KITCHEN/CAFE	400 S.F. + 380 S.F. = 780 S.F.
2 HIGH BAY	875 S.F. x4 = 3,500 S.F.	8 OFFICE	120 S.F. x6 = 720
3 LOADING DOCK	900 S.F.	9 BATHRM/SHOWER	90 S.F. x4 = 360 S.F.
4 LAB	565 S.F. x6 = 3,390 S.F.	10 STORAGE	615 S.F.
5 MEETING/FLEX	(200 S.F. x2) + (560 S.F. x2) = 1,520 S.F.		

1 "SHELL" - SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

OPTION 02: SHELL Second Floor Plan

ECO-INDUSTRIAL PARK & RESOURCE
RECOVERY BUILDINGS

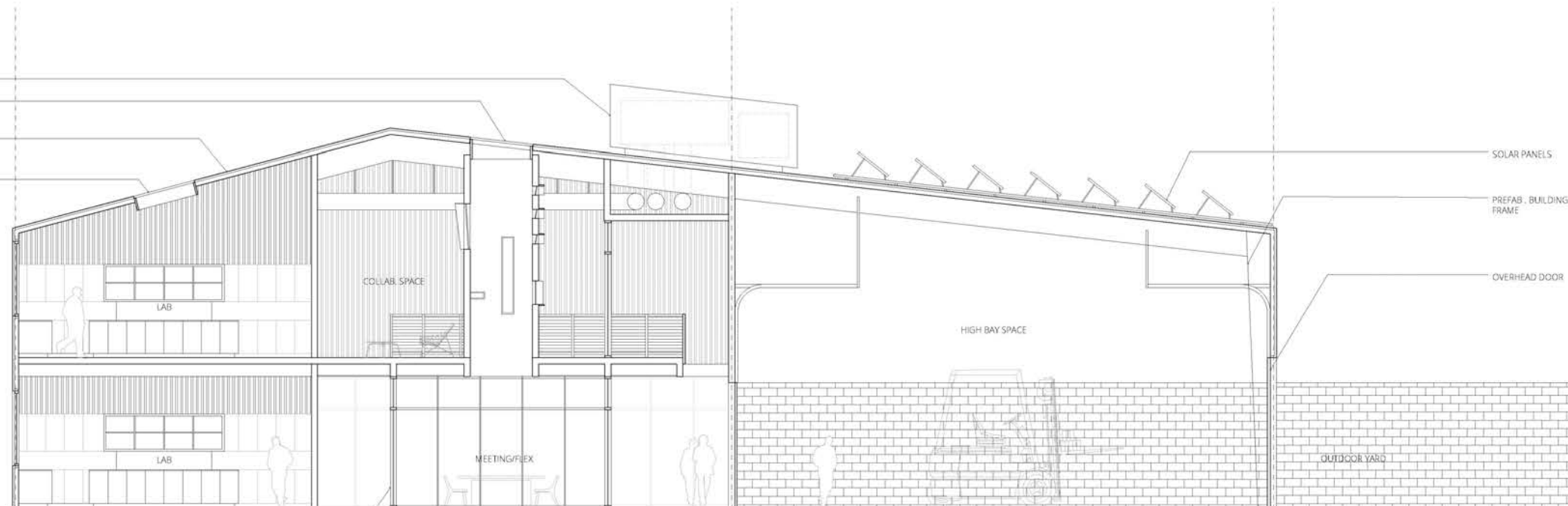
SCHEMATIC DESIGN

NOTES:

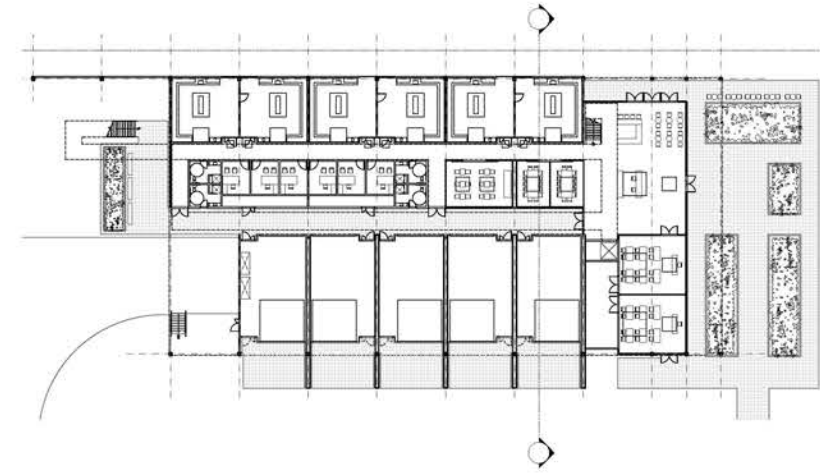
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SECOND FLOOR
PLAN
A1.4

MECHANICAL EQUIP
SCREEN
SKYLIGHT W/
RECYCLED MATERIAL
INSTALLATION
CORRUGATED
INSULATED METAL
PANELS
SKYLIGHT



STOREFRONT GLASS
SYSTEM



SOLAR PANELS

PREFAB. BUILDING
FRAME

OVERHEAD DOOR

33'-10"
MECH. SCREEN

30'-6"
ROOF PEAK

22'-6"
ROOF

12'-6"
OVERHEAD DOOR / LEVEL 02

10'-0"
LEVEL 01 CEILING

F.F.E 0'-0" (ARCH)

OUTDOOR YARD

HIGH BAY SPACE

MEETING/FLEX

COLLAB SPACE

LAB

LAB

OPTION 02: SHELL Section

1 SHELL OPTION SECTION
SCALE: 3/16" = 1'-0"

ECO-INDUSTRIAL PARK & RESOURCE
RECOVERY BUILDINGS

SCHEMATIC DESIGN

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BUILDING
SECTIONS
A6.2



OPTION 02: SHELL View from NE 63rd Ave



OPTION 02: SHELL View Approaching Building from Parking Lot



University of Arkansas Sculpture Studio
ARCHITECTS: El Dorado + Modus Studio



Acne Studios
ARCHITECT: Sophie Hicks

OPTION 02: SHELL Precedents



Charles Smith Wines
ARCHITECT: Olson Kundig



The Cooper Union
ARCHITECT: Morphosis



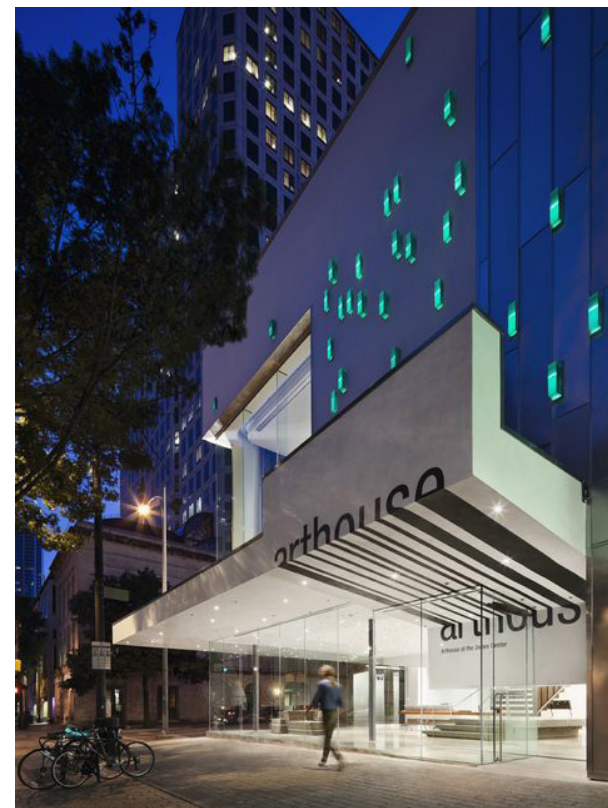
Gates Foundation
ARCHITECT: Olson Kundig



University of Toronto Graduate House
ARCHITECT: Morphosis



Tacoma Art Museum
ARCHITECT: Olson Kundig



Arthouse
ARCHITECT: LTL Architects



Agave Library
ARCHITECT: Will Bruder + Partners



Agave Library
ARCHITECT: Will Bruder + Partners

Signage Precedents